MERIDIAN
server

ADMINISTRATOR'S GUIDE

2022

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Contents

Introducing Meridian Enterprise

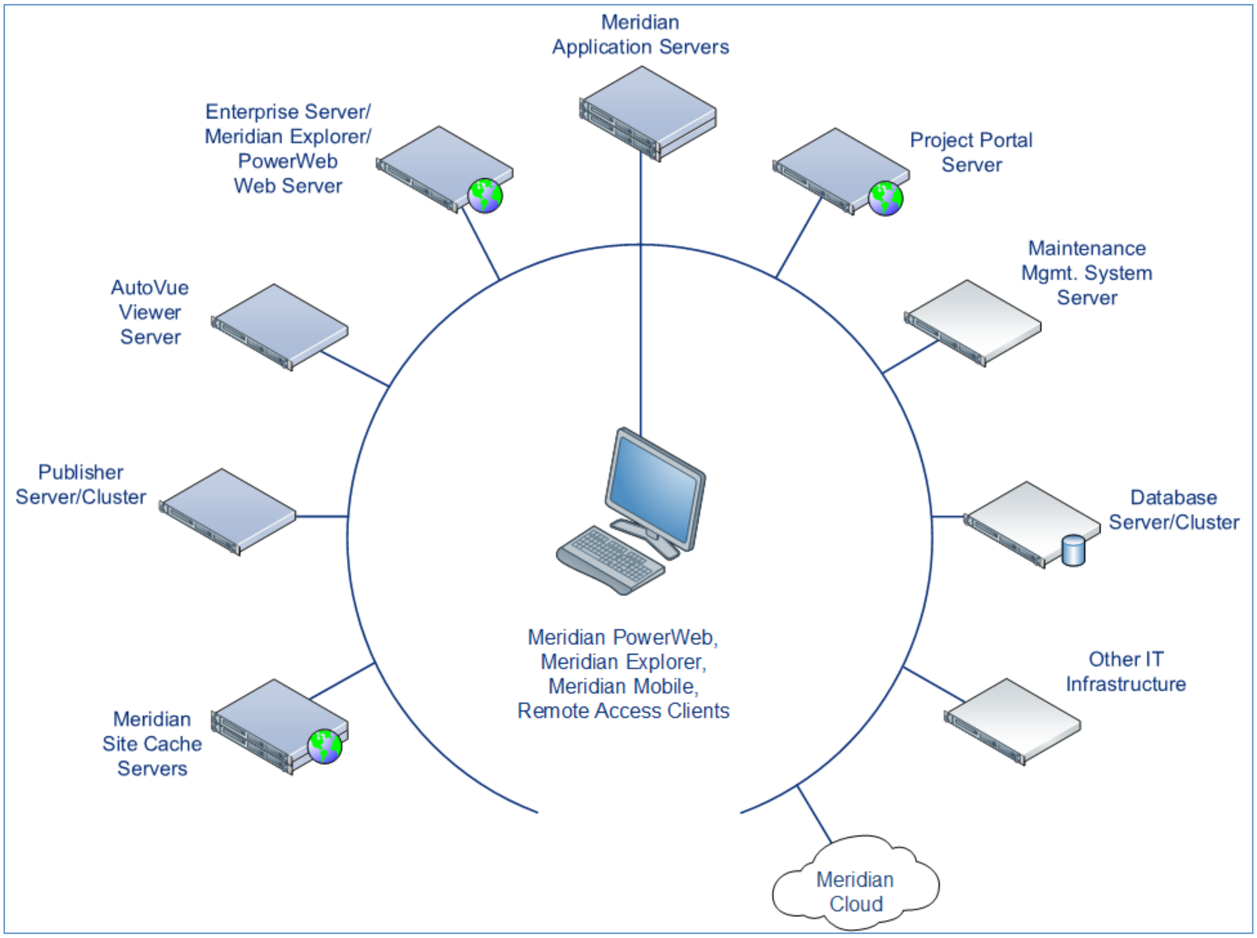
Meridian Enterprise is a departmental to enterprise-wide engineering information management (EIM) and asset lifecycle information management (ALIM) system from Accruent. It can be installed with the following database engines: Accruent Hypertrieve, Microsoft® SQL Server®, or Oracle®. The number of vaults, documents, and concurrent users is limited only by available hardware resources on the host server computer. For the supported versions, see the *Supported Software* document for this release of Meridian available from your Accruent Partner or the Meridian Technical Library.

Meridian Enterprise Product Suite

Meridian Enterprise is the core of the Meridian Enterprise product suite—a family of solutions that extends Meridian Enterprise into the engineering-related business processes for specific industries:

- Chemical
- Pharmaceuticals
- Oil & Gas
- Metals & Mining
- Utilities

The Meridian Enterprise product suite includes optional modules and alternative channels of data publishing as shown in the following figure.



For more information on any of the Meridian Enterprise product suite solutions, contact your authorized Accruent Partner or visit accruent.com.

Meridian Enterprise Server

Meridian Enterprise Server is the core product in the Meridian Enterprise product suite. It provides centralized, scalable, web services and administration for use with Meridian Enterprise, Accruent Project Portal, and other business systems. Besides the shared services, Meridian Enterprise Server includes the latest generation of Publisher and Meridian Explorer technology.

Although the names Meridian Enterprise Server and Meridian Enterprise are very similar, Meridian Enterprise Server should not be confused with the application server of Meridian Enterprise. They are distinct systems that work together. Throughout this documentation, each name is used explicitly for its corresponding system.

> **Note:**
> Meridian Enterprise Server 2013 (and higher) is a replacement for prior versions of Publisher and Meridian Explorer that has been completely redesigned and reprogrammed. This allows Meridian Enterprise Server to provide additional functionality over prior versions. Although

> Meridian Enterprise Server has many of the same features as prior versions of Publisher and Meridian Explorer, the products are not compatible and Meridian Enterprise Server 2022 should not be considered as a direct upgrade from the older versions.

Meridian Advanced Project Workflow Module

The Meridian Advanced Project Workflow Module establishes a project structure for managing engineering content work-in-progress. Master documents are available for maintenance and operations in an as-built area, while working copies are made in project areas. The Meridian Advanced Project Workflow Module also allows you to manage multiple concurrent projects that share documents. It provides a way to merge design changes into a new version of the master document in a controlled manner and lets you handle small changes as well as complex capital projects based on pre-configured projects and workflow templates. Its advanced tools let you control and monitor project progress.

Meridian Asset Management Module

The Meridian Asset Management Module enhances, automates, and streamlines asset operations throughout their lifecycle by linking them with engineering content such as drawings and technical specifications. The module allows you to integrate with maintenance management systems like Maximo, SAP PM, Datastream, and Ultimo, and with Facility Management Systems like Archibus and Famis. This ensures the performance of mission-critical assets and avoids costly operational disruptions. Maintaining control of and providing access to up-to-date documentation is crucial in all phases of the asset life cycle.

Meridian Explorer

Meridian Explorer provides a repository separate from the engineering production vault and a web browser–based view of documents and related information in one or more Meridian Enterprise vaults. These two components make it possible to provide read-only access to technical documents on a large scale. Meridian Explorer provides an innovative interface for quickly and easily finding documents with minimal end-user training.

The main benefits of Meridian Explorer are its powerful search, ease of use, extensive configurability, and scalability. You can easily navigate your way to the document you need and view its information with just a few mouse clicks. Meridian Explorer provides you with text search capability on both custom metadata properties and document text content. You can also find documents by navigating a folder tree. Best of all, you can search a repository interactively by selecting from specific property values found in the current search results. With this method, you can quickly narrow your search from potentially hundreds of thousands of documents to just the documents you are interested in. Search results are presented in tabular format or as easily recognizable thumbnail images.

Meridian Explorer includes the following major features:

- Incremental synchronization of documents and related metadata from one or more Meridian Enterprise vaults to a Meridian Explorer consolidated repository.
- Zero install, web browser-based read-only client. Engineering change requests and electronic redlines can be sent to vaults configured with the Meridian Asset Management Module.
- Support for server-based viewing.
- Configurable property pages, search pages, and views.

> **Note:**
> Meridian Explorer manages documents and tags very similarly. Therefore, they are referred to collectively as *items* in the topics that refer to both documents and tags.

Meridian FDA Module

The Meridian FDA Module adds U.S. Food and Drug Administration 21 CFR Part 11 regulatory compliance features to Meridian. Its advanced document control tools are used by pharmaceutical companies throughout the processes of document creation, review, approval, revision, and archiving.

Publisher

Publisher helps you publish engineering data managed by Meridian to alternative formats in other document management systems, file systems, or the Internet. It enables the reliable and timely availability of documents in other systems such as FileNet, Livelink, SharePoint, web portals, or email.

Publisher can optionally render documents in the source system to a different file format before publishing them to the destination system. Publisher combines these two actions—rendering and publishing—in a *publishing job* that it can run either on demand, as a scheduled task, or in a scheduled batch along with other jobs. Publisher provides links to the most common engineering document management systems. Publisher also includes rendering modules for the most popular engineering content authoring applications. Additional links and rendering modules are under development by Accruent.

Publisher includes application links that can be installed to simplify publishing documents from within source document management systems, such as:

- Meridian Enterprise
- Meridian Portal
- Accruent Project Portal
- Microsoft SharePoint
- Any Windows file system

The links add documents to the publishing queue, which can be managed through a website installed on the Meridian Enterprise Server computer or a separate web server. The queue can be viewed and controlled using any web browser from anywhere on the network.

What's In This Guide

This guide describes the system requirements, licensing, installation, and configuration of the servers used in a Enterprise Server system.

This guide includes the following subjects:

- How to install Meridian Enterprise Server, which includes the service components and web application components
- How to create and maintain Meridian Explorer repositories and map Meridian Enterprise vault properties to repository properties
- The various methods of synchronizing Meridian Explorer repositories from source vaults
- How to tailor Meridian Explorer views and search and property pages for your requirements
- How to create, configure, and run publishing jobs to synchronize Meridian Explorer

Who Should Read This Guide

This guide is intended for System Administrators, systems integrators, and Accruent technical personnel. Readers should be familiar with, and experienced in:

- General computing concepts
- Microsoft Windows server and workstation operating systems administration
- Microsoft Windows networks
- Microsoft Internet Information Services administration
- Microsoft SQL Server or Oracle database administration
- Meridian Enterprise server administration

Technical Support

Technical support for Accruent products is available from a variety of sources if you have an active support contract. Your first source of support is the authorized contacts designated by your company to participate in the support contract. They are the persons that are responsible for resolving problems with Accruent software before contacting outside sources of support. If your company works with a Accruent Partner, that partner is your second source of support. Accruent Partners are responsible for providing technical support to their customers in order to maintain their status as Accruent Partners. Accruent will assist the partner company, if necessary, to help resolve your problem. If your company is a direct Accruent customer, your authorized contacts may communicate directly with Accruent to resolve your problem.

Accruent Partners and direct customers have access to all of these Accruent technical support resources:

- Support Cases – around the clock support issue entry, update, and status
- Meridian knowledge base – continuously updated problem solutions, minor releases, updates, and how-to articles about advanced techniques
- Email notifications – immediate alerts to support issue status changes
- Telephone support – direct access to highly qualified software support engineers with extensive experience in Accruent products

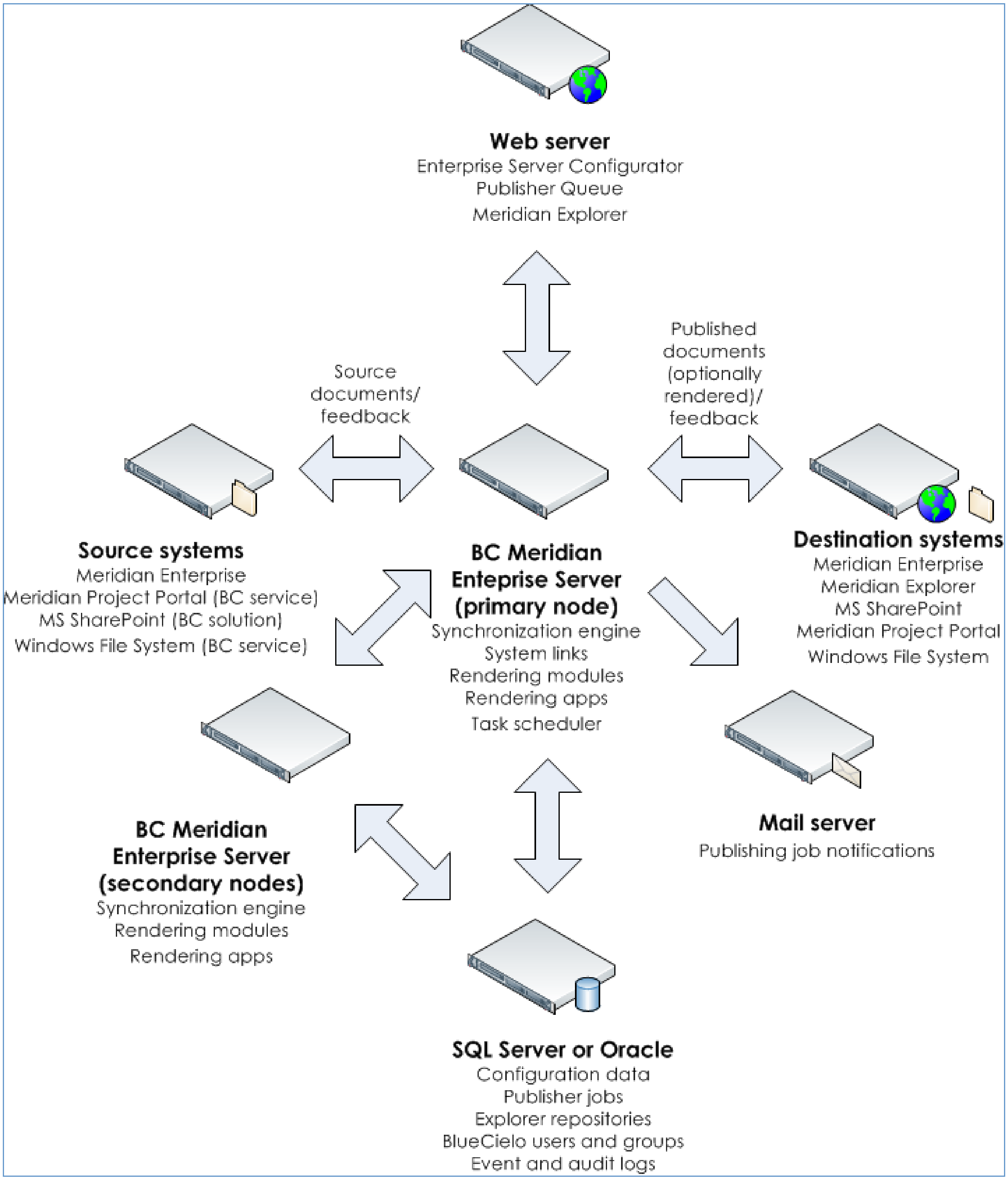
The available support contract options, terms, and other details are described in documents that are available from your Accruent Partner.

Meridian Enterprise Server Architecture

Understanding the Meridian Enterprise Server architecture is critical to effectively configuring and administering environments that include Publisher, Meridian Explorer, and Meridian Enterprise. The Meridian Enterprise Server system consists of several interrelated components:

- One or more server computers with Meridian Enterprise Server installed
- A database server running either the Microsoft SQL Server or Oracle database management system
- If documents will be published between different document management systems, the source and destination servers
- A web server running Microsoft Internet Information Services

The relationships of these components to one another, the components that reside on each and the flow of documents between systems are illustrated in the following figure.



The basic flow of data among the computers is as follows.

1. A scheduled publishing job runs on the Meridian Enterprise Server primary node. The job checks a database to find which documents need to be published. It registers each document found in the Publisher Queue.
2. Source system documents and their metadata are read by a system link and exported to temporary locations on the Meridian Enterprise Server computer.
3. If the documents are to be rendered to a different format, rendering modules run on the Meridian Enterprise Server computer (or optionally on other computers in the same cluster) and generate the renditions using AutoVue or the native application.
4. A system link imports the source or rendition documents and their metadata into the destination system.
5. After the link has finished processing the document, it provides feedback to the source system that the document was successfully published or that errors occurred during the process. Optional email notifications to interested users are sent through the organization's SMTP server.

Meridian Enterprise Server can be configured through a web application that runs on the web server. The Meridian Enterprise Server server and the web server can be the same computer in small to medium size environments. Meridian Enterprise Server stores all of its configuration and publishing job data on the database server along with user and group definitions and Meridian Explorer repository data. The Meridian Explorer repository can be viewed with a web application running on the web server.

For large environments, multiple computers running Meridian Enterprise Server may be configured in a cluster as described in Meridian Enterprise Server Clusters.

Meridian Enterprise Server System Requirements

The hardware requirements for Meridian Enterprise Server are primarily dependent on the amount of rendering that takes place. We recommend a dedicated processor with dedicated processor time for the best results. It is important that the rendering server conforms to at least the minimum hardware requirements of the applications that are used to render the documents.

The software used by the rendering modules or system links on the Meridian Enterprise Server computer might interfere with Publisher. Therefore, for high-volume use, we recommend a dedicated rendering computer for Publisher so that the applications that are invoked by the rendering modules and system links do not run while a publishing job is active. If additional applications are installed, those application requirements are in addition to those of Meridian Enterprise Server. In all cases where multiple components are hosted on the same computer, the system requirements of all components must be met and, between similar requirements, the greater requirement applies.

The Meridian Enterprise server hosting the vaults to be synchronized with the Meridian Explorer repository must meet the Meridian Enterprise system requirements for each version of Meridian Enterprise.

The computer where Meridian Enterprise Server is installed must meet the following minimum requirements. Additional requirements might apply depending on the system links and rendering modules that will be used.

> **Note:**
> The Meridian Enterprise application server should not be used to host PowerWeb, Explorer, or the EDM Service if you have a large user community. Meridian Enterprise Server processing, particularly rendering that can happen at any time, requires significant system resources and can degrade performance for Meridian Enterprise users to unacceptable levels. Instead, a dedicated computer should be used so that Meridian Enterprise Server processing will not interfere with the source or destination system processes.

- Intel® Core CPU 2.0 GHz or higher
- 4 GB RAM or more
- One of the Windows Server operating systems (with latest Service Pack) listed in the *Operating Systems* section of the *Supported Software* document for this release of the Meridian Enterprise product suite.
- Member server in an Active Directory domain.
- Microsoft .NET Framework 4.7.1 (all cluster nodes)
- Microsoft Windows Communication Foundation
- Windows Process Activation service

- Windows Identity Foundation (for cloud-hosted Microsoft SharePoint destinations only. The Meridian Enterprise Server computer must also meet WIF system requirements. To download, see Windows Identity Foundation in the Microsoft Download Center.)
- DCOM access to the Meridian Enterprise application server
- Internet Information Services 7 or higher with the following components installed and enabled (only if the Meridian Enterprise Server server will also act as a web server):
  - Windows Authentication service
  - ASP.NET 4.6.1
  - WCF Services
    - HTTP Activation
  - Static Content
- OLE DB access to an existing database in one of the SQL Server or Oracle versions (with latest Service Pack) listed in the *Database Management Systems* section of the *Supported Software* document for this release of the Meridian Enterprise product suite.
  - If SQL Server will be used, we recommend that you enable the FILESTREAM option of the database.
  - If Oracle will be used, the Oracle Data Access Components (ODAC) with Oracle Data Provider (ODP.NET) drivers must be installed on the Meridian Enterprise Server computer. Install the same bit-wise version as the operating system. The **Configure ODP.NET and/or Oracle Providers for ASP.NET at machine-wide level** option must be enabled during installation. Questions related to installing and configuring ODAC should be addressed to Oracle support.
- Additional software may be required by the various publishing modules as described in the Publisher Requirements.
- We do not recommend running Publisher with rendering modules on the source or destination document management systems servers.

Meridian Enterprise Server Database Server Requirements

The hardware and software specifications of the Meridian Enterprise Server database server should carefully consider the anticipated database sizes and user load. The following are the minimum requirements:

- One of the Windows Server operating systems (with latest Service Pack) listed in the *Operating Systems* article in the *Supported Software* document for this release of the Meridian Enterprise product suite including the limitations listed there. The server must meet the system requirements of the DBMS as published by the manufacturer.
- 8 GB RAM (higher recommended)
- Adequate free disk space for:
  - The Meridian Enterprise Server configuration database (minimum 70 MB).

    The size of the configuration database depends on many factors related to the configuration of the system, including but not limited to:

    - Number of repositories
    - Number and frequency of publishing and synchronization jobs
    - Number of documents synchronized
    - Number of user, group, and role profiles
  - Any Meridian Explorer repository databases (minimum 100 MB each).

    The size of each repository database depends on many factors related to the content of the repository and the enabled options, including but not limited to:

    - Number of documents (minimum 50 KB each)
    - Number of asset tags
    - Number of revisions
    - Number of references between documents and between documents and tags
    - Number of properties synchronized from the source vault
    - Amount of data in each property
    - The number of properties indexed for faster searching
    - Whether or note document content is copied to the repository from the source vault and if it is, the size of the content files.

    - Whether or not full-text indexing is enabled and if it is, the amount of text in the documents

- One of the database management systems (with latest Service Pack) listed for Meridian Explorer in the *Database Management Systems* article in the *Supported Software* document for this release of the Meridian Enterprise product suite including the limitations listed there.

Site Cache Server Requirements

The system requirements for a Meridian site cache server are intentionally minimal to make it easy to deploy site caches on existing hardware resources:

- A web server at the remote site with one of the Internet Information Services versions installed that are listed in *Web Servers and Browsers* in the *Supported Software* document for this release of Meridian Enterprise.

  These are the minimum role services must be installed for proper operation:

  - IIS > Web Server > Common HTTP Features > Static Content
  - IIS > Web Server > Common HTTP Features > HTTP Redirect
  - IIS > Web Server > Security > Windows Authentication
  - .NET Framework 4.5 > ASP.NET 4.5
  - .NET Framework 4.5 > WCF Services > HTTP Activation

  > **Note:**
  > - HTTP Secure (HTTPS) is supported by:
  >   - Configuring the **BCSiteCache** and **BCSiteCacheClient** web applications as described in Configure HTTPS.
  >   - Create self signed certificates for all Meridian Enterprise web servers, the Meridian Enterprise Server computer, and the site cache servers. On each web server, add the certificates for the other servers to the Trusted Root store. On the client PCs, add the certificates for the servers to the Trusted Root store.
  > - If the **Request Filtering** feature option **Allow unlisted file name extensions** is disabled in IIS Manager, the following file extensions must be added to the **File Name Extensions** list and allowed: `.dll`, `.gif`, `.png`, `.js`, `.css`.

- Microsoft URL Rewrite Module 2.0 for IIS (x64)
- Adequate free disk space for the cached documents and metadata. The amount depends on the size of the document collections that are cached.
- The site cache component requires that a Site Cache Server license (part number contains **M--SCH**) be registered in the Accruent License Server if the component is not installed on the same computer as Meridian Enterprise Server.
- In environments with multiple Meridian Enterprise Server servers, all repositories must have unique names.

- The connections between the Meridian Enterprise EDM servers and the Meridian Enterprise Server servers must specify a UPN as described in *Configure the Connection To Meridian Enterprise Server* in the *Meridian Enterprise Administrator's Guide*. We highly recommend that all Meridian Enterprise services and web applications run under the same system account, which can be specified during installation.
- Bi-directional network communications between the site cache server and the Meridian Enterprise Server computers where it is registered.

Security Requirements

The Meridian Enterprise setup program creates an application pool named **BCEnterprise** (by default) with the correct settings. To ease the configuration and maintenance, we recommend that you use this application pool with a dedicated system account that is also used for the Meridian Enterprise Server service.

Meridian Enterprise Server service requirements

The Meridian Enterprise Server service must run under an account with the following privileges:

- On the Meridian Enterprise Server computer:
  - A member of the **Administrators** group
  - Read/write access to `C:\ProgramData\BlueCieloECM`
  - Read/write access to any folders used by the rendering modules or system links
- On the SQL Server computer:
  - If the **Integrated Windows authentication** option is enabled, the account that is assigned to the application pool must have the sysadmin role for the Meridian Enterprise Server configuration database. If the option is not enabled, the SQL Server account that is configured for the database connection as described in Create the Configuration Database must have the sysadmin role.
  - If Meridian Enterprise Server will be allowed to create the configuration database, the account does not need the sysadmin role, however the sysadmin role is still required to restore or create a repository. The role can be reduced to db_creator after the database is created. If that is not permitted due to your organization's security policy, create the database either with the database configuration wizard as described in Create the Configuration Database or with the script in SQL Server Database Creation Script. Specify this account for the IIS application pool and the account under which the Meridian Enterprise Server web service is run in the preceding descriptions.
- On the Oracle server:
  - Create a user account and database with the script in Oracle Database Creation Script. Specify this account for the IIS application pool and the account under which the Meridian Enterprise Server web service is run in the preceding descriptions.
- On the source and destination systems:
  - Sufficient privileges to perform the configured actions (for example, updating the feedback property in a source system).

  The destination system account credentials are specified in the publishing job.

Publishing Services requirements

The account under which the Windows file system publishing service or the Accruent Project Portal publishing service is run must have the following privileges:

- On the Meridian Enterprise Server computer:
  - Access to the Meridian Enterprise Server web service
  - Write access to the `Kronodoc.Service.exe.config` file located in the Meridian Enterprise Server program folder.
- On the server where the monitored folder resides:
  - Full control

Troubleshooting and notes about functionality

- All computers where documents are published from (by the Accruent File Publishing Service or PowerUser extension) or where the Publisher Queue website is opened in a web browser must have access to the Meridian Enterprise Server web services.

  For example, if Meridian Enterprise and Publisher are running on separate computers, we recommend that you change the EDM Server service from using the default SYSTEM account to use a domain account with sufficient permissions to access the web services on the Meridian Enterprise Server computer. If this is not done, users attempting to register documents for publishing in Meridian Enterprise PowerUser will see errors and registration will fail.

  The Meridian Enterprise Server server, the web server that hosts the Meridian Enterprise Server website (if separate), and the cluster nodes (if any) must all be able to communicate through Windows Communication Foundation (WCF) on HTTP port 8686. The primary node and the secondary nodes of a cluster also communicate push notifications on port 40865.
- If a Meridian Explorer feedback type page will be used in web browsers other than Internet Explorer (for example, Firefox or Chrome), access denial errors can occur if the Meridian Enterprise Server application pool account is not the same as the Meridian Enterprise EDM Server service account.
- To authenticate with Microsoft Online Services, the Windows Identity Foundation must be installed as described in Meridian Enterprise Server System Requirements. Only Azure Active Directory with DirSync is supported.
- Internet Explorer Enhanced Security Configuration can cause the Meridian Explorer client home page to fail to load and to show JavaScript errors. It can be disabled in Windows Server Manager.

- If your Meridian Enterprise system will use more than one server, the services might need to be configured to allow security delegation as described in Security Delegation.
- **Access denied** errors can occur during import package scanning and import if the Meridian Enterprise Server and the Meridian Enterprise EDM Server are not running under the same account.
- Path or access errors can occur for Novell NetWare mapped drives if the drives are not available to the Meridian Enterprise Server application pool account in administrator mode. To ensure that the drives are available, run a scheduled task at system startup as the NT AUTHORITY\SYSTEM account with the **Run with highest privileges** option enabled and the following command line:

  ```
  cmd.exe /C net use <drive letter:> "<UNC path>" /persistent:yes
  ```

Security Delegation

In the typical Windows network, when a user makes a request from a service, if the service needs to connects to a different computer to fulfill the request, it connects using its own account (or application pool identity if it is a web service).

Examples are:

- Meridian Enterprise and PowerWeb running on separate servers
- Meridian Enterprise, Publisher, and Meridian Explorer running on separate servers

This has ramifications for Meridian Enterprise security. For example, the requesting service account must have all of the permissions granted to it that would be needed by any combination of potential users, document types, and areas of the vault. This makes enforcing very specific or granular security difficult if not impossible. It may also have ramifications on the metadata. For example, document properties that are modified by the request will show the service account name in the **Modified By** property or in the document log. This can make security auditing problematic.

To overcome these problems, the environment can be configured to allow security delegation, in which the service impersonates the requesting user by connecting to the other computer using the user's account to fulfill the request. The user's account credentials are delegated to the service. At first glance, delegation may seem to be the perfect solution. However, impersonation creates what is known as the double hop problem, which requires additional configuration.

By default, Meridian Enterprise Server assumes that security delegation has been configured. Delegation and impersonation can be disabled in Meridian Enterprise Server by adding the following setting to the file `C:\ProgramData\BlueCieloECM\Hyperion\WebConfigDto.dat`.

```
"DisableImpersonationForBCM":true,
```

> **Note:**
> - This setting affects changes initiated from feedback type property pages and VBScript events. Examples are users adding comments to documents from Meridian Explorer and viewing print previews when watermarks are configured to be shown. In both examples, Meridian Enterprise Server needs to connect to the Meridian Enterprise server to read or save data that can be protected by security privileges that the application pool identity might not have been granted.
> - Also see the registry value **SameIISEDMAccount** in HKEY_LOCAL_MACHINE\Software\Cyco\AutoManager Meridian\CurrentVersion\WebLink as described in the *Registry Keys* section in the *Meridian Enterprise Administrator's Guide*.

> - In Meridian Enterprise Server 2012 SP5, the name of this setting is `FeedbackNoImpersonation`.

Following are some guidelines to help you determine if you need to configure security delegation.

- If the system works as expected and access errors do not occur or if the services run on the same computer, delegation is not necessary and you do not need to disable impersonation.
- If the lack of security delegation is causing problems, you have two options:
    - If it's acceptable to your organization that for all Meridian Explorer users, feedback to the Meridian Enterprise vault (redlines, comments, property updates, VBScript procedures) are performed under the service account, then disabling the impersonation is an easy way to avoid the delegation issue.
    - You must resolve the double hop problem by configuring security delegation.

Following are links to resources that explain this requirement in more detail and provide configuration assistance:

- Security Account Delegation on the Microsoft TechNet website
- How to Configure the Server to be Trusted for Delegation on the Microsoft TechNet website
- How to configure an ASP.NET application for a delegation scenario on the Microsoft Support website
- Understanding Kerberos Double Hop on the Microsoft TechNet website

Publisher Requirements

Depending on your specific requirements, the Publisher may impose the following requirements or limitations.

- The system links communicate with third-party applications such as Microsoft SharePoint that must be installed on other computers. These applications and their licenses are not included with Publisher. The versions of these applications that are supported by this release are listed in the *Publisher System Links* section of the *Meridian Enterprise Supported Software* document that corresponds to this release. Accruent is not responsible for the installation, operation, and licensing of third-party software.
- The rendering processes use third-party applications such as Microsoft Office, AutoCAD, and Autodesk Inventor that must be installed on the Publisher computer. These applications and their licenses are not included with Publisher. The versions of these applications that are supported by this release are listed in the *Publisher Rendering Applications* article in the *Meridian Enterprise Supported Software* document that corresponds to this release. Accruent is not responsible for the installation, operation, and licensing of third-party software.

  > **Note:**
  > - Some third-party applications that are used for rendering are not compatible with all operating systems that Publisher is compatible with or the applications may not be supported by the manufacturer in that configuration. When installed together with Publisher, we recommend that the Publisher rendering module for that application be installed on a dedicated computer running a version of Windows that is compatible with the third-party application and that Publisher be installed on a computer running a supported version of Windows Server.
  >
  >   For example, AutoCAD is not supported on Windows Server by Autodesk. Therefore, we recommend that the AutoCAD rendering module and AutoCAD be installed on a computer running an Autodesk-supported workstation operating system and that Publisher be installed on a separate computer running a Accruent-supported server operating system.
  > - Add-ins, plug-ins, or extensions can interfere with rendering. They are not supported by Accruent and should be disabled in all rendering applications that are installed on the Publisher computer.
- The Publisher has several out-of-the-box configuration possibilities, but additional configuration is usually needed to meet specific customer requirements. This document describes the configuration options for each rendering module and system link. Refer to the specific topics that pertain to each rendering module and system link for any additional requirements or limitations.

The following table lists the third-party applications that must be installed on the Publisher computer that performs rendering with specific rendering modules. The unlisted rendering modules include the components that perform rendering by those modules and no additional software needs to be installed with Meridian Enterprise Server.

Required third-party applications

Rendering Module	Required Application
Acme CAD Converter	Acme CAD Converter
Autodesk AutoCAD	Autodesk AutoCAD
Autodesk Inventor	Autodesk Inventor
Autodesk Revit	Autodesk Revit
Dassault Systèmes SolidWorks	Dassault Systèmes SolidWorks
Microsoft Office	Microsoft Office
eSignature signature pages and watermark profiles with certain options enabled as described in Configure Rendition Watermarks	Microsoft Word

Client Computer Requirements

PCs used for the Meridian Explorer client (including Meridian Enterprise Server Administration Console) must meet the following requirements.

Hardware specifications

Requirement	Minimum
CPU	Intel® Pentium® 4 @ 1 GHz
Memory	1 GB (2 GB recommended and for 64-bit)
Storage	Up to 125 MB depending on the options chosen.
Display	1024 x 768 resolution or higher with True Color. Non-critical information may be hidden at lower resolutions.

The software requirements include:

- One of the web browsers listed in the *Web Servers and Browsers* article in the *Meridian Enterprise Supported Software* document for this release.
- Microsoft .NET Framework 4.7.1.
- If the Meridian Explorer client will also have Meridian Enterprise installed, it must be Meridian Enterprise 2013 SP2 or higher, which has additional requirements that are specified in the *System Requirements Cross-References* article in the version of *Meridian Enterprise Supported Software* that corresponds to the Meridian Enterprise release.
- Depending on how Meridian Explorer is deployed and how users will use it, the Meridian Enterprise Web Client components might need to be installed as described in Install Components On Client Computers.

Installation

The Meridian Enterprise Server setup program installs the Meridian Enterprise Server core components, the selected system links and rendering modules, and several web services that are used to support publishing and Publisher queue monitoring functionality on the Meridian Enterprise Server computer. The setup program also includes components for publishing documents and monitoring the Publisher queue from a source or destination system. Typically, the Meridian Enterprise Server should be installed on more than one computer.

Installing Meridian Enterprise Server involves tasks for installing and configuring multiple components on several servers as well as for installing optional components on the computers that will act as Meridian Explorer clients. The installation tasks are listed in the order in which they should be performed in the following table and are described in the remainder of this guide. Use the hyperlinks in the following checklist to find the installation information for each task. Track your installation progress by printing this checklist and placing a checkmark in the **Completed** column as you finish each task.

Meridian Enterprise Server installation checklist

Completed	Task	Topic Reference
	Read this manual completely to familiarize yourself with the system.	Introducing Meridian Enterprise
	Confirm that the computers to be used for Meridian Enterprise Server meet the system requirements	Meridian Enterprise Server System Requirements
	Register the necessary licenses on the Meridian Enterprise License Server.	Licenses
	Run the Meridian Enterprise setup program on the server computer and install all of the necessary components there even if they are intended for other computers, such as a Meridian Enterprise application server or SharePoint server. You will move the files later.	Install Meridian Enterprise Server
	Configure the Meridian Enterprise Server computer.	Create the Configuration Database

Completed	Task	Topic Reference
	Complete the installation of files for the source and destination system servers.	Install Components On a SharePoint Server Install Components On a Windows File Server Install Components On an Accruent Project Portal Server
	Configure the Meridian Enterprise Server components on the source and destination system servers depending on the system types.	Configure a SharePoint Server Configure the Accruent File Publishing Service Configure the Accruent Project Portal Publishing Service
	Create a Meridian Explorer repository (optional).	Repositories
	Create and configure a publishing job to synchronize the repository from a vault (optional).	Create a Publishing Job Configure a Publishing Job
	Create and configure additional publishing jobs as necessary for other systems or to update the renditions in a source vault, for example.	Create a Publishing Job Configure a Publishing Job
	Schedule and run the publish jobs.	Run a Publishing Job Schedule Publishing Jobs

Completed	Task	Topic Reference
	Configure the Meridian Explorer web application	Website
	Configure end-user authentication	Configure the Application Pool Account
	Schedule periodic local workspace cleanup on rendering nodes.	Clean the Local Workspace
	Set up the Meridian Explorer client computers (optional).	Install Components On Client Computers

Install Meridian Enterprise Server

The Meridian Enterprise Server application server includes business and data access components that are used by other Accruent applications. These components should be installed on a Windows server running Internet Information Services (IIS) on which you want to host Meridian Enterprise Server.

> **Note:**
> If Meridian 2020 R2 is was previously uninstalled and an earlier verision installed, the Microsoft Visual C runtime must installed manually.

The components are installed using the Meridian Enterprise setup program. Meridian Enterprise Server is an integral part of:

- Meridian Explorer
- Publisher
- User and group management when the preceding are used together with Meridian Enterprise
- Meridian Enterprise Data Library

Meridian Enterprise Server is typically installed on one computer. However, for maximum scalability it can be installed on multiple computers and configured as a cluster as described in Configure a Meridian Enterprise Server Cluster.

Notes About Installation

Review the following important information about installing Meridian Enterprise Server.

- Meridian Enterprise Server 2014 or later can be upgraded in-place with the installation package. Existing installations prior to Meridian Enterprise Server 2014 cannot be upgraded. You must uninstall the existing version before installing a newer version. Delete any remaining files in `C:\Program Files\BC-Meridian\Enterprise Server` and in `C:\ProgramData\BlueCieloECM`. If you have manually modified any configuration files, make a backup copy before uninstalling the old version and restore the file after installing the new version.
- If ASP.NET is installed on the computer before IIS is enabled, you must enable ASP.NET by running the command `aspnet_regiis -i`.
- If the Meridian Enterprise client components were installed on the Meridian Enterprise Server computer before Meridian Enterprise Server is installed, some of the Meridian Enterprise client libraries are overwritten during the Meridian Enterprise Server installation.

If Meridian Enterprise Server is subsequently uninstalled, those libraries will be unregistered and cause errors if Meridian Enterprise Server is reinstalled, such as with an upgrade. In such cases, run the Meridian Enterprise setup program before reinstalling Meridian Enterprise Server and select the **Repair** option to re-register the libraries and prevent the errors.

- You must install the setup package as an administrator of the computer and temporarily disable Windows User Account Control (UAC).
- If the **inetpub** folder is created in a different drive (other than the default C:\ drive) during the Meridian Enterprise Server installation, you will see a warning indicating that the web server is not installed on the Windows server and the PowerWeb component will not be installed.

  To prevent this issue:

  - Before the Meridian installation, change the **PathWWWRoot** value for the `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Microsoft\InetStp` registry key to the path to the wwwroot on the chosen drive.

    During the installation, the setup path will show the correct destination folder in the **Start Copying Files** dialog. All PowerWeb files will go to the chosen drive during the installation.
- If you install Publisher on a client machine, you must manually create a Windows application event log with the name **BC Application Events**.

  Learn more about creating Windows Event Logs on Microsoft's website.

Procedures

To install the components:

1. Follow the instructions in *Choose An Installation File* in the *Meridian Enterprise Administrator's Guide* to run `BC-Meridian Server (x64).exe`.
2. On the **Select Features** page, review the selections in each branch using the descriptions in the following table.

   Select only those components for which you have purchased and installed licenses and complete the installation.
3. Complete the setup wizard normally.

Meridian Enterprise Server setup component branches

Branch	Description
Publisher /System links	Publisher system links available in this release.
Publisher /Rendering modules	Publisher rendering modules available in this release. If the AutoVue rendering module is installed for rendering 3D models, also select the Oracle **AutoVue 3D Professional Advanced** component in the **Client/Viewer** branch. Licenses that begin with **M--AV3** must also be installed on the Accruent license server.
Publisher /Publishing tools	Publisher services for the Windows file system, Accruent Project Portal, and Microsoft SharePoint.

If the AutoVue rendering module was installed, the **AutoVue Document Converter** dialog will display the installation results.

4. Click **OK**.
5. If a rendering module will be used on the Meridian Enterprise Server computer that starts a native application (for example, AutoCAD, Autodesk Inventor, Microsoft Office, and so on), install and configure the native application.
6. If AutoCAD drawings will be rendered with the AutoVue rendering module that use custom font (`.shx`) files, place copies of the font files in the following location after installation:

   ```
   C:\Program Files\Common Files\Cyco Shared\AutoVue\Fonts
   ```

7. If Meridian Enterprise Server is installed correctly, you can open Meridian Enterprise Server Administration Console as described in Open Accruent Meridian Administration Console.

Create the Configuration Database

Most of the Meridian Enterprise Server configuration data is stored in a configuration database. This database can be hosted by the same database server that is used to host the other Meridian Enterprise Server data. This database is not created automatically during Meridian Enterprise Server installation. You must provide the configuration database connection parameters as a separate task described in this topic.

To view or edit existing configuration database connection parameters and Meridian Enterprise Server cluster configuration, see View And Edit the Connectivity Settings.

> **Important!**
> Errors can occur If the amount of disk space allowed for the configuration database is reduced or restricted. We highly recommend that you allow unlimited growth of the database, which is the default when the database is created by the task below and the scripts.

Notes about this Task

You will need the following information to complete this task:

- The credentials of a domain account under which to run the Meridian Enterprise Server service.
- The credentials of a domain account for the application pool under which the Meridian Enterprise Server web application will run.
- The name of the server where Meridian Enterprise Server is installed and the number of the TCP port that it is listening to (if on a different server than the Meridian Enterprise Server web application).
- For SQL Server, the connection parameters for a new or existing database. If you would prefer to create the database manually, an empty database with default parameters is sufficient. If you also want to create a Meridian Explorer repository database manually, use the script in SQL Server Database Creation Script.
- For Oracle, the user name for a new or existing database. If you would prefer to create the database with a script instead, see Oracle Database Creation Script.
- An existing database (SQL Server) or user (Oracle schema) can be used but we recommend that you can create a new database or user dedicated to the Meridian Enterprise Server configuration database and separate from any Meridian Explorer repositories.

In Meridian Enterprise Server 2021, before you can create an Oracle configuration database, you must first run the Oracle Database Creation Script and then run this SQL command as the user that you specified in the script:

```
CREATE TABLE BCLayerTranslationTable
(
    ID INTEGER NOT NULL,
    Name nvarchar2(255) NOT NULL,
    Description nvarchar2(1024) NULL,

    CONSTRAINT PK_BCLayerTranslationTable PRIMARY KEY (ID),
    CONSTRAINT UK_TableName UNIQUE (Name)
)
```

Create the Configuration Database

To create the configuration database:

1. Install the Meridian Enterprise Server software as described in Install Meridian Enterprise Server.
2. Set the credentials for the **BC Enterprise Server** service in the **Services** applet.
3. Set the credentials for the **BCEnterprise** application pool in IIS Manager.
4. Attempt to open the configuration page of the web application (`http://`*`<ServerName>`*`/BCEnterprise/config.aspx`).

   The web application will attempt to connect to the configuration database. When this fails because the configuration database has not yet been created, the **Configuration Database** page appears.
5. Click options or type values for the database connection parameters using the descriptions in the following table.
6. Click **Register**.

   The configuration database is created or connected using the parameters that you entered.

Database connection parameters

Parameter	Description
Provider	**SQL Server** or **Oracle**

<table>
<tr><th>Parameter</th><th>Description</th></tr>
<tr><td>Server
(SQL Server) or
SID (Oracle)</td><td>The name of the database server and/or instance where you want to create the configuration database. The names you must specify depend on the type of database server and the client configuration.
For example:
MyServer — SQL Server Standard or Enterprise
MyServer\MyInstance — SQL Server Express or another edition that created a named instance when the software was installed.
MyInstance — Oracle network alias for the database. This list includes the alias names found in all <code>tnsnames.*</code> files on the computer unless you have set in the Oracle client configuration the location of a specific <code>tnsnames.ora</code> file to be used.</td></tr>
<tr><td>Type (SQL Server only)</td><td>The authentication method to use to connect to the configuration database.</td></tr>
<tr><td>User name</td><td>The name of the user to connect to the configuration database.
Note:
The account name should follow the Oracle rules described in Schema Object Names and Qualifiers.</td></tr>
<tr><td>Password</td><td>The password of the user to connect to the configuration database.</td></tr>
<tr><td>Database
(SQL Server only)</td><td>To use an existing database:
1. Click Edit.
The Select Database dialog box appears.
2. In the menu, click Existing Database.
The list of existing databases appears.
3. Select a database.
4. Click OK.
The name appears in the Database field.
To create a new database:
1. Click Edit.
The Select Database dialog box appears.
2. In the menu, click New Database.
The database creation options appear.
3. Type a name for the database.
4. Click OK.
The name appears in the Database field.</td></tr>
</table>

Parameter	Description
Primary path (SQL Server only)	Type the path on the database server where to store the configuration data.
Log path (SQL Server only)	Type the path on the database server where to store the configuration database logs.

Upgrade a Configuration Database

Upgrading an existing Publisher and Meridian Explorer configuration database imports that data into new tables in the Meridian Enterprise Server configuration database.

The Meridian Enterprise Server Administration Console provides an **Upgrade** command that will allow you to select the available configuration items that you want to import:

- Meridian Explorer repositories
- Meridian Explorer views
- Meridian Explorer synchronization jobs
- Publisher publishing jobs

You may upgrade some of the items and repeat the command later to upgrade other items.

Note:

- The upgrade does not need to begin with a new, empty configuration database. Data can also be imported into an existing Meridian Enterprise Server 2022 configuration database.
- If Meridian Explorer views have already been created in the Meridian Enterprise Server 2022 configuration database that have the same names as views being upgraded from a prior version, they will be overwritten when the old views are imported. Meridian Explorer repositories and any publishing or synchronization jobs with matching names will not be upgraded or overwritten.
- If a repository fails to upgrade, the entire upgrade process will abort. If any other items fail to upgrade, they will be skipped and the next item attempted.

To upgrade a configuration database:

1. Confirm that there is a verified backup of the existing configuration and repository databases.
2. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Settings**.

   The **System Settings** page appears.
3. On the **System Settings** page, in the **Upgrade** group, click **Upgrade**.

   The command will attempt to find old configuration data in the currently configured configuration database. If none is found, it will then look for the old database connection string in the Windows registry.

   If no configuration information was found, the **Upgrade** dialog box will prompt you for a connection string to the old configuration database.

4. Click options or type values using the descriptions in the following table.

Upgrade options

Option	Description
Provider	The database type where the existing configuration data resides.
Connection string	Type a valid connection string to connect to the configuration database.

5. If any configuration information is found, the repositories and publishing jobs are listed. All repositories will be upgraded.
6. Select the publishing jobs that you want to upgrade and click **OK**.

   A background task is started to import the old configuration data into new tables and you can continue working. When the task has completed an **Upgrade Report** dialog box will appear and list the results of importing the old configuration data. If any items failed, make a note of the error messages and contact your Accruent Partner or Accruent Technical Support.
7. Click **OK**.
8. Review the imported items carefully.

   Some settings may require manual correction or reconfiguration as described in the following table and the corresponding references to topics in this guide.
9. To purge the old configuration and repository data, click **Delete**.

Configuration review items

Items	Description	Reference
Publishing jobs	Property mappings, publishing job options, and watermarking settings might need to be adjusted for the new system. Also, if Publisher clustering was configured in the old environment, confirm that the computer names that are assigned to the jobs are valid in the new environment or assign the jobs to nodes in the new environment.	Configure the Mappings Configuring the Publishing Options

Items	Description	Reference
Rendering profiles	The upgrade will create a rendering profile for each rendering module used by the upgraded publishing jobs. Typically, this will lead to multiple rendering profiles where some have an identical configuration. Because Meridian Enterprise Server rendering profiles can be shared by multiple publishing jobs, these duplicate profiles can be manually consolidated or removed and the remaining profiles can be used with multiple jobs.	Create And Edit a Rendering Profile Delete a Rendering Profile
Synchronization jobs	The Explorer synchronization jobs will require some manual configuration after the upgrade. Special attention is required for the property mapping and the job-specific options. **Note:** The values of the **LastSynchronized** time stamp property will be lost during the upgrade. The current time stamp is displayed on the detail page of the Meridian Enterprise source vault (available on the **Repositories** page). To avoid a full synchronization, the time stamp can be manually set to a recent date.	Configure Synchronization Options Configure the Mappings The ExplorerSynchronization Property Set
Scheduled tasks	The Windows Task Scheduler is used to schedule the running of jobs. After the upgrade, these jobs will have to be reconfigured.	Schedule Publishing Jobs
Folders view security	Meridian Explorer 2022 does not use Windows groups for the security of the views. After upgrading, you will need to edit the views to configure the view security. Typically, view security is used in combination with a filter to restrict access to information. In that case, there will be multiple views that only differ on the security settings. The new security model allows you to define security on the document level. This way, a single view can be used for user groups with access to different information.	Configure View Security

Autovue

Meridian Enterprise supports AutoVue for viewing 2D and 3D documents. AutoVue is a Java applet that displays documents that are rendered by an AutoVue server. AutoVue can be installed in two deployment types: client/server deployment or desktop deployment. Meridian Enterprise supports both deployment types. The AutoVue viewer appears as **AutoVueWebViewer** in the Meridian **Viewer Options** dialog box. All documentation for AutoVue products is available in the Meridian Enterprise distribution package and at the Oracle website.

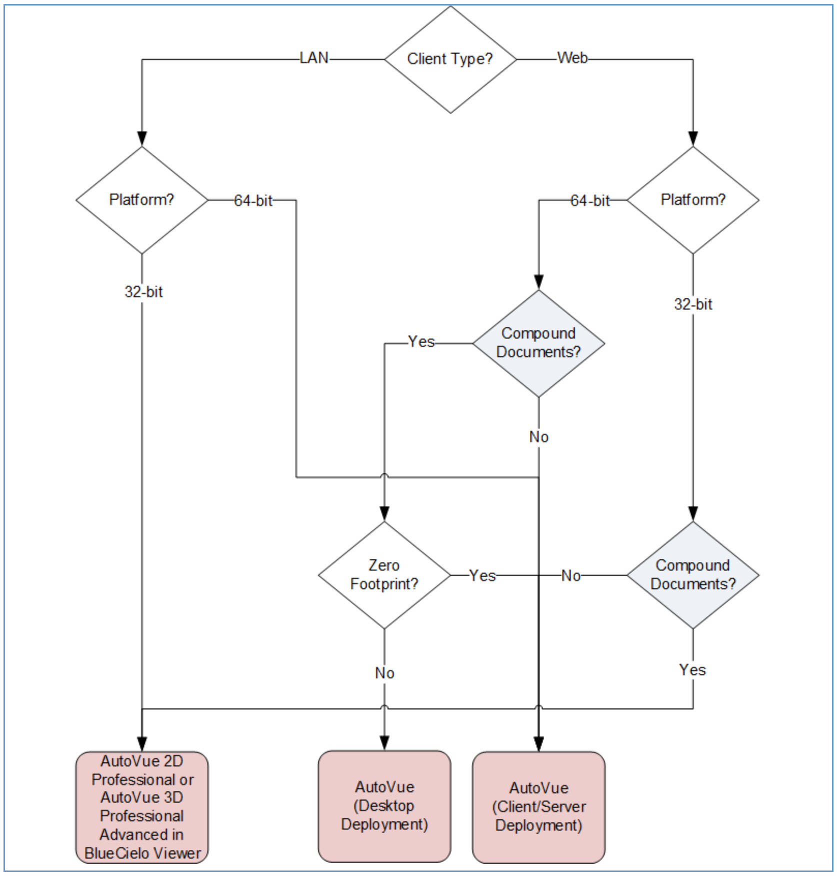
The Java server and the AutoVue server software can be installed on separate servers if many client computers require the service. This architecture is best suited for the department and enterprise deployment models described in the *Deployment Models* section of the *Meridian Enterprise Administrator's Guide*.

The AutoVue software may be installed on the following computers depending on the expected viewing workload:

- The Meridian Enterprise application server together with PowerWeb web server (minimal workload)
- A separate PowerWeb web server or Meridian Enterprise Server web server (moderate workload)
- Separate Java application server and web server (heavy workload)

The AutoVue software may also be installed entirely on client computers if a dedicated rendering server is unjustified, such as in the departmental or workgroup models. Obviously, this would not be a zero footprint installation and should not be considered by organizations that require it. For installation of all deployment types, see Install Autovue.

Your decision as to which AutoVue version to install and in which deployment configuration can be guided using the following figure.


Client Type?
LAN
Web
Platform?
64-bit
32-bit
Platform?
64-bit
32-bit
Compound Documents?
Yes
No
Zero Footprint?
Yes
No
Compound Documents?
No
Yes
AutoVue 2D Professional or AutoVue 3D Professional Advanced in BlueCielo Viewer
AutoVue (Desktop Deployment)
AutoVue (Client/Server Deployment)

Install Autovue

Installing AutoVue includes installing the AutoVue software on a Java application server and installing the components that integrate AutoVue on the web server and on the Java application server (if separate). The AutoVue documentation is also available on the Oracle website. Installation also includes configuring Meridian to connect to those components when a document should be viewed.

The AutoVue software includes a copy of the open source Java application server software named Jetty. This is convenient if you will be deploying AutoVue and do not have an existing Java application server on which to host AutoVue. It is also useful if you want a lightweight Java application server for desktop deployment. For convenience, the AutoVue installation packages install Jetty support by default.

The Jetty server is adequate for desktop deployments and small client/server deployments. In larger deployments, we recommend deploying the Accruent Connector component on the Apache Tomcat Java server instead. For guidance, refer to the Accruent knowledge base or Accruent Technical Support.

For more information about configuring and administering AutoVue, see:

- *Oracle AutoVue Client/Server Deployment Installation and Configuration Guide*
- *Oracle AutoVue Desktop Deployment Installation and Configuration Guide*

Important!
The JAR files required for the AutoVue integration are no longer included with our installation files. These files and installation instructions can be provided to you by request via Accruent Support.

Notes about functionality

- Each version of the AutoVue software supports specific Java versions as listed in the *Oracle AutoVue* article in the *Meridian Enterprise Supported Software* document. If the computer on which you want to install AutoVue must use a Java version that is unsupported by AutoVue in order to support another application, you can configure separate Java versions on the same computer for each application as described in Deployment Rule Set.
- If AutoVue is installed as a client/server deployment, the AutoVue server must be configured to allow interactive services or the **Allow service to interact with the desktop** option enabled in the service properties.

- If AutoCAD drawings will be viewed that use custom font, shape, or linetype files, place copies of the files in the following existing locations after installation:

  ```
  C:\Oracle\AutoVue\bin\fonts
  C:\Program Files (x86)\Common Files\Cyco Shared\AutoVue\Fonts
  C:\Program Files (x86)\Common Files\Cyco Shared\AV\Fonts
  ```

- When the Meridian Enterprise Server is upgraded to a new release, also upgrade the AutoVue server at the same time. The AutoVue server software must be the same version as the JVue applet that is included in the Meridian Enterprise release.
- If you install Meridian Enterprise on a server with the **AutoVue Client/Server Integration** component selected, then later install AutoVue, and still later repair the Meridian Enterprise installation, the AutoVue integration files might reside in the wrong folder. To resolve this issue, run the Meridian Enterprise setup program, select the **Modify** option, remove the **AutoVue Client/Server Integration** component , and then run the setup program again and reinstall it.
- If Meridian Enterprise and Meridian Explorer are used together in the same environment, they can share the same AutoVue deployment. The version of AutoVue that is supported by the Meridian Enterprise version should be used by both Meridian Enterprise and Meridian Explorer.

  The integration components for Meridian Enterprise are installed only by the Meridian Enterprise installation package and are specific to a particular AutoVue version. The `.jar` files that are installed with Meridian Explorer (by default, in `C:\inetpub\wwwroot\<WebSite>\Jar\Res`) should be replaced by the versions that are installed by Meridian Enterprise (by default, in `C:\inetpub\wwwroot\AMM\Res`).

- By default, client computers download documents to the Local Workspace when files are viewed. When configured to use AutoVue, this does not occur unless documents are printed from the viewer or if the viewer window is undocked from the primary client window.
- The user's preference settings are stored in files in the folder `C:\Users\<UserName>\AppData\Roaming\Cyco\AutoManager View Control2`.
- For advanced troubleshooting, enable logging by changing all occurrences of the path `c:/temp/Logs` in the file `C:\Program Files (x86)\Common Files\Cyco Shared\AutoVue\log4j.xml` to a path that exists.

Requirements

Please note the following pre-installation requirements:

- Microsoft .NET Framework is required on the web server where the Accruent web service is installed in this task and ASP.NET must enabled.

  To enable ASP.NET, run one of the following from a command line window with elevated privileges, depending on the bit width and version of .NET Framework that is installed, and restart IIS:

  ```
  %windir%\Microsoft.NET\Framework\<VersionNumber>\aspnet_regiis.exe
  -i
  %windir%\Microsoft.NET\Framework64\<VersionNumber>\aspnet_
  regiis.exe -i
  ```

- Meridian Enterprise can use an existing AutoVue server that has already been configured to work with Meridian Enterprise as described in Integrate Autovue With Meridian Products. Alternatively, another instance can be installed on a different server.
- Any firewall protecting the AutoVue server must allow inbound TCP traffic on port 80. Otherwise authentication or timeout errors can occur.
- The vaults that contain documents that will be viewed (by any client applications) must be published as PowerWeb locations as described in Creating a PowerWeb location.

Procedures

The following instructions can also be used to install AutoVue as a desktop deployment. In that case, the references to different computers apply to the same computer.

To install AutoVue:

1. Ensure that the server and client computers meet the hardware and software requirements described in the *Oracle AutoVue Client/Server Deployment Installation and Configuration Guide* and in *Installation Requirements* in the *Meridian Enterprise Administrator's Guide*.
2. Choose between two options:
   - If an existing installation of AutoVue will be used, skip to step 4.
   - Otherwise, perform step 3.
3. On the computer that will be the AutoVue server, install the AutoVue software using its respective Oracle setup program.

   If both the 2D and 3D versions will be used, each version must be installed on its own computer. Use the instructions for non-integrated installation in the *Oracle AutoVue*

Client/Server Deployment Installation and Configuration Guide. The following table lists the installation option responses that are adequate for integration with Meridian Enterprise.

Oracle AutoVue installation options

Option	Setting
Specify Installation Directory	Accept the default (`C:\Oracle\AutoVue`)
Select Install Set	**Standard**
Select Shortcut Folder	Accept the default (**Oracle AutoVue**)
Specify hostname or IP address for the AutoVue Server	Accept the default
AutoVue Server Authentication	**Configure Later**

Enabling SSL Communication	If you do not want to use the SSL protocol, select **Configure Later**.
	If you do want to use SSL:
	a. Select **Configure SSL with a CA certificate** and click **Next**.
	The **Select the CA certificate** file page appears.
	b. Select a valid CA certificate and click **Next**.
	The **Select the Identity JKS Keystore file** page appears.
	c. Click **Next**.
	A default file will be created as:
	`C:\oracle\autovue\bin\AutoVueIdentity.jks`
	The **Specify the Identity JKS Keystore password** page appears.
	d. Type a password and click **Next**.
	The password will be stored in the file:
	`C:\oracle\autovue\bin\jetty\etc\jetty-ssl.xml`
	e. Perform the rest of the steps described in Configure Viewing With SSL.

> **Note:**
> These settings configure the AutoVue server as a stand-alone application that can be used outside of Enterprise Server by opening the page at `http://<ServerName>/jVue/jVue.html`.

4. On the AutoVue computer, run the Meridian Enterprise setup program that contains the same AutoVue version as the installed version of AutoVue and install the **AutoVue Client/Server Integration** component.

   This will add the Accruent Connector to AutoVue and install a Accruent web service in the IIS default website. If the Meridian Enterprise web server is a separate computer, run the setup program there also.

5. On the Meridian Enterprise web server, test the web service by opening it in a browser with the following URL.

   `http://<ServerName>/BCWebService/BCWebService.BluePrintService.svc`

   A page titled **BluePrintService Service** appears if installation is correct to this point.

6. On the AutoVue server, open the file `StartServers.bat` in any text editor and verify that the paths are correct for your installation.

   By default, it is located in `C:\Oracle\AutoVue\bin`.

   By default, the Jetty application server, the AutoVue servlet, and the Accruent Connector servlet will be started automatically. If this fails due to system configuration or security issues, the server can be started manually by running `StartServers.bat`. Two command prompt windows and the **AutoVue Server** console window appear. If the last lines in the command prompt windows contain the text **INFO: Started** and the **Processes** boxes in the **AutoVue Server** window are green, the server started successfully. The windows must stay open but can be minimized. For more information about starting the servers automatically, see Start the Servers Automatically.

7. Choose between two options:

   - On the 64-bit desktop client (not PowerWeb) computers, set the registry values that are described in the following tables.
   - On the 32-bit desktop client computers, set the matching registry values in the `Wow6432Node` branch instead.

> **Note:**
> The values in the following settings are case-sensitive and must precisely match the folder and file names in your environment.

HKEY_LOCAL_MACHINE\SOFTWARE\Cyco\AutoManager View Control2

Value Name	Data Type	Value Data
BluePrintWSDL	String	URL of the Accruent web service that you installed in step 3. For example: **http://** ***<ServerName>*** **/BCWebService/BCWebService.BluePrintService.svc?wsdl**
DMSInfo	String	URL of the Accruent Connector that you installed in step 3. For example: **http://*<ServerName>*:8900/wsclient/servlet/DMS**. This setting should be the same as the **BlueCielo Connector URL** property used by PowerWeb.

HKEY_CURRENT_USER\SOFTWARE\Cyco\AutoManager Meridian\CurrentVersion\Client\Settings

Value Name	Data Type	Value Data
ClientServerWebView	DWORD	If this value is **1**, the client applications use the AutoVue viewer. If this value is **0**, the client applications use the locally installed viewers.

If you are installing AutoVue as a desktop deployment on one computer, also set the registry values that are described in the following table.

HKEY_LOCAL_MACHINE\SOFTWARE\Cyco\AutoManager View Control2

Value Name	Data Type	Value Data
AppletRootPath	String	Path to the AutoVue Java applets, for example, `C:\Oracle\AutoVue\bin\`.

Value Name	Data Type	Value Data
AutoVueServer	String	URL to the AutoVue rendering server, for example, `http://<ServerName>:5098/servlet/VueServlet`. If the rendering server software is installed on the local computer, the location of the AutoVue configuration file, for example, `direct//C:\Program Files (x86)\AutoVue\jVue20_0\bin\autovue.properties`. The path settings in `autovue.properties` must be valid for the local computer.
BCBeans	String	Path to the Accruent Java support libraries. By default, they are installed at: `C:\Program Files (x86)\Common Files\Cyco Shared\AV\AMViewXBeans.jar`.
JAVAVMDLL	String	Path to the Java virtual machine DLL for support of AutoVue, for example, `C:\Oracle\AutoVue\jre\bin\client\jvm.dll`.

8. To check whether the AutoVue servlet is working, open a web browser window to the following URL:

   `http://<ServerName>:5098/servlet/VueServlet`

   A page titled **VueServlet for AutoVue <*Version*>** should appear.

9. Users must enable the AutoVue viewer before it will become their default viewer.

   - Web client users must enable the **Use Oracle AutoVue for viewing documents** option on the **Preferences** page in PowerWeb as described in *Personal Preferences* in the *Meridian Enterprise User's Guide*.
   - Desktop client users must set the **AutoVueViewer** option first in viewer priority in the viewer options of Meridian Enterprise PowerUser as described in *Change Viewers* in the *Meridian Enterprise User's Guide*.

10. (Optional) Configure Meridian Enterprise to use the AutoVue server as described in Configure the Viewer Options.

11. Test AutoVue by opening a document in the client application.

    The AutoVue applet downloads from the web server and opens the selected document.

    To prevent the Java authentication dialog from appearing at the beginning of each viewing session, you may need to configure one or more of the following settings:

    - Add the fully qualified name of the AutoVue server to the **Local intranet** zone in the Internet Explorer security options on the client computers but do not add it to the **Trusted sites** list.

- Add the account name that is used for the application pool under which the web application is run (for example, PowerWeb or Meridian Explorer) to the **Act as part of the operating system** policy using the Local Group Policy Editor.
- Define an authentication level for **Network security: LAN Manager authentication level** using the Local Group Policy Editor. The setting cannot be **Not Defined**.
- On Windows Server 2003 and Windows XP computers, the account under which the **BCConnectorService** logs on should be changed from **Local System** to an account that has access to the website.

12. Install any applicable AutoVue updates and retest.

The following table lists the default TCP port numbers used by AutoVue:

TCP port numbers

Port	Description
1099 to 1104	Used by AutoVue Server
5099	Used by AutoVue Server
5098	AutoVue Server URL (in case the AutoVue Server Based View is configured)
8443	SSL AutoVue Server URL (in case the AutoVue Server Based View is configured)

Configure Viewing With SSL

If your organization uses Meridian Enterprise together with AutoVue from outside your firewall, you might want to secure network communications between the servers with the Secure Sockets Layer (HTTPS).

> **Note:**
> You will need a certificate from a known certificate authority in order to configure SSL.

For information about using Internet Information Server to perform this task, see the Windows documentation.

To configure viewing with SSL:

1. In Internet Information Services, if no SSL certificate has been installed yet, import or create a certificate.
2. For the website that contains the Meridian Enterprise application, bind the HTTPS protocol to the certificate that you created in step 1.
3. Open the `web.config` file of the Meridian Enterprise Server service in any text editor.

   By default, it is located in `C:\inetpub\wwwroot\BCEnterprise`.
4. In the **binding name="basicHttpBinding_BluePrint"** element, add a **<security mode>** element that is set to **Transport** as shown in the following example.

   ```
   <security mode="Transport">
   ```
5. If you imported or created a certificate in step 1, export it to a `.cer` file using the **Base-64 encoded X.509** format option.

   Otherwise, export the existing certificate. Do not export the private key. You may use any filename.
6. If you have not yet installed AutoVue, start the installation as described in Install Autovue.

   If AutoVue is already installed, restart the installation program and configure the **Enabling SSL Communication** option as described in Install Autovue.
7. Open a command prompt window in the `bin` folder of the Java Runtime Environment (for example, `C:\Program Files (x86)\Java\jre7\bin`).
8. Run the `keytool.exe` program to add the certificate file that you exported in step 4 to the Identity JKS Keystore file with the password that you created as described in Install Autovue, for example:

   ```
   keytool -import -v -trustcacerts -alias <ComputerName> -file
   <PathToCERFile> -keystore <PathToJKSFile> -keypass
   <JKSFilePassword> -storepass <JKSFilePassword>
   ```

9. Create a copy of `C:\oracle\autovue\bin\jetty\etc\jetty-ssl.xml` in the same folder and name it `jetty-ssl-DMS.xml`.
10. Open `jetty-ssl-DMS.xml` in any text editor and set the port number to the same as in the `web.config` file in step 3c, for example:

    ```
    <Set name="Port">8900</Set>
    ```

11. Comment out or remove the **DOCTYPE** declaration line as in the following example.

    ```
    <!--!DOCTYPE Configure PUBLIC "-//Mort Bay Consulting//DTD
    Configure//EN" "http://jetty.mortbay.org/configure.dtd"-->
    ```

    If this line is left active, the **BCConnectorService** service may stop responding.
12. Open the file `StartDMS.bat` in any text editor and modify the Jetty startup.

    Specify the `jetty-ssl-DMS.xml` file that you created in step 8 at the end of the launch line, for example:

    ```
    "%AUTOVUE_ROOT%\jre\bin\java.exe" ... "%JETTY_DIR%\etc\jetty_
    dms.xml" "%JETTY_DIR%\etc\jetty-ssl-DMS.xml"
    ```

13. Stop the AutoVue server and the BCConnector service processes and restart them with `StartDMS.bat`.

    The AutoVue viewer should now work over the HTTPS protocol. You can confirm this by viewing a document in Meridian Enterprise and confirming that the protocol shown in the browser address bar is **https**, not **http**.

Increase Memory Allocation For Large Documents

AutoVue might display some large documents slowly or not at all using the default Java Runtime settings. In such cases, the default memory allocation settings can be configured.

No Error

If no error is shown:

1. On each client computer that exhibits this problem, in Windows **Control Panel**, double-click **Java** .

   The **Java Control Panel** dialog box appears.

2. Click the **Java** tab.

   The **Java Runtime Environment Settings** page appears.

3. Click **View**.

   The **Java Runtime Environment Settings** dialog box appears.

4. On the **User** page, type values for the **-Xms** and **-Xmx** parameters in the **Runtime Parameters** column.

   We recommend entering **-Xms256m -Xmx256m** as a starting point for your tests. This allocates a minimum and maximum of 256 MB of memory for the Java Runtime Environment in which AutoVue runs.

   These memory settings will be used for all Java applications that run on the same computer and might not be optimal for some applications.

   For information about these options, see java - the Java application Starter on the Oracle website.

5. Click **OK**.

Error Getting DMS Response

If an error message that states 'Error getting DMS response' is shown:

- Add the **-Xmx** parameter to the Java virtual machine launch command in the `StartServers.bat` file similar to the following example.

  By default, it is located in `C:\Oracle\AutoVue\bin`.

  ```
  "%AUTOVUE_ROOT%\jre\bin\java.exe" -Xmx1024m <Other Parameters>
  ```

Prevent Timeouts

In a default configuration, if AutoVue is inactive for a short time, it can time out. This can cause delays when the next user views a document. To prevent timeouts and delays, you can configure the Jetty application server and the Accruent web service to not time out.

> **Note:**
> If your environment uses a different Java application server than Jetty, refer to that server's documentation for how to configure the corresponding settings.

To prevent viewer timeouts:

1. On the AutoVue server, open the file `Jetty.xml` in any text editor.

   By default, it is located in `C:\Oracle\AutoVue\bin\jetty\etc.`
2. Find and change the **maxIdleTime** setting to amount of time that you want the viewer to remain running before it times out, for example, 50000 (8.33 hours).
3. From the same location, open the file `Jetty_DMS.xml` in any text editor and change the setting with the same name to the same value.
4. In IIS Manager on the web server, configure the application pool that you specified during installation as described in Install Autovue.
5. In the advanced settings of the **Process Model** group, set the **Idle Time-out** setting to the equivalent number of minutes for the values that you set for the **maxIdleTime** settings.

Prevent Viewer Reloads

In Meridian Enterprise PowerUser, after the AutoVue applet has been started for the first time, it is cached and reused during the same session when viewing subsequent documents. Reusing the applet in PowerWeb requires a specific configuration. Without this configuration, the viewer applet will be reloaded before viewing each document, which can take considerable time. With this configuration, the viewer applet will only be loaded at the first viewing during the current session.

To prevent viewer reloads:

1. Set the **UseFrames** registry value to **1** on the Meridian Enterprise web server as described in HKEY_LOCAL_MACHINE\Software\Cyco\AutoManager Meridian\CurrentVersion\WebLink in the *Meridian Enterprise Administrator's Guide*.
2. Each user must enable the **Use Oracle AutoVue Cient/Server deployment for viewing documents** option in their personal preferences as described in *Personal Preferences* in the *Meridian Enterprise User's Guide*.

Start the Servers Automatically

The default method of starting the Jetty application server, the AutoVue servlet, and the Accruent Connector servlet is by manually running `StartServers.bat` whenever the AutoVue application server is restarted as described in Install Autovue. The servers can be started automatically using one of the following methods.

Start Servers Upon User Login

To start the servers automatically when Windows boots and a user account logs on:

1. Create a shortcut to `StartServers.bat` in the computer's **Startup** group of the Windows **Start** menu.
2. Enable the **Run as administrator** option in the **Advanced Properties** dialog box of the shortcut.

Start Servers Upon Windows Boot

> **Note:**
> - `StartServers.bat` is not necessary in this configuration.
> - On Windows Server 2003, the **BCConnectorService** might stop when the user account logs off.
>
>   To work around this issue:
>   1. In the **Services** Control Panel applet, open the **Properties** dialog box for the **BCConnectorService** service.
>   2. On the **Recovery** tab, set the **First failure** option to **Restart the Service**.
>   3. Click **OK**.

To start the servers automatically when Windows boots without a user account logged on:

1. Configure AutoVue Server to run as a service.

   You do this by running the following in a command prompt window:

   ```
   jvueserverx -install
   ```
2. Configure AutoVue Server to automatically start Jetty when it launches.

   You do this by opening the file `jvueserver.properties` in any text editor and uncommenting the lines that begin with the following:

```
#servlet-engine.classpath=
#servlet-engine.jre=
#servlet-engine.cmdline=
```

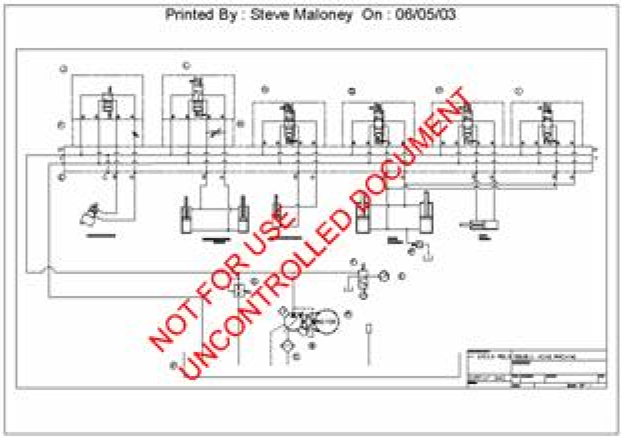
3. In **Services** control panel, set the **Startup Type** option of the **BCConnectorService** and the **Oracle AutoVue Server** services to **Automatic**.

   If the services will not be used for an extended period, we recommend that they be set to **Disabled**.

Configure Watermark Printing

You can configure watermark text to appear on hard copies made with the Meridian viewer, similar to the following figure. These watermarks are typically used to describe the circumstances of a document, such as who has printed the document or when it was printed. For this reason, they may be described as dynamic watermarks.

To configure static watermarks related to the content of a document, see Configure Rendition Watermarks.



This can be useful to indicate unapproved drawings, expiration dates, time stamps, and so on. You can configure the following characteristics of watermarks:

- Text, which can include property values
- Font, size, color, and transparency of the text
- Position on the printed page and angle of the text
- Title text to appear as the header or footer of the printed page

The watermark options are set with VBScript in the **DraftPrint_SetWaterMark** event procedure because it is invoked immediately before printing occurs. For more information on customizing event procedures, see the *Document Generic Events* article in the *Meridian Enterprise VBScript API Reference Guide*.

Note:

- The **DraftPrint_SetWaterMark** event procedure performs the same function for AutoVue in Meridian Explorer as the **DocGenericEvent_BeforePrint** procedure performs for AutoVue in Meridian Enterprise. The procedures can configure the same watermarks or they can configure different watermarks.
- These watermarks appear on hard copy output from the viewer and are independent of watermarks that can be added to renditions by Publisher.

- The settings **Enable draft print** and **Enable watermarks on draft print hardcopies** must be set to **True** as described in Configure the Application Options.
- These watermarks can be rotated to match the page rotation of specific printers using these registry values described in the *Meridian Enterprise Administrator's Guide*.

```
HKEY_CURRENT_USER\Software\Cyco\AutoManager View
Control2\Settings\AVLandscape
HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Cyco\AutoManager View
Control2\Settings\AVLandscape
```

Watermarks use the **Client.Viewer.Watermark** properties described in the following table. You do not have to use all of the properties, only the ones necessary to produce the results you want.

Watermark options

Property	Type	Description
Angle	Long	The angle of the watermark text in degrees.
Color	String	The color of the watermark text, specified as an **AS_WATERMARK_COLORS** constant.
Font	String	The font of the watermark text. Can be any installed Windows font.
FrameWidth	Long	The width of a line framing the printed page.
Size	Long	The font size of the watermark text in points.
Style	Long	The position of the watermark text on the printed page using one or more **AS_WATERMARK_STYLES** constants. To combine style options, use the **Or** operator.
Text	String	The watermark text to print.
TitleFont	String	The font of the title text. Can be any installed Windows font.
TitleFontSize	Long	The font size of the title text in points.
TitleStyle	Long	The position of the title text on the printed page using one or more **AS_WATERMARK_TITLESTYLES** constants. To combine style options, use the **Or** operator. You can specify only one title. You cannot print one title in the header and another title in the footer.
TitleText	String	The title text to print. Title text is always printed in black.
Transparency	Long	The transparency of the watermark text in percent.

Following is an example event procedure that incorporates all of the watermark properties and produces a watermark, frame, and title similar to those in the preceding figure.

Note:
vbCrLf can only be used with TitleText, not with Text.

```
Sub DraftPrint_SetWaterMark()
    Client.Viewer.WaterMark.Angle = 45
    Client.Viewer.WaterMark.Font = "Arial"
    Client.Viewer.WaterMark.Size = 36
    Client.Viewer.WaterMark.Text = "NOT FOR USE"
    Client.Viewer.WaterMark.TitleFont = "Arial"
    Client.Viewer.WaterMark.TitleFontSize = 10
    Client.Viewer.WaterMark.TitleStyle = AS_WMTS_CENTRED Or AS_WMTS_
HEADER
    Client.Viewer.WaterMark.TitleText = "Printed by: " &
User.FullName & " on: " & DateValue(Today)
End Sub
```

Note:
When watermark properties are processed by AutoVue, the following limitations apply:

- Values for **Angle** other than 0, 90, 180, and 270 are converted to diagonal
- All values for **Transparency** are ignored and watermarks are printed semi-transparent
- All values of **Style** that specify positioning are ignored and watermarks are centered on the page
- Frames (**AS_WMS_DRAWFRAME** constant) are not supported
- **TitleText** is converted to header text unless it includes the special markup tags `<H></H>` that enclose the header text and `<F></F>` that enclose the footer text.

Integrate Autovue With Accruent Products

A single AutoVue deployment can be integrated with several Accruent products. Each product has its own configuration options that determine how AutoVue can be used in the product. In large or complex environments, deciding specifically how to configure each product can seem overly complicated.

The following table consolidates this information in one place for easier reference.

AutoVue integration configurations

Deployment Type	Installation Requirement	Meridian Enterprise PowerUser Configuration	Meridian Enterprise PowerWeb Configuration	Meridian Explorer Configuration
Client/server	Clients — none Server — separate AutoVue installation program and **AutoVue Client/Server Integration** component in Meridian Enterprise server setup See *Installing AutoVue* and *Installing the server components* in the *Meridian Enterprise Administrator's Guide*.	Set **ClientServerWebView** and related registry settings and set **AutoVueViewer** first in priority in viewer options See Install Autovue and *Change Viewers* in the *Meridian Enterprise User's Guide* .	Enable **Use Oracle AutoVue Client/Server deployment to view documents** client option as described in *Personal Preferences* in the *Meridian Enterprise User's Guide*.	Set **Viewer Options** of the repository as described in Configure the Viewer Options. Set **Viewer options** per view as described in Create And Edit Detail Page Layouts.
Desktop	Client setup default See *Installing the client components* in the *Meridian Enterprise Administrator's Guide*.	Set **AutoVueViewer** first in priority in viewer options. See *Change Viewers* in the *Meridian Enterprise User's Guide*.	Default	

Install Components On a Windows File Server

Some components of the Publisher must be installed on the Windows file server from which documents will be published to the destination system.

For information about the security rights required for the Windows file system publishing service, see Security Requirements.

> **Note:**
> Install the **Accruent file publishing service** component as described in Install Meridian Enterprise Server.

To install components on a Windows file server:

1. Copy the following files from the Meridian Enterprise Server computer to same location on the Windows file server:

   ```
   C:\Program Files\BC-Meridian\Enterprise Server\WinFSService.exe
   C:\Program Files\BC-Meridian\Enterprise
   Server\WinFSService.exe.config
   ```

2. Open a **Command Prompt** window in the folder where you copied the files.
3. Install the service assembly by executing the following command line:

   ```
   C:\Windows\Microsoft.NET\Framework\v2.0.50727\Installutil.exe
   WinFSService.exe
   ```

4. On 64-bit computers, also run the following command line:

   ```
   C:\Windows\Microsoft.NET\Framework64\v2.0.50727\Installutil.exe
   WinFSService.exe
   ```

5. Assign an account with permissions to the monitored folders and to the Meridian Enterprise Server destination folders to the **Log On** option of the service properties in **Control Panel**.

   > **Note:**
   > After installation, the service is not started automatically by default. To do so, change its **Startup type** in the **Services** control panel from **Manual** to **Automatic** and manually start the service, if necessary. If the service will not be used for an extended period, we recommend that you set it to **Disabled**.

6. Continue by configuring the service as described in Configure the Accruent File Publishing Service.

Configure the Accruent File Publishing Service

Configuring the Accruent File Publishing Service specifies where the service will monitor for new files, how often it monitors, and where and how it will register the files in the Publisher database for publishing.

To configure the Accruent File Publishing Service:

1. On the computer where you copied the files as described in Install Components On a Windows File Server, locate the file `WinFSService.exe.config` and open it in any text editor.
2. Locate and configure the settings described in the following table:
3. Save your changes and close the file.
4. Start the Accruent File Publishing Service as described in Run the Accruent File Publishing Service.

Accruent File Publishing Service settings

Setting	Description
PublisherServicesAddress	Set the **<value>** element to the Publisher web services URL, for example, **http://<*ServerName*>/BCEnterprise**.
MonitorSecondsPeriod	Set the **<value>** element to the frequency in seconds at which you want the service to scan the folder for changed files. The default value is 60 seconds.
PreventDuplicate	Set the **<value>** element to True (default) to check for duplicate document registrations before adding a new one. If any duplicates found, the document will not be registered again.
FailOnDuplicate	Set the **<value>** element to True to continue a batch operation if any duplicate document registration is found. The default is False.
CommitSize	Set to the number of documents to send to the server as a single batch. If set to 0, all documents are sent in one batch. The default value is 10.

Setting	Description
MonitorFolders	The **<value>** element is a collection (**ArrayOfString** element) of **<string>** elements that each specify a job name (not **Display Name**) and a corresponding folder to monitor. Specify the value using the syntax *<JobName>*;*<FolderPath>*, for example, **45E2E0;D:\ToPublish**. You can find the job name for each publishing job in its definition. You may specify multiple job name/folder pairs. One job name may be associated with multiple folders and one folder may be associated with multiple job names. If the publishing job has multiple source or destination systems, the following syntax must be used to specify the ordinal numbers of the systems to use. The numbers are the one-based index of the systems as defined in the publishing job. **SourceNumber{JobName}TargetNumber;FolderPath** **SourceNumber** is the index of the publishing source. It is required if the job has multiple sources configured. **TargetNumber** is the index of the publishing destination. If omitted, then the files will be registered for all destinations. Examples: **JobName;C:\TEMP\Source** – compatible with prior Publisher versions. The job must have a single source. If multiple targets are defined, then the files are published to all destinations. **2{JobName}1;C:\TEMP\Source** – publish from source #2 to destination #1 **JobName}1;C:\TEMP\Source** – publish to destination #1. The job must have a single source **2{JobName;C:\TEMP\Source** – publish from source #2 to all destinations

Following is a simple example of these settings:

```
<setting name="PublisherServicesAddress" serializeAs="String">
  <value>http://nkv/Publisher/</value>
</setting>
<setting name="MonitorSecondsPeriod" serializeAs="String">
  <value>60</value>
</setting>
<setting name="PreventDuplicate" serializeAs="String">
  <value>True</value>
</setting>
<setting name="MonitorFolders" serializeAs="Xml">
  <value>
    <ArrayOfString xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance"
     xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <string>45E2E0;D:\ToPublish\</string>
```

```
    </ArrayOfString>
  </value>
</setting>
```

Run the Accruent File Publishing Service

The Accruent File Publishing Service can run either automatically as a service or from a command line for troubleshooting purposes. When the Accruent File Publishing Service is installed as described in Install Components On a Windows File Server, it is installed as a service. You can control the service using the **Services** node in Server Manager like any other service.

> **Note:**
> When the Accruent File Publishing Service is run as a service but it is not being used, the service should be disabled to prevent unnecessary communications with the Publisher database and entries in the **BC Application Events** event log of the computer.

To run the service from a command line:

1. From the Windows **Start** menu, open a **Command Prompt** window.
2. Change the current directory to the location of `WinFSService.exe`.

   By default, it is located in the folder `C:\Program Files\BC-Meridian\Enterprise Server`.
3. Run `WinFSService.exe`.

   The service begins to monitor the folders specified in the file `WinFSService.exe.config` as described in Configure the Accruent File Publishing Service. When changed files are detected in the monitored folders, they are registered for publishing. The output of each step of this process will appear in the **Command Prompt** window.
4. To stop the service in the **Command Prompt** window, press any key.

   > **Note:**
   > Any errors that occur during processing can be viewed in the **BC Application Events** event log of the computer.

Install Components On a SharePoint Server

A SharePoint server can act as a publishing destination, source, or both.

If the SharePoint server will be a destination of published documents, the publishing job and the Meridian Enterprise vault require special configuration. This causes documents that have been published to SharePoint and then are renamed in the vault and republished to become versions of the original document with the new name in SharePoint and not create duplicate documents.

Configure a SharePoint Destination

To configure a SharePoint destination:

1. In Administration Console, enable the **Enable Meridian script events** option of the publishing job that will publish to SharePoint as described in Configuring the Publishing Options.
2. In Meridian Enterprise Configurator, create a custom property in the **Document** property set named **SPdestDocId** to store the SharePoint document ID.
3. In Meridian Enterprise Configurator, add the following event handlers to the VBScript block of the vault:

```
Function PublisherSourceEvent_BeforePublish(destType,
destAddress, destDocId, destDocPath, destDocName,
publishOptions)
 PublisherSourceEvent_BeforePublish = Array
(Document.SPdestDocId)
End Function

Sub PublisherSourceEvent_AfterPublish(destType, destAddress,
destDocId, publishOptions)
 Document.SPdestDocId = destDocId
End Sub
```

For more information about using Meridian Enterprise Configurator, see the *Meridian Enterprise Configuration Guide* .

If the SharePoint server will be a source of published documents, some components of Publisher must be installed there. The components are provided as a solution package that is installed using a Windows PowerShell script. Therefore, PowerShell must be installed if it is not included with the installed version of Windows.

After installation, the solution package will be visible on all sites of the same SharePoint farm but will only work on the site that is specified in the deployment script or typed manually during deployment.

> **Note:**
> Install the **Microsoft SharePoint solution** component as described in Install Meridian Enterprise Server.

Install Components on a Sharepoint Source Server

To install components on a SharePoint source server:

1. Copy the following files from the Meridian Enterprise Server computer to the same location on SharePoint server:

   ```
   C:\Program Files\BC-Meridian\Enterprise
   Server\BlueCieloECM.Publisher.SharePointUI.wsp
   ```

   ```
   C:\Program Files\BC-Meridian\Enterprise
   Server\BlueCieloECM.Publisher.SharePointUI_Deploy.ps1
   ```

   ```
   C:\Program Files\BC-Meridian\Enterprise
   Server\BlueCieloECM.Publisher.SharePointUI_Remove.ps1
   ```

2. By default, when the solution package is deployed, you will be prompted for the name of the SharePoint site collection where you want to deploy it.

   To modify the script to specify the site collection URL instead:

   a. Open `BlueCieloECM.Publisher.SharePointUI_Deploy.ps1` in any text editor.

   b. Find the definition of the **$webapplication** variable and edit its value to the URL of the SharePoint site collection where you want to deploy the solution package.

   c. Save your changes and close the script.

      The script `BlueCieloECM.Publisher.SharePointUI_Remove.ps1` can be used to remove the solution package.

   d. Repeat steps a to c with the script to specify the SharePoint site collection.

3. Open the SharePoint Management Shell and change the working path to the location of the script file.

4. Deploy the solution package by running the deployment script using the following command:

   ```
   .\BlueCieloECM.Publisher.SharePointUI_Deploy.ps1
   ```

5. Open the SharePoint site where you deployed the solution package.

   The **Home** page appears.

6. On the **Site Actions** menu, select **Site Settings**.

   The **Site Settings** page appears.

7. In the **Site Collection Administration** column, click **Site collection features** .

   The **Site Collection Features** page appears.
8. Confirm that **BlueCieloECM.Publisher.SharePointUI** is listed.
9. If the **Status** column does not contain **Active**, click **Activate**.
10. Continue by configuring the system link as described in Configure a SharePoint Server.

Remove Components from a Sharepoint Source Server

To remove the components from a SharePoint source server:

1. Open the SharePoint Management Shell and change the working path to the location of the script `BlueCieloECM.Publisher.SharePointUI_Deploy.ps1`.
2. Remove the solution package by running the removal script using the following command:

   ```
   .\BlueCieloECM.Publisher.SharePointUI_Remove.ps1
   ```

Modified and Modified By field behavior

There are two ways that the **Modified** and **Modified By** fields in Sharepoint can be populated.

- By default, these fields are populated with the date and time of publishing and the Publisher account.
- When the **UpdateSharePointModifiedFields** setting is set to **true**, these fields are populated with the values from Meridian.

To configure this setting:

1. Navigate to **C:\ProgramData\BlueCieloECM\EnterpriseServices\PublishingCapability.dat**

   Learn more about the settings in the PublishingCapability.dat file.
2. Add the following parameter to the file:

   ```
   "UpdateSharePointModifiedFields":true
   ```

3. Save the file.

Configure a SharePoint Server

After the Publisher components have been installed as described in Install Components On a SharePoint Server, the end user publishing tools must be configured.

To configure the end user publishing tools inside SharePoint:

1. Open the SharePoint site where you deployed the solution package.

   The **Home** page appears.
2. On the ribbon in the **BC Publisher** tab, click **Settings**.

   The **Publisher Settings** dialog box appears.
3. Click options or type values using the descriptions in the following table.
4. Click **OK**.

> **Note:**
> These settings are only available to SharePoint site administrators.

Publisher Settings options

Option	Description
BC Publisher service address	The URL of the Publisher web services, for example, **http://<*ServerName*>/BCEnterprise/**
Prevent duplicates	If enabled, does not create a duplicate publishing job if one for the same document already exists in the queue.
User name	The account name with which to access the Publisher web service.
Password	The password for the specified user account.

Install Components On an Accruent Project Portal Server

For information about the security rights required for the Accruent Project Portal publishing service, see Security Requirements.

> **Note:**
> Install the **Accruent Project Portal publishing service** component as described in Install Meridian Enterprise Server.

To install the Accruent Project Portal publishing service:

1. Locate the following files on the Meridian Enterprise Server computer:

```
C:\Program Files\BC-Meridian Enterprise
Server\BlueCieloECM.Publisher.KronodocConnector.dll
C:\Program Files\BC-Meridian Enterprise
Server\BlueCieloECM.Publisher.Client.dll
C:\Program Files\BC-Meridian Enterprise
Server\BluecieloECM.Publisher.Client.XmlSerializers.dll
C:\Program Files\BC-Meridian Enterprise
Server\BluecieloECM.Publisher.ServiceContract.dll
C:\Program Files\BC-Meridian Enterprise Server\ProjectPortal.exe
C:\Program Files\BC-Meridian Enterprise
Server\ProjectPortalService.exe.config
```

2. Open a **Command Prompt** window in the folder where the files reside.
3. Install the service assembly by executing the following command line:

```
C:\Windows\Microsoft.NET\Framework\v2.0.50727\Installutil.exe
ProjectPortalService.exe
```

4. On 64-bit computers, also run the following command line:

```
C:\Windows\Microsoft.NET\Framework64\v2.0.50727\Installutil.exe
ProjectPortalService.exe
```

> **Note:**
> After installation, the service is not started automatically by default. To do so, change its **Startup type** in the **Services** control panel from **Manual** to **Automatic** and manually start the service, if necessary. If the service will not be used for an extended period, we recommend that it be set to **Disabled**.

5. Continue by configuring the service as described in Configure the Accruent Project Portal Publishing Service.

Configure the Accruent Project Portal Publishing Service

Configuring the Accruent Project Portal Publishing Service specifies where the service will monitor for new files, how often it monitors, and where and how it will register the files in the Publisher database for publishing.

To configure the Accruent Project Portal File Publishing Service:

1. On the computer where you copied the files as described in Install Components On an Accruent Project Portal Server, locate the file `ProjectPortalService.exe.config` and open it in any text editor.
2. Locate and configure the settings described in the following table:
3. Save your changes and close the file.
4. (Optional) To configure the service to communicate using Secure Sockets Layer (SSL):
    a. Add an **https** binding to the **Site Bindings** settings of the web site in IIS Manager.
    b. Enable the **Require SSL** option in the **SSL Settings** of the web application in IIS Manager.
    c. Locate the file `Web.config` for the web site in Windows Explorer and open it in any text editor.
    d. Locate the setting **binding name="Binding_ES"** and set the **security mode** setting to **Transport** like in the following example:

    ```
    <binding name="Binding_ES" closeTimeout="00:10:00"
    openTimeout="00:01:00" receiveTimeout="00:50:00"
      sendTimeout="00:50:00" messageEncoding="Text"
    maxReceivedMessageSize="2147483647">
      <!--
        HTTPS: security mode = Transport
        HTTP: security mode = TransportCredentialOnly
      -->
      <security mode="Transport">
        <transport clientCredentialType="Windows" realm="" />
      </security>
    </binding>
    ```

    e. Save and close the file.
5. Start the Accruent Project Portal Publishing Service as described in Run the Accruent Project Portal Publishing Service.

Accruent Project Portal Publishing Service settings

Setting	Description
PublisherServicesAddress	Set the **<value>** element to the Publisher web services URL, for example, **http://<*ServerName*>/BCEnterprise**.
MonitorSecondsPeriod	Set the **<value>** element to the frequency in seconds at which you want the service to scan the folder for changed files. The default value is 60 seconds.
PreventDuplicate	Set the **<value>** element to True (default) to check for duplicate document registrations before adding a new one. If any duplicates found, the document will not be registered again.
CommitSize	Set the **<value>** element to the number of documents to send to the server as a single transaction. If the values equals 0, all documents in the batch are sent as one transaction. The default value is 10.
FailOnDuplicate	Set the **<value>** element to True to continue a batch operation when a duplicate task is found. The default value is False.

Setting	Description
MonitorSources	The **<value>** element is a collection (**ArrayOfString** element) of **<string>** elements that each specify a job name and a starting ID to monitor. Specify the value using the syntax <*JobName*>;<*StartID*>, for example, **45E2E0;0**. You can find the job name for each publishing job in its definition. You may specify multiple job name/starting ID pairs. One job name may be associated with multiple folders and one folder may be associated with multiple job name . If the publishing job has multiple source or destination systems, the following syntax must be used to specify the ordinal numbers of the systems to use. The numbers are the one-based index of the systems as defined in the publishing job. **SourceNumber{JobName}TargetNumber;FolderPath** • **SourceNumber** is the index of the publishing source. It is required if the job has multiple sources configured. • **TargetNumber** is the index of the publishing destination. If omitted, then the files will be registered for all destinations. Examples: • **JobName;C:\TEMP\Source** — compatible with prior Enterprise Server versions. The job must have a single source. If multiple targets are defined, then the files are published to all destinations • **2{JobName}1;C:\TEMP\Source** — publish from source #2 to destination #1 • **JobName}1;C:\TEMP\Source** — publish to destination #1. The job must have a single source • **2{JobName;C:\TEMP\Source** — publish from source #2 to all destinations

Following is a simple example of these settings in `ProjectPortalService.exe.config`:

```
  <userSettings>
    <BlueCieloECM.Publisher.KronodocService.Properties.Settings>
      <setting name="MonitorSources" serializeAs="Xml">
        <value>
          <ArrayOfString xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance"
            xmlns:xsd="http://www.w3.org/2001/XMLSchema">
            <string>FC1A22;0</string>
            <string>1E9967;0</string>
          </ArrayOfString>
        </value>
      </setting>
    </BlueCieloECM.Publisher.KronodocService.Properties.Settings>
  </userSettings>
```

```
<applicationSettings>
  <BlueCieloECM.Publisher.KronodocService.Properties.Settings>
    <setting name="PublisherServicesAddress" serializeAs="String">
      <value>http://localhost/Publisher/</value>
    </setting>
    <setting name="MonitorSecondsPeriod" serializeAs="String">
      <value>60</value>
    </setting>
    <setting name="PreventDuplicate" serializeAs="String">
      <value>True</value>
    </setting>
  </BlueCieloECM.Publisher.KronodocService.Properties.Settings>
</applicationSettings>
```

Run the Accruent Project Portal Publishing Service

The Accruent Project Portal Publishing Service can run either automatically as a service or from a command line for troubleshooting purposes. When the Accruent Project Portal Publishing Service is installed as described in Install Components On an Accruent Project Portal Server, it is installed as a service. You can control the service using the **Services** node in Server Manager like any other service.

> **Note:**
> When the Accruent Project Portal Publishing Service is run as a service but it is not being used, the service should be disabled to prevent unnecessary communications with the Publisher database and entries in the **BC Application Events** event log of the computer.

To run the service from a command line:

1. From the Windows **Start** menu, open a **Command Prompt** window.
2. Change the current directory to the location of `ProjectPortalService.exe`.

   By default, it is located in the folder `C:\Program Files\BC-Meridian Enterprise Server`.
3. Run `ProjectPortalService.exe`.

   The service begins to monitor the folders specified in the file `ProjectPortalService.exe.config` as described in Configure the Accruent Project Portal Publishing Service. When changed files are detected in the monitored folders, they are registered for publishing. The output of each step of this process will appear in the **Command Prompt** window.
4. To stop the service in the **Command Prompt** window, press any key.

   > **Note:**
   > Any errors that occur during processing can be viewed in the **BC Application Events** event log of the computer.

Meridian Enterprise Server Clusters

In environments that place high demands on publishing renditions, multiple Meridian Enterprise Server computers can be configured to act as one system to improve rendering performance and to simplify the configuration. Clustering provides no benefits for other system functions such as repository performance.

> **Note:**
> - Meridian Enterprise Server clustering does not improve performance appreciably for publishing jobs that do not perform document rendering.
> - Each Meridian Enterprise Server computer in the cluster will claim an appropriate license.

You should consider Meridian Enterprise Server clustering when:

- More than one rendering module will be used for many documents. Each of the rendering modules can be configured on a separate Meridian Enterprise Server computer dedicated to that rendering module.
- Significant numbers of large documents will be rendered with different rendering modules. Each of the rendering modules can be configured on a separate Meridian Enterprise Server computer dedicated to that rendering module.
- Only modest hardware resources are available for one Meridian Enterprise Server computer but multiple computers are available. Multiple Meridian Enterprise Server computers can be configured with the same rendering modules and groups of users can be assigned different publishing jobs that specify which Meridian Enterprise Server computer to process their jobs. This effectively limits the maximum load on any one Meridian Enterprise Server computer.
- Large document renditions must be available as soon as possible after they are submitted for rendering. Each of the rendering modules can be configured on a separate Meridian Enterprise Server computer dedicated to that rendering module. Alternatively, multiple Meridian Enterprise Server computers can be configured with the same rendering modules and groups of users can be assigned different publishing jobs that specify which Meridian Enterprise Server computer to process their jobs.

For example, if publishing job A specifies the AutoCAD rendering module and job B specifies the Inventor rendering module and only one Meridian Enterprise Server computer is configured, rendering many large files can take considerable time and place a high demand on the hardware resources as AutoCAD and Autodesk Inventor are repeatedly and alternately started to perform rendering.

Meridian Enterprise Server supports clustering by allowing each Meridian Enterprise Server computer in the cluster to run specific publishing jobs. All Meridian Enterprise Server computers in the cluster share the same publishing database and Publisher Queue. One Meridian Enterprise

Server computer in the cluster, called the *primary*, hosts the Meridian Enterprise Server web service that delegates publishing jobs to the other computers, called *nodes*, for rendering. The web services on the nodes are not used. The primary Meridian Enterprise Server computer can also act as a node of itself and also perform rendering.

In the preceding example, all client computer job submissions, queue management, logging, and related functions are processed by the Meridian Enterprise Server primary node. Jobs that specify the node where the AutoCAD rendering module is installed (job A in the example) run there. Jobs that specify the node where the Autodesk Inventor rendering module is installed (job B in the example) run there, and so on for additional job definitions. Each node runs its jobs asynchronously from the other computers, thereby allowing parallel rendering. Each publishing job can specify the same or a different rendering module.

> **Note:**
> Meridian does not perform load balancing, also known as pooling, between the computers in the cluster. This means that the Meridian Enterprise Server primary node cannot delegate publishing jobs to the next available node on a first-come, first-served basis. All job submissions for the same job definition will be executed on the node where the rendering module is installed regardless of how many other nodes are available. For this reason, if you want to distribute jobs roughly equally between multiple nodes, the jobs must be divided among separate nodes or divided among Meridian Enterprise Server users (instruct groups of users to select different jobs in Meridian Enterprise).

Configure a Meridian Enterprise Server Cluster

Configuring a Meridian Enterprise Server cluster is very similar to configuring a single Meridian Enterprise Server computer except that some of the tasks are performed on all of the computers in the cluster.

To configure an Meridian Enterprise Server cluster:

1. Install Meridian Enterprise Server on each computer in the cluster as described in Install Meridian Enterprise Server.

   Of the Publisher components, you may install only what will be used by that computer.

   For example, on the rendering nodes, install only the components that are required for the jobs that will be processed by that node:

   - Meridian Enterprise Server
   - Rendering modules
   - Post-rendering tools
   - Native applications used by any rendering modules. Exclude the website components and system links on the secondary nodes, they aren't needed.
2. Set the Meridian Enterprise Server service account on each node to the same user.

   This Windows user account must also be associated with a Meridian Enterprise user account as described in Create And Edit User Accounts.
3. Configure Meridian Enterprise Server on the primary node as described in Create the Configuration Database.
4. Register the nodes in the cluster as described in View And Edit the Connectivity Settings.
5. Create and configure all of the publishing jobs on the primary node that will be processed by any node in the cluster.

   In the source system options of the publishing job, in the **Computer** option, specify the name of the node where the job should be run. For more information about creating and editing publishing jobs, see Create a Publishing Job.

   > **Note:**
   > To dedicate one node to a specific vault, create a publishing job with only that vault as the source and assign the node to that job.
6. Ensure that the server for the configuration database can accept remote connections.

   The cluster nodes must be able to access the database. If they cannot, Publisher will generate the error **Database has not been initialized**. For example, remote connections are disabled by default in Microsoft SQL Server Express.

- In Microsoft SQL Server Management Studio, in the **Server Properties** dialog box, on the **Connections** page, enable **Allow remote connections to this server**.
- In SQL Server Configuration Manager:
    a. In the **SQL Server Services** branch, in the **SQL Server Browser Properties** dialog box, on the **Log On** page, enter appropriate account credentials.
    b. On the **Service** page, set the **Start Mode** option to **Automatic**.
- In SQL Server Configuration Manager, in the **SQL Server Network Configuration** branch, for **Protocols for *<InstanceName>***, enable **TCP/IP** and **Named Pipes**.
- If Windows Firewall is enabled on the database server computer, create an exception rule that allows communication by `sqlservr.exe` and by `sqlbrowser.exe`.

Install Components On Client Computers

Depending on the deployment of Meridian Explorer, PowerWeb might be required on the client computers for viewing documents in Meridian Explorer. It is also responsible for draft printing, document export, and for downloading batches of documents, referenced documents, hybrid parts, and redlines. The most recent version of the installation package can be downloaded from the Meridian Cloud homepage. Run the **Meridian Client for Windows** setup program on each Meridian Explorer client computer.

> **Note:**
> When PowerWeb is not installed on a client computer, Meridian Explorer will not display a document viewer pane, but will instead display a link to the PowerWeb download location. This URL can be changed to a location on your organization's intranet by editing the **AccruentViewerDownloadUrl** setting as described in Configure the Viewer Options.

If users will not need the download features listed above but only need to view documents, an alternative to installing PowerWeb is to install AutoVue Client/Server as described in Autovue and to configure Meridian Explorer to use that viewer as described in Configure the Viewer Options.

Deploy Standard Preference Settings

If necessary, you can deploy a standard set of preference settings for Meridian Explorer users. The settings are overridden by the user's own selections that are stored in their personal profile file on the Meridian Enterprise Server server. By default, each user's preferences are stored in a file named `C:\ProgramData\BlueCieloECM\Hyperion\WidgetStateCollection.`*`<Domain name>`*`-`*`<UserName>`*`.dat`. The files can also be backed up for safekeeping.

To deploy standard preference settings:

1. Identify a user's profile file that you want to use as a template for the other users.

   Which user you choose is not important except that the preferences for that user will become the preferences of all other users to which you copy the template.
2. Log in to Meridian Explorer with that account.
3. Set all the preferences to meet your requirements as described in the *Configure personal preferences* article in the *Meridian Explorer User's Guide*.
4. Log out.
5. Make copies of the template profile file for each user whose preferences you want to configure.
6. Set the name of the file with their username as described above.

The changes will take effect in the users' next Meridian Explorer session. The users can still override the settings, but the standard settings will get them started.

Configure Enterprise Server To Not Run As a Service

By default, Meridian Enterprise Server runs as a service. Among other things, this means that it:

- Does not require a user to log on
- It can start automatically when Windows starts
- Performance, reliability, security, and administration are simplified

This also means that Enterprise Server cannot interact with the Windows desktop or a specific user. In most cases, this is not a problem. However, some rendering applications do not support running as a service for all output types. In those scenarios, Enterprise Server must be configured to run under a logged on user account for rendering to succeed. This user account must have local administrator privileges on the machine hosting Enterprise Server.

> **Note:**
> This requirement is noted in the "Configuring the ... rendering module options" chapter of the rendering modules that are known to require configuration as described in this topic.

To configure Enterprise Server to run as a logged on user:

1. In Meridian Enterprise Server Administration Console, create and configure the rendering profiles and schedule the publishing jobs normally as described elsewhere in this guide.
2. On any Meridian Enterprise Server node that has an application installed for rendering that does not support being run as a service, log on as the Windows user that is configured for the Meridian Enterprise Server service as described in Create the Configuration Database.
3. Modify the scheduled tasks that perform rendering with that application and enable the **Run only when user is logged on** option.
4. In the **Services** applet in Control Panel, stop and disable the Meridian Enterprise Server service.
5. Start the Meridian Enterprise Server service manually from a command line in console mode:

   ```
   BlueCieloECM.EnterpriseService.exe /c
   ```
6. Leave the service account logged on. It will need to be re-logged on after server restarts before scheduled jobs will run.
7. Repeat steps 2 to 6 on all remaining nodes (primary and cluster nodes) that will perform rendering with the affected rendering applications to the affected rendition formats.

Time Zones in Meridian

The time displayed in Meridian depends on what part of the system you are looking at.

Times based on User Preference or Local Settings

- Times displayed in PowerWeb are translated into to the time zone selected by the user in Preferences.
- Times displayed in the Publisher Queue in PowerWeb are shown are translated into to the time zone selected by the user in Preferences.
- Times displayed in PowerUser are translated to the time zone configured on the workstation.

Times always in UTC

- All times in Meridian Vaults and Explorer databases, regardless of the time zone configured on the server hosting Meridian or Explorer.

  > **Important!**
  > The time zone configured on the server is used to translate times to UTC, so it is important that it is configured correctly.

- Times displayed in Explorer are shown in UTC.
- Time displayed in the Audit Log are shown in UTC.
- The time zone configured on servers hosting Site Cache does not affect times displayed in Meridian clients.

Licenses

Meridian Explorer and Publisher usage is controlled by licenses to authorize their various features. These licenses are managed by the Meridian Enterprise license server to which Meridian Enterprise Server is configured as described in Manage Licenses. The licenses and their usage can also be viewed in Meridian Enterprise Server Administration Console.

Explorer and PowerUser Licenses

The Meridian Explorer licenses are:

- Explorer Server License (part number includes **M--EXS**). One is required for each Meridian Enterprise server that is synchronized with a Meridian Explorer repository (excluding the Meridian Enterprise Data Library).
- For named licensing, customers use the Explorer Base, Standard, and Plus client licenses (part numbers include **MN-EXB, MN-EXC, MN-EXP**). Each license type enables specific client functionality:
  - Explorer Base – all basic functionality such as:
    - **Documents** view
    - **Collections** view
    - **General**, **Properties**, **Revisions**, **References**, and **Project Copies** property pages
  - Explorer Standard – all functionality of Explorer Base plus:
    - **Projects** view
    - **Feedback** property page (requires AutoVue for redlining)
    - **Packages** property page and package import/export
    - Dashboard page
  - Explorer Plus – all functionality of Explorer Standard plus:
    - **Tags** view
    - Tag search
    - **Related Tags** property page
- For concurrent licensing, one **M--EXC** license is required for every concurrent Meridian Explorer user and the license remains claimed for the duration of the browser session.

> **Note:**
>
> - Meridian Explorer client licenses will be substituted automatically by a PowerUser client (**M--PUR**) license (if available) when a user opens the PowerUser client while one of the licenses are claimed. The licenses are not substituted in reverse. That is, when a user has claimed a PowerUser license and opens the Meridian Explorer client, no additional Meridian Explorer license is claimed. The PowerUser license entitles the user to work in Meridian Explorer and the PowerUser license remains claimed. License substitution does not occur between concurrent and named licenses.
> - PowerUser client (**M--PUR**, equivalent to **M--EXP**) licenses will be claimed by Meridian Explorer users if no Meridian Explorer user licenses are available.
> - Client licenses expire after 30 minutes of inactivity. This is not configurable.

- AutoVue 2D Viewer License and AutoVue 3D Viewer License (part number includes **M--AV2** or **M--AV3**, respectively). One is required for every (concurrent or named license) user with a PC that has the viewer installed. The AutoVue 3D Viewer License is claimed when the user is viewing any document regardless of its type. How the viewer is used can be configured as described in Configure the Viewer Options.

Publisher System Link Licenses

The Publisher system link licenses are:

- Windows file system link (part number includes **FS-PUS**) for publishing to or from a Windows file system.
- SharePoint system link (part number includes **M--PSP**) for publishing to or from a SharePoint library.
- Project Portal (formerly Kronodoc) system link (part number includes **K--PUS**) for publishing to or from a Accruent Project Portal or Kronodoc workspace.

  All system link licenses include the use of:

  - AutoVue 2D rendering module. Rendering 3D models requires an AutoVue 3D license.
  - Meridian Enterprise vault extensions
  - Client applications to support publishing from that system

Publisher Rendering Module Licenses

The Publisher rendering module licenses are:

- Native Application rendering module (part number includes **M--PNR**) for rendering through AutoCAD, Autodesk Inventor, Microsoft Office, MicroStation, SolidWorks, or the Custom rendering module.
- eSignature module (part number includes **M--PES**) for applying watermarks, electronic signatures, and signature pages to renditions.
- PDF Merge rendering module (part number includes **M--PMD**) for merging renditions into a single Adobe PDF file.

> **Note:**
> When configured in a cluster, all Meridian Enterprise Server nodes (primary and secondary) require their own system link and rendering module licenses for the jobs that they process.

Obtaining Additional Licenses

To obtain additional licenses, contact your Accruent Partner or Accruent. For more information about registering licenses in the Accruent License Server, see *Register Licenses - Administrator* in the *Meridian Enterprise Administrator's Guide*.

Meridian Enterprise Server Administration Console

Meridian Enterprise Server Administration Console is a part of the Meridian Enterprise Server web application.

It is used by System Administrators to create, edit, and maintain:

- Publisher publishing jobs, rendering profiles, and the publishing queue
- Meridian Explorer repositories, repository views, and the Meridian Explorer website
- Meridian Enterprise user groups for security in Meridian Explorer and Meridian Enterprise
- Task scheduling, event log viewing, and more

Using Administration Console for these tasks is described in the topics for each task. Getting started with Administration Console is described in the following topics in this chapter.

Open Accruent Meridian Administration Console

Meridian Administration Console can be opened in multiple ways. Only one person may edit the configuration at a time.

To open Meridian Administration Console from within the Meridian Explorer website:

- On the **Home** page, in the **Settings** group, click **Configurator**.
- To open Meridian Administration Console in a new browser window:
    1. Type the following URL in the address box and press **Enter**:

       `http://<ServerName>/BCEnterprise/Config.aspx`

       If you have not yet connected Administration Console to an existing Meridian Enterprise Server computer, Administration Console will attempt to find a server. If it finds one, a confirmation dialog box will prompt whether you want to connect to the server.
    2. Click **Yes**.

       If you have not yet created a configuration database or to connect to an existing configuration database, see Create the Configuration Database.

       When a connection the web service is established and the configuration database is connected, the Administration Console home page appears.

The Administration Console home page is divided into three sections:

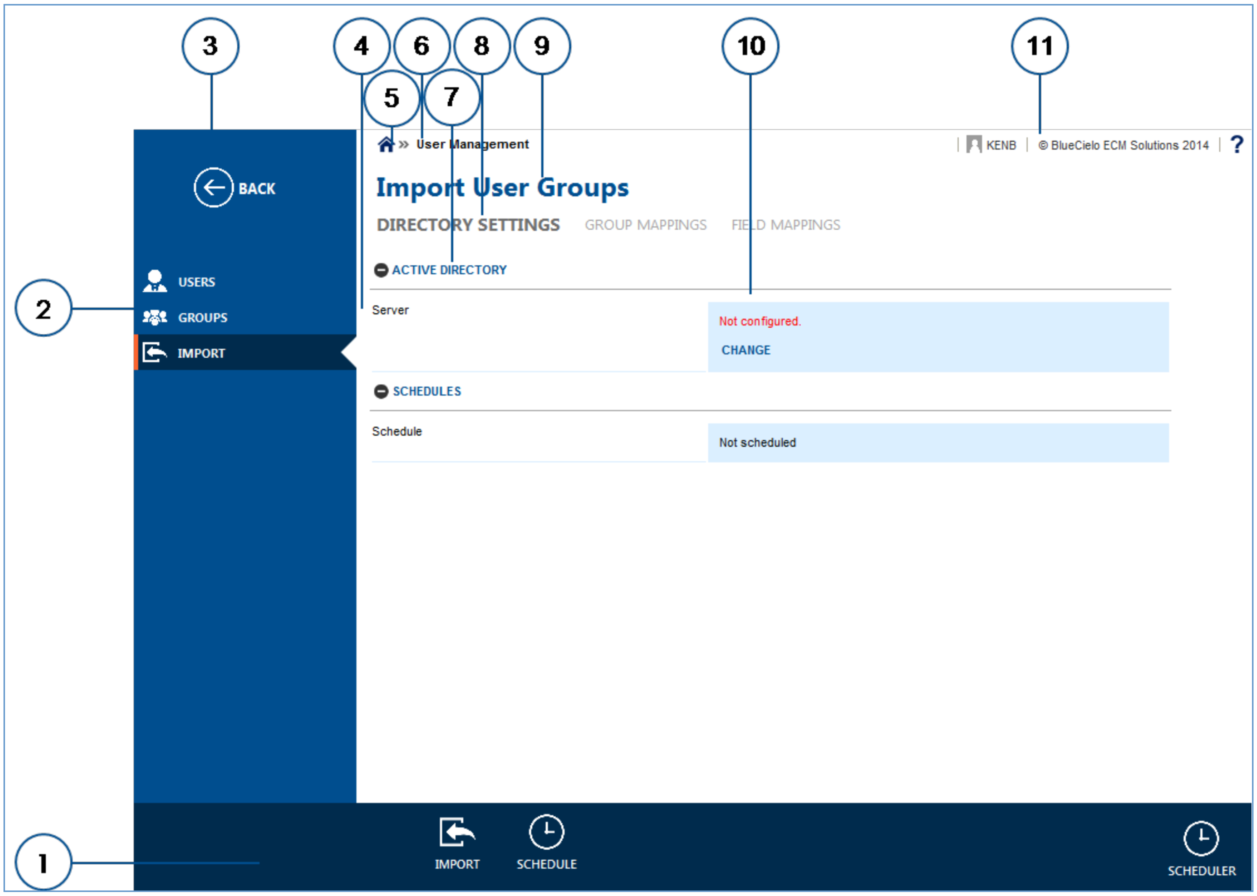
- **Data Exchange** — pages for configuring and managing Publisher jobs, rendering profiles, and the publishing queue
- **Repositories** — pages for configuring and managing Meridian Explorer repositories, view layouts, and their many options
- **System Management** — pages for administering the Meridian Enterprise Server scheduled tasks, event and audit logs, user accounts and groups, and their settings

Each section contains tiles that link to the different pages of that section. You click these tiles to open pages that show data, options, and commands for that feature of the application. The **All** menu item shows all of the tiles in a single list for you to select from. This can be useful to more quickly move around in Administration Console after you have become familiar it.

A screen resolution higher than 1024x768 may be necessary to see all of the tiles without switching to the **All** view.

If you are not sure which page to use to configure a particular feature, type a keyword in the **Search** box and a list of links to the pages that configure the items related to your keyword appear.

A typical page is shown in the following figure.



The names that are used throughout the rest of this guide for the areas of a page are described in the following table.

Typical page features

Number	Name	Description
1	App bar	Shows the important commands for the current page. The more critical commands are on the left side of the bar, the least critical commands at the right side.
2	Menu	Items that show the data or options for a part of the application. The items work similar to the tabs of Windows desktop applications.
3	Back icon	Click to return to the previous page. Works similar to the browser's **Back** button. When Administration Console is busy, a spinner appears in this space and the **Back** icon is unavailable.
4	Option	Name of an individual option for the selected item.

Number	Name	Description
5	Home page icon	Click to return to the Administration Console home page
6	Breadcrumb	Shows your current location within the Administration Console page structure. Click a page name to jump to that page.
7	Option group	A group of options or data for the selected item.
8	Subheader	Titles of the available pages in the page set for the selected item. The title of the current page is shown in bold, normal-colored text. The titles of other pages are shown in normal, dimmed text.
9	Header	Title of the page set for the selected item. Each page set comprises one or more pages.
10	Option data	The current value of the corresponding option. May also show commands for editing the values.
11	Status bar	Shows a collection of items: • Name of the current user. Click to show the user profile options. • Copyright link. Click to show the Meridian Enterprise Server version information. • Help icon ? . Click to show online help for Meridian Enterprise Server.

Configure Your Preferences

Meridian Enterprise Server Administration Console retains local settings for each person who uses it. You can set these options to your personal preferences.

To configure your preferences:

1. In Meridian Enterprise Server Administration Console, in the status bar, click your user name.

   A page appears where you can set your preferences.

2. On the **General** page, click options or type values using the descriptions in the following table.

   General options

Option	Description
Language	To change the language shown in Administration Console: a. Click **Change**. The **Language** dialog box appears. b. Select a language and then click **OK**.
Local settings	To clear your local settings and restore the default settings: a. Click **Reset**. A warning dialog box appears. b. Click **Yes**. A notification dialog box appears. c. Click **OK**.

3. On the **Options** page, click options or type values using the descriptions in the following tables.

Other options

Option	Description
Download options	To configure how files are downloaded to your PC: 1. Click **Change**. The **Accruent Upload/Download Control** dialog box appears. 2. Click options or type values using the descriptions in the following table. 3. Click **OK**.

File transfer options

Option	Description
Download location	Files will download to this location on your computer unless **Download to Local Workspace** is enabled.
Download to Local Workspace	Downloads documents to your Meridian Enterprise Local Workspace folder.
Prompt before download	Displays the **Accruent Upload/Download Control** dialog every time documents are downloaded so that you can select different options each time.
Open folder in Windows Explorer	After a file is downloaded, the destination folder is opened in Windows Explorer so that you can easily open files for viewing or editing.
Open in application	After a file is downloaded, it is opened for editing. Files will be opened in the applications that are registered with Windows on your computer for the downloaded file types.

Configure Your Avatar

Your avatar is the image that appears next to your name. If you do not upload an image, the default image is used.

To configure your avatar:

1. In the upper-right corner of any page, click your user name.

   Your personal profile pages appear.

2. In the avatar image area, click the **Change** icon .

   The **Change Avatar** dialog box appears.

3. Choose between two options:

   - To upload a different image:

     a. Click **Upload**.

        The **Upload Avatar** dialog box appears.

     b. Click the **Browse** icon .

        The **Choose File to Upload** dialog box appears.

     c. Select an image file on your local computer to upload and then click **Open**.

        The filename appears in the **Change Avatar** dialog box.

     d. Click **Upload**.

        The file replaces the current avatar image.

   - To reset your avatar to the default image:

     - Click **Remove**.

       The default avatar image replaces the current avatar image.

Create Links To Other Websites

If you rely on other intranet or Internet websites, you can place links to those sites in the right sidebar for your convenience.

You must have the **Application Administration** permission to create links on the Administration Console page.

Create a Link

To create a link in the right column:

1. Open the Meridian Enterprise Server Administration Console.
2. In the right sidebar, in the **Other Options** group, click **Create New**.

   The **Create New** dialog box appears.
3. Click options or type values using the descriptions in the following table.
4. Click **Save**.

   The page refreshes to show the new link.

Link options

Option	Description
Caption	The text that will appear on the page.
URL	The address of the site that you want to link to open.

Delete a Link

To delete a link on the page:

1. Open the Meridian Enterprise Server Administration Console.
2. In the right sidebar, in the **Other Options** group, click the delete icon ✖ next to the link that you want to delete.

   The page refreshes to show the new link removed.

Back Up Customization And Connection Settings

When you customize Meridian Enterprise Server as described in Customize the User Interface and in Customize the Colors And Header, those settings are not stored in the configuration database with the other application settings. The settings for connecting to the configuration database are not stored in the database either. This is so that the settings are portable and can be reused on other servers before a configuration database has been created. Instead, the settings are stored in files on the Meridian Enterprise Server server in the default folder `C:\ProgramData\BlueCieloECM`. That folder should be backed up regularly along with the repository and configuration databases to allow for full system restoration in the case of accidental loss.

When Meridian Enterprise Server is uninstalled, the files are not removed by the setup program. This is so that if the system is reinstalled, the settings will be retained and applied automatically. If the system will not be reinstalled, such as if it is moved to a different server, the folder and its contents can be safely deleted manually. If the system is moved, the settings can be copied to the new server so that the customization is reapplied when the system starts.

Repositories

Meridian Enterprise Server Administration Console can manage multiple types of repositories:

- Meridian Explorer repositories. These contain the synchronized data from one or more Meridian Enterprise vaults
- Meridian Enterprise vaults. You can register (but not create) a Meridian Enterprise vault in Meridian Enterprise Server Administration Console. The vault is not actually stored in the Meridian Enterprise Server database nor is it served by Meridian Enterprise Server. Those functions are still served by the Meridian Enterprise EDM Server service.

  The purpose of registering the vault in Meridian Enterprise Server is so that you can view and manage the vault settings that are used by Publisher to synchronize the vault with Meridian Explorer. Having the vault in Meridian Enterprise Server Administration Console means you don't need to have access to the Meridian Enterprise Administrator program to manage the settings.

After Meridian Enterprise Server has been installed, you must create and synchronize the Meridian Explorer repository before you can modify its configuration or use its data. Creating and synchronizing the repository includes numerous steps that should be performed in the following sequence.

> **Note:**
> You must be a member of a Accruent group with the **BC Explorer Administrators** or **Application Administrators** permission in order to create or manage a repository.

To create and synchronize a Meridian Explorer repository:

1. Create a repository database to hold the document metadata and optionally, the document content as described in Create a Meridian Explorer Repository.
2. Create a publishing job as described in Create a Publishing Job.

   The publishing job synchronizes document metadata from the Meridian Enterprise vault to the repository database.
3. Configure the publishing job as described in Configure Synchronization Options.

   Configuring the job specifies which vault to synchronize with the repository.
4. Run the publishing job as described in Run a Publishing Job.

   Executing the job performs the initial import of vault data into the repository.
5. Schedule the publishing job to run on a periodic basis as described in Schedule Publishing Jobs.

Repeating the publishing job ensures that the repository is kept up to date with the contents of the source vault.

All other repository administration tasks are described in the following topics.

Create a Meridian Explorer Repository

Meridian Enterprise Server helps you to create and test a connection to a database server where you want to store the repository. You can use the wizard to create connections to SQL Server or Oracle servers.

If you have sufficient privileges to create a new database on the database server, you can create a repository by performing the following task. If you have access to the database server with another account that does not have access from the Meridian Explorer server, see SQL Server Database Creation Script or Oracle Database Creation Script. If you do not have sufficient privileges, a database administrator will have to create the database for you.

Prerequisites

Before creating a repository, you must complete the following prerequisites.

1. You must know the name of either a Windows user account or a database account with permissions to access the database server and create database tables, indexes, and stored procedures. You also need to know the account password.
2. Meridian Enterprise Server requires that the SQL Server or Oracle instance already exist before a repository can be created. If Oracle will be used, an existing user (schema) can be used but we recommend that you can create a new user dedicated to Meridian Enterprise Server. If multiple repositories will be hosted by Oracle, we recommend that you create a separate user for each repository.
3. Before creating an Oracle Repository or BCConfiguration database, you must configure ODAC.

Procedures

To create a repository:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.
2. Click **New**.

   The **New Repository** dialog box appears.
3. Select **Explorer repository**.

4. Click **Next**.
5. Click options or type values using the descriptions in the following table.
6. Click **Register**.

   A background task is started and you may continue working. Creating the repository can take several minutes. After the new database is created, the new repository name appears in the **Repositories** list.

Database connection options

Group	Option	Description
General	Repository Name	Type a name for the repository as you want it to appear to users.
General	Provider	Select a database provider type from the list.
General	Server (SQL Server only)	Type the name of the SQL Server computer that will host the repository. **Note:** If the database server is running SQL Server Express, SQL Server Small Business, or another edition that created a named instance when the software was installed, type the name of the database server and the SQL Server instance name, for example, **MyServer\SQLEXPRESS** or **MyServer\MSSMLBIZ**.
General	TNS Network Alias (Oracle only)	Type the name of the Oracle server and instance that will host the repository. For example, **servername:1521/instance** where **1521** is the default port of Oracle communication.
Authentication	Type	If you selected **SQL Server** in the **Provider** option in step 1, select your preference for **Windows** or **SQL Authentication**.
Authentication	User name	SQL Server only: If you selected **SQL Authentication**, type a SQL Server user account with permissions to access the database server and create database tables, indexes, and stored procedures. Oracle only: Type a valid Oracle user account with permissions to access the database server and create database tables, indexes, and stored procedures.

Group	Option	Description
Authentication	Password	Type the password for the user account.
Database	Database (SQL Server only)	To select an existing database or to create a new database: • Click **Edit**. The **Select Database** dialog box appears. To create a new database: • On the **New Database** page, click options or type values using the descriptions in the following table. To select an existing database: • On the **Existing Database** page, select an existing database name and click **OK**. The name appears in the **Database** field.

The options in the following table are only available with the appropriate license. If you think you should have these options and you do not have them, contact your Accruent representative.

Database options

Option	Description
Database	Type a name for the new database.
Primary path	Type a path on the database server for the repository metadata files.
Content path	Type a path on the database server for the repository content files.
Index path	Type a path on the database server for the repository index files.
Log path	Type a path on the database server for the repository log files.

Option	Description

Use file stream	Enable this option if you want the new database to use the SQL Server FILESTREAM feature. We recommend this option for higher performance. If this option is disabled, content copied from the source vault will be stored inside the database as binary large objects (BLOBs).
	Before using this feature, we strongly recommend that you fully understand the advantages, limitations, and implications of the feature by studying the Microsoft SQL Server documentation.
	Note:
	This option requires that the **Windows** authentication option be used to access the database server.
	By default, the Meridian Enterprise Server copies document content from the stream folders of the source vault. You can configure it as follows to copy the content from an alternative file stream location:
	• Create a plain text file named `MRE2368.dat` in the folder `C:\ProgramData\BlueCieloECM\Hyperion` that contains the alternate stream folder settings for each Meridian Enterprise vault to be synchronized. The settings must be in JSON notation like the following example:
	`{`
	`"StreamFolders":[{`
	`"SourceName": "DatastoreName1",`
	`"FolderPath": "C:\\Data\\BC-MERIDIAN VAULTS\\DatastoreName1"`
	`}, {`
	`"SourceName": "DatastoreName2",`
	`"FolderPath": "C:\\Data\\BC-MERIDIAN VAULTS\\DatastoreName2"`
	`}]`
	`}`
	The synchronization job will attempt to copy the vault stream files from the specified path. If the path does not exist, an error will occur. If a particular stream file does not exist in the specified folder, the job will attempt to copy it from the regular streams folder.

File stream path	If the **Use File Stream** option is enabled, type a path on the database server for the database Filestream files. This option is only enabled if the database server is compatible.

After creating a repository and before vault synchronization with the repository can occur, at least one synchronization job must be configured.

Configure a Meridian Explorer Repository

After a Meridian Explorer repository has been created and synchronized with its source vaults, its configuration contains only the default information necessary for basic operation. To expand the repository's functionality and customize it for users' requirements, you must modify the configuration. The configuration comprises two areas:

- Definitions of the item names, indexing, and item filters for documents, tags, and projects. Configuring them primarily controls *what* information is seen by users.
- Definitions of the grid columns, property navigation structures, advanced search, navigation views, property pages, and lists. Configuring these items primarily controls *how* information is found and seen by users.

To view the current configuration of a repository:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.

2. Double-click the name of the repository that you want to view.

   The **Overview** page for the repository appears.

   - The **General** group shows the repository name. Where its data is stored is shown in **Connection string**.
   - The **Statistics** group shows the quantity of each object type that is stored in the repository.

3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.

   Configuring these areas of a repository is described in the following topics.

4. In the menu, click **Synchronization**.

   The **Synchronization** page appears. This page shows one or more groups of information about the synchronization jobs that import data to the repository. You can configure the jobs themselves as described in Configure Synchronization Options.

   To run a synchronization job immediately:

   - Click **Run**.

     The job is started as a background task and you can continue working.

   In special circumstances, you might need to reset the **Last run** date and force a full synchronization:

- After restoring a backup of the repository, recent changes in the source vault must be re-synchronized.
- After changing the synchronization options or property mappings. Force a full sync to apply the changes for all documents.
- After a disk failure.

To reset the **Last run** date:

a. Click **Reset**.

   The **Reset Options** dialog box appears.

b. Click options or type values using the descriptions in the following table.

c. Click **OK**.

Last run reset options

Option	Description
Synchronize everything next time	Synchronizes all documents when the job runs the next time, whether it is started manually or on a schedule.
Synchronize after a specific date	Synchronizes all documents when the job runs the next time after the selected date. To select the date, click the calendar icon .

Configure Item Names And Indexing

A repository's item names are initially created when a publishing job imports their definitions from a source vault. Thereafter, you can configure some elements of the items to meet your requirements, including property indexing.

You can configure the names of the following repository items:

- Document properties, types, and reference types
- Tag properties, types, and reference types
- Project properties and types

The steps to configure the items are the same.

Meridian Explorer uses the following types of indexes:

- Property value indexes for general searches as described in this topic.
- Full-text indexes of the source vault.

By default, Meridian Explorer automatically indexes the system properties that are necessary for basic operation and no additional configuration is necessary. However, you may want to index additional properties to improve performance.

When selecting the properties for indexing, observe the following guidelines:

- Do not select more properties than required. Selecting too many properties will negatively impact performance.
- Index the properties that are most likely to be used for searches in the **Search** pane.

> **Note:**
> By default, SQL Server does not recognize the hyphen (-) as a searchable character. If indexed properties will include values that contain hyphens (such as document numbers or filenames), you should configure a custom stop list as described in the SQL Server documentation. A default, empty stop list is created by default during repository creation that you can modify.

Configure Item Names and Property Indexing

To configure item names and property indexing:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.

2. Double-click the name of the repository that you want to configure.
3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.
4. In the **Metadata** group, click **Manage**.

   The **Metadata** page appears.
5. In the menu, click **Document**, **Object Tag**, or **Project** according to the item type that you want to configure.

   A list of the properties for the item type appears, grouped by property set. To configure other items, click **Types** or **Reference Types** in the page header.

   The internal names in the items appear in the **Name** column. The corresponding display names of the items appear in the **Display Name** column. Additional information appears in subsequent columns only for properties.
6. To filter the list of items for easier selection:
   a. Type the beginning of an item name in the search box.
   b. Click the filter icon .

      The list is filtered on the text that you typed. By default, the filter is applied to the item display name. To filter on the item internal name instead, click the arrow next to **Display name** and then click **Name**.
7. To remove the item name filter:
   a. Remove the text that you typed.
   b. Click the filter icon .

      The full list of items is shown.
8. To change the display name or other options for an item, click the item name.

   The item's options appear at the right.
9. Click options or type values using the descriptions in the following table.

Item options

Column	Description
Display Name	The name of the item as it should appear to users.

Column	Description
Indexed	Indicates whether the item is included in the property indexes. Read-only.
Text search indexed (properties only)	Enable this option if the property should be included in full-text searches along with the document content.
Data type	The data type of the item. Read-only.
Length	For String items only, the allowable data length.
Is Part (reference types only)	Enable this option if the reference is used to indicate parts in an assembly.

10. Click **Save**.
11. Repeat steps 5 through 10 for each item that you want to change.
12. If you included new properties in the full-text search indexes, in the toolbar, click **Full-text index**.

    A dialog box opens, asking you to confirm your choice.

    > **Note:**
    > Under normal operating conditions, you do not need to manually maintain the repository indexes. It can be necessary if you recently enabled additional properties for indexing, are experiencing poor performance, or under the direction of Accruent Technical Support. It is not necessary if the Meridian Enterprise Server synchronization job is configured to rebuild the indexes.

13. Click **Yes**.

    A background task is started and you may continue working.

Rebuild Property Indexes Immediately

To rebuild the property indexes immediately:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.
2. Double-click the name of the repository that you want to configure.
3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.

4. In the **Indexes** group, for the **Run or schedule this task** item, click **Run** to rebuild the property indexes.

   A dialog box opens, asking you to confirm your choice.

5. Click **Yes**.

   A background task is started and you may continue working.

Schedule Property Index Rebuilds

To schedule property index rebuilds:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.

2. Double-click the name of the repository that you want to configure.
3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.

4. In the **Indexes** group, for the **Run or schedule this task** item, click **Schedule**.

   The **Schedule** dialog box appears. This dialog box requires the same input as the Windows Task Scheduler.

5. Configure the scheduled task to run when you require and then click **Schedule**.

   The task is modified and will run on the configured schedule.

Rebuild Full-Text Index Immediately

To rebuild the full-text index immediately:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.

2. Double-click the name of the repository that you want to configure.
3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.

4. In the **Metadata** group, click **Manage**.

   The **Metadata** page appears.

5. In the toolbar, click **Full-text index**.

   A dialog box opens, asking you to confirm your choice.

6. Click **Yes**.

   A background task is started that rebuilds the repository full-text index from the source vault full-text index.

Create a New Property

In most scenarios, the properties that are defined in the source system of the repository are sufficient. However, in some cases, you might want to create additional properties in the repository, like:

- A new property calculated from existing property values by a stored procedure in the repository database.
- To prepare the repository to receive data from additional source systems.
- The source system property name does not reflect the purpose of the property and you want to map it to a more descriptive property name in the repository.

To create a new property:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.

2. Double-click the name of the repository that you want to configure.
3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.

4. In the **Metadata** group, click **Manage**.

   The **Metadata** page appears.

5. In the menu, click **Document**, **Object Tag**, or **Project** according to the item type to which you want to add the property.

   A list of the properties for the item type appears, grouped by property set.

   The internal names in the properties appear in the **Name** column. The corresponding display names of the properties appear in the **Display Name** column. Additional information appears in subsequent columns only for properties.

6. To filter the list of properties for easier selection:
   a. Type the beginning of a property name in the search box and click the filter icon .

      The list is filtered on the text that you typed. By default, the filter is applied to the display name. To filter on the internal name instead, click the arrow next to **Display name** and then click **Name**.

   b. To remove the name filter, remove the text that you typed and click the filter icon .

      The full list of properties is shown.

7. In the toolbar, click **Create New**.

   The **New Property** dialog box appears.

8. Click options or type values using the descriptions in the following table.
9. Click **OK**.

   The page refreshes to show the new property added to the list.

New property options

Option	Description
Property set	Select a property set name from the list in which you want to add the property.
Name	The internal name of the property.
Display name	The name of the property as it should appear to users.
Data type	The data type of the property.

Repository Security

Meridian Explorer security is very configurable, flexible, and powerful. It uses some concepts that are similar to Meridian Enterprise vault security and some that you may not be familiar with.

It is important to understand that Meridian Explorer security is not applied directly to folders like Meridian Enterprise security roles or Windows access control lists. This is because Meridian Explorer relies less on the folder paradigm than Meridian Enterprise or Windows.

All Meridian Explorer security is defined using Meridian Enterprise users and groups that are members of defined roles. The users and groups can be defined in Meridian Enterprise Server or they can be mapped from Microsoft Active Directory as described in Map AD Groups To Meridian Enterprise Groups.

> **Note:**
> Only a user's name and not their domain determines their identity in Meridian Explorer. This is by design so that you can move the user account to a different trusted domain and the user will retain their security profile. Conversely, different users in separate domains that use the same account will have the same security profile. The domain name does not distinguish them.

The effective permissions for a particular user for a specific item are determined by these factors:

- The membership of the user in one or more roles
- The level of the item in the property hierarchy of the item type, whether document or tag
- The permission levels assigned to roles at each hierarchy level
- The global and project permissions that have been granted

Following are explanations of each of these factors.

User roles

A user role is a set of users or groups with the same functional role relative to the organization, for example, **Contributor**, **Reviewer**, and **Document Controller**. Some example roles are predefined but you can edit and delete them and create others to meet your own requirements. You can assign a permission level to a user role at any level in a property hierarchy, which is explained below. Unlike with permission levels alone, user roles give you another dimension of flexibility to assign security, especially in complex environments or with many users.

> **Note:**
> We recommend that you assign only Meridian Enterprise groups to roles, not individual users. This way, users can be given access to the repository by their group memberships. Security can then be adjusted in the group memberships instead of in the repository.

Permission levels

A permission level is a set of permissions that can be assigned to a user role at a level of a property hierarchy, for example, **View**, **Manage**, and **Full Access**. Some example permission levels are predefined but you can edit and delete them and create others to meet your own requirements.

Property hierarchies

A property hierarchy is how security can be assigned based on property values. Separate hierarchies can be defined for documents and for tags. Each hierarchy can comprise multiple levels. Each level corresponds to one property. In this way, Meridian Explorer property hierarchies are similar to the Meridian Enterprise Field-Path definition. That is, a document's folder location in the vault depends on its values for the properties that comprise the Field-Path definition. In a Meridian Explorer property hierarchy, a user's effective permissions for an item depend on its values for the properties that comprise the property hierarchy.

One difference is that Meridian Explorer property hierarchies are invisible and have no direct relation to folders, as previously stated. Therefore, they affect any navigation views (that can have different hierarchies) that also use the same properties. This greatly extends the power of property hierarchies. Another difference is that security can be configured even more granular by assigning different permission levels to user roles for any number of values of the same property in a hierarchy. This allows you to configure a single security model made up of numerous rules that apply everywhere in the repository regardless of whether the documents, tags, or property values already exist.

At each level of a hierarchy, you can assign a permission level to one or more user roles. You can also not assign any permission level to a user role, which basically prevents the users in that role from performing the activities that correspond to the permission level. Moreover, each level of a hierarchy can either have its own permission level assignments or it can inherit the assignments of its parent property in the hierarchy. This is true even if items have no value for the property—they will inherit the parent permission level until a value is explicitly set for the property, at which time any assigned permission level will take effect. A user's effective permissions for a particular document, tag, or project are the sum of the permissions that are assigned to the roles for which the user is a member. These permissions apply regardless of whether the items reside in projects or not.

Global permissions

Global permissions are exceptions to the permission level assignments just described. These permissions do not involve user roles or property hierarchies. They control the same permissions (and more) as property hierarchy assignments but override them. Global permissions can be granted to specific Meridian Enterprise groups. This can be valuable so that some users (for example, System Administrators) can manage items in the repository regardless of where a document resides in the repository or its property values (which define the item level security). For that reason, global permissions should be assigned sparingly.

Project permissions

Most Meridian Explorer users only need access to the master documents (or renditions of them) in a repository. They are secured by the property hierarchy security model described above. But if some users also need access to work-in-progress documents that reside in projects in the repository, an additional security level is often needed. Project permissions are that extra security level.

Project permissions apply only to the project containers and not to the items they contain. Examples of these permissions are the ability to view projects and manage the security of projects. Project permissions can be assigned to specific user roles and are in addition to the item level security that applies to all documents and tags. This allows you to grant project access only to certain roles and project management responsibility only to other roles. Project permissions can apply to all projects in the repository or, if you need even more flexibility, they can be overridden for particular projects as described in *Assign Security Roles - Explorer* in the *Meridian Explorer User's Guide*.

Configure Repository Security

Configuring repository security comprises performing the following tasks in the order listed:

1. Create or import Accruent groups and users as described in Meridian Enterprise User Administration. Verify that you are a member of the **Application Administrators** group.
2. If necessary, create additional roles as described in Create And Edit Roles.
3. Assign permissions to each permission level as described in Create And Edit Permission Levels.
4. If necessary, grant global permissions to the groups that require it in addition to the **Application Administrators** group as described in Configure Global Permissions.
5. Assign the groups (and users, if necessary, but not recommended) to roles as described in Assign Groups And Users To Roles.
6. Define the property hierarchies that will apply to documents and tags as described in Configure the Document And Tag Hierarchies.
7. Assign permission levels to roles for specific property levels as described in Assign Permission Levels To Property Hierarchy Values.
8. If necessary, assign permission levels to roles for the default project security as described in Assign Default Permission Levels For Projects.
9. If necessary, override the default project security assignments for specific projects as described in *Assign Security Roles* in the *Meridian Explorer User's Guide*.
10. Optionally export the repository configuration as a temporary backup, for configuration management, or to migrate it to a different server as described in Export the Configuration.

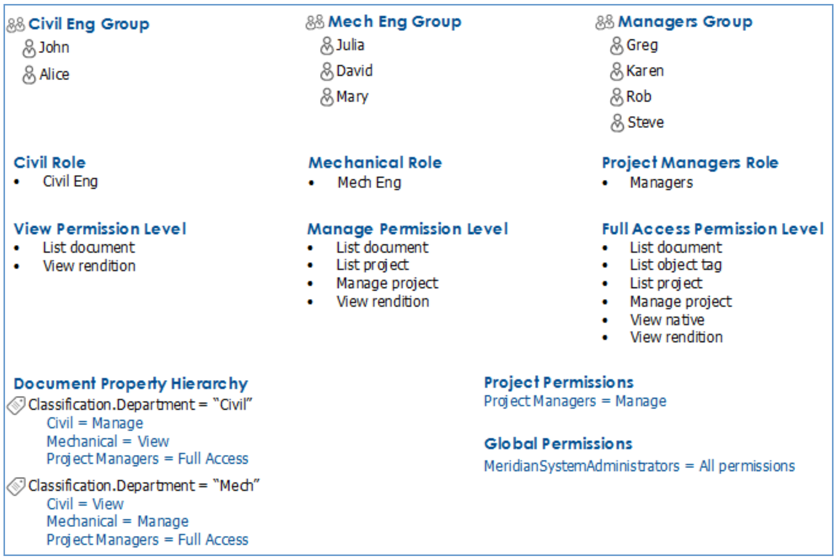
Performing each task is described in the following topics.

Simple Example

Following is a simple example that limits the users' access to documents based on their department. All departments can view all documents but each department can only manage the documents that belong to their department.

For the sake of simplicity, this scenario only demonstrates the effective security for documents but it could be extended to include tags. Likewise, only one group is assigned to each user role but multiple groups could be assigned.

In the following figure, blue text indicates items defined in Meridian Explorer. Black text indicates the properties of each item.



Following are the effective rights for several of the users in this scenario:

- John has **Manage** permissions to documents that have the value **Civil** for the **Department** property. For documents that do not belong to his department, he has only **View** permissions. He has no access to projects.

  Here is why:

  - He is a member of the **Civil Eng** group that is assigned to the **Civil** role.
  - That role is assigned the **Manage** permission level in the property hierarchy when the **Department** property equals **Civil**. When it equals **Mech**, he has only **View** permissions.
  - He is not a member of the **Managers** group that is assigned to the **Project Managers** role that has the **Manage** permission level to all projects.

- Julia has **Manage** permissions to documents that have the value **Mech** for the **Department** property. For documents that do not belong to her department, she has only **View** permissions. She has no access to projects.

  Here is why:

  - She is a member of the **Mech Eng** group that is assigned to the **Mechanical** role.
  - That role is assigned the **Manage** permission level in the property hierarchy when the **Department** property equals **Mech**. When it equals **Civil**, she has only **View** permissions. She is not a member of the **Managers** group that is assigned to the **Project Managers** role that has the **Manage** permission level to all projects.
- Rob has **Full Access** permissions throughout the repository regardless of the **Department** property. He can also view and manage projects.

  Here is why:

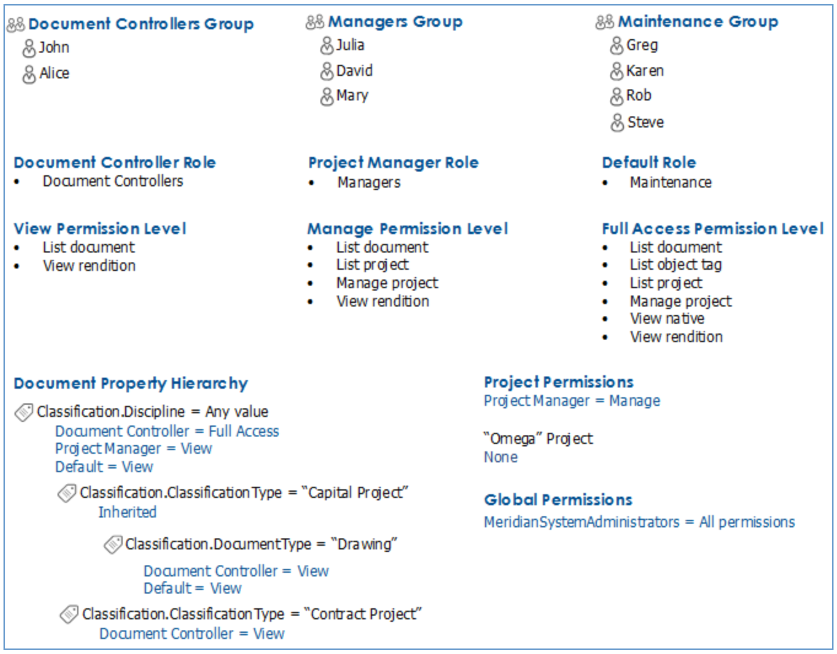
  - He is a member of the **Managers** group that is assigned to the **Project Managers** role.
  - That role is assigned the **Full Access** permission level in the property hierarchy when the **Department** property equals **Civil** and when it equals **Mech**. The **Project Managers** role is assigned the **Manage** permission level as the default for all projects.
- Members of the **MeridianSystemAdministrators** group have all permissions in the repository because they have been granted in the global permissions.

Complex Example

Following is a more complex example that limits the users' access to documents based on their organizational role and a standard security level that is assigned to each document. Documents may only be viewed and edited on a need-to-know basis.

For the sake of simplicity, this scenario only demonstrates the effective security for documents but it could be extended to include tags. Likewise, only one group is assigned to each user role but multiple groups could be assigned.

In the following figure, blue text indicates items defined in Meridian Explorer. Black text indicates the properties of each item.



Following are the effective rights for several of the users in this scenario:

- John has full access within the repository except that he can only view drawings that are classified as **Capital Project** and he can only view all documents that are classified as **Contract Project**. He has no access to projects.

  Here is why:

- He is a member of the **Document Controllers** group that is assigned to the **Document Controller** role.
- That role is assigned the **Full Access** permission level at the top level of the document property hierarchy. The assignment is inherited by the second level for **Capital Project** documents but for documents of the type **Drawing** at the third level, the **Document Controllers** role has only the **View** permission level.
- He is not a member of the **Managers** group that is assigned to the **Project Manager** role that has the **Manage** permission level to all projects.

- Julia has view access throughout the repository except for projects. She can see and manage all projects except for the Omega project.

  Here is why:

  - She is a member of the **Managers** group that is assigned to the **Project Manager** role.
  - That role is assigned the **View** permission level at the top level of the document property hierarchy and is inherited by the lower levels.
  - The **Project Manager** role is assigned the **Manage** permission level in the default project permissions. The default permissions have been manually removed from the Omega project.

- Rob has view access throughout the repository except for projects.

  Here is why:

  - He is a member of the **Maintenance** group that is assigned to the **Default** role.
  - That role is assigned the **View** permission level at the top level of the document property hierarchy. The assignment is inherited by the second level and is also repeated explicitly for documents of the type **Drawing**.
  - Rob cannot view projects because he is not a member of the **Managers** group that is assigned to the **Project Manager** role that has the **Manage** permission level to all projects.

- Members of the **MeridianSystemAdministrators** group have all permissions in the repository because they have been granted in the global permissions.

Create And Edit Roles

A role is a named group of users or Accruent groups to which you assign permission levels for particular repository items. By default, Meridian Enterprise Server includes some recommended roles that you can use:

- Default
- Project Manager
- Document Controller
- Reviewer
- Contributor

These names were chosen because they best represent the actions and permissions that are available in a repository and the design of Meridian Enterprise Server. Because these roles do not have any permission levels assigned to them by default, you can determine what actions they can perform in the repository. They are just a starting point. You can delete them and create other roles if you want to.

Create or Edit a Role

To create or edit a role:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.
2. Double-click the name of the repository that you want to configure.
3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.
4. In the **Security** group, for the **Security** item, click **Manage**.

   The **Global permissions** page appears.
5. Click **User Roles**.

   The **User Roles** page appears and lists the existing roles.
6. Choose between two options:

- To create a new role:
    - Click **Create New**.

      The **Create New** dialog box appears.
- To edit an existing role:
    a. Select the name of the role that you want to edit.
    b. Click **Edit**.

      The **Edit - Default** dialog box appears.

7. Click options or type values using the descriptions in the following table.

Role options

Option	Description
Name	Type a descriptive name for the role. If this role will be in addition to the default roles, make the name compatible with the default role names.
Description	Type a detailed description of the role for reference by System Administrators.

8. Click **OK**.

   If you created a new role, the new role is added to the list.

Delete a Role

To delete a role:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.
2. Double-click the name of the repository that you want to configure.
3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.
4. In the **Security** group, for the **Security** item, click **Manage**.

   The **Global permissions** page appears.
5. Click **User Roles**.

   The **User Roles** page appears and lists the existing roles.
6. Select the name of the role that you want to delete and in the toolbar, click **Remove**.

   The role is deleted.

Create And Edit Permission Levels

A permission level is a named set of permissions that you assign to roles for particular repository items. By default, Meridian Enterprise Server includes some example permission levels that you can use:

- Full Access
- Viewer
- Manager

These names were chosen because they best represent the actions and permissions that are available in a repository and the design of Meridian Enterprise Server. These permission levels have default permissions assigned to them that you can see as described in the following task. They are just a starting point. You can edit or delete them and create other permission levels if you want to.

Create or Edit a Permission Level

To create or edit a permission level:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.
2. Double-click the name of the repository that you want to configure.
3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.
4. In the **Security** group, for the **Security** item, click **Manage**.

   The **Global permissions** page appears.
5. Click **Permission Level**.

   The **Permission Level** page appears and lists the existing permission levels.
6. Choose between two options:
   - To create a new permission level:
     - Click **Create New**.

       The **New Permission Level** dialog box appears.
   - To edit an existing permission level:

a. Select the name of the permission level that you want to edit.

b. Click **Edit**.

The **Edit Permission Level** dialog box appears.

7. Click options or type values using the descriptions in the following table.

Role options

Option	Description
Name	Type a description name for the permission level. If this permission level will be in addition to the default permission level , make the name compatible with the default permission level names.
Description	Type a detailed description of the permission level for reference by System Administrators.

8. Click **OK**.

If you created a new permission level, the new permission level is added to the list.

9. On the right side of the page, select the permissions that you want to assign to the selected permission level.

The available permissions are described in Security Permission Descriptions

Delete a Permission Level

To delete a permission level:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.

2. Double-click the name of the repository that you want to configure.

3. In the menu, click **Management Tools**.

The management tools for the selected repository appear.

4. In the **Security** group, for the **Security** item, click **Manage**.

The **Global permissions** page appears.

5. Click **Permission Level**.

The **Permission Level** page appears and lists the existing permission levels.

6. Select the name of the permission level that you want to delete and in the toolbar, click

Remove.

The permission level is deleted.

Configure Global Permissions

If some users require the same permissions across the entire repository regardless of their access as defined by the item level security, then they should be granted global permissions. Typically, this is only administrative users. By default, members of the Application Administrators group have full access to the repository.

> **Important!**
> The **Configure Repository** permission can only be granted as a global permission. This permission is required to manage the repository configuration, including the repository security.
>
> Remember, global permissions override all other security assignments. Therefore, they should be assigned sparingly.

To configure global permissions:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.

2. Double-click the name of the repository that you want to configure.
3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.

4. In the **Security** group, for the **Security** item, click **Manage**.

   The **Global permissions** page appears. This page lists the groups that are currently assigned global permissions.

5. Choose between three options:
   - To assign global permissions to a new group:
     a. Click **Add**.

        The **Add Groups** dialog box appears and lists the existing groups.

     b. Select the groups that you want to add.

        Press and hold the **CTRL** key while clicking to select individual names. Press and hold the **Shift** key while selecting the first and last of a range of names.

     c. Click **OK**.

        The groups are added to the list of groups that are assigned global permissions.

     d. Select an added group and then select the permissions on the right side of the page that you want to assign to the selected group.

e. Repeat step d for each group that you added.

- To edit the current global permissions for a group:
    a. Select the group that you want to edit.
    b. Select or clear the permissions on the right side of the page accordingly.
- To remove a group:
    a. Select the group that you want to remove.
    b. Click **Remove**.

       The group is removed.

Assign Groups And Users To Roles

Assigning groups and users to roles helps you to assign permissions by grouping users together who have similar responsibilities for individual items. This is not the same as their permissions, which is are assigned as described in Assign Permission Levels To Property Hierarchy Values.

To assign groups and users to roles:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.

2. Double-click the name of the repository that you want to configure.
3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.

4. In the **Security** group, for the **Item Security** item, click **Manage**.

   The ***<RepositoryName>* Item security** page appears.

5. In the page subheader, click **Memberships**.

   The list of current roles appears. Each row indicates the number of groups or users that have been assigned to that role. To view them, select the role.

6. Select the role that you want to edit and then in the assignments column, click **Edit**.

   The ***<RepositoryName>* - Update Default Membership** dialog box appears and lists the roles.

7. Choose between two options:

   - To add a new group or user:

     a. In the toolbar, click **Add Group** or **Add User**.

        The **Add Groups** or **Add Members** dialog box appears.

     b. Select the names that you want to add.

        Press and hold the **CTRL** key while clicking to select individual names. Press and hold the **Shift** key while selecting the first and last of a range of names.

     c. Click **OK**.

        The names are added to the list of role members.

     d. Click **Save**.

        A confirmation dialog box prompts whether you want to apply the memberships to all existing projects.

e. Click **Yes** or **No** to proceed.

- To remove a group or user:
  a. Select the names that you want to remove.
  b. Click **Remove**.

     The names are removed from the list of role members.
  c. Click **Save**.

     The number of assignments is updated.

Configure the Document And Tag Hierarchies

The document and tag hierarchies specify the properties that you use to define the security of the repository items. You use hierarchies together with the defined permission levels and roles.

> **Note:**
> - To configure repository security to work similar to the Field-Path definition a Meridian Enterprise vault for the same users, define the Meridian Explorer property hierarchies using the same properties as the Field-Path relation in Meridian Enterprise.
> - The document and tag hierarchies only support string properties, not Boolean, date, or number properties. To work around this limitation for an unsupported Meridian Enterprise property, consider using an equivalent string property that reflects the unsupported property value. These are also called shadow properties.
>
>   An example is a Meridian Enterprise Boolean property named **CanDownload** that controls whether users can download documents from Meridian Explorer. When the property is changed in Meridian Enterprise, also set a hidden string property with the corresponding string value, “Can download” or “Cannot download.” Synchronize the string property to the Meridian Explorer repository and select the string property in the document hierarchy.

To configure the document and tag hierarchies:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.
2. Double-click the name of the repository that you want to configure.
3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.
4. In the **Security** group, for the **Item Security** item, click **Manage**.

   The ***<RepositoryName>* Item security** page appears.
5. In the page sub-header, click **Hierarchy**.

   The current hierarchies for documents and tags are shown.
6. In either the **Document** or **Object Tag** group, click the corresponding **Edit** link.

   The ***<RepositoryName>* - Hierarchy Editor** dialog box appears and shows the current hierarchy for the item type.
7. Choose between three options:

- To add a property level:
    a. In the toolbar, click **Add Level**.

       A new level with a default property assignment is added to the end of the hierarchy.

    b. To change the property, click the name and select a different name from the list.
    c. Click **Update**.

       The hierarchy is updated.

- To change the property for a level:
    a. Click the name and select a different name from the list.
    b. Click **Update**.

       The hierarchy is updated.

- To remove a property level:
    a. Right-click the name and then in the context menu, click **Remove**.

       The level is removed.

    b. Click **Update**.

       The hierarchy is updated.

Assign Permission Levels To Property Hierarchy Values

Assigning permission levels to property hierarchy values defines who can do what for documents and tags with specific property values. The permission levels for each value of a property can either be inherited from its parent property in the hierarchy (propagated) or they can be different (custom) if you explicitly assign permission levels to roles. These assignments then apply to all items in the repository that match the property values.

> **Important!**
> Remember, the global permissions described in Configure Global Permissions override all other security assignments.

Assign Permission Levels

To assign permission levels to property hierarchy values:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.
2. Double-click the name of the repository that you want to configure.
3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.
4. In the **Security** group, for the **Item Security** item, click **Manage**.

   The ***<RepositoryName>* Item security** page appears.
5. In the page subheader, click **Documents** or **Object Tags** accordingly.

   The corresponding hierarchy is shown on the left side of the page. The property values of the selected level of the hierarchy are also listed. The special value **Any value** determines the default permission level if no explicit assignments are made.

   On the right side of the page, the selected value is shown with its propagation type, either **Inherited** or **Custom**. By default, permission levels are inherited from the parent level unless explicit (custom) assignments are made. Below the propagation type are listed the existing roles with the permission level that has been assigned to that role.

6. For the property value that you want to edit, click the assignments column or the edit icon .
7. Select a permission level from the list.

Remove Permission Levels

To remove a permission level from a property hierarchy value:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.
2. Double-click the name of the repository that you want to configure.
3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.
4. In the **Security** group, for the **Item Security** item, click **Manage**.

   The ***<RepositoryName>* Item security** page appears.
5. In the page subheader, click **Documents** or **Object Tags** accordingly.

   The corresponding hierarchy is shown on the left side of the page. The property values of the selected level of the hierarchy are also listed. On the right side of the page, the selected value is shown with its propagation type, either **Inherited** or **Custom**. Below the propagation type are listed the existing roles with the permission level that has been assigned to that role.
6. For the property value that you want to edit, click the remove icon .

   The current permission level is removed from the role.

Assign Default Permission Levels For Projects

By default, projects have no security assigned to them. The items in the projects are secured by the property hierarchies that you specify as described in Configure the Document And Tag Hierarchies. To add more security, you can assign permission levels to particular roles that you want to have access to projects.

The available project permissions are:

- **List project** — All access to a project
- **Manage project** — Change the membership of roles assigned to a project.

Permission levels that include these permissions are the default security for all new projects. For existing projects, you can assign the permission levels for each project separately as described in *Assign Security Roles* in the *Meridian Explorer User's Guide*.

> **Important!**
> Remember, the global permissions described in Configure Global Permissions override all other security assignments.

To assign default permission levels for new projects:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.
2. Double-click the name of the repository that you want to configure.
3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.
4. In the **Security** group, for the **Item Security** item, click **Manage**.

   The ***<RepositoryName>* Item security** page appears.
5. Click **Projects**.

   The existing user roles are listed with the permission levels that have been assigned to them.
6. Select the role that you want to edit.
7. Choose between two options:
   - To change the permission level assigned to the role, click the current assignment or the edit icon .

     A permission level from the list that appears.

- To remove the permission level assigned to the role, click the **Delete** icon ✖.

  The permission level is removed from the role.

Configure the Content Source Options

By default, the Meridian Enterprise Server reads the document content for viewing and downloading from the stream folders of the source Meridian Enterprise vault. This saves disk space and optimizes efficiency if the Meridian Enterprise application server and the Meridian Enterprise Server computer are co-located and there is a high bandwidth connection between them. If not, you can configure the Meridian Explorer repository to store a copy of the document content in its database when the repository is synchronized from the vault. This improves performance when there is not a high bandwidth connection between the servers.

> **Note:**
> You can tune the content synchronization task as described in Configure the Application Options.

Configure Content Source Options

To configure the content source options:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.
2. Double-click the name of the repository that you want to configure.
3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.
4. In the **Document Content** group, for the **Current mode** item, click **Edit**.

   The **Import Content Settings** dialog box appears.
5. Click options or type values using the descriptions in the following table.
6. Click **Update**.

   The specified values appear in the **Content Source** group.

Content source options

Option	Description
Store the document content in the repository database	Enable this option to store a copy of the document content in the repository database during each update. If disabled, the content is read from the source vault streams.

Copy Content Immediately

To copy the content immediately:

- In the **Document Content** group, for the **Run or schedule this task** item, click **Run**.

  A background task is started and you can continue working.

Schedule Content Import

To schedule content import:

1. In the **Content Source** group, for the **Run or schedule this task** item, click **Schedule**.

   The **Schedule** dialog box appears. This dialog box requires the same input as the Windows Task Scheduler.
2. Configure the scheduled task to run when you require and then click **Schedule**.

   The task is modified and will run on the configured schedule.

Use Alternative File Stream Location

In rare situations, copying the content into the repository database from the source vault stream folders might not meet your requirements. You can configure the repository to copy the content from an alternative file stream location as follows:

Create a plain text file named `MRE2368.dat` in the folder `C:\ProgramData\BlueCieloECM\Hyperion` that contains the alternate stream folder settings for each Meridian Enterprise vault to be synchronized. The settings must be in JSON notation like the following example:

```
{
 "StreamFolders":[{
  "SourceName": "DatastoreName1",
  "FolderPath": "C:\\Data\\BC-MERIDIAN VAULTS\\DatastoreName1"
}, {
  "SourceName": "DatastoreName2",
  "FolderPath": "C:\\Data\\BC-MERIDIAN VAULTS\\DatastoreName2"
 }]
}
```

The server will attempt to copy the vault stream files from the specified path. If the path does not exist, an error will occur. If a particular stream file does not exist in the specified folder, the job will attempt to copy it from the regular streams folder.

Create And Edit Item Filters

Item filters determine the *items* that are available to be shown in the various repository views. These filters are not to be confused with view filters as described in Create And Edit View Filters that can filter the *properties* that are available to be shown in a particular view.

Item filters can be one of two types:

- A property comparison expression that filters the items that are shown in a repository view.

  In prior versions of Meridian Explorer, this was the only way to restrict access to items. This method is still supported but we recommend using item level security whenever possible as described in Assign Permission Levels To Property Hierarchy Values.
- An expression that also defines corresponding URL parameters for each property in the filter for integration with another system, such as the Meridian Asset Management Module.

Item filters can be defined for documents, tags, and projects. Every view uses one of these filters.

Create or Edit an Item Filter

To create or edit an item filter:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.
2. Double-click the name of the repository that you want to configure.
3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.
4. In the **Item Filters** group, click **Manage**.

   The **Filters** page for the selected repository appears and lists the existing filters.
5. Choose between two options:
   - To edit an existing filter:
     - Double-click the filter row.

       The configuration dialog box for the selected filter appears.

- To create a new filter:
  a. Click **New**.

     The **New Query** dialog box appears.
  b. Select the type of filter that you want to create.
  c. Click **Next**.

     The configuration dialog box for the new filter appears.

6. Click options or type values using the descriptions in the following table.
7. Click **OK**.

Filter options

Page	Option	Description
General	Name	Type a descriptive name for the filter. You will specify this name when configuring views as described in Create And Edit Repository Views or when composing view URLs as described in Compose View URLs.
General	Code	The read-only internal name of the filter.

Page	Option	Description
Filter	Filter expression	To add a property to the filter expression: • Click **Add Property**. A new condition row is added to the expression and appears in **Preview**. **Note:** ◦ To create a filter template for use with another system such as the Meridian Asset Management Module, add one property and placeholder for each parameter in the URL that will be passed to Meridian Explorer from the other system. Examples are **Custom.SiteID** equals **{siteid}** and **Custom.LocationNumber** equals **{location}**. The parameter placeholders must be enclosed in braces {}. As you enter each parameter placeholder, the text in **URL** updates to show you a preview of the resulting filter template. ◦ When passing values to the filter that include symbols, encode the symbols in URL format. For example, replace the slash symbol (/) with %2F in date values. To edit an existing condition: 1. Click the condition row. The row becomes editable. 2. Select a property name in the **Property** column list. 3. Select an operator in the **Operator** column list. 4. Type a search value in the **Value** column. To delete a property from the filter expression: • Select the row and then in the toolbar, click **Remove**. The row is deleted and **Preview** is updated to show the resulting filter. By default, the properties will be evaluated with the Boolean AND operator. To change the operator by which the properties are joined: • Click the operator that you want to change and select a different operator.

Delete an Item Filter

A filter can only be deleted if it is not used by any repository view.

To delete an item filter:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.
2. Double-click the name of the repository that you want to configure.
3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.
4. In the **Item Filters** group, click **Manage**.

   The **Filters** page for the selected repository appears and lists the existing filters.
5. Select the filter that you want to delete and then in the toolbar, click **Remove**.

   A dialog box opens, asking you to confirm your choice.
6. Click **Yes**.

   The filter is deleted.

Configure Default User Preferences

Meridian Explorer users can configure their preferences for the options described in *Configure Personal Preferences* in the *Meridian Explorer User's Guide*. The default settings are configurable by a System Administrator.

To configure the default user preferences:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **User Defaults**.

   The **User Defaults Options** page appears.

2. Click options or type values using the descriptions in the following table.

   Default user options

Option	Description
Maximum number of items in expanded folder	Select a number from the list. Meridian Explorer users can view additional items by using the page controls at the bottom of the results list.
Maximum number of values in list	Select a number from the list. Meridian Explorer users can view the items in excess of this number by using the page controls at the bottom of a list.
Default user language	a. Click **Edit**. The **Default Language** dialog box appears. b. Select a language from the list. c. Click **Save**.

3. Click **Save**.

Configure the Viewer Options

Meridian Explorer can use one of the following viewers to show documents:

- AutoVue installed in a client/server deployment for use either by Meridian Enterprise or Meridian Explorer or both. AutoVue is only supported for backward compatibility.
- Accruent viewer (ActiveX) control that is installed on the client PCs by the PowerWeb setup program. With this option, you can use the viewers described in Third-Party Viewers.
- Adobe viewer supported by the browser.
- PDFTron server-based viewer that is installed by default and can be used to view PDF renditions.

Which viewer is used and for what documents is determined by the viewers that are available to the client PC, by the central options configured as described in the following task, and by the preferences that are configured by the user. The default viewer window options are acceptable for most users but you can configure numerous options to further optimize their experience.

> **Note:**
> - Not all viewers display redlines.
> - The viewers in the **Viewers** group are listed in priority order.
> - The first viewer that is enabled will be used to show PDF documents.
> - The default viewer is used to generate the thumbnail images shown in Meridian Explorer and the viewer must be installed on the Meridian Enterprise Server computer.

To configure the viewer options:

1. In Administration Console, in the **Repositories** group, click **Options**.

   The **User Defaults Options** page appears.
2. In the menu, click **Viewer**.

   The list of configurable options appears.
3. Click options or type values using the descriptions in the following table.
4. Click **Save**.

Meridian Explorer viewer options

Group	Option	Description
Viewers	Enable PDFTron viewer for PDF documents	If enabled, renditions (only) are shown in the server-based PDFTron viewer window. Before a rendition can be viewed in PDFTron for the first time, the rendition must be updated. **Note:** When Enable XOD Viewing is turned off, an error may occur in PowerWeb or Meridian Explorer when viewing a rendition of a complex drawing using PDFTron with Microsoft Internet Explorer.
Viewers	Enable Adobe Reader for PDF documents	If enabled and Adobe Reader is installed on the client PC, PDF documents are shown in Adobe Reader.
Viewers	Enable Accruent server-based viewer	If enabled, shows documents using AutoVue running on a server if all of the following are true: • This option is enabled • AutoVue is installed in a client/server deployment • The options in the **Viewer Server Settings** group are configured. • The **Enable Accruent viewer control** is enabled
Viewers	Enable Accruent viewer control	If enabled and the Accruent viewer control is installed on the client PC, documents are shown in the Accruent viewer and documents can be batch printed. Otherwise, only draft printing single documents is possible.
PDFTron Viewer Settings	Enable XOD Viewing	Allows users to view XOD files instead of native PDFs in PDFTron. This provides faster response times on multi-page documents, but reduced quality and limited functionality. We recommend you enable this setting if you use Internet Explorer 11. **Note:** When this setting is turned off: • An error may occur in PowerWeb or Meridian Explorer when viewing a rendition of a complex drawing using PDFTron with Microsoft Internet Explorer. • Updating a rendition may fail if EDM server and Enterprise Server are located on the same machine, and Content Indexing (Windows Search) is ON.

Group	Option	Description
PDFTron Viewer Settings	Hotspots opacity	Allows you to configure the opacity of hotspots. You can enter a value between 0.1 and 1.
PDFTron Viewer Settings	Hotspots border thickness	Allows you to set the thickness of hotspot borders. You can enter a value between 0.001 and 15.
PDFTron Viewer Settings	Hotspots color	Allows you to choose the color of hotspots.
PDFTron Viewer Settings	Hotspots hover color	Allows you to choose a hover color for hotspots.
Viewer Server Settings	AutoVue 2D server URL	The URL of the AutoVue 2D client/server installation to which to connect. The default is **http://<*ServerName*>:5098/servlet/VueServlet**.
Viewer Server Settings	Connector URL	The URL where the Accruent Connector is installed on the server that is specified for the **AutoVue 2D server URL** option. The default is **http://<*ServerName*>:8900/wsclient/servlet/DMS**. If an AutoVue installation for Meridian Enterprise will be used, this setting should be the same as the **BlueCielo Connector URL** property of PowerWeb.
Viewer Server Settings	AutoVue 3D server URL	The URL of the AutoVue 3D client/server installation to connect to. The default is **http://<*ServerName*>:5098/servlet/VueServlet**. Every user that connects to this server needs an **M--AV3** license. To limit the users who can connect, specify one user group for the **User group allowed to use 3D** option.
Viewer Server Settings	Connector 3D URL	The URL where the Accruent Connector is installed on the server that is specified for the **AutoVue 3D server URL** option. The default is **http://<*ServerName*>:8900/wsclient/servlet/DMS**. If an AutoVue installation for Meridian Enterprise will be used, this setting should be the same as the **BlueCielo Connector URL** property of PowerWeb.

Group	Option	Description
Viewer Server Settings	User group allowed to use 3D	The name of a user group whose members are allowed to view documents using the server that is specified for the **AutoVue 3D server URL** option. By default, no users are allowed. To specify a user group: 1. Click **Edit**. The **Add Groups** dialog box appears. 2. Select the group that you want to allow access to and then click **OK**. The group name appears in the value column. To remove the group: • Click **Clear**. The group name is removed.

Configure the Application Options

By default, the appearance and behavior of the Meridian Explorer client application are acceptable for most users but you can configure numerous options to further optimize their experience.

> **Note:**
> You cannot configure default sorting options or hide columns for users in Explorer. Files are sorted alphabetically according to the file name.

To configure the application options:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Options**.

   The **User Defaults Options** page appears.
2. In the menu, click **Application**.

   The list of configurable options appears.
3. Click options or type values using the descriptions in the following table.
4. Click **Save**.

Meridian Explorer application options

Group	Option	Description
Application Options	Enable Meridian download control	Enable (default) this option to use the Accruent Upload/Download control for file transfers. Meridian Explorer users can configure the options of the control as described in *Configure Options* in the *Meridian Explorer User's Guide*.
Application Options	Enable draft print	If enabled (default), the **Draft Print** command is available to users in the viewer pane if: • The property page is configured to show document content from PowerWeb as described in Create And Edit Detail Page Layouts • The documents exist in the vault and are published as a PowerWeb location
Application Options	Enable watermarks on draft print hardcopies	If enabled and watermarks are configured in the source vault, they will also be printed on the output. The default is disabled. For information about configuring the appearance of watermarks, see Configure Watermark Printing.

Group	Option	Description
Application Options	Hide status columns from grid	If enabled, hides the column that show document status icons. The default is disabled. **Note:** If enabled, this will disable display of the number of available rows in the current view and the workflow status column in the results grid is hidden from view by users.
Application Options	Include empty values in navigation view	If enabled (default), navigation view levels for properties that are empty are shown instead of hidden. The default is enabled.
Application Options	Optimize grid queries	Leave disabled (default) unless directed by Accruent Technical Support. See also .
Meridian Script Events	Disable feedback comment events	If enabled, the following Meridian Enterprise events do not occur: • AIMS_AddComment • AIMS_UpdateComment • AIMS_CloseComment • AIMS_DeleteComment
Meridian Script Events	Use Meridian impersonation	If enabled (default), the account of the IIS application pool under which the application runs will be used to connect to Meridian Enterprise for features like discussion comments, redlining, retrieving watermark data, uploading documents to the vault, and VBScript events. This prevents the Kerberos double hop problem. The application pool and the Meridian Enterprise server must run under the same service account. If disabled, the connection to Meridian Enterprise impersonates the Meridian Explorer user. The application pool and the Meridian Enterprise server do not need to run under the same service account. The Kerberos double hop problem can occur if the Meridian Enterprise server is run on a different computer than Meridian Enterprise Server.
System Settings	URL for viewer download	If the **Enable Accruent viewer control** option is enabled as described in Configure the Viewer Options and you want Meridian Explorer users to download the control from a location on your network, type a URL where the control can be downloaded by users. This URL will appear in an empty viewer windows until the user installs the control. By default, a URL to the viewer control on the Accruent website will be shown.

<table>
<thead>
<tr><th>Group</th><th>Option</th><th>Description</th></tr>
</thead>
<tbody>
<tr>
<td>Synchronization</td>
<td>Synchronization</td>
<td>
By default, synchronization between Meridian Explorer repositories and their Meridian Enterprise source vaults, is done in batches of documents. This excludes the document content, which must be done as a separate task.
<blockquote> Note:
The pre-2017 sync mode is not supported. </blockquote>
To edit the synchronization settings:

 Click Edit. The Explorer Synchronization Settings dialog box appears.
 Configure the appropriate options:

 Require Meridian stream files — If enabled, causes an error to be logged if the content for a document that is being synchronized cannot be found in the source vault.
 Export batch size — The maximum number of documents to include in each batch during repository synchronization. The default is 10000.
 Level of concurrency — The maximum number of simultaneous process threads to use to read the document content files from the source vault during synchronization. The default is 8 and assumes the server CPU has 8 cores. The Meridian Enterprise EDM server must be configured to use one of the multi-threading database engines (names that end with the number 5) in order to take advantage of this option.

</td>
</tr>
</tbody>
</table>

Configure Thumbnail Generation

Meridian Explorer shows thumbnails of documents on the **General** property page. The thumbnails are generated from the source file and stored separately in the repository. As new revisions of the documents are imported into the repository, the thumbnails should be regenerated to show the latest content.

> **Note:**
> - If Meridian Enterprise Server is installed on a separate server from Meridian Enterprise, set the name of the Meridian Enterprise server in the **ServerMachine** value of the registry key `HKEY_LOCAL_MACHINE\Software\Cyco\AutoManager View Control2` on the Meridian Enterprise Server computer. For more information about this setting, see the *Meridian Enterprise Administrator's Guide* .
> - For most files, thumbnails are generated using the default viewer that is set as described in Configure the Viewer Options. The viewer must be installed on the Meridian Enterprise Server computer.
>
>   Thumbnails for Native PDF files are generated using AutoVue, which must also be installed on the Meridian Enterprise Server computer. Additionally, the **DisableThumbnailUpdate** registry key value should be set to **2**. This setting is described in *HKEY_LOCAL_MACHINE\Software\Cyco\AutoManager Meridian\CurrentVersion\WebLink* in the *Registry Keys* section of the *Meridian Enterprise Server Administrator's Guide*.

Configure Thumbnail Generation

To configure thumbnail generation:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.
2. Double-click the name of the repository that you want to configure.
3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.
4. In the **Thumbnails** group, for the **Generate thumbnails** item, click **Edit**.

   The **Thumbnail Settings** dialog box appears.
5. Click options or type values using the descriptions in the following table.

6. Click **Update**.

   The specified values appear in the **Thumbnails** group.

Thumbnail options

Option	Description
Regenerate items that failed before	By default, if thumbnail generation fails for a document, that document will be skipped during the next thumbnail update. Enable this option to retry the document during each update.
Width	The width of the thumbnail image in pixels. The default is 300.
Height	The height of the thumbnail image in pixels. The default is 200.
Timeout in seconds	The amount of time in seconds to wait for thumbnail generation to complete before an error is entered in the event logs and processing proceeds to the next thumbnail. The thumbnail process can stop responding if it encounters a problem in the source file.

Generate Thumbnails Immediately

To generate the thumbnails immediately:

- In the **Thumbnails** group, for the **Schedule** item, click **Run**.

  A background task is started and you can continue working.

Schedule Thumbnail Generation

To schedule thumbnail generation:

1. In the **Thumbnails** group, for the **Run or schedule this task** item, click **Schedule**.

   The **Schedule** dialog box appears. This dialog box requires the same input as the Windows Task Scheduler.
2. Configure the scheduled task to run when you require and then click **Schedule**.

   The task is modified and will run on the configured schedule.

Configure Hotspots

You can configure the properties shown when users hover over a hotspot when they view hotspots on a PDFTron rendition, as described in the *View Documents* article in the *Meridian Explorer User's Guide*. For document and object tags you can edit the property used to display the number and type. You can also choose the properties that you want to appear.

To configure hotspots:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.

2. Double-click the name of the repository that you want to configure.
3. Scroll to the **Hotspots** group.
4. To edit the **Tag number** property to display for Document and Object Tags:
   a. Click **Edit Number** in the Document or Object tag configuration depending on the setting you want to change.

      The **Select Property** dialog box opens.

   b. Choose the property you want to display for the document or tag number.
   c. Click **OK**.
5. To edit the **Asset number** property to display for Document and Object Tags:
   a. Click **Edit Type** in the Document or Object tag configuration depending on the setting you want to change.

      The **Select Property** dialog box opens.

   b. Choose the property you want to display for the document or tag number.
   c. Click **OK**.
6. To add the hotspot properties you want:
   a. Click **Select Properties** in the Document or Object tag configuration depending on the setting you want to change.
   b. Click **Add Property**.

      The **Select Properties** dialog box opens.

   c. Choose between two options:

- Select the property you want from a **Property Set** then click **Add**.
- To enter the property manually:
    i. Select the **Toggle search mode** check box.
    ii. In the field that appears, enter the name of the property you want to add.
    iii. Click **Check**.
    iv. If the field appears the **Validation Result** box with green text, click **Add**.

Properties to be added are listed on the right.

d. Click **OK**.

The **Hotspot Properties** dialog box lists the property to be added.

e. Click **OK**.

7. To remove or edit hotspot properties:
    a. Click **Select Properties** in the Document or Object tag configuration depending on the setting you want to change.
    b. To change an existing property, select that property then choose the one you want from the list.
    c. To delete a property, select that property then click **Remove**.
    d. Click **OK**.

> **Important!**
> For hotspots to work in Explorer, an item filter must be added to identify which documents in the repository are Master documents. If no Masters Filter is configured in a repository, hotspots will not be shown.

8. To add an item filter:
    a. Select the **Management Tools** section.
    b. Under **Item Filters**, click **Manage**.
    c. Click **New**.
    d. In the dialog, select **Filter to define master area**.
    e. Click **Next**.
    f. Enter the name for the filter.
    g. Enter the filter conditions.

    The filter should be configured in such a way that it matches all documents which are in the vault in a folder configured as a Masters folder. This can usually be done by creating a query that matches the field-path relation in the Vault.

    h. Click **OK**.

Select Multiple Properties

Several places in the Meridian Enterprise Server Administration Console allow you to select multiple properties to configure a feature of a view. Meridian Enterprise Server provides several ways that you can select the properties.

To select multiple properties:

1. In the toolbar, click **Add**.

   The **Select Properties** dialog box appears. The dialog box shows all available properties grouped by property set in the left list and the properties that you have selected in the right list.

   The dialog box works in two modes:

   - Browse mode – you select properties from a list that can be filtered on text that you type.
   - Search mode – you type property names, validate that the spelling is correct and that they exist, and then add them to your selection.

   To switch between modes, select or clear the **Toggle search mode** check box.

2. To browse for properties:

   a. Clear the **Toggle search mode** check box.

   b. Choose between two options:

      - Scroll the list to find the properties that you want. Collapse or expand property sets to help find a particular property.
      - Filter the list to show only the properties that you want:

        i. Type the beginning of a property set name or a property name in the filter box.

           The search operator that will be used is Starts With.

        ii. Press **Enter** or click the search icon.

           The list refreshes to show the results of your filter.

        iii. To reset the filter results, clear the filter box and click the icon again.

   c. To add properties to the selected properties list:

      i. Select the property.

      ii. Click **Add**.

iii. Double-click the property name.

iv. Drag the property and drop it in the list.

3. To search for properties by name:

   a. Select the **Toggle search mode** check box.

   b. Type one or more property names (case insensitive) in the text box.

      The property names may be separated by the comma (,) semi-colon (;) pipe (|) or newline characters. It is not necessary to type the property set name.

      If the list of property names already exists in a document, copy them to the Clipboard and paste the list into the text box.

   c. Click **Check** to confirm that the names are spelled properly and that all of the properties exist in the repository.

      If a property name is valid, its name appears in the **Validation Result** box in green text. If it is not valid, it appears in red text.

   d. Click **Add** to add all of the valid property names to the selected properties list.

4. To remove a property from the selected properties list:

   a. Select the property.

   b. Click **Remove**.

5. When you have added all of the properties to the list that you want, click **OK**.

   The properties that you selected are added to the list of properties for the feature that you are configuring.

Create And Edit Repository Views

A repository view is the fundamental presentation of the contents of a repository to users. Repository views are listed on the **Home** page of a Meridian Explorer site for users to select from and to begin working with documents, tags, and projects. Views are created as *view groups*.

Each view group comprises individual views that apply to each of the possible tag types: document, tags, and projects. That is, when you create a view for one type of item, Administration Console creates views for the other types of items at the same time that work together.

If you do not need views for the other item types, you can delete or disable them as described elsewhere in this guide. A repository may have any number of views. Views can be shown in named groups, for example, the views for a particular repository or tag type.

Each view includes layouts for searches, navigation, and property presentation:

- Advanced search, cascading property filters, and autocompletion
- Property-based navigation
- Navigation views similar to Meridian Enterprise
- Search results columns, toolbar buttons, and thumbnails
- Property pages and their mappings to document, tag, and project types.

Additional options such as full-text searching, folder browsing, and relational searches are also configured in each view.

Each view can use some or all of these layouts and each view has a default navigation layout that is shown when Meridian Explorer users first open a repository. Moreover, each view can be restricted for use by specific user groups.

> **Note:**
> - You must be a member of a Accruent group with the **Explorer Configurators** or **Application Administrators** permission in order to create or manage a repository view.
> - The definition of a view group is edited as described in this topic. The view layouts are edited as described in other topics in this chapter.
> - When multiple repositories exist on the same server, the website will list the views of all repositories.

Create New View Group

To create a new view group:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Views**.

   The **Explorer Views** page appears and lists the existing views grouped by the repository that they were created for.

2. Choose between two options:

   - To create a new view group:

     a. In the app bar, click **New View**.

        The **New View** dialog box appears.

     b. In the repository list, select the repository that the view will be created for.

     c. On the menu, select the item type that you want to configure the view for.

        A page that shows the options for the item type that you selected appears.

   - To copy an existing view:

     a. Select the view that you want to copy and then click **Copy**.

        The view is copied and appears in the view list as **Copy of *<SourceViewName>***.

     b. Select the view copy and then in the toolbar, click **Edit**.

        The **Edit *<ViewName>*** dialog box appears.

     c. On the menu, select the item type that you want to configure the view for.

        A page that shows the options for the item type that you selected appears.

3. Click options or type values using the descriptions in the following table.

Item type options

Option	Description
Enabled	Makes the view visible and selectable by users. Disable this option to hide a view from users.
Show on home page	If enabled, shows this view in the list of available views on the Meridian Explorer home page. If disabled, this view will not be listed but it can still be selected from the views bar after opening the **Documents** view.
Caption	The name of the view as seen by users.

Option	Description
Group	The available view names are grouped together by this name on the **Home** page of the Meridian Explorer website. Type the same name in this option for each view that you want to show in the same group. To create a new group, see Arrange Repository Views. **Note:** The same group name can be used by multiple repositories to group all of the related views together. Conversely, to group all of the views for a specific repository together, use the same group name, preferably one that includes the repository name for easier identification.
View ID	The read-only internal name of the view.
Enable preview	Shows property page tabs in the detail pane of the repository view. Users may click these tabs to preview properties without having to open the detail page of an item.
Hide project copies	Shows only master items in the view. Project copies are hidden.
Display redlines (Documents only)	Shows redlines in the viewer pane that were synchronized from the source vault not those that have been added by Meridian Explorer users with comments.
Enable feedback comments	Enables the discussion comments and redline functionality. For users to work with comments requires Meridian Explorer Standard or Plus level licenses (number begins with **M--EXC** or **M--EXP**) be registered in Accruent License Server. For information about showing the discussion comments in Meridian Enterprise PowerUser, see Compose View URLs. For information about the permissions that are required to work with discussions, see Create And Edit Permission Levels.
Display hotspots (Documents only)	Shows hotspots in the viewer pane that were synchronized from the source vault.
Display Content (Documents only)	The default document content shown in the viewer, either the renditions only or also the source documents and which should appear by default.

Option	Description
Allow draft printing (Documents only)	Permits Meridian Explorer users to print draft hardcopies. For more information about draft printing, see *Draft Print Documents* in the *Meridian Explorer User's Guide*.
Show documents (Projects only)	Enables the **Documents** view in the views bar in Meridian Explorer so that users can see the related documents when viewing projects. The view is available regardless of the **Enabled** setting.
Show object tags (Projects only)	Enables the **Objects** view in the views bar in Meridian Explorer so that users can see the related tags when viewing projects. The view is available regardless of the **Enabled** setting.
Filter	Select an item filter from the list that will determine the items that are shown by this view. This is required for all views. For information about creating filters, see Create And Edit Item Filters.

Edit a View Group

To edit a view group:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Views**.

   The **Explorer Views** page appears and lists the existing views grouped by the repository that they were created for.

2. Select a view in the view group that you want to edit and then in the toolbar, click **Edit**.

   The **Edit *<ViewName>*** dialog box appears.

   Double-clicking a view name or clicking **Properties** allows you to edit the view's configuration, not its definition as described in this topic.

3. On the menu, select the item type that you want to configure the view for. A page that shows the options for the item type that you selected appears.

4. Click options or type values using the descriptions in the preceding table.

5. Repeat steps 3 to 4 for each of the other item types (**Documents**, **Object Tags**, or **Projects**) that you want to configure the view for.

   For each type, either configure the view options if the view will be available to users or disable the view so that it is not available to users.

6. On the menu, click **Options** to configure settings that apply to all item types in this view.

7. Click options or type values using the descriptions in the following table.

View options

Option	Description
Enable package functionality	Allows export packages to be created from this view and published to other systems.
Default view for repository '< *RepositoryName*>'	Makes this the default view for the specified repository. If this option is not set for any view, the first view in the list will be the default view. If this option is already enabled for a different view, it will be disabled. This option must be set for one of the views to allow the **Related Packages** page to appear for Meridian Explorer users.
Accessible by the Meridian Explorer app for mobile devices	Makes this view available to mobile device users. The default view of each mobile device user can be set on the **Settings** page in the Meridian Mobile app.
Disable Mobile App ToDoList for this view	Allows the To-Do List to be disabled in Meridian Mobile app.

8. Click **OK**.

   If you copied an existing view, views for the other tag types are also created the same as if you had created a new view group.

   After you have created a view group, you can configure the individual views as described in Configure Repository Views and set view security as described in Configure View Security.

Configure Repository Views

After a repository view has been created as described in Create And Edit Repository Views, you can configure its many options.

> **Note:**
> You must be a member of a Accruent group with the **Explorer Configurators** or **Application Administrators** permission in order to create or manage a repository view.

Configuring repository views is described in the following topics.

Configure the Advanced Search Page

The advanced search page appears when Meridian Explorer users select the **Form Search** option in the **Search** ribbon and then toggle on the advanced options. You can configure the options that appear and the properties that are shown on the page.

To configure the **Advanced** search page:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Views**.

   The **Explorer Views** page appears and lists the existing views grouped by the repository that they were created for.

2. Choose between two options:

   - Double-click the view that you want to configure.
   - Select the view that you want to configure and then in the toolbar, click **Properties**.

     > **Note:**
     > Do not click **Edit**. Clicking **Edit** allows you to edit the view's definition as described in Create And Edit Repository Views, not edit its configuration as described in this topic.

     The view's configuration pages appear.

3. In the menu, click **Search Settings**.

   A sub-menu and options for the feature category appear.

4. In the sub-menu, click **Advanced Search** to show the available options.

5. Click options or type values using the descriptions in the following table.

6. Configure the search criteria list by adding criteria.

   - To add criteria:

     a. Click **Add New** and continue as described in Select Multiple Properties.

        A new row appears in the criteria list for each property that you added.

     b. For each new property, select options in each column using the descriptions in the following table.

   - To configure the criteria order:

     - Drag a row and drop it in the preferred location in the list.

   - To remove a criterion:

     - Select a row in the criteria list and click the **Remove** icon ❌.

       The criterion is removed from the list.

7. Click **Save**.

Advanced search configuration options

Group	Option	Description
Advanced search	Enable	Makes the advanced search page visible and available to users. Disable this option to hide the page from users.
Advanced search	Default	Makes the advanced search page the default search type for users.
Advanced search	List all properties	By default, users can only select from the properties that are specified in the search criteria list defined in the next step. Enabling this option allows users to select from all available properties similar to the **List all properties** option in the Meridian Enterprise PowerUser **Find** dialog.
Advanced search	Filter drop-down values (cascading)	Excludes values from lists that do not match the currently selected filter criteria. This makes the lists dependent on the other search criteria, also known as cascading value lists.
Advanced search	Min. autocomplete length	Select the minimum number of characters that must match the search properties.
Advanced search	Enable search on object tag name	Adds the **Object Tag Name** field to the default search form and to the advanced search form. Users can type a name (supported by autocomplete) in the field or select one from the list. The search result will show only the documents that are related to the selected tag. This condition can be combined with other search criteria. This option is not available for tag views.
Search criteria	Property	If necessary, click the cell and then select a different property from the list.
Search criteria	Default Operator	Click the cell and then select a default operator from the list. Users will be able to select from any of the operators in this list as well as **Is Empty** and their inverse counterparts, for example, **Not Empty**. **Note:** • For best performance, we recommend the **Starts with** operator as the default. If users select an existing value from a list, the **Equals** operator will always be used for best performance. • Wildcard characters are supported only by the **Wildcard** and **Not Wildcard** operators.

Group	Option	Description
Search criteria	Default	By default, every criterion in the search criteria list is shown to the user. If a criterion should not be shown by default, clear the check box in this column. The user must then add that property manually at search time.
Search criteria	Show Drop-Down	Shows a list of values for the user to select from.

Configure Property-Based Navigation

The property-based navigation page appears when Meridian Explorer users select the **Property based navigation** option in the **Search** ribbon. This lets users perform cascading (faceted) searches. You can configure the options and the properties that are shown on the page.

To configure property-based navigation:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Views**.

   The **Explorer Views** page appears and lists the existing views grouped by the repository that they were created for.

2. Choose between two options:

   - Double-click the view that you want to configure.
   - Select the view that you want to configure and then in the toolbar, click **Properties**.

     > **Note:**
     > Do not click **Edit**. Clicking **Edit** allows you to edit the view's definition as described in Create And Edit Repository Views, not edit its configuration as described in this topic.

     The view's configuration pages appear.

3. In the menu, click **Search Settings**.

   A sub-menu and options for the feature category appear.

4. In the sub-menu, click **Property Navigation** to show the available options.
5. Click options or type values using the descriptions in the following table.
6. Configure the properties.

   - To add a property to the list:

     a. Click **Add Property**.

        A property is added to the end of the list.

     b. Select the new property.

     c. Click **Edit** to select a different property name.

   - To configure the property hierarchy:

     - Drag a property's icon to the preferred location in the list and drop it when the tooltip icon has an arrow pointing above the list item.

       The property is moved to the new location. The ⊘ tooltip icon indicates an invalid destination.

- To remove a property:
    a. Select the property that you want to remove.
    b. Click **Remove**.

       The property is removed from the list.
7. Click **Save**.

Property navigation options

Option	Description
Enable	Makes this property navigation definition visible and available to users. Disable this option to hide the page from users.
Default	Makes this property navigation definition the default navigation for users.
Maximum values to display	The maximum number of unique values to show for each level of the layout after the user has clicked the **(more…)** link. If more values than this number exist, a text box will appear that the user can use to filter the values with the Contains operator.

Create And Edit Navigation View Layouts

A navigation view is shown when Meridian Explorer users select the **Navigation view** option in the **Search** ribbon. A navigation view layout displays documents or tags in a repository organized in a hierarchical folder structure according to a predefined set of properties. Users can browse and select from the existing values for a property at each level of the view in order to find documents or tags with the selected values. Meridian Explorer navigation view layouts are similar to Meridian Enterprise navigation views. A repository may have any number of navigation view layouts for use in different repository views.

The items that are shown in a navigation view are determined by a filter that is configured as described in Create And Edit View Filters.

To create or edit a navigation view layout:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Views**.

   The **Explorer Views** page appears and lists the existing views grouped by the repository that they were created for.

2. Choose between two options:

   - Double-click the view that you want to configure.
   - Select the view that you want to configure and then in the toolbar, click **Properties**.

   > **Note:**
   > Do not click **Edit**. Clicking **Edit** allows you to edit the view's definition as described in Create And Edit Repository Views, not edit its configuration as described in this topic.

   The view's configuration pages appear.

3. In the menu, click **Search Settings**.

   A sub-menu and options for the feature category appear.

4. In the sub-menu, click **Navigation View** to show the available options and the list of existing navigation views.

5. Click options or type values using the descriptions in the following table.

6. Choose one of the following options:

   - To create a navigation view:

     a. Click **New**.

        A new view named **Untitled** appears at the bottom of the navigation view list.

     b. Double-click the view's name to edit the name.

- To configure a navigation view:
    a. Select the navigation view that you want to edit in the list.
    b. Click **Edit**.

       The **Navigation View - Edit** dialog box appears.
- To add a property level to a navigation view:
    a. Select the navigation view that you want to edit from the list. The view's current navigation levels appear.
    b. On the **Hierarchy** page, click **Add Level**.

       A new child level is added to the bottom of the view.
    c. Click **Change** and then select a property from the list.
- To change the order of levels:
    - Drag a property's icon to the preferred location in the list and drop it when the tooltip icon has an arrow pointing above the list item.

      The property is moved to the new location. The ⊘ tooltip icon indicates an invalid destination.
- To remove a level from a navigation view:
    a. Select a level in the view.
    b. Click **Remove**.

       The level is removed from the view.
- To remove navigation views:
    - Select one or more rows in the view list and click **Remove**.

      The selected views are removed from the list.

7. Click **Save**.

Navigation view options

Option	Description
Enable	Makes the navigation views visible and available to users. Disable this option to hide the views from users.
Default	Makes navigation views the default search type for users.

Create And Edit View Filters

View filters determine the properties of items that are available to be shown in navigation views.

To create or edit a view filter:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Views**.

   The **Explorer Views** page appears and lists the existing views grouped by the repository that they were created for.

2. Choose between two options:

   - Double-click the view that you want to configure.
   - Select the view that you want to configure and then in the toolbar, click **Properties**.

     > **Note:**
     > Do not click **Edit**. Clicking **Edit** allows you to edit the view's definition as described in Create And Edit Repository Views, not edit its configuration as described in this topic.

   The view's configuration pages appear.

3. In the menu, click **Search Settings**.

   A sub-menu and options for the feature category appear.

4. In the sub-menu, click **Navigation View** to show the available options and the list of existing navigation views.

5. Select the navigation view that you want to edit in the list.

6. Click **Edit**.

   The **Navigation View - Edit** dialog box appears.

7. On the **Filter** page, add conditions to create the desired filter.

   - To add a condition to the filter expression:
     - Click **Add Property**.

       A new condition row is added to the expression. By default, the new condition will be evaluated with the Boolean AND operator in combination with any other conditions.
   - To edit an existing condition:

a. Click the condition row.

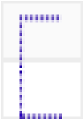
   The row becomes editable.

b. For the second and subsequent conditions, select a Boolean operator in the third column.

c. Select a property name in the **Property** column list.

d. Select an operator in the **Operator** column list.

e. Type a search value in the **Value** column.

   Grouped criteria are indicated by dotted lines  in the second column. Grouped criteria are evaluated together and the result evaluated with any other criteria in the filter.

- To group or ungroup criteria:

  a. Select two adjacent criteria.

  b. Right-click and select **Group** or **Ungroup** accordingly from the shortcut menu.

8. Click **OK**.

Note:
After you create or modify view filters, we recommend that you review the property indexes as described in Configure Item Names And Indexing to add or remove properties affected by your changes.

Configure Miscellaneous Search Options

The miscellaneous options enable advanced features for Meridian Explorer power users.

To configure the miscellaneous options:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Views**.

   The **Explorer Views** page appears and lists the existing views grouped by the repository that they were created for.

2. Choose between two options:

   - Double-click the view that you want to configure.
   - Select the view that you want to configure and then in the toolbar, click **Properties**.

   > **Note:**
   > Do not click **Edit**. Clicking **Edit** allows you to edit the view's definition as described in Create And Edit Repository Views, not edit its configuration as described in this topic.

   The view's configuration pages appear.

3. In the menu, click **Search Settings**.

   A sub-menu and options for the feature category appear.

4. In the sub-menu, click **Others** to show the available options.
5. Click options or type values using the descriptions in the following table.
6. Click **Save**.

Miscellaneous search options

Option	Description
Enable full-text search	Permits users to perform full-text searches.
Enable folder browsing	Permits users to browse folders. This option is not available for tag views.
Enable relational searches	Permits users to perform relational (related tags/documents) searches.

Configure the Results Grid Layout

The results grid layout defines how Meridian Explorer displays document or tag information in the results pane of a repository view. Each repository view has one results grid layout.

You can configure the following features of the layout:

- Column layout
- Available toolbar buttons and their captions
- Size of thumbnail images shown in the view

Configure Results List Columns

To configure the results grid columns:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Views**.

   The **Explorer Views** page appears and lists the existing views grouped by the repository that they were created for.
2. Choose between two options:
   - Double-click the view that you want to configure.
   - Select the view that you want to configure and then in the toolbar, click **Properties**.

     > **Note:**
     > Do not click **Edit**. Clicking **Edit** allows you to edit the view's definition as described in Create And Edit Repository Views, not edit its configuration as described in this topic.

     The view's configuration pages appear.
3. In the menu, click **Results Columns**.

   A sub-menu and options for the feature category appear.
4. In the sub-menu, click **Columns** to show the list of existing columns.
   - To add a column:
     a. Click **Add**.
     b. Continue as described in Select Multiple Properties.

        A new row appears in the column list for each column that you added.
     c. For each new row, select options in each column using the descriptions in the following table.

- To configure the column order:
  - Drag a row and drop it in the preferred location in the list.
- To remove a column:
  - Click the **Remove** icon ✖ in the row that you want to remove.

    The row is removed from the list.

5. Click **Save**.

Column display options

Option	Description
Property	If necessary, click the cell and then select a different property from the list.
Caption	Type a caption for the column to appear to users.
Visible	By default, every column in the list is visible to the user. If a column should not be shown by default, clear the check box in this column. The user must then add that column manually for it to be visible.
Thumbnail	Select the check box in this column to show a thumbnail image of the item in the column. This option is not available for tag views.

Configure Toolbar Buttons

To configure the toolbar buttons:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Views**.

   The **Explorer Views** page appears and lists the existing views grouped by the repository that they were created for.
2. Double-click the view of the repository that you want to configure.

   The view's configuration pages appear.
3. In the menu, click **Result Columns**.

   A sub-menu and options for the feature category appear.
4. In the sub-menu, click **Toolbar Buttons** to show the available options.
5. Click options or type values using the descriptions in the following table.
6. Click **Save**.

Toolbar button options

Option	Description
Enable document download	Shows a toolbar button that allows users to download documents to their computer from the Meridian Portal server. Type a caption for the button in **Button Caption**. This option is not available for tag views.
Enable download rendition with redlines	Shows an option in the context menu of the view that allows users to download the rendition of the document with redlines. Type a caption for the button in **Button Caption**.
Enable download from Meridian Web Access	Shows a toolbar button that allows users to download documents to their computer from the Meridian Enterprise PowerWeb server, which might be more local to the user than the Meridian Enterprise Server server. Users must have permissions for the PowerWeb server, they must have Meridian Enterprise Application Integration installed on their PC, and the vaults must be published as PowerWeb locations. Type a caption for the button in **Button Caption**. This option is not available for tag views.
Enable export to Excel	Shows a toolbar button that allows users to export the information in the results grid to a Microsoft Excel file on their computer. Type a caption for the button in **Button Caption**.
Enable external hyperlink	Shows a toolbar button that users can click to open an external web page in the browser. Type a caption for the button in **Button Caption**. Type the address of the web page in **URL**. For more information about specifying this option, see External Page URL Placeholders.

Configure Thumbnail Image Size

To configure the thumbnail image size:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Views**.

   The **Explorer Views** page appears and lists the existing views grouped by the repository that they were created for.

2. Double-click the view of the repository that you want to configure.

   The view's configuration pages appear.

3. In the menu, click **Result Columns**.

   A sub-menu and options for the feature category appear.

4. In the sub-menu, click **Thumbnails** to show the available options.

5. Click options or type values using the descriptions in the following table.
6. Click **Save**.

Thumbnail options

Option	Description
Small	Select a size from the list for small thumbnails.
Medium	Select a size from the list for medium thumbnails.
Large	Select a size from the list for large thumbnails.

Create And Edit Detail Page Layouts

Detail page layouts appear in the details pane when a user selects a document or tag to view its details. The property pages that are shown are specific to each document type or tag type in the repository. A repository may have any number of detail page layouts.

> **Note:**
> Although detail page layouts are defined within the context of a particular view, they are not view-specific and any changes to the layout in one view will be reflected in the other views in which the layouts are used. The layouts are specific to the document types or tag types to which they are mapped, which might not be intuitive in the user interface.

You may create one of each of the following property page types unless otherwise noted:

- **Content Page** — a list of the content data available for the selected document; source, rendition, redlines, or hybrid parts.
- **External Page** — a page from an external website.
- **Project Copies Page** — a list of the project copies made of the selected document.
- **Property Page** — the properties of the selected document or tag.
- **References Page** — the references of the selected document.
- **Related Items Page** — a list of related documents or tags.
- **Related Packages Page** — the packages that contain the selected document
- **Revisions Page** — the revisions of the selected document.
- **System Default** — the system-generated (**General**) page that contains the thumbnail, filename, workflow, and reference information for the item.

Create New Detail Page

To create a new detail page:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Views**.

   The **Explorer Views** page appears and lists the existing views grouped by the repository that they were created for.
2. Choose between two options:

- Double-click the view that you want to configure.
- Select the view that you want to configure and then in the toolbar, click **Properties**.

> **Note:**
> Do not click **Edit**. Clicking **Edit** allows you to edit the view's definition as described in Create And Edit Repository Views, not edit its configuration as described in this topic.

The view's configuration pages appear.

3. In the menu, click **Property Pages**.

   A page that lists the existing property pages and their options appears.

4. Click **New Page** and select a page type from the shortcut menu.

   A new row for the page appears in the page list and the new page's options appear.

5. Click options or type values using the descriptions in the following table. Not all options are available for each page type or for tag views.
6. Click **Save**.

Detail page options

Option	Description
Page type	The read-only type of the property page.
Page map	Shows a count of the item types to which the page has been applied. To quickly apply the page to every item type, click **Use Everywhere**. To quickly remove the page from every item type, click **Use Nowhere**. To apply the page to only specific item types, see the following task.
Caption	The caption of the page as you want it to appear to users.
Show property grid	Shows the specified properties and their values in a grid on the page.

Option	Description
Grid Columns	Lists the properties that will appear in the property grid. To add a property: 1. Click **Edit**. The **Properties** dialog box appears. 2. Click **Add Property**. A new row appears in the property list. 3. Click the row and then select a property from the list. To remove a property: • Select the row and then click **Remove**. The row is removed from the list. To configure the order that the properties appear in the grid: • Drag a row and drop it in the preferred location in the list. When you are finished defining the property grid, click **OK**.
Reference types to hide	Lists the references types that will not be shown in the view. To add a reference type: 1. Click **Edit**. The **Select Reference Types To Hide** dialog box appears. 2. Select each reference type that you do not want shown on the **References** page in Meridian Explorer. **Note:** References between documents and tags are not affected by this option. They will still be shown on the **Related Documents** or **Related Tags** pages. 3. When you are finished defining the property grid, click **OK**. The reference type names are listed for the option.
Viewer options	Select an option from the list to specify whether item content should be shown in a viewer window on the page.
URL	The URL of an external web page to show in the current page. This option is only available for external page type pages.The page must be able to be shown in a frame. For more information about specifying this option, see External Page URL Placeholders.

Option	Description
Enable feedback functionality	Enable this option to create a page specifically for feedback from an asset management system that is integrated with the Meridian Asset Management Module. For more information about this option including: the feedback properties, customizing the behavior of the feedback functionality with VBScript, showing additional information on the page, and adding custom command buttons, see *Customize the Feedback Page Functionality* in the *Meridian Enterprise Configuration Guide* . **Note:** • Enabling this option also enables redlining in the viewer window. The redlines will be stored with their respective documents in the Meridian Enterprise vault. • We recommend that you use the feedback comments (discussions) feature that is described in Create And Edit Repository Views instead. Enable this option only for backward compatibility with customization or existing feedback that has not yet been processed.
Show in this view	Enable to show this property page in the selected view. Disable to hide this property page in the selected view. The detail page must also be mapped to the item type as described in the task below for it to appear. This setting does not override the page mapping.

Edit Existing Detail Page

To edit an existing detail page:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Views**.

   The **Explorer Views** page appears and lists the existing views grouped by the repository that they were created for.
2. Double-click the view of the repository that you want to configure.

   The view's configuration pages appear.
3. In the menu, click **Property Pages**.

   A page that lists the existing property pages and their options appears.
4. Click the name of the detail page that you want to edit.

   The detail page's options appear.
5. Select or type options using descriptions in the preceding table.
6. Click **Save**.

Map or Unmap Detail Page from Item Type

To map or unmap a detail page from an item type:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Views**.

   The **Explorer Views** page appears and lists the existing views grouped by the repository that they were created for.
2. Double-click the view of the repository that you want to configure.

   The view's configuration pages appear.
3. In the menu, click **Property Pages**.

   A page that lists the existing property pages and their options appears.
4. Click **Page Mappings**.

   The **Page Mappings** dialog box appears.
5. Select an item type from the **Types** list.

   The list of current property pages appears to the right.
6. Select or clear the check box in the **Mapping** column accordingly or click **Apply To All Types**.
7. Click **OK**.
8. Click **Save**.

Change Order of Detail Pages

To change the order that detail pages are shown:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Views**.

   The **Explorer Views** page appears and lists the existing views grouped by the repository that they were created for.
2. Double-click the view of the repository that you want to configure.

   The view's configuration pages appear.
3. In the menu, click **Property Pages**.

   A page that lists the existing property pages and their options appears.
4. Click **Page Mappings**.

   The **Page Mappings** dialog box appears.
5. In the **Assignment** column, drag and drop the pages into the order you want.
6. Click **OK**.
7. Click **Save**.

Remove Existing Detail Page

To remove an existing detail page:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Views**.

   The **Explorer Views** page appears and lists the existing views grouped by the repository that they were created for.
2. Double-click the view of the repository that you want to configure.

   The view's configuration pages appear.
3. In the menu, click **Property Pages**.

   A page that lists the existing property pages and their options appears.
4. Click the name of the detail page that you want to remove and then click **Remove**.

   A dialog box opens, asking you to confirm your choice.
5. Click **Yes**.

   The detail page is deleted.
6. Click **Save**.

Arrange Repository Views

The order of view groups in the **Views** list and the order of the views in the right pane of the **Home** page are configurable to meet your requirements.

To arrange repository views:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Views**.

   The **Explorer Views** page appears and lists the existing views grouped by the repository that they were created for.

2. In the toolbar, click **Arrange**.

   The **Arrange** dialog box appears. The view groups are listed on the left.

3. Select the view group that you want to edit.

   The views included in a view group are listed on the right.

4. Drag and drop view names in the list to arrange them in the order that you want them to appear.

5. Click **OK**.

   The Administration Console refreshes to show the new arrangement. The arrangement will be applied to the client application after your changes have been deployed as described in Deploy the Current Views.

Configure View Security

You can restrict access to each view to specific Meridian Enterprise user groups.

To configure view security:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Views**.

   The **Explorer Views** page appears and lists the existing views grouped by the repository that they were created for.

2. Select the view that you want to configure.
3. Click **Edit**.

   The **Edit** dialog box for the corresponding view appears. The options shown are those that you configured when the view was created as described in Create And Edit Repository Views.

   Double-clicking a view name or clicking **Properties** allows you to edit the view's configuration, not its definition as described in this topic.

4. In the menu, click **Security**.

   A page appears that lists the groups that are currently granted access to the selected view.

5. Choose between two options:
   - To add groups:
     a. Click **Add**.

        The **Add Groups** dialog box appears.

     b. Select the groups that you want to assign to the view.
     c. Click **OK**.

        The group names are added to the list.
   - To remove groups:
     a. Select the groups that you want to remove.
     b. Click **Remove**.

        The group names are removed from the list.
6. Click **OK**.

Disable And Enable Repository Views

Disabling a repository view prevents it from being seen by users but retains its configuration in case you want to enable it later.

To disable or enable a repository view:

1. In the Meridian Enterprise Server Administration Console, select the view of the repository that you want to configure.
2. In the toolbar, click **Disable** or **Enable**, accordingly.

   The view's status in the **Active** column changes to indicate its current state.

Copy Repository Views

Copying a repository view family creates clones of the source views that you can modify. This can be useful if you want to create a view that is very similar to an existing view.

To copy repository views:

1. In the Meridian Enterprise Server Administration Console, select the view of the repository that you want to copy.
2. In the toolbar, click **Copy**.

   The view family is copied to new names preceded with the text **Copy of**.

Delete Repository Views

Deleting a repository view removes the entire view family (the selected view and its related views) from the repository configuration completely. It cannot be restored later except from a backup copy.

To delete a repository view:

1. In the Meridian Enterprise Server Administration Console, select the view of the repository that you want to delete.
2. In the toolbar, click **Delete**.

   The **Delete** dialog box appears.
3. Click **Yes**.

   The views are deleted.

Deploy the Current Views

When you change the Meridian Explorer views configuration, you must deploy it to the website before your changes are reflected by the website. After you configure a repository view, the changes you make are saved to a temporary location. They will not affect the site until they are explicitly deployed.

> **Note:**
> The Meridian Enterprise Server Administration Console continuously validates a view while you configure it to ensure that the options that you have chosen can be deployed to the website. For example, if you enable the advanced search option for a view but have not specified properties, an **Invalid Configuration** dialog box will appear. You must resolve this inconsistency before you can deploy the view.

To deploy the active views:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Views**.

   The **Explorer Views** page appears and lists the existing views grouped by the repository that they were created for.
2. In the app bar, click **Deploy**.

   A dialog box opens, asking you to confirm your choice.
3. Click **Yes**.

   A progress dialog box appears until the deployment is complete.

Revert To the Active Views

While you are modifying the active views, Meridian Enterprise Server Administration Console saves your changes but does not deploy them. You must do that manually as described in Deploy the Current Views. If you decide instead that the new views are incorrect and you want to restore the configuration (revert) to what is currently deployed, you can do so easily.

To revert the configuration to the active views:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Views**.

   The **Explorer Views** page appears and lists the existing views grouped by the repository that they were created for.

2. In the app bar, click **Revert**.

   A dialog box opens, asking you to confirm your choice.

3. Click **Yes**.

   A progress dialog box appears as your changes are rolled back.

Export Views

Exporting views saves the view configuration information for the repository to an XML file that is contained in a compressed archive (`.zip`) file. You specify the location of the file when you export the configuration.

Exporting the configuration is useful for several purposes:

- As a snapshot of the system's configuration at a point in time, such as before making major changes.
- As a backup of the configuration in case of disaster.
- To copy to another Meridian Enterprise Server server for import.

To export the active views:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Views**.

   The **Explorer Views** page appears and lists the existing views grouped by the repository that they were created for.
2. Click **Export**.

   A dialog box appears to prompt you for which repositories you want to export the views.
3. Select one or more repositories for which you want to export the views and then click **Export**.

   The file `Views.zip` is downloaded by your browser and you are prompted for what to do with it.
4. Save or open the file.

Import Views

Importing views loads view configuration information from a repository that was previously exported.

Importing views is useful for several purposes:

- To restore the system's configuration to a known point in time, such as before major changes were made.
- To rebuild a repository configuration after a disaster.
- To duplicate the configuration of another Meridian Explorer repository.

> **Note:**
> If views in the source repository were configured with item filters, the item filters are excluded from the import.

To import views:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Views**.

   The **Explorer Views** page appears and lists the existing views grouped by the repository that they were created for.
2. In the app bar, click **Import**.

   The **Import Views** dialog box appears to prompt you for the location of the file to import.
3. Click the folder icon.

   The **Open** dialog box appears.
4. Navigate to and select the compressed archive file (the default is `Views.zip`) that you want to import and then click **Open**.

   The filename appears in the **Views** field.
5. Click **Upload**.

   The file is uploaded by your browser and then the **Import Views** dialog box appears and lists the repositories for which views were found in the file.
6. Select the repositories for which you want to import views and then click **Import**.

   The views for the selected repository are imported.

After importing views, you might need to modify their configuration before deploying to them. If the imported views are different from the active views, they will need to be deployed as described in Deploy the Current Views before the changes will be available to users.

Export the Configuration

The configuration of a repository may be exported to a file. Exporting the configuration is useful for several purposes:

- As a snapshot of the system's configuration at a point in time, such as before making major changes.
- As a backup of the configuration in case of disaster.
- To copy to another Meridian Enterprise Server computer for import.

The configuration is exported to several XML files that are contained in a compressed archive (`.zip`) file. The configuration contains the items listed in Import a Configuration.

To export the repository views, see Export Views .

To export the current configuration:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click the name of the repository that you want to export.

   The repository overview page appears.

2. Click **Export**.

   The file `Configuration_`*`<RepositoryName>`*`.zip` is downloaded by your browser and you are prompted for what to do with it.

3. Save or open the file.

Import a Configuration

Importing a repository configuration loads the settings from a repository that was previously exported as described in Export the Configuration.

Importing a configuration is useful for several purposes:

- To restore the system's configuration to a known point in time, such as before major changes were made.
- To rebuild a repository configuration after a disaster.
- To duplicate the configuration of another Meridian Explorer repository.

Importable Configuration Items

The following table lists the configuration items that can be imported and describes how the items are imported.

Configuration items

Item	Description
Property definitions (document, tag, project) Object types (document, tag, project) Reference types (document, tag) Filters (document, tag, project)	If an item already exists in the repository, it is skipped.

Item	Description
Security settings • Global permissions • User roles • Permission levels • Memberships • Item-level security hierarchy and values(document, tag) • Project security (permission levels for user roles)	All security settings will be removed and replaced by the settings in the configuration file. If a user or group is missing, it will be ignored. This can happen when importing a configuration that was exported from a server with different users and groups. The memberships are applied to all projects. If a group already has global permissions, they are skipped. If a role is applied to a hierarchy value, the value is created so that the security will apply as expected when the value is used later. The value must not already exist.

Import a Configuration

To import a configuration:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click the name of the repository that you want to import.

   The repository overview page appears.

2. In the app bar, click **Import**.

   The **Importing Repository Cconfiguration** dialog box appears to prompt you for the location of the file to import.

3. Click the folder icon.

   The **Open** dialog box appears.

4. Navigate to and select a local compressed archive file (the default is `<RepositoryName>.zip`) that you want to import and then click **Open**.

   The filename appears in the **Configuration** field.

5. Click **Upload**.

   A dialog box opens, asking you to confirm your choice.

6. Click **Yes**.

   A background task is started and you can continue working.

   When the process has completed, the changes are effective immediately.

Upgrade a Repository

After you install a Meridian Enterprise Server upgrade, if a repository or its views are not available, you might need to manually upgrade the repository before it is available in Meridian Explorer. If you have not yet created repositories, proceed instead to create one as described in Create a Meridian Explorer Repository.

Confirm that a current verified backup of the repository database exists.

To upgrade an existing repository to use the Microsoft SQL Server FILESTREAM option that was not enabled when the repository was created, contact Accruent Technical Support for an upgrade procedure.

To upgrade a repository:

1. Confirm that a verified backup of the repository exists.
2. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories** .

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.
3. Select the repository that you want to upgrade and then in the toolbar click **Upgrade**.

   A background task is started and you can continue working. When the upgrade is finished, the result is shown in the **Compatibility** column of the repository list.
4. Redeploy the view configuration as described in Deploy the Current Views.

Back Up a Repository

A repository database is a normal DBMS database that can be backed up with other data managed by the DBMS. However, since the repository is synchronized from data stored in Meridian Enterprise, the repository database is not at a high risk of loss. It can be easily re-created by resynchronizing it from its source vault either manually or by the next run of the synchronization job scheduled task. However, because full synchronization can take a considerable length of time depending on the size of the source vault, you might want to back up the repository database anyway so that it can be restored more quickly.

> **Note:**
> When stored in SQL Server, the repository database uses multiple file groups. To ensure that the file groups are correctly restored from a backup, we recommend using the Full Recovery Model for the repository database. Also, if the FILESTREAM option of the repository is enabled, be sure to also back up the FILESTREAM path.

Delete Repository Items

In rare circumstances, you might want to delete some or all of the items in a repository, for example, to test a synchronization job or to rebuild it without removing it from the database server.

Important!

Performing this task will delete some or all of the repository contents. Confirm that no valuable data will be lost if you proceed.

This task should be performed only when no users have the repository open.

Delete Specified Types of Repository Items

To delete specified types of repository items:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.
2. Double-click the name of the repository that you want to configure.
3. In the **Statistics** group, for each of the **Documents**, **Object Tags**, and **Projects** items click **Remove**.

   A **Delete** dialog box appears.
4. Click options or type values using the descriptions in the following table.

   Delete options

Option	Description
Delete option	Select which items you want to delete. • **Remove all** deletes all items. • **Remove filtered** deletes the items that match the item filter that you select from the **Filter** list. For more information about item filters, see Create And Edit Item Filters.

5. Click **OK**.

   A **Warning** dialog box appears.

6. Click **Yes**.

   A background task is started and you can continue working.

7. To confirm that the items were deleted, click **Refresh** next to the item type that you deleted.

Delete All Document Content

To delete all document content from the repository database:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.

2. Double-click the name of the repository that you want to configure.
3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.

4. In the **Document Content** group, for the **Remove Content** item, click **Run**.

   A dialog box opens, asking you to confirm your choice.

5. Click **Yes**.

   A background task is started to remove the content and the repository will revert to showing content from the Meridian Enterprise vault.

Rebuild the Repository

To rebuild the repository:

1. Validate the synchronization job that you will use to synchronize the repository with the source vault as described in Validate a Synchronization Job with the **Ensure obsolete items will be removed from Explorer** option enabled.
2. Run the synchronization job to recreate the repository items.

Take Repositories Offline Or Online

Taking a repository offline temporarily makes it inaccessible by Meridian Explorer so that you can perform administrative tasks without users online. Making it online again restores access.

To take a repository offline or online:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories** .

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.

2. Select the repository that you want to take offline or online and then in the toolbar click **Off/Online**.

   A warning dialog box appears.

3. Click **Yes**.

   If the repository was online, it is taken offline. If the repository was offline, it is taken online. The status of the repository is shown in the **Status** column.

Unregister Repositories

Unregistering a repository disconnects the repository database from Meridian Enterprise Server. It does not delete the data.

Important!
To reregister a repository after it has been unregistered, contact Accruent Technical Support.

To unregister a repository:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.

2. Select the repository that you want to unregister and then in the toolbar click **Unregister** .

   A dialog box opens, asking you to confirm your choice.

3. Click **Yes**.

   The selected repository is unregistered.

Register a Meridian Enterprise Vault

Registering a Meridian Enterprise vault in Meridian Enterprise Server Administration Console makes it easier for you to view and manage the vault settings that are used by Publisher to synchronize the vault with Meridian Explorer. You can do the same tasks in the Meridian Enterprise Administrator program and you must perform all other vault management there.

To register a vault:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.

2. Click **New**.

   The **New Repository** dialog box appears.

3. Select **Meridian vault** and then click **Next**.

   The **Select [M] Vault To Register** page appears.

4. If necessary, type the correct server name.

   Enter the name in the same format as it is used in the Meridian Enterprise Administrator program to avoid the vault appearing multiple times:

   - Fully-qualified domain name

     This is preferred, especially if multiple vaults on the same EDM server will be registered. The same name registered in different formats can result in a license claimed for each format.

   - Computer name alone
   - NETBIOS machine name

5. Click the connect icon .

   The vaults that reside on the specified server are listed.

6. Select one or more vaults and then click **Register**.

   The vaults appear in the repository list in the **BC Meridian** group.

Manage a Meridian Enterprise Vault

Managing a Meridian Enterprise vault in Meridian Enterprise Server Administration Console makes it easier for you to view and manage the vault settings that are used by Meridian Enterprise Server.

To manage a Meridian Enterprise vault:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.
2. Double-click the icon of the vault that you want to manage.

   The **Overview** page for the vault appears.
3. Click **Check for locked documents** if you want to show the documents that are locked for a user that you select.
4. Click **Unlock documents** if you want to unlock the documents that are locked for a user that you select.
5. Click options or type values using the descriptions in the following table.
6. In the menu, click **Publish**.

   The **Publish** page appears and lists the settings for each publishing job that are configured to synchronize the selected vault with a Meridian Explorer repository. You can manage some of the settings on this page. For the other settings, configure the publishing job directly as described in Configure a Publishing Job.
7. Click options or type values using the descriptions in the following table.
8. Click **Save**.

Meridian Enterprise vault overview options

Group	Option	Description
General	Name	The name of the vault and server in the form *<VaultName>@<ServerName>*.
General	Server	The name of the server that hosts the vault.
General	PowerWeb location ID	The GUID of the PowerWeb location ID that is used by Meridian Explorer.

Group	Option	Description
General	PowerWeb root	The URL of the PowerWeb location that is used by Meridian Explorer.
Options	Stream root	Verify that the default location is correct or type the path on the Meridian Enterprise server that is the location of the stream files contained in the vault. If the Meridian Enterprise server is separate from the Meridian Enterprise Server computer, the path must be a shared UNC location. If the path is incorrect, errors can occur when user's access document content.
Options	Document number property	The display name of the vault property that uniquely identifies documents for synchronization. If the same property name is used in more than one property set, qualify the property name with the property set name (for example, **Custom.Number**).
Options	Tag number property	The display name of the vault property that uniquely identifies tags for synchronization. If the same property name is used in more than one property set, qualify the property name with the property set name (for example, **Custom.Number**).
Options	Project number property	The display name of the vault property that uniquely identifies incoming packages for import into the vault. If the same property name is used in more than one property set, qualify the property name with the property set name (for example, **Custom.Number**).
Options	Site name	Site that the repository is assigned to. This enables you to manage Layer Translation tables at the site level.
Options	Transmittal document type	Identifies the document in Meridian that is to be used as the transmittal sheet. The content of the first document that has this Document Type is sent to Portal as the transmittal sheet.

Meridian Enterprise vault publishing options

Option	Description
Job name	The names of the publishing job in the form *<DisplayName>*(*<JobName>*).
Destination repository	The name of the Meridian Explorer repository that is synchronized with this vault.
Only publish documents from the specified collection	The name of a collection that is configured for the **Only publish documents from the specified collection** option as described in Configure Synchronization Options.

<table>
<thead>
<tr><th>Option</th><th>Description</th></tr>
</thead>
<tbody>
<tr><td>Number of documents</td><td>The number of documents contained in the vault, excluding revisions.</td></tr>
<tr><td>Last run</td><td>The date and time that the publishing job last ran.
To reset the date and force a full synchronization:
Click Reset.
The Reset Options dialog box appears.
Click options or type values using the descriptions in the following list:
Synchronize everything next time – Synchronizes all documents when the publishing job runs the next time, whether it is started manually or on a schedule.
Synchronize after a specific date – Synchronizes all documents when the publishing job runs the next time after the selected date.
To select the date, click the calendar icon .
Click OK.</td></tr>
<tr><td>Documents pending</td><td>The number of documents pending publishing by this job.
To remove some or all of the documents from the publishing queue:
Click Manage.
The Manage Pending Documents dialog box appears and lists all of the documents pending publishing.
Choose between two options:
Click Remove All to remove all of the documents.
Select the documents that you want to remove from the queue.
Press and hold the CTRL key while clicking to select individual names. Press and hold the Shift key while selecting the first and last of a range of names.
Click Remove.</td></tr>
</tbody>
</table>

Website

The Meridian Explorer website displays repository information from synchronized Meridian Enterprise vaults. Users can find documents and tags (if applicable) using configurable views or search using configurable search layouts. The results of searches or property-based navigation can be shown in either a configurable grid or a thumbnail layout. The details of documents or tags can be shown in configurable property pages.

The Meridian Explorer website is configured at several levels:

- Configuration that applies to the entire website, all repositories, and all users. This configuration is described in this chapter. For information about customizing the look of the website, see Customize the Colors And Header and Customize the User Interface.
- Configuration that applies to a specific repository. This configuration is described in Configure a Meridian Explorer Repository.
- Configuration that can be set by users to their personal preferences. This configuration is described in the *Configure Personal Preferences* section of the *Meridian Explorer User's Guide*.

Instructions for global configuration can be found in the following topics.

For information on customizing Meridian Explorer to include data from other sources, see Include Data From Other Sources.

Configure the Application Pool Account

By default, the Meridian Explorer web application is configured with the **Integrated Windows authentication** option enabled. This allows you to use Windows user accounts and groups to configure the security of the application. The Meridian Explorer clients will connect to the repository using the security account of the Internet Information Services (IIS) application pool. By default, Meridian Explorer will use the **BCEnterprise** application pool, which runs under the Network Service account.

> **Note:**
> - The region and language settings of the application pool identity determine how Meridian Explorer data is shown to users. For example, the format of dates.
> - If a feedback type page will be used in web browsers other than Internet Explorer (for example, Firefox or Chrome), access denial errors can occur if the Meridian Enterprise Server application pool account is not the same as the Meridian Enterprise EDM Server service account.
> - If a .NET Framework 2.0 application pool will be used instead of the **BCEnterprise** application pool created by the setup program, internal server errors can occur when the Meridian Explorer home page is loaded. These can be prevented by removing the following line from the application's `web.config` file.
>
> ```
> <section name="scriptResourceHandler"
> type="System.Web.Configuration.ScriptingScriptResourceHandlerSec
> tion,
> System.Web.Extensions, Version=3.5.0.0, Culture=neutral,
> PublicKeyToken=31BF3856AD364E35"
> requirePermission="false"
> allowDefinition="MachineToApplication"/>
> ```

If **SQL Server authentication** is selected for the repository database connection, a dedicated application pool may not be necessary.

If **Windows authentication** is selected for the repository database connection, we recommend that you create a dedicated application pool that will run under a domain account with the rights described in Security Requirements.

To configure the application pool account:

1. Open the **Internet Information Services Manager** in **Computer Management** and select **Application Pools** in the **Connections** tree.
2. Select the **BCEnterprise** application pool.
3. On the **Actions** menu, select **Advanced Settings**.

The application pool's **Advanced Settings** dialog box appears.

4. Expand **Process Model** and select **Identity**.
5. Click the browser button in the value column.

   The **Application Pool Identity** dialog box appears.
6. Select **Custom account** and click **Set**.

   The **Set Credentials** dialog box appears.
7. Type an account name in **User name** and type the account password in **Password** and **Confirm Password**.

   > **Note:**
   > This account must be a domain administrator and the **BCEnterprise** site must connect with the **Application user (pass-through authentication)** option enabled.
8. Click **OK**.

   The dialog box closes and the account name appears in **Custom account**.
9. Click **OK**.

   The dialog box closes and the account name appears in **Identity**.
10. Click **OK**.

    The dialog box closes.
11. Contact your database administrator to grant the account access to the Meridian Explorer configuration and Meridian Explorer repository databases.

Compose View URLs

By default, the Meridian Explorer website opens to the **Welcome** page, where the user can begin browsing and searching the repository. The default URL of the site is: `http://<ServerName>/bcenterprise` or `http://<ServerName>/bcenterprise/home.aspx`. Under some circumstances or for some users, you might want the website to open to a specific view with a specific document or tag filter, optionally disable other navigation, and show the items as thumbnails. You can achieve these and similar results by composing a URL that specifies the view to open and other parameters. You can then place the URL in a hyperlink on a different site or in a shortcut on the user's desktop.

The URL is similar for the Meridian Explorer mobile website. The website can be opened by a URL with the schema name **bluecielo** and the username and password:

bluecielo:<*ServerName*>/<*UserName*>/<*Password*>?

URL Parameters

The Meridian Explorer URL accepts the optional parameters described in the following table. The view and filter IDs can be found in Meridian Enterprise ServerAdministration Console as the names that are automatically assigned to them.

Meridian Explorer URL parameters

Parameter	Description

COMMENTS	If set to **True**, shows the **Comments** page of the document or tag. This parameter is intended to be used in the URL of a custom external page in Meridian Enterprise PowerUser. The page can be useful for Meridian Enterprise users to see the comments entered in Meridian Explorer.
	Use the following VBScript expression to calculate a URL that specifies an external property page in Meridian Enterprise. Replace *<ServerName>* with your web server name and modify the **ViewID** parameter to specify the view definition. Then Meridian Enterprise users can view the comments entered by Meridian Explorer users. For more information about configuring an external property page for Meridian Enterprise, see the *Configure External Pages* article in the *Meridian Enterprise Configuration Guide*.
	`“http://<ServerName>/BCEnterprise/Home.aspx?ViewID=DOC_E91E5& GLOBALID=” & Cstr(Document.ID)& “&COMMENTS=True”`
	• If the Meridian Explorer option **Use Oracle AutoVue Client/Server deployment to view documents** is enabled and **AutoVueViewer** is the default (set to the highest priority in the PowerUser viewer options), one viewer or the other will not work correctly in PowerUser depending on which one is activated first in the current session. In this configuration, if both clients will use AutoVue, they must use the same type of deployment, either the same client/server deployment or desktop deployment. Deployment types cannot be mixed.
	• If the URL will be shown as an external property page in Meridian Enterprise and the specified view is configured to show renditions and the **Enable PDFTron viewer for PDF documents** option is enabled as described in Configure the Viewer Options, the rendition may not appear in PowerUser unless the following registry values are set:
	For 32-bit, set the DWORD value **PowerUserU.exe** to **0000270f** at:
	`HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\ Microsoft\Internet Explorer\Main\FeatureControl\ FEATURE_BROWSER_EMULATION`
	For 64-bit, set the DWORD value **PowerUser.exe** to **0000270f** at:
	`HKEY_LOCAL_MACHINE\SOFTWARE\ Microsoft\Internet Explorer\Main\FeatureControl\ FEATURE_BROWSER_EMULATION`

Parameter	Description
DEFVIEW	Optional display mode in which to show the results pane. May only be used with **VIEWID**. If this parameter is set to **THUMBNAIL**, items in the view pane appear as thumbnail images. If this parameter is set to any other or no value, the items appear in a grid view.
DOCFILTER	Optional ID of an item filter to apply to the specified view. The filter specifies which documents are included using property matching. If the filter specifies property value criteria, the property values must be specified in placeholders in the URL. The criterion operator in the filter definition will be used and should not be specified in the URL. If no value is specified in the URL for the property value criteria of a filter, the filter always evaluates to True. For information about creating item filters, see Create And Edit Item Filters.
GLOBALID	Optional value of the Meridian Enterprise **Document ID** property of the document or tag for which to show comments. This parameter is intended to be with the **COMMENTS** parameter in the URL of a custom external page in Meridian Enterprise PowerUser.
HIDEVIEWBAR	When missing (default) or set to **TRUE**, hides the views bar at the bottom of the page. This parameter is intended for use when Meridian Explorer is integrated with another system and only the **Documents** view is relevant. The views bar can be hidden entirely as described in Customize the User Interface.
HOME	When missing (default) or set to **YES**, shows links to the home page. When set to **NO**, hides the home page links. This parameter is intended for use with the **MOD** parameter to show a substitute view.
ID	One or more document IDs to show in a view specified by the **VIEWID** parameter. Separate multiple IDs with the semicolon (;) character. For example: `http://MyServer/bcenterprise/Home.aspx?VIEWID=DOC_E91E5&ID=100;101;102`
ISOLATION=TRUE	Hides the views bar and the **HOME** tab in the ribbon menu bar when one document or a list of documents is previewed in a new browser window, such as from within a maintenance management system.
MOD	When set to one of the shortcuts listed in Meridian Enterprise Server URL Shortcuts, shows that view instead of the home page.
MRU	When missing (default) or set to **YES**, shows a group of the most recently used view names on the home page. When set to **NO**, it shows the welcome text instead of the view names.

Parameter	Description
NAVSTATE	Optional display state of the navigation pane in the browser. May only be used with **VIEWID**. If this parameter is set to **HIDE**, the pane is collapsed and the results pane expands to full window width. If this parameter is set to any other or no value, the navigation pane is visible.

PACKAGEID	Export package ID to show on the **Collections** page by the **VIEWCAT** parameter as in the following example.
	`http://MyServer/bcenterprise/home.aspx?RN=MyRepository&ViewCat=MyPackage&PACKAGEID=10`
	Also used for the ID of a package to show on the **Import Packages** page by the **import** URL shortcut described in Meridian Enterprise Server URL Shortcuts. For example:
	`http://MyServer/bcenterprise/import?PACKAGEID=10`

RN	The repository name to open. The asterisk (*) wildcard character may be specified to open the first available repository.
TAGFILTER	Optional ID of an item filter to apply to the specified view. Typically, this filter is used to specify which assets are included using indirect linking. If the filter specifies property value criteria, the property values must be specified in placeholders in the URL. The criterion operator in the filter definition will be used and should not be specified in the URL. If no value is specified in the URL for the property value criteria of a filter, the filter always evaluates to True. For information about creating item filters, see Create And Edit Item Filters.
TagNumber	Optional value of the **Tag Number** property of the tag for which to show its related documents.

Parameter	Description
UPLOAD	When set to **1**, the **Upload** button will be available in the toolbar of the **Related Documents** page. When set to **0** (default), the button is not shown. This parameter is intended for use when the view is shown from within a maintenance management system. Users can click the button to upload files to the Meridian Enterprise source vault of the repository. The files will be uploaded to the first vault that is a source of the synchronization job of the repository. You cannot specify one vault from among multiple sources. If no source vault is configured for the synchronization job, an error will occur. The Meridian Portal web application `web.config` file should also be modified to configure the maximum acceptable file size (in KB) to upload, similar to the following. Files larger than this will fail to upload. The default is 4096: `<httpRuntime maxRequestLength="1048576" />` The **AIMS_Attach_Intialize** event procedure must also be implemented (to assign a document type to the uploaded documents, for example) as described in *Asset Management Events* in the *Meridian Enterprise VBScript API Reference Guide*. The optional **AIMS_Attach_Before** and **AIMS_Attach_After** events may also be implemented.
VIEWCAT	The item type view to open. The supported types are **DOC**, **TAG**, **Project**, and **Package**.
VIEWID	The ID of the view to open. When a document view is specified, all documents will be listed that match the filter specified by **DOCFILTER** or are related to a tag that matches the filter specified for **TAGFILTER**. When a tag view is specified, all tags will be listed that match the filter specified by **TAGFILTER** or are related to a document that matches the filter specified for **DOCFILTER**. Required for use with the Meridian Asset Management Module.
VIEWMODE	Optional display mode of the detail pane. If this parameter is set to **DETAILS**, the details page of the first item in the result set will be shown.

Examples

Following are some examples of using the client URL parameters.

- Open the default documents view for the repository **MyRepos**:

  `http://<ServerName>/BCEnterprise/Home.aspx?RN=MyRepos&VIEWCAT=DOC`

- Open the view named **DOC_E915** of the default repository:

  `http://<ServerName>/BCEnterprise/Home.aspx?VIEWID=DOC_E91E5`

- Open the view named **DOC_E915** of the default repository and apply the document filter named **123456**.

```
http://<ServerName>/BCEnterprise/Home.aspx?VIEWID=DOC_
E91E5&DOCFILTER=123456
```

- Open the view named **DOC_E915** of the default repository and apply the tag filter named **222222**:

```
http://<ServerName>/BCEnterprise/Home.aspx?VIEWID=DOC_
E91E5&TAGFILTER=222222
```

- Open the view named **DOC_E915** of the default repository, apply the document filter named **123456**, and apply the tag filter named **222222**:

```
http://<ServerName>/BCEnterprise/Home.aspx?VIEWID=DOC_
E91E5&DOCFILTER=123456&TAGFILTER=222222
```

- Open the view named **DOC_E915** of the default repository, apply the document filter named **123456**, and pass the value **ABC** for the filter criterion with property **SITEID**:

```
http://<ServerName>/BCEnterprise/Home.aspx?VIEWID=DOC_
E91E5&DOCFILTER=123456&SITEID=ABC
```

- Open the view named **DOC_E915** of the default repository, apply the document filter named **123456**, pass the value **ABC** for the filter criterion with property **SITEID**, hide the navigation pane, and display the results pane in thumbnail mode:

```
http://<ServerName>/BCEnterprise/Home.aspx?VIEWID=DOC_
E91E5&DOCFILTER=123456&SITEID=ABC&NAVSTATE=HIDE&DEFVIEW=THUMBNAIL
```

- Open the view named **DOC_E915** of the default repository and show the **Comments** page for the current document.

  Use the following VBScript expression to calculate a URL that specifies an external property page in Meridian Enterprise PowerUser. Replace <*ServerName*> with your web server name and modify the ViewID parameter to specify your view definition. Then Meridian Enterprise users can view the comments entered by Meridian Explorer users.

```
"http://<ServerName>/BCEnterprise/Home.aspx?ViewID=DOC_
E91E5&GLOBALID=" & Cstr
(Document.ID)& "&COMMENTS=True"
```

- Open the Meridian Explorer mobile website, apply the document filter named **123456** and the tag filter named **654321**, pass the filter template criteria **WO=123** and **FUNCLOC=ABC**, and title the results **Related Documents**.

```
bluecielo:<ServerName>/<UserName>/<Password
>?DOCFILTER=123456&TAGFILTER=654321&WO=123&FUNCLOC=ABC&TITLE=Rela
ted Documents
```

- Open the view named **DOC_MASTERS** of the default repository in list mode, hide the navigation pane, apply the tag filter named **F00001**, and show the documents related to tag **ABC123** in a list.

  ```
  https://<ServerName>/BCEnterprise/Home.aspx?VIEWID=DOC_
  MASTERS&TAGFILTER=F00001&DEFVIEW=LIST&NAVSTATE=HIDE&VIEWMODE=LIST
  &TAGNUMBER=ABC123
  ```

Create Links On the Home Page

If the Meridian Explorer users in your organization rely on other intranet or Internet websites, you can place links to those sites on the **Home** page for their convenience.

You must have the **Explorer Administration** permission to create links.

Create Link

To create a link on the home page:

1. Open the Meridian Explorer client website.
2. In the right sidebar, in the **Other Options** group, click **Create New**.

   The **Create New** dialog box appears.
3. Click options or type values using the descriptions in the following table.
4. Click **Save**.

   The home page refreshes to show the new link.

Link options

Option	Description
Caption	The text that will appear on the **Home** page.
URL	The address of the site that you want to link to open.

Delete Link

To delete a link on the home page:

1. Open the Meridian Explorer client website.
2. In the right sidebar, in the **Other Options** group, click the delete icon ✖ next to the link that you want to delete.

   The home page refreshes to show the new link removed.

Customize the Colors And Header

Administration Console makes it easy to change the color schemes and logos used in Meridian Explorer and in Administration Console itself.

You can set a color scheme by picking one primary color. Lighter and darker hues of the same color are automatically calculated to complement the primary color and to complete the color scheme.

To customize the colors and header text:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Settings**.

   The **Application Settings** page appears.

2. On the **Application Settings** page, in the **Management Tools** group, for the **Branding** item, click **Manage**.

   The **Branding** dialog box appears.

   - To change the Meridian Explorer header text:

     a. On the **Headers** page, for the **Explorer Client** item, type the text that you want to appear as the title on the Meridian Explorer**Home** page.

     b. Click **Save**.

   - To change the Administration Console or Meridian Explorer screen colors:

     a. Choose between two options:

        - On the **Themes** page, click **Change** for the **Config application color** item to change the Administration Console color theme.

        - Click **Change** for the **BC Explorer color** item to change the Meridian Explorer color theme.

          The **Pick Color** dialog box appears.

     b. Select the primary color for your theme.

     c. Click **Save**.

3. To see your changes, refresh your browser.

To change the logo that is shown on the Meridian Explorer **Home** page, see Customize the User Interface.

Enterprise Server saves the selected color scheme in `C:\inetpub\wwwroot\BCEnterprise\Themes\css\BCTheme`*<Number>*`_`*<ColorCode>*`.css` where *<Number>* is a sequential number and *<ColorCode>* is the 6 digit hexadecimal code for the base color that you picked. If you pick a different color later, a new CSS file will be created if it does not already exist. Enterprise Server also makes a backup copy of the CSS file in `C:\ProgramData\BlueCieloECM\Hyperion\Themes\CSS` and restores the copy if the application is restarted or reinstalled so that you do not need to reset the color scheme.

The active stylesheet will be the one with the highest number in <*Number*>. This number is incremented when new styles are added to the default stylesheet as the result of changes in a version of Meridian Enterprise Server. The new default stylesheet is set as the active stylesheet after the new version of the software is installed, including for upgrades. The old stylesheet is retained during upgrades so that if you have made customizations, you can copy them to the new stylesheet.

If you have experience with CSS and want to further customize the colors, you can edit the file that is stored in the backup `CSS` folder. It will be copied over the active file when IIS is restarted. A comment block at the top of the file lists the theme colors. Each line includes a comment that describes where the color is used in the user interface. To change a color, replace all occurrences of the color code in the file with the desired code.

Customize the User Interface

You can easily customize items in the Meridian Explorer client application user interface as described in the following table. Additional settings are provided that allow you to configure some of the website behaviors. If you replace files, you must restart Internet Information Services and clear the user's browser cache for the changes to take effect.

For information about changing the **Home** page header text and the application colors, see Customize the Colors And Header.

Customizable items

Item	Description
Icons for each file extension used by documents	Replace C:\ProgramData\BlueCieloECM\Hyperion\Images\Custom\Extensions*<FileExtension>*_icon.gif **Note:** Do not replace DOC_DEFAULT.gif or TAG_DEFAULT.gif.
Icons for each tag type	Replace C:\ProgramData\BlueCieloECM\Hyperion\Images\Custom\Extensions*<TagTypeName>*_icon.gif
Icons for each view	Replace C:\ProgramData\BlueCieloECM\Hyperion\Images\Custom\ViewImages*<RepositoryName><ViewInternalID><ViewID>*.png. An example filename is BCRepository_C68DA_DOC_671C1.png. *<ViewInternalID>* is a 5 character sub-string of the view GUID, which is not visible in the user interface. If existing icon files are not present to follow as the filename pattern, export the **BCUserSettings** table, **Data** column from the configuration database and examine the **DocumentViewSchema.Name** value. *<ViewID>* can be found in the **VIEW ID** column of **Explorer Views** list and includes the view type prefix **DOC**, **TAG**, **AREA** (project).
Thumbnail images shown for each tag type	Replace C:\ProgramData\BlueCieloECM\Hyperion\Images\Custom\Thumbnails\ObjectTag*<TagTypeName>*.png **Note:** Do not replace DEFAULT_OBJECTTAG.gif.

Item	Description
Date format shown in the view results list and on property pages	Add new rows with the names **ServerDateFormat** and **ServerTimeFormat** in the first (settings) column of the **General** worksheet in the resource file for the user's preferred language. Resource files for all of the supported languages are located in `C:\inetpub\wwwroot\BCEnterprise\Languages` by default. In the second (values) column, type the Windows character pattern in which to display the date or time, for example, **MM/dd/yyyy** and **h:mm tt**. Restart the Enterprise Server service and Internet Information Services for your changes to take effect. **Note:** The **DateFormat** and **DateTimeFormat** settings are used by JavaScript and do not affect the display of metadata by Meridian Explorer.
Change the text shown in the client application	Find and modify the text in the **General** worksheet in the resource file for the user's preferred language. Resource files for all of the supported languages are located on the server in `C:\inetpub\wwwroot\BCEnterprise\Languages` by default.

To modify the behavior of certain features, use the following table to edit or create the settings in `C:\ProgramData\BlueCieloECM\Hyperion\WebConfigDto.dat`.

Configurable items

Setting	Description
MaxChildFolderCount	Maximum number of sub-folders shown in the navigation tree
MaxChildValueCount	Maximum number of property values shown in the navigation tree or in lists
StoreFeedbackRedlineOnRendition	Set to **true** to always save redlines in the rendition file, not the original file. If the document does not have a rendition, the data will be stored on the original file. To configure a feedback page to show renditions, see Create And Edit Repository Views.
AhaPortal	Set to **false** to hide the **Meridian Wishlist** item on the **Other Options** menu.
HideViewBar	Set to **true** to hide the views bar at the bottom of the page.
LargeViewFileSizeToWarnInKb –	Threshold in KB at which to warn users that viewing a large file make take a long time. The default value is 51200 (KB). If set to 0, no warning is shown.
LicensePageRefreshInterval	Frequency in milliseconds at which to refresh the **Licenses** page described in Manage Licenses.

Configure HTTPS

By default, the Meridian Enterprise Server websites communicate unsecured using the HTTP protocol. The system can use HTTPS by modifying one setting in the `web.config` file of the website.

To configure HTTPS:

1. Open the `web.config` file of the **BCEnterprise** website in any text editor.
2. Find the binding named **Binding_ES**.
3. Set the **security mode** value of the HTTPS protocol to **Transport** as shown in the following example.
4. Save and close the file.
5. To configure the Meridian Enterprise server to also communicate with the Meridian Enterprise Server computer using HTTPS:
    a. Specify the HTTPS protocol in the **Computer running the Enterprise services** option as described in the *Configure the connection to Meridian Enterprise Server* article in the *Meridian Enterprise Administrator's Guide*.
    b. In IIS Manager, select the **BCSiteCache** web application and increase the size of the **uploadReadAheadSize** configuration setting.

```
<binding name="Binding_ES" closeTimeout="00:10:00"
openTimeout="00:01:00" receiveTimeout="00:50:00"
sendTimeout="00:50:00" messageEncoding="Text"
maxReceivedMessageSize="2147483647">
    <!--
    HTTPS: security mode = Transport
    HTTP: security mode = TransportCredentialOnly
    -->
  <security mode="Transport">
  <transport clientCredentialType="Windows" realm=""/>
  </security>
</binding>
```

To avoid changes in the protocol of the Meridian Enterprise Server address, see Hyperion Address Affected by URL Used to Open Meridian Enterprise.

Configure SAML Authentication

You can configure Meridian Explorer to work with any SAML 2.0 compatible identity provider. For information about configuring PowerWeb and site cache connections to use SAML, see the *Configure WebLink Registry Keys* section below.

To use SAML authentication in Meridian, a Meridian Portal tenancy is required. You can Configure a Third-Party Identity Provider in Meridian Portal.

To complete this configuration, as a Meridian Enterprise Server System Administrator you must understand how to configure an on-premises firewall to allow inbound connections if required.

To configure Meridian Explorer for SAML authentication, complete these tasks on the Meridian Enterprise Server computer. Command lines are shown below but, you can also complete the tasks with the user interface.

Due to the technical complexity and impact on user management processes, we recommend you contact your Accruent account manager when you intend to implement SAML authentication for an on-premises Meridian installation.

SAML authentication currently does not work with:

- PowerUser
- Selecting Publisher rendering jobs

Important!
When presenting the e-signature page, Meridian instructs the identity provider to force re-authentication of the user. However, by itself this may not meet regulatory requirements because the browser may be caching credentials. Additional measures such as defining security policies to prevent credential caching by browsers may be required. It also may depend on how the selected identity provider behaves when forcing re-authentication.

OpenID Connect is used to communicate between Meridian Server on-prem and your Meridian Cloud tenancy, where the integration with the SAML identity provider is configured. The instructions below describe how to configure OpenID Connect to connect from the Enterprise Server to your Meridian Cloud tenancy.

The configuration can be set up and tested with the tool described in the *Configure OpenId Connect* article in the *Meridian Enterprise Administrator's Guide*.

Configure WebLink Registry Keys

You must configure the following registry key settings to ensure that SAML authentication works as expected.

- HKEY_LOCAL_MACHINE\Software\Cyco\AutoManager Meridian\CurrentVersion\WebLink\Auth
    - Configure the settings described for this registry key in the *Meridian Enterprise Administrator's Guide*.

      The article can be found in the *Windows Registry Keys* > *Server Registry Keys* > *HKEY_LOCAL_MACHINE* section.
- HKEY_LOCAL_MACHINE\Software\Cyco\AutoManager Meridian\CurrentVersion\WebLink
    - Ensure the **SameIISEDMAccount** value is set to **1**.

Configure Meridian Explorer

To configure Meridian Explorer:

1. First, configure the Meridian Explorer web site:
    a. On the Meridian Enterprise Server computer, in Internet Information Services (IIS), find the name of the Meridian Explorer web site, for example, **Hyperion**.

    b. Enable anonymous authentication mode.

       It might be necessary to unlock the sections first if `appcmd.exe` is used.

       ```
       appcmd set config "Default Web Site/BlueCieloECM.Hyperion"
       /section:system.webServer/security/authentication/anonymousAu
       thentication /enabled:true /commit:appHost
       ```
2. Then, configure the Meridian Explorer application:
    a. Open the `AuthConfiguration.dat` file in any text editor.

       By default, it is located in the `C:\ProgramData\BlueCieloECM\Hyperion` folder.

    b. Change or create the values listed in the following table.

       Settings are separated by commas (,).

Authentication options

Option	Description	Example
UseOpenIdConnectAuthentication	Enables SAML authentication.	`true`
HyperionAppUrl	URL used to connect to PowerWeb. This must be the same URL as the one provided to the SAML identity provider.	`http://<MyDomain>/BlueCieloECM.Hyperion`
TenantId	Meridian Portal tenancy name.	`<OrgName>`
IssuerUri	URL of the Meridian Cloud authentication server.	`https://auth-ci2.meridiancloud.io/auth`
ClientId	Value entered during registration with the SAML identity provider.	`localhyperion`
ClientSecret	Value entered during registration with the SAML identity provider.	`secret`

The completed text block should look like this:

```
{"UseOpenIdConnectAuthentication":true,"HyperionAppUrl":"http
://MyServer/BlueCieloECM.Hyperion",
"TenantId":"MyOrg","IssuerUri":"https://auth-
ci2.meridiancloud.io/auth",
"ClientId":"localhyperion","ClientSecret":"secret"}
```

c. Restart IIS.

```
iisreset
```

Configure Meridian IIS application

To configure the Meridian IIS application:

1. Change the application pool settings for the **Meridian** application pool.

   If you used a standard setup, the name of the application pool is probably **BCMeridian**.

   If you are using the user interface:

   a. Select **Integrated** from the **Managed pipeline mode** field.

   b. Select the .NET Framework version to be used by the application pool.

   If you are using AppCmd.exe:

   a. Run the following command to switch to integrated pipeline mode:

   ```
   appcmd set apppool "Meridian Application Pool" /managedPipelineMode:Integrated
   ```

   b. Run the following command to set the .NET Framework version:

   ```
   appcmd set apppool "Meridian Application Pool" /managedRuntimeVersion:v4.0
   ```

   To learn more about these settings, see Application Pool Defaults on Microsoft's website.

2. Change your Meridian Web Site settings to Anonymous authentication.

   If you use AppCmd.exe, it might be necessary to unlock the sections first. If you use the user interface to make these changes, you will not have to unlock the sections.

   If you are using the user interface:

   - Follow the instructions on Microsoft's website.

     Linked above is *Anonymous Authentication <anonymousAuthentication>*, which is a general article which describes how anonymous authentication is configured. Further reading may be necessary.

   If you are using AppCmd.exe:

   - Run the following commands to change your authentication settings.

   ```
   appcmd set config "Default Web Site/Meridian"
   /section:system.webServer/security/authentication/windowsAuthentication /enabled:false
   /commit:appHost

   appcmd set config "Default Web Site/Meridian"
   /section:system.webServer/security/authentication/anonymousAuthentication /enabled:true
   /commit:appHost
   ```

3. Open the `web.config` file for the Meridian web application in a text editor.

4. Add the following text to the `<configuration\system.webServer>` node:

```
<modules runAllManagedModulesForAllRequests="true" />
```

5. Add the following text to the `<configuration>` node:

```
<runtime>
    <assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">
     <dependentAssembly>
        <assemblyIdentity
name="Microsoft.Owin" publicKeyToken="31bf3856ad364e35" culture="neutral" />
        <bindingRedirect oldVersion="0.0.0.0-3.1.0.0" newVersion="3.1.0.0" />
      </dependentAssembly>
      <dependentAssembly>
        <assemblyIdentity name="Microsoft.Owin.Security" publicKeyToken="31bf3856ad364e35" />
        <bindingRedirect oldVersion="0.0.0.0-3.1.0.0" newVersion="3.1.0.0" />
      </dependentAssembly>
      <dependentAssembly>
        <assemblyIdentity
name="Microsoft.Owin.Security.OAuth" publicKeyToken="31bf3856ad364e35" />
        <bindingRedirect oldVersion="0.0.0.0-3.1.0.0" newVersion="3.1.0.0" />
      </dependentAssembly>
      <dependentAssembly>
        <assemblyIdentity
name="Microsoft.Owin.Security.Cookies" publicKeyToken="31bf3856ad364e35" />
        <bindingRedirect oldVersion="0.0.0.0-3.0.1.0" newVersion="3.0.1.0" />
      </dependentAssembly>
      <dependentAssembly>
        <assemblyIdentity
name="System.Web.Http" publicKeyToken="31bf3856ad364e35" culture="neutral" />
        <bindingRedirect oldVersion="0.0.0.0-5.2.3.0" newVersion="5.2.3.0" />
      </dependentAssembly>
      <dependentAssembly>
        <assemblyIdentity
name="System.Web.Http.Owin" publicKeyToken="31bf3856ad364e35" culture="neutral" />
        <bindingRedirect oldVersion="0.0.0.0-5.2.3.0" newVersion="5.2.3.0" />
      </dependentAssembly>
      <dependentAssembly>
        <assemblyIdentity
name="Microsoft.Owin.Cors" publicKeyToken="31bf3856ad364e35" culture="neutral" />
```

```
        <bindingRedirect oldVersion="0.0.0.0-3.1.0.0" newVersion="3.1.0.0" />
      </dependentAssembly>
      <dependentAssembly>
        <assemblyIdentity
name="System.IdentityModel.Tokens.Jwt" publicKeyToken="31bf3856ad364e35" culture="neutral" />
        <bindingRedirect oldVersion="0.0.0.0-4.0.20622.1351" newVersion="4.0.20622.1351" />
      </dependentAssembly>
      <dependentAssembly>
        <assemblyIdentity
name
="Microsoft.IdentityModel.Protocol.Extensions"
 publicKeyToken="31bf3856ad364e35" culture="neutral" />
        <bindingRedirect oldVersion="0.0.0.0-1.0.2.33" newVersion="1.0.2.33" />
      </dependentAssembly>
      <dependentAssembly>
        <assemblyIdentity
name="Newtonsoft.Json" publicKeyToken="30ad4fe6b2a6aeed" culture="neutral" />
        <bindingRedirect oldVersion="0.0.0.0-8.0.0.0" newVersion="8.0.0.0" />
      </dependentAssembly>
      <dependentAssembly>
        <assemblyIdentity
name="Microsoft.Owin.Security.Jwt" publicKeyToken="31bf3856ad364e35" culture="neutral" />
        <bindingRedirect oldVersion="0.0.0.0-3.1.0.0" newVersion="3.1.0.0" />
      </dependentAssembly>
    </assemblyBinding>
  </runtime>
```

6. Save your changes.
7. Restart the IIS server.

   ```
   iisreset
   ```

2022 Release: Configure PowerWeb IIS application

If you are using the new PowerWeb IIS application described in the 2022 release notes, you will need to make some configuration updates.

To update your configuration:

1. Follow the *Configure Meridian IIS application* procedures above.

   Make sure that the Meridian IIS application is using .NET 4.0.
2. Change the application pool settings for the **PowerWeb** application pool.

If you used a standard setup, the name of the application pool is probably **BCPowerWeb**.

To learn more about these settings, see Application Pool Defaults on Microsoft's website.

3. Set the managed pipeline mode to **Integrated**.
4. Select the .NET 4.0 Framework as the version used by the application pool.
5. Edit your web.config file.
6. In the **preCondition** settings in the **Handlers** section, change **classicMode** to **integratedMode**.
7. Ensure that the Meridian handler comes *before* the PowerWeb handler.

   Usually the Meridian handler is called `BlueCieloWebServiceHandler`, and PowerWeb handler is called `BlueCieloPowerWebHandler`.

   Example

```
<handlers accessPolicy="Read, Execute, Script">
    <add
name
="BlueCieloWebServiceHandler"
path
="weblink3.dll"
verb
="GET,HEAD,POST,OPTIONS"
modules
="IsapiModule"
scriptProcessor
="C:\inetpub\AMM\WebLink3.dll" resourceType="File" preCondition="integratedMode,bitness64" />
    <add
name
="BlueCieloPowerWebHandler"
path
="?*"
verb
="GET,HEAD,POST,OPTIONS"
modules
="IsapiModule"
 scriptProcessor="C:\inetpub\AMM\PowerWeb.dll" preCondition="integratedMode,bitness64" />
</handlers>
```

8. Save your changes.
9. Restart the IIS server.

```
iisreset
```

Configure remote CAD links and Site Cache Client

To ensure your remote CAD links and the Site Cache Client are properly configured:

1. Ensure that **BlueCieloECM.BCLinkOidc.Client.dll** is registered in the **...\BCMeridian\Program\BCLinkOidc** folder after setup.

   If not, then use the following command in Powershell:

   ```
   "%SystemRoot%\Microsoft.NET\Framework64\v4.0.30319\RegAsm.exe" /codebase /tlb
   "BlueCieloECM.BCLinkOidc.Client.dll"
   ```

2. Ensure the settings in the bulleted list below are applied in the following registry keys:

   HKEY_LOCAL_MACHINE\Software\Cyco\AutoManager Meridian\CurrentVersion\Client\BCSiteCacheAuth

   HKEY_CURRENT_USER\Software\Cyco\AutoManager Meridian\CurrentVersion\Client\Settings\BCSiteCacheAuth

   - **UseWorkspace** – dword – 00000000
   - **UseOpenIdConnectAuthentication** – dword – 00000001
   - **M360Tenant** – %tenant_name%
   - **M360Domain** – meridian360.io
   - **IssuerUri** – https://%issuer_uri_host%.meridiancloud.io/auth

3. In **...\BCMeridian\Program\BlueCieloECM.SiteCache.LwsClient.exe.config**, add the following text to the **<configuration><userSettings>** node:

   ```
   <setting name="IssuerUri" serializeAs="String">
       <value>https://%issuer_uri_host%.meridiancloud.io/auth</value>
   </setting>
   <setting name="M360Domain" serializeAs="String">
       <value>meridian360.io</value>
   </setting>
   <setting name="ClientId" serializeAs="String">
       <value>meridianlwsclient</value>
   </setting>
   <setting name="ClientSecret" serializeAs="String">
       <value>gSJtqpBn5yG8y4tR</value>
   </setting>
   ```

4. Set the following values in the **C:\ProgramData\BlueCieloECM\SiteCache\SiteCacheSettings.dat** file:
   - **IssuerUri** – https://%issuer_uri_host%.meridiancloud.io/auth
   - **UseOpenIdConnectAuthentication** – true
5. Open the **Internet Information Services (IIS) Manager**.
6. Navigate to **Sites** > **Default Web Site** > **BCSiteCache** > **Authentication**.
7. Disable Windows Authentication.
8. Enable Anonymous Authentication.

Document Synchronization Methods Overview

There are three different methods you can use to synchronize document contents, title blocks, and references with PowerWeb. You can use one or more of these methods in the same environment. The methods are listed below, from most desirable to least desirable.

Synchronize via IIS

Some file types can be synchronized directly through PowerWeb via IIS. . See *Meridian PowerWeb* in the *Meridian Enterprise Administrator's Guide* to learn more about how PowerWeb uses IIS.

- **Benefits** – Synchronization is done immediately after a workflow transition is completed. Specialty software is not needed to update documents supported by this method.
- **Drawbacks** – Not all file extensions are supported.

Configuration

To configure synchronization via IIS:

1. Navigate to the **HKEY_LOCAL_MACHINE\Software\Cyco\AutoManager Meridian\CurrentVersion\WebLink** registry key in the Windows Registry Editor.

   You can learn more about this registry key in the *Registry Keys* section of the *Meridian Enterprise Administrator's Guide*.
2. Modify the **SynchronizeDirect** setting so that it contains the file extensions you want to synchronize via IIS.

   The file extensions must be entered as a semicolon-delimited list. The supported extensions are as follows: dst; dgn; dwg; doc; docx; docm; xls; xlsx; xlsm; ppt; pptx; pptm; vsdx; vsdm. If you remove one of the extensions from this list, it will no longer synchronize immediately via PowerWeb after a workflow transition is completed.

   A use case for when a System Administrator may want to remove a file extension from this setting is if they wanted to run a Macro in Microsoft Office. In that scenario, they would remove the appropriate file extension from the **SynchronizeDirect** setting and create a publishing job for that file type.

End-User Procedures

The following end-user procedures are impacted by this configuration:

- *Run a Workflow Transition on a Project*
- *Route a Document In a Workflow*

To read these procedures, see the *Meridian Enterprise User's Guide*.

Synchronize via Publisher

Publisher provides links to the most common engineering document management systems. Publisher also includes rendering modules for the most popular engineering content authoring applications. See a list of file extensions and the modules that support them.

- **Benefits** – Some file extensions require specialty software for editing. This method allows users to edit documents without needing the software installed on their workstation.
- **Drawbacks** – Synchronization is NOT immediate, but instead is asynchronous. While Publisher is processing the synchronization, the affected document will be locked.

Configuration

> **Note:**
> For cluster node scanning to work when using SQL Server, the Publisher nodes need to have the SQL driver installed, and they need to be able to connect to the SQL Server configuration database. This is a requirement for the *Create And Edit a Rendering Profile* procedures in step 2.

To configure synchronization via Publisher:

1. Follow the procedures described in *Configure a Vault For Publisher* in the *Meridian Enterprise Administrator's Guide*.

   The **Publisher Jobs** settings cannot be configured until after you have created publishing jobs in step 3 below.
2. Create a rendering profile for the rendering module you want to use for your publishing job.

   See a list of file extensions and the modules that support them.
3. Create publishing jobs for your rendering profiles.

   At least one rendering profile must be specified for each publishing job that will generate renditions.
4. Configure any applicable options for your publishing jobs.
5. Configure the synchronize content options for your publishing jobs.
6. If you want to link a publishing job to a specific command in PowerWeb, configure the **Publisher Jobs** settings in the Administrator.

To learn more about these settings, see the *Configure a Vault For Publisher* article in the *Meridian Enterprise Administrator's Guide*.

End-User Procedures

The following end-user procedures are impacted by this configuration:

- *Update Renditions*
- *Synchronize File Properties*
- *Synchronize References*

To read these procedures, see the *Meridian Enterprise User's Guide*.

Synchronize via Application Integration

Meridian includes application links for the most popular applications used for engineering. The links provide specific Meridian functionality within each application for working with that application's data. This functionality is in addition to the functionality provided by Meridian Application Integration described in the *Application Links* section of the *Meridian Enterprise User's Guide*.

Application Integrations are application-independent and configurable by each user so that they can conveniently work with vault documents. Because the links work with application data, the application links can be configured by a System Administrator so that the data is managed in the same way for all Meridian users in the organization.

To learn more about the supported application integrations, see the *Application Integration* section of the *Meridian Enterprise Configuration Guide*.

- **Benefits** – Some file extensions require specialty software for editing. This method supports specialty software.
- **Drawbacks** – Users must have specialty software installed on their workstation. Updates are only made when the user triggers the update from within the application.

Configuration

To configure an application integration, see the relevant section in the *Application Integration* section of the *Meridian Enterprise Configuration Guide*.

End-User Procedures

The following sections in the *Meridian Enterprise User's Guide* are impacted by this configuration:

- *AutoCAD Link*
- *MicroStation Link*
- *Autodesk Inventor Link*
- *SolidWorks Link*
- *Revit Link*
- *Office Link*
- *Lotus Notes Link*

To read these procedures, see the *Meridian Enterprise User's Guide*.

Publishing Modules

The publishing modules that are included in Meridian Enterprise Server comprise rendering modules and system links.

Rendering modules are used by Publisher to convert documents from one file format to another file format. Multiple rendering modules can be specified for each publishing job but only one rendering module should be configured for each file type.

System links are used to copy rendered or source documents from the source system to the destination system. The links and rendering modules that are included with the Publisher are described in detail in the following topics.

Please contact your Accruent Partner or Accruent for additional publishing solutions.

Accruent Project Portal System Link

The Accruent Project Portal system link connects the Publisher to a Accruent Project Portal site as a publishing source or as a destination. The same workspace can be both the source and the destination for the publishing of renditions.

> **Note:**
> This system link also works with Accruent Kronodoc.

When configured as a source system, documents are published from a specified folder in a Accruent Project Portal workspace. The link can replicate the source folder structure and filenames or use properties from the source document. A feedback property can receive the result of the publishing job. When configured as a destination system, the workspace, folder and document type can be specified.

Because a Accruent Project Portal document can have multiple files attached to it, certain filename variations are possible as listed in the following table. It is the responsibility of the System Administrator to ensure that filenames are distinct within the destination system.

Destination system filename variations

Source	Destination	Filename	Extension
Accruent Project Portal	Same Accruent Project Portal workspace (rendition)	Same	Rendition format extension
Accruent Project Portal	Different Accruent Project Portal workspace	Same. The document name can be the same or set to a source document property value.	Rendition format extension
Other	Accruent Project Portal	Same. The document name can be the same or set to a source document property value.	Rendition format extension
Accruent Project Portal	Other	*<DocumentName>*(*<Filename>*). Document name can be set to a source document property value.	Rendition format extension

This link is ideal for organizations that use Accruent Project Portal to make Meridian Enterprise documents available to external organizations in a highly managed environment.

Acme CAD Converter Rendering Module

The Acme CAD Converter rendering module uses the Acme CAD Converter to render DWG and DWF files to Adobe PDF format. The Acme CAD Converter software is not included with Meridian Enterprise Server and must be purchased and installed separately.

> **Note:**
> This rendering module does not have the same limitation when run as a scheduled task as described in Autodesk AutoCAD Rendering Module.

Autodesk AutoCAD Rendering Module

The Autodesk AutoCAD rendering module converts AutoCAD DWG files to PDF, DWF, or JPG files. Based on the module's configuration options, the module uses the AutoCAD ActiveX interface to plot drawings. The AutoCAD software is not included with Meridian Enterprise Server and must be purchased and installed separately.

> **Note:**
>
> - Except when used with the Meridian Enterprise system link, no reference resolution is performed and all assembly files must reside in the same source folder.
> - Multiple layouts within the same drawing file can be rendered to individual sheets and the property values of multiple insertions of the same title block can be mapped to the destination system.
> - Rendering with this module using a scheduled task is not supported unless the account running the task is a member of the server's **Administrators** group and Windows User Account Control (UAC) is disabled.

To better control the plotting process, the rendering module provides a configuration option to invoke a custom AutoLISP function that can contain the AutoCAD PLOT command among other commands. The AutoLISP function can use input parameters from a Meridian Enterprise property value. The AutoLISP function can also invoke VBScript. Any information that cannot be obtained via AutoLISP programming or Meridian Enterprise properties cannot be used for rendering. The details of the custom function depend very much on each Meridian Enterprise environment and the customer's requirements and therefore require custom programming. Examples of such a configuration are provided in Configure the Autodesk AutoCAD Rendering Module Options and Rendering Navisworks Models.

Autodesk Inventor Rendering Module

The Autodesk Inventor rendering module renders Autodesk Inventor drawing (`.idw` and `.dwg`), part (`.ipt`), assembly (`.iam`), and presentation (`.ipn`) files to DWF, PDF, or TIFF format. The Autodesk Inventor software is not included with Meridian Enterprise Server and must be purchased and installed separately.

> **Note:**
> - Except when used with the BC Meridian system link, no reference resolution is performed and all assembly files must reside in the same source folder.
> - Rendering will only succeed if Windows User Account Control (UAC) is disabled and the user account under which the Publisher runs is a member of the **Administrators** group.

This rendering module uses the Autodesk Inventor translators for rendering. It is also able to output to software printer drivers. The Autodesk Inventor rendering module's configuration options are described in Configure the Autodesk Inventor Rendering Module Options.

Autodesk Revit Rendering Module

The Autodesk Revit rendering module can be used to render Revit project files (`.rvt`) and Revit project family files (`.rfa`). It uses Revit on the Meridian Enterprise Server computer to open the files and save them in Drawing Web Format (`.dwf`), Industry Foundation Classes (`.ifc`), or popular image file (`.bmp`, `.jpg`, `.png`, `.tga`, and `.tif`) formats. The Revit software is not included with Meridian Enterprise Server and must be purchased and installed separately.

> **Note:**
> - Multiple sheets within the same file can be rendered to individual sheets and the property values can be mapped to the destination system.
> - Except when used with the BC Meridian system link, no reference resolution is performed and all assembly files must reside in the same source folder.

AutoVue Rendering Module

The AutoVue rendering module uses the AutoVue Document Converter to render documents to the following output formats:

- Windows Bitmap (`.bmp`)
- CCITT Group 4 Fax (`.gp4`)
- Tagged Image Format (`.tif`)
- Adobe Portable Document Format (`.pdf`) Renditions and redline comments are included in full-text searches.

Many file formats that are supported for viewing by Oracle AutoVue 2D Professional can be rendered, although not to every output format. A complete list of the supported file formats and their versions, user documentation, and additional technical documentation for AutoVue products can be found online at the Oracle web site.

Which source file formats are rendered to which output file format are listed in Rendering Modules. The module's configuration options are described in Configure the AutoVue Rendering Module Options.

The AutoVue rendering module requires the following software components be installed separately from the Meridian Enterprise Server setup program:

- Oracle AutoVue 2D Professional or Oracle AutoVue 3D Professional Advanced (requires optional licenses provided by Oracle)
- Microsoft Visual C++ 2008 Redistributable Package (x86)

> **Note:**
> In order to apply the correct paper sizes, the AutoVue Document Converter is set as the default printer during rendering if it is not set already.

Custom Rendering Module

The Custom rendering module makes it possible to create renditions with almost any application that can produce a rendition (PDF) file. The application can be a commercially available application or it can be a custom-developed application for your special requirements. If the application can be started by a script with sufficient parameters to generate the desired output, it can be used with the Custom rendering module. The Custom rendering module provides you with a configuration interface to specify the application startup parameters, page and pen parameters, custom parameters unique to the application, and parameters that are stored as document properties.

> **Note:**
> Using a third-party application in this way might be subject to your end user license agreement (EULA) with the application's vendor. Accruent does not provide any licenses for software that is not included with Meridian Enterprise.

The module manages the entire rendering process:

- Starts a script that, in turn, starts the rendering application with the specified parameters
- Provides the input and output filenames based on the source document
- Provides the source document file and its references
- Detects the output file and publishes it as configured by the publishing job
- Detects if the rendering application has failed (timed out) and provides logging for troubleshooting

The Custom rendering module's configuration options are described in Configure the Custom Rendering Module Options.

Dassault Systèmes SolidWorks Rendering Module

The Dassault Systèmes SolidWorks rendering module can be used for assembly (`.sldasm`), part (`.sldprt`), and drawing (`.slddrw`) files. It uses SolidWorks on the Meridian Enterprise Server computer to open assemblies and save them in Adobe PDF or eDrawings file format. The module can also render using an installed Windows software printer to convert documents into additional formats.The SolidWorks software is not included with Meridian Enterprise Server and must be purchased and installed separately.

> **Note:**
> Except when used with the BC Meridian system link, no reference resolution is performed and all assembly files must reside in the same source folder.

Meridian Enterprise System Link

The Meridian Enterprise system link connects the Publisher to Meridian Enterprise vaults as publishing sources or destinations.

This system link is useful in several scenarios, such as:

1. A common set of documents that need to be available in multiple vaults (such as a part library at multiple sites). Changes made at one site need to be published to the other vaults.
2. Released documents need to be published to another vault that is accessible from the Internet.

   > **Note:**
   > Be aware that when the destination vault is located outside a firewall, the firewall must be configured to allow DCOM traffic from the Meridian Enterprise Server computer to the Meridian Enterprise application server of the destination vault.

3. Documents need to be exchanged between owner and contractor vaults.
4. Renditions need to be available in the source vault.

Published documents are imported into the destination system. If the destination system is also a Meridian Enterprise vault, the following additional actions may be performed:

- Folders may be created as part of the import process.
- Redlines are published by default.
- A new revision of a document is created if the document already exists.
- If a source document has hybrid parts, they are only published to the destination vault if the source document is published or if the AutoCAD rendering module is used.
- Depending on the link's configuration settings, documents are released when the publishing job has completed.
- Publishing options that are set for individual documents as described in Configuring the Publishing Options.

Source document properties are copied to the destination system as defined by the property mapping of the publishing job.

This link generates special VBScript events in the source and destination vaults before and after publishing that can be used to further customize the publishing process. For more information on these events, see *Publishing Events* in the *Meridian Enterprise VBScript API Reference*.

Microsoft Office Rendering Module

The Microsoft Office rendering module renders documents to Adobe PDF format using Microsoft Office 2007 and later. The Office software is not included with Meridian Enterprise Server and must be purchased and installed separately.

The Office file formats that can be rendered include:

- Microsoft Word
- Microsoft Excel
- Microsoft PowerPoint
- Microsoft Visio

Except when used with the BC Meridian system link, no reference resolution is performed and all assembly files must reside in the same source folder.

> **Note:**
> In Meridian Enterprise 2021 Microsoft Office native rendering does not work after installing the Windows 10 20H2 (19042.685) update.

The Microsoft Save as PDF or XPS Add-in must be installed for Microsoft Office 2007 programs. The functionality is built into Office 2010.

PDFsharp Rendering Module

The PDFsharp rendering module renders popular image and graphic metafile documents to Adobe PDF format by using the included PDFsharp library from empira Software GmbH.

SharePoint System Link

The SharePoint system link connects the Publisher to an existing SharePoint farm. When configured as a destination system, documents are published to a specified folder in a document library. If the document already exists in the library, it is checked out by the Publisher, the document is updated, Publisher checks the document back in, and increments the major revision number. If the document does not already exist in the library, the document is approved automatically so that it is immediately available to users. The link can also replicate the source folder structure in the library. To learn how to do this, see Configure a Publishing Job. When configured as a source system, the document library can be selected.

This link is ideal for organizations that use SharePoint to make documents available to external organizations or to remote sites and those that need to import documents from a project owner's SharePoint portal.

> **Note:**
>
> - It is possible to replicate native documents and renditions. The renditions will be in a separate file. It is not possible to replicate revisions.
> - SharePoint Online is only supported as a destination system using the Azure Active Directory Identity Provider for claims-based authentication.
> - Publishing jobs may fail if the format of a **DateTime** column on the SharePoint computer is different than the date and time format displayed by the Meridian Enterprise Server computer.

Teigha DGN Rendering Module

The Teigha DGN rendering module renders MicroStation drawings to Adobe PDF format by using the included Teigha® library from the Open Design Alliance. For information about the MicroStation versions that are supported by this rendering module, see the Open Design Alliance website.

Limitations

The limitations below are currently known to Accruent. However, if an item is not mentioned here, that does not imply that it is supported.

- CIT\CAL\TG4 images are not supported
- Images in an OLE2FRAME element are not supported

Teigha DWG Rendering Module

The Teigha DWG rendering module renders AutoCAD drawings to Adobe PDF format by using the included Teigha® library from the Open Design Alliance. For information about the AutoCAD versions that are supported by this rendering module, see the Open Design Alliance website.

Limitations

The limitations below are currently known to Accruent. However, if an item is not mentioned here, that does not imply that it is supported.

- CIT\CAL\TG4 images are not supported
- Images in an OLE2FRAME element are not supported

Windows File System Link

The Windows file system link connects the Publisher to Windows file system folders. The link includes the Accruent File Publishing Service that can be installed on one or more file servers. The service can be configured to monitor one or more folders (and subfolders recursively) on the local computer and to associate a publishing job with each folder. The folders can be shared on the network for easy access by users. At a specified interval, the service automatically detects any documents that have been added to the folders and registers them with the associated publishing jobs. After registering the documents, the Accruent File Publishing Service moves the files (and subfolders) to a source folder on the Meridian Enterprise Server computer from which they are published to the destination system. This link creates folders in the destination file system, if necessary.

This link is ideal for organizations that have another enterprise system in which released documents need to be available, for example, an extranet or an enterprise knowledge management system.

When used as a source system, the document properties to be published can be specified in a Microsoft Excel worksheet. When used as a destination system, the published properties can be saved in an XML file or in a database table.

PublishingCapability.dat

The **PublishingCapability.dat** file is a configuration file which is located the **C:\ProgramData\BlueCieloECM\EnterpriseServices** folder. This file is used to store non-default settings for the Publisher. Some of the settings that can be configured with this file do not have a direct equivalent in the user interface. You can modify this file with any standard text editor software.

> **Important!**
> We recommend consulting with your Accruent representative before making changes to this configuration file. Some of the settings in this file can result in accidental data loss if used improperly.

Procedures

To modify the **PublishingCapability.dat** file:

1. Navigate to **C:\ProgramData\BlueCieloECM\EnterpriseServices\PublishingCapability.dat**.
2. Open **PublishingCapability.dat** in a text editing software.
3. Choose between two options:
   - If the setting you want to modify already exists in the file, change it.
   - If the setting you want to modify does not exist in the file:
     a. Type a comma after the last setting in the file, but before the closing bracket.
     b. Enter the setting name using the syntax below.

        ```
        "SETTINGNAME":value
        ```
4. Save your changes.

   An example of a properly formatted file appears below.

   ```
   {"EnableDocumentumDMS":false,"EnableRemoveMeridianSource":false,"EnableCopyMeridianRevisions":f
   alse,"EnableRemoveSharePointTarget":false,"EnableUseRenditionForLinkedDocuments":false,"DoNotRe
   nderIfSourcePDF":false,"InventorRenderSessionMaxDocuments":100,"InventorRenderRestartFailedSess
   ion":false,"AutoCADRenderExtendedLog":false}
   ```

PublishingCapability.dat settings

Setting	Impacted Components	Permitted Values	Recommended Value	Description
AutoCADRenderExtendedLog	AutoCAD rendering module	true or false		If set to **true**, enables extended logging for the AutoCAD rendering module.
EnableCopyMeridianRevisions	General	true or false	false	If set to **true**, enables the Publish all revisions for new documents setting for a publishing job. Use this setting with caution. If this setting is set to **true** and the above setting is **enabled**, Publisher publishes all revisions of a document instead of just the most recent released revision.
EnableRemoveMeridianSource	General	true or false	false	If set to **true**, enables the Delete source document if publishing succeeded setting for a publishing job. Use this setting with caution. If this setting is set to **true** and the above setting is **enabled**, Publisher deletes source documents after they have been successfully published to the destination system. This can be useful when the Publisher is used to archive documents into a central system or an archive vault. If **disabled**, the source documents are not deleted.
EnableRemoveSharePointTarget	SharePoint System Link	true or false	false	If set to **true**, enables the _DELETE_ or _DELETE_*<FileName>* option for VBScript. Use this setting with caution. These settings delete documents from SharePoint libraries when the Meridian Enterprise source document is deleted. If the destination filename is not specified, the name of the document registered for publishing is used.

Setting	Impacted Components	Permitted Values	Recommended Value	Description
ExternalUpdateProperties	Teigha DGN Rendering Module Teigha DWG Rendering Module	true or false		If set to **true** and you use the Teigha rendering engine, this setting allows Meridian to recover from attempting to render a corrupt or invalid document. If a third-party rendering component fails, we remove the document from the rendering queue. A message appears in the process log that informs the user that the process has failed, and then Meridian proceeds to the next document in the queue.
InventorRenderSessionMaxDocuments	Inventor rendering module	number		The maximum number of documents are rendered in a single Inventor session. The default value of this setting is **100**. When Meridian is rendering many Inventor documents, some may fail to render because they do not open correctly in Inventor. In such cases, Inventor will generate an **Unspecified error** message. You can reduce the likelihood of this happening by changing this setting to a lower number. Setting the value to **0** removes the limitation completely. After this number of documents have been rendered, Inventor will be closed and restarted to reclaim system resources.

Setting	Impacted Components	Permitted Values	Recommended Value	Description
KeepPackageTempFiles	Portal integration Import / Export Packages	true or false		If set to **true**, import and export package temporary files will be saved in the following folders: • C:\ProgramData\BlueCieloECM\EnterpriseServices\Meridian360\Import • C:\ProgramData\BlueCieloECM\EnterpriseServices\Meridian360\Export\<tenant> In these folders you will find the contents of the packages as well as the metadata spreadsheets which are used during imports (or included with an export).
RetryWriteRendition	General	number		The number of times that Publisher will retry a rendition before the rendition fails. Increasing this value helps you avoid issues with a locked file preventing a rendition from being generated. Learn more about configuring a vault for Publisher.
UpdateSharePointModifiedFields	SharePoint System Link	true or false		If set to **true**, the **Modified** and **Modified By** fields in Sharepoint are populated with the values from Meridian. If set to **false**, these fields are populated with the date and time of publishing and the Publisher account. Learn more about Sharepoint servers.
WaitWriteRendition	General	number		The number of seconds that Publisher will wait before a retry is attempted. Increasing this value helps you avoid issues with a locked file preventing a rendition from being generated. Learn more about configuring a vault for Publisher.

Publishing Jobs

A *publishing job* defines the source and destination systems and the options that are used to publish documents between the systems. You create a publishing job from one of the publishing job templates in Meridian Enterprise Server Administration Console. A template provides specific options that depend on the type of the source or destination system.

At least one rendering profile must be specified for every publishing job that will generate renditions.

The available job templates include:

- **Publish** — Publishes documents or renditions from a source system to a destination system other than Meridian Explorer.
- **Rendition** — Creates renditions within the Meridian Enterprise vault.
- **Package export** — Publishes an export package that contains documents to a Windows file system or to Meridian Portal.
- **Synchronization**
  - **Configurable synchronization** — Publishes documents from a Meridian Enterprise vault to a Meridian Explorer repository. The synchronization will include project folders created by the Meridian Advanced Project Workflow component.
  - **Data Library synchronization** — Publishes documents from a Meridian Enterprise vault to a Meridian Enterprise Data Library repository. This job type has no configurable options other than the vault selection.
- **Synchronize Content**
  - **Update to vault** — Synchronizes references from the file and stores title block data in the Meridian Enterprise vault.

Publishing jobs run in Meridian Enterprise Server and each job can run either manually or as a scheduled task.

> **Note:**
> You must be a member of a Accruent group with the **Publisher Configurators** or **Application Administrators** permission to create or manage a publishing job.

To use publishing jobs, perform the following steps in the order listed, regardless of the job template that was used to create the job:

1. Create publishing jobs as described in Create a Publishing Job.
2. Configure the publishing jobs as described in Configure a Publishing Job.

3. Run publishing jobs as described in Run a Publishing Job.
4. Monitor the progress of publishing jobs as described in Monitor Background Tasks.

Repository Synchronization Jobs

Meridian Explorer repository synchronization jobs are more complex than other types of jobs and typically involve more documents. Meridian Enterprise Server is integrates deeply with Meridian Enterprise and repositories typically contain most of the documents for one more vaults. Therefore, the functionality is broader and there are more options available.

A synchronization job reads data from the Meridian Enterprise source vault and exports it to one or more intermediate data (not document content) files. A separate export is performed for each source vault that is specified for the same job name. If only one source vault is specified, then only one export is performed. If multiple source vaults are specified, each will be exported separately. The names of the intermediate files that are produced by the export conform to the following pattern: `*<source datastore name><job name><time of export><file number>*.dat_`. The data files contain: the configuration of the source vault, synchronization parameters, user data, folder data, project data, and document data. Depending on the batch size of the job, multiple data files may be created with sequential file numbers. Depending on the available hardware resources, multiple batches may be exported simultaneously for best performance. The data files are stored in a sub-folder named for each destination repository. The sub-folder also contains one baseline file per export that conforms to the following pattern: *<source datastore name><job name>*.baseline_. The baseline file is used to calculate incremental synchronizations.

After the first data file of the export phase of repository synchronization has been created, the job uses the names of the intermediate files to import the data that they contain (including document content) into the destination repository in the correct order. After they have been imported, the intermediate files can be moved to a configurable sub-folder where they can be re-used. Otherwise, they are deleted.

Configuring repository synchronization jobs and the export parameters is described in detail in Configure Synchronization Options.

> **Note:**
> If you run an incremental synchronization at time T1, some changed documents were processed and then documents were changed in the period [T1 - TransactionSpan, T1], the next time (T2) you run incremental synchronization, these documents are processed a second time because T1-TransactionSpan is used as a baseline to find changed documents. If you run incremental synchronization again, some documents could be processed a third time if T2-TransactionSpan is in the period [T1 - TransactionSpan, T1] and these documents were changed later than T2-TransactionSpan.

View the Publishing Jobs

All publishing job management begins from the list of existing jobs.

To view the publishing jobs:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page appears and lists all of the existing publishing jobs grouped by the name of the computer (cluster node) on which they run.

2. To view only the jobs of a particular type, click the type in the menu.

   The page refreshes to show only the jobs with the selected type.

To edit a publishing job, see the topics in Configure a Publishing Job.

To view the documents that have been registered for publishing, see View the Publisher Queue.

Create a Publishing Job

After the Meridian Enterprise Server configuration database has been created, you can create a publishing job to synchronize metadata from one or more source systems to one or more destination systems. The publishing job specifies the sources and destinations of the data that Publisher synchronizes and options that define how the data is published.

At least one rendering profile must be specified for every publishing job that will generate renditions.

To create a publishing job:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.

2. Click **New**.

   The **Select a job type** dialog box appears. Depending on the other Accruent products that are installed, job types are shown for each product for which a job can be created.

3. Select the job type that you want to create.
4. Click **Next**.

   The **Select source systems** page appears.

5. In the menu, select a source system type.

   The selection options for the source type appear at the right.

   Jobs with the source system type **Accruent Meridian Explorer** provide certain options that can be used to publish packages from Meridian Explorer to other systems as described in the *Export a Package* article in the *Meridian Explorer User's Guide*.

6. If necessary, type the source system address and connection parameters, for example, server name or URL and user credentials.
7. Click the connect icon .

   The sources that reside on the specified system are listed.

8. Select one or more sources.
9. Click **Next**.

   The **Select destination system** page appears.

10. In the menu, select a destination system type.

    The connection options for the destination type appear.

11. If necessary, type the destination system address and connection parameters, for example, server name or URL and user credentials.
12. Click the connect icon .

    The destinations that reside on the specified system are listed.
13. Select one or more destinations.
14. Click **Next**.

    The job is created and opened for editing.
15. Configure the job as described in Configure a Publishing Job.

Configure a Publishing Job

You create a publishing job as described in Create a Publishing Job. This type of job defines the options for publishing documents or creating renditions.

To configure a publishing job:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.
2. Double-click the publishing job that you want to configure.

   The **Overview** page appears.
3. Click options or type values using the descriptions in the following table.
4. Click **Save**.
5. Configure the applicable options as described in the remaining topics in this chapter.

> **Note:**
> Some of the options in the following table are only available for specific source or destination system types.

Publishing job basic options

Option	Description
Synchronization	The read-only type of the publishing job.
Name	The read-only, internal identifier used by Publisher to refer to the job regardless of the value of **Display Name**.
Description	Type a description of the job (500 characters maximum) as you want it to appear to users.
Display Name	Type a descriptive name as you want it to appear in the Administration Console and elsewhere.

<table>
<tr><th>Option</th><th>Description</th></tr>
<tr><td>Source systems</td><td>
The sources of the documents to publish.
The types of the systems are shown in italic text. The display names of the systems are shown in bold text. These are shown for users to select a specific destination from when the user publishes documents with a job that has multiple destination systems configured. The connection names of the systems are shown in normal text and link to the source system definition.
If multiple destination systems are selected for a job, only the property definitions of the first system are shown for property mapping as described in Configure the Mappings. The property definitions of the other systems are assumed to be identical, at least for the properties that will be mapped.
When the EnableFQDNS registry value is set to:

0 — If the full computer name is less than or equal to 15 characters, old rendering and profile jobs can work with DNS[1] names. If the full computer name is greater than 15 characters, you must re register the vault with the full name and recreate all rendering profiles and jobs.
1 — you must enter all names for the source system, rendering profiles, and computer (cluster node) in FQDN[2] format. If this is not done, the job might produce undesirable results or not work at all.

For more information about the registry value, see the HKEY_LOCAL_MACHINE\Software\Cyco\AutoManager Meridian\CurrentVersion\Server article in the Meridian Enterprise Administrator's Guide.
To change the sources:

Click Edit.
The Source Systems dialog box appears and lists the current source systems.
To add another source system:
<ol type="a">
Type a computer name in the text box or select a server from the list.
Note:
Exclude the domain name or rendition jobs might not appear in Administration Console.
Click the connect icon or the browse icon, depending on the configured source type.

</td></tr>
</table>

[1]An Accruent portable document package. A briefcase is a single file in an archive format that may contain multiple discrete documents. Briefcases may be in open standard formats such as ZIP and RAR, the Accruent BRC format, or custom formats. A briefcase may also contain document metadata in a data file and, in the Accruent BRC format, document redlines.

[2]The Meridian Enterprise Server data access and business services running on a server computer. May also be used to refer to the server hosting the services.

Option	Description
	The systems that are available on the specified server appear in the list. For file systems, the **Browse** dialog box appears. c. Select the systems that you want. For a file system, navigate to the parent of the folder that you want to select, select the child folder, and then click **OK**. The path of the selected folder appears in the dialog box. 3. To remove a system, clear the check box next to its name. 4. Click **OK**. To change the display names of the systems to be more user-friendly: 1. Click **Display Name**. The **Edit Display Name** dialog box appears. The name is limited to 50 characters. 2. Edit the text in the **Display Name** column and then click **Change**. The names are updated. To check whether the systems that are listed are online and available: • Click **Check Availability**. Publisher connects to each system, confirms its availability, and shows the results.
Properties file	A Microsoft Excel (2003 or higher) file that contains document metadata to publish to the destination system. Available only for file system sources. The format of the metadata must be: • In the first worksheet in the workbook. • Column A of row 2 and higher must contain the paths of the documents to publish. The paths must be relative to the source folder. • Column B and higher of row 1 must be named **PropertyName1**, **PropertyName2**, and so on to the last column of metadata properties. To select the file, click **Browse**.

Option	Description
Destination systems	The destination of the documents to publish. **Note:** The types of the systems are shown in italic text. The display names of the systems are shown in bold text. These are shown for users to select a specific destination from when the user publishes documents with a job that has multiple destination systems configured. The connection names of the systems are shown in normal text and link to the source system definition. To change or check the destination systems, perform the tasks described for the **Source systems** option.
Computer	If a cluster is configured as described in Configure a Meridian Enterprise Server Cluster, select the node on which to run this job.
Use database for metadata storage	By default, document metadata is published to an XML file named *<DateTimeStamp>*_*<JobName>*.xml (for example, 2013-10-04_07-30-35_BA5586.xml) and located in the destination folder. All of the properties mapped as described in Configure the Mappings are output to the file. Enabling this option stores the document metadata in a database instead of in a file on disk. The database connection parameters are specified in the following options. Available only for file system destinations.
Connection string	A valid connection string to connect to a SQL Server or Oracle database where the metadata should be stored.
Package destination URI	If the job publishes packages from a Meridian Explorer repository, the URI where the packages should be uploaded. Following are examples: C:\Packages \\ServerName\ShareName\Packages ftp://ServerName/Packages https://ServerName:444/Packages/ **Note:** • In addition to the package file (.zip), a manifest file (.xlsx) is also uploaded for use by destination systems that must validate the package before processing it. • HTTP and HTTPS destination URIs must end with a trailing slash character. • IIS destinations should be configured to use authentication and the credentials configured as described in the following options. • IIS destinations require WebDAV authoring rules be configured.

Option	Description
User name	If the **Connection string** option is specified, a user account name with rights to connect to the database specified in **Connection string**. If the job publishes packages from a Meridian Explorer repository, a user account with rights to the path specified for **Destination systems** and for **Package destination URI**.
Password	The password for the account specified in **User name**. If the **Connection string** option is specified, to test the current connection credentials: • Click **Test Connection/Test Package URI**.
Table	The name of the table where to store the metadata. The column names and data types in this table must match the property names and data types that are mapped as described in Configure the Mappings.
Create folders for recipients	Creates one sub-folder for each recipient specified in the package. Supported only for UNC paths. For other types (for example, FTP, HTTP, HTTPS), the sub-folders must already exist.
Path column	The name of the column that will contain the document paths. The column must be the String data type.

Configure Synchronization Options

When a repository synchronization job runs, Publisher exports documents from a source vault according to settings that are configured for the publishing job. You can configure some of the parameters that determine how the export is performed. The synchronization job then imports the documents into the destination repository. The job options specify how each document is to be synchronized, including:

- Which documents in the source vault are synchronized
- Which revisions of the documents are synchronized
- Where the document content will be retrieved from
- Whether deleted vault documents are deleted from the repository

> **Note:**
> The maximum size of documents that can be synchronized from Meridian Enterprise to Meridian Explorer is 2 GB. Larger files will be skipped. A message can be seen in the publishing log if the **MinLogLevel** setting is **0** in the file `C:\ProgramData\BlueCieloECM\EnterpriseServices\EventLogConfigDto.dat`.

Configure Repository Synchronization Options

To configure the repository synchronization options:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.
2. On the **All** or **Synchronization** page, double-click the name of the job that you want to configure.

   The job's configuration option pages appear.
3. In the menu, click **Options**.

   The **Options** configuration page appears.
4. To configure the options in the **Notification** group, see Configure the Notification Options.
5. Click **Save**.

> **Note:**
> The **Use options from Meridian document properties** and **Enable Meridian script events** options determine how each Meridian Enterprise document will be synchronized to the Explorer repository. These options are only available if the **pre-2017 sync mode** is in use as described in Configure the Application Options.
>
> The effects of these options can be different for each document. Before processing a document, the properties (in the **ExplorerSynchronization** property set) that correspond to the options are read. The Meridian Enterprise vault can optionally implement VBScript methods that set these properties. For example, the `DocSync_Options` method will be invoked before processing a document and can be used to set the synchronization options. When the synchronization process does not find a valid value for one of the synchronization options, it will use the default values that are configured for the synchronization job.

Meridian Explorer repository options

Group	Option	Description
General	Timeout	The number of seconds for the system to wait for each attempt of synchronizing a document to complete before retrying. The default is 60 seconds. If all attempts fail to complete within this period, the result will be noted in the publishing log of the document but no errors will be generated.
BC Explorer	Keep revision history	Publishes the prior revisions of documents in addition to the current revision. If the source vault setting **Work Isolation Mode in Main area** is set to **On** or **On, read-only**, only released revisions will be synchronized, including working copies of the user account under which the synchronization job runs. Work Isolation Mode is a legacy feature. We still support customers who have it enabled, but we do not allow it to be enabled in new Vaults.
BC Explorer	Synchronize draft revision	If enabled and a document is under revision at the time that the job runs, any draft revisions (one or more) will also be published to the repository. If disabled, only the revisions with the status **Unchanged**, **Released**, and **Retired** are synchronized. Changing this option is not detected by the **Validate Synchronization** command described in Validate a Synchronization Job. To synchronize the draft revisions after changing this setting, make an insignificant property value change to the draft revisions. They will be synchronized properly by the next synchronization job.

Group	Option	Description
BC Explorer	Allow automatic deletion	Deletes repository documents when the vault documents from which they were synchronized have been deleted. In certain situations, some deleted vault documents might not be detected by an Meridian Explorer synchronization job. To delete the missed documents, we recommend that you run the **Validate Synchronization** command occasionally as described in Validate a Synchronization Job.
BC Explorer	Enable separate options per document	By default, all documents from the Meridian Enterprise source vault are synchronized to the Enterprise Server repository according to the options that are set for the synchronization job. If this option is enabled, some synchronization options can be controlled per document by setting property values of the documents. Typically the property value would be set by customized VBScript event procedures. For example, when certain workflow transitions or other events occur. This option applies to the **ExplorerSynchronization.ContentOption**, **ExplorerSynchronization.DeleteOption** and **ExplorerSynchronization.RevisionOption** properties. This option is only available if the unsupported **pre-2017 sync mode** is selected as described in Configure the Application Options. **Note:** The value of the **ExplorerSynchronization.Modified** property is ignored but it will be set to **False** when the document is processed correctly.
BC Explorer	Enable Meridian script events	Causes the `DocSync_Options`, `DocSync_Succeeded`, and `DocSync_Failed` VBScript events to occur for the source documents before and after publishing. They can be used to update the publishing status properties in the source vault that are described for the **Enable separate options per document** option. Typically the property value would be set by customized VBScript event procedures. For example, when certain workflow transitions or other events occur. This option is only available if the **pre-2017 sync mode** is in use as described in Configure the Application Options. For more information about these VBScript events, see *Publishing Events* in the *Meridian Enterprise VBScript API Reference*.
BC Explorer	Update display names	If the display names of properties and types in the source vault have changed, the names in the repository are synchronized with the changes.
BC Explorer	Create properties	Creates a property definition in the destination repository for every source vault property.

Group	Option	Description
BC Explorer	Update indexes	Includes new documents in the indexes for faster searches. Search performance can be adversely affected by heavy loads on the server and result in time-out errors. If you want to schedule a synchronization job to run frequently (hourly, for example) during business hours or together with other jobs in a batch, we recommend that you disable this option and create a separate, dedicated indexing job to run only once daily outside of business hours.
BC Explorer	Collect dashboard statistics	Runs the stored procedure in the repository database that collects the information that is shown on the dashboard. The dashboard will appear empty until the data is collected. Because the data collection can be a resource-intensive process, we recommend that you enable this option for the last scheduled task of each day and during non-production hours. For information about customizing the stored procedure and the dashboard layout, see Configure the Dashboard.
BC Explorer	Only synchronize documents from the specified collection	To limit the synchronization to a specific set of vault documents, select an existing shared dynamic collection from the list. If the collection does not yet exist, you must first create it in Meridian Enterprise. To synchronize all documents in the source vault, leave this option empty. If the **Include documents by reference** option of the collection is enabled, referenced and referencing documents (even if they have changed) are synchronized only if the selected document has changed.
Content	Synchronize the source document	Enable this option if both the source and rendition files should be available in the destination repository. Users might not see any content for some documents depending on the current setting of the **Display Content** option described in Create And Edit Repository Views. Content might also not be available depending on whether a rendition exists in the source vault and whether the rendition is out of date because the source document has been modified.
Content	Use the file extension of the rendition	Assigns the file extension of the rendition to the published document. This option does not change the format of the document and viewers that use the file extension to detect the file format will fail to view the document.
Content	Synchronize outdated renditions	If enabled, synchronizes existing renditions even if they are not up to date.
Content	Synchronize redlines	Enable this option synchronize the source document redlines and rendition redlines. If the **Enable feedback functionality** option is enabled for a detail page and redlines are edited using that page, the changes will be saved to the Meridian Enterprise vault.

Configure Synchronization Batch Options

By default, **Use batch synchronization** is enabled as described in Configure the Application Options. Additional options are available to configure how the batches are processed.

To configure the synchronization batch options:

1. In Meridian Enterprise ServerAdministration Console, in the **BC Publisher** group, click **Jobs**.

   The **Publish Jobs** page appears and lists the existing jobs.

2. On the **All** or **Explorer Synchronization** page, double-click the name of any job.

   The job's configuration option pages appear.

3. In the app bar, click **Synchronization**.

   The **Explorer Synchronization Settings** dialog box appears.

4. Click options or type values using the descriptions in the table in Configure the Application Options.

Validate a Synchronization Job

Under typical working conditions, if the **Allow automatic deletion** option is enabled in the synchronization job as described in Configure Synchronization Options, the job will correctly detect and delete items from the repository that no longer exist in the source vault.

However, there are some situations when this cannot be reliably detected by the synchronization job, such as when the document or tag:

- Was never released
- Was purged
- Is not deleted in the vault but does fall outside the collection specified for synchronization

These situations can leave documents or tags in the repository that you might not want to retain. To clean up these deleted documents and tags, you should occasionally validate the synchronization job.

Note:

- Scheduled validations will validate the synchronization jobs for all Meridian Enterprise source vaults of the current repository.
- If multiple synchronization jobs run for a repository and the **Allow automatic deletion** option is enabled for all of the jobs, documents will only be removed from the repository if none of the jobs specify a collection scope.
- Because this task can be quite time-consuming, we recommend that you schedule it to run only once per week outside of production hours.

To validate a synchronization job:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.
2. Double-click the name of the repository that you want to configure.
3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.
4. In the **Validate Synchronization** group, enable **Repair inconsistencies** if you want the validation task to add missing items to the repository and delete obsolete items in the next synchronization job.

   Disable the option to only view a report of the inconsistencies.
5. Choose between two options:

- To validate the repository immediately:
  - Click **Run**.

    A background task is started and you can continue working. When the validation has completed, the **Validation Report** dialog box appears and shows the information described in the following table.
- To schedule repository validation to run later:
  a. Click **Schedule**.

     The **Schedule** dialog box appears. This dialog box requires the same input as the Windows Task Scheduler.
  b. Configure the scheduled task to run at your desired time.
  c. Click **Schedule**.

     The task is modified and will run on the configured schedule.

Validation report items

Item	Description
Status	The completion status of the validation.
Report	The quantities of objects found by the selected checks.
Out of scope documents	The number of documents in the source vault that are not in the collection specified for the synchronization job.
Out of scope object tags	The number of tags in the source vault that are not in the collection specified for the synchronization job.
Out of scope projects	The number of project folders in the source vault that are not in the collection specified for the synchronization job.
Missing items	The sum of the items in the source vault that are not in the collection specified for the synchronization job.

Configure the Mappings

The job mappings specify to which items in the destination system items from the source system are imported. To combine the values of multiple source properties into one destination property value, simple expressions can be specified.

Notes about Functionality

- The job mappings must be updated manually if the configuration of the source or destination systems changes.
- By default, document types and reference types are automatically synchronized between Meridian Enterprise and Meridian Explorer.
- There is a single property mapping configuration for all source and destination systems of the same publishing job. Also, the system takes advantage of matching property names in the systems when possible. This means that if there is an unmapped property in one of the source systems that matches an unmapped property in one of the destination systems, it will be imported even though no explicit mapping has been configured.

  This also means that to configure unique property mappings between specific systems, you may need to create separate publishing jobs. For the best results when mapping properties between multiple source or destination systems, they should have the same properties.
- We recommend that you not map properties that are specified in a destination vault's Field-Path definition unless the **Identify by Global ID if document path is not available** option is enabled as described in Configure the Miscellaneous Options. This is because their values have already been determined by the location of the document. Errors can occur and the publishing job may fail if the destination folder and the Field-Path definition property values do not match.

Configure System Mappings

To configure the system mappings:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.
2. Double-click the job for which you want to configure the mappings.

   The job's configuration pages appear.

3. In the menu, click **Property Mapping** or **Type Mapping** (if the job is a Meridian Explorer synchronization job).

   A list of the current mappings appears, grouped by property set if the items are properties. To configure the mappings for other item types (a Meridian Explorer synchronization job), click **Object Tag** or **Project** in the page header.

   The icons and columns are described in the following table:

Mapping icons and columns

Column or icon	Description
⚠	Item is not mapped
🔧	Item is mapped and included
■	Item is mapped but excluded
Destination	The item names in the destination system **Note:** When a single-value Meridian Enterprise source property is mapped to a multi-value destination property, separate multiple values in the source data with the semicolon character (;).
Source	The item names in the source system
Expression	An expression that calculates the value of the item in the destination system

   If no mappings appear, they have not yet been defined, such as for a file system destination, for example.

4. Choose between two options:
   - To create matching properties from the source system:
     a. In the toolbar, click **Edit Destination Properties**.

        The **Edit Destination Properties** dialog box appears.

     b. Click **Create From Source**.

        A new destination property definition is created for each source system property and is added to the list. Duplicate property names appear in red text and must be renamed to be unique. Unique property names appear in green text. You will only be able to save the property definitions when all property names are unique.

c. To change the settings of a property, click its row to make it editable and then use the following instructions for editing the settings of a manually created mapping.

d. To remove a property from the mapping, select the row that you want to remove and then in the toolbar click **Remove**.

e. Click **OK**.

The new mappings appear on the page.

- To create a new mapping manually:

  a. In the toolbar, click **New**.

  A new property row appears in the list with default settings.

  b. Type a unique name in the **Name** column and select the appropriate data type from the **Data Type** list.

  c. Click **Update**.

5. Choose one or more of the following options:

- To exclude an item from publishing:
  - Select the item name and then click **Exclude**. The icon changes to indicate the item's new status.
- To include an item in publishing:
  - Select the item name and then click **Include**. The icon changes to indicate the item's new status.
- To change the mapping of an item:

  a. Double-click the item name.

  The item expands to show its mapping options.

  b. Click options or type values for each column using the descriptions in the following table.

  c. Click **Update**.

- To assign an expression to an item mapping:

  a. Select the item name that you want to assign the expression to and then in the toolbar, click **Edit Expression**.

  The **Expression** dialog box appears and lists the available properties in the source system.

  b. In the **Expression** pane, type an expression to be evaluated during publishing.

The expression may use any .NET compliant methods (except **Parse**) and operators in the C# language syntax. The result of the expression will be the property value in the destination system. Double-click a property in the list to insert it into the expression. For multi-sheet drawings, layout properties may also be selected, **__LayoutProperties._NAME**, for example. The result of the expression must be compatible with the data type of the destination property. If necessary, you can convert data types, for example, using the **ToString** method.

Following are examples of text and date expressions:

```
{Title 1} + " " + {Title 2} + " " + {Title 3}
{PropertyName}.SubString(0, 1)
{NonStringProperty}.ToString() + " days"
{ProjectEndDate}.AddDays(-30)
```

c. To validate the expression, click **Check**.

Errors in the expression appear in the **Errors** pane. Correct all errors until the **Errors** pane is empty.

d. When you are finished editing the expression, click **Save**.

The expression appears in the **Expression** column.

6. Repeat steps 4-5 for each mapping that you want to change.
7. When you are finished configuring mappings, click **Save**.

Mapping options

Column	Description
Destination	Select a destination item from the list.
Source	Select a source item from the list.
Expression	To edit the expression, see the following bullet.
Separator (multi-value properties only)	Type the character that separates individual values in a multi-value property. For unprintable characters, type **newline** or **tab** The default character is the comma (,). Older versions of Publisher stored this setting in a registry key. If a different character was used before upgrading to this version of Publisher, then this setting should be changed to match the old setting and the character that is actually used in the source metadata.

Configuring the Publishing Options

The publishing options specify the names, locations, and types of the published documents as well as other related options. At least one rendering profile must be specified for every publishing job that will generate renditions.

To configure the publishing options:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.
2. Double-click the publishing job that you want to configure.

   The **Overview** page appears.
3. On the menu, click **Options**.

   The **Options** page appears.
4. Click options or type values using the descriptions in the following table.
5. Click **Save**.

Some of the options in the following table are only available for specific source or destination systems.

To configure the **Miscellaneous** options, see Configure the Miscellaneous Options.

To configure the **Notification** options, see Configure the Notification Options.

Publishing options

Group	Option	Description
General	Timeout	The number of seconds for the system to wait for each attempt of publishing a document to complete before retrying. The default is **180 seconds**. If all attempts fail to complete within this period, the result will be noted in the publishing log of the document but no errors will be generated. This timeout is applied to each layout of a drawing being rendered. If a drawing contains many layouts, the total timeout time can be lengthy and not interrupt rendering as expected.

Group	Option	Description
General	Number of retries if publishing fails	The number of retries for the rendering step of a publishing job. This is the number of retries to publish or render a document before proceeding to the next document or rendering attempt. Each rendering attempt (**First**, **Second**, and **Third**) that is configured on the **File Extensions Mapping** page described in Configure the File Extension Mappings will make this number of attempts. If specified, this option is overridden by the **_RETRY_*<Count>*_** option in VBScript as described in *Publishing And Rendering Options* in the *Meridian Enterprise VBScript API Reference*. Attempts will only be called if there is an issue with the rendering profile. If the rendering profile does not fail but there is another issue with the publishing job, Meridian will not retry the rendition.
General	Batch size	When large jobs run, Enterprise Server slices them into batches so that it can insert other pending publishing jobs in its queue. This prevents a large job from monopolizing the server and delaying all other jobs until it has completed. This setting specifies the maximum number of documents to include in each batch. The default is **0 (unlimited)**, which is the maximum of **10000 documents**. When a publishing job includes more documents than the batch size, the job will be truncated to one batch of this size and the remaining documents will be published in separate batches by each scheduled run of the job until the entire job is complete. If the job is not scheduled to run again, the batch is simply truncated.
General	Publish new documents immediately	If enabled, the publishing job is started immediately when new documents are created in the source vault. Under certain conditions, such as with very large documents, this option can result in the previous revision of the document being published instead of the new document. If this occurs in your environment, disable this option and schedule the job with a short interval instead, for example, once every minute.
General	Publish restarted documents immediately	If enabled, the documents that fail to publish are restarted immediately in the Publisher Queue. If the documents are part of a batch publishing job, the failed documents are restarted individually. The entire batch is not restarted.

Group	Option	Description
General	Enable Meridian script events	Causes the `PublisherSourceEvent_BeforePublish`, `PublisherSourceEvent_AfterPublish`, and `PublisherDestinationEvent_AfterPublish` VBScript events to occur. They can be used to update the publishing status properties in the source or destination. For more information about the VBScript events, see *Publishing Events* in the *Meridian Enterprise VBScript API Reference*.

Group	Option	Description
Destination File Name	Use property value from source document	By default, the source document name is used as the name (without file extension) in the destination system. You may also apply the value of a property as the destination document name or you can define an expression to calculate the destination name (only for jobs with a Meridian Enterprise vault as the source system). To select the property: 1. Click **Select**. The **Select Property** dialog box appears and lists all of the available properties. 2. To filter the list to show only similar property names: a. Type the beginning of a property set name or a property name in the filter box. The search operator that will be used is **Starts With**. b. Click the search icon . The list refreshes to show the results of your filter. c. To reset the filter results, clear the filter box and click the icon again. 3. Click the name of the property that you want to use. 4. Click **OK**. The selected name appears as the option value. To remove the current property: • Click **Clear**. The property name is removed. To define an expression to calculate the file name: 1. Click **Expression**. The **Expression** dialog box appears and lists the available properties in the source system. 2. In the **Expression** pane, type an expression to be evaluated during publishing. The expression may use any .NET compliant methods (except **Parse**) and operators in the C# language syntax. The result of the expression will be the file name in the destination system. Double-click a property in the list to insert it into the expression. For multi-sheet drawings, layout properties may also be selected, **__LayoutProperties._NAME**, for example. The result of the

Group	Option	Description

		expression must be string data. If necessary, you can convert data types, for example, using the **ToString** method.
		Following are examples of expressions:
		`{Title 1} + " " + {Title 2} + " " + {Title 3}`
		`{PropertyName}.SubString(0, 10)`
		`{NonStringProperty}.ToString()`
		To set the file extension, enable the **Enable Meridian script events** option and calculate the file extension in the `PublisherDestinationEvent_AfterPublish` VBScript event handler.
		For more information about the VBScript events, see *Publishing Events* in the *Meridian Enterprise VBScript API Reference*.
		3. To validate the expression, click **Check**.
		Errors in the expression appear in the **Errors** pane. Correct all errors until the **Errors** pane is empty.
		4. Click **Save**.

Destination Folder	Use source folder	Reproduces the folder structure of the original location in the destination system.
Destination Folder	Use property value from source document	Applies the value of the property as the destination parent folder. To select the property, perform the steps listed for the **Select** command in the preceding option.
Destination Folder	Publish to a single folder	Publishes all documents from the source system to a single folder in the destination system. Type the destination folder name in **Folder**.

Group	Option	Description
Destination Folder	Use Meridian navigation view path	Creates the document's path in the selected navigation view as the path in the destination system. To select the view: 1. Click **Select**. The **Use Meridian Navigation View Path** dialog box appears and lists the available navigation views in the source vault. 2. Click the name of a view and then click **OK**. The navigation view name appears in the option data.
Destination Folder	Folder	The name of a folder in the destination system where to publish all documents.
Destination Folder	Document library	The name of the SharePoint document library to publish the documents to. Publishing to a SharePoint picture library is slower than publishing to a document library due to thumbnail images that are generated by SharePoint. This option is only available for the SharePoint system link.
Destination Folder	Subsite path	The name of the SharePoint sub-site to publish the documents to. This option is only available for the SharePoint system link.
Document Type / Object	Use type of the source document	Assigns the document type of the source document to the published documents.
Document Type / Object	Change type to	Assigns the document/content type that is selected for the **Document/Object type** option to the published documents.
Document Type / Object	Document/Object type	Applies the value of the property as the destination document type. To select the type, perform steps similar the **Select** command in the preceding option.
Document Type / Object	Use property value from source document	Applies the value of the property as the destination document type. To select the property, perform steps similar to the **Select** command in the preceding option. If this option is used in a job for which the destination is a Accruent Project Portal workspace, the property must contain the ID of the document type, not the name of the document type.

Group	Option	Description
Content	Publish the source document	Enable this option if the source file (including hybrid parts, if applicable) should be available in the destination system. Hybrid parts are always published if the destination system is a Meridian Enterprise vault. At least one rendering profile must be specified for every publishing job that will generate renditions. This setting does not work for the following publishing jobs, because the systems involved do not have the concept of a native document and associated rendition: • BC Meridian - MS SharePoint • MS SharePoint - MS SharePoint • MS SharePoint - BC File System • File System - MS SharePoint • File System - File System • BC Meridian Project Portal - MS SharePoint • BC Meridian Project Portal - FileSystem **Note:** • Users might not see any content for some documents depending on the current setting of the **Display Content** option described in Create And Edit Repository Views. Content might also not be available depending on whether a rendition exists in the source vault and whether the rendition is out of date because the source document has been modified. • If a publishing job is configured so that the source document and the rendition have the same filename and extension, the publishing job will append the text `.rend` to the filename so that you can distinguish between the files. For example, if a publishing job creates an export package that contains the source document `MyDocument.pdf`, the rendition will be named `MyDocument.rend.pdf`. • Leave this option disabled for the Documentum system link.

Group	Option	Description
Content	Publish redlines	Enable this option to publish the source document redline data as rendition redlines for viewing in the destination system. The **Include redlines in rendition** option must also be enabled as described in Configure Rendering Options). This is only supported by the AutoVue Desktop Deployment rendering module. Leave this option disabled for the Documentum system link. If the **Enable feedback functionality** option is enabled for a detail page and redlines are edited using that page, the changes will be saved to the Meridian Enterprise vault.
Source Documents	Content to include	Select which copy of a document to include in packages, the current master revision or the current project copy, if any.
Source Documents	Lock project copies	Enable this option to lock any project copies in the repository that are added to packages. This will allow changes only by the package recipient. The project copies will be unlocked when the package is imported back into the repository.
Source Documents	Lock master documents	Enable this option to lock the master documents of any project copies that are added to packages. This will allow only revisions by the package recipient to be released as new master document revisions. Project copies will also be made of any master documents that are referenced by the main project copies and they will also be included in the package for reference.
Source Documents	Create project copy	Enable this option to create project copies (if they do not yet exist) and add them to packages instead of master documents. This will cause revisions by the package recipient to be released as new master document revisions. Project copies will also be made of any master documents that are referenced by the main project copies and they will also be included in the package for reference.

Configure the Miscellaneous Options

The miscellaneous job options control various features that are common to more than one source or destination system.

To configure the miscellaneous options:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.
2. Double-click the publishing job that you want to configure.

   The **Overview** page appears.
3. On the menu, click **Options**.

   The **Options** page appears.
4. In the **Miscellaneous** group, click options or type values using the descriptions in the following table.

   Some of the options in the following table are only available for specific source or destination systems.
5. Click **Save**.

Miscellaneous job options

Option	Description
Keep revision information	If cleared (default), only publishes the most recent released revision of documents. If enabled, publishes all revisions. By default, the **Comment** property of a Meridian Enterprise source document is not published to the destination vault.
Keep modification information	Sets the **Modified**, **ModifiedBy**, **Created**, and **CreatedBy** properties of the published document to the same values as the source document.
Keep workflow status	Keeps the source document workflow status if the source document is the latest revision. Otherwise, the status of the published document is set to **Released** unless it is overridden by VBScript as described in the *ExecTransitionMethod* section of the *Document Object Methods* article in the *Meridian Enterprise VBScript API Reference*.

Option	Description
Keep managers	If the **Keep workflow status** option is enabled, this option also keeps the source document workflow managers if the source document is the latest revision. Otherwise, the manager is not set for the published document.
Keep to-do persons	Keeps the source document to-do persons if the source document is the latest revision. Otherwise, the to-do person is not set for the published document. This option is independent of the **Keep workflow status** option.
Identify by Global ID if document path is not available	If the document in the destination vault can not be found based on its destination path, then the document will be retrieved using its **GlobalID** value, which is set to the ID of the source document. We recommend that you do not publish properties that are specified in a destination vault's Field-Path definition unless this option is enabled This is because their values have already been determined by the location of the document. Errors can occur and the publishing job may fail if the destination folder and the Field-Path definition property values do not match.
Add comment when published	Adds a comment to the workflow log (**Comments** property) in both the source and destination vaults when the document is published.
Publish all revisions for new documents	If cleared (default), only publishes the most recent released revision of documents. If enabled, publishes all revisions. Select the **Copy revision comments** option to also publish the workflow comments property of the revisions. **Important!** Due to the risk of accidental data loss, this option is only available if the **EnableCopyMeridianRevisions** option is set to `true` in the following file. Be certain that you want to use this option before enabling it. `C:\ProgramData\BlueCieloECM\EnterpriseServices\PublishingCapability.dat` Learn more about the settings in the PublishingCapability.dat file. Besides the **Name** property, only metadata in the default **Custom** properties set will be published for the prior revisions.
Copy revision comments	If cleared (default), does not copy the workflow log (**Comments** property) of revisions published by the **Publish all revisions for new documents** option. This option is only available if the **Publish all revisions for new documents** option is enabled.
Create thumbnail	Generates a thumbnail in the destination system when the document is published as described in Configure Thumbnail Generation.

Option	Description
Thumbnail width / Thumbnail height	If you have selected the **Create thumbnail** check box, enter the thumbnail width and height in pixels in the appropriate fields.
Skip publishing of files with the following extensions	Excludes files with the specified file extensions from being published to the destination system. 1. Click **Configure**. The **Select File Extensions** dialog box appears and lists the file extensions that have already been specified, if any. 2. Choose one or more of the following options: • To add another file extension, type the file extension in the text box and then click the **Add new item** icon. The file extension is added to the list. • To remove a file extension, click the **Remove** button in the row of the extension that you want to remove. The file extension is removed from the list. 3. When you are finished specifying file extensions, click **OK**.

<table>
<tr><th>Option</th><th>Description</th></tr>
<tr><td>Feedback property</td><td>If specified, the name of the custom document property to which a textual result message from the publishing job can be set. This property can be used to show the document's current publication status in the Meridian Enterprise client applications. No error message is generated if the feedback property cannot be set. We recommend the BCRenditionPropertySet._RESULT property.
This option is only available if the source system supports property updates.
To select the property:
1. Click Select.
The Select Property dialog box appears and lists all of the available properties.
2. To filter the list to show only similar property names:
a. Type the beginning of a property set name or a property name in the filter box.
The search operator that will be used is Starts With.
b. Click the search icon .
The list refreshes to show the results of your filter.
c. To reset the filter results, clear the filter box and click the icon again.
3. Click the name of the property that you want to use.
4. Click OK.
The selected name appears as the option value.
To remove the current property:
• Click Clear.
The property name is removed.
Note:
The BCRenditionPropertySet._FORMAT property will contain the file extension of the rendition file.</td></tr>
<tr><td>Watermark prior revision</td><td>Applies a watermark to the prior revision of the rendition (if one exists) when a new revision is created.
This option assumes that renditions exist in the source vault that were created by another publishing job. If the vault does not contain renditions of prior revisions, this option has no effect.
You will also need to select the Enable check box in the General options for your Prior Revision watermark profile.</td></tr>
</table>

Option	Description
Delete source document if publishing succeeded	If enabled, deletes source documents after they have been successfully published to the destination system. This can be useful when the Publisher is used to archive documents into a central system or an archive vault. If disabled, the source documents are not deleted. **Important!** Due to the risk of accidental data loss, this option is only available if the **EnableRemoveMeridianSource** option is set to `true` in the following file. Be certain that you want to use this option before enabling it. `C:\ProgramData\BlueCieloECM\EnterpriseServices\PublishingCapability.dat` Learn more about the settings in the PublishingCapability.dat file.

Configure the Notification Options

Email notification options can be used to alert interested users when the job succeeds or fails. The recipients must have an email address specified for their Meridian Enterprise user account.

To configure the notification options:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.

2. Double-click the publishing job that you want to configure.

   The **Overview** page appears.

3. On the menu, click **Options**.

   The **Options** page appears.

4. In the **Notification** group, click options or type values using the descriptions in the following table.

5. Click **Save**.

Notification options

Option	Description
Notify when the job succeeded	Sends a status message to the notification recipients when the publishing job succeeds.
Notify when the job failed	Sends a status message to the notification recipients when the publishing job fails. If the **Number of retries if publishing fails** option is specified as described in Configuring the Publishing Options, one message is sent only if the retries fail. If the option is not configured, one message is sent for each document failure. Notifications for failed rendering are only sent if the file extension is configured with the **Fail** option for its final attempt as described in Configure the File Extension Mappings. To prevent **Another instance of the job is currently running** notifications if a frequent job is still running when it is scheduled to begin again, set the **DoNotNotifyAnotherJobIsRunning** setting in the following file to **true**. The default is **false**. `C:\ProgramData\BlueCieloECM\EnterpriseServices\GeneralPublisherSettings.dat`

Option	Description
Notify submitter when publishing a document succeeded	Sends a success status message to the person who submitted the document for publishing.
Notify submitter when publishing a document failed	Sends a failure status message to the person who submitted the document for publishing. If the **Number of retries if publishing fails** option is specified as described in Configuring the Publishing Options, the message is sent only if the retries fail.
Recipients	Lists the primary recipients of notification messages for publishing jobs. To configure the list: 1. Click **Change**. The **Configure Recipients** dialog box appears. 2. Manually edit the list or click **Add recipients**. The **Add Members** dialog box appears and lists the current Meridian Enterprise user accounts. 3. Select the users that you want to add. 4. Click **OK**. The users' names appear in the **Recipients** list. 5. Click **Change** to save the list of recipients.
CC recipients	Lists the secondary recipients of notification messages for publishing jobs. To configure the list, perform steps similar to the **Recipients** option.

Configure Hotspot Extraction Options

The hotspot extraction options allow you to determine whether hotspots are to be extracted for the rendition job. Additionally, you can choose whether to:

- only extract hotspots only when the rendition is out dated
- trigger the Meridian script event once hot spots are successfully updated

To configure hotspot extraction options:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.
2. Double-click the publishing job that you want to configure.

   The **Overview** page appears.
3. On the menu, click **Options**.

   The **Options** page appears.
4. In the **Hotspot Extraction** group, select the options you want:
   - **Extract hotspot data as configured in the Application Link Settings** — Select if you want hotspot data to be extracted.
   - **Extract only if rendition is outdated** — Select if you only want the extraction to occur if the rendition is outdated.
   - **Publisher will invoke Meridian script event when update succeeds** — Select if you want the Hotspots Updated script event to be triggered when hotspots are updated.
5. Click **Save**.

Configure the Synchronize Content Options

The options of a content synchronization job determine when synchronization occurs, what data is synchronized, and in which direction; from the vault to the documents, the opposite direction, or both directions.

> **Note:**
> This job type is intended to replace the legacy title block synchronization described in Application Integration, which is disabled by default for new installations or retained for upgraded installations. To re-enable legacy synchronization, set the **UpdateContentPublisher** registry value described in HKEY_LOCAL_MACHINE\Software\Cyco\AutoManager Meridian\CurrentVersion\WebLink to **0**.

Configuration Procedures

To configure the content synchronization options:

1. In Meridian Enterprise ServerAdministration Console, in the **Data Exchange** group click **Jobs**.

   The **All Jobs** page appears and lists the existing jobs.
2. On the **All** or **Synchronize Content** page, double-click the name of the job that you want to configure.

   The job's configuration option pages appear.
3. In the menu, click **Options**.

   The **Options** configuration page appears.
4. To configure the options in the **Notification** group, see Configure the Notification Options.
5. Click **Save**.

Content synchronization options in the General group

Option	Description
Update new documents immediately	This job is started immediately when a new document is created.
Update restarted documents immediately	This job is started immediately when a document that failed to synchronize previously is restarted as described in Restart a Document.

Option	Description
Update job type	The data to synchronize when this job runs: • **Read title block properties** — from the document • **Write title block properties** — to the document. The document is locked during this operation. • **Synchronize references** — from the document

The results of this job type can be viewed as described in View the Audit Log.

Limitations

Synchronization by this job type occurs separate from the actions taken on documents like importing or workflow transitions. This imposes certain limitations on when and where the data is available.

Content synchronization limitations

Update job type	Action	Limitations	Remarks
Any	Any	`DocCADLink_*` script events not supported	
Read title block properties	Release	Values are not available in wizards	Work around by showing the wizard on the next state transition. Title block will be updated when the application link is active.
Read title block properties	Import	Values are not available in wizards	Work around by showing the wizard on the next state transition.
Write title block properties	Start Change	Not supported	Work around by adding a prior workflow transition.
Write title block properties	Workflow transition	Not supported when opening the document	Work around by having the user do the workflow transition before the download.
Write title block properties	Quick Change	None	
Write title block properties	New from template	Values are not available in wizards	Work around by initializing the values in script based on the known content of the template.

Update job type	Action	Limitations	Remarks
Write title block properties	Copy, Replace, Derive	Values are not available in wizards	Work around by adding a subsequent workflow transition.

Specify Rendering Profiles

Basic rendering options are configured in the rendering profile of the job. At least one rendering profile must be specified for every publishing job that will generate renditions.

> **Note:**
> If you specify a rendering profile that supports file extensions that are already mapped to a different rendering profile or action as the **First** action on the **File Extension Mapping** page as described in Configure the File Extension Mappings, the specified rendering profile will be set as the **Second** action. The previous **Second** mapping is set as the **Third** action.
>
> If you deselect a rendering profile that is mapped on the **File Extension Mapping** page, the existing action (**First**, **Second**, or **Third**) is removed for those file extensions and if no other action is configured, they will be automatically re-mapped to the **Blank** action described in Configure the File Extension Mappings. The file extensions are retained in the list so that you can re-map them to a different rendering profile or action.

To specify the rendering profiles:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.

2. Double-click the publishing job that you want to configure.

   The **Overview** page appears.

3. On the menu, click **Rendering**.

   The **Rendering** page appears and lists the existing rendering profiles. The profiles that have already been assigned to the job are selected. The rendering profiles that you select on this page are those that are available for mapping to specific file extensions on the **File Extension Mapping** page as described in Configure the File Extension Mappings.

4. To create a new rendering profile:

   a. Click **New**.

   b. Follow the steps described in Create And Edit a Rendering Profile.

5. To assign or unassign a rendering profile for the current job, select or deselect the check box next to the profile name.

   Do not select a rendering profile unless the rendering module used by that profile is installed on the computer (cluster node) where the job will run.

Do not select both the **Teigha DGN** and the **Teigha DWG** rendering profiles in the same publishing job. A **Faulting application name: ESPADM64.exe** error can occur even if only one of them will be used.

If a rendering profile is not already mapped to the file extensions that it supports, those file extensions are automatically mapped for you and added to the file extension list.

6. Click **Save**.

Configure Rendering Options

For most publishing jobs, the basic options of the rendering profile that is assigned to the job are sufficient. When they are not sufficient, rendering options can be configured on a per document basis. These are properties of the source documents that contain the values for the rendering options. In this way, the settings are independent of the rendering profiles that are used to generate the renditions and the settings can be specific to each document.

Although the rendering modules that are provided with Publisher can render most popular file formats, they do not render all file formats. Options are available for those file types to instead publish a pre-existing Adobe PDF rendition template file. The template file can take the place of the rendition instead of not publishing anything to the destination system, which could be perceived by users as the source document being missing. The template file could contain the text **No rendition available**, for example. Similarly, some files in the source system might not have a file extension at all. This prevents them from being associated with a rendering profile, which uses file extensions to specify which documents it renders. The rendition template file can also be published for these documents.

> **Note:**
> - If set, these options override the corresponding options of the rendering profile. If these options cannot be used or are not set, the default settings configured for the rendering profile are applied.
>
>   Take for example a rendering profile for the AutoVue rendering module that has its **Force all colors to black** option enabled.
>   - If its **Use job advanced rendering settings** option is disabled, the rendition will be monochrome.
>   - If the **Use job advanced rendering settings** option is enabled, the value of the property selected for the **Color/monochrome** option of the job will be used instead.
> - We recommend that you use the properties in the **Rendition Properties** property set with the options that use properties.
> - The published rendition template can also have watermarks or electronic signature pages applied to it and it can be merged with other renditions as described elsewhere in this chapter.

To configure the rendering options:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.

2. Double-click the publishing job that you want to configure.

   The **Overview** page appears.
3. On the menu, click **Rendering**.

   The **Rendering** page appears.
4. In the page header, click **Settings**.

   A page that lists the mappable rendering options appears.
5. Click options or type values using the descriptions in the following table.

   Some of the options in the following table are only available for specific rendering profiles.
6. Click **Save**.

Rendering options

Group	Option	Description
Rendering Profile Options	Page size	If specified, applies the value of the property as the rendition page size. If unspecified, the page size as specified in the rendering profile is used. To select the property: 1. Click **Select**. The **Select Property** dialog box appears and lists all of the available properties. 2. To filter the list to show only similar property names: a. Type the beginning of a property set name or a property name in the filter box. The search operator that will be used is **Starts With**. b. Click the search icon . The list refreshes to show the results of your filter. c. To reset the filter results, clear the filter box and click the icon again. 3. Click the name of the property that you want to use. 4. Click **OK**. The selected name appears as the option value. To remove the current property: • Click **Clear**. The property name is removed. For acceptable page size property values, see Page Size Names.

Group	Option	Description
Rendering Profile Options	Page orientation	If specified, applies the value of the property as the rendition page orientation. If unspecified, the page orientation as specified in the rendering profile is used. To select the property, perform the steps listed for the **Select** command in the preceding option. The orientation values in the selected property can be **Portrait**, **Landscape**, **P**, **L**, or empty (default orientation). Valid values must match those in the localized language. If an invalid value is encountered, an error message will appear in the publishing log.
Rendering Profile Options	Page layout	If specified, applies the value of the property as the view layout to render. If unspecified, the default view is used. To select the property, perform the steps listed for the **Select** command in the preceding option. The supported property values are listed below: • ***** — Current view • **All** — All views **Note:** A Merge PDF license (part number includes M--PMD) or an eSignature module license (part number includes M--PES) is required to use this value with the AutoCAD rendering module. All layouts will be rendered to a single, multi-page rendition. • **“<LayoutName>”** — A layout name in quotation marks • **n,n** — Comma-separated list of layout numbers • **n-n** — Range of layout numbers • **n-** — All layout numbers beginning with **n**

Group	Option	Description
Rendering Profile Options	Color/monochrome	If specified, applies the value of the property as the color depth to render. If unspecified, all colors will be rendered in the output. To select the property, perform the steps listed for the **Select** command in the preceding option. The supported property values are: • Color • Any other value will render all colors as black (monochrome).
Rendering Profile Options	Pen style	If specified, applies the value of the property as the pen table name with which to render. If unspecified, the default pen table will be used. To select the property, perform the steps listed for the **Select** command in the preceding option.
Rendering Profile Options	AutoLISP	If specified, applies the value of the property as the name of an AutoLISP function to plot the source drawing. If unspecified, the function name specified in the rendering profile will be used. This option is only available for the AutoCAD rendering module. For help creating the AutoLISP function, see Configure an AutoLISP Plotting Command. To select the property, perform the steps listed for the **Select** command in the preceding option.
Miscellaneous	Use existing rendition	If enabled, prevents unnecessary re-rendering of vault documents. The existing rendition will be published instead if it is up to date.
Miscellaneous	Publish outdated renditions	If enabled, publishes existing renditions even if they are not up to date.

Group	Option	Description
Miscellaneous	Disable XOD generation	If enabled, PDFTron intermediate rendition files are not generated. The generation of intermediate rendition files is an upgrade in terms of loading and viewing documents. Instead of having a specific loading time without any visualization, during the rendition generation, the document becomes visible and gets sharper. This method is faster and less demanding for the browser. The **Disable XOD Generation** option is available as of 2020 R2.
Miscellaneous	Include redlines in rendition	If enabled and the **Publish redlines** option described in Configuring the Publishing Options is also enabled, the source document redlines are included in the rendition. This is only supported by the AutoVue Desktop Deployment rendering module.
Default PDF Template	Use for empty documents	If enabled, and there is no source file, the file specified for **Template PDF file** is published to the destination system.
Default PDF Template	Label item as "Failed"	If enabled and rendering fails and **Use template** is set as the action for the failed attempt as described in Configure the File Extension Mappings, then the file specified for **Template PDF file** is published to the destination system and the item is logged as **Failed** in the audit trail.
Default PDF Template	Template PDF file	The name of the Adobe PDF rendition template file to publish for the documents that are affected by the other options in this group. To specify the file: 1. Click **Edit**. The **Resources** dialog box appears and lists the custom resources that have already been uploaded to the server. 2. Select an existing file or upload a new file as described in Manage Custom Resources.

Configure the File Extension Mappings

A publishing job can use different rendering profiles to render specific file types. You aren't limited to using the same rendering profile for a particular file type for all business scenarios. The file extension mapping options give you a lot of flexibility to optimize the results of the job for your needs.

You may configure up to three different actions that you want Publisher to take for each file extension depending on the success or failure of the previous action. If a rendering profile fails on the first attempt for any reason, you can configure Publisher to try again with a different rendering profile on the second attempt. You can configure a third attempt with yet another rendering profile or configure a final action for Publisher to take.

Besides actual file extensions, two special settings are available that can be mapped:

- **[Empty]** — represents all files without a file extension
- **[Other]** — represents all files with different file extensions than any that are explicitly mapped

If no action is configured for these extensions, errors can occur and the documents will not be published. To use these special settings, select them in the **File extension** list as described in the following task.

> **Note:**
> When you add a new rendering profile to a job, the default file extensions for that rendering profile are automatically added to the file extension mappings if the extensions are not already mapped to a different rendering profile. When you remove a rendering profile from a job, its existing file extension mappings are automatically removed and any existing mappings or actions are promoted to the next available action. The exception is if the file extension is not mapped to any other rendering profile. In this case, you must remove the file extension yourself if you do not want it available to the job.

To configure the file extension mappings:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.

2. Double-click the publishing job that you want to configure.

   The **Overview** page appears.

3. On the menu, click **Rendering**.

   The **Rendering** page appears.

4. In the page header, click **File Extension Mapping**.

   A page that lists the mapped file extensions appears.
5. Choose one or more of the following options:
   - To add a file extension to the list:
     - Click **Add**.

       A new row appears at the top of the list. It has no file extension or rendering profile configured yet.
   - To map a file extension to a rendering profile or other action:
     - Click one or more rows that contain the file extensions that you want to configure.

       The current rendering profile mappings for the file extensions appear in the detail pane.
   - To remove a file extension from the list:
     - Select the row that contains the file extension that you want to remove and then in the toolbar, click **Remove**.

       The selected file extension is removed from the list.
6. Click options or type values using the descriptions in the following table.
7. Click **Update**.

File extension mapping options

Option	Description
Select from the list	If disabled, you must type the file extension in the **File extension** text box. If enabled, you can select a file extension from the list. Not available if multiple file extensions are selected.
File extension	Select a file extension from the list or enter the file extension without the period (.) Not available if multiple file extensions are selected.

Option	Description
First	Select a rendering profile to use or an action to take on the first attempt to render this file extension. The available rendering profiles are those that are selected on the **Rendering Profiles** page as described in Specify Rendering Profiles. The available rendering profiles are listed regardless of whether or not they support the specified file extension. This is possible so that file extensions that become supported by third-party applications in the future can be mapped without requiring an update of the rendering module. As a consequence, be sure to select only the file extensions that are supported by the third-party application that is used by the rendering module. The available actions are: • **Blank** — Do nothing. No rendition will be published by this job, only the source document (if enabled) and the metadata will be published. A rendition will be created in the stream folder, but it will be empty. • **Publish unrendered** — This setting is obsolete. It was used as a workaround for a bug with PDFTron which has been fixed. Publishes the source file unrendered. Post-rendition processing can still occur. When this action is taken, Meridian duplicates the native document in a rendition file. For example, if a .dwg file is mapped with **Publish Unrendered**, the rendition file will be created as a .dwg file. • **Do not publish** — Do not publish the source file if it cannot be rendered by a previous action. No error is logged and no notification is sent. The rendition is not created even if a rendition job is executed. In Explorer, you can see an error message that reads, "No file is available for the document". In PowerWeb and PowerUser, you will receive a message that says, "There is no rendition stream". • **Use template** — Publish the default PDF template file that is configured as described in Configure Rendering Options. • **Fail** — Skip rendering the source file, add an error to the publishing log and send notifications (if configured).
Second (optional)	Select a rendering profile to use or an action to take on the second attempt to render this file extension. The available rendering profiles are those that are selected on the **Rendering Profiles** page as described in Specify Rendering Profiles. The available actions are the same as described for the **First** option.
Third (optional)	Select a rendering profile to use or an action to take on the third attempt to render this file extension. The available rendering profiles are those that are selected on the **Rendering Profiles** page as described in Specify Rendering Profiles. The available actions are the same as described for the **First** option.

Configure Rendition Merging Options

The rendition merging options specify how related source documents are rendered and merged together into a single Adobe PDF rendition.

> **Note:**
> This feature requires the PDF Merge rendering module license described in Licenses.

To configure the rendition merging options:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.
2. Double-click the publishing job that you want to configure.

   The **Overview** page appears.
3. On the menu, click **Post Rendering**.

   The **Post Rendering** page appears and lists the watermark profiles that have been specified for the job. To configure a watermark profile, see Configure Rendition Watermarks.
4. In the header, click **Merging**.

   The rendition merging options appear.
5. Click options or type values using the descriptions in the following table.
6. Click **Save**.

Rendition merging options

Group	Option	Description
General	Enable merging	Activates rendition merging for the selected publishing job.
Linking	Link document with	Select **Property** to merge renditions that are related by the same property value of the source documents. Select **Reference** to merge renditions that are related by the same reference type of the source documents.

<table>
<tr><th>Group</th><th>Option</th><th>Description</th></tr>
<tr><td>Linking</td><td>Reference types</td><td>
This option is available only if the Link document with option is set to Reference. This merges the renditions of the source documents that are related to the submitted document by the selected Meridian Enterprise references types. Select the references types in the list that link together the documents that you want to be included in the merged rendition.
To select the reference types:

Click Select.
The Select Reference Types dialog box appears and lists all of the available reference types.
To filter the list to show only similar reference types:
<ol type="a">
Type the beginning of a reference type name in the filter box.
The search operator that will be used is Starts With.
Click the search icon .
The list refreshes to show the results of your filter.
To reset the filter results, clear the filter box and click the icon again.

Select the reference types.
Click OK.
The selected names appears as the option value.

To remove the current reference types:

Click Clear.
The reference types are removed.

Below this option, select an option to control which referenced documents to include: Referenced by the main document, That reference the main document, or Both reference directions.
</td></tr>
</table>

Group	Option	Description
Linking	Property name	This option is available only if the **Link document with** option is set to **Property**. This is a property name that is common among the source documents to be rendered and merged. The documents must have a value for this property in order to be processed. To select the property: 1. Click **Select**. The **Select Property** dialog box appears and lists all of the available properties. 2. To filter the list to show only similar property names: a. Type the beginning of a property set name or a property name in the filter box. The search operator that will be used is **Starts With**. b. Click the search icon . The list refreshes to show the results of your filter. c. To reset the filter results, clear the filter box and click the icon again. 3. Click the name of the property that you want to use. 4. Click **OK**. The selected name appears as the option value. To remove the current property: • Click **Clear**. The property name is removed.
Linking	Comparison operator for included documents	This option is available only if the **Link document with** option is set to **Property**. This determines whether property values match so that renditions are merged. In the list, click the name of the operator to use to compare the property values. If the **Contains** operator is selected, the property values of the included documents must contain the entire value of the submitted document. If the **Equals** operator is selected, the property value of the included documents must exactly match the entire value of the submitted document.

Group	Option	Description
Grouping	Include the main document	Merges the rendition of the submitted document with the renditions of the documents that are related by the options on the **Linking** tab. If disabled, only the renditions of the related documents are included in the merged rendition. This option is useful for merging the renditions of the documents that are linked to a Meridian Asset Management Module tag that has been submitted for rendering.
Grouping	Place the main document first in each group	Places the rendition of the submitted document first in the merged rendition followed by the renditions of the related documents. The order of the related renditions is determined by the sorting options. If disabled, the position of the rendition in the group is also determined by the sorting options.
Grouping	Limit each group to a maximum number of documents	Limits the number of related documents that are rendered and merged into each output file. If the number of related documents exceeds the number specified for **Maximum number**, they are ignored.
Grouping	Maximum number	Type the maximum number of documents to include in the rendition group.
Grouping	Sort by the document name	Places the renditions in the output file in alphabetical order according to the names of the source documents.
Grouping	Sort by this property of the main document	Places the renditions in the output file in alphabetical order according to the values of the selected property for the source documents. To select the property, perform the steps listed for the **Select** command in the preceding option.

Post-Rendition Processing

After a source document has been rendered, Publisher can perform additional processing of the rendition:

- Apply configurable watermarks to the rendition (including the prior revision of the rendition in a Meridian Enterprise vault)

  To apply a watermark to a prior revision of a rendition, you must select the **Enable** check box in the **General** options for your Prior Revision watermark profile, and you must enable the Watermark prior revision option.
- Generate signature pages to show electronic signature information, for example, as managed by the Meridian FDA Module.
- Merge documents that are related to each other as a set and that should reside in the same file as described in Configure Rendition Merging Options.

About watermarks

Publisher supports watermarks that are specified in a *watermark profile*. A watermark profile is the configuration of one or more watermarks that are placed on a rendition for the same purpose. Each watermark can be an image or a string of formatted text .

An example of one watermark profile would be the combination of the following separate watermarks:

- A print stamp that contains the vault location and file name of the document in the margin of the rendition
- An overlay that contains the document's current workflow status and an effectivity statement across the body of the rendition.

Multiple watermark profiles can be created for different purposes, such as for different document types or different document life cycle stages.

Watermarks are applied by components that are included with Publisher. They are applied after Publisher has generated the rendition. Depending on the type of watermark, the text can be static, read from a document property, or calculated using JavaScript for Acrobat. Watermarks can be conditionally applied based upon a document property value.

> **Note:**
> - These watermarks are independent of any watermarks configured in VBScript and printed by the viewer **Draft Print** command as described in Configure Watermark Printing.

- During watermark rendering, the AutoVue Document Converter is set as the default printer if it is not already. The original default printer is restored after rendering has completed. To ensure that the correct paper sizes are applied, we recommend that the AutoVue Document Converter be manually set as the default printer.
- This feature requires the eSignature rendering module license described in Licenses.

About signature pages

Signature pages are optional pages added to an Adobe PDF rendition. They can show electronic signature information as proof that the prior pages in the rendition have been approved for a specific purpose, such as regulatory compliance. The information can be formatted on the page using a signature page template that can include standard text such as a legal disclaimer. Multiple signature page definitions can be created for different purposes, such as for different document types.

> **Note:**
> This feature requires the eSignature rendering module license described in Licenses.

For more information about electronic signatures, see *Electronic Signatures* in the *Meridian Enterprise Configuration Guide*.

About rendition merging

Rendition merging is one of the more powerful features of Publisher. The merged renditions can be related by Meridian Enterprise references between the source documents or they can have a Meridian Enterprise property value in common.

Publisher detects the documents that are related to a submitted document and automatically submits them for rendering also. The rendering is performed by the rendering modules that have been configured to process the related documents' file extensions. Therefore, all file extensions that are expected to be merged together must be specified in publishing jobs with a configured rendering module. After the set of related documents have been rendered, Publisher combines the renderings into a single Adobe PDF file.

Examples of related documents that can be rendered together:

- A cover sheet containing a list of documents and all of the related documents such as CAD drawings, MS Office documents, images, and so on.
- A set of related CAD drawings that must be considered as a single document.

Besides providing options that determine which documents are rendered and merged together, options are also available to control the order that the documents appear within the merged rendition. For more information about the options, see Configure Rendition Merging Options.

How Page Sizes Are Applied

Determining the correct page size and orientation to render a document is a challenge for any application. Documents use many different formats and many different standard page sizes exist. The post-processing features of Publisher introduce another level of complexity to the challenge. That is, like rendering options, watermark profiles must depend on the page size and orientation to which they are applied. This is so that they can calculate the relative location of the watermark text. To reduce the number of possible combinations of watermarks and page sizes, the watermark profiles should be able to be applied to a limited set of page sizes. Unfortunately, identical page size names in multiple rendering applications seldom exist. The challenge can be even more difficult if page size and orientation information is stored differently in the source system properties than is expected by either the rendering configuration or the watermark profiles.

Publisher meets this challenge by allowing the page sizes and orientations to originate from two sources: document properties in the source system or the independent, standard page sizes that are provided by the operating system of the Meridian Enterprise Server computer. Publisher uses flexible logic and resorts to default values for exceptional cases. This makes it possible to configure complex rendering and watermarking scenarios without a lot of work.

> **Note:**
> All possible page sizes and name variations may not be defined in the operating system print server, for example, **A0**. If the size that you want to use is missing, create a custom form as described in the operating system documentation.

The logic that Publisher employs depends on the rendering module that is assigned to a particular document:

- **AutoVue rendering module** — the rendering module and the watermark profiles use the same page sizes as provided by the operating system. Only configuration of the rendition page size is necessary.
- **Office rendering module** — the rendering module determines the rendition page size automatically from the source document. No configuration is necessary.
- **Other rendering modules** — the rendering module controls a third-party application that performs the rendering and that may define page sizes in non-standard ways. The watermark profiles use the same page sizes as provided by the operating system. If the two page sizes do not match, watermarking is not possible.

  An example is the AutoCAD rendering module. AutoCAD defines page sizes with names like **ISO full bleed A4 (297.00 x 210 MM)** that do not easily match the standard (watermark) page size of **A4**. This rendering module uses size mapping to specify the standard page size that is the equivalent of each AutoCAD page size. Fuzzy matching logic is used so that insignificant differences between the names are ignored and watermarking can succeed. If a match is not found, the default page size that is configured for the rendering module is applied. Similar size mapping is used by the other CAD application rendering modules.

The challenge of how to configure Publisher rendering and watermarking page sizes is then reduced to the scenarios that are described in the following topics.

Page Sizes From Metadata

When the page size and orientation are available as source document properties, they can be retrieved and used by Publisher. This is only supported if the source system is Meridian Enterprise. Other source systems must use the scenario described in Page Sizes From Configuration.

To configure rendering and watermarking page sizes:

- Configure rendering by selecting the vault properties as described in Configure Rendering Options.

  Documents that do not have values for those properties will use the default values configured for the particular rendering module as described in the topics that follow Create And Edit a Rendering Profile.

- Configure watermarking by creating watermark profiles as described in Configure Rendition Watermarks.

  Create watermark profiles for every possible combination of values in the selected document properties or create default watermark profiles to be applied to every possible page size and orientation combination.

Page Sizes From Configuration

When the page size and orientation are not available as source document properties, they must be specified in the rendering configuration. This scenario is supported for all source system types.

To configure rendering and watermarking page sizes:

- Configure default size and orientation values for the rendering module as described in the topics that follow Create And Edit a Rendering Profile.

  Support is module-dependent as described in How Page Sizes Are Applied.
- Configure watermarking as described in Configure Rendition Watermarks.

  The rendition page size cannot be detected during post-processing, so create default watermark profiles to be applied to every possible page size and orientation combination.

Configure Rendition Watermarks

You will typically need to create multiple watermark profiles, if not for separate purposes, then for each rendition page size. Default watermark profiles may also be configured that will be applied to any page size and orientation. Rendition watermarks are typically used to describe the contents of a document, such as if a document is now obsolete. For this reason, they may be described as static watermarks. To configure dynamic watermarks related to the circumstances of a document, see Configure Watermark Printing.

To prevent all watermarks from being applied for specific publishing jobs, specify the **_NOPOSTRENDER_** rendering option in the publishing job. For more information about the publishing options, see the Publishing And Rendering Options article in the *Meridian Enterprise VBScript API Reference*.

At least one publishing job must first be configured to generate renditions as described in Create And Edit a Rendering Profile.

Create or Edit a Watermark Profile

To create or edit a watermark profile:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.
2. Double-click the publishing job that you want to configure.

   The **Overview** page appears.
3. On the menu, click **Post Rendering**.

   The **Post Rendering** page appears and lists the current watermark profiles.
4. To prevent tampering with the watermarks (professional engineers' stamps, for example), enable **Secure PDF**.

   This assigns a randomly generated password to the watermarks that cannot be retrieved. Be certain that you do not want the watermarks to be editable before enabling this option.
5. Confirm that the **Enable** check box is selected.

Clear **Enable** to disable all watermarks in one step. To disable a specific watermark type, clear the **Enable** option in the properties of the watermark type.

6. Choose between two options:
   - To edit an existing watermark profile:
     - In the row of the watermark profile that you want to edit, click the **Edit** icon .

       The **Edit Watermark** dialog box appears.
   - To create a new watermark profile:
     - Click **Add**.

       The **New Watermark** dialog box appears.

       The menu lists the types of watermarks that you can configure.
       - Overlay – text or image placed on the face of the document, for example, an effectivity statement
       - ESignature – text or image placed on the face of the document that identifies the document as having been electronically signed
       - Print stamp – text placed in the margin of a document, for example, that shows the date and time when the rendition was generated
       - Prior revision – text or image placed on the face of the prior revision of the published document, for example, to indicate that the prior rendition is obsolete. This watermark type is only applied if the publishing job is a **Rendition** type. Other source systems are not supported by this type.
7. Click options or type values using the descriptions in the following table.

   Not all options are required for every watermark type.
8. Repeat step 5 for each watermark type that you want to configure for this watermark profile.
9. Click **OK**.

   The new watermark profile name appears in the list.
10. Click **Save**.

11. If you created a **Prior Revision** type watermark and the publishing job is a **Rendition** type:
    - Select the **Enable** check box in the **General** options, described below.
    - Enable the **Watermark prior revision** option as described in Configure the Miscellaneous Options.
12. Click **Save**.

Watermark options

Group	Option	Description
General	Name	A descriptive name for the watermark profile. The default is the type of watermark.
General	Size	Select the rendition page size to which this watermark profile will be applied. The sizes that are available are provided by the operating system. If no size or **Orientation** are set, this watermark profile will be considered as a default watermark profile. It will be applied to all renditions that are created by the current publishing job unless another watermark profile specifies a matching rendition page size.
General	Orientation	Select the rendition page orientation to which this watermark profile will be applied. If no orientation or **Size** are selected, this watermark profile will be considered as a default watermark profile. It will be applied to all renditions that are created by the current publishing job unless another watermark profile specifies a matching rendition page orientation.
General	Enable	Enables the selected watermark type for the current watermark profile. You may also enable and disable watermark types in the watermark profiles list. This setting must be selected to apply a watermark to a prior revision of a rendition. You also must enable the Watermark prior revision option.

Group	Option	Description
Conditions	Apply watermark	Select **Always** if the watermark should be applied under all conditions. Select **Property name** to make the watermark dependent upon a source document property value. To select the property: 1. Click **Select**. The **Select Property** dialog box appears and lists all of the available properties. 2. To filter the list to show only similar property names: a. Type the beginning of a property set name or a property name in the filter box. The search operator that will be used is **Starts With**. b. Click the search icon . The list refreshes to show the results of your filter. c. To reset the filter results, clear the filter box and click the icon again. 3. Click the name of the property that you want to use. 4. Click **OK**. The selected name appears as the option value. To remove the current property: • Click **Clear**. The property name is removed.
Conditions	Property name	The name of the property that determines when this watermark will be applied.
Conditions	Value	The value that the selected property must equal for the watermark to be applied.

Group	Option	Description

PDF Printing Handler	Javascript file	The name of a JavaScript for Acrobat file to calculate the watermark text. Available only for the print stamp watermark type.
		Accept the default, which is an example installed by the Meridian Enterprise Server setup program or click **Select** and follow the instructions in Manage Custom Resources to upload a different file. The script will be executed on the Acrobat **Will Print** event before the document is printed.
		You can modify the example file `PrintStamp.js` or use it as a template to create variations for other purposes. The example generates text that will be placed in the stamp field named **PrintStamp**:
		`var strStampValue = "BC Publisher sample. Printed on " + util.printd(2, new Date());`
		`this.getField("PrintStamp").value = strStampValue;`
		For more information about JavaScript for Acrobat and the **Will Print** event, see Perk up PDF documents with JavaScript.

PDF Printing Handler	Stamp field name	This option is only available for the print stamp watermark type. The name of the form field that will be added to the rendition PDF files. Accept the default name or type a different name. This field will receive the text calculated by the JavaScript file.
Text	Use this text	Select to apply the text that you type in the text box for this watermark.
Text	Use property value from source document	Select to apply the value of the selected property as the watermark text. **Note:** Date/time property values are rendered in the local server format. To select the property, perform the steps listed for the **Select** command in the preceding option.

Group	Option	Description
Text	Use this image file	Select to apply the specified image as the watermark. To select an image: 1. Click **Select**. The **Resources** dialog box appears and lists the custom resources that have already been uploaded to the server. 2. Select an existing image or upload a new image as described in Manage Custom Resources.
Text	Use this template file	The name of an HTML file that defines the text and images to overlay on the rendition. Accept the default, which is an example installed by the Meridian Enterprise Server setup program or click **Select** to select an existing file or upload a different file as described in Manage Custom Resources. **Note:** • This option requires that Microsoft Word be installed on the rendering computer. • This template is not the same as the template that is described in Create a Signature Page Template, but is created in the same way. If the **Paper size** option is configured, then the template will be rendered to that size, otherwise the A4 page size will be used.
Text	Non-ANSI support	Enable this option if the watermark text uses non-ANSI characters. The text itself will be rendered to an image that is then placed on the rendition similar to the **Use this image file** option. This option requires that Microsoft Word be installed on the rendering computer.
Appearance	Font name	The name of the font in which to render the watermark text.
Appearance	Font size	The size of the font in which to render the watermark text.
Appearance	Font color	Select a color from the color picker in which to render the watermark text.
Appearance	bold	Renders the watermark in bold text.
Appearance	Italic	Renders the watermark in italic text.

Group	Option	Description
Appearance	Alignment	The horizontal alignment of the watermark text relative to the text starting point. Values other than **Left** are ignored if the **Rotation** option is not set to the default. **Note:** The **Right** option has no effect if **Rotation** is greater than 0.
Appearance	Mode	Modes that render the watermark text with special effects: • **Normal** — text characters filled with the selected font color • **Outlined** — text characters outlined in black with no fill • **Normal with a border** — text characters filled with the selected font color and outlined in black • **Invisible** — text with no fill or outline
Appearance	Rotation	The clockwise angle at which to render the watermark text on the page.
Appearance	Use exact location	Enable this option to specify precise coordinates for the origin of the watermark on the page.
Appearance	**X** and **Y**	Type numbers in the text boxes to specify the lower-left corner of the watermark text on the rendition page. The values are relative to the standard coordinate system with the origin in the lower-left corner of the rendition page. For template-generated watermarks, start with no offset (0,0). The page size is specified as described in Create And Edit a Rendering Profile. If no page size is configured, the A4 page size is assumed. **Note:** An A4 size page has a width (**X**) of 595 points and height (**Y**) of 842 points. One point is equal to 1/72 of an inch. If the **Use this template file** or **Use this image file** options are enabled, the insertion point of these watermarks is the upper-left corner of the watermark as opposed to the origin of the rendition page in the lower-left corner. Therefore, specify the number of points to offset the location from the lower-left corner of the rendition page in the horizontal and vertical directions, respectively.

Group	Option	Description
Appearance	**Size X** and **Size Y**	When the **Use this image file** option is enabled, specify here the number of points for each dimension of the image watermark.
Appearance	Use location on page	Enable this option to select a general location on the page as the origin of the watermark and then select the location from the list.
Appearance	Apply on first page only	Renders the watermark only on the first page of a multi-page rendition. Not available for print stamp type watermarks.
Appearance	Opacity	Specify how transparent to render the watermark.
Appearance	Place in the background	If enabled, renders the image watermark behind the document rendition. If disabled (default), it is rendered on top of the rendition.

Copy a Watermark Profile

To copy a watermark profile:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.

2. Double-click the publishing job that you want to configure.

   The **Overview** page appears.

3. On the menu, click **Post Rendering**.

   The **Post Rendering** page appears and lists the current watermark profiles.

4. Select the row of the watermark profile that you want to copy and then click **Copy**.

   The watermark profile is copied.

Delete a Watermark Profile

To delete a watermark profile:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.
2. Double-click the publishing job that you want to configure.

   The **Overview** page appears.
3. On the menu, click **Post Rendering**.

   The **Post Rendering** page appears and lists the current watermark profiles.
4. In the row of the watermark profile that you want to delete, click the **Remove** icon ✖.

   The watermark profile is deleted.

Configure Signature Pages

You will typically need to create multiple signature page definitions, if not for separate purposes (document types), then for each watermark profile page size.

> **Note:**
> The vault must first be configured with at least one publishing job in which renditions are generated as described in Create And Edit a Rendering Profile. Microsoft Office must be installed on the rendering computer as described in Publisher Requirements.

Create a Signature Page

To create signature pages:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.
2. Double-click the publishing job that you want to configure.

   The **Overview** page appears.
3. In the menu, click **Post Rendering**.

   The **Post Rendering** page appears.
4. In the header, click **Signature Pages**.

   The signature page options appear.
5. Confirm that the **Enable** check box is selected.

   > **Note:**
   > To quickly and easily create a new signature page using an existing signature page as a template, copy the existing signature page using the instructions later in this topic.
6. Click **Add**.

   The **New Page** dialog box appears.
7. Click options or type values using the descriptions in the following table.
8. Click **Close**.

   The new signature page name appears in the list.
9. Repeat steps 6 to 8 for each signature page that you want to define.
10. Click **Save**.

Signature page options

Group	Option	Description
General	Name	The name of the signature page definition.
General	Size	This option is only available if vault properties have been selected as described in Create And Edit a Rendering Profile. Select the source page size to which this signature page will be applied. If no size is selected, this signature page definition will be considered as a default that will be applied to the renditions of all sizes created by the current publishing job.
General	Orientation	This option is only available if vault properties have been selected as described in Create And Edit a Rendering Profile. Select the source page orientation to which this signature page will be applied. If no orientation is selected, this signature page definition will be considered as a default that will be applied to the renditions of all sizes created by the current publishing job.
General	Enable	Activates this signature page for the selected publishing job.
Attach Conditions	Attach page	Select **Always** if the page should be attached under all conditions. Select **When source property value equals the specified value** to make the signature page dependent upon a source document property value. To select the property: 1. Click **Select**. The **Select Property** dialog box appears and lists all of the available properties. 2. To filter the list to show only similar property names: a. Type the beginning of a property set name or a property name in the filter box. The search operator that will be used is **Starts With**. b. Click the search icon . The list refreshes to show the results of your filter. c. To reset the filter results, clear the filter box and click the icon again. 3. Click the name of the property that you want to use. 4. Click **OK**. The selected name appears as the option value. To remove the current property: • Click **Clear**. The property name is removed.

Group	Option	Description
Attach Conditions	Value	Type the value that the selected property must equal for the signature page to be applied.
Attach Conditions	Append to the end	Appends the signature page to the end of the rendition page set. The default is to prepend it to the beginning of the page set.
Page Template	File	Accept the default, which is an example installed by the Meridian Enterprise Server setup program or click **Select** and select an existing HTML template file that has been created as described in Create a Signature Page Template. You can modify the example file or use it as a template to create variations for other purposes. To modify the example file or to upload a different file, see Manage Custom Resources.
Page Template	Size	Select the default page size of the signature page template. This size will override the **Paper size** option if that option is set or specify the signature page size if the option is not set (a default signature page).
Page Template	Orientation	Select an orientation for the signature page from the list. The default orientation is the setting of the **Page orientation** option described in Configure Rendering Options.

Edit a Signature Page

To edit a signature page:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.
2. Double-click the publishing job that you want to configure.

   The **Overview** page appears.
3. In the menu, click **Post Rendering**.

   The **Post Rendering** page appears.
4. In the header, click **Signature Pages**.

   The signature page options appear.
5. Select the signature page in the list that you want to edit and click **Edit**.

   The signature page's **Properties** dialog box appears.
6. Select or type options using the descriptions in the preceding table.

Delete a Signature Page

To delete a signature page:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.
2. Double-click the publishing job that you want to configure.

   The **Overview** page appears.
3. In the menu, click **Post Rendering**.

   The **Post Rendering** page appears.
4. In the header, click **Signature Pages**.

   The signature page options appear.
5. Select the signature page in the list that you want to delete and click **Remove**.

   The signature page is deleted.

Copy a Signature Page

To copy a signature page:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.
2. Double-click the publishing job that you want to configure.

   The **Overview** page appears.
3. In the menu, click **Post Rendering**.

   The **Post Rendering** page appears.
4. In the header, click **Signature Pages**.

   The signature page options appear.
5. Select the signature page in the list that you want to copy and click **Copy**.

   The signature page is copied with the name **Copy of <*SourceSignaturePageName*>**. You can rename the signature page.

Create a Signature Page Template

A signature page template is used by Publisher to generate signature pages that are attached to document renditions. A template defines the layout of the signature page, the electronic signature property values, and standard text to include on signature pages. A signature page template can be created with any program that can produce an HTML file, for example, Microsoft Word. During signature page generation, Publisher loads this file into a session of Microsoft Word and prints the file with the Adobe PDF printer, replacing placeholders in the text with values from the specified document properties.

As of the 2022 release, you are not required to have Microsoft Office installed on the rendering node to add signature pages to the end of a document. Instead, the signature page is applied by the Aspose library.

> **Note:**
> This feature is designed for use with electronic signature information generated by the Meridian FDA Module, but it will work equally well with information generated by another electronic signature application and stored in a document property.

To create a signature page template:

1. In any program that can produce an HTML file, create a new file.
2. Type any standard text that you want to appear on every signature page.

   Type placeholders to represent document property values using the syntax **$(<*PropertySet.PropertyName*>)**. For example, to show the Meridian FDA Module electronic signature data on the page, type: **$(BCRenditionPropertySet._ESIGNATURES)**.

   > **Note:**
   > The Meridian Enterprise **_ESIGNATURES** property contains the electronic signature information from all signers of the current revision of the document (the most recent workflow). The same syntax may be used for other source system properties.

3. Design the layout of the template using any features (for example, tables and logos) supported by the editing program and the HTML format.
4. Upload the template as described in Manage Custom Resources.
5. Specify the template in the configuration of signature pages as described in Configure Signature Pages.

Configure Custom Processing

If the post-rendition processing features of Meridian Enterprise Server do not meet all of your needs, you can configure a third-party program to perform additional processing.

Custom post-processing is only supported by the Teigha DWG and Teigha DGN rendering modules.

The third-party program must support:

- Command line interface
- Standard PDF input files
- Input and filename parameters
- Processing options that you require

When the post-processing has completed, the rendition generated by the rendering module will be replaced by the output of the third-party program.

To configure custom processing:

1. Double-click the publishing job that you want to configure.

   The **Overview** page appears.
2. In the menu, click **Post Rendering**.

   The **Post Rendering** page appears.
3. In the header, click **Custom**.

   The custom options appear.
4. Click options or type values using the descriptions in the following table.
5. Click **Save**.

Custom processing options

Option	Description
Enable custom post rendering	When enabled the program specified for **Executable** will be run after each rendition is generated. When disabled, custom processing is excluded.
Wait for user job finish	Enable this option if the custom process should not be executed until after the rendition has been generated (for example, if the process will modify the rendition in some way). Disable this option if the custom process should execute independent of rendition generation (for example, to update data in another system).

Option	Description
Executable	Full path to the third-party program or batch file to run. Click **Select** to browse for the file.
Options	Processing options to pass on the command line to the executable.
Key for input PDF	Command line parameter to precede the rendition file name. The rendition file name will be inserted in the command line automatically by the rendering module.
Command line preview	An example of the full command line that will be invoked for each rendition.

Run a Publishing Job

Running a publishing job starts the job immediately. Repeating a past publishing job runs the job immediately using the current job options, which might not necessarily be the options that were in effect when the job was first run.

If the source system contains many documents, we recommend that you perform the first run of the publishing job outside of business hours. The publishing job could take a considerable amount time depending on the size of the source data.

Notes about Functionality

- A publishing job will generate an error if licenses for any of its system links or rendering modules are unavailable.
- No two publishing jobs may run at the same time on the same computer. A publishing job and a Meridian Explorer synchronization job may run at the same time.
- When a Meridian Explorer synchronization job runs, it will detect new and modified documents, tags, and projects in the vault and synchronize only those items with the destination system. Publisher records the date and time that the last synchronization job ran so that it can perform another differential synchronization the next time that the job runs. To reset that date and time and thereby force a full synchronization, see Manage a Meridian Enterprise Vault.
- When a Meridian Explorer synchronization job runs, it will detect new items that have been added to the vault configuration since the last time that the job ran and that can be mapped to corresponding items in the repository. New document types, tag types, folder types, and reference types will be automatically added to the repository configuration and mapped accordingly. New document and folder properties that cannot be matched to corresponding repository items will stop the publishing job and show a warning that the property mappings must be updated to either include or exclude the new properties.

Run Immediately

To run a publishing job immediately:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.

2. Select the job that you want to run and then in the toolbar, click **Run**.

   The job is started as a background task. For information about background tasks, see Monitor Background Tasks.

Repeat a Past Job

To repeat a past publishing job:

1. In Enterprise Server Administration Console, open the **Tasks** page as described in Monitor Background Tasks.
2. Select the job that you want to repeat and click **Repeat**.

   A dialog box opens, asking you to confirm your choice.
3. Click **Yes**.

   The job is copied to the top of the **Tasks** list and starts immediately.

Schedule a Single Publishing Job

To schedule the publishing job to run automatically on a periodic basis, thereby keeping the repository up to date, see Schedule a Single Publishing Job.

Cancel a Publishing Job

Canceling a publishing job stops the job immediately.

To cancel publishing only the documents for a specific Meridian Enterprise source vault, see Manage a Meridian Enterprise Vault.

To cancel a publishing job:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Tasks**.

   The **Tasks** page appears and lists the background tasks that have been created and their status.

2. Select the job that you want to cancel and then in the toolbar, click **Cancel**.

   A dialog box opens, asking you to confirm your choice.

3. Click **Yes**.

   The job stops immediately.

> **Note:**
> Although the publishing job itself will be stopped, other processes that were started by the publishing job may continue to run until they are finished processing the current document. For example, native applications used by rendering modules.

Export Publishing Jobs

Exporting publishing jobs saves their configuration information to a ZIP file that can be imported into the same system or a different system. You specify the location of the file when you export the publishing jobs.

Exporting publishing jobs is useful for several reasons:

- As a record of the job configurations at a point in time, such as before making major changes.
- As a backup of the jobs in case of an accident.
- To copy one job configuration to another as a template or to another Publisher computer for import.

To export Publisher jobs:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.
2. Click **Export**.

   The **Export Jobs** dialog box appears and lists the available jobs.
3. Select the jobs that you want to export and then click **Export**.

   The file `Jobs.zip` is downloaded by your browser and you are prompted for what to do with it.
4. Save or open the file.

Import Publishing Jobs

Importing publishing jobs creates new publishing jobs using the configuration information from jobs that were previously exported from Publisher.

Importing publishing jobs can be useful for several reasons:

- To restore job configurations to a known point in time, such as before major changes were made.
- To rebuild publishing jobs after an accident.
- To duplicate the configuration of Publisher jobs on another server.

Notes about Functionality

- Importing a publishing job with the same name as an existing job will create a duplicate job and will not update or overwrite the existing job.
- If the publishing job specifies a source or destination system that does not exist, a warning will appear but the job will be imported anyway. You may then specify the missing systems.
- Imported publishing jobs retain the name of the computer (cluster node) that they were originally assigned to. To use them on a different computer (cluster node), you must modify the computer name as described in Configure a Publishing Job.
- Importing publishing jobs will also import the rendering profiles that were used by all jobs on the source computer. If the rendering profiles were originally associated with a different computer (or cluster node that does not exist in the new cluster), the rendering profiles cannot be used with publishing jobs on the current computer. You can either modify the computer name of the imported rendering profiles (except for the AutoCAD rendering module) or copy them as new rendering profiles and assign them to publishing jobs.

Import a Publishing Job

To import a publishing job:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.
2. In the app bar, click **Import**.

   The **Import Jobs** dialog box appears.

3. Click the folder icon .

   The **Open** dialog box appears.

4. Select a file on the local computer that you want to import and then click **Open**.

   The file location appears in **Jobs**.

5. Click **Upload**.

   The file uploads to the server and the **Import Jobs** dialog box lists the jobs that are contained in the uploaded file.

6. Select the jobs that you want to import and click **Import**.

   The import task is started in the background and you can continue working. When the import finishes, the new publishing jobs will appear in the job list.

Disable and Enable a Publishing Job

Disabling a publishing job prevents it from running but does not delete its configuration. Enabling a publishing job makes the job available for running again but does not start it immediately.

To disable or enable a publishing job:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.

2. Select the publishing job that you want to disable or enable and then in the toolbar, click **Disable** or **Enable** accordingly.

   The **Status** column indicates the new state of the publishing job.

Copy a Publishing Job

You can copy publishing jobs to duplicate its settings in a new job.

To copy a publishing job:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.
2. Select the publishing job that you want to copy and then in the toolbar, click **Copy**.

   The **Copy Job** dialog box appears and shows a default internal name for the new job.
3. Edit the name of the new job, if desired, and then click **Copy**.

   A dialog box opens, asking you to confirm your choice.
4. Click **OK**.

   The publishing job is copied with the display name **Copy of *<Original Name>***. To change the display name, see Configure a Publishing Job.

Delete a Publishing Job

You should delete publishing jobs that you no longer use.

To delete a publishing job:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.

2. Select the publishing job that you want to delete and then in the toolbar, click **Remove**.

   A dialog box appears.

3. If there are no items in the queue that use the publishing job, click **Yes**.

   The publishing job is deleted.

   If there are pending items in the queue that use the job, select the option that corresponds to what you want done with the items and then click **Next**. The publishing job is deleted and the pending items are cancelled, deleted, or ignored depending on the option that you choose.

Schedule Publishing Jobs

Efficiently scheduling publishing jobs minimizes publishing job execution times and maximizes Meridian Enterprise Server computer performance.

If clustering is configured, publishing jobs are scheduled on the primary node in the cluster but executed on the secondary node that is assigned to the job. For both single jobs and batch jobs, a single task is added to the Windows Task Scheduler on the primary node. Scheduled tasks should not be modified or deleted in Windows Task Scheduler, only in Meridian Enterprise Server Administration Console.

Publishing jobs can be run in the following ways:

- One scheduled task. This is best for single Meridian Explorer synchronization jobs that must run only once or twice per day.
- One scheduled task that runs multiple publishing jobs combined in one batch. This is best for complex publishing scenarios involving multiple source and destination systems that must run at the same time once or twice per day.

> **Note:**
> No two publishing jobs may run at the same time on the same computer. A publishing job and a Meridian Explorer synchronization job may run at the same time.

Each of these methods is described in the following topics.

Schedule a Single Publishing Job

Scheduling a publishing job creates a Windows Task Scheduler task to run the job on a schedule that you define.

To schedule a publishing job:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.

2. Select the job that you want to schedule and then in the toolbar, click the **Schedule**.

   If the job has multiple source or destination systems, a selection dialog box appears for each type so that you can select which of the systems to schedule the job for. Next, the **Schedule** dialog box appears. This dialog box requires similar input to the Windows Task Scheduler.

   > **Note:**
   > You must enter the credentials of the user account under which the task should be run.

3. Configure the scheduled task to run when you require and then click **Schedule**.

   The task is created and the publishing job will run on the configured schedule.

> **Note:**
> If the task is not created automatically in Windows Task Scheduler, you can create it manually. The task details (including the ID) are written to the folder `\ProgramData\BlueCieloECM\EnterpriseServices\ScheduledTasks.`

Meridian Enterprise Server will use it if:

- The task is not deleted in Meridian Enterprise Server Administration Console.
- The task is configured to start in the `Program Files\BC-Meridian Enterprise Server` folder.
- The task name or description contains the Meridian Enterprise Server task ID.
- Only one task exists for each task ID.

Schedule a Batch Of Publishing Jobs

If you schedule multiple individual publishing jobs to run at the same time on the same Meridian Enterprise Server computer, only one job will run. The other jobs scheduled at the same time will fail without errors. The reason for this is that only one instance of the publishing process may be active at any time. If multiple jobs must be run at about the same time, place them in a batch for execution instead. The jobs will run sequentially rather than simultaneously.

You schedule a batch of publishing jobs by building a list of the publishing jobs that you want to run and then configuring the entire batch to run at a specified schedule.

> **Note:**
> - When a batch publishing job runs, it will appear as one task on the **Tasks** page . Each job in the batch will also appear on the page and the summary of the batch job will indicate how many jobs (items) are in the batch.
> - If any job requires exclusive access to a processing resource (for example, AutoCAD for rendering) no other jobs requiring the same resource should be in the same batch on the same render node.

To schedule a batch of publishing jobs:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Jobs**.

   The **All Jobs** page opens with a list of existing publishing jobs. The jobs are grouped by the name of the computer (cluster node) to which they have been assigned.
2. In the toolbar, click **Batch Schedule**.

   The **Batch Schedule** dialog box appears with an empty job list.
3. Click **New**.

   The **Select a Job** dialog box appears.
4. Select the first publishing job that you want to include in the batch and then click **OK**.

   If the job is configured for multiple source or destinations, additional dialog boxes will appear for you to make those selections. When all selections have been made, the job appears in the job list.

   > **Note:**
   > If clustering is configured, the node on which the selected job will run will restrict the other jobs that you may add to the same batch. This is so that only jobs that are configured for the same computer will run together on that computer.
5. Repeat step 4 until all of the jobs that you want to include in the batch are listed.

6. To remove a job from the list, click the **Remove** icon ❌ next to the publishing job name.

   The publishing job is removed from the batch.

7. Enable **Continue if any job fails** if you want the other jobs to run even if one of the jobs fails for any reason.

   That is, the jobs are independent of one another.

8. When you are finished editing the batch list, click **OK**.

   The **Schedule** dialog box appears. This dialog box requires the same input as the Windows Task Scheduler.

   > **Note:**
   > You must enter the credentials of the user account under which the task should be run.

9. Configure the scheduled task to run when you require and then click **Schedule**.

   A single task is created in Windows Task Scheduler and it will run on the configured schedule.

Register Documents For Publication

For any document to be published, it must first be registered for publishing from the source system. Documents can be registered either manually from within the source document management system or programmatically from VBScript, a PowerUser user interface extension, or a .NET application. Programmatically registering documents can be done either with or without the Meridian Enterprise Task Server.

The method of registering documents manually for publication is different for each source system. An application for each source system is provided with Meridian Enterprise Server for registering documents manually. Documents can also be registered automatically by triggers customized in the source system. The customization simply creates an entry in the Meridian Enterprise Server database for each document to be published. Whether manually or automatically, documents must be registered using the Meridian Enterprise Server web services or by direct access to the Meridian Enterprise Server database.

> **Note:**
> The Meridian Enterprise Server registration database is created on the database server that is specified during Meridian Enterprise Server configuration as described in Create the Configuration Database. The database is created when it is needed for the first time.

When a publishing job executes, Publisher scans the database for entries that match the name that is specified for the publishing job and processes the documents with matching entries.

For information on viewing the documents that are currently registered in the Publisher queue, see *View the Publisher Queue* in the *Meridian Enterprise User's Guide*.

The different methods of registering documents for publication are described in the following topics.

Registering On Demand In Meridian Enterprise

Meridian Enterprise includes a user interface extension that allows authorized users to publish selected documents at any time. It adds a **Publish** command on the document shortcut menu. Users may select multiple documents before invoking the command. When the command is invoked, the user is prompted by a dialog to select a publishing job.

Registering Programmatically With the Task Server

To register documents with the Task Server, you submit a task to the Task Server from your program. You submit the task to the **MeridianTask** object that is instantiated by a Publisher extension for the PowerUser program. That extension is registered as described in *Set Up the Task Server* in the *Meridian Enterprise Administrator's Guide*. The Task Server executes the task using the options of the publishing job that is specified by the name that you pass to the **MeridianTask** object. For information about programmatically registering documents without using the Task Server, see Registering Programmatically Without the Task Server.

Using the **MeridianTask** object requires the following:

- The name of the publishing job that you want to use to publish the documents must be configured in Meridian Enterprise as described in Configure a Publishing Job. For more information about creating and configuring publishing jobs, see Publishing Jobs.

Register Documents Using Task Server

To register documents using the Task Server:

1. Implement programming code that sets at least the **JobCode** (publishing job name) property of a vault's **Task** object.

   Additional properties may be set, but are not required.

2. Submit the **Task** object to the **BCPublisher.MeridianTask** class with the **Submit** method and pass a **Document** object as shown in the following examples.

   For more information about the **MeridianTask** object, see *MeridianTask Object* in the *Meridian Enterprise VBScript API Reference*.

   The task can be submitted by any event or command where a **Document** object exists. For more information about the **Submit** method, see *Document Object Methods* in the *Meridian Enterprise VBScript API Reference*.

   > **Note:**
   > In VBScript, you only have access to the selected document; therefore, publishing tasks can only be created for the selected document.

Example using Meridian Enterprise VBScript

```
Sub PublishCommand_Execute(Batch)
  ' Set arguments for the task.
  Vault.Task.Set "JobCode", "3BA9DF"
```

```
  Vault.Task.Set "FeedBackProperty", "Custom.PublishStatus"
  ' Register the selected document for publishing.
  Vault.Task.Submit "BCPublisher.MeridianTask", Document
End Sub
```

Example using a Meridian Enterprise VB.NET extension

```
Private Sub btnPublish_Click(ByVal sender As System.Object, ByVal e
As System.EventArgs) _
  Handles btnPublish.Click

  ' Get the selected document to publish.
  Dim document As BCDocument = ExtensionHost.CurrentObject

  ' Set arguments for the task.
  Dim task As BCSTask = ExtensionHost.ScriptObjects.Vault.Task
  task.Set("JobCode", "3BA9DF")
  task.Set("FeedbackProperty", "Custom.PublishStatus")

   ' Register the document for publishing.
  task.Submit("BCPublisher.MeridianTask", document)

End Sub
```

Example using a Meridian Enterprise VB.NET application (server API)

```
Private Sub DoIt(ByVal repository As BCRepository)
  ' Get document to publish.
  Dim document As BCDocument = repository.GetFSObject
("\MyDocument.doc")

  Using taskServer As BCTaskServer = New BCTaskServer
(repository.AMServer.AMTaskServerMachine)
    ' Set arguments for the task.
    Dim args As Dictionary(Of String, Object) = New Dictionary(Of
String, Object)
    args("JobCode") = "3BA9DF"
    args("FeedbackProperty") = "Custom.PublishStatus"

   ' Register the document for publishing.
    taskServer.SubmitTask( _
      "BCPublisher.MeridianTask", _
      args, _
      Nothing, _
```

```
      0, _
      document.ID, _
      Nothing, _
      Nothing, _
      Nothing, _
      Nothing)
  End Using
End Sub
```

Example using a Meridian Enterprise VB.NET application (client API)

```
Private Sub DoIt(ByVal repository As BCRepository)
  ' Get document to publish.
  Dim document As BCDocument = repository.GetFSObject
("\MyDocument.doc")

  Using services As BCServiceProvider = New BCServiceProvider
(repository)
    Using metadata As BCSMetadata = New BCSMetadata(services)
      ' Set arguments for the task.
      Dim task As BCSTask = metadata.Vault.Task
      task.Set("JobCode", "3BA9DF")
      task.Set("FeedbackProperty", "Custom.PublishStatus")

      ' Register the document for publishing.
      task.Submit("BCPublisher.MeridianTask", document)
    End Using
  End Using
End Sub
```

Registering Programmatically Without the Task Server

Registering a document for publishing without the Task Server involves bypassing the Task Server and creating entries directly in the Meridian Enterprise Server database. Entries can be created by using the **MeridianQueue** object from within VBScript, a PowerUser user interface extension, or a .NET application.

Registering without using the Task Server has the advantage that no Task Server installation or hardware resources are required. This simplifies your system configuration. However, the disadvantage of registering without the Task Server is that it requires more complicated programing on your part to register documents for publishing. For information about programmatically registering documents using the Task Server, see Registering Programmatically With the Task Server.

You can take one of the following approaches to creating the database records:

- **Use VBScript with an ActiveX object.**

  The advantage of this method is that you can protect your code from accidental or malicious misuse by compiling it in the ActiveX object. Another advantage is that you can generate GUID values to set as the **PublishID** field in the Meridian Enterprise Server database. However, the origin of publishing is still visible and susceptible to misuse by System Administrators. This method is further described below.

- **Use VB.NET in a PowerUser user interface extension or other application.**

  The advantage of this method is that the origin of publishing and all of your code are not readily discernible. Developing user interface extensions is beyond the scope of this document. For information about the Meridian Enterprise APIs, see the Meridian Enterprise .NET API Reference Guide.

Register Documents without Task Server

To register documents without using the Task Server:

- Call the **RegisterDocument** method of the **MeridianQueue** object and pass at least a **Document** object and **JobCode** (publishing job name) property as shown in the following examples.

  For more information about the **MeridianQueue** object, see *MeridianQueue Object* in the *Meridian Enterprise VBScript API Reference*.

The job can be submitted by any event or command where a **Document** object exists. For more information about the **Submit** method, see *Document Object Methods* in the *Meridian Enterprise VBScript API Reference*.

> **Note:**
> - In VBScript, you only have access to the selected document; therefore, publishing jobs can only be created for the selected document.
> - The **WinMsgBox** statement in the following example is not supported by the Meridian Enterprise Web Client.

Example using Meridian Enterprise VBScript

```
Sub PublishCommand_Execute(Batch)
  On Error Resume Next
  'Create the script object
  Dim Publisher
  Set Publisher = New PublisherScriptObject
  'Register the selected document for publishing.
  Call Publisher.Queue.RegisterDocument("", "Job", Document.ID, , , ,
, ,"Custom.StringProperty")
  'Release the script object.
  Set Publisher = Nothing
  If Err.Number <> 0 Then
         WinMsgBox "Publish failed: " +  Err.Description
  End If
End Sub

'Represents a wrapper of a COM object accessible from VBScript.
'Provides deterministic release of resources.
Class PublisherScriptObject
  Private underlyingObject

  'Initializes the COM object.
  Private Sub Class_Initialize()
      Set underlyingObject = AMCreateObject
("BCPublisher.MeridianQueue")
    End Sub

  'Releases the COM object.
  Private Sub Class_Terminate()
      underlyingObject.Dispose()
        Set underlyingObject = Nothing
  End Sub

  'Gets the COM object.
  Public Property Get Queue
```

```
    Set Queue = underlyingObject
  End Property

End Class
```

Example using a Meridian Enterprise VB.NET extension

```
Private Sub btnPublish_Click(ByVal sender As System.Object, ByVal e
As System.EventArgs) _
  Handles btnPublish.Click

  Dim publisherQueue As Object = Nothing
  ' Get the selected document to publish.
  Dim document As BCDocument = ExtensionHost.CurrentObject

  Dim vaultId = String.Format( _
    "\\{0}\{1}", _
    ExtensionHost.Repository.AMServer.Address, _
    ExtensionHost.Repository.DataStoreName)

  Try
    ' Create the publisher object.
    ' Add a second parameter set to True to create the object on the
server instead
    ' if automatic downloads to client computers are prohibited.
    publisherQueue = CreateObject("BCPublisher.MeridianQueue")

    ' Register the document for publishing.
    publisherQueue.RegisterDocument( _
      vaultId, "3BA9DF", document.ID, , , , , ,
"Custom.PublishStatus")

  Finally
    ' If the object was initialized, dispose explicitly.
    If publisherQueue IsNot Nothing Then
      publisherQueue.Dispose()
      publisherQueue = Nothing
    End If
  End Try
End Sub
```

Example using a Meridian Enterprise VB.NET application

```
Private Sub DoIt(ByVal repository As BCRepository)
  Dim publisherQueue As Object = Nothing
```

```
  ' Get document to publish.
  Dim document As BCDocument = repository.GetFSObject
("\MyDocument.doc")
  ' Compile the vault identifier.
  Dim vaultId = String.Format("\\{0}\{1}",
repository.AMServer.Address, repository.DataStoreName)

  Try
    ' Create the publisher object.
    publisherQueue = CreateObject("BCPublisher.MeridianQueue")

    ' Register the document for publishing.
    publisherQueue.RegisterDocument( _
      vaultId, "3BA9DF", document.ID, , , , , ,
"Custom.PublishStatus")

  Finally
    ' If the object was initialized, dispose explicitly.
    If publisherQueue IsNot Nothing Then
      publisherQueue.Dispose()
      publisherQueue = Nothing
    End If
  End Try
End Sub
```

View the Publisher Queue

The Publisher queue lists documents that have been submitted for rendering and/or publishing. This is the most useful way to see the documents that are waiting to be published by the next scheduled publishing job. The queue holds all documents to be published regardless of how they were added to the queue, automatically or manually from any source system. You can also view the queue to see what documents have already been published or that failed to publish for some reason and details (the process log) for each document.

You will only see jobs in the Publisher Queue that originated from the current vault.

> **Note:**
> You may not modify a publishing job if you are not the job owner or a member of the **Publisher Configurators** group or the **Application Administrators** group as described in the *Publishing Jobs* chapter in the *Meridian Enterprise Server Administrator's Guide*.

(PowerWeb) Open the Publisher Queue

Use these steps for PowerWeb.

To open the Publisher Queue:

- In the **Vault** ribbon, in the **View** group, click **Publisher Queue**.

  The **All Queue** page appears and lists all of the documents currently in the queue regardless of their status.

To open the Publisher queue in a new web browser window:

1. Open Internet Explorer.
2. Type the following address where <**PublisherComputerName**> is the name of computer where Meridian Enterprise Server is installed:

   ```
   http://<PublisherComputerName>/BCEnterprise/Queue
   ```

3. Press the **Enter** key on your keyboard.

   The **All Queue** page appears and lists all of the documents currently in the queue regardless of their status.

(PowerUser) Open the Publisher Queue

Use these steps for PowerUser.

Internet Explorer must be configured as your default web browser or the following error may occur: **Cannot start process because a file name has not been provided**.

To open the Publisher queue:

- On the **Tools** menu, click **Open Publisher Queue**.

  The **All Queue** page appears and lists all of the documents currently in the queue regardless of their status.

View Document Status

To view the current status of a particular document:

- Select the document in the queue list.

  The current status appears in the **Status** group on the right side of the page. Below the status is the **Process Logs** group that shows all of the processing activity and can be used for troubleshooting.

View Jobs with Specific Status

To view only the jobs with a specific status:

- Click the name of the status in the menu.

  The page refreshes to show only the jobs with the selected status.

View Jobs with Specific Property Value

The properties that can be searched are configurable as described in Configure the Queue Display Options.

To view only the jobs with a specific property value:

1. Type at least the beginning of the property value in the search box.

   The search operator that will be used is **Starts With**.
2. Click the search icon .

   The list refreshes to show the results of your search.
3. To reset the filter results, clear the search box and click the icon again.

Filter the List

The properties that can be filtered on are configurable as described in Configure the Queue Display Options.

To filter the list:

1. Click the downward arrow to the right of the column name that you want to filter on.
2. Point to **Columns**.
3. Select or deselect columns accordingly.

Sort Column

To sort the jobs on a particular column:

1. Click the heading of the column that you want to sort on.

   The sort icon indicates the current sorting column and direction.
2. To reverse the sort order, click the heading again.

Change Column Order

To change the order of columns:

- Drag a column heading and drop it in the desired position.

Show or Hide Columns

To show or hide columns:

1. Click the downward arrow next to any column name.
2. Point to **Columns**.
3. Select or deselect columns accordingly.

View Job Details

To view the details of a job:

- Click the icon of the job.

  The details of the job appear in the right pane. The properties that are shown in the **Other** group are the ones that are selected in the **Details** column as described in Configure the Queue Display Options.

  The data that is listed in the **Process Logs** group is output from the publishing job if it has run already. If multiple attempts were made to publish the document, the data for each attempt is collapsible and expandable and the last attempt is expanded by default. Any error messages appear in red text.

Cancel a Document

Canceling a document in the Publisher queue prevents it from being published to the destination system. The document's registration remains in the Publisher database for auditing and other purposes. A canceled document may be restarted for publishing at a later time unless it is marked as obsolete as described in Mark a Document As Obsolete.

Use these steps for PowerUser and PowerWeb.

To cancel a document:

1. Open the Publisher queue as described in View the Publisher Queue.
2. Select the documents that you want to cancel.

   Press and hold the Ctrl key while clicking to select individual items. Press and hold the Shift key while selecting the first and last of a range of items.
3. In the toolbar, click **Cancel**.

   The status of the document changes to **Canceled**.

Restart a Document

A document with a **Status** of **Failed** or **Canceled** can be restarted. Restarting a document activates it for publishing once again. Only users with Administrative rights or the owner of a document can restart a failed document.

Use these steps for PowerUser and PowerWeb.

To restart a document:

1. Open the Publisher queue as described in View the Publisher Queue.
2. Select the documents that you want to cancel.

   Press and hold the Ctrl key while clicking to select individual items. Press and hold the Shift key while selecting the first and last of a range of items.
3. In the toolbar, click **Restart**.

   The status of the document changes to **Pending**.

Mark a Document As Obsolete

Marking a document as obsolete prevents it from being published. This action is typically done when the document has been added to the queue more than once and the Publisher has not been configured to ignore duplicates. When the document has been published successfully once, the other registrations in the queue should be marked obsolete to prevent overwriting previous files on the destination system. The document's registration remains in the Publisher database for auditing and other purposes.

Use these steps for PowerUser and PowerWeb.

To mark a document as obsolete:

1. Open the Publisher queue as described in View the Publisher Queue.
2. Select the documents that you want to mark as obsolete.

   Press and hold the Ctrl key while clicking to select individual items. Press and hold the Shift key while selecting the first and last of a range of items.
3. In the toolbar, click **Obsolete**.

   The status of the document changes to **Obsolete**.

For information about reversing this change, see Unmark a Document As Obsolete.

Unmark a Document As Obsolete

Unmarking a document as obsolete allows it to be restarted for publishing. This reverses the effect described in Mark a Document As Obsolete.

Use these steps for PowerUser and PowerWeb.

To unmark a document as obsolete:

1. Open the Publisher queue as described in View the Publisher Queue.
2. Select the documents that you want to unmark as obsolete.

   Press and hold the Ctrl key while clicking to select individual items. Press and hold the Shift key while selecting the first and last of a range of items.
3. In the toolbar, click **Undo Obsolete**.

   The state of the document reverts to its previous status.

Configure the Queue Display Options

By default, the Publisher Queue shows basic information that is suitable for most uses. You may configure the display differently to meet your own requirements.

Use these steps for PowerUser and PowerWeb.

To configure the queue display options:

1. Open the Publisher Queue as described in View the Publisher Queue.
2. In the app bar, click **Settings**.

   The **Queue Options** dialog box appears. Each row shows the names and display options for each property in the queue.
3. Select a row that you want to configure.
4. Click options or type values using the descriptions in the following table.
5. Click **OK**.

   The queue page is refreshed to reflect your changes.

Publisher Queue display options

Option	Description
Rename	To change the name that is shown for a property in the column heading: 1. Click the edit icon . The **Rename** dialog box appears and shows the current display name of the property. 2. Edit the name and click **Rename**. The property display name updates.
Grid	Shows the property in the queue grid on the left side of the page.
Details	Shows the property in the **Other** group on the right side of the page when a document is selected.
Filter	Enables the property to be a filter as described in View the Publisher Queue.
Autoload	For better performance, loads unique values in the property filter list when the page loads instead of when the filter is configured. Enable this option if the property contains many unique values and the **Filter** option is also enabled.
Searchable	Enables the property to be searched as described in View the Publisher Queue.

Option	Description
Display Name	The name of the property as it appears on the queue page.
Name	The internal name of the property used by the system.

Clean the Local Workspace

When a publishing job runs, it will download documents to a local workspace on a disk of the Publisher node. The local workspace will grow as more documents are published and, by default, because publishing runs as a service, the local workspace is not automatically cleaned of old files the same as it would be for an interactive user. This can lead to publishing jobs not completing and insufficient disk space errors.

To avoid this, we recommend that you regularly clean the local workspace on the Publisher node using the following command line with the Enterprise Server service account:

```
C:\Program Files\BC-Meridian\Program\AMHookTrayU.exe -sync -exit
```

> **Note:**
> If a 64-bit client setup program is used, the executable name is `AMHookTray.exe`.

This command can be run as a scheduled task (for example, once a week). The frequency should be adjusted for the amount of disk space configured for the local workspace, how often publishing occurs, the size of the source documents, and how many documents are published.

For more information about configuring and administering local workspaces, see the *Local Workspace* sections in the *Meridian Enterprise Administrator's Guide* and the *Meridian Enterprise User's Guide* .

Rendering Modules

This article lists additional requirements per rendering module. It also displays information about the rendering modules in two ways: supported file types per rendering module, and the rendering modules applicable to each file type.

Additional Requirements per Module

The following table lists additional requirements and notes for each rendering module.

Additional Requirements per Module

Rendering Module	Additional Requirements	Notes
ACME CAD	ACME CAD license required.	
Aspose	If you are switching to the Aspose rendering module after having previously used Microsoft Office, you may need to install some fonts for Office files to render correctly. The reason for this is because Office includes several fonts in its installation package, including some proprietary fonts. These fonts are not included with Meridian. For many of the fonts, you can download and install True Type Font (.ttf) files for free. However, for Microsoft's proprietary fonts, you will need to acquire a license.	

Rendering Module	Additional Requirements	Notes
AutoVue		Limitations for specific file types. See tables below. This list is a subset of the formats that AutoVue supports for viewing. A complete list of the viewing formats can be found on the Oracle web site. This list is provided as a guideline for convenience only and may not be accurate for specific combinations of the versions of Publisher, AutoVue, and the source document format. For confirmation of support for specific combinations and any known limitations, contact Accruent Technical Support.
Custom Render Engine	Depends on the render engine	
Forge	• Autodesk Forge account • **For Microstation:** Meridian Tenancy • Internet access	Forge does not create PDF renditions, as the other render engines do. For documents rendered with Forge, a SVG (Scalable Vector Graphics) rendition is generated which is stored in an Autodesk web service. See the file formats supported by Forge.
Native AutoCAD renderer	• **For plain:** AutoCAD installation • **For verticals:** AutoCAD vertical installation If multiple AutoCAD verticals are required, they must be installed on separate render nodes. • Publisher must run in interactive mode • Additional license	The license agreement of an application may prohibit using a centrally deployed and/or automated installation to generate output available to multiple users. The additional license is included in the Enterprise subscription plan. Interactive mode requires an account to be constantly logged into the server to run Publisher. Learn more about this topic in Meridian Enterprise Server Clusters.

Rendering Module	Additional Requirements	Notes
Native Inventor renderer	• Inventor installation • Publisher must run in interactive mode • Additional license	The license agreement of an application may prohibit using a centrally deployed and/or automated installation to generate output available to multiple users. The additional license is included in the Enterprise subscription plan. Interactive mode requires an account to be constantly logged into the server to run Publisher. Learn more about this topic in Meridian Enterprise Server Clusters.
Native Microstation renderer	• Microstation installation • Publisher must run in interactive mode • Additional license	The license agreement of an application may prohibit using a centrally deployed and/or automated installation to generate output available to multiple users. The additional license is included in the Enterprise subscription plan. Interactive mode requires an account to be constantly logged into the server to run Publisher. Learn more about this topic in Meridian Enterprise Server Clusters.
Native Office renderer	• Microsoft Office installation • Publisher must run in interactive mode • Additional license	The license agreement of an application may prohibit using a centrally deployed and/or automated installation to generate output available to multiple users. The additional license is included in the Enterprise subscription plan. Interactive mode requires an account to be constantly logged into the server to run Publisher. Learn more about this topic in Meridian Enterprise Server Clusters.

Rendering Module	Additional Requirements	Notes
Native Revit renderer	• Revit installation • Publisher must run in interactive mode • Additional license	The license agreement of an application may prohibit using a centrally deployed and/or automated installation to generate output available to multiple users. The additional license is included in the Enterprise subscription plan. Interactive mode requires an account to be constantly logged into the server to run Publisher. Learn more about this topic in Meridian Enterprise Server Clusters.
Native SolidWorks renderer	• SolidWorks installation • Publisher must run in interactive mode • Additional license	The license agreement of an application may prohibit using a centrally deployed and/or automated installation to generate output available to multiple users. The additional license is included in the Enterprise subscription plan. Interactive mode requires an account to be constantly logged into the server to run Publisher. Learn more about this topic in Meridian Enterprise Server Clusters.
PDFSharp	None	
Teigha	None	There are two rendering modules, and they are applicable to different file types: • Teigha DGN Rendering Module • Teigha DWG Rendering Module

Modules and File Extensions They Support

In the table below, each module is listed along with the file extensions it supports.

Modules and File Extensions They Support

Rendering Module	File Extension	Format	Comments
ACME CAD	dwf	Design Web Format File	AutoCAD - plain
ACME CAD	dwg	Autodesk AutoCAD drawing	AutoCAD - plain
ACME CAD	dxf	Drawing Exchange Format File	
Aspose	doc	MS Word 97-2003 Document	
Aspose	docx	MS Word Document	
Aspose	htm	Web Page	
Aspose	html	Web Page	
Aspose	jpeg	JPEG File Interchange Format	
Aspose	jpg	JPEG File Interchange Format	
Aspose	png	Portable Network Graphics Format	
Aspose	ppt	MS PowerPoint 97-2003 Presentation	
Aspose	pptx	MS PowerPoint Presentation	
Aspose	tif	Tagged Image File Format	
Aspose	tiff	Tagged Image File Format	

Rendering Module	File Extension	Format	Comments
Aspose	vsd	Visio 2003-2010 Drawing	
Aspose	vsdx	MS Visio Drawing	
Aspose	xls	MS Excel 97-2003 Workbook	
Aspose	xlsx	MS Excel Workbook	
AutoVue	bmp	Bitmap Image	Supported for rendition output
AutoVue	cel	MicroStation Cell Library File	AutoVue 3D Only
AutoVue	cg4	CALS Group IV Bitmap Graphics Format	
AutoVue	cit	Intergraph Format Image	
AutoVue	dgn	MicroStation Design File	
AutoVue	doc	MS Word 97-2003 Document	
AutoVue	docx	MS Word Document	
AutoVue	dwg	Autodesk AutoCAD drawing	
AutoVue	dxf	Drawing Exchange Format File	
AutoVue	fax	CALS Raster Graphic	
AutoVue	gif	Graphics Interchange Format	
AutoVue	gp4	CCITT Group 4 Fax	
AutoVue	ipn	Autodesk Inventor Presentation File	AutoVue 3D Only
AutoVue	ipt	Autodesk Inventor Part File	AutoVue 3D Only

Rendering Module	File Extension	Format	Comments
AutoVue	jpg	JPEG File Interchange Format	
AutoVue	mil	Group 4 Fax	
AutoVue	msg	MS Outlook Mail Message	
AutoVue	pdf	Portable Document Format File	Supported for rendition output
AutoVue	png	Portable Network Graphics Format	
AutoVue	ppt	MS PowerPoint 97-2003 Presentation	
AutoVue	pptx	MS PowerPoint Presentation	
AutoVue	rlc	Run Length Coding	
AutoVue	rtf	Rich Text Format File	
AutoVue	sldasm	SolidWorks Assembly File	AutoVue 3D Only
AutoVue	slddrw	SolidWorks Drawing File	
AutoVue	sldprt	SolidWorks Part File	AutoVue 3D Only
AutoVue	tif	Tagged Image File Format	Supported for rendition output. Uncompressed, PackBits, FAX III, and FAX IV sub-formats.
AutoVue	txt	Plain Text File	
AutoVue	vsd	Visio 2003-2010 Drawing	
AutoVue	wmf	Windows Metafile	
AutoVue	xls	MS Excel 97-2003 Workbook	
AutoVue	xlsm	MS Excel Macro-Enabled Workbook	

Rendering Module	File Extension	Format	Comments
AutoVue	xlsx	MS Excel Workbook	
AutoVue	xlt	MS Excel 97-2003 Template	
AutoVue	xltm	MS Excel Macro-Enabled Template	
AutoVue	xltx	MS Excel Template	
Custom Render Engine	Other formats		
Forge	dgn	MicroStation Design File	
Forge	dwf	Design Web Format File	AutoCAD - plain
Forge	dwg	Autodesk AutoCAD drawing	AutoCAD - plain
Forge	iam	Autodesk Inventor Assembly File	
Forge	idw	Autodesk Inventor Drawing File	
Forge	ipn	Autodesk Inventor Presentation File	
Forge	ipt	Autodesk Inventor Part File	
Forge	rvt	Revit Project File	
Forge	sldasm	SolidWorks Assembly File	
Forge	slddrw	SolidWorks Drawing File	
Native AutoCAD renderer	dwf	Design Web Format File	AutoCAD - plain
Native AutoCAD renderer	dwg	Autodesk AutoCAD drawing	AutoCAD - plain AutoCAD - verticals
Native Inventor renderer	dwg	Autodesk AutoCAD drawing	

Rendering Module	File Extension	Format	Comments
Native Inventor renderer	iam	Autodesk Inventor Assembly File	
Native Inventor renderer	idw	Autodesk Inventor Drawing File	
Native Inventor renderer	ipn	Autodesk Inventor Presentation File	
Native Inventor renderer	ipt	Autodesk Inventor Part File	
Native Microstation renderer	dgn	MicroStation Design File	
Native Office renderer	doc	MS Word 97-2003 Document	
Native Office renderer	docx	MS Word Document	
Native Office renderer	ppt	MS PowerPoint 97-2003 Presentation	
Native Office renderer	pptx	MS PowerPoint Presentation	
Native Office renderer	vsd	Visio 2003-2010 Drawing	
Native Office renderer	vsdx	MS Visio Drawing	
Native Office renderer	xls	MS Excel 97-2003 Workbook	
Native Office renderer	xlsx	MS Excel Workbook	
Native Revit renderer	rvt	Revit Project File	
Native SolidWorks renderer	sldasm	SolidWorks Assembly File	
Native SolidWorks renderer	slddrw	SolidWorks Drawing File	
PDFSharp	jpeg	JPEG File Interchange Format	
PDFSharp	jpg	JPEG File Interchange Format	

Rendering Module	File Extension	Format	Comments
PDFSharp	png	Portable Network Graphics Format	
PDFSharp	tif	Tagged Image File Format	
PDFSharp	tiff	Tagged Image File Format	
Teigha	dgn	MicroStation Design File	Teigha DGN module only.
Teigha	dwf	Design Web Format File	AutoCAD - plain Teigha DWG module only.
Teigha	dwg	Autodesk AutoCAD drawing	AutoCAD - plain Teigha DWG module only.
Teigha	dxf	Drawing Exchange Format File	Teigha DWG module only.

File Extensions and Modules That Support Them

In the table below, each file extension is listed along with the modules that support it.

File Extensions and Modules That Support Them

File Extension	Format	Rendering Module	Comments
bmp	Bitmap Image	AutoVue	Supported for rendition output
cel	MicroStation Cell Library File	AutoVue	AutoVue 3D only
cg4	CALS Group IV Bitmap Graphics Format	AutoVue	
cit	Intergraph Format Image	AutoVue	
dgn	MicroStation Design File	AutoVue	
dgn	MicroStation Design File	Forge	
dgn	MicroStation Design File	Native Microstation renderer	
dgn	MicroStation Design File	Teigha	Teigha DGN module only.
doc	MS Word 97-2003 Document	Aspose	
doc	MS Word 97-2003 Document	AutoVue	
doc	MS Word 97-2003 Document	Native Office renderer	
docx	MS Word Document	Aspose	
docx	MS Word Document	AutoVue	
docx	MS Word Document	Native Office renderer	

File Extension	Format	Rendering Module	Comments
dwf	Design Web Format File	ACME CAD	AutoCAD - plain ACME CAD license required.
dwf	Design Web Format File	Forge	AutoCAD - plain
dwf	Design Web Format File	Native AutoCAD renderer	AutoCAD - plain
dwf	Design Web Format File	Teigha	AutoCAD - plain Teigha DWG module only.
dwg	Autodesk AutoCAD drawing	ACME CAD	AutoCAD - plain ACME CAD license required.
dwg	Autodesk AutoCAD drawing	AutoVue	
dwg	Autodesk AutoCAD drawing	Forge	AutoCAD - plain
dwg	Autodesk AutoCAD drawing	Native AutoCAD renderer	AutoCAD - plain AutoCAD - verticals
dwg	Autodesk AutoCAD drawing	Native Inventor renderer	
dwg	Autodesk AutoCAD drawing	Teigha	AutoCAD - plain Teigha DWG module only.
dxf	Drawing Exchange Format File	ACME CAD	ACME CAD license required.
dxf	Drawing Exchange Format File	AutoVue	
dxf	Drawing Exchange Format File	Teigha	Teigha DWG module only.
fax	CALS Raster Graphic	AutoVue	
gif	Graphics Interchange Format	AutoVue	

File Extension	Format	Rendering Module	Comments
gp4	CCITT Group 4 Fax	AutoVue	
htm	Web Page	Aspose	
html	Web Page	Aspose	
iam	Autodesk Inventor Assembly File	Forge	
iam	Autodesk Inventor Assembly File	Native Inventor renderer	
idw	Autodesk Inventor Drawing File	Forge	
idw	Autodesk Inventor Drawing File	Native Inventor renderer	
ipn	Autodesk Inventor Presentation File	AutoVue	AutoVue 3D only
ipn	Autodesk Inventor Presentation File	Forge	
ipn	Autodesk Inventor Presentation File	Native Inventor renderer	
ipt	Autodesk Inventor Part File	AutoVue	AutoVue 3D only
ipt	Autodesk Inventor Part File	Forge	
ipt	Autodesk Inventor Part File	Native Inventor renderer	
jpeg	JPEG File Interchange Format	Aspose	
jpeg	JPEG File Interchange Format	PDFSharp	
jpg	JPEG File Interchange Format	Aspose	
jpg	JPEG File Interchange Format	AutoVue	
jpg	JPEG File Interchange Format	PDFSharp	

File Extension	Format	Rendering Module	Comments
mil	Group 4 Fax	AutoVue	
msg	MS Outlook Mail Message	AutoVue	
Other formats		Custom Render Engine	
pdf	Portable Document Format File	AutoVue	Supported for rendition output
png	Portable Network Graphics Format	Aspose	
png	Portable Network Graphics Format	AutoVue	
png	Portable Network Graphics Format	PDFSharp	
ppt	MS PowerPoint 97-2003 Presentation	Aspose	
ppt	MS PowerPoint 97-2003 Presentation	AutoVue	
ppt	MS PowerPoint 97-2003 Presentation	Native Office renderer	
pptx	MS PowerPoint Presentation	Aspose	
pptx	MS PowerPoint Presentation	AutoVue	
pptx	MS PowerPoint Presentation	Native Office renderer	
rlc	Run Length Coding	AutoVue	
rtf	Rich Text Format File	AutoVue	
rvt	Revit Project File	Forge	
rvt	Revit Project File	Native Revit renderer	
sldasm	SolidWorks Assembly File	AutoVue	AutoVue 3D only

File Extension	Format	Rendering Module	Comments
sldasm	SolidWorks Assembly File	Forge	
sldasm	SolidWorks Assembly File	Native SolidWorks renderer	
slddrw	SolidWorks Drawing File	AutoVue	
slddrw	SolidWorks Drawing File	Forge	
slddrw	SolidWorks Drawing File	Native SolidWorks renderer	
sldprt	SolidWorks Part File	AutoVue	AutoVue 3D only
tif	Tagged Image File Format	Aspose	
tif	Tagged Image File Format	AutoVue	Supported for rendition output. Uncompressed, PackBits, FAX III, and FAX IV sub-formats.
tif	Tagged Image File Format	PDFSharp	
tiff	Tagged Image File Format	Aspose	
tiff	Tagged Image File Format	PDFSharp	
txt	Plain Text File	AutoVue	
vsd	Visio 2003-2010 Drawing	Aspose	
vsd	Visio 2003-2010 Drawing	AutoVue	
vsd	Visio 2003-2010 Drawing	Native Office renderer	
vsdx	MS Visio Drawing	Aspose	
vsdx	MS Visio Drawing	Native Office renderer	
wmf	Windows Metafile	AutoVue	

File Extension	Format	Rendering Module	Comments
xls	MS Excel 97-2003 Workbook	Aspose	
xls	MS Excel 97-2003 Workbook	AutoVue	
xls	MS Excel 97-2003 Workbook	Native Office renderer	
xlsm	MS Excel Macro-Enabled Workbook	AutoVue	
xlt	MS Excel 97-2003 Template	AutoVue	
xltm	MS Excel Macro-Enabled Template	AutoVue	
xltx	MS Excel Template	AutoVue	
xslx	MS Excel Workbook	Aspose	
xslx	MS Excel Workbook	AutoVue	
xslx	MS Excel Workbook	Native Office renderer	

Rendering Profiles

A *rendering profile* specifies to which format in the destination vault the source documents should be rendered before they are published. Each profile specifies a rendering module to use and contains a collection of settings that specify how the rendering module will process the source documents. A rendering profile creates one destination document for each source document. You may create any number of rendering profiles for different purposes. Rendering profiles are assigned to publishing jobs for processing. A publishing job can have any number of rendering profiles assigned to it to create multiple renditions of the source documents.

> **Note:**
> The output options that are available in a rendering module for a particular file format are not necessarily available for another file format. For information about the specific options that are available for a particular format, see the configuration topic for the rendering module in Create And Edit a Rendering Profile. We recommend that you discuss the technical specifications of your rendition requirements with your Accruent Partner or Accruent Technical Support in advance of implementing a rendering module.

Creating and editing rendering profiles are described in the following topics.

Create And Edit a Rendering Profile

Rendering profiles depend on the applications that perform the rendering. If only one Meridian Enterprise Server server is deployed, the system is simple and all rendering applications must be installed on the same computer. But when a cluster is deployed, the system can be more complex. For a list of the rendering application versions that are compatible with your version of Meridian Enterprise, see *Publisher Rendering Applications* in the *Supported Software* document for the Meridian Enterprise version.

For example, the primary node might be dedicated to the non-rendering tasks and dedicated nodes deployed to perform the compute-intensive rendering tasks. All publishing jobs must be defined on the primary node where the rendering applications are not installed. Some of the publishing job options require information from the computer where the rendering applications are installed. Moreover, a publishing job that performs rendering should only be able to be assigned to and run on the node where the rendering application is installed.

Meridian Enterprise Server meets these challenges with the ability to scan the cluster nodes for the rendering applications that are installed on them. The information is cached on the primary node for instant access. The system uses this information to guide you in creating only rendering profiles for which the rendering applications are installed and only assigning jobs to the correct nodes. You should start a scan when new rendering applications are installed or custom paper sizes are created on the node.

To create or edit a rendering profile:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Rendering Profiles**.

   The **All Rendering Profiles** page appears and lists the existing profiles grouped by the name of the computer (cluster node) to which they are assigned.

   If cached rendering application information exists, the message **Native application capabilities found in cluster machines** is shown at the bottom of the page. The nodes are listed on the right side of the page with information about when the node was last scanned.

2. If no rendering applications are cached or if new applications have been installed since the last scan, scan the cluster for rendering application changes before proceeding:

   - On the right side of the page, next to the name of the node that you want to scan, click **Scan**.

     The node is scanned and the information is cached. For scanning to work when using SQL Server, the Publisher nodes need to have the SQL driver installed, and they need to be able to connect to the SQL Server configuration database.

3. Choose one or more of the following options:
   - To create a new rendering profile:
     a. Click **New**.

        The **New Rendering Profile** dialog box appears and lists the available rendering modules for selection.
     b. Select a rendering module.
     c. Click **Next**.

        The name page appears.
     d. Accept the default name or type a more descriptive name for the rendering profile in the **Name** box.
     e. Click **Next**.

        A page with the particular options for the rendering module that you selected appears.
   - To edit an existing rendering profile:
     - Select the profile that you want to edit, and then in the toolbar, click **Properties**.

       A page with the particular options for the rendering module that you selected appears.
     - Double-click the profile that you want to edit.

       A page with the particular options for the rendering module that you selected appears.
4. Configure the particular options for the rendering module that you selected as described in the following topics.
5. Click **Save**.

Configure the Acme CAD Converter Rendering Module

The Acme CAD Converter rendering module options specify which source document formats to render and how they should be rendered in the destination system.

To configure the Acme CAD Converter rendering module options:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Rendering Profiles**.

   The **All Rendering Profiles** page appears and lists the existing profiles grouped by the name of the computer (cluster node) to which they are assigned.

2. Double-click the rendering profile that you want to configure.

   The rendering options page appears.

3. On the **General** page, click options or type values using the descriptions in the following table.

   Acme CAD Converter rendering module general options

<table>
<tr><th>Option</th><th>Description</th></tr>
<tr><td>Name</td><td>The name of the rendering profile as seen in the Administration Console.</td></tr>
<tr><td>Computer</td><td>The name of the Meridian Enterprise Server cluster node on which to run this job.</td></tr>
<tr><td>Input extensions</td><td>The file extensions that will be rendered by this module.
To modify this list:
a. Click Configure.
The Input Extensions dialog box appears and lists the supported file extensions.
b. Select the file extensions that you want to be rendered.
c. Click OK.
The quantity is refreshed to reflect your selections.</td></tr>
</table>

4. On the **Output** page, click options or type values using the descriptions in the following table.

5. Click **Save**.

Acme rendering module output options

Group	Option	Description
General	Application location	The location on the Meridian Enterprise Server computer where the Acme CAD Converter software is installed. For example, `C:\Program Files (x86)\Acme CAD Converter\AcmeCADConverter.exe`. This option is set automatically if Acme CAD Converter was installed by a setup program. If it was installed from an archive file, this option must be set manually.
General	Create conversion report	If enabled, generates a report of the rendering process that can be used to troubleshoot unexpected results. The report is saved in `<WindowsTEMPFolder>\BCTemp\AcmeRender\<SourceFileName>.log` where *<WindowsTEMPFolder>* is the path set in the Windows **TEMP** environment variable and *<SourceFileName>* is the name of the rendition source file, for example, `C:\Users\YourName\AppData\Local\Temp\MyDrawing.dwg`. The contents of the report are described in the Acme CAD convertor help.
Options	Use job advanced rendering settings	Select this option if the page size and orientation are stored as property values for the source documents and the corresponding options of the publishing job are selected as described in Configure Rendering Options. If those options are not selected, select values from **Default page size** and **Default orientation**.
Options	Update title blocks before rendering	If enabled and the Acme CAD Converter is installed on the rendering node, the title blocks in the document will be updated from the document properties before the document is rendered. If disabled or the application is not installed on the rendering node, the update is skipped.
Options	Font search path	Semi-colon separated list that defines the paths to search for SHX font files that are used in the source drawings being rendered. For example, `C:\Program Files\Autodesk\AutoCAD 2021\Fonts;f:\RealDWG\2021_64`. If a font is not found in a path, the text might be rendered incorrectly.
Options	Substitute fonts	If enabled, text fonts that are specified in the source drawings are substituted with different fonts during rendering. If disabled, the fonts are not substituted and the original fonts are rendered if they can be found in the path specified for **Font search path**.
Options	TrueType fonts only	If enabled, only TrueType fonts are substituted. If disabled, TrueType and SHX type fonts are substituted.
Options	Big font	Name of the big font file to use for rendering.

Group	Option	Description
Options	Small font	Name of the small font file to use for rendering.
Options	TrueType font	Name of the TrueType font file to use for rendering.
Options	Enable layer support	Generates layers in the rendition that correspond to the layers in the source drawing.
Page Setup	Default page size	Select an option from the list to indicate how the rendition page size is specified. Select **Custom page size** if **Use job advanced rendering settings** is enabled and the page size is specified in a document property.
Page Setup	Custom page size units	Select an option from the list for the units of the **Custom page size** option. For example, to set a custom page size of 210mm x 300mm, select **mm**. This option will be ignored if **Use job advanced rendering settings** is enabled and the page size is specified in a document property.
Page Setup	Custom width	The rendition width in the units specified for the **Custom page size** option. For example, to set a custom page size of 210mm x 300mm, type **210**. This option will be ignored if **Use job advanced rendering settings** is enabled and the page width is specified in a document property.
Page Setup	Custom height	The rendition height in the units specified for the **Custom page size** option. For example, to set a custom page size of 210mm x 300mm, type **300**. This option will be ignored if **Use job advanced rendering settings** is enabled and the page height is specified in a document property.
Page Setup	Default orientation	Select an option from the list to indicate the rendition orientation. This option will be ignored if **Default page size** is set to **Automatically detect** and **Use job advanced rendering settings** is disabled.
Page Setup	Zoom to extents	If enabled, renders the drawing extents if larger than shown in the layout specified for the **Layouts to export** option.
Page Setup	Layouts to export	Select which layouts to render from the list. To render a different layout, select **Custom** and specify the layout tab number in **Custom layout**.
Page Setup	Custom layout	If **Custom** is selected for the **Layouts to export** option, the ordinal number of the custom layout to render, for example, **2**.
Pen Setup	Default color	Select an option from the list to indicate the color depth of the rendition. Select **Use from global** to apply the value set for the **Color/monochrome** option described in Configure Rendering Options.

Group	Option	Description
Pen Setup	Use line weights	If enabled, renders line weights in the output according to the selected option. Cannot be used together with **Use pen table**.
Pen Setup	Use pen table	If enabled, applies the pen table specified for the **Pen table** option to the output. If disabled, no pen table is applied to the output. even if the **Pen table** option is set to **Use from global**. Cannot be used together with **Use line weights**.
Pen Setup	Default pen table	Select an option from the list to specify the pen table to apply to the output. The pen table must be created in Acme CAD Converter before using it with this rendering module. If the name of the pen table does not appear in the list, the computer might need to be scanned to discover the pen table as described in Configure Rendering Options.

Configure the Aspose Rendering Module Options

The Aspose rendering module options specify which formats to render, how they are rendered, and to which format in the destination system.

If you have the Aspose rendering module enabled, Meridian can read references for Microsoft Word, Excel, PowerPoint, and Visio documents without having Microsoft Office installed on the local machine or the server.

> **Important!**
> If you are switching to the Aspose rendering module after having previously used Microsoft Office, you may need to install some fonts for Office files to render correctly. The reason for this is because Office includes several fonts in its installation package, including some proprietary fonts. These fonts are not included with Meridian.
>
> For many of the fonts, you can download and install True Type Font (.ttf) files for free. However, for Microsoft's proprietary fonts, you will need to acquire a license.

To configure the Aspose rendering options:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Rendering Profiles**.

   The **All Rendering Profiles** page appears and lists the existing profiles grouped by the name of the computer (cluster node) to which they are assigned.

2. Double-click the rendering profile that you want to configure.

   The rendering options page appears.

3. On the **General** page, click options or type values using the descriptions in the following table.

   Aspose rendering module general options

Option	Description
Name	The name of the rendering profile as seen in Administration Console.
Computer	The name of the Meridian Enterprise Server computer (cluster node) on which to run this job.

Option	Description
Input extensions	The file extensions that will be rendered by this module. To modify this list: a. Click **Configure**. The **Input Extensions** dialog box appears and lists the supported file extensions. b. Select the file extensions that you want to be rendered. c. Click **OK**. The quantity is refreshed to reflect your selections.

4. On the **Output** page, click options or type values using the descriptions in the following table.

Aspose rendering output options

Option	Description
Document Type	Allows you to choose the output document type for the rendering profile. You can choose from: • Doc(x); Docm • Xls(x); Xlsm • Ppt(x) • Vsdx • Htm; Html • Images • Eml; Msg

Option	Description
Update title blocks before rendering	If selected, the title blocks in the document are updated from the document properties before the document is rendered. If cleared, the update is skipped. This option is available when one of these document types is selected: • Doc(x); Docm • Xls(x); Xlsm • Ppt(x); Pptm • Vsdx; Vsdm Since Meridian 2021, Aspose carries out title block updates in Microsoft Office documents by default. If you want to use Microsoft Office to do this, you must unregister BcOfficeDocAccess.dll and register AMOfficeDocAccess.dll.
Multiple pages per sheet	Allows you to select the way in which users navigate an Excel Spreadsheet when rendered with Apose. When selected: • one sheet is rendered to several pages if content does not fit • pages are rendered to the same size When cleared: • one sheet is rendered per page • pages are rendered to different sizes
Render to standard paper size	Select this option to render the HTML document to the smallest standard paper size that can contain the width of the document. Only available for the Htm; Html document type.
Use original page settings	This setting is available for Word, Excel, and PowerPoint files. If selected, Aspose will use the original page settings of the document. This setting only works if the page size in the document matches a page size supported by Aspose. To download an Excel file which lists the page sizes supported by Aspose, click here.
Use job advanced rendering settings	If the check box is selected, the user-defined options in the document rendition properties will be overwritten by any corresponding properties defined in script. If this check box is not selected, the user-defined options in the document rendition properties are always used. Any additional options specified in script will be ignored.
Default page size	Select the default page size. Images are centered on the page.
Default orientation	Select the default orientation. Images are centered on the page.

5. Click **Save**.

Configure the Autodesk AutoCAD Rendering Module Options

The Autodesk AutoCAD rendering options specify which drawing layouts to render and to which format in the destination system.

For information about installing AutoCAD on the Meridian Enterprise Server computer, see Publisher Requirements.

Besides configuring the rendering module, we recommend that you also configure the AutoCAD installation on the Meridian Enterprise Server node to prevent rendering interruptions and from showing interactive dialog boxes. Do so while logged on to Windows with the same account as the Meridian Enterprise Server service

Recommended Settings

We recommend these settings:

- This module uses the following plotter configuration files, which are installed with AutoCAD and must be present on the rendering node: `DWG To PDF.pc3`, `DWF6 ePlot.pc3`, `PublishToWeb JPG.pc3`.
- If A0 size drawings will be rendered to Adobe PDF format, you must create a custom page size in the print server properties. If the A0 page size will be used in landscape orientation, you must also create a custom page size in the AutoCAD `DWG to PDF.pc3` file for Publisher to use. Publisher can use the A0 page size from the unmodified `DWG to PDF.pc3` file for drawings in portrait orientation.
- The AutoCAD **SDI** (single document interface) system variable must be set to **0** for use with this rendering module or else rendering could fail and result in **ARX cannot load** errors in the event log.
- If AutoCAD drawings (particularly legacy drawings) that contain AEC objects will be rendered, set the AutoCAD **AECFILEOPENMESSAGE** system variable to **0**. This will prevent dialog boxes from appearing when the drawings load that suspend rendering. The text of the dialog boxes is **Saving the drawing will update any AEC object in it to the current version, which will be incompatible with earlier versions**.
- Autodesk Infocenter must be disabled by setting the **InfoCenterOn** value of the following register key to **0**:

  `HKEY_CURRENT_USER\Software\Autodesk\AutoCAD\RXX.X\ACAD-XXXX:XXX\InfoCenter`

Where the Xs represent the release number and application code for the installed version of AutoCAD. This prevents the InfoCenter process (`WSCommCntr4.exe`) from starting and consuming processor resources.

- Add the Meridian Enterprise Server program folder (by default, `C:\Program Files\BC-Meridian\Enterprise Server`) to the **TRUSTEDPATHS** system variable in AutoCAD by clicking **Tools**>**Options**>**Files**>**Trusted Location**.
- Set the AutoCAD **REGENMODE** system variable to **1** to automatically regenerate drawings, if necessary, without prompting.
- Set the AutoCAD **PLQUIET** system variable to **1** to suppress plot-related dialog boxes and nonfatal error messages.
- If you have problems creating a rendering profile with the Autodesk AutoCAD rendering module and have verified the preceding settings, test AutoCAD interactively with the AutoCAD user profile of the Windows account that will be used for rendering. If the problem persists, recreate the AutoCAD user profile.
- If the normal rendering log output described in View the Event Logs doesn't reveal the cause of rendering problems, you can enable additional logging for this rendering module by setting the **AutoCADRenderExtendedLog** option to **true** in the following file.

  ```
  C:\ProgramData\BlueCieloECM\EnterpriseServices\PublishingCapabili
  ty.dat
  ```

  Learn more about the settings in the PublishingCapability.dat file.

Notes about Functionality

- The Autodesk AutoCAD rendering module does not support monochrome output directly but the output colors can be set in a plotter pen settings file.
- To successfully render AutoCAD external reference (xref) files, the paths must be available to and configured in the AutoVue configuration file `AVX.ini`. For information about configuring the **XREFPATHS** option in this file, see "AutoVue X INI File", "Pen Mapping Options", and "Printing Options" in the *Oracle AutoVue, Desktop Version Installation and Administration Manual* that can be downloaded from the Oracle website.

  For xrefs located on a local drive, specify absolute local paths. For xrefs located on shared network drives, specify absolute UNC paths or using mapped drive letters. With mapped drive letters, the Meridian Enterprise Server service must run in console, not service, mode as described in Configure Enterprise Server To Not Run As a Service.

> **Note:**
> For an example of configuring this module to render Navisworks models to NWD format, see Rendering Navisworks Models.

Configure AutoDesk AutoCAD Options

To configure the Autodesk AutoCAD rendering module options:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Rendering Profiles**.

   The **All Rendering Profiles** page appears and lists the existing profiles grouped by the name of the computer (cluster node) to which they are assigned.
2. Double-click the rendering profile that you want to configure.

   The rendering options page appears.
3. Click options or type values using the descriptions in the following table.
4. Click **Save**.

Autodesk AutoCAD rendering module options

Group	Option	Description
General	Name	The name of the rendering profile as seen in the Administration Console.
General	Computer	The name of the Meridian Enterprise Server cluster node on which to run this job.
General	Input extensions	The file extensions that will be rendered by this module. To modify this list: 1. Click **Configure**. The **Input Extensions** dialog box appears and lists the supported file extensions. 2. Select the file extensions that you want to be rendered. 3. Click **OK**. The quantity is refreshed to reflect your selections.
Output	AutoCAD version	If the computer has multiple AutoCAD installations on it, select the one that you want to be used with this rendering profile.

Group	Option	Description
Output	Rendering command	Select a command to use for rendering: • **Plot** — renders drawings with AutoCAD plotter configuration files using the options that are set in the **Plotter** and **Plot options** groups • **AutoLISP command** — shows options with which you can configure an AutoLISP function that you have created for plotting
Export	Layouts to export	Select the layouts to render. For the **Custom** option, type the layout name in **Custom layout**.
Export	Use job advanced rendering settings	Uses the value retrieved from a source document property. The property name is specified in the **AutoLISP** option of the publishing job as described in Configure Rendering Options.
Plotter	Plot configuration	Type the name of a plotter configuration file to use for rendering. For successful rendering, the file must be fully configured and operational without Publisher before it is used with Publisher.
Plotter	Output file format	Select the desired output format.
Plotter	Use all values from layout	If enabled, the options in the **Plot options** group are retrieved from the selected layout. If cleared, the options are available and can be configured.
Plot options	Media size from advanced rendering settings	Uses the value retrieved from a source document property. The property name is specified in the **Page size** option of the publishing job as described in Configure Rendering Options.
Plot options	Media size from layout	If **Media size from advanced rendering settings** is not enabled, uses the value retrieved from the layout, if one is set. If a media size was not set, the default size will be used.
Plot options	Default media size	Select a media name from AutoCAD to be used as the default (for example, if the page size retrieved from the source document property cannot be matched with an AutoCAD media name).

Group	Option	Description
Plot options	Plot style	Select a source for the plot style to use for rendering. The **Use job advanced rendering settings** option uses the value retrieved from a source document property. The property name is specified in the **Pen style** option of the publishing job as described in Configure Rendering Options.
Plot options	Skip incompatible drawings	If enabled and the selected plot style cannot be applied, generates an error and the drawing is skipped. Otherwise, if an incompatible value is used then the plot style is taken from the layout. If the plot style from the layout is not present on the Meridian Enterprise Server computer, then no plot style is used.
Plot options	Use values from layout	If enabled, the remainder of the options in the dialog box are derived from the layout to be rendered. Otherwise, the options are available and can be configured.
Plot options	Plot area	Select an option from the list to specify the area to render. The available options correspond to those saved in the drawing.
Plot options	Center plot	Centers the output within the selected media.
Plot options	Fit to paper	Scales the selected plot area to fit the selected media.
Plot options	Scale	Select a scale at which to render the output. Only available if **Fit to paper** is cleared.
Plot options	Orientation	Select an option from the list to specify the orientation of the selected plot area within the selected media. The **Use job advanced rendering settings** option uses the value retrieved from a source document property. The property name is specified in the **Page orientation** option of the publishing job as described in Configure Rendering Options.
Plot options	Units	Unit of measurement to scale the drawing to the media.
Plot options	Use line weights	Renders line weights in the output.
Plot options	Scale line weights	Adjusts the line weights relative to the value selected for the **Scale** option.
AutoLISP command	Command	Type the name of an AutoLISP function to plot the source drawing. For help creating the AutoLISP function, see Configure an AutoLISP Plotting Command.

Group	Option	Description
AutoLISP command	Output extension	Type the extension of the output file to be created. It should be the extension that is normally generated by the plotter that is specified in the plotter configuration file that is used by the function. By default, the name the output file will be the name of the drawing being plotted.

Configure an AutoLISP Plotting Command

The plotting function called by a publishing job must be declared with two parameters. The first parameter will be set by Publisher to the output file name during rendering. The second parameter can be used to pass to the function the value of the document property that is selected for the **Property based** option in the rendering profile described in Configure the Autodesk AutoCAD Rendering Module Options. The function can then implement logic that controls the output, for example, the sheet size.

> **Note:**
> The function must not invoke the AutoCAD EXPORT command.

The function should run an AutoCAD command with at least the input responses necessary to produce the desired output file. Providing additional input responses is optional.

The easiest way to determine the necessary input responses is to run the command manually and to record the responses that you type. Then transfer those responses to the function definition.

Following is an example of an AutoLISP function definition that implements the second parameter to retrieve the page size from the property specified by the **Property based** option. Depending on the value, a different corresponding printer page definition is used. The function then plots the drawing differently if the current tab shows model space or a paper space layout:

```
(defun PDFPlot (outfile prop)
  (setq pc3 "DWG To PDF.pc3")
  ;Set the paper size
  (setq psize
    (cond
      ((= prop "A4") "ISO expand A4 (210.00 x 297.00 MM)")
      ((= prop "A3") "ISO expand A3 (297.00 x 420.00 MM)")
      ((= prop "A2") "ISO expand A2 (420.00 x 594.00 MM)")
      ((= prop "A1") "ISO expand A1 (594.00 x 841.00 MM)")
      ((= prop "A0") "ISO expand A0 (841.00 x 1189.00 MM)")
      (T "ISO expand A3 (297.00 x 420.00 MM)")
    )
  )
  (setq orientation "L")
  ;Run the plot command
  (if (= (getvar "ctab") "Model")
     (command "-PLOT" "Y" "Model" pc3  psize "M" orientation "N"
       "E" "FIT" "C" "Y" "Monochrome.ctb" "Y" "A" outfile "N" "Y")
     (command "-PLOT" "Y" (getvar "ctab") pc3  psize "M" orientation
       "N" "Layout" "1:1" "0.00,0.00" "Y" "Monochrome.ctb" "Y" "N"
       "N" "N" outfile "N" "Y")
  )
)
```

Configure the Autodesk Forge Rendering Module Options

The Autodesk Forge rendering options specify which file extensions to render.

> **Note:**
> Your Meridian Cloud subscription must be configured as described in Configure Autodesk Forge Viewing.

To configure the Autodesk Forge rendering options:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Rendering Profiles**.

   The **All Rendering Profiles** page appears and lists the existing profiles grouped by the name of the computer (cluster node) to which they are assigned.
2. Double-click the rendering profile that you want to configure.

   The rendering options page appears.
3. Click options or type values using the descriptions in the following table.

Autodesk Forge rendering options

Option	Description
Name	The name of the rendering profile as seen in Administration Console.
Computer	The name of the Meridian Enterprise Server computer (cluster node) on which to run this job.
Input extensions	The file extensions that will be rendered by this module. To modify this list: 1. Click **Configure**. The **Input Extensions** dialog box appears and lists the supported file extensions. 2. Select the file extensions that you want to be rendered. 3. Click **OK**. The quantity is refreshed to reflect your selections.

Configure the AutoVue Rendering Module Options

The AutoVue rendering options specify which source document formats to render and to which format in the destination system.

Notes about Functionality

Two rendering modules are provided that are both based on AutoVue software, which must be installed separately.

The AutoVue rendering module is based on a legacy version of AutoVue Desktop. It supports page ranges, paper sizes, orientation, colors, and pen tables and those options are available in existing and new rendering profiles made with this rendering module. However, it does not support redlines or the latest versions of some file formats and is no longer being developed by Oracle. This is the same version as provided by prior versions of Meridian Enterprise Server and is compatible with existing rendering profiles.

The AutoVue Desktop Deployment rendering module is based on the AutoVue client/server version that is listed in the *Supported Software* document for this version of Meridian Enterprise. It is installed as a desktop deployment on the Meridian Enterprise Server computer. It does not support page ranges, paper sizes, orientation, colors, and pen tables and those options are not available in new rendering profiles made with this rendering module. However, this AutoVue version does support the latest versions of some file formats, it supports redlines (the rendering module does not support AutoVue **Signoff** approval stamps), and is supported by Oracle.

Configure Oracle AutoVue Options

To configure the Oracle AutoVue rendering options:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Rendering Profiles**.

   The **All Rendering Profiles** page appears and lists the existing profiles grouped by the name of the computer (cluster node) to which they are assigned.
2. Double-click the rendering profile that you want to configure.

   The rendering options page appears.
3. Click options or type values using the descriptions in the following table.
4. Click **Save**.

Note:

- To publish redlines for the Microsoft Word, Excel, and RTF file types, set the **ENABLEOFFICEMARKUPS** option to **1** in the **[OPTIONS]** section of the file `avx.ini` that is located in the `Windows` folder.
- Accruent does not provide support for modifications to the `avx.ini` file that are not documented by Accruent. In some circumstances, the settings may also be overwritten by Accruent software. Make other modifications at your own risk.

AutoVue rendering module options

Group	Option	Description
General	Name	The name of the rendering profile as seen in Administration Console.
General	Computer	The name of the Meridian Enterprise Server computer (cluster node) on which to run this job.
General	Input extensions	The file extensions that will be rendered by this module. To modify this list: 1. Click **Configure**. The **Input Extensions** dialog box appears and lists the supported file extensions. 2. Select the file extensions that you want to be rendered. 3. Click **OK**. The quantity is refreshed to reflect your selections.
Output	Format	The output file format to which to render files with the extensions listed in the **File extensions** option.
Output	File extension	Type the file extension (with period) to assign to the output files rendered by this module.
Options	Update title blocks before rendering	If enabled and AutoVue is installed on the rendering node, the title blocks in the document will be updated from the document properties before the document is rendered. If disabled or the application is not installed on the rendering node, the update is skipped.
Options	Use job advanced rendering settings	Enable this option if the page size and orientation are stored as property values for the source documents and the corresponding options are selected as described in Configure Rendering Options. If those options are not selected, select default values for **Paper size** and **Orientation**.

Group	Option	Description
Options	Force all colors to black	Enable for monochrome output. Available only for PDF output.
Page Setup	Document pages	Specify which pages to render. To render only a range of pages, select **Range** and then type the page numbers in **From** and **To**. To render the current page as it was last saved in the document, select **Current**. Available only for PDF output.
Page Setup	Paper size	Select a page size from the list. This option is not available for the AutoVue Desktop Deployment rendering module.
Page Setup	Orientation	Select an option from the list to specify the orientation of the output file. This option is not available for the AutoVue Desktop Deployment rendering module.
Pen Setup	Pen table	Select an AutoVue pen table that specifies the pen width of each line color. Available only for PDF output. If the pen table file specifies AutoCAD color numbers, set the **ACAD2004RGBCOLOR** option to **0** in the **[OPTIONS]** section of the file `avx.ini` that is located in the `Windows` folder. Not available for the AutoVue Desktop Deployment rendering module.
Pen Setup	Units	Select the unit of measurement in which the pen widths are expressed. Available only for PDF output. Not available for the AutoVue Desktop Deployment rendering module.
Pen Setup	Color depth	Select a gamut to control the number of colors in the output file. Not available for Adobe PDF output. Not available for the AutoVue Desktop Deployment rendering module.
Pen Setup	Scale	The scale of the output image relative to the original file. Not available for Adobe PDF output. Not available for the AutoVue Desktop Deployment rendering module.
Pen Setup	Size	Type the number of pixels in the **X** and **Y** dimensions for the output image. Not available for Adobe PDF output. Not available for the AutoVue Desktop Deployment rendering module.

Configure the Autodesk Inventor Rendering Module Options

The Autodesk Inventor rendering options specify which drawing layouts to render and to which format in the destination system.

To configure the Autodesk Inventor rendering options:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Rendering Profiles**.

   The **All Rendering Profiles** page appears and lists the existing profiles grouped by the name of the computer (cluster node) to which they are assigned.

2. Double-click the rendering profile that you want to configure.

   The rendering options page appears.

3. Click options or type values using the descriptions in the following table.

   Autodesk Inventor rendering options

Option	Description
Name	The name of the rendering profile as seen in Administration Console.
Computer	The name of the Meridian Enterprise Server computer (cluster node) on which to run this job.
Input extensions	The file extensions that will be rendered by this module. To modify this list: a. Click **Configure**. The **Input Extensions** dialog box appears and lists the supported file extensions. b. Select the file extensions that you want to be rendered. c. Click **OK**. The quantity is refreshed to reflect your selections.

4. For each of the Inventor file types, click the corresponding tab and then click options or type values for that file type using the descriptions in the following table.

   Not all options are supported for all output file formats.

5. Click **Save**.

> **Note:**
> When rendering many Inventor documents, some may fail to render because they do not open correctly in Inventor. In such cases, Inventor will only generate an **Unspecified error** message. You can reduce the likelihood of this happening by limiting how many documents are rendered in a single Inventor session.
>
> To do so, set the **InventorRenderSessionMaxDocuments** setting in the following file to a lower number. The default is **100**. Setting the value to **0** removes the limitation completely. After this number of documents have been rendered, Inventor will be closed and restarted to reclaim system resources.
>
> ```
> C:\ProgramData\BlueCieloECM\EnterpriseServices\PublishingCapability.dat
> ```
>
> To learn more about the settings in the **PublishingCapability.dat** file, see the *PublishingCapability.dat* article in the *Meridian Enterprise Server Administrator's Guide*.

Autodesk Inventor rendering options

Group	Option	Description
Output	Output file format	The output file format to which to render the selected Inventor file type. When configured for PDF rendition output only and in combination with Autodesk Inventor 2016, the Autodesk Inventor rendering module requires additional configuration of Meridian Enterprise Server as described in Configure Enterprise Server To Not Run As a Service.

Group	Option	Description
Options	Publish mode	The amount of data to render from the source document depending on the Inventor file type: Assembly: • **Express** — Renders the current view of the document. Does not render bill of materials data, design views, or positional representations. • **Complete** — Renders the full content of the file. Renders all enabled bill of materials data, all design views, and all positional representations. Drawing: • **Express** — Renders only the active sheet without the 3D model. • **Complete** — Renders all sheets and all 3D models except sheets excluded from printing. Part, Sheet Metal Part, iPart, iAssembly: • **Express** — Renders the current view of the document. • **Complete** — Renders the full content of the file. Presentation: • **Express** — Renders the static exploded views. Does not render bill of materials data, design views, or positional representations. All unsaved working changes including the current camera position render to the DWF file. Components invisible in Autodesk Inventor render and are shown in the DWF model palette as hidden. • **Complete** — The rendered DWF file contains all presentation views (including animations and assembly instructions) and the associated Autodesk Inventor assembly, along with its design views, positional representations, and BOM. **Note:** Only the active level of detail representations are rendered. **Custom** — The amount of data to render corresponds to the Autodesk Inventor **Export** command options. For more information about the options on the tabs, refer to the Autodesk Inventor documentation.
Options	Enable measure	Enables the **Measure** tool in the output file.
Options	Enable printing	Enables printing of the output file.

Group	Option	Description
Options	Enable markups	Enables markup of the output file.
Options	Enable markup editing	Enables markup editing in the output file.
Options	Create 2D snapshot	Creates a 2D file from a 3D model. Available for DWF output only.
Options	Printer name	Select a printer name from the list of available printers and then select a color depth for the rendition, either **Gray scale** or **Color**. The printer driver must not show any interactive dialog boxes during printing, for example, **Save As** to save the printer driver output as a disk file. If the driver does show a dialog box, the Autodesk Inventor rendering module cannot detect it and respond accordingly. Such a printer driver cannot be used with the Autodesk Inventor rendering module. Test all printer drivers thoroughly to determine their compatibility.
Options	Output file extension	Type a valid file extension to assign to the output file.
Options	Use job advanced rendering settings	Select this option if the page size and orientation are stored as property values for the source documents and the corresponding options are selected as described in Configure Rendering Options. If those options are not selected, select default values from **Paper size** and **Orientation**.
Options	Sheets in range	Select which drawing sheets to render. To render only a range of sheets, select **Sheets range** and then type the sheet numbers in the **From** and **To** text boxes.
Options	Excluded sheets	Enable this option to render all sheets except those specified in **Sheets in range**.
Options	All colors as black	If enabled, renders all colors in the source drawing to black in the output file.
Options	Remove object line weight	Renders all line weights in the source drawing to the same weight in the output file.
Options	Vector resolution	Select an output resolution.
Image Size	X	Type a size for the output image width (in pixels).

Group	Option	Description
Image Size	Y	Type a size for the output image height (in pixels).
Image Size	Transparent background	If enabled, renders the background of the image as transparent, which also reduces image file size.

Configure the Custom Rendering Module Options

The Custom rendering module options specify which source document file extensions to render and the parameters to pass to the rendering application.

Notes about Functionality

The Custom rendering module does not provide any of the following that are the responsibility of the rendering application and of the organization that implements it:

- All processes started by the resource (script) file are properly closed when they are no longer needed. The process (script) that the module starts will be terminated by the module if it exceeds the time-out specified in Configuring the Publishing Options.
- Dialog boxes shown by the rendering application are suppressed or handled appropriately
- Resources created by or consumed by the rendering application do not interfere with publishing job processing
- The rendering application is properly installed, configured, and licensed to run under the Enterprise Server service account
- Error handling, roll-back, or fail-over processes

The rendering module automatically generates a configuration file from the source document information and the configuration parameters. The rendering application can use this configuration file to perform the rendering.

The desired path of the configuration file can be specified on the rendering application command line with the **-profile** key, for example, `<Application>.exe -profile CustomRender.ini`. If no path is specified, the default location of the configuration file is `<ServiceAccountTempFolder>/BCTemp/<JobName>`. The file is generated in standard `.ini` format with sections that group related settings together, for example, **[Page]**. The format makes it easier for you to understand the configuration and for applications to interpret the parameters.

Each setting occupies one line, for example, **PageSize=A3**.

Following is an example of an automatically generated configuration file:

```
[Common]
Source=F:\DataStor\Cache\ANDREWD\M-And-w8-64,D-Ht1\Publish\Test_
2017.dwg
Destination=C:\tmp\BCTemp\CustomRender\Test_2017.pdf
Log=C:\tmp\BCTemp\CustomRender\Test_2017.log
[Source]
Category=Meridian
```

```
Name=Ht1@AND-W8-64
ID={417B4146-EF2B-11E0-0000-9D6D3C3A882E}
[Page]
Layout=0
PageSize=A3
PageOrientation=0
ZoomToExtents=1
[Pen]
Color=2
UseLineWeights=0
[Custom]
Units=mm
Stamp=1
```

> **Note:**
> - The file paths, names, and extensions are calculated by the rendering module and are not configurable.
> - The rendering application is responsible for writing its command line output to the specified log file.

If the rendering application does not support a parameter file in this format, create logic in an executable script file (`.bat`,`.cmd`, `.ps1`) that parses the parameter file and calculates and runs a command line that is compatible with the application. Upload the script file as a custom resource file on the server as described in Manage Custom Resources. An example PowerShell script for rendering with the AutoVue Document Converter is provided in `C:\Program Files\BC-Meridian\Enterprise Server\CustomRenderAutoVue.ps1`. Thoroughly test your script file apart from the publishing job first to be sure it works as expected.

Configure Custom Rendering Module Options

To configure the Custom rendering module options:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Rendering Profiles**.

   The **All Rendering Profiles** page appears and lists the existing profiles grouped by the name of the computer (cluster node) to which they are assigned.
2. Double-click the rendering profile that you want to configure.

   The rendering options page appears.
3. On the **General** page, click options or type values using the descriptions in the following table.

Custom rendering module general options

Option	Description
Name	The name of the rendering profile as seen in the Administration Console.
Computer	The name of the Meridian Enterprise Server cluster node on which to run this job.
Input extensions	The file extensions that will be rendered by this module. To modify this list: a. Click **Configure**. The **Input Extensions** dialog box appears and lists the file extensions that are registered in Windows on the computer specified for **Computer**. Any custom file extensions specified for the **Custom input extensions** option are listed in the **Custom files** group. b. Select the file extensions that you want to be rendered. c. Click **OK**. The quantity is refreshed to reflect your selections.
Custom input extensions	If you want the module to render files with extensions that are not shown in the **Input Extensions** list by default, type them (without the period) here separated by semi-colons (;). For example, `txt2;xyz`. The extensions will be added to the **Input Extensions** list in the **Custom files** group where you can select them. If you try to enter file extensions that already exist in the **Input Extensions** list, they will be automatically removed.

4. On the **Output** page, click options or type values using the descriptions in the following table.
5. Click **Save**.

Custom rendering module output options

Group	Option	Description
General	Resource file to run	Select an existing resource filename to run on the command line. The list contains files that have been uploaded as described in Manage Custom Resources.
General	Include input and output filename parameters	If enabled, passes the input, output, and log file names on the command line to the script. The log file output is also saved in the publishing log. If disabled, the file names are not passed to the script and output is not saved in the publishing log.

Group	Option	Description
General	Command line preview	Read-only preview of the command line that would be run with the selected options.
Options	Output file format	The file extension (without the period) of the output from the rendering application. Files with this extension in the output folder will be detected for publishing.
Options	Update title blocks before rendering	If enabled and the native application of the source document is installed on the rendering node, the title blocks in the document will be updated from the document properties before the document is rendered. If disabled or the application is not installed on the rendering node, the update is skipped.
Options	Use job advanced rendering settings	Select this option if the values for the options in the **Page Setup** group and the **Pen Setup** group are stored as property values of the source documents. If so, then the document properties must be selected as described in Configure Rendering Options.
Page Setup	Default page size	Select an option from the list to specify the default rendition page size if **Use job advanced rendering settings** is not enabled or if a valid size is not found in the document property.
Page Setup	Default orientation	Select an option from the list to specify the default rendition page orientation if **Use job advanced rendering settings** is not enabled or if a valid size is not found in the document property. The values that are saved in the configuration file are: **0** — portrait **1** — landscape
Page Setup	Layouts to export	Select an option from the list to specify the default layout to render if **Use job advanced rendering settings** is not enabled or if a valid layout is not found in the document property. The values that are saved in the configuration file are: **0** — active layout **1** — model space only **2** — all paper space layouts **3** — all layouts **4** — layout name specified in **Custom layout**
Page Setup	Custom layout	If **Custom** is selected for the **Layouts to export** option, the name of the custom layout to render. This option is only available if **Layouts to export** is set to **Custom**.

Group	Option	Description
Page Setup	Zoom to extents	If enabled, renders the drawing extents if it is larger than what is shown in the layout that is specified for the **Layouts to export** option.
Pen Setup	Default color	Select an option from the list to specify the default color depth of the rendition if **Use job advanced rendering settings** is not enabled or if a valid size is not found in the document property. The values that are saved in the configuration file are: **0** — monochrome **1** — gray scale **2** — color
Pen Setup	Use line weights	If enabled, renders line weights in the output according to the setting of **Default pen table**.
Pen Setup	Default pen table	Select an option from the list to specify the default pen table to use if **Use job advanced rendering settings** is not enabled or if a valid pen table is not found in the document property. If the name of the pen table does not appear in the list, the computer might need to be scanned to discover the pen table as described in Configure Rendering Options.
Custom Parameters	Custom parameters	Type parameter name and value pairs that are required by the rendering application. Type one pair per line in the format ***<Parameter>=<Value>***. Each line will be added to the profile file unaltered for the script to parse accordingly. For example, **username=john**

Configure the Meridian Cloud Rendering Module Options

The Meridian Cloud rendering options specify which file extensions to render in the Meridian Cloud Publisher. If you have a publishing job configured for this rendering profile, you can configure your publishing job to generate a thumbnail when you update a rendition. This rendering module type was added in the 2022 release.

> **Note:**
> To use this rendering module, you must have a Meridian Cloud tenancy and a subscription to Meridian Cloud Publisher. The CloudPublisherSubscription feature toggle must be enabled in Cloud.

To configure the Meridian Cloud rendering options:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Rendering Profiles**.

   The **All Rendering Profiles** page appears and lists the existing profiles grouped by the name of the computer (cluster node) to which they are assigned.
2. Double-click the rendering profile that you want to configure.

   The rendering options page appears.
3. Click options or type values using the descriptions in the following table.

Meridian Cloud rendering options

Option	Description
Name	The name of the rendering profile as seen in Administration Console.
Computer	The name of the Meridian Enterprise Server computer (cluster node) on which to run this job.
Input extensions	The file extensions that will be rendered by this module. To modify this list: 1. Click **Configure**. The **Input Extensions** dialog box appears and lists the supported file extensions. 2. Select the file extensions that you want to be rendered. 3. Click **OK**. The quantity is refreshed to reflect your selections.

Configure the Microsoft Office Rendering Module Options

The Microsoft Office rendering options specify how to render each Office file format, how to run the Office applications, and options for the output file.

> **Note:**
> - Use of Microsoft Office 2007 requires installation of the 2007 Microsoft Office Add-in: Microsoft Save as PDF.
> - Rendering all Microsoft Office applications requires additional configuration of Meridian Enterprise Server as described in Configure Enterprise Server To Not Run As a Service.

To configure the Microsoft Office rendering options:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Rendering Profiles**.

   The **All Rendering Profiles** page appears and lists the existing profiles grouped by the name of the computer (cluster node) to which they are assigned.
2. Select **Microsoft Office** and click **Options**.

   The **Office Rendering Options** dialog box appears.
3. Select or type options using the descriptions in the following tables.

   After setting options on the **General** page, configure the rendering options for the applicable Office applications by clicking the corresponding tab.
4. Click **Save**.

General Options

General options

Option	Description
Name	The name of the rendering profile as seen in Administration Console.
Computer	The name of the Meridian Enterprise Server computer (cluster node) on which to run this job.

Option	Description
Input extensions	The file extensions that will be rendered by this module. To modify this list: 1. Click **Configure**. The **Input Extensions** dialog box appears and lists the supported file extensions. 2. Select the file extensions that you want to be rendered. 3. Click **OK**. The quantity is refreshed to reflect your selections.

Word Options

Microsoft Word options

Option	Description
Update title blocks before rendering	If enabled and Office is installed on the rendering node, the title blocks in the document will be updated from the document properties before the document is rendered. If disabled or the application is not installed on the rendering node, the update is skipped. Setting this option does not enable rendering. Rendering must be configured separately. The **BC Enterprise Server** service must be run in interactive mode as described in Configure Enterprise Server to not run as a service.
Pages	Select an option to specify which pages to render.
Publish what	Select **Document** to only render the final document text. Select **Document showing markup** to also render Word comments, ink, insertions, deletions, formatting changes, and highlighting in the output file.
Create bookmarks using	Adds bookmarks to the **Bookmarks** navigation panel in Adobe Reader using Word heading styles or bookmarks.
Document properties	Adds the document property values to the corresponding properties of the output file.
Document structure tags for accessibility	Adds non-visible tags to the output file that improve readability of the document for users of assistive software or mobile devices.

Option	Description
ISO 19005-1 compliant	Adds all information (for example, fonts) to the output file that is necessary to display the document in the same way at any time in the future. Excludes information (for example, audio, video, JavaScript, encryption, non-standard metadata) that relies on external sources.
Bitmap text when fonts may not be embedded	Converts text to images if the fonts cannot be embedded due to licensing or other external dependencies.

Excel Options

Microsoft Excel options

Option	Description
Update title blocks before rendering	If enabled and Office is installed on the rendering node, the title blocks in the document will be updated from the document properties before the document is rendered. If disabled or the application is not installed on the rendering node, the update is skipped. The **BC Enterprise Server** service must be run in interactive mode as described in Configure Enterprise Server to not run as a service.
Pages	Select an option to specify which pages to render.
Publish what	Select an option to specify the scope of the pages to render. Select **Ignore print areas** to exclude print areas that may be set in worksheets and to render all available data instead.
Document properties	Adds the document property values to the corresponding properties of the output file.
Document structure tags for accessibility	Adds non-visible tags to the output file that improve readability of the document for users of assistive software or mobile devices.
ISO 19005-1 compliant	Adds all information (for example, fonts) to the output file that is necessary to display the document in the same way at any time in the future. Excludes information (for example, audio, video, JavaScript, encryption, non-standard metadata) that relies on external sources.
Disable macros	Disables execution of Excel macros during rendering.
Run Excel interactively	Shows the Excel user interface during rendering for monitoring or troubleshooting. If cleared, Excel runs invisibly in the background.

PowerPoint Options

Microsoft PowerPoint options

Option	Description
Update title blocks before rendering	If enabled and Office is installed on the rendering node, the title blocks in the document will be updated from the document properties before the document is rendered. If disabled or the application is not installed on the rendering node, the update is skipped. The **BC Enterprise Server** service must be run in interactive mode as described in Configure Enterprise Server to not run as a service.
Pages	Select an option to specify which slides to render.
Publish what	Select an option from the list to specify the scope of the data to render.
Slides per page	Type the number of slides to render to each page in the output file.
Frame slides	Renders a hairline border around each slide in the output file.
Order	Select the orientation of slides in the output file.
Include hidden slides	Renders hidden slides in the output file.
Include comments and ink markup	Renders PowerPoint comments, ink, insertions, deletions, formatting changes, and highlighting in the output file.
Document properties	Adds the selected document property values to the corresponding properties of the output file.
Document structure tags for accessibility	Adds non-visible tags to the output file that improve readability of the document for users of assistive software or mobile devices.
ISO 19005-1 compliant	Adds all information (for example, fonts) to the output file that is necessary to display the document in the same way at any time in the future. Excludes information (for example, audio, video, JavaScript, encryption, non-standard metadata) that relies on external sources.
Bitmap text when fonts may not be embedded	Converts text to images if the fonts cannot be embedded due to licensing or other external dependencies.
Disable macros	Disables execution of PowerPoint macros during rendering.

Visio Options

Microsoft Visio options

Option	Description
Update title blocks before rendering	If enabled and Office is installed on the rendering node, the title blocks in the document will be updated from the document properties before the document is rendered. If disabled or the application is not installed on the rendering node, the update is skipped. **Note:** The **BC Enterprise Server** service must be run in interactive mode as described in Configure Enterprise Server to not run as a service.
Pages	Select an option to specify which pages to render.
Color as black	Select this option if the output file will typically be printed on a monochrome printer or for greater visibility.
Include background	Renders background color or images in the output file.
Document properties	Adds the document property values to the corresponding properties of the output file.
Document structure tags for accessibility	Adds non-visible tags to the output file that improve readability of the document for users of assistive software or mobile devices.
ISO 19005-1 compliant	Adds all information (for example, fonts) to the output file that is necessary to display the document in the same way at any time in the future. Excludes information (for example, audio, video, JavaScript, encryption, non-standard metadata) that relies on external sources.
Disable events	Disables execution of Visio event handlers during rendering.

Configure the PDFsharp Rendering Module Options

The PDFsharp rendering options specify which source document formats to render and how they should be rendered in the destination system.

Graphic metafiles (`.wmf` and `.emf`) are converted to 200 dpi bitmap images before rendering. The resolution is not configurable.

To configure the PDFsharp rendering options:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Rendering Profiles**.

   The **All Rendering Profiles** page appears and lists the existing profiles grouped by the name of the computer (cluster node) to which they are assigned.
2. Double-click the rendering profile that you want to configure.

   The rendering options page appears.
3. On the **General** page, click options or type values using the descriptions in the following table.

   PDFsharp rendering module general options

Option	Description
Name	The name of the rendering profile as seen in the Administration Console.
Computer	The name of the Meridian Enterprise Server cluster node on which to run this job.
Input extensions	The file extensions that will be rendered by this module. To modify this list: a. Click **Configure**. The **Input Extensions** dialog box appears and lists the supported file extensions. b. Select the file extensions that you want to be rendered. c. Click **OK**. The quantity is refreshed to reflect your selections.

4. On the **Output** page, click options or type values using the descriptions in the following

table.

PDFsharp rendering module output options

Group	Option	Description
Page Setup	Paper size	Select the rendition page size from the list.
Page Setup	Orientation	Select the rendition orientation from the list.
Placement	Scaling	Select how to scale the image to the rendition page.
Placement	Vertical alignment	Select how to vertically align the image on the rendition page.
Placement	Horizontal alignment	Select how to horizontally align the image on the rendition page
Options	Color	Select the color depth of the rendition from the list.

5. Click **Save**.

Configure the Autodesk Revit Rendering Module

The Autodesk Revit rendering options specify what to render, where to render it, and to which format in the destination system.

> **Note:**
> If rendering certain Revit files (.rvt) consistently leads to any error which does not seem applicable, check if opening the .rvt file in the Revit version installed on the render node causes an upgrade dialog to appear. If so, the file should be upgraded in an interactive Revit session before trying to render again.

To configure the Autodesk Revit rendering module options:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Rendering Profiles**.

   The **All Rendering Profiles** page appears and lists the existing profiles grouped by the name of the computer (cluster node) to which they are assigned.
2. Double-click the rendering profile that you want to configure.

   The rendering options page appears.
3. Click options or type values using the descriptions in the following table.
4. Click **Save**.

Autodesk Revit rendering module options

Group	Option	Description
General	Name	The name of the rendering profile as seen in the Administration Console.
General	Computer	The name of the Meridian Enterprise Server cluster node on which to run this job.
General	Input extensions	The file extensions that will be rendered by this module. To modify this list: 1. Click **Configure**. The **Input Extensions** dialog box appears and lists the supported file extensions. 2. Select the file extensions that you want to be rendered. 3. Click **OK**. The quantity is refreshed to reflect your selections.

Group	Option	Description
Output	Output file format	Select the desired output format. The page refreshes to show the options that are available for the format that you selected. When configured for BMP rendition output only, the Revit rendering module requires additional configuration of Meridian Enterprise Server as described in Configure Enterprise Server To Not Run As a Service.

The table below describes the options available for each output type.

Output options

Output Type	Group	Option	Description
DWG	Layers	Layer mapping standard	Assign objects to layers in the output according to the selected layer standard .
DWG	Layers	Property overrides	Specify how layers are assigned to entities with explicit layer assignments in the rendition. • **Category properties BYLAYER, overrides BYENTITY** — Entities generated by a specific category are assigned to a layer according to the layer settings. To preserve visual fidelity, overridden attributes result in entity-specific attributes. • **All properties BYLAYER, no overrides** — Forces all entities to follow visual properties as set by their layer. Visual fidelity is lost, but this produces the least number of layers while still providing by-layer control over exported entities. • **All properties BYLAYER, new layers for overrides** — Visual fidelity is preserved and there is by-layer control over all entities, although the number of layers in the output file might be increased.
DWG	Layers	Hide matching layers	Exclude layers from the rendition that have names with the suffix specified in **Hidden layers suffix**.
DWG	Layers	Hidden layers suffix	Type a suffix for the layers to exclude from the rendition.
DWG	Units	DWG units	Select the rendition scale units
DWG	Units	Coordinate system basis	Select the basis for the rendition coordinate system

Output Type	Group	Option	Description
DWG	Quality	ACA objects	Specify how to render ACA (AutoCAD Architecture) objects.
DWG	Quality	Solids in 3D views	Select the type of solids to generate for 3D objects.
DWG	Quality	Text quality	Specify how text is rendered. Formatting intelligence is lost with the **Exact** setting.
DWG	Quality	Color depth	Select the color depth of the output.
DWG	Options	Use job advanced rendering settings	Select this option if the page size and orientation are stored as property values for the source documents and the corresponding options are selected as described in Configure Rendering Options.
DWG	Options	Defaults if job advanced rendering settings cannot be matched	Select this option to configure a default settings if the values that are retrieved as described in Configure Rendering Options are missing or do not match those provided by the operating system.
DWG	Options	View name	Type the name of a view to generate in the rendition. See also the note below.
DWG	Options	Rooms, spaces and areas as polylines	If enabled, renders using polylines. If disabled, renders using primitive entities.
DWG	Options	Linetype scale	Select a linetype scale for the rendition.
DWG	Options	Hide scope boxes	Specify whether to show scope boxes.
DWG	Options	Hide reference planes	Specify whether to show reference planes.
DWG	Options	Hide unreferenced tags	Specify whether to show unreferenced view tags.
DWG	Options	DWG file format version	Select an AutoCAD file format version for the rendition.
DWF	Export Object Data	Element properties	Include the instance and type properties of objects in the rendition.

Output Type	Group	Option	Description
DWF	Export Object Data	Separate rooms, spaces and areas	Separate the element properties by room, space, and area in the rendition.
DWF	Graphics Settings	Image format	Select either standard or compressed output.
DWF	Graphics Settings	Image quality	If compressed output is enabled, select a level of compression.
DWF	Print Setup	Orientation	Select an option from the list to specify the orientation of the image in the output file.
DWF	Print Setup	Paper size	Select a page size from the list.
DWF	Options	DWFx	Renders the file to DWFx format for better compatibility with other applications.
DWF	Options	Crop box visible	Includes the export crop box in the output.

Output Type	Group	Option	Description
DWF	Options	View range	A comma-separated list of the view names or numbers to include in the rendition. A range of view numbers can be specified with a hyphen. If left empty, the first view in the model will be rendered. This option supports the following view category names: • **FPlan** — Floor plan views • **CPlan** — Celling plan views • **APlan** — Area plan views • **Elevation** — Elevation views • **ThreeD** — 3D views • **Sheet** — Drawing sheet views • **Legend** — Legend views • **Section** — Section views • **Detail** — Detail views • **Render** — Rendering views Each item in the view range list can be specified in one of these forms: • *<Category>*:*<View name>* • *<Category>*:*<View number in category>* • *<Category>*:*<Start view number in category>-<End view number in category>* Both the view category name and the view name can be specified with the asterisk wildcard (*). Missing category names and view names will produce the same result. Examples: • **Sheet:*** or **Sheet:** Renders all drawing sheet views. • ***:Kitchen or :Kitchen** Renders all views in any category that includes the word **Kitchen** in the view name. • **Sheet:A10**

Output Type	Group	Option	Description
			Renders any drawing sheet number that includes the text **A10**. • **ThreeD:2,Render:4-6** Renders the second 3D view and the three rendering views with numbers 4, 5 and 6. See also the note below.
IFC	Options	IFC file type	Select the type of IFC file for the rendition.
IFC	Options	Filter view name	Include only the visible elements in the specified view. Elements in other views are filtered out. If no view name is specified (default), all model elements are included.
IFC	Options	Split walls and columns by story	Separates the walls and columns of each level that is defined as a building story.
IFC	Options	Export base quantities	Includes base quantities for model elements in the rendition.
IFC	Options	Include space boundaries	Select an option from the list to specify which space boundaries to include in the rendition.
IFC	Options	Family mapping file	The path on the server to a file that maps custom Revit families to IFC containers. The default is the file that is currently installed with Revit.
Image	Graphics Settings	Image format	Select the desired image format.
Image	Graphics Settings	Image quality	Select the desired image quality.
Image	Image Size	Size type	Select the desired output area.
Image	Image Size	Fit to size (pixels)	If the **Fit** option is selected for **Size type**, specify the rendition size in pixels.
Image	Image Size	Fit direction	If the **Fit** option is selected for **Size type**, specify the direction of the size that is specified for **Fit to size**.
Image	Image Size	Zoom to size (%)	If the **Zoom** option is selected for **Size type**, specify the zoom percentage.
Image	Options	View name	The name or ordinal number of the view to render. See also the note below.

Note:
If no value is specified for the **View name** or **View range** options, the first view that is found from the following list will be rendered (in order of priority):

1. The view specified as the starting view for the project (if provided).
2. The view specified for project preview generation (if provided).
3. The first view found from the following categories (in order of priority):
    a. **Sheet**
    b. **FPlan**
    c. **CPlan**
    d. **APlan**
    e. **Elevation**
    f. **Section**
    g. **ThreeD**
    h. **Render**
4. The first view that can be found.

Configure the Dassault Systèmes SolidWorks Rendering Module Options

The Dassault Systèmes SolidWorks rendering module options specify which drawings to render and to which format in the destination system.

The Dassault Systèmes SolidWorks rendering module requires additional configuration of Meridian Enterprise Server as described in Configure Enterprise Server To Not Run As a Service.

To configure the Dassault Systèmes SolidWorks rendering options:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Rendering Profiles**.

   The **All Rendering Profiles** page appears and lists the existing profiles grouped by the name of the computer (cluster node) to which they are assigned.
2. Double-click the rendering profile that you want to configure.

   The rendering options page appears.
3. Click options or type values using the descriptions in the following table.
4. Click **Save**.

Dassault Systèmes SolidWorks rendering module options

Group	Option	Description
General	Name	The name of the rendering profile as seen in Administration Console.
General	Computer	The name of the Meridian Enterprise Server computer (cluster node) on which to run this job.
General	Input extensions	The file extensions that will be rendered by this module. To modify this list: 1. Click **Configure**. The **Input Extensions** dialog box appears and lists the supported file extensions. 2. Select the file extensions that you want to be rendered. 3. Click **OK**. The quantity is refreshed to reflect your selections.
Output	Action	Select an output format: **Save as PDF**, **Print**, or **Publish as eDrawings**.

Group	Option	Description
Output	Update title blocks before rendering	If enabled and SolidWorks is installed on the rendering node, the title blocks in the document will be updated from the document properties before the document is rendered. If disabled or the application is not installed on the rendering node, the update is skipped.
Output	Use job advanced rendering settings	Select this option if the page range is stored as a property value of the source documents and the **Page layout** option is selected as described in Configure Rendering Options. If that option is not selected, select a range from **Drawing page range**.
Output	Drawing page range	Select which drawing sheets to render. To render only a range of sheets, select **Page(s)** and then type the sheet numbers in **From** and **To**.
Output	Export as 3D	Saves the model as a 3D file.

Configure the Teigha DGN Rendering Module Options

The Teigha DGN rendering module options specify which drawing layouts to render, how they are rendered, and to which format in the destination system.

To configure the Teigha DGN rendering options:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Rendering Profiles**.

   The **All Rendering Profiles** page appears and lists the existing profiles grouped by the name of the computer (cluster node) to which they are assigned.

2. Double-click the rendering profile that you want to configure.

   The rendering options page appears.

3. On the **General** page, click options or type values using the descriptions in the following table.

   Teigha rendering module general options

Option	Description
Name	The name of the rendering profile as seen in Administration Console.
Computer	The name of the Meridian Enterprise Server computer (cluster node) on which to run this job.
Input extensions	The file extensions that will be rendered by this module. To modify this list: a. Click **Configure**. The **Input Extensions** dialog box appears and lists the supported file extensions. b. Select the file extensions that you want to be rendered. c. Click **OK**. The quantity is refreshed to reflect your selections.

4. On the **Output** page, click options or type values using the descriptions in the following table.

5. Click **Save**.

Teigha DGN rendering output options

Group	Option	Description
Options	Update title blocks before rendering	If enabled, the title blocks in the document will be updated from the document properties before the document is rendered. If disabled, the update is skipped.
Options	Use job advanced rendering settings	Select this option if the page size and orientation are stored as property values for the source documents and the corresponding options are selected as described in Configure Rendering Options. If those options are not selected, select default values from **Paper size** and **Orientation**.
Options	Xref paths	Comma-delimited list of locations to search for external reference files. Locations may be specified as filenames (linked by Meridian Enterprise references), paths relative to the parent document, or absolute paths to shared network folders. External references are resolved in the following order: • Absolute path, if specified • File name (Meridian Enterprise reference or relative path) • Locations specified by this setting If an external reference resides both in the vault and in a location outside the vault, the external location will take precedence. MicroStation logical variables are not supported.
Page Setup	Page size	Select a page size for the output from the list.
Page Setup	Orientation	Select a page orientation option.
Page Setup	Color	Select an option from the list to indicate the color depth of the rendition.
Page Setup	Layouts to export	Select an option for the layouts to include in the output.
Other Options	Pen table	Name of a pen table file (without the `.tbl` extension) that specifies the pen styles to use for rendering. The rendering module will search for the pen table file in the folder `C:\Program Files\BC-Meridian\Enterprise Server\Teigha.NET`. If the file cannot be found, the drawing will be rendered without the pen table.
Other Options	Named fence	Name of an existing fence object in the drawing that defines the plotting area.

Group	Option	Description
Other Options	Data fields	Include the data fields in the output file.
Other Options	Text nodes	Include the text nodes in the output file.
Other Options	Line weights	Render line weights in the output file.
Other Options	Embedded fonts	Embed the fonts that are used by the rendition in the output file so that they can be shown on systems where they are not installed. If fractions in text do not render correctly, copy the MicroStation font file `WorkSpace\System\Symb\font.rsc` to the folder `C:\Program Files\BC-Meridian\Enterprise Server\Teigha.NET`, rename the file to `ustation.rsc`, and regenerate the rendition.
Other Options	TrueType as geometry	Render text that is drawn with TrueType fonts using polylines. If this option is enabled, the text in PDF renditions can only be searched with the Advanced Find command in Adobe Reader.
Other Options	SHX text as geometry	Render text that is drawn with SHX fonts using polylines. By default, this rendering module will search for SHX fonts in the folder `C:\Program Files\BC-Meridian\Enterprise Server\Teigha.NET`. If a font file cannot be found, the text will be drawn using polylines. If this option is enabled, the text in PDF renditions can only be searched with the Advanced Find command in Adobe Reader.
Other Options	Enable simple geometry optimization	Use a rendering algorithm that optimizes simple geometry such as line segments into more complex entities such as polylines in the output. This option reduces performance slightly but produces smaller files.
Other Options	Encode (reduce file size)	Compresses images in the output file to save space.
Other Options	Enable layer support	Generates layers in the rendition that correspond to the layers in the source drawing.
Other Options	Include layers with visibility off	If **Enable layer support** is enabled, includes layers that are turned off in the rendition. Otherwise, they are excluded from the rendition.

Configure the Teigha DWG Rendering Module Options

The Teigha DWG rendering module options specify which drawing layouts to render, how they are rendered, and to which format in the destination system.

The rendition might display a blank page if Post rendering, Print stamp, and Encode are selected. If this occurs, clear the Encode (reduce the file size) check box.

To configure the Teigha DWG rendering options:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Rendering Profiles**.

   The **All Rendering Profiles** page appears and lists the existing profiles grouped by the name of the computer (cluster node) to which they are assigned.

2. Double-click the rendering profile that you want to configure.

   The rendering options page appears.

3. On the **General** page, click options or type values using the descriptions in the following table.

   Teigha DWG rendering module general options

Option	Description
Name	The name of the rendering profile as seen in Administration Console.
Computer	The name of the Meridian Enterprise Server computer (cluster node) on which to run this job.
Input extensions	The file extensions that will be rendered by this module. To modify this list: a. Click **Configure**. The **Input Extensions** dialog box appears and lists the supported file extensions. b. Select the file extensions that you want to be rendered. c. Click **OK**. The quantity is refreshed to reflect your selections.

4. On the **Options** page, click options or type values using the descriptions in the following

table.

5. Click **Save**.

Teigha DWG rendering output options

Group	Option	Description
Output	Use job advanced rendering settings	Select this option if the page size and orientation are stored as property values for the source documents and the corresponding options are selected as described in Configure Rendering Options. If those options are not selected, select default values from **Paper size** and **Orientation**.
Output	Update title blocks before rendering	If enabled, the title blocks in the document will be updated from the document properties before the document is rendered. If disabled, the update is skipped.
Output	Xref paths	Comma-delimited list of locations to search for external reference files. Locations may be specified as filenames (linked by Meridian Enterprise references), paths relative to the parent document, or absolute paths to shared network folders. External references are resolved in the following order: • Absolute path, if specified • File name (Meridian Enterprise reference or relative path) • Locations specified by this setting If an external reference resides both in the vault and in a location outside the vault, the external location will take precedence. MicroStation logical variables are not supported.
Page Setup	Paper size	Select a page size for the output from the list.
Page Setup	Orientation	Select a page orientation option.
Page Setup	Color	Select an option from the list to indicate the color depth of the rendition.
Page Setup	Layouts to export	Select an option for the layouts to include in the output.
Page Setup	Custom layout	Name of the layout to include in the output if **Layouts to export** is set to **Custom**.

Group	Option	Description
Other Options	Plot style	Name of a plot style in the drawing that specifies the rendering options. Name of a plot style table file (without the `.stb` or `.ctb` extension) that specifies the plot styles to use for rendering. The rendering module will search for the file in the folder `C:\Program Files\BC-Meridian\Enterprise Server\Teigha.NET`. If the file cannot be found, the drawing will be rendered without plot styles.
Other Options	Adobe PRC support	If enabled, renders ACIS 3D objects in the source drawing as Product Representation Compact (PRC) data in the rendition. Select how the objects should be rendered, as boundary representations (BREP option) or as mesh representations (MESH option).
Other Options	Enable layer support	Generates layers in the rendition that correspond to the layers in the source drawing. See also the note on **SHX text as geometry**.
Other Options	Include layers with visibility off	If **Enable layer support** is enabled, includes layers that are turned off in the rendition. Otherwise, they are excluded from the rendition.
Other Options	Use line weights	Use the line weights defined in the plot style table file specified for **Plot style**.
Other Options	Scale line weights	Scale the output thickness of line styles defined in the plot style table file specified for **Plot style**. Only available if **Use line weights** is enabled,
Other Options	Embedded fonts	Embed the fonts that are used by the rendition in the output file so that they can be shown on systems where they are not installed.
Other Options	TrueType as geometry	Render text that is drawn with TrueType fonts using polylines. If this option is enabled, the text in PDF renditions can only be searched with the Advanced Find command in Adobe Reader.
Other Options	SHX text as geometry	Render text that is drawn with SHX fonts using polylines. If this option is enabled, the text in PDF renditions: • Can only be searched with the Advanced Find command in Adobe Reader. • Is placed on a special layer in the rendition.
Other Options	Enable simple geometry optimization	Use a rendering algorithm that optimizes simple geometry such as line segments into more complex entities such as polylines in the output. This option reduces performance slightly but produces smaller files.

Group	Option	Description
Other Options	Encode (reduce the file size)	Compresses images in the output file to save space. In Meridian Enterprise 2021, when this option is selected, watermarks may be located in the wrong place or the rendition may be empty.

Rename a Rendering Profile

You can rename a rendering profile to be more descriptive.

To rename a rendering profile:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Rendering Profiles**.

   The **All Rendering Profiles** page appears and lists the existing profiles grouped by the name of the computer (cluster node) to which they are assigned.

2. Select the rendering profile that you want to rename and then in the toolbar, click **Rename**.

   The **Rename Rendering Profile** dialog box appears.

3. Type a new name for the rendering profile and then click **Rename**.

   The rendering profile is renamed.

Copy a Rendering Profile

You can copy a rendering profile to duplicate its settings in a new rendering profile.

To copy a rendering profile:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Rendering Profiles**.

   The **All Rendering Profiles** page appears and lists the existing profiles grouped by the name of the computer (cluster node) to which they are assigned.
2. Select the rendering profile that you want to copy and then in the toolbar, click **Copy**.

   The **Copy Rendering Profile** dialog box appears.
3. Type a name for the new rendering profile and then click **Copy**.

   A results dialog box appears.
4. Click **OK**.

   The rendering profile is copied with the new name and appears in the list. To change the settings of the new rendering profile, see Create And Edit a Rendering Profile.

Delete a Rendering Profile

You may delete a rendering profile even if it is assigned to a publishing job. For this reason, we recommend that you confirm where the profile is used before deleting and reconfigure the jobs to use a different profile.

To delete a rendering profile:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Rendering Profiles**.

   The **All Rendering Profiles** page appears and lists the existing profiles grouped by the name of the computer (cluster node) to which they are assigned.

2. Select the rendering profile that you want to delete and then in the toolbar, click **Remove**.

   If the profile is use by a publishing job, a confirmation dialog box appears.

3. Click **Yes**.

   The rendering profile is deleted. If you do not assign a different rendering profile to the existing publishing jobs or delete them, the jobs will proceed without the rendering profile and may produce undesired results.

Packages

A package contains a related or unrelated set of documents or asset information in an archive (ZIP) file. Meridian Enterprise uses packages to import data, export data, and to transfer data between systems. Packages can be imported into a Meridian Enterprise vault from Meridian Explorer or automatically from a Meridian Portal tenancy. Packages can be exported from Meridian Explorer as described in *Exporting a package* in the *Meridian Explorer User's Guide*. Export packages can be created by Meridian Explorer, manually by users, by Meridian Portal, or by some other system and sent to Meridian Enterprise Server.

Package functionality can be configured in Meridian Enterprise in these ways:

- Import profiles as described in Create an Import Profile
- Meridian Explorer property pages that show the packages related to a document as described in Create And Edit Detail Page Layouts
- Enable package export functionality in Meridian Explorer as described in Create And Edit Repository Views
- Support for packages in Meridian Enterprise as described in the *View and Edit Vault Properties* article in the *Meridian Enterprise Administrator's Guide*.
- Meridian Portal package functionality as described in Configure Package Types
- Meridian Portal package issue reasons as described in Manage Package Issue Reasons

Import With Packages

An import package is a set of documents or asset information and an accompanying MS Excel workbook that contains metadata about the items in the package. Import packages support external references, hybrid documents, multiple revisions of the same document, and drawing title block data exchange.

Packages can be exported from Meridian Explorer as described in Exporting a package. Packages can also be imported into a Meridian Enterprise vault from Meridian Explorer or automatically from a Meridian Portal tenancy. The (export) packages can be created by Meridian Explorer, manually by users, by Meridian Portal, or by some other system and sent to Meridian Enterprise Server.

You import packages into Meridian Enterprise according to a set of rules called an *import profile* that is created by a System Administrator. Different import profiles can be configured for different sources, destinations, or purposes for the packages.

Meridian Enterprise Server lets you see how documents will be imported before the import is actually performed. You do this by scanning the package. This lets you verify the import configuration before any changes are made in the destination vault.

Meridian Enterprise Server scans and imports packages in the background, which lets you continue working. You can monitor the progress of an import at any time.

The following table lists the minimum steps for importing a package and the corresponding topics in this guide that describe each step in more detail. The steps are listed in the order that they should be performed.

> **Note:**
> - A Meridian Explorer client license must be available to work with import packages.
> - The **Enable Advanced Project Workflow Module** option of the source vault must be enabled for the **Export Packages** and **Import Packages** property pages to appear in the Meridian Enterprise clients.

Package import steps

No.	Step	Topic
1	Collect the documents into a folder or in an archive (ZIP) file that you want to import.	Consult a System Administrator
2	Create an MS Excel workbook file that includes a worksheet that contains the metadata that you want to import.	Create an Import Profile

No.	Step	Topic
3	Create a copy of the workbook file with empty rows to serve as a template for the metadata.	Consult a System Administrator
4	Create an import profile to specify how you want Meridian Enterprise Server to import the metadata and the documents.	Create an Import Profile
5	Create a new, open package to associate the source documents, metadata, and import profile together for import.	Create an Import Package
6	Start the scanning process.	Scan an Import Package
7	Review the scan results and adjust the import actions as necessary.	Scan an Import Package
8	Start the package import process.	Import an Import Package
9	Close the package to indicate that it has been completed.	Import an Import Package

Depending on the outcome of the scanning or import processes or for business reasons, you might want to repeat, abort, or skip steps. The preceding steps and the available commands for each step are shown in Route an Import Package and are available in the toolbar.

Import packages are designed so that these steps can be performed by different users who may have separate responsibilities for documents in your organization. For example, one user (such as a System Administrator) might be responsible for creating import profiles; a second user (such as a project team member) for creating, scanning, and importing packages; and a third user (such as a project leader) for approving packages before they are imported and for closing packages. Processes like this can be supported by the security privileges described in Create an Import Profile.

Create an Import Profile

You begin to import a package of documents or assets by creating an import profile. An import profile specifies the rules to apply when you import the package into a vault. Only after you create an import profile can you import a package with that profile.

> **Note:**
> - You must be a member of the **Import Profile Managers** role to perform this task.
> - The destination vault must be registered in Meridian Enterprise Server as described in Register a Meridian Enterprise Vault.
> - Options that specify a property name can accept either the internal name or the display name of the property.

To create or edit an import profile:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Import Profiles**.

   The **Import Profiles** page appears and lists the existing import profiles.
2. Choose between two options:
   - To create a new import profile:
     - Click **New**.

       The **Overview** page of the new import profile appears.
   - To edit an existing import profile:
     - Click the icon of the import profile that you want to edit.

       The **Overview** page of the import profile appears.
3. Click options or type values using the descriptions in the following table.

   Import profile properties

Group	Property	Description
General	Name	Type a descriptive name for the import profile. We recommend that the name refer to the source of the package contents and to the destination of the documents.
General	Description	Type a detailed description of the import profile (500 characters maximum).

Group	Property	Description
General	Use Meridian Portal	If enabled, a Meridian Portal tenancy can be configured as the source address when the import profile is configured after it has been created. **Important!** There should only be one import profile that has the **Use Meridian Portal** setting enabled per vault.
Source Address	Meridian Portal tenancy	Shows the name of the Meridian Portal tenancy to which the Meridian Enterprise Server is connected as described in View And Edit the Connectivity Settings.
Source Address	Address	If **Use Meridian Portal** is disabled, the location of an archive file that contains the items that will be imported by this profile. This address can be specified as a UNC path or as a URL address (HTTP, HTTPS, FTP, FTPS). If the address is a URL path, the system will look at this location for an archive (ZIP) file with the same name (and no extension) as the metadata of the package. If the address is a UNC path, an option labeled **Use content from a folder** is available when the package is made that can be enabled to indicate that the documents are contained in a sub-folder with the same name (and no extension) as the metadata file in the package. If the folder is not found, the system will look for an archive (ZIP) file with the same name. If a folder or archive file name that is different than the metadata filename is specified when the package is created, the system will look for that name first.
Source Address	User name	Name of an account with read access to the location specified in **Address**. This option is only available when importing an archive file from a file system. This account is only used for that purpose. The account of the user that performs the import is used to import the documents.
Source Address	Password	Password for the account specified in **User name**. This option is only available when importing an archive file from a file system. Click **Test** to test the user name and password for the location specified in **Address**.

Group	Property	Description
Source Definition	Template	Not applicable to Meridian Portal. An existing MS Excel workbook file that contains one or more worksheets of columns only. The columns specify the property names of the metadata to import from the packages to which this import profile will be assigned. For information on creating this workbook, see Create a Property Mapping Template. To provide a metadata template: a. Click **Upload**. The **Upload Template** dialog box appears. b. Click the **Browse** icon . The **Choose File to Upload** dialog box appears. c. Select the workbook file that you want to upload and then click **Open**. d. Click **Upload**. The page refreshes to show the **Key Columns**, **Miscellaneous**, **Property Mapping**, and **Permissions** pages.
Source Definition	Document table	Not applicable to Meridian Portal. Name of the worksheet in the workbook file specified for **Template** that contains the item metadata columns.
Source Definition	Reference table	Not applicable to Meridian Portal. Name of the worksheet in the workbook file specified for **Template** that contains the reference file metadata columns for the items in the packages.
Destination repository	Destination repository	The destination vault for the items that are imported from packages to which you assign this import profile. Only the projects in this vault are valid destinations.

Group	Property	Description
Destination repository	Destination folder	Vault folder where to import the items. The default is the root folder. If **Import into project** is enabled and the **Project number property** option below is set, each project will be imported as a sub-folder of this parent folder. **Note:** This location will be overridden if: • A path is specified in the column in the import package metadata that is mapped to the **Import folder** option on the **Key Columns** page of the import profile. • The item already exists in this folder and a folder is specified for the **Duplicates folder** option of the import profile.
Destination repository	Duplicates folder	Vault folder where to import duplicate items if they already exist in the folder specified for **Destination folder**. This option is not used when importing packages from Meridian Portal.

Group	Property	Description

Destination repository	Document number property	Fully qualified Meridian Enterprise property definition name that holds the primary identifier for every item in the vault. This property is used to determine if an imported item already exists in the vault.
		
		Note:
		• These are the rules (in priority order) that are used to determine if an item already exists and should be superseded by an imported item:
		  ◦ Item with the same **GlobalID** value.
		  ◦ Item with the same value for this property that resides inside the project folder. This is the only rule that is applied to items imported from Meridian Portal. Therefore, this option must be set if the vault will exchange items with Meridian Portal through Meridian Explorer (scripted integration). This option is not used for item exchange directly with Meridian Portal project repositories.
		  ◦ Item with the same value for this property that resides outside the project folder.
		  ◦ Item with the same value for this property that resides in the folder calculated by the vault's Field-Path definition (if configured) using the property mapping template described in Create a Property Mapping Template.
		• If no matching item is found in the destination project, the item is imported as a new item in the project. If a name conflict occurs with an existing item, an incremental number is appended to the imported item name (for example, `MyDrawing (1).dwg`.
		• If this property is empty during synchronization, the filename (without extension) is used to identify the items.
		
		To specify the property name:
		a. Click **Edit**.
		The **Select Property** dialog box appears.
		b. Select a vault property from the list.
		Typically, you should select the **Name** property in the **Common** property set.

Group	Property	Description
		c. Click **OK**. The property name appears in the option field.
Destination repository	Project number property	Fully qualified Meridian Enterprise property definition name that holds the destination project number. Read-only if set in the vault registration described in Manage a Meridian Enterprise Vault. This property is matched to the values contained in the **Project Number** column of import package metadata files as described in Import with packages.
Destination repository	Default document type	Document type to assign to the imported items if no document type is specified in the **Property Mapping** options. **Note:** If the **Document type workflow** option of the document type is set to **Use workflow definitions**, the **After importing documents** option of the vault should be set to **Set state to Under Change**. After import, the items will be in the Released workflow state depending on the configuration of the document type and of the vault. If the items cannot be released, they will be left in the Under Change state for the user that performed the import and the reason that they could not be released will be entered in the publishing log.
Destination repository	Default reference type	Reference type to assign to the imported items if no document type is specified in the **Property Mapping** options.

4. Choose between two options:
   - If you are creating a new import profile, click **Save**.

     The page refreshes to show additional options.
   - If you are editing an existing profile, click **Key Columns**.

     The **Key Columns** page appears. This step does not apply to Meridian Portal, skip to step 6. These options specify the columns in the package metadata to map to the most important Meridian Enterprise properties. The metadata should contain columns for all of the following options that apply to the source items.

     The available values for these options are only the column names that were found in the worksheet specified for **Document table** in the workbook that you uploaded for **Template**. Any columns in excess of those that are mapped to these options are considered as custom properties and they can be mapped on the **Property Mapping** page.

> **Note:**
> All properties that are mapped in the import profile must exist in the metadata of the import package or the import will fail.

5. Click options or type values using the descriptions in the following table.

Key mapping properties

Group	Property	Description
Document Key Columns	Document number	The column that contains an identifier that is unique for each item (including the parts of assemblies). This number should be the same for all revisions of the same item and the same for project copies of master documents.
Document Key Columns	Document name	The column that contains the item name as it should appear to users.
Document Key Columns	Document type	The column that contains the document type to assign to the imported items.
Document Key Columns	Revision	The column that contains the item revision number. This must be unique for all revisions of the same item. Text field that accepts any revision numbering scheme. Enter the order of revisions in the **#** column. Rows with the same value for **Document Number** and for **Revision Number** are imported as hybrid documents by default. If you want to import rows with the same value for **Document Number** and for **Revision Number** that are distinct revisions but not hybrid drawings, enter an index prefix with the **Revision Number** value in the form n::<*RevisionNumber*> where n starts at 1, is applied to the first duplicate revision and is incremented for successive revisions. For example: First revision=A Second revision=1::A Third revision=2::A
Document Key Columns	Revision sort	The column upon which to sort the revisions for a single item (if present) so that they are imported in the correct order. Typically, this is the same column as **Revision field**.
Document Key Columns	Hybrid sort	The column to sort to identify the main document (imported first) and the parts (imported next) of hybrid documents.

Group	Property	Description
Document Key Columns	Path	The column that contains the path to the content of the items. This location must be relative to the location specified for **Address**. If two rows in the spreadsheet contain the same filepath for a document, scanning will fail and an error will be returned.
Document Key Columns	Rendition path	The column that contains the relative path to a rendition of the document. This location must be relative to the location specified for **Address**.
Document Key Columns	Import folder	The column that contains the names of folders where to import the items. The values in this column override the **Destination folder** option on the **Overview** page.
Document Key Columns	Workflow state	The column that contains the workflow state names for the items in the destination vault. **Note:** • The synchronization job for the destination vault must have the **Publish draft revision** option enabled as described in Configure Synchronization Options. • If this column is empty for an imported item or contains an invalid value, the item will be imported to the **Released** state. To set a different destination workflow state, specify it in the **Workflow State** column of the source metadata file described in Create an Import Package.
Reference Key Columns	Source document number	The column that contains the item number that is the source of the references.
Reference Key Columns	Destination document number	The column that contains the item number that is the destination of the references.
Reference Key Columns	Source revision number	The column that contains the revision number of the item that is the source of the references.
Reference Key Columns	Destination revision number	The column that contains the revision number of the item that is the destination of the references.
Reference Key Columns	Reference name	The column that contains the names of the references to create between the items.

Group	Property	Description
Reference Key Columns	Reference type	The column that contains the names of the reference types to create between the items. The supported reference types are: • AutoCAD Drawing Sheet Reference • AutoCAD External Reference • AutoCAD Overlaid Reference • AutoCAD Raster Image Reference • AutoCAD Underlay Reference • Client Reference • MicroStation Model Reference • MStation RasterRef • MSExcelReference • MSPowerPointReference • MSWordReference • TagObjectReference (supported only between tags and from a document to a tag)

6. In the menu, click **Miscellaneous**.

   The **Miscellaneous** page appears. These options specify how you want Meridian Enterprise Server to perform the import.

7. Click options or type values using the descriptions in the following table.

Miscellaneous options

Group	Option	Description
Scan Options	Import title blocks	If enabled, searches imported files for title blocks that are specified in the vault configuration and if any are found, sets the corresponding item properties. • The **Perform automatic title block updates** option and the **When the document is imported** option of the document type must both be enabled. • Only when a title block property is specified in a title block link configuration of the vault and it is also mapped to a column in the import metadata will the title block property values be imported to the items. The import metadata will not be imported. • Title block properties are only imported after a item is successfully imported into a vault, not during package scanning. • Title block synchronization during package import has the same requirements and limitations as during normal application link operations in Meridian Enterprise. For example, Meridian Enterprise Server must run under the same account as was used to install the native application (Autodesk Inventor, SolidWorks, and so on) that provides the libraries that are used to perform the synchronization. • Any errors that occur during title block synchronization will appear in the **Comment** log of the item and will not cause the import to fail. For more information about configuring title block links, see *Configure Title Block Updates* in the *Meridian Enterprise Configuration Guide* .
Scan Options	Include references	If enabled, scans imported files for external references and creates corresponding Meridian Enterprise references. These references are in addition to the references created by the worksheet specified for the **Reference table** option. If an external reference is missing from the package, an error will be logged and the parent item will be skipped. To use this feature, **Site Cache Mode** must be enabled. For more information about Site Cache Mode, see the *Personal Preferences* section of the *Meridian Enterprise User's Guide*.
Scan Options	Create thumbnails	If enabled, generates thumbnail images of items during import.

Group	Option	Description
Scan Options	Stop on validation error	If the check box is selected, when you scan the import package and there are validation errors in that import package, it cannot be imported and an error message is shown in the **Status** field.
Import Options	Existing documents	Specifies how to process items that already exist in the destination folder in the vault. **Note:** If this option is set to **New revision** and a source vault item is in a custom workflow but not in the **Released** state when the item is imported back to the vault from Meridian Portal, the import will fail. If this happens, change the state of the vault item to **Released** and restart the import job.
Import Options	Match in	Specifies how the system should check if a document number is unique. There are two options: • Target Project — checks if the number is unique within the target project • Entire Vault — checks if the number is unique within the entire vault This setting is only available for import profiles that are not used for Meridian Portal.
Import Options	Missing content	Specifies how to process items for which a content file could not be found in the sub-folder or archive file at the location specified in **Address**.
Import Options	Release new documents by default	Specifies if the workflow status is not set for a document in the metadata worksheet, then Meridian will: • (disabled) Leave document in its current workflow state For example, if the document was Under Change, it stays in the Under Change state. • (enabled) Release the document from the workflow entirely The document is no longer in a workflow, and becomes a new version.
Notification	Notify if failed	If enabled, the members of the selected group are notified when an import package fails.

Group	Option	Description
Notification	Recipients	The name of the group to receive notifications when an import package fails. To select a different group: a. Click **Change**. The **Configure Recipients** dialog appears. The currently selected group appears in **Recipients**. b. Click **Add recipients**. The **Add Groups** dialog appears. c. Select a group from the list and click **OK**. The newly selected group appears in **Recipients**. d. Click **Change**. The name of the group to receive notifications is updated.

8. In the menu, click **Property Mapping**.

   The **Property Mapping** page appears. These options are supplemental mappings of vault properties to custom properties that can be included in the item metadata worksheet.

9. Create a mapping for each column in the metadata that you want to import as a item property in the vault.

   For each mapping, click options or type values using the descriptions in the following table.

> **Note:**
> - All values in the metadata are read as text.
> - Only select destination properties of the correct data type for each column.
> - Null values for String, Memo, and RTFMemo data types in the metadata are converted to empty strings in the mapped vault properties, when possible.

Property mapping options

Group	Option	Description
Target	Initialize property on import	If enabled, the property will be set for the item in the vault with the value specified by the other options that you select. If disabled, the property will not be set during import.

Group	Option	Description
Target	Validate property on import	If enabled, the value specified in the metadata will be evaluated by the **Input required** and **Apply input restrictions** validation options that are configured in the destination vault just as if the item were created new in the vault.
Source	Fixed value	If selected, sets the property to the value specified in **Fixed value**.
Source	Database field	If selected, sets the property to the value specified in the metadata column selected from the list.

Source	Expression	If enabled, evaluates an expression to calculate the value of the mapped property.
		To specify the expression:
		a. Click **Edit**.
		The **Expression** dialog box appears and lists the available properties in the source system.
		b. In the **Expression** pane, type an expression to be evaluated during import.
		The expression may use any .NET compliant methods (except **Parse**) and operators in the C# language syntax. The result of the expression will be the property value in the destination system. Double-click a property in the list to insert it into the expression. The result of the expression must be compatible with the data type of the destination property. If necessary, you can convert data types, for example, using the **ToString** method.
		Following are examples of text and date expressions:
		`{Title 1} + " " + {Title 2} + " " + {Title 3}`
		`{PropertyName}.SubString(0, 1)`
		`{NonStringProperty}.ToString() + " days"`
		`{ProjectEndDate}.AddDays(-30)`
		c. To validate the expression, click **Check**.
		Errors in the expression appear in the **Errors** pane. Correct all errors until the **Errors** pane is empty.
		d. When you are finished editing the expression, click **Save**.

10. In the menu, click **Permissions**.

    The **Permissions** page appears. These options specify which security groups can perform various actions with import packages that have been assigned this import profile.

Permissions options

Group	Option	Description
Administrative Permissions	View	Can see packages.
Administrative Permissions	Create and edit	Can create and edit a package.
Administrative Permissions	Scan	Can start scanning of a package.
Administrative Permissions	Approve	Can approve a scanned package.
Administrative Permissions	Import	Can start the import of a package.
Administrative Permissions	Close, reopen, delete	Can close, reopen, and delete a package.

11. Click **Save**.

Create a Property Mapping Template

An import profile property mapping template is a MS Excel workbook file that contains one or more worksheets of columns for the system to look for in the metadata workbooks of the import packages. The worksheets should contain columns only and no rows. They make it easier for you to specify the property names of the import metadata instead of you having to enter the metadata fields manually in the import profile. The import data itself (rows) are provided in similar metadata workbooks of the import packages. You can download a copy of a property mapping template to give to others to fill with the document metadata to import.

The property names that are specified in the columns in the template will be shown in lists in the import profile. You select properties from these lists to map to the corresponding Meridian Enterprise properties where you want to import the metadata.

The template must contain at least one worksheet and its name must be specified in the **Document table** option. At a minimum, it should contain the applicable columns that are listed in the **Document Key Columns** group on the **Key Columns** page. If you want to import additional properties, provide one column for each property in this worksheet and map them to the vault properties on the **Property Mapping** page.

> **Note:**
> For metadata that will be used with the Meridian Portal hierarchical lookup properties **Discipline** or **Classification** that have corresponding code properties, specify the full property name and values. The matching code properties will be set accordingly during import. Custom properties defined in Meridian Portal will be automatically included in the import profile that is exported as described in Export And Import Profiles .
>
> For properties that allow the selection of multiple values, the values must be enclosed by two separators, and each value must be separated by a separator. The default separator is an asterisk, but you can also use a different separator. To learn more, see the *Create And Edit Custom Properties* article in the *Meridian Enterprise Configuration Guide*.
>
> For example, if you were using the default separator, the format of the property values would be: ***Option1*Option2*Option3*** .

If the documents listed in the worksheet specified for **Document table** contain references to other files in the import package and you want to create corresponding Meridian Enterprise references for them in the vault as they are imported, the workbook file must also contain another worksheet and its name must be specified in the **Reference table** option. At a minimum, it should contain the applicable columns that are listed in the **REFERENCE KEY COLUMNS** group on the **KEY COLUMNS** page.

> **Important!**
> The **References** tab in the spreadsheet is mandatory.

It's important that the metadata to import be saved in the workbook in the correct data types to match the destination vault property data types. Meridian Enterprise Server supports the following data types in the metadata cells:

- Text
- Number
- Date/Time
- Boolean

During import, Meridian Enterprise Server converts the data type found in the template to the correct data type of the destination property.

Export And Import Profiles

After you have created an import profile, you can export it from one computer (a test or development server, for example) and import it to another computer (a production server, for example).

Export Import Profile

To export an import profile:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Import Profiles**.

   The **All Import Profiles** page appears and lists the existing import profiles.
2. Click **Export**.

   The **Export Package Profiles** dialog box appears.
3. Select the profiles that you want to export and then click **Export**.

   The file `ImportProfiles.zip` is downloaded by your browser and you are prompted for what to do with it.
4. Save or open the file.

Import Import Profile

To import an import profile:

1. In Meridian Enterprise Server Administration Console, in the **Data Exchange** group, click **Import Profiles**.

   The **All Import Profiles** page appears and lists the existing import profiles.
2. Click **Import**.

   The **Import Package Profiles** dialog box appears.
3. Click the folder icon.

   The **Open** dialog box appears.
4. Navigate to and select the compressed archive file (the default is `ImportProfiles.zip`) that you want to import and then click **Open**.

   The filename appears in the **Package profiles** field.

5. Click **Upload**.

   The file is uploaded by your browser and then the **Import Profiles** dialog box appears and lists the profiles that were found in the file.
6. Select the profiles that you want to import.
7. Click **Import**.

   The profiles are imported.

Create an Import Package

You create a new import package to upload items from your PC or from a network location to a vault. You must have the **Create and edit** permission in the import profile that you want to assign to this package in order to perform this task.

The default behavior is for the package source folder to be copied to the temporary folder of the service account in Meridian Enterprise Server. Administrators can change this behavior.

To change this behavior, create this .dat file:

```
%ProgramData%\BlueCieloECM\EnterpriseServices\ImportPackageOptions
.dat
```

with this content:

```
{"DoNotDownloadFromFolder":true}
```

To create an import package:

1. On the home page, in the right sidebar, click **Import Packages**.

   The **Import Packages** page appears.
2. In the toolbar, click **New** or in the app bar, click **New**.

   The **New Import Package** dialog box appears.
3. Click options or type values using the descriptions in the following table.
4. Click **OK**.

   The spreadsheet and source items are uploaded to Meridian Enterprise Server and will be imported using the options that you selected.

New package options

Group	Option	Description
Identification	Source metadata (.xlsx)	Local MS Excel workbook file that contains metadata for the items in the package. The rows in this file will be assigned to the imported items according to the options set in the import profile that you specify for **Import Profile**. This file must include at least one worksheet that contains the metadata for the items. The name of the worksheet must be specified in the **Document table** option of the import profile. If this column is empty for an imported item or contains an invalid value, the item will be imported to the **Released** state. To set a different destination workflow state, specify it in the **Workflow State** column using this syntax. • **SDWF:*<StateName>*** for standard document type workflows. For example: **SDWF:DWFS_RELEASED** • **CWF:*<WorkflowName>*.*<StateName>*** for custom workflow definitions. For example: **CWF:cwfBasic.Approve** The valid standard document type state names are: • DWFS_RELEASED • DWFS_INITIATED • DWFS_REFUSED • DWFS_ASSIGNED • DWFS_UNDERCHANGE • DWFS_SUBMITTED • DWFS_INREVIEW • DWFS_REJECTED • DWFS_APPROVED • DWFS_WORKINGCOPY • DWFS_UNCHANGED • DWFS_RETIRED Unlisted or invalid state names will not be imported; the document status will be blank. If the items listed in the worksheet contain references to other files in the package or in the vault and you want to create corresponding Meridian Enterprise references for them in the vault as they are

Group	Option	Description
		imported, the workbook file should also contain a worksheet of reference data. The name of this worksheet must be specified in the **Reference table** option of the import profile. The items (including revision numbers) specified in each row of the reference worksheet must have corresponding rows in the items worksheet. For more information about the structure of this file, see the description of the **Template** option in Create an Import Profile. To provide a metadata file: 1. Click the **Browse** icon . The **Open** dialog box appears. 2. Select the workbook file that you want to upload and then click **Open**. The name of the selected file appears in the text box.
Identification	Package name	The name of the package as you want it to appear to users.
Identification	Description	The description of the package.
Import Profile	Import Profile	Name of the import profile with which to process the package. The package can only be imported to projects in the vault that is specified for the **Destination vault** option of the import profile. For information about creating import profiles, see Create an Import Profile. To download a metadata spreadsheet template that contains all of the necessary worksheets and column definitions that are specific to your environment, ready for you to add the metadata values, click **Download XLSX Template** button and save the file somewhere on your PC.
Source Files	Source archive (ZIP)	Local or network folder or archive file name (excluding extension) that contains the items in the package. This name (or relative path) is appended to the location specified for **Address** in the import profile that you specify for the **Import Profile** option. To validate the import profile and the source archive: • Click the **Test** icon . The icon changes to show the results of the validation. A tooltip shows details of the validation. If the source files are contained in a sub-folder instead of an archive file, enter the folder name and enable **Use content from a folder**. If you only want to import the metadata and no files (such as for asset tags), enable **Process the package without document files**.

View And Edit an Import Package

You can view the configuration of import packages, their contents, and their import status. You can change a limited number of the properties of an existing import package.

> **Note:**
> You must have the **View** permission in the import profile that is assigned to this package in order to view the package. You must have the **Create and edit** permission in the import profile that is assigned to this package in order to edit the package.

To view or edit an import package:

1. In the right sidebar, click **Import Packages**.

   The **Import Packages** page appears. The packages that are listed depends on the status filter that is selected in the left menu.

2. To filter the package list to show only import packages with a different status, click a filter in the menu.

   The page refreshes to show only the import packages with the selected status.

   The columns of this page show the information described in the following table.

   Import packages view columns

Column	Description
Name	Name of the import package as specified by its creator.

Column	Description
Status	Current import status of the import package. The possible values are: • **Aborted** — Import stopped by a user • **Closed** — Closed by a user • **Imported** — Has been imported as described in Import an Import Package • **Import Failed** — Import stopped by the system due to an error • **Importing** — Currently being imported into the vault • **Ready For Import** — The system has verified that the user account and password specified in the import profile can access the source of the items • **Received** — Created but not yet imported • **Scanned** — Has been scanned as described in Scan an Import Package • **Scanning** — Currently being scanned • **Scanning Failed** — Scanning stopped by the system due to an error The icon of the import package indicates its status graphically.
Profile	Name of the import profile assigned to the import package.
Meridian Vault	Name of the vault specified in the import profile to which to import the contents of the import package.
Received	Date the import package was received by Meridian Enterprise Server.

3. To view detailed information about a package:
   - Click the row of the import package that you want to view.

     The properties of the package appear read-only in the right pane. Each property is described in the following table.
4. To edit or process a package:
   - Click the icon of the import package.
   - In the toolbar, click **Open**.

     The **Overview** page of the import package shows the properties described in the following table. Depending on the current state of the import package, some of the properties may not be visible. You may only edit the properties in the **General** group.

     The current state of the package in the overall import workflow is highlighted in the time line at the top of the page.

Import package properties

Group	Property	Description
General	Name	Name of the import package.
General	Description	Description of the import package.
General	Import Profile	Name of the import profile assigned to the import package. To view and edit the assigned import profile: • Click **Manage**. The **Overview** page of the import package opens, where you can change it as described in Create an Import Profile.
Imported	Updated documents	The number of items in the destination vault that were updated by the import package.
Imported	New documents	The number of new items created in the destination vault.
Imported	Failed	The number of items in the import package that failed to import.
Scanned	Scanned	The number of items that were scanned successfully.
Scanned	Document rows	The number of rows found in the package metadata that can be scanned.
Scanned	Matching documents	The number of items in the destination vault that match the metadata in the package.
Scanned	New documents	The number of new items that will be created by package.
Scanned	Skipped	The number of rows in the metadata that were skipped due to property validation or other errors.
Received	Source metadata	MS Excel workbook file that contains metadata about the items in the import package. The column data in this file will be assigned to the imported items. For information about the structure of this file, see Create an Import Profile. To download a copy of the metadata: • Click **Download**. The file downloads to your browser.
Received	Source address	Source of the item content files to import with the metadata.

5. To change any of the properties in the **General** group:
   a. Click **Edit** in the **General** group.

      The **<PackageName>** dialog box opens, where you can change the available properties.
   b. Click **Save**.
6. To view the metadata of the items in the package:
   - In the menu, click **Documents**.

     The **Documents** page for the import package appears and shows the metadata contained in the MS Excel worksheet for each item of the import package.
   - To sort, rearrange, or filter the data in the columns, see Change the Column Layout.
   - To view all of the system and metadata information for a particular item, select the item in the list.

     Its details appear in the right pane.

Change the Column Layout

The columns that are shown in the results pane and their order are configured by a System Administrator, but you can change the column layout to suit your preferences.

> **Note:**
> - Not all columns support filtering and searching.
> - Searching with the SQL wildcard characters (_ or %) will show all documents.

Resize a Column

To resize a column:

1. Hover your cursor over the right end of the column heading until the resize cursor appears.
2. Click and drag the column edge to the desired size and then release the column.

Move a Column

To move a column:

- Click and drag the column heading to the desired location as indicated by the arrow icons and then release the column.

Add or Remove Columns

To add or remove columns:

1. Click the menu button for any column.

   The column menu appears.
2. Point to **Columns**.

   A menu of the available columns appears.
3. Select or clear column names.
4. Click anywhere outside of the menu.

   The results pane refreshes to show the column changes.

> **Note:**
> If you accidentally remove all columns, the view header will be unavailable to reconfigure the columns. To restore the hidden columns, press and hold the Ctrl key and click in the detail pane.

Sort Results List on a Column

> **Note:**
> The properties that may be selected for sorting are configured by a System Administrator.

To sort the results list on a column:

- Click the column heading.

  Click the heading again to reverse the sort order.

- Click the menu button for the column and then select **Sort Ascending** or **Sort Descending** from the menu that appears.

Filter Results List on a Property Value

To filter the results list on a property value:

1. Click the menu button for any column.

   The column menu appears.

2. Point to **Filters**.

   A search keyword text box appears.

3. Enter the name of a value upon which you want to search.

   The document list refreshes dynamically to show you the search results. You may refine your search criteria to obtain the results you want.

4. Click anywhere outside of the menu to complete the search.

   A filter icon appears in the heading of columns that are filtered.

Clear Column Filters

To clear column filters:

1. Click the menu button for any column.

   The column menu appears.
2. Clear the check box next to **Filters**.

   The results pane refreshes to show the filters removed.

Search In Import Packages

The **Documents** list in of an import package shows all the items in a package, but it can sometimes be easier to search for a particular item.

Searches are performed on the import package metadata with the **contains** operator. You cannot search in the item content.

To search in an import package:

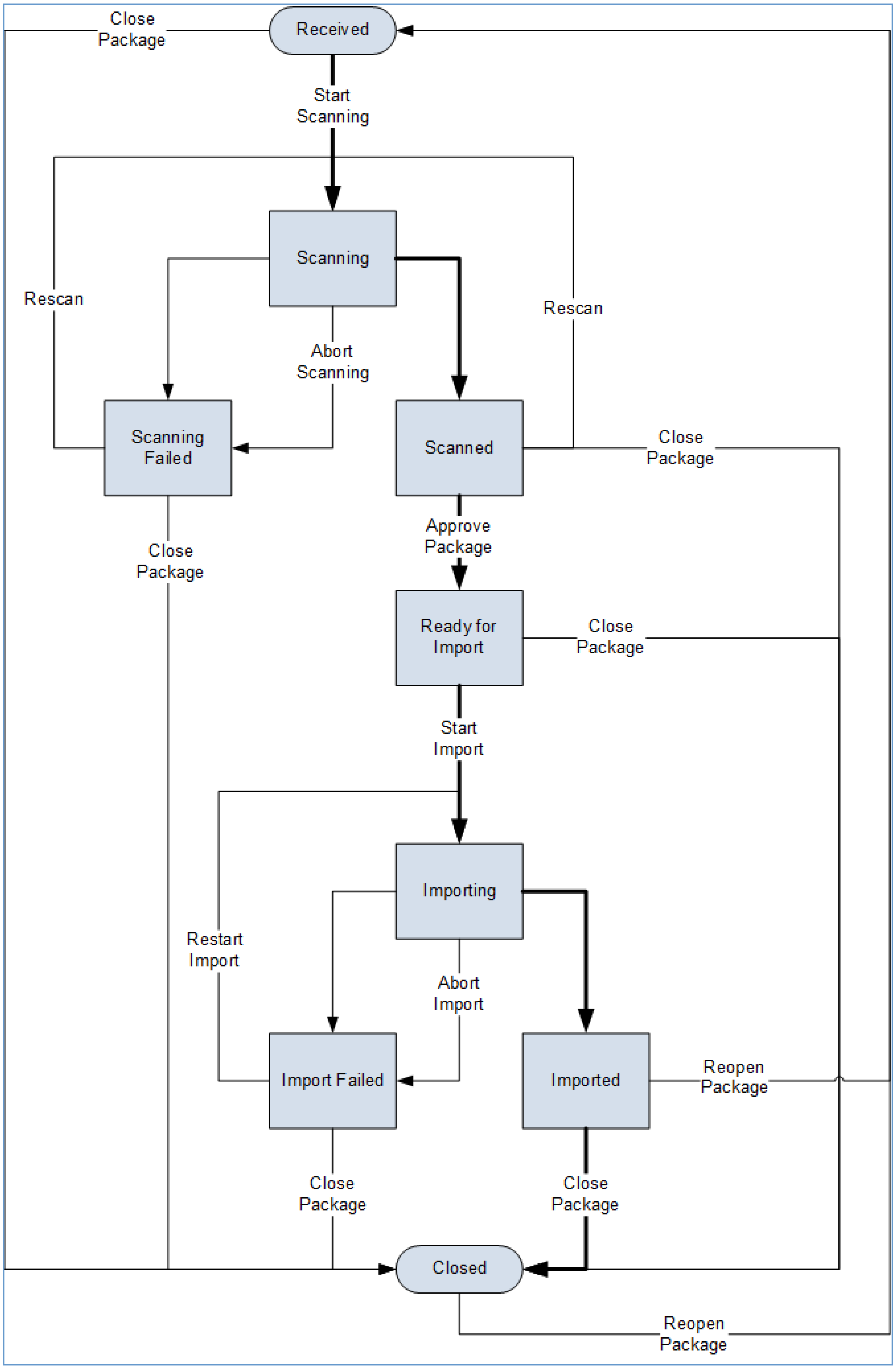
- Enter a keyword in the search box above the item list and click the search icon or press **Enter**.

  The list refreshes to show the search results.

Route an Import Package

The following flow diagram shows the possible states (shapes in the following figure) and transitions (connectors) of an import package. The states are shown in the **Status** property of an import package. The transitions are available as toolbar buttons when viewing import packages. The critical path of the workflow is shown with thicker lines. The other paths are optional or allow you to make corrections.

> **Note:**
> You must have the appropriate permission in the import profile that is assigned to the package in order to route the package.


Received
Close Package
Start Scanning
Rescan
Scanning
Rescan
Abort Scanning
Scanning Failed
Scanned
Close Package
Approve Package
Close Package
Ready for Import
Close Package
Start Import
Importing
Restart Import
Abort Import
Import Failed
Imported
Reopen Package
Close Package
Close Package
Closed
Reopen Package

Scan an Import Package

After you have created an import package as described in Create an Import Package, it is ready to scan for:

- Property mappings in the import profile match columns in the metadata file and in the destination vault
- Items that already exist in the destination vault
- Multiple revisions of the same source item can be sorted in ascending order using the specified property
- Title blocks that match link configurations in the vault
- All references that are specified in the **References** table of the metadata resolve to items in the import package.
- All references in the source items resolve to other items in the import package
- Main documents and parts of hybrid documents can be identified and sorted

> **Note:**
> You must have the **Scan** permission in the import profile that is assigned to the package in order to perform this task.

Scan an Import Package

To scan an import package:

1. Open the import package that you want to scan as described in View And Edit an Import Package.
2. For each item in the **Documents** list, review the information and the import action in the right pane, and confirm that they are correct.

   If the import data is incorrect, correct it in the metadata workbook and try again. If the action shown for **Default action** is incorrect, select a different action from **Take this action**. Setting the actions for a selection of items is also supported. The available actions are those that can be performed in the destination vault.

   > **Note:**
   > Some actions that are performed during an import are slightly different than how they work in Meridian Enterprise:

- The **Create New Revision** action creates a new revision of the vault item rather than replace the source item with a new item.
- The **Derive Document**, **Replace Document**, and **Create New Version** import actions place the imported item in the **Released** state, which is different from the corresponding commands in Meridian Enterprise.

3. In the toolbar, click **Start scanning**.

   A background task is started, the status of the import package changes to **Scanning**, and the icon of the import package changes to reflect its status. If two rows in the spreadsheet contain the same filepath for a document, scanning will fail and an error will be returned.

   When the process has completed, the status of the import package will change to either **Scanned** (successful) or **Scanning Failed** (failure) and a confirmation dialog box will appear. Click **OK**.

4. To halt the scanning process, in the toolbar, click **Abort scanning**.

   The background task is aborted and the status of the import package reverts to its previous state.

Filter on validation status

Once you have scanned an import package, the **Documents** list shows the **Skipped Reason** for each document that could not be imported. You can now filter the list to show only those that have metadata validation errors.

If you download and open the metadata spreadsheet in Microsoft Excel, you can also filter the list based on Validation Status.

To filter the list:

1. Select the down arrow in the **Skipped Reason** column.
2. In the menu that appears, select **Filters**.
3. Select the **Validation Failed** check box.

Approve an Import Package

After you have scanned an import package as described in Scan an Import Package, you can approve it for import.

> **Note:**
> You must have the **Approve** permission in the import profile that is assigned to the package in order to perform this task.

To approve the results of the scan:

1. In the menu, click **Documents**.

   The **Documents** page of the import package appears and lists the results of scanning the import package. The **Status** value of each item indicates how the item will be imported based on the current package data.
2. Review the information for each item and the import action in the right pane, and confirm that they are correct.
3. Click **Approve** to accept the results and your changes, which allows the package to be imported.

Import an Import Package

After you have scanned an import package and approved the results as described in Scan an Import Package, it is ready to import.

Notes about Functionality

- You must have the **Import** permission in the import profile that is assigned to the package in order to perform this task.
- Items that import successfully invoke all the same Meridian Enterprise VBScript events as if the item were created by a user, for example, the **DocGenericEvent_BeforeNewDocument** and **DocGenericEvent_AfterNewDocument** events. If the destination vault implements customization using these events, consider what effects importing a package may have before you import the package.
- When you import packages that contain multiple rows of metadata related to a single document (multiple revisions or hybrid documents, for example), if content cannot be found for any of the documents but the **Process the package without document files** option is disabled and the **Missing content** option is set to **Import empty document** instead of **Skip**, any files that are missing from the package will fail to import (as expected) but the main document will be left in the **Under Change** state in the vault instead of **Released**. This is because the main document is placed under change at the beginning of the import but it cannot be released at the end of the import because some of its dependent files failed. The main document must be released manually.

Import Package

To import an import package:

1. Open the list of import packages as described in View And Edit an Import Package.
2. Select the import package that you want to import and then in the toolbar, click **Start import**.

   A background task is started, the status of the import package changes to **Importing**, and the icon of the import package changes to reflect its status.

   When the process has completed, the status of the import package will change to either **Import** (successful) or **Failed** (failure) and a confirmation dialog box will appear. Click **OK**.

   An item can fail to import for many reasons. The most common are:

- The import profile of the package has the **Validate property on import** option enabled and a property failed that validation.
- The document contains external references and one or more files are missing from the package.
- The item is a new revision of an existing item in the vault and that item is locked.

To determine why a particular item failed to import, see the text shown next to **Action taken** and **Comment** in the detail pane of the item in the import package. Also review the audit log for the package as described in View the Import Audit Log.

3. To halt the import process, in the toolbar, click **Abort importing**.

   The background task is aborted and the status of the import package reverts to its previous state.

View the Import Audit Log

Each of the successful package processing actions in Meridian Explorer and in Meridian Enterprise Server Administration Console are logged to a database. Items that fail to import for any reason do not create entries in the audit log. This data can be used to perform security audits and system troubleshooting.

To view the import audit log:

1. In the right sidebar, click **Import Packages**.

   The **Import Packages** page appears.
2. Select the package for which you want to view its audit log.
3. In the toolbar, click **Audit log**.

   The **Audit Log** dialog box opens and lists the logged actions.

Layer Translation Tables

Layer translation tables contain rules that determine the way in which layers in documents are translated when a PDF rendition is created from a CAD document. You can select the translation table to use for a document from the **Layer translation table** field on the **Rendition** property page of a document. If no layer translation table is specified for a document, that document is rendered with the same layers as the CAD document.

When the rendition is updated:

- if the layer translation table assigns a CAD layer to a PDF group name, the layer is added to that group in the PDF
- If a layer matches a rule in the layer translation table that is not assigned a group, it is added to the top level in the PDF
- layers of the main part have the same names as the CAD layers
- layers of XREF parts have the same names as the CAD layers

You can associate a layer translation table with a Meridian repository. This enables you to restrict editing to only those who belong to a local administrator group of a site related to a that Meridian repository.

Create and Edit Layer Translation Tables

You can create and edit layer translation tables if you are assigned the Application Administrators permission or the Layer Translation Administrators permission. If you do not have those permissions, but are a member of a local administrator group for any site, you can create and edit a layer translation table.

Once you have created a layer translation table, you can apply it to specific Meridian repositories associated with sites where you are a member of a local administrator group.

To create or edit a layer translation table:

1. In Meridian Enterprise Server Administration Console, click **Data Exchange** > **Layer Translations**.

   The **Layer Translations** page opens with the existing layer translation tables.

2. Choose between two options:

   - To create a new layer translation table, in the app bar, click **New**.
   - To edit an existing translation layer table, click the icon of the translation table that you want to edit.

     The **Overview** page of the translation table appears.

3. Enter or edit the **Name** and **Description**.
4. Click **Save**.

   If you created a new translation table, the **Translation rule** button appears.

5. To add a rule:

   a. Click the **Translation rule** button.

      The **Translation rules** page opens for the translation table that you are editing.

   b. Click **Add New**.

      A new blank rule is added to the list

   c. Double-click a value to change it:

      - **CAD Layer Name** — Allows you to apply a rule based on the name of a layer in a CAD document. To set this rule choose method to compare the layer name and then enter the name you want to compare in the field to the right of the comparison method. For example, you can specify layer name **Starts with** Valve15-

- **Match In** — Allows you to specify where you want the comparison to be made. Select **Main drawing** to compare the main drawing or choose **XREF** to make the comparison with its cross references.
- **PDF Layer Name** — Allows you to specify the name you want for the PDF layer. If you want the layer name from the CAD document, leave the field blank so that it reads ***Use original layer name***.
- **PDF Layers Group Name** — Allows you to specify the name of a group to which the PDF layer belongs. If you do not want the layer to belong to a group, leave the field blank so that it reads ***Layer is not grouped***.
- **PDF Layer Color** — Allows you to specify the color of the items in the PDF layer. Select **Use original color** if you want the color from the CAD drawing.
- **Mandatory** — Select the check box if you want the layer to be mandatory.
- **Show By Default** — Select the check box if you want the layer to be shown by default in the browser.
- **Line Width** — Allows you to specify the line width of items in the layer including polylines. You can enter a value between 1 and 15. Line with is set to 1/72 inch multiplied by the value. For instance, a value of 15 equals 15 x 27th of an inch.

6. To edit a rule, double-click the value you want to change and edit the values as described above.
7. To remove a rule:
   a. Select the rule you want to remove.
   b. Click **Remove**.

      The rule is removed from the list.
8. To change the order in which rules are applied, click and drag the rules to the order you want.
9. To apply the layer translation table to specific Meridian repositories:
   a. Click the **Repositories** button.

      The **Select Repositories** dialog box opens.
   b. Select the repositories that you want.
   c. Click **OK**.
10. Click **Save**.

    A dialog box opens, asking you to confirm your choice.
11. Click **OK**.

Restrict Layer Translation Tables

You can restrict layer translation tables in these ways

Restrict editing to specific sites

You can restrict editing to only users who belong to a local administrator group associated with the site assigned to a Meridian repository.

To restrict editing layer translation tables to specific sites:

1. Create and edit the sites you want.
2. Assign the Meridian repository to a site:
   a. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

      The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.
   b. Click the icon of the vault that you want to manage.

      The **Overview** page for the vault appears.
   c. In the **Options** pane, click **Edit** in the **Site name** field.
   d. In the **Select Repositories** dialog box that opens, select the site you want to associate with the Meridian Enterprise repository.
   e. Click **OK**.
3. Add the local administrators group to each user you want to be able to edit layer translation tables:
   a. In Meridian Enterprise Server Administration Console, click **System Management** > **User Management**.

      The **Users** page appears and lists the existing user accounts.
   b. Double-click the user that you want to assign local administrator permissions.

      The **Overview** page opens with the user you selected.
   c. Click the **Members** button.
   d. Click **Add**.
   e. In the **Add Groups** dialog box that opens, select the local administrator groups that you want to assign to the user.
   f. Click **OK**.

Apply a translation layer to a Meridian repository

You can apply a layer translation table to specific Meridian repositories so that users in PowerWeb can only select from layer translation tables associated with their vault.

If you have the Application Administrators permission, you can select any Meridian vault. If you do not have the Application Administrators permission, but are a member of a local administrator group for one or more sites, you can apply the layer translation table to repositories associated with those sites.

To apply a layer translation table to specific Meridian repositories:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.
2. Click the icon of the translation table that you want to edit.
3. Click the **Repositories** button.

   The **Select Repositories** dialog box opens.
4. Select the repositories that you want.
5. Click **OK**.

Remove a Layer Translation Table

If you belong to a local administrator group associated with the site assigned to a Meridian repository, you can remove layer translation tables associated with that repository.

To remove a layer translation table:

1. In Meridian Enterprise ServerAdministration Console, click **Data Exchange** > **Layer Translations**.

   The **Layer Translations** page opens with the existing layer translation tables.
2. Select the layer translation table that you want to remove.
3. Click **Remove**.

   A dialog box opens, asking you to confirm your choice.
4. Click **Yes**.

Meridian Enterprise User Administration

Meridian Enterprise user administration consists of these separate but interrelated activities:

- Windows user account administration. Meridian Enterprise user accounts can be synchronized with Windows user accounts.
- Meridian Enterprise user account and group administration.
- Meridian Explorer and Publisher security application.
- Meridian Enterprise vault security application as described in *Meridian Security Requirements* in the *Meridian Enterprise Administrator's Guide , Secure Parts Of the Vault Configuration* in the *Meridian Enterprise Configuration Guide*, and *Assign Security Roles To a Folder* in the *Meridian Enterprise User's Guide*.

Meridian Enterprise user accounts and user groups should not be confused with Windows users and groups or Active Directory users and groups. Although Meridian Enterprise users and groups can be synchronized with their Active Directory counterparts, they are not the same. Instead, they can work together to authorize content management activities. The Windows user accounts and groups are used solely for user authentication and security permissions outside of Meridian Enterprise vaults and Meridian Explorer repositories. In the remainder of this guide, the terms user and group refer to Meridian Enterprise users and groups unless otherwise specified.

Meridian Enterprise users and groups are defined in Meridian Enterprise Server Administration Console. They are defined in one place for use in any of the vaults or repositories on the same LAN. To configure Meridian Enterprise to use the user accounts and groups defined in Meridian Enterprise Server, see *Meridian User Administration* in the *Meridian Enterprise Administrator's Guide .* After the two systems have been connected, you can make changes to the user accounts and groups in either system and they will be stored in Meridian Enterprise Server.

After they have been defined, Meridian Enterprise users and groups can be applied to:

- Meridian Explorer repository views
- Meridian Explorer and Publisher administration

In addition, you can delegate application management to groups of users on local sites administrators of those sites can then manage access to views, reports, and repositories.

Create And Edit User Accounts

Meridian Enterprise user accounts can be created either manually as described in this topic or by importing them from a Microsoft Active Directory as described in Synchronize Users And Groups From Active Directory. Each Meridian Enterprise user account can be associated with one or more Windows accounts.

> **Note:**
> Meridian Enterprise user accounts and groups can be created and modified from the Meridian Enterprise Administrator program if a connection from the EDM Server has been configured to the Meridian Enterprise Server services as described in the *Meridian User Administration* section in the *Meridian Enterprise Administrator's Guide* .

Create or Edit a User Account

To manually create or edit a user account:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **User Management**.

   The **Users** page appears and lists the existing user accounts.

   To filter the list of user names:

   - Type the beginning of the user's full name in the filter box and then press Enter or click the filter icon . The list is filtered on the text that you typed.
2. Choose between two options:
   - To create a new account, click **New**.

     The **New User** dialog box appears.
   - To edit an existing account, double-click the name of the user account that you want to edit.

     The option pages for the selected account appear.
3. On the **Basic** page, click options or type values using the descriptions in the following table.

   Basic user account options

Option	Description
Name	Type the user's ID as you want it to appear to other users.

Option	Description
Full name	Type the user's full name as you want it to appear to other users.
Initials	Type the user's initials.
Description	Type a description of the user.
Title	Type the title of the user.
Disabled	Select the check box to disable the account. Clear the check box to enable the account. If you select this check box, the user will be removed from all user lists, including work flows and role assignments. The user can still use Quick Change, but cannot use application links.
Locked	Select the check box to lock the account and prevent the user from logging on to Meridian Enterprise with any client application. An account can also be locked automatically by the Meridian FDA Module if the user exceeds the maximum number of logon or electronic signature attempts.
Organizational Unit	Type the name of the organizational unit in which the user works.
Email Address	Type the email address where notifications for this user should be sent.

4. On the **Windows Accounts** page, click options or type values using the descriptions in the following table.

Windows account options

Option	Description
Windows account	For each Active Directory account that you want to associate with this user: • Type the full name of an account as it appears in Active Directory and then click the **Add** icon ⊕. If the name is validated in Active Directory, it is added to the accounts list.

5. On the **Authentication** page, click options or type values using the descriptions in the following table.

Authentication options

Option	Description
Allow forms authentication	Enable this option if this user is allowed to log on using ASP.NET forms authentication. To specify the Active Directory for forms authentication, see Enable Forms Authentication. Each user for which forms authentication is enabled will permanently claim a client license as described in Licenses.

6. Click **Save**.

Import Users from a Meridian Enterprise EDM Server User Database

To import users from a Meridian Enterprise EDM Server user database:

- Run the following program as an Administrator account where:
  - *<UserDBfile>* is the path to the Meridian Enterprise user database file in Microsoft Access (MDB) or SQLite
  - *<ESaddress>* is the Meridian Enterprise Server address (UPN syntax) if it is located on a different computer. If Meridian Enterprise and Meridian Enterprise Server are installed on the same computer, omit the *<ESaddress>* argument.
  - *<Password>* is the password for the UPN account on the Meridian Enterprise Server computer.
  - `-T` or `-Trace` enable logging to a file for troubleshooting.

    ```
    C:\Program Files\BC-
    Meridian\Program\BCUsersMeridian2BCESConvertor.exe
    <UserDBfile> [-A<ESaddress>] [-T[race]]
    ```

    For example:

    ```
    C:\Program Files\BC-
    Meridian\Program\BCUsersMeridian2BCESConvertor.exe
    "D:\BC-Meridian Vaults\ICUserDB.SDF"
    -
    A"Host=MyServer;Port=8686;UPN=MyDomain\Meridian;Password=<Pas
    sword>"
    ```

Add a User to a Meridian Enterprise Group

To add a user to a Meridian Enterprise group:

1. Open the user account for editing as described in the previous task.
2. In the menu, click **Membership**.

   A page appears that lists the user's current group memberships.
3. Click **Add**.

   The **Add Groups** dialog box appears and lists the current Meridian Enterprise groups.
4. Select the groups that you want to add the user to.
5. Click **OK**.

   The selected groups appear in the list of the user's current group memberships.

Remove a User from a Meridian Enterprise Group

To remove a user from a Meridian Enterprise group:

1. Open the user account for editing as described in the previous task.
2. In the menu, click **Membership**.

   A page appears that lists the user's current group memberships.
3. Select the groups that you want to delete the user from and then click **Remove**.

   The selected groups are deleted from the list of the user's current group memberships.

Create And Edit Groups

Meridian Enterprise user groups can be created either manually as described in this topic or by importing them from a Microsoft Active Directory as described in Synchronize Users And Groups From Active Directory. Each Meridian Enterprise user account can be a member of one or more Meridian Enterprise groups.

> **Note:**
> - The group **Everyone** is built-in, cannot be edited, and automatically includes all Meridian Enterprise user accounts.
> - Meridian Enterprise user accounts and groups can be created and modified from the Meridian Enterprise Administrator program if a connection from the EDM Server has been configured to the Meridian Enterprise Server services as described in the *Configure the Connection To Meridian Enterprise Server* article in the *Meridian Enterprise Administrator's Guide* . If there is a chance that another System Administrator could be modifying the users or groups at the same time, refresh the page as described in this task by clicking **Refresh** in the app bar to show the latest information.

Manually Create a Group

To manually create a group:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **User Management**.

   The **Users** page appears and lists the existing user accounts.
2. In the menu, click **Groups**.

   The **Groups** page appears and lists the current Meridian Enterprise groups.
3. Click **New**.

   The **New Group** dialog box appears.

4. On the **Basic** page, click options or type values using the descriptions in the following table.

   Basic user group options

Option	Description
Name	Type the name of the group.
Description	Type a description of the group for administrative purposes.

5. Click **Save**.

Edit a Group

To edit a group:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **User Management**.

   The **Users** page appears and lists the existing user accounts.
2. In the menu, click **Groups**.

   The **Groups** page appears and lists the current Meridian Enterprise groups.
3. To filter the list of group names:
   a. Type the beginning of the group's name in the filter box.
   b. Press **Enter** or click the filter icon .

      The list is filtered on the text that you typed.
4. Double-click the name of the group that you want to edit.

   The option pages for the selected group appear.
5. To edit the options on the **Overview** page:
   a. In the **General** group, click **Edit**.

      The basic options dialog box for the selected group appears.
   b. Click options or type values using the descriptions in the preceding table.
   c. Click **Save**.
   d. In the **Authentication** group, click options using the descriptions in the following table.

Group authentication options

Option	Description
Clear Security Tokens	Remove all security assignments for all members of the selected group. This will force all users of forms authentication to log on again.
Enable Forms Authentication	Enable forms authentication for all members of the selected group. **Note:** Each user for which forms authentication is enabled will permanently claim a client license as described in Licenses.
Disable Forms Authentication	Disable forms authentication for all members of the selected group.

6. To add users to the group:
   a. In the menu, click **Membership**.
      A page appears that lists the group's current members.
   b. Click **Add**.
      The **Add Members** dialog box appears and lists the current Meridian Enterprise users.
   c. Select the users that you want to add to the group and then click **OK**.
      The selected users appear in the list of the group's current members.
7. To remove a user from a Meridian Enterprise group:
   a. In the menu, click **Membership**.
      A page appears that lists the group's current members.
   b. Select the users that you want to delete from the group and then click **Remove**.
      The selected users are deleted from the list of the group's current members.

Export And Import User Groups

If your organization has many Meridian Enterprise Server user groups and you need to duplicate them on another Meridian Enterprise Server server (such as from a development server to a production server), you can easily export the group memberships from one server to a file that you can import on the other server.

The exported user information contains only the user names and no other account information as described in Create And Edit User Accounts. Importing user groups will create any groups that do not already exist and add any existing Meridian Enterprise Server user accounts to the groups (including existing groups). New user accounts are not created.

> **Note:**
> This process is more efficient than synchronizing the new server from Active Directory as described in Synchronize Users And Groups From Active Directory.

Export User Groups to a File

To export user groups to a file:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **User Management**.

   The **Users** page appears and lists the existing user accounts.

2. In the menu, click **Groups**.

   The **Groups** page appears.

3. Click **Export**.

   The group memberships are exported to an XML file named `UserGroups.xml` that you can edit or import into another system. When the export is finished, the file is downloaded by your browser and you are prompted for what to do with it.

4. Save or open the file.

Import User Groups from a File

To import user groups from a file:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **User Management**.

   The **Users** page appears and lists the existing user accounts.

2. In the menu, click **Groups**.

   The **Groups** page appears.

3. Click **Import**.

   The **Import File Path** dialog box appears.

4. Click the folder icon .

   The **Open** dialog box appears. Navigate to and select the file that contains the exported user groups and then click **Open**. The file path appears in **User groups**.

5. Click **Import**.

   A dialog box opens, asking you to confirm your choice.

6. Click **Yes**.

   A background task is started and you can continue working. A result dialog box will appear when the task is finished.

Synchronize Users And Groups From Active Directory

Meridian Enterprise user accounts and groups can be created either manually as described in the preceding topics or by synchronizing them from a Microsoft Active Directory as described in this topic. The user and group information can be kept synchronized with the Active Directory to prevent double data entry.

> **Note:**
> User accounts in nested Active Directory groups will be synchronized with their associated Meridian Enterprise user accounts but Meridian Enterprise groups may not be nested.

Synchronize Users and Groups from Active Directory

To synchronize users and groups from Active Directory:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **User Management**.

   The **Users** page appears and lists the existing user accounts.
2. In the menu, click **AD Sync**.

   The **Sync User Groups** page appears.
3. If the Active Directory server options have not already been configured:
   a. In the **Active Directory** group, click **Change**.

      The **Microsoft Directory Server** dialog box appears.
   b. Click options or type values using the descriptions in the following table.
   c. Click **OK**.
4. In the app bar, click **Run**.

   A background task is started and users can continue working.

Active Directory server options

Option	Description
AD server	The name of the Active Directory server that you want to import from.
User name	The name of a user account on the Active Directory server with permissions to read the Active Directory.
Password	The password of the user account.

Option	Description
Synchronize	Select an option to specify how often to synchronize the Meridian Enterprise user accounts and groups from the Active Directory server.
Rename duplicate accounts	Enable this option to rename existing Meridian Enterprise user account and group names if identical names are imported from Active Directory.

Schedule Synchronization

To schedule the synchronization of users and groups from Active Directory:

1. Configure the Active Directory server options as described in the preceding task.
2. In the app bar, click **Schedule**.

   The **Schedule** dialog box appears. This dialog box requires the same input as the Windows Task Scheduler.
3. Configure the scheduled task to run when you require and then click **Schedule**.

   The task is created and the synchronization will run on the configured schedule.

Map AD Groups To Meridian Enterprise Groups

You can either use the Active Directory groups that are imported as described in Synchronize Users And Groups From Active Directory, or you can map those groups to Meridian Enterprise groups that you have created manually. This is particularly valuable if you want to use different group names in Meridian Enterprise Server or to combine multiple Active Directory groups into a single Meridian Enterprise group. When you have the mappings defined the way that you want them, you can export them to import into another system.

Map AD Groups to Meridian Enterprise Groups

To map AD groups to Meridian Enterprise groups:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **User Management**.

   The **Users** page appears and lists the existing user accounts.

2. In the menu, click **AD Sync**.

   The **Sync User Groups** page appears.

3. In the page header, click **Group Mappings**.

   The list of current group mappings appears. Active Directory groups that have not yet been mapped to a Meridian Enterprise group appear in red text.

   - To filter the list of group names:

     a. Type the beginning of the group's name in the filter box.

     b. Press **Enter** or click the filter icon .

        The list is filtered on the text that you typed.

   - To sort the list of AD group names, enable **Show mapped groups first**.

     The list is sorted on the **AD Group** column and the groups that have already been mapped appear at the top of the list.

4. Map the AD groups to Meridian Enterprise groups.

   - To map an AD group to a Meridian Enterprise group with the same name:

     - Select the AD group and then click **Include**.

       The AD group name is added in the **Meridian Group** column.

   - To map one or more Meridian Enterprise groups to an AD group with a different name:

a. Double-click the AD group name.

   The **Group Mappings** dialog box appears and lists all of the Meridian Enterprise groups in the left column and the Meridian Enterprise groups that are currently mapped to the selected AD group in the right column.

b. Choose between two options:

   - Double-click the Meridian Enterprise group name that you want to map to.
   - Select the Meridian Enterprise group and then click **Add**.

     The Accruent group name is added to the list of mapped groups.

c. To unmap a Meridian Enterprise group from an AD group:

   i. Select the Meridian Enterprise group that you want to unmap.

   ii. Click **Remove**.

   The group is unmapped.

d. Click **OK**.

- To clear the Meridian Enterprise group mappings for an AD group:
  - Select the AD group that you want to clear and then click **Exclude**.

    All Meridian Enterprise groups are unmapped from the selected AD group.

Export Group Mappings

To export the group mappings:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **User Management**.

   The **Users** page appears and lists the existing user accounts.

2. In the menu, click **AD Sync**.

   The **Sync User Groups** page appears.

3. In the page header, click **Group Mappings**.

   The list of current group mappings appears.

4. In the toolbar, click **Export**.

   The group mappings are exported to an XML file named `UserGroupsMapping.xml` that you can edit or import into another system. When the export is finished, the file is compressed into `UserGroupsMapping.zip` and downloaded by your browser and you are prompted for what to do with it.

5. Save or open the file.

Import Group Mappings

To import the group mappings:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **User Management**.

   The **Users** page appears and lists the existing user accounts.

2. In the menu, click **AD Sync**.

   The **Sync User Groups** page appears.

3. In the page header, click **Group Mappings**.

   The list of current group mappings appears.

4. Click **Import**.

   The **Import File Path** dialog box appears.

5. Click the folder icon .

   The **Open** dialog box appears.

6. Navigate to and select the compressed archive file (the default is `UserGroupsMapping.zip`) that you want to import and then click **Open**. The filename appears in the **Group mappings** field.

7. Click **Import**.

   The file is uploaded by your browser and the mappings are imported.

Map Meridian Enterprise User Properties To AD Fields

The user account properties in Meridian Enterprise Server are not the same as the user account fields in Active Directory. Moreover, you might want to use an alternative AD field for the Meridian Enterprise property value, for example, the AD **Personal Title** field for the Meridian Enterprise **Title** property instead of the AD **Job Title** field. Or, you might want to not use all of the AD fields. Meridian Enterprise Server lets you specify which and how AD user fields are mapped to Meridian Enterprise user properties.

To map Meridian Enterprise user properties to AD fields:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **User Management**.

   The **Users** page appears and lists the existing user accounts.

2. In the menu, click **Import**.

   The **Import User Groups** page appears.

3. In the page header, click **Field Mappings**.

   The list of current field mappings appears. Active Directory fields that have not yet been mapped to a Meridian Enterprise property appear in red text.

4. To filter the list of field names:

   a. Type the beginning of the field name in the filter box.

   b. Press **Enter** or click the filter icon.

      The list is filtered on the text that you typed.

5. Map the AD fields to Meridian Enterprise properties.

   - To map a Meridian Enterprise property to an AD field:

     a. Double-click the AD field name.

     b. Select the corresponding Meridian Enterprise property from the list that appears.

     c. Click **Update**.

        The Meridian Enterprise property is mapped to the AD field.

   - To unmap the Meridian Enterprise property mapping for an AD field:

     a. Select the AD field that you want to clear.

     b. Click **Exclude**.

        The Meridian Enterprise property is unmapped from the selected AD field.

Delete User Accounts

Deleting a user account removes it from the system permanently. To temporarily disable an account, see Create And Edit User Accounts.

> **Note:**
> You cannot delete a user account that was used to configure any global system settings. Reconfigure the settings with a different account and then you will be able to delete the first user account.

To delete a user account:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **User Management**.

   The **Users** page appears and lists the existing user accounts.

2. To filter the list of user names:

   a. Type the beginning of the user's full name in the filter box.

   b. Press **Enter** or click the filter icon.

      The list is filtered on the text that you typed.

3. Select the user account that you want to delete and then click the **Remove** icon.

   A dialog box opens, asking you to confirm your choice.

4. Click **Yes**.

   The account is deleted.

Create and Edit Sites

You can delegate application management to groups of users on local sites. Administrators of those sites can then manage access to views, reports, and repositories. When you create a site you can specify:

- **local administrators** — A list of members who you want as administrators for that site. This is listed on the **Groups** page as the name of the site suffixed with **local administrators**.
- **members** — A list of users that you want to grant access for a specific site. This is listed on the **Groups** page as the name of the site suffixed with **all users**.
- **groups** — You can create a group withing a site that contains subset of users belonging to the site. When you create a group in a site, that group is listed on the **Groups** page.

If a user is a member of the User Administrators group, they can:

- add a Group under a Site.
- add any meridian users to the members
- remove a member from a site

If you are not a member of the User Administrators group, but are a member of the Local User Administrators group for a Site you can carry out those activities for that Site.

You can choose the groups that appear as a result of creating a site when you:

- Configure repository security
- Configure view security
- Create repository views

To create a site:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **User Management**.

   The **Users** page appears and lists the existing user accounts.
2. In the menu, click **Sites**.

   The **Sites** page appears.
3. Click **New**.

   The **New Site** dialog box opens.
4. Enter a **Name** and **Description** for the site.
5. Click **Save**.

The **New Site** dialog box closes and the new site is listed on the **Sites** page.

6. Click the icon next to the site you created.

   The **Overview** page of the site appears.

7. To add administrators to the site:
   a. In the menu, click **Administrators**.
   b. Click **Add**.

      The **Add Members** dialog box opens.
   c. Select the users you want as administrators of the site.
   d. Click **OK**.
8. To add members to the site:
   a. In the menu, click **Members**.
   b. Click **Add**.

      The **Add Members** dialog box opens.
   c. Select the users you want as members of the site.
   d. Click **OK**.
   e. If you want to remove a user, select that user and click **Remove**.
9. To add groups to the site:
   a. In the menu, click **Groups**.
   b. Click **Add New**.

      The **New Group** dialog box opens.
   c. Enter a **Name** and **Description** for the group.
   d. Click **Save**.
10. To configure each group:
    a. Click the icon next to the group you want to configure.

       The **Overview** page of the group appears.
    b. In the **General** group, click **Edit**.

       The **Basic** options dialog box for the selected group appears.
    c. If required, edit the **Description** for the group
    d. Click **Save**.
    e. In the **Authentication** group, select the options you want:

- **Clear Security Tokens** — Remove all security assignments for all members of the selected group. This forces all users of forms authentication to sign on again.
- **Enable Forms Authentication** — Enable forms authentication for all members of the selected group.

  > **Note:**
  > Each user for which forms authentication is enabled will permanently claim a client license as described in Licenses.

- **Disable Forms Authentication** — Disable forms authentication for all members of the selected group.

11. To add members to the group:

    a. In the menu, click **Members**.

       the **Members** page opens for the selected group.

    b. Click **Add**.

       The **Add Members** dialog box opens and lists the members of the selected site that you can add to the group.

    c. Select the users you want as members of the group.

    d. Click **OK**.

    e. If you want to remove a user, select that user and click **Remove**.

Management Tools

The management tools in Meridian Enterprise Server help you to administer and customize various aspects of Meridian Enterprise Server from one place without leaving Administration Console.

With the management tools, you can:

- Manage all your scheduled tasks.
- Analyze the event logs.
- Change the Administration Console and Meridian Explorer colors, application title, and logo.
- Maintain custom resource files used in various Meridian Enterprise Server settings.
- Purge temporary user, audit log, Publisher queue, and scheduled task data that is obsolete.
- Configure the integration of Meridian Enterprise Server with an email server, Windows Search, forms authentication, and database server.
- Monitor license usage.
- View the audit log that records all Meridian Enterprise Server activity.
- Grant special administrative permissions.
- Easily see which full-text filters are installed on the server.
- Even more

Performing these tasks are described in the following topics.

Monitor Background Tasks

While background tasks (for example, a publishing job) are running, you can monitor their progress and their effects on server performance. You can also review the history of tasks that have run in the past.

> **Note:**
> - A publishing job will appear as one task in the **Tasks** list but may publish many documents. To view the status of individual documents, view the Publisher queue instead as described in View the Publisher Queue.
> - Changes to documents in the source system (including references) will not appear in the destination system if the documents fail to publish successfully as the result of a failed publishing task. To determine why they failed, see Solving Common Problems .

To view additional details about a task, see Inspect a Background Task.

Monitor Background Tasks

To monitor the background tasks:

- In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Tasks**.

  The **Tasks** page appears and lists the background tasks that have been created and their status.

Filtering the Tasks List

Choose one of the following options:

- To filter the Tasks list by **job status**, in the menu, click the status of the jobs that you want to monitor.

  The list is filtered by the selected status.
- To filter the Tasks list by **job name**, type the beginning of the job name in the **Job code** box and then click the filter icon .

  The list is filtered by the text that you typed.
- To filter the Tasks list by **the name of the user that submitted the job**, type the beginning of the user's name in the **User** box and then click the filter icon .

  The list is filtered by the text that you typed.

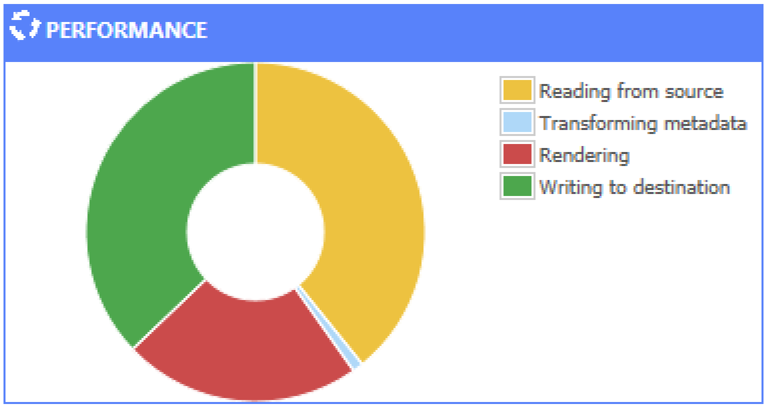
- To remove a filter, remove the text that you typed and click the filter icon.
  The full list of jobs is shown.

Inspect a Background Task

You can learn a lot about a background task by viewing closely the information that Meridian Enterprise Server provides about it:

- Status, progress, and details
- Performance effects on the server
- Errors

The performance data is shown as a pie chart similar to the following figure. The chart divides the total elapsed time to run the publishing job into its individual processes. This chart can be useful to identify bottlenecks in Meridian Enterprise Server performance.



Inspect Background Task

To inspect a background task:

1. Open the **Tasks** page as described in Monitor Background Tasks.
2. Select the task that you want to inspect and then in the toolbar, click **Open**.

   The **Dashboard** page for the task appears and shows an overview of the task and performance statistics related to the task. To show performance data for the task as a pie chart in the **Performance** pane, enable the **Collect dashboard statistics** option of each task for which you want to see the dashboard as described in Configure Synchronization Options. If you do not have the required licenses, you will not have access to these configuration options.

   > **Note:**
   > The statistics for synchronization jobs that use batch synchronization will not appear until after each batch has completed.

3. To view any errors that occurred during the task:
   a. In the menu, click **Diagnostics**.

      The errors are listed in the order that they occurred.
   b. To view only the failed processes:
      - Click the process result (**Passed** or **Failed**) and in the menu that appears, click **Failed**.

        The processes that succeeded are hidden.

Export Task Details

The details of failed tasks can be exported for troubleshooting.

To export the task details:

1. Click **Export**.

   The file `LogTaskDetailsExport.xlsx` is downloaded by your browser and you are prompted for what to do with it.
2. Save or open the file.

Manage Scheduled Tasks

You can manage the Meridian Enterprise Server scheduled tasks with Windows Task Scheduler, but if there are many tasks not related to Meridian Enterprise Server, it can be difficult to work with only the Meridian Enterprise Server tasks. Managing the tasks in Administration Console is easier.

To manage the scheduled tasks:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Task Scheduler**.

   The **All Scheduler** page appears.

2. Follow the appropriate procedures below.

Filter by Type

To filter the list of tasks by type:

- In the menu, click the type of scheduled tasks that you want to manage.

  The page refreshes to show only the type of tasks that you selected.

Modify a Task

To modify a single task:

1. Select the task that you want to modify and then in the toolbar, click **Change**.

   A warning dialog box appears.

2. Click **Yes**.

   The **Schedule** dialog box appears. This dialog box requires the same input as the Windows Task Scheduler.

3. Configure the scheduled task to run when you require and then click **Schedule**.

   The task is modified and will run on the configured schedule.

Modify a Batch Task

To modify a batch task:

1. Select the batch task that you want to modify and then in the toolbar, click **Edit Batch**.

   A warning dialog box appears.
2. Click **Yes**.

   The **Batch Job Schedule** dialog box appears.
3. Modify the batch as described in Schedule a Batch Of Publishing Jobs.

Disable or Enable a Task

To disable or enable a task:

- Select the task that you want to disable or enable and then on the toolbar, click **Disable** or **Enable**, accordingly.

  The status of the task toggles to the opposite state.

Run a Task Immediately

To run a task immediately:

1. Select the task that you want to run and then on the toolbar, click **Run**.

   A warning dialog box appears.
2. Click **Yes**.

   The task is run immediately.

View a Task

To view a task:

- Select the task that you want to examine and then in the toolbar, click **Open**.

  A page appears that shows the details of the task.

Delete a Task

To delete a task:

1. Select the job that you want to delete and then in the toolbar, click **Remove**.

   A warning dialog box appears.
2. Click **Yes**.

   The task is deleted.

View the Event Logs

Meridian Enterprise Server logs the results of every action that it takes to event logs. The logs can be useful for troubleshooting failed tasks or unexpected results. You can view the Meridian Enterprise Server event logs with Windows Event Viewer, but viewing the logs in Administration Console is easier.

> **Note:**
> The Meridian Enterprise Server events can be seen in Windows Event Viewer in the **BC Application Events** folder of the **Applications and Services Logs** branch.

The event logs can contain errors of the following severity levels:

- **Information** — The operation occurred without error. The information is provided for convenience only.
- **Warning** — The operation completed but with non-critical errors.
- **Error** — The operation could not complete due to a critical error.

View Event Logs

To view the Meridian Enterprise Server event logs:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Event Logs**.

   The **All Event Logs** page appears. If clustering is configured, separate logs are shown for each node in the header.

2. Choose between two options:

   - To filter the events by severity:
     - In the menu, click the level of severity that you want to see or click **All** to see all events.
   - To view the full details about a particular event:
     a. Double-click the event.

        A dialog box appears and shows all of the available information about the event.

     b. To view the details of nearby events, click **Back** or **Next**.

        The details of the corresponding event are shown.

Clear Logs of Unwanted Events

To clear the logs of unwanted events:

1. In the app bar, click **Clear**.

   A **Warning** dialog box appears for you to confirm that you want to clear the logs.

2. Click **Yes**.

   The event logs are cleared.

Customize the Colors And Header

Administration Console makes it easy to change the color schemes and logos used in Meridian Explorer and in Administration Console itself.

You can set a color scheme by picking one primary color. Lighter and darker hues of the same color are automatically calculated to complement the primary color and to complete the color scheme.

To customize the colors and header text:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Settings**.

   The **Application Settings** page appears.

2. On the **Application Settings** page, in the **Management Tools** group, for the **Branding** item, click **Manage**.

   The **Branding** dialog box appears.

   - To change the Meridian Explorer header text:

     a. On the **Headers** page, for the **Explorer Client** item, type the text that you want to appear as the title on the Meridian Explorer**Home** page.

     b. Click **Save**.

   - To change the Administration Console or Meridian Explorer screen colors:

     a. Choose between two options:

        - On the **Themes** page, click **Change** for the **Config application color** item to change the Administration Console color theme.

        - Click **Change** for the **BC Explorer color** item to change the Meridian Explorer color theme.

          The **Pick Color** dialog box appears.

     b. Select the primary color for your theme.

     c. Click **Save**.

3. To see your changes, refresh your browser.

To change the logo that is shown on the Meridian Explorer **Home** page, see Customize the User Interface.

Enterprise Server saves the selected color scheme in `C:\inetpub\wwwroot\BCEnterprise\Themes\css\BCTheme`*<Number>*`_`*<ColorCode>*`.css` where *<Number>* is a sequential number and *<ColorCode>* is the 6 digit hexadecimal code for the base color that you picked. If you pick a different color later, a new CSS file will be created if it does not already exist. Enterprise Server also makes a backup copy of the CSS file in `C:\ProgramData\BlueCieloECM\Hyperion\Themes\CSS` and restores the copy if the application is restarted or reinstalled so that you do not need to reset the color scheme.

The active stylesheet will be the one with the highest number in <*Number*>. This number is incremented when new styles are added to the default stylesheet as the result of changes in a version of Meridian Enterprise Server. The new default stylesheet is set as the active stylesheet after the new version of the software is installed, including for upgrades. The old stylesheet is retained during upgrades so that if you have made customizations, you can copy them to the new stylesheet.

If you have experience with CSS and want to further customize the colors, you can edit the file that is stored in the backup `CSS` folder. It will be copied over the active file when IIS is restarted. A comment block at the top of the file lists the theme colors. Each line includes a comment that describes where the color is used in the user interface. To change a color, replace all occurrences of the color code in the file with the desired code.

Manage Custom Resources

Custom resource files are uploadable data that you can use to configure some Meridian Enterprise Server features, such as:

- Watermark image files
- Watermark print stamp Javascript files
- Watermark signature page templates
- Printer configuration files
- Custom rendering module scripts

Besides uploading new resources, you can delete old ones that are no longer needed.

> **Note:**
> You may upload resource files with the same filename multiple times but you must assign a unique caption to each one. This means that you cannot update the content of an existing resource by simply uploading a new file. Instead, you must download the file, edit it, and then upload it back to the server.

To manage custom resources:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Settings**.

   The **Application Settings** page appears.

2. On the **Application Settings** page, in the **Management Tools** group, for the **Custom resources** item, click **Manage**.

   The **Resources** dialog box appears.

3. Choose one or more of the following options:

   - To add a new resource:

     a. Click **Add**.

        The **Upload Resource** dialog box appears.

     b. Click the folder icon .

        The **Open** dialog box appears.

     c. Navigate to and select the resource file that you want to upload and then click **Open**.

        The filename appears in the **File path** field.

d. Type a unique name for the resource in **Display Name**.

e. Click **Upload**.

   The file uploads to the server and appears in the **Resources** list.

- To delete a resource:

  a. Click the **Remove** icon ❌ next to the resource name that you want to delete.

     A warning dialog box appears.

  b. Click **Yes**.

     The resource is deleted.

- To download a resource so that you can edit it:

  a. In the row of the resource that you want to edit, click the **Download** icon.

     The file is downloaded by your browser and you are prompted for what to do with it.

     > **Note:**
     > If the resource is a signature page template (HTML file), the file will open in a new browser tab instead of downloading. To work around this, right-click the icon and on the shortcut menu that appears, click **Save target as**. You may then download the file.

  b. Save the file somewhere on your PC, edit it as necessary, and then upload the file back to the server using the following task.

- To upload new content for an existing resource:

  a. In the row of the resource that you want to upload, click the **Edit** icon.

     The **Upload Resource** dialog box appears.

  b. Click the folder icon.

     The **Open** dialog box appears.

  c. Navigate to and select the resource file that you want to upload and then click **Upload**.

     The file uploads to the server and replaces the content of the resource.

4. Click **Cancel**.

Purge Obsolete Data

By default, Meridian Enterprise Server retains all data that it collects.

This data includes:

- Temporary user data such as notifications, system generated spreadsheets, and so on.
- Audit log entries
- Publisher job history
- Scheduled task history

You can purge some or all of this data when it becomes obsolete. The data can be purged immediately or on a schedule that you configure.

Purge Specific Data

To specify the data that you want to purge:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Settings**.

   The **Application Settings** page appears.

2. On the **Application Settings** page, in the **Management Tools** group, for the **Clear system data** item, click **Manage**.

   The **Clear System Data** dialog box appears.

3. In the menu, click each of the items that correspond to the data that you want to purge.
4. Select an option from the **Clear system data** list that specifies when you want to purge the data.

   If you select **Older than**, type the number of days of data that you want to keep in **Days**.

5. Click **Save**.

   Your settings are saved and will be applied the next time that a task runs to clear data.

Purge Data Immediately

To purge the specified data immediately:

- For the **Clear system data** item, click **Run**.

  The operation is added as a background task and you can continue to work.

Schedule Data Purge

To purge the specified data on a schedule:

1. For the **Clear system data** item, click **Schedule**.

   The **Schedule** dialog box appears. This dialog box requires the same input as the Windows Task Scheduler.

2. Configure the scheduled task to run when you require and then click **Schedule**.

   The task is modified and will run on the configured schedule.

Reset the Application Cache

By default, Meridian Enterprise Server caches system data in memory that is used frequently and for fast access.

This data includes:

- User group memberships
- Meridian Explorer view layouts

Under normal circumstances, this data is cleared automatically when changes are made to the configuration database.

It can be helpful to clear the cache manually when:

- Troubleshooting, to ensure that user management or view configuration changes are applied
- Changes are made directly to the configuration database
- Multiple instances of the web application are connected to the same configuration database

To reset the application cache:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Settings**.

   The **Application Settings** page appears.

2. On the **Application Settings** page, in the **Management Tools** group, for the **Reset application cache** item, click **Reset**.

   A dialog box opens, asking you to confirm your choice.

3. Click **Yes**.

   The cached data is cleared and will be re-cached automatically when necessary.

Configure the Dashboard

The Meridian Explorer dashboard shows valuable information about the contents and the activity of your repositories. The dashboard can contain tables, charts, pie graphs and gauges.

The dashboard shows data that is collected on a regular basis by a scheduled publishing job. After the job is finished, it invokes a stored procedure in the repository database to collect the data and to generate the layout that is shown on the dashboard.

Getting started with the dashboard is as easy as turning it on and configuring how often the data is updated.

Turn on Dashboard

To turn on the dashboard:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Settings**.

   The **Application Settings** page appears.

2. In the **Management Tools** group, click **Enable** for the **Dashboard** option.

View Dashboard

To view the dashboard:

- See the *View the Dashboard* article in the *Meridian Explorer User's Guide* .

  The dashboard will appear empty until the data is collected by the publishing job.

Customize Dashboard Layout

To customize the dashboard layout:

- Contact Accruent Professional Services.

Collect Publishing Job Performance Data

To collect performance data for publishing jobs:

- Enable the **Collect dashboard statistics** option of each publishing job for which you want to see the dashboard as described in Configure Synchronization Options.

You can view the dashboard as described in Inspect a Background Task after the publishing job and the stored procedure have finished.

Specify a Mail Server

Meridian Enterprise Server can use your organization's existing SMTP server to send notification messages. These messages are used to notify you about the status of Meridian Explorer synchronization jobs or the results of a publishing job.

To specify a mail server:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Settings**.

   The **Application Settings** page appears.

2. On the **Application Settings** page, in the **SMTP** group, for the **SMTP server** item, click **Change**.

   The **Register SMTP Settings** dialog box appears.

3. Click options or type values using the descriptions in the following table.
4. Click **Save**.

   The server name appears in the **SMTP Server** item.

SMTP server settings

Setting	Description
SMTP server	The name of the SMTP server.
Port	The port number that the SMTP server listens to. The default is 25 (SSL not used). Also see the following description of **Use SSL/TLS**.
From name	The name that you want to appear as the sender of the notifications.
From address	The email address that you want to appear for the sender of the notifications.
Reply-to address	The email address where you want replies to the notifications to be sent.
User name	The user account to be used for authentication with the SMTP server.
Password	The password to be used for authentication with the SMTP server.
Use SSL/TLS	Enable this option to use the Secure Sockets Layer and Transport Layer Security protocols to communicate with the SMTP server. **Note:** Only Explicit SSL is supported and port 587 should be specified for the preceding **Port** option. Port 465, which supports Implicit SSL and is used by public SMTP servers such as Gmail and Yahoo, will not work.

Enable Forms Authentication

By default, Meridian Enterprise Server and Meridian Explorer require Windows authentication for PC browsers, not forms authentication. You can enable ASP.NET forms authentication if your organization requires it.

> **Note:**
> - Each user for which forms authentication is enabled will permanently claim a client license (named license) as described in Licenses.
> - These settings can be overridden for particular Accruent groups as described in Create And Edit User Accounts.

To enable forms authentication:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Settings**.

   The **Application Settings** page appears.

2. On the **Application Settings** page, in the **Forms Authentication** group, for the **Allow forms authentication** item, click **Change**.

   The **Register AD Server Name** dialog box appears.

3. Click options or type values using the descriptions in the following table.
4. Click **Save**.

Forms authentication settings

Setting	Description
Allow forms authentication	Redirects authentication requests to the specified server. Disable this option to disable forms authentication.
Active Directory name	The name of the Active Directory that you want to authenticate the requests. This setting allows users to enter just their user name when logging on to the website. They may also enter this domain name.
Token Lifetime	Select an option from the list to specify the authentication token lifetime. Users will be required to log on when the lifetime expires.

Manage Licenses

The server, client, and viewer licenses that are claimed by Meridian Explorer and Publisher can be viewed in the Meridian Enterprise Server Administration Console along with the licenses claimed by Meridian Enterprise modules and users.

> **Note:**
> The number of licenses that are listed in Meridian Enterprise ServerAdministration Console are retrieved from the Meridian Enterprise License Server during repository synchronization. If you register additional licenses with the Meridian Enterprise License Server, they will not be available to Meridian Enterprise Server until after the next vault synchronization has occurred.

Change the License Server

To change the Meridian Enterprise license server where the licenses are retrieved from:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Settings**.

   The **Application Settings** page appears.
2. In the menu, click **Licenses**.

   The **Licenses** page appears.
3. In the **License Server** group, for the **Server Name** item, click **Change**.

   The **Register Licensing Server Name** dialog box appears.
4. Type the name of the computer where the Meridian Enterprise license server is hosted in **Register License Server Name**.
5. Click **Register**.

   The new name appears in **Server Name**.

View Installed Licenses and License Usage

To view the installed licenses and their usage:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Settings**.

   The **Application Settings** page appears.
2. In the menu, click **Licenses**.

The **Licenses** page appears. The top pane shows a list of the licenses that have been registered, the license keys, and the quantity of each license. The bottom left pane shows how many of the installed licenses are currently in use. The lower-right pane lists the names of the users who are currently using licenses, when they began using them, and when the license was last reassigned.

3. Click the name of a license in the top pane.

   The corresponding row in the lower-left pane is automatically highlighted and the lower-right pane refreshes to show the corresponding user names. The page refreshes periodically to show the current information.

4. Click **Close**.

Register Licenses - Administration Console

The licenses used by Meridian Enterprise, Meridian Explorer, and Publisher are managed by the Meridian Enterprise License Server. The license server must be running on the computer to which the Meridian Enterprise Server server is connected as described in Manage Licenses. To use licenses beyond the 30 day trial period, authorization keys for the licenses must be received from Accruent and registered in the license server.

Licenses and authorization keys can be registered either in the Meridian Enterprise Administrator as described in the *Register Licenses* article in the *AccruentMeridian Enterprise Administrator's Guide* or in the Meridian Enterprise ServerAdministration Console as described in the following task. Both methods accomplish the same thing.

- If the connection to the Meridian Enterprise License Server has not yet been configured, register the license server name as described in Manage Licenses.
- Copy or record the license codes from the Accruent Customer Portal or from your Accruent Partner to the Windows clipboard.

Register Licenses

To register licenses:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Settings**.

   The **Application Settings** page appears.
2. In the menu, click **Registration Details**.

   The **Registration Details** page appears.
3. In the **Registration Details** group, if the organization fields have not be entered yet, enter your organization's information.
4. In the **License Server** group, click **Enter License Codes**.

   The **Enter license codes** dialog box appears. If valid license codes are in the Windows clipboard, they are read automatically and appear in the license list.

   If you did not copy the license codes to the clipboard before starting this task, leave the dialog box open, copy the codes to the clipboard, and then click **Read clipboard**. The codes should then appear in the license list.
5. Click **Next**.

   The **Register new license codes** dialog box appears and lists each license type and the quantity of each license as calculated from the license codes.

6. Click **Next**.

   The **Enter license codes** dialog box appears and lists the site properties.
7. If you have not previously registered a site ID, type it or your license agreement number in **Site ID/Agreement**.
8. Click **Next**.

   A dialog box opens, asking you to confirm your choice.
9. Click **Yes**.

   An information dialog box appears and shows the results of registering the licenses.
10. Click **OK**.

    The dialog box closes and the **Status** property on the **Registration Details** page is updated. You may now view the registered licenses as described in Manage Licenses or send the registration form to receive authorization keys for the licenses as described in the following task.

Receive Authorization Keys

To receive authorization keys:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Settings**.

   The **Application Settings** page appears.
2. In the menu, click **Registration Details**.

   The **Registration Details** page appears.
3. In the **Registration Details**group, for the **Registration Form** item, click **Edit**.

   The **Registration** dialog box appears.
4. Click options or type values using the descriptions in the following table.

   License registration properties

Property	Description
Organization	The name of your organization.
Country	The name of the country where your organization is located.
State	If your organization is located in the United States, type the abbreviation of the state.
City	The name of the city where your organization is located.

5. To preview the registration information before you send it to Accruent, in the menu, click **Registration Form**.

   The registration information that you entered appears along with the software version, registered license codes, and information about where to send the registration form.

6. To download the registration information so that you can send it to Accruent:

   Choose between two options:

   - On the **Registration Form** page, click **Download**.
   - On the **Registration Details** page, click **Download**.

     The file is downloaded by your browser and you are prompted for what to do with it. Save the file somewhere on your PC.

7. Click **Close**.
8. Send the file to the Accruent office nearest you as listed at the bottom of the downloaded file.

Register Authorization Keys

> **Note:**
> Copy the complete text of the registration information that you received from Accruent or from your Accruent Partner to the Windows clipboard. Any existing licenses that have been registered will be replaced by the licenses on the Windows clipboard.

To register authorization keys:

1. Repeat the task to register the licenses as described at the beginning of this topic. The authorization keys will be detected and registered.
2. If you did not previously register a site ID, it is required before the licenses can be registered.

Reassign Named Licenses - Meridian Enterprise Server

Named licenses are assigned to specific users when an unassigned license is claimed for the first time. The user will then retain exclusive use of that license until they have not used it for 30 days, at which time the license is released and may be claimed by another user. You may assign claimed licenses to other users instead of waiting for the 30 days to elapse, such as for an extended absence.

To reassign a named license:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Settings**.

   The **Application Settings** page appears.

2. In the menu, click **Licenses**.

   The **Licenses** page appears. The list on the top of the page lists the registered licenses. The list in the lower-left of the page lists the quantity of each license that is currently in use. The list in the lower-right of the page lists the users who are assigned to the license selected in either of the other two lists.

3. In the lower-right list, double-click the name of the user who is assigned a license that you want to reassign.

   The **Select User To Exchange License** dialog box appears.

4. Click the name of the user to which you want to assign the license and then click **OK**.

   The license is assigned to the selected user.

Restrict Licenses

In some environments, users should only receive Meridian Enterprise licenses if a user is a member of a specific Active Directory group. Restricted licenses can be configured in the following Windows key on the computer where the Accruent License Server is installed.

HKEY_LOCAL_MACHINE\Software\Cyco\AutoManager Meridian\CurrentVersion\Server\Licensing

To learn more about the settings for this license key, see the *Registry Keys* section of the *Meridian Enterprise Administrator's Guide*.

You specify pairs of user group names and corresponding Meridian Enterprise product codes. The Accruent License Server service will then only grant licenses to the members of the specified group for the specified product code. If a user attempts to use one of the specified products but is not a member of the matching group, the user will be denied a license. You may also restrict licenses in the Meridian Enterprise Administrator as described in the following task.

Notes about functionality

- Restricting licenses overrides reserved licenses as described in *Reserve Licenses* in the *Meridian Enterprise Administrator's Guide*.

  You can restrict licenses without reserving them and you can reserve licenses without restricted them. But if you want to use both license reservations and license restrictions, the users for which you want to reserve licenses must also be members of groups to which licenses have been restricted. Users without reserved licenses only need to be members of groups to which licenses have been restricted.
- Restricted licenses can also be configured in Meridian Enterprise Server if the **Use Enterprise Server for user management** option is enabled as described in *Configure the Connection To Meridian Enterprise Server* in the *Meridian Enterprise Administrator's Guide*.
- The available group names are retrieved from the Active Directory server that has been synchronized. This synchronization can be done in two ways:
  - Using the `ADSyncUsers.exe` program as described in *Synchronize User Groups With Active Directory* in the *Meridian Enterprise Administrator's Guide*.
  - Using the AD Sync tool in the Meridian Enterprise Server Administration Console, as described in Synchronize Users And Groups From Active Directory.
- Users must be members of a local or domain group.

Administrator Procedures

To restrict licenses:

1. In the Meridian Enterprise Administrator, select **License Server** in the left pane.

   Property page tabs appear in the right pane.

2. Click the **Users** tab.

   The current quantity of each registered license type is shown in the **Licenses** list.

3. Right-click the name of the licenses that you want to restrict and then click **Restrictions**.

   The **License Restrictions** dialog box appears and lists all of the registered licenses. By default, the **Select user group** list is empty until you specify at least one group to which to restrict licenses.

4. Select an existing group from **User group** that has already been assigned product codes.

   If the group you want to select is not listed:

   a. Click **Add**.

      The **Select User Group** dialog box appears.

   b. Type the name of a group in **User group** and press **Enter**.

      The group name appears in the **User group** list.

5. Select the license codes that you want to allow for the specified group.

6. Repeat steps 3-4 for each group to which you want to restrict licenses.

7. Click **OK**.

Enterprise Server Administration Console Procedures

To restrict licenses:

1. In the **System Management** group, click **Settings**.

   The **Application Settings** page appears.

2. In the menu, click **Licenses**.

   The **Licenses** page appears.

3. Click **Restrictions**.

   The **License Restrictions** dialog box appears and lists all of the registered licenses. By default, the **Select user group** list is empty until you specify at least one group to which to restrict licenses.

4. Select an existing group from **Select user group** that has already been assigned product codes.

   If the group you want to select is not listed:

   a. Click **Add group**.

      The **Select User Group** dialog box appears.

   b. Type a search criterion in **Search filter** and press **Enter**.

      The matching groups appear in the **User group** list.

   c. Select a group.

   d. Click **OK**.

      The group appears in the **Select user group** list where you can select it to assign product codes.

5. Select the license codes that you want to allow for the specified group.
6. Repeat steps 3-4 for each group to which you want to restrict licenses.
7. Click **OK**.

View the Audit Log

All actions in Meridian Explorer and in Meridian Enterprise Server Administration Console are logged to a database. This data can be used to perform security audits and system troubleshooting. This Audit Log is filtered to your current vault.

Publishing job activity is not logged in the audit database. Refer to Publisher Queue described in View the Publisher Queue instead.

> **Note:**
> You must be a member of a group that has been granted the **Audit Log Viewers** administrative permission to perform this task.

View the Audit Log

To view the audit log:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Audit Log**.

   The **Audit Log** page appears. By default, no data is shown at first due to the large volume of data that the audit log can hold. You must select a filter for the type of activity that you want to view.

2. Choose one or more of the following options:

   - To filter on a particular action:

     - Select an action from the list and click the search icon .

       The audit log refreshes to show the activities that have occurred for the selected action.

   - To filter a particular value in a column:

     a. Click the downward arrow in the heading of the column that you want to filter and point to **Filters**.

     b. Choose between two options:

        - If the column contains text, type part of the value that you want to find in the text box, and then press **Enter** on your keyboard.

          The audit log refreshes to show the filtered data and the filter icon appears in the heading to indicate that a filter is active.

- If the column contains dates, select a criterion from the list that appears and if a calendar appears, select a date from the calendar to use with the criterion.

  The audit log refreshes to show the filtered data and the filter icon appears in the heading to indicate that a filter is active.

- To sort the data on a particular column:
  - Click the heading of the column that you want to sort on. To reverse the sort order, click the heading again.
- To change the order of columns:
  - Drag a column heading and drop it in the desired position.
- To hide or show columns:
  - Click the downward arrow in any heading, point to **Columns**, and then select the columns that you want to see or clear the columns that you want to hide.
- To change the column names:
  a. In the app bar, click **Settings**.

     The **Audit Log Columns** dialog box appears.

  b. Click the row that corresponds to the column that you want to change.

     The row expands to show the configuration options.

     i. To change the column name, type the new name in the **Caption** column.

     ii. To change the column visibility, select or clear the check box in the **Visibility** column, respectively.

  c. Click **Update**.

  d. Click **Save**.

     The audit log refreshes to show your changes.

Export to Excel

To export the audit log as a Microsoft Excel workbook:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Audit Log**.

   The **Audit Log** page appears.

2. Click **Export**.

The export starts as a background task. The entire audit log database will be exported to an Excel workbook named `AuditLogExplort.xlsx` where you can filter, sort, organize, and format the data to meet your requirements. When the task is finished, the file is downloaded by your browser and you are prompted for what to do with it.

3. Save or open the file.

Configure Administrative Permissions

Administrative permissions apply to the entire Meridian Enterprise Server configuration. By default, only members of the local **Administrators** group on the Meridian Enterprise Server computer and users who are logged on to the server are allowed to modify the configuration. You can grant additional permissions to particular Accruent groups to perform specific administrative tasks.

User permissions to individual Meridian Explorer repositories are described in Configure Repository Security. User permissions to publish documents and edit rendition properties are described in Security Permission Descriptions.

The available roles are described in the following table.

Administrative security roles

Role	Description
Application Administrators	Unrestricted access to the configuration. These groups are in addition to the Windows local **Administrators** group and users who are logged on to Windows on the server.
Repository Administrators	Can create and manage Meridian Explorer repositories as described in Create a Meridian Explorer Repository.
Publisher Administrators	Can create and manage publishing jobs and import profiles as described in Create a Publishing Job. The user who registered a document for publishing may also manage it in the Publisher Queue as described in View the Publisher Queue
Explorer Administrators	Can create and manage Meridian Explorer repository views as described in Create And Edit Repository Views.
Import Profile Administrators	Can create and manage import profiles as described in Create an Import Profile.
User Administrators	Can manage groups and users as described in Create And Edit User Accounts.
Audit Log Viewers	Can view the audit log database as described in View the Audit Log.
Layer Translation Administrators	Can create and manage layer translation tables.

To configure the administrative permissions:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Settings**.

   The **Application Settings** page appears.

2. In the menu, click **Permissions**.

   The **Permissions** page appears.

3. Click **Edit** in the item of the administrative role that you want to configure.

   The **Select Groups** dialog box appears and lists the Accruent groups that are members of the selected role.

4. Choose between two options:

   - To add a group:

     a. Click **Add**.

        The **Add Groups** dialog box appears.

     b. Select one or more groups to add and then click **OK**.

        The groups are added to the groups list.

   - To remove a group:

     a. Select the group that you want to remove.

     b. Click **Remove**.

        The group is removed from the list.

5. When you are finished editing the role, click **OK**.

   The list of groups for the selected role refreshes to show your changes.

6. Repeat steps 3 to 4 for each role that you want to configure.

View the Full-Text Filters

Meridian Explorer uses Windows Search to index the text of documents, memo properties, and file properties. Windows Search uses IFilters to crawl the data and extract keywords for indexing. Each IFilter supports one or more particular file formats. You can view which IFilters are installed on the Meridian Enterprise Server server to determine whether particular file formats are indexed correctly.

Windows installs an IFilter that crawls the text of numerous generic file types such as `.txt`, `.xml`, and so on. IFilters for proprietary file formats are typically installed with the applications that produce or view the files, such as Microsoft Office, AutoCAD, Adobe Reader and so on.

To view the full-text filters:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Settings**.

   The **Application Settings** page appears.

2. In the menu, click **IFilters**.

   The **IFilters** page appears. The page lists the registered file extensions, the corresponding IFilters, their names, the location of the corresponding `.dll` file, and whether they are 32-bit.

3. To refresh the list after installing a new IFilter:

   - In the app bar, click **Refresh**.

     The list is refreshed.

View And Edit the Connectivity Settings

After the Meridian Enterprise Server configuration database connection has been created, it can be viewed or changed as described in the following task. For the highest performance in large scale environments, multiple Meridian Enterprise Server servers can be deployed and configured in a cluster with one server acting as the primary server.

To view or edit the connectivity settings:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Settings**.

   The **Application Settings** page appears.

2. In the menu, click **System Settings**.

   The **System Settings** page appears with server configuration options.

Server configuration options

Group	Option	Description
Configuration Database	Connection string	Connection string to the configuration database. You can change the configuration database or create a new one.
Server (Primary)	Server Name	Name of the server to which the Meridian Enterprise Server Administration Console is connected. You can connect to a different server. If the Hyperion site URL in the Enterprise Server configuration database is different to this server, you are prompted to update the URL in the configuration database if you visit this page and you have Administrator permissions.
Meridian Analytics	Share Meridian analytics	Enable this setting to allow Meridian Enterprise Server to share Meridian Enterprise vault data with Meridian Analytics. The shared data includes all user activities in all Meridian clients plus the quantities of documents for each type in every vault. Users, documents, vaults, and servers are identified by uniquely computed values and not by name to protect customers' privacy.
Cluster	Server clusters	You can join another Meridian Enterprise Server server with the current server in a cluster. For information about Meridian Enterprise Server clusters, see Meridian Enterprise Server Clusters.

Group	Option	Description
Meridian Portal	Meridian Portal tenancy	The name of the Meridian Portal tenancy to which to connect for the exchange of packages. You can change the tenancy settings.
Meridian Portal	Packages	The number of packages sent from Meridian Portal that have not yet been imported to the Meridian Enterprise vault by Meridian Enterprise Server. To refresh the package count, click **Update**. To view the available packages, click **View**.
Meridian Portal	Synchronize lookup tables	Synchronizes the Meridian Portal lookup tables from the linked Meridian Cloud vault. You can create a scheduled task to synchronize lookup tables.

In the **System Settings** page you can:

Change configuration database or create new

To select a different configuration database or to create a new one:

1. In the **Configuration Database** group **Connection string** field, click **Change**.

   A dialog box opens, asking you to confirm your choice.
2. Click **Yes**.

   The **Configuration Database** page appears.
3. Click options or type values using the descriptions in the table in Create the Configuration Database.

Connect to a different server

To connect Meridian Enterprise Server Administration Console to a different server:

1. In the **Server (Primary)** group, **Server Name** field, click **Change**.

   A dialog box opens, asking you to confirm your choice.
2. Click **Yes**.

   The **Server configuration** page appears.
3. Click options or enter values to complete these fields:

- **Computer** – Meridian Enterprise Server server name in one of these formats:
  - Simple name (**MyServer**)
  - Fully qualified domain name (**MyServer.MyDomain**)
  - IP address (**127.0.0.1**, **localhost**)
- **Port** – port number that Meridian Enterprise Server is configured for. Default value: 8686.
- **UPN** – User Principle Name with which to connect to the server, for example, **MyServer\Administrator** or **administrator@MyServer**.

4. In the app bar, click **Connect**.

   A dialog box opens, asking you to confirm your choice.
5. Click **OK**.

   Meridian Enterprise ServerAdministration Console reloads connected to the specified server.

Join another server with current server

To join another Meridian Enterprise Server server with the current server in a cluster:

1. In the **Cluster** group, **Server clusters** field, click **Add Node**.

   The **Register Node** dialog box appears.
2. Click options or type values using the descriptions in the preceding table.
3. Click **Register**.

   The name of the server is added to the node list.

   The new node can now be selected for publishing jobs as described in Configure a Publishing Job.

Change Tenancy settings

To change tenancy settings:

1. In the **Meridian Portal** group, **Meridian Portal tenancy** field, click **Change**.

   The Meridian Portal page appears.
2. In the Meridian Portal page that opens, complete the fields:

- **Meridian Portal** — The Meridian Portal domain name where your tenancy resides (for example, **meridian360.com** or **meridian360.eu**)
- **Package scanning interval** — The interval in minutes to scan for new packages. The default is 5 minutes. This option is only available after a Meridian Portal tenancy has been registered.
-
- **Sub-domain** — The name of your tenancy (company) at the domain entered in the **Meridian Portal** option.
- **User name** — The account name with access to the Meridian Portal API with which to connect to Meridian Portal.

  This is the special **Meridian** user account that can only be used by Meridian Enterprise Server to communicate with Meridian Portal.

  The ways in which the **Meridian** user account is different from normal user accounts are:

  - The account and its password can only be created by Accruent and once created, the account cannot be deleted.
  - It is the only account that can be assigned the **Meridian** security role in Meridian Portal that is necessary to communicate with Meridian Enterprise. The role does not grant privileges to the account to work interactively in Meridian Portal. Once assigned, the role cannot be revoked.

  For more information about the account and Meridian Portal security, see Manage User Accounts.
- **Password** — Password for the account specified in **User name**.
- **Proxy address** — URL (including optional port number) of the proxy server to use to connect to Meridian Portal.
- **Proxy user name** — User account with permission to connect to the proxy server.
- **Proxy user password** — Password for the account specified in **Proxy user name**.

3. Click **Save**.

Create a scheduled task to synchronize lookup tables

Choose between three options:

- To create a scheduled task to synchronize the tables:
    1. Click **Schedule**.

       The **Schedule** dialog box appears. This dialog box requires the same input as the Windows Task Scheduler.
    2. Configure the scheduled task to run when you require and then click **Schedule**.

       The task is created and the synchronization will run on the configured schedule.
- To view an existing scheduled task:
    1. Click **Open Scheduler**.
    2. Locate the task named **Meridian Portal lookup synchronization**.
- To run the scheduled task immediately, click **Run**.

Import Tags

Meridian Enterprise Server can import asset management system tags from a variety of sources:

- Microsoft SQL Server
- Microsoft Access
- Microsoft Excel
- Oracle

Importing tags is a three-step process:

1. In the asset management system, export the tag data to an intermediate file. This will be the source of the data to import in Enterprise Server. Consult a System Administrator or the documentation for the asset management system for how to do this.
2. In Enterprise Server, create an import profile that specifies how to import the tag data as described in Create And Edit Tag Import Profiles.
3. In Enterprise Server, run an import using the profile as described in Run a Tag Import.

Configuring tag import profiles and running imports are described in the following topics.

Create And Edit Tag Import Profiles

A tag import profile is a group of settings that specify where the tags are imported from and how the tag properties are mapped from the source to Enterprise Server

To create a tag import profile:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.
2. Double-click the name of the repository for which you want to import tags.

   The **Overview** page for the repository appears.
3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.
4. In the **Tag Import** group, click **Manage**.

   The list of existing tag import profiles appears.
5. Click **New**.

   The **Overview** page appears.
6. Click options or type values using the descriptions in the following table.
7. Click **Save**.

Tag import profile options

Option	Description
Name	The name of the profile as it should appear in the profile list.
Source type	The data source of the tag data.
Table	The table or spreadsheet name that contains the tag data.
Connection string	A valid connection string to the data source.

Configure Tag Property Mappings

The tag property mappings specify to which properties in Enterprise Server the tag properties from the source system are imported.

Mapping some of the repository properties are mandatory. If these properties are not mapped, the import will fail:

Repository property descriptions

Name	Description
Description	Description of the equipment to which the tag is related.
Name	Primary name or number of the tag.
Status	Current status of the tag (0 = disabled, 1 = enabled)
Type Name	Type of the tag. If the tag type does not yet exist in the repository, it will be created. For more information about tag types, see Configure Item Names And Indexing.
Location	Location of the equipment to which the tag is related.

To configure tag property mappings:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.
2. Double-click the name of the repository for which you want to import tags.

   The **Overview** page for the repository appears.
3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.
4. In the **Tag Import** group, click **Manage**.

   The list of existing tag import profiles appears.
5. Double-click the name of the profile that you want to configure.

   The **Overview** page appears.
6. In the menu, click **Property Mapping**.

   The **Property Mapping** page appears and lists the repository properties that can be mapped (grouped by property set) and their current mappings to the tag data source.

7. Click options or type values using the descriptions in the following table.
8. To change the mapping of an item:
    a. Double-click the item name.

       The item expands to show its mapping options.
    b. Click options or type values using the descriptions in the following table.
    c. Click **Update**.
9. Click **Save**.

Property mapping options

Column	Description
Repository	Repository property display name, internal name, and data type. Read-only.
Source	Select a tag property from the list.
Size Limit	Length of the data to import in characters (strings only). The default is the size of the data specified by the property definition.
Fixed Value	Type one value to apply to all tags for this property.

Run a Tag Import

Running a tag import uses the configuration of the tag import profile to import the tag data into the repository. Any existing tags in the repository will be updated by the import.

To run a tag import:

1. In Meridian Enterprise Server Administration Console, in the **Repositories** group, click **Repositories**.

   The **All Repositories** page appears and lists the existing Meridian Explorer repositories and Meridian Enterprise vaults.

2. Double-click the name of the repository for which you want to import tags.

   The **Overview** page for the repository appears.

3. In the menu, click **Management Tools**.

   The management tools for the selected repository appear.

4. In the **Tag Import** group, click **Manage**.

   The list of existing tag import profiles appears.

5. Select the profile that you want to run and then in the toolbar, click **Run**.

   The job is starts as a background task. For information about background tasks, see Monitor Background Tasks.

To view the imported tags, open a tag view in the repository as described in *View Linked Tags* in the *Meridian Enterprise User's Guide* .

Remote Site Caches

Because Meridian Enterprise is a centralized system, optimizing performance for remote users with modest available bandwidth can be a challenge, particularly if the users work with large files or many external references. Meridian Enterprise provides a variety of features to help meet this challenge, including Remote and Online modes for Power Desktop users and Remote mode for PowerWeb and Explorer users.

If a group of Meridian Enterprise users works in proximity to a corporate web server that is geographically closer to them than the Meridian Enterprise application server, Meridian Enterprise web server, or Meridian Explorer server, a site cache component can be installed and configured on their local web server. Site cache servers support Meridian Explorer clients and the Online and Remote modes of PowerWeb (HTTP or HTTPS) but do not support Offline mode or the PowerUser client (DCOM). They also support simultaneous connections from multiple sessions by the same user and simultaneous connections to multiple Meridian Enterprise servers.

The site cache temporarily stores documents (source or renditions) that the users work with so that they do not have to download them from the central server every time. The system response and performance to download and upload documents is greatly improved, comparable to users that are located near to a Meridian Enterprise server. The site cache service automatically synchronizes the cache with the Meridian Enterprise servers transparently in the background. Old and orphaned documents are removed from the cache (and from local workspaces) to make space for newer and active documents. Multiple site caches can be configured to serve separate groups of users that each have a local web server.

> **Note:**
> New documents created by remote users are sent immediately to the Meridian Enterprise web server and stored in the vault. Copies of the documents are added to the local site cache for future access.

Configuring a site cache server involves tasks on several servers as well as on the Meridian Explorer clients. The installation tasks are listed in the order in which they should be performed in the following table and are described in this guide and in other guides. Use the hyperlinks in the following checklist to find the instructions for each task. Track your installation progress by printing this checklist and placing a check mark in the **Completed** column as you finish each task.

Site cache configuration checklist

Completed	Task	Topic Reference
	If using HTTPS, Install the site cache server certificate on the Meridian Enterprise Server machine.	When using HTTPS, it is now mandatory to install a site cache server certificate on the Meridian Enterprise Server machine for each site cache server, otherwise the site cache server is marked as invalid and an error like this one is shown in the BC Application Events: Site Cache Server 'https://<pcname>/BCSiteCache' is unavailable due to these reasons: • One or more errors occurred. • An error occurred while sending the request. • The underlying connection was closed: Could not establish trust relationship for the SSL/TLS secure channel. • The remote certificate is invalid according to the validation procedure. **Note:** To provide preload tasks with a way to query site cache servers using HTTPS, ensure site cache servers have a self-signed certificate issued to localhost.

Completed	Task	Topic Reference
	The Meridian Enterprise EDM Server service, Meridian Enterprise web application identity, Meridian Enterprise Server service, and the **BCSiteCache** web application identity must all run under the same account.	Enter an appropriate domain account during Meridian Enterprise server installation when prompted. Confirm that the account is used by each of the services. For account requirements, see *Grant domain privileges with a service account* in the *Meridian Enterprise Administrator's Guide*.
	Integrate Meridian Enterprise with Meridian Enterprise Server and specify the correct **HOST** and **UPN** parameters for the Meridian Enterprise Server account.	See *Configure the connection to Meridian Enterprise Server* in the *Meridian Enterprise Administrator's Guide*.
	Publish the vault that contains the documents to be cached as a PowerWeb location on only one Meridian Enterprise web server.	See *Create a PowerWeb location* in the *Meridian Enterprise Administrator's Guide*.
	Confirm that the site cache server meets or exceeds the minimum system requirements.	Site cache server requirements
	Disable Compatibility view of the **BCSiteCache** URL in Internet Explorer on the PC that will be used to configure the site cache server.	Compatibility View on the MSDN website.
	Register the site cache server in Meridian Enterprise Server.	Register site cache servers
	Configure the site cache server in Meridian Enterprise Server.	Configure site cache servers
	Pre-load the site cache with documents.	Pre-load site caches
	On the client PCs, confirm that the local workspace component of Meridian Enterprise Application Integration is installed and running (`BlueCieloECM.SiteCache.LwsClient.exe`).	
	On the client PCs, confirm that Meridian Enterprise Application Integration is set to **Remote** mode.	See *Work Offline or Remote* in the *Meridian Enterprise User's Guide*.

Completed	Task	Topic Reference
	On the client PCs, confirm that the site cache URL is set correctly.	See *Configure Local Workspace* in the *Meridian Enterprise User's Guide*. See *HKEY_LOCAL_ MACHINE\Software\Cyco\ AutoManager Meridian\CurrentVersion\Client* in the *Meridian Enterprise Administrator's Guide*.
	If users will connect from a different domain or if the site cache server is behind a proxy server, advise users how to set the connection settings of the site cache client.	See *Configure a Site Cache Connection* in the *Meridian Enterprise User's Guide*.
	On the client PCs, confirm that the local workspace option **Use in Offline and Remote modes** is enabled.	See *Configure Local Workspace* in the *Meridian Enterprise User's Guide*.
	On the client PCs, if they will be used in Remote mode with application links and large assemblies, consider enabling the **EnableRemoteDocumentCache** setting.	See *HKEY_CURRENT_ USER\Software\Cyco\ AutoManager Meridian \CurrentVersion\AMLink\Settings* in the *Meridian Enterprise Administrator's Guide*.

Register Site Cache Servers

If you use remote site cache servers to improve the performance of the Meridian Enterprise Web Client for remote users, you can manage their configuration from a single place within the Enterprise Server Administration Console.

> **Important!**
> In environments with multiple vaults, the vault names must be unique and not be sub-strings of other vault names. For example, vaults with names like **Orion** and **Orion_South** can result in documents being cached from the wrong vault.

The Meridian Enterprise Server computer must be able to connect to and access the cache folder on the site cache server either within the same domain or between trusted domains. The **BCSiteCache** application pool on the site cache server must use the same identity as the **BCEnterprise** application pool (to access Meridian Explorer repository documents) and the **BCMeridian** application pool (to access Meridian Enterprise vault documents). This account should be granted full permissions to the folder specified for **Cache folder** as described in Configure Site Cache Servers.

Users must have the Download Native Document security privilege to view native documents when a site cache server is registered.

Add Site Cache Server

To add a site cache server:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Settings**.

   The **Application Settings** page appears.
2. In the menu, click **Site Cache**.

   The **Site Cache** page appears and shows the currently registered servers.
3. Click **New**.

   The **Register Server** dialog box appears.
4. Type the URL of the site cache server in **Server URL** (for example, **https://MyServer/BCSiteCache**) and click **OK**.

   The URL is added to the list of registered servers.
5. You can now configure the cache server as described in Configure Site Cache Servers.

Unregister Site Cache Server

To unregister a site cache server:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Settings**.

   The **Application Settings** page appears.

2. In the menu, click **Site Cache**.

   The **Site Cache** page appears and shows the currently registered servers.

3. Select the server in the list that you want to unregister and in the toolbar, click **Unregister** .

   A dialog box opens, asking you to confirm your choice.

4. Click **Yes**.

   The server is removed from the list.

Configure Site Cache Servers

When you configure a site cache server, you specify:

- Which Meridian Enterprise Server repositories to cache on the site cache server
- The specific documents to preload into the cache so that they are available to local users
- When to preload a cache so that new documents are available to local users
- How much disk space on the site cache server to use for the cached documents
- How long to retain the documents and when to remove the oldest documents

When the Site Cache Server component is installed, it creates two web applications in Internet Information Server:

- **BCSiteCache** — Must be accessible by users to use the site cache.
- **BCSiteCacheClient** — Must be accessible by System Administrators to configure the site cache as described below. You can deny end users access to this application with IIS permissions.

The maximum size of files uploaded to the site cache server is 2 GB. This may be considerably more than is possible with PowerWeb, which is limited by Internet Information Services. You can adjust the limit as described in the Accruent knowledge base article How to increase the upload file size limit of PowerWeb.

When using Site Cache Mode with Shared Workspaces, the server hosting Meridian must be added to the trusted locations. If this is not done, the following error might appear when a user first attempts to download a document to the shared workspace "Local DB document update failed. The parameter is incorrect."

To provide preload tasks with a way to query site cache servers using HTTPS, ensure site cache servers have a self-signed certificate issued to localhost.

Configure a Site Cache Server

To configure a site cache server:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Settings**.

   The **Application Settings** page appears.
2. In the menu, click **Site Cache**.

   The **Site Cache** page appears and shows the currently registered servers.

3. Select the server in the list that you want to configure and in the toolbar, click **Configure**.

   The configuration page of the site cache server opens in a new browser window.
4. Click options or type values using the descriptions in the following table.
5. Click **Apply**.

   Your changes are saved.

Site cache server options

Group	Option	Description
General Settings	Cache folder	The root path on the site cache server where to store the cached files. Sub-folders will be created here automatically for each repository. To validate the path, click **Test**.
General Settings	Description	Type a description of this site cache server to appear on the **Site Cache** page for easier identification.
General Settings	Preferable for subnets	Type one or more ranges of IP addresses that should use this site cache server. To define IP range, use network prefix notation, also known as CIDR notation. Separate ranges with the semicolon character (;). PCs within a specified range will show the text **Preferred:** next to the site cache server display name in the site cache server list as described in the *Configure a site cache connection* article in the *Meridian Enterprise User's Guide*. For example, **100.70.0.0/20;100.100.1.0/16** specifies two IP ranges: 100.70.0.1 to 100.70.15.254 and 100.100.0.1 to 100.100.255.254.
Repositories	Display name	Lists all the Meridian Explorer repositories and Meridian Enterprise vaults that are registered on the Meridian Enterprise Server to which the site cache server is connected.
Repositories	DMS Type	The repository type, either **ExplorerClient** or **WebAccess** (Meridian Enterprise web client).
Repositories	Available	The current availability of the repository.
Repositories	Cache enabled	Indicates whether the repository is cached by the current site cache server. This option requires a Site Cache Server license (part number contains **M--SCH**) if the component is not installed on the same computer as Meridian Enterprise Server.
Cleanup settings	Cache info	The amount of disk space currently used by the cache relative to the maximum cache size.

Group	Option	Description
Cleanup settings	Max cache size	The maximum amount of disk space (in MB) to use for cached documents. The default is 50% of the available free disk space. The current size of the cache is shown as a bar graph and as a percentage. To delete the currently cached files, click **Clear cache**.
Cleanup settings	Files will expire if not used for	The maximum number of days to keep documents in the cache before they are deleted to make space available for newer documents. Click **Schedule** to specify when and how often the cache cleanup should occur. This dialog box requires similar input to the Windows Task Scheduler. The required fields are indicated by the asterisk (*) character.
Monitor	User	The names of the users that are currently connected to the site cache. The computer from which they most recently connected is shown in the **Machine** column.
Information Events	Log of background activities for troubleshooting	
Error Events	Log of errors for troubleshooting	

Configure Caching for a Specific Repository

To configure caching for a specific repository:

1. In the row of the repository that you want to configure, click the **Edit** icon.

   The **Edit repository settings** dialog box appears.

2. To pre-load specific documents into the cache before users request them, select an existing collection from **Collection for preload**.

   All Meridian Explorer repositories provide a collection named **All Documents** that is selected by default when caching is enabled. Meridian Enterprise vaults do not provide a default collection so you must create one as described in the *Create and Edit a Collection* article in the *Meridian Enterprise User's Guide* .

   If this option is empty, no documents from the repository will be preloaded into the cache. They will still be available to users but they will be downloaded from the repository first, which will take longer than if they were preloaded in the site cache. On subsequent requests, they will be downloaded from the site cache, which is faster.

3. To enable caching of the repository, check the box next to **Cache enabled**.
4. Click **Save**.

Unregister a Repository

You may only unregister a repository that is unavailable. You may also unregister a repository as described in Unregister Repositories.

To unregister a repository:

- In the row of the repository that you want to unregister, click the **Actions** icon ⋮ and then click **Unregister**.

Configure Number of Connection Attempts

If your organization enforces an account lockout policy for failed logon attempts and users change their passwords but forget to update their site cache configuration, their Active Directory account can become locked when the site cache client attempts to connect with an incorrect password. (The proper site cache configuration is described in the *Configure a site cache connection* article in the *Meridian Enterprise User's Guide*.) To prevent account lockout, you can reduce the number of connection attempts.

To configure the number of connection attempts:

1. On the Meridian Enterprise Server computer, open the file `BlueCieloECM.SiteCache.LwsClient.exe.config` in a text editor and find the `BlueCieloECM.SiteCache.LwsClient.Properties.Settings` group.
2. Change the value of `MaxNumOfReconnects` to a positive number that is less than the account lockout threshold.

   A value of 0 causes unlimited reconnection attempts.
3. Save and close the file.

Pre-Load Site Caches

Pre-loading a site cache copies the documents from the Meridian Enterprise vault to the site cache server so that they are available in advance to the users of the site cache. Without pre-loading, the documents that are requested by users must be downloaded at the time that they are requested, which can delay system response for the users. The documents that are pre-loaded are those that are contained in the collection that is specified for the site cache server as described in Configure Site Cache Servers.

Schedule Pre-Loading

To schedule pre-loading of repository documents:

1. In Meridian Enterprise Server Administration Console, in the **System Management** group, click **Settings**.

   The **Application Settings** page appears.

2. In the menu, click **Site Cache**.

   The **Site Cache** page appears and shows the currently registered servers.

3. Select the server in the list that you want to configure and in the toolbar, click **Configure**.

   The configuration page of the site cache server opens in a new browser window.

4. In the row of the repository that you want to schedule pre-loading for, click the **Actions** icon ⋮ and then click **Schedule preload**.

   The **Schedule preload** dialog box appears. This dialog box requires the same input as the Windows Task Scheduler. The documents that are pre-loaded are those that are specified in the collection or filter that is set for the **Collection for preload** or **Filter for preload** option as described in Configure Site Cache Servers.

   > **Note:**
   > The collection or filter must include the **Document.Revision ID** property or the pre-load will fail.

5. Click **Save**.

Pre-Load Immediately

To pre-load a repository immediately:

- In the row of the repository that you want to pre-load, click the **Preload collection** icon.

  A background task is started and you can continue working.

  > **Important!**
  > Do not edit the repository settings with the site cache server configuration page while a preload is in progress as it can cause documents to fail to load into the cache. Wait until the preload has finished or use the **Repositories** page in Meridian Enterprise Server Administration Console instead.

Meridian Enterprise Server URL Shortcuts

Meridian Enterprise Server supports the shortcuts listed in the following table for opening various pages in Meridian Explorer and Meridian Enterprise Server Administration Console. Only the shortcut name is listed. The full URL of each shortcut begins with `http://<ServerName>/BCEnterprise/`.

Note:

- Each page will be shown without links to the home page.
- To create hyperlink shortcuts on the Meridian Explorer home page to other websites , see Create Links On the Home Page.

Meridian Enterprise Server URL shortcut names

Shortcut	Description
`<ViewID>`	Meridian Explorer client view with the specified ID (for example, DOC_12345)
`audit`	Audit log
`config`	Meridian Enterprise Server Administration Console
`documentview/<RepositoryName>`	The default documents view of the specified repository. The repository name may be omitted if there is only one repository.
`events`	Event logs
`exadm`	Meridian Explorer client options
`home`	Meridian Explorer client **Home** page
`import`	Meridian Explorer client **Import Packages** page
`jobs`	Publishing jobs list
`objecttagview/<RepositoryName>`	The default tags view of the specified repository. The repository name may be omitted if there is only one repository.
`packageview/<RepositoryName>`	The default packages view of the specified repository. The repository name may be omitted if there is only one repository.

Shortcut	Description
`projectview/<RepositoryName>`	The default projects view of the specified repository. The repository name may be omitted if there is only one repository.
`queue`	Publisher queue
`repos`	Repositories list
`sysconfig`	System settings
`tasks`	Task monitor
`users`	User and group management
`views`	Views list

Report From the Repository

The Meridian Explorer repository can be a data source for your preferred reporting applications. You can configure reports against the repository using any application that supports the same data source as your repository, for example, Microsoft SQL Server Reporting Services or SAP Crystal Reports. You may also create reports from any application that functions as a web API client.

The repository database includes approximately 50 interrelated tables. To simplify reporting, the repository provides predefined views upon which you can base your reports:

- **dbo.AreaView** — includes all projects
- **dbo.DocumentView** — includes all properties for all document revisions. Filter on the **IsLatestRevision** column to exclude prior revisions
- **dbo.FolderView** — includes all folders
- **dbo.ObjectTagView** — includes all properties for all asset tag revisions. Filter on the **IsLatestRevision** column to exclude prior revisions

We recommend that you create reports on these views, not on the source tables. If you have special requirements that cannot be easily met using these views, contact your Accruent Partner or Accruent Professional Services for more specific views.

Meridian Enterprise Server provides a web API for external applications that need to query a Meridian Explorer repository for documents based on property filters with HTTP(S) web requests. The web API supports standard AJAX GET and POST requests, and the data is returned in JSON format. For more information about the web API, see Web API Reference.

The ExplorerSynchronization Property Set

The properties in the **ExplorerSynchronization** property set and their valid values are described in the following table. These properties can be set either manually by Meridian Enterprise users on a custom property page or automatically by customized VBScript event procedures when certain workflow transitions or other events occur.

> **Note:**
> - By default, the repository **Use batch synchronization** option is enabled and these properties are ignored. See Configure the Application Options.
> - These properties override the default synchronization options that are described in Configure Synchronization Options. For example VBScript code to manipulate these properties, see Configure Synchronization Options.

ExplorerSynchronization properties

Property	Data Type	Value
ContentOption	Integer	The location from which Meridian Explorer will retrieve this document's content. **0** — Copy document content to the repository **1** — Use the Meridian Enterprise stream files **2** — Copy only rendition content to the repository **4** — Use the Meridian Enterprise rendition stream files When this option is set to **1**, the document content files are not backed up with the repository database and must be backed up separately, such as with the Meridian Enterprise backup files.
DeleteOption	Integer	What should be done with the repository document when this document is deleted from the source vault. This property is also set by the **Allow automatic deletion** option of the repository's synchronization options. **0** — Delete the repository document when the vault document is deleted **1** — Keep the repository document This value is copied to the repository upon synchronization and used by the **PrepareDeletions** argument.

Property	Data Type	Value
RevisionOption	Integer	Specifies how the document will be synchronized in the repository. This property is also set by the **Keep revision history** and **Publish draft revision** options of the repository's synchronization options. **0** — All released revisions **1** — Only the latest released revision **2** — None **3** — All revisions including unreleased revisions **4** — All current revisions (latest released revision and unreleased revisions)
Modified	Boolean	Set to **False** when the document has been synchronized successfully. Typically, this value should be set to **True** on the **DocWorkflowEvent_AfterChangeWFState** event. Beginning with Meridian Explorer 2013, this property is no longer used to filter the documents that are synchronized. Because synchronization to multiple destination repositories is supported, a single property is not enough to control what has been synchronized. For backward compatibility, you can add this property to the item filter (dynamic collection) used by the synchronization job.
Failed	Boolean	Set to **True** when the document fails to synchronize. This property can be used to find documents in the source vault that failed to synchronize.
LastSynchronized	Date/Time	Time stamp set when the document is successfully synchronized.
DocumentGroupID	String	For future use.

External Page URL Placeholders

To show a web page from a different system in Meridian Explorer (for example, PowerWeb or IBM Maximo), URLs can include placeholders that will be automatically replaced with the corresponding values of the current item. You show an external web page in a detail page layout of the **External Page** type as described in Create And Edit Detail Page Layouts.

For example, the following URL shows the Meridian Enterprise audit log viewer record for the current item in Meridian Explorer:

```
http://
<MyServer>
/WebExtensibilityDBViewer/AuditView.aspx?MachineName=
<ServerName>&VaultName=<VaultName>&HideHeader=1&ObjectID={globalid}
```

If Meridian Enterprise is configured to use the Meridian Enterprise Server audit log, the URL is simpler:

```
https://<MyServer>/bcenterprise/Audit?ID={globalid}
```

> **Note:**
> Property placeholders and property names are case-sensitive for compatibility with the external systems with which they might be used. Also, the URL is not converted to another case. Be sure to type the URL exactly as required by the other system.

The supported placeholders are described in the following table.

External page URL placeholders

Placeholder	Description
{aid}	The GUID (Meridian Enterprise Global ID) of the current project.
{did}	The GUID (Meridian Enterprise Global ID) of the selected document.
{globalid}	The internal Global ID of the current item.

Placeholder	Description
{p:<*PropertyName*>}	The value of the specified internal property name for the current item. All properties in the **Custom** property set are available as well as the following system properties: • Name • ID • GlobalID • RevisionID (only for documents and tags, not for projects) • RevisionNumber • TypeName • IsLatestRevision
{rid}	The GUID (Meridian Enterprise revision ID) of the current item.
{rn}	The name of the Meridian Explorer repository.
{tid}	The GUID (Meridian Enterprise Global ID) of the selected tag.
{vid}	The internal ID of the current view.
{webaccess}	The complete PowerWeb URL for the current item. Equivalent to: {WebAccessRoot}/?FSObject&vault={WebAccessID}&oid={GlobalID}
{WebAccessID}	The PowerWeb location of the Meridian Enterprise vault. It is not necessary to specify this placeholder. It is retrieved by the Meridian Explorer repository database and updated during each synchronization.
{WebAccessRoot}	The root path of the PowerWeb server, for example, **http://<*ServerName*>/Meridian/**. It is not necessary to specify this placeholder. It is retrieved by the Meridian Explorer repository database and updated during each synchronization.

SQL Azure Database Creation Script

As of the 2022 release, SQL Azure is supported as a database provider for Meridian Enterprise Server. However, there are a few limitations to this support:

- We only support Azure virtual machines (VMs).
- The setup script should only be used with a fresh installation of Enterprise Server. Any existing configuration will be overwritten or will not be functional anymore.

This script creates configuration and Explorer databases in Azure SQL server and configures your Meridian installation to use Azure databases. You also have the option to create a new Azure resource group and SQL server.

If you decide not to use this option, your existing group or server will be used. The databases will be created with a performance level of **S0**, but you can scale up your databases to another size later.

After setup is complete, you can use the **CreateRepository** script switch to create a new Explorer repository.

Prerequisites

The following requirements must be met to successfully use this script.

- **PowerShell 5.1** or higher is required, but we recommend using **PowerShell 7**
- **Az** and **SqlServer** PowerShell modules

  If you run the script, it will detect if the modules are not available.

Required script files

The following script files can be found in `C:\Program Files\BC-Meridian\Enterprise Server\AzureSql` after installing Meridian:

- **AzSqlConfig.json** – configuration file in JSON format

  This is a sample configuration file. You are not required to use this specific file.
- **AzureSqlSetup.ps1** – PowerShell script
- **CreateExplorerDb.sql** – Explorer Repository SQL script

Configuration file settings

The following parameters can be defined in the configuration file.

Configuration file settings

Parameter	Definition
subscriptionId	Subscription ID
location	VM location, for example, **westeurope**
resourceGroupName	Resource group name
sqlServerName	SQL Server name
startIp	Start of IP address range. This should be the public IP of the server making the calls.
endIp	End of IP address range. This should be the public IP of the server making the calls.
SqlLogin	The SQL Server account username you want to use
configDatabaseName	Configuration database name
repoDatabaseName	Explorer repository database name
explorerRepositoryName	Explorer repository display name
serverDnsName	Server DNS name for public URL of Hyperion. If empty, the Server FQDN name will be used.

Script arguments

The following switches and arguments can be used in the **AzureSqlSetup** Powershell script.

Switches

- `SetupAzSql` – used to set up Azure SQL
- `CreateRepository` – used to create a new Explorer repository

Arguments

- `ConfigFile` – Required. This is the path to the configuration file.
- `CreateResGroup` – Optional, used to create a resource group. This is set to **yes** by default.
- `CreateSqlSever` – Optional, used to create a SQL server. This is set to **yes** by default.

Example argument 1

This example sets up Azure SQL using an existing resource group and creates a new SQL server if one does not exist.

```
.\AzureSqlSetup.ps1 -SetupAzSql -ConfigFile  AzSqlConfig.json false
```

Example argument 2

This example creates a new Explorer repository.

```
.\AzureSqlSetup.ps1 -CreateRepository -ConfigFile  AzSqlConfig.json
```

Procedures

To implement this configuration:

1. Navigate to `C:\Program Files\BC-Meridian\Enterprise Server\AzureSql`.
2. Extract the files to a folder on your Meridian Enterprise Server.

   The location you extract to is not important, but you will need to navigate to this location in PowerShell later. In our case, we extracted the files to a sub-folder in our C drive.
3. Open **AzSqlConfig.json** in any editor.
4. Refer to the *Configuration file settings* table above and define your configuration settings.
5. Save your changes.
6. Run PowerShell as an Administrator.
7. Navigate to the folder where you extracted the script files.
8. Run **AzureSqlSetup.ps1** using the `SetupAzSql` script argument defined in the *Script arguments* section above.

   You are prompted to sign in to Azure.
9. Sign in to your Azure account.

   Once you are successfully signed in, you are presented with a setup configuration summary.
10. Check the summary to ensure your settings are properly configured.

11. Type **Yes** and press **Enter** on your keyboard to continue.

    If you want to change your configuration settings, type **No** instead.

12. Type the password you want to use for your SQL account, and then press **Enter** on your keyboard.

    Make sure to use a password you will remember, or store it in a safe location, such as your organization's password manager application.

    The script executes. It may take some time to complete—do not close the application.

    When the script is successful, it will return the message, "Azure SQL Setup finished."

13. Run **AzureSqlSetup.ps1** using the `CreateRepository` script argument defined in the *Script arguments* section above.

    You are prompted to sign in to Azure.

14. Sign in to your Azure account.

    Once you are successfully signed in, you are presented with a setup configuration summary.

15. Check the summary to ensure your settings are properly configured.

16. Type **Yes** and press **Enter** on your keyboard to continue.

    If you want to change your configuration settings, type **No** instead.

17. Enter the password for your SQL account.

    The script executes. It may take some time to complete—do not close the application.

    When the script is successful, it will return the message, "Script done".

Troubleshooting

The following scenarios may occur when attempting to implement SQL Azure.

- When trying to install a PowerShell module, the following error might occur: "No match was found for the specified search criteria and module name…"

  To resolve this issue, specify TLS 1.2 for the .NET security protocol using the following command:

  ```
  [Net.ServicePointManager]::SecurityProtocol =
  [Net.SecurityProtocolType]::Tls12
  ```

- The SQL statement **Invoke-Sqlcmd** might fail with the following error: "A parameter cannot be found that matches parameter name 'ConnectionString'"

  This happens when an old SQL module is installed (SQLPS). To resolve this issue, install the new **SqlServer** module with **-AllowClobber** option enabled:

  ```
  Install-Module -Name SqlServer -AllowClobber
  ```

SQL Server Database Creation Script

If your account on the Meridian Enterprise Server server does not have sufficient privileges to create a new database on the database server as described in Create a Meridian Explorer Repository, you can create the repository database with the following script.

Important!
Do not use this script to create a Meridian Enterprise vault database. This script is for creating Meridian Explorer repositories only. The database structures for vaults and for Meridian Explorer repositories are different. Instead, create the database as described in *Creating the vault database manually* in the *Meridian Enterprise Administrator's Guide*.

This script does not create a FILESTREAM file group. If you intend to use that feature for the repository, the file group must be configured manually.

To create a Meridian Enterprise Server configuration database manually, simply create a new database with the default parameters.

Create a Meridian Explorer Repository Database on the Database Server

To create a Meridian Explorer repository database on the database server:

1. In SQL Server Management Studio, run the following T-SQL script to create an empty database with the required file groups.
2. Change every occurrence of the text ***<DatabaseName>*** in the following script to the desired database name.
3. Edit the path specified for each of the **filename** parameters to refer to the correct locations.

```
USE [master]
GO
CREATE DATABASE [<DatabaseName>] ON PRIMARY
( NAME = N'<DatabaseName>', filename = N'C:\TEMP\<DatabaseName>.mdf'
,
MAXSIZE = UNLIMITED, FILEGROWTH = 1024KB ), FILEGROUP [CONTENT]
( NAME = N'<DatabaseName>_content', filename =
N'C:\TEMP\<DatabaseName>_CONTENT.ndf' ,
MAXSIZE = UNLIMITED, FILEGROWTH = 1024KB ), FILEGROUP [INDEXES]
( NAME = N'<DatabaseName>_indexes', filename =
N'C:\TEMP\<DatabaseName>_INDEXES.ndf' ,
MAXSIZE = UNLIMITED, FILEGROWTH = 1024KB )
LOG ON
( NAME = N'<DatabaseName>_log', filename = N'C:\TEMP\<DatabaseName>_
```

```
Log.ldf' ,
SIZE = 1024KB , MAXSIZE = 2048GB , FILEGROWTH = 10%)
GO
EXEC dbo.sp_dbcmptlevel @dbname=N'<DatabaseName>', @new_cmptlevel=100
GO
EXEC [<DatabaseName>].[dbo].[sp_fulltext_database] @action = 'enable'
GO
ALTER DATABASE [<DatabaseName>] SET ANSI_NULL_DEFAULT OFF
GO
ALTER DATABASE [<DatabaseName>] SET ANSI_NULLS OFF
GO
ALTER DATABASE [<DatabaseName>] SET ANSI_PADDING ON
GO
ALTER DATABASE [<DatabaseName>] SET ANSI_WARNINGS OFF
GO
ALTER DATABASE [<DatabaseName>] SET ARITHABORT OFF
GO
ALTER DATABASE [<DatabaseName>] SET AUTO_CLOSE OFF
GO
ALTER DATABASE [<DatabaseName>] SET AUTO_CREATE_STATISTICS ON
GO
ALTER DATABASE [<DatabaseName>] SET AUTO_SHRINK OFF
GO
ALTER DATABASE [<DatabaseName>] SET AUTO_UPDATE_STATISTICS ON
GO
ALTER DATABASE [<DatabaseName>] SET CURSOR_CLOSE_ON_COMMIT OFF
GO
ALTER DATABASE [<DatabaseName>] SET CURSOR_DEFAULT  GLOBAL
GO
ALTER DATABASE [<DatabaseName>] SET CONCAT_NULL_YIELDS_NULL OFF
GO
ALTER DATABASE [<DatabaseName>] SET NUMERIC_ROUNDABORT OFF
GO
ALTER DATABASE [<DatabaseName>] SET QUOTED_IDENTIFIER OFF
GO
ALTER DATABASE [<DatabaseName>] SET RECURSIVE_TRIGGERS OFF
GO
ALTER DATABASE [<DatabaseName>] SET ENABLE_BROKER
GO
ALTER DATABASE [<DatabaseName>] SET AUTO_UPDATE_STATISTICS_ASYNC OFF
GO
ALTER DATABASE [<DatabaseName>] SET DATE_CORRELATION_OPTIMIZATION OFF
GO
ALTER DATABASE [<DatabaseName>] SET TRUSTWORTHY OFF
GO
ALTER DATABASE [<DatabaseName>] SET ALLOW_SNAPSHOT_ISOLATION OFF
GO
ALTER DATABASE [<DatabaseName>] SET PARAMETERIZATION SIMPLE
GO
ALTER DATABASE [<DatabaseName>] SET READ_WRITE
```

```
GO
ALTER DATABASE [<DatabaseName>] SET RECOVERY FULL
GO
ALTER DATABASE [<DatabaseName>] SET MULTI_USER
GO
ALTER DATABASE [<DatabaseName>] SET PAGE_VERIFY CHECKSUM
GO
ALTER DATABASE [<DatabaseName>] SET DB_CHAINING OFF
GO
ALTER DATABASE [<DatabaseName>] SET RECOVERY FULL
```

Oracle Database Creation Script

If your account on the Meridian Enterprise Server server does not have sufficient privileges to create a new database on the database server as described in Create a Meridian Explorer Repository, you can create a Meridian Explorer repository database or a Meridian Enterprise Server configuration database with the following script.

> **Important!**
> Do not attempt to use this script to create a Meridian Enterprise vault database. The database structure of vaults is different.

Create a Meridian Explorer Repository Database

To create a Meridian Explorer repository database or a Meridian Enterprise Server configuration database on the database server:

1. In SQLPlus, run the following PL-SQL script.
2. Change <*UserName*> and <*Password*> to the desired user name and password respectively.

```
DEFINE UserName = "<UserName>"
DEFINE Password = "<Password>"
---------------------------------------------------------------------
-----------
CREATE USER &UserName IDENTIFIED BY &Password
ACCOUNT UNLOCK
- DEFAULT TABLESPACE "USERS"
- TEMPORARY TABLESPACE "TEMP"
- PROFILE "DEFAULT";
GRANT RESOURCE, CREATE SESSION TO &UserName; - required for Oracle 11
(nnk)
GRANT RESOURCE, CONNECT TO &UserName;
GRANT EXECUTE ON CTX_DDL TO &UserName;
GRANT CREATE VIEW TO &UserName;
GRANT ALTER ANY TABLE TO &UserName;
GRANT CREATE PROCEDURE TO &UserName;
GRANT CREATE TRIGGER TO &UserName;
GRANT CREATE UNLIMITED TABLESPACE TO &UserName;
- ALTER USER &UserName QUOTA 100M ON USERS;
--GRANT EXECUTE ON "CTXSYS"."CTX_DDL" TO "&UserName";
```

Security Permission Descriptions

Following are the available security permissions in a Meridian Explorer repository.

Available Permissions

Available permissions

Permission	Description
Configure repository	Modify the repository configuration. May only be granted as a global permission as described in Configure Global Permissions.
Configure views	Allows users to create repository views.
List Document	Any access to a document
List Object Tag	Any access to a tag.
List Project	Any access to a project. Does not apply to the documents or tags associated with the project.
Manage Project	Change the membership of roles assigned to a project.
View Source	View the source content of a document.
View Rendition	View the rendition content of a document.
Share Collections	Can make a private collection that they own public.
Edit Collections	Can create, rename, or delete a collection.
View Packages	Can view export packages and their contents.
Edit Packages	Can create, rename, and edit an export package.
Send Packages	Can send and view the process logs of export packages .
Manage Packages	Can perform all actions on export packages and cancel the sending of packages. This permission overrides all other collection and package permissions.
Add Comments	Can add comments to a discussion.
Edit Comments of Others	Can edit the comments in a discussion that were entered by other users.
Delete Comments	Can delete comments in a discussion that were entered by other users.

Permission	Description
Close Comments	Can close discussions that they started.
Download native document	Can download the latest revision of the primary document. Users will be denied access to download a batch of documents if they do not have this permission for all of the documents in the batch.
Download rendition	Can download the latest rendition of the primary document. Users will be denied access to download a batch of documents if they do not have this permission for all of the documents in the batch.

Additional Security Permissions for Publisher

Publisher provides additional security permissions in Meridian Enterprise. The Publisher permissions secure the PowerUser commands that are provided by Publisher as well as provide extra security for document metadata. You must be a member of a Meridian Enterprise security role to which these permissions have been granted and the role must be applied to the current folder before you can perform the respective action.

The Publisher security permissions appear in the **Document** privilege group in Meridian Enterprise Configurator and are described in the following table.

Publisher security permissions

Permission	Description
Publish Document	Required by the parent folder to submit documents for publishing.
Edit Rendition Properties	Required to edit properties on the **Rendition** tab in the Meridian Enterprise client applications when the document is in an active workflow.
Edit Rendition Properties Outside Workflow	Required to edit properties on the **Rendition** tab in the Meridian Enterprise client applications when the document is not in an active workflow.

Solving Common Problems

We recommend that you monitor publishing jobs closely on a daily basis to correct problems with published documents or the publishing job configurations. This monitoring is needed because Publisher depends on predictable behavior from third-party applications that are used in the rendering process.

In certain situations or for certain documents, it is possible that a third-party application may behave unexpectedly. This can result in the application waiting for additional user input. In these situations, you should stop the application and ensure that Publisher is still working properly.

To resolve common publishing and rendering problems, examine the following in the order listed:

1. The feedback property (if configured) of the failed documents for error messages.
2. The document's registration in the publishing queue as described in Register Documents For Publication and the user's permission to publish documents as described in Security Permission Descriptions.
3. The Meridian Enterprise Server task queue during publishing job execution for errors as described in Monitor Background Tasks.
4. The Meridian Enterprise Server event log files for errors as described in View the Event Logs.
5. The **Application** log in the Windows Event Viewer for error messages.
6. Delete the files with the extension `.ignore` in the `C:\Program Files\BC-Meridian Enterprise Server` folder, restart Meridian Enterprise Server, and scan for rendering applications as described in Create And Edit a Rendering Profile.

Troubleshoot Thumbnail Image Generation

Meridian Enterprise Server runs background tasks to generate thumbnail images.

The task processes each document as follows:

1. Copies the source file for the currently synchronized document to the folder `%TEMP%\BCTemp\`.
2. Starts a separate process to generate the thumbnail image using the default viewer set in Configure the Viewer Options.
3. Retrieves the result and stores it in the database.
4. Removes the temporary file.

To troubleshoot thumbnail image generation:

- Run the program `BCThumbnailGen.exe` with the following arguments.

  By default, it resides in the folder `C:\Program Files\BC-Meridian\Enterprise Server`:

  ```
  BCThumbnailGen.exe /THGen /InFile:"C:\Temp\MyTestFile"
  /OutFile:"C:\Temp\thumbnail.jpg" /Width:"400" /Height:"400"
  ```

  If thumbnail generation is working properly, the output file will contain an image of the input file.

Troubleshoot Rendering Over the Web

Rendering documents from a web browser is more complicated than rendering documents within your organization's LAN because of the many additional security requirements. If these are not met, rendering can fail when initiated from a web client that succeeds when initiated by other means. One of the common error messages is Error **HTTP request is unauthorized with client authentication scheme 'Ntlm'**. The primary cause of these failures is identity authentication.

Here are some common settings to check when troubleshooting problems of rendering over the web:

- Set the **SameIISEDMAccount** registry value described in the *HKEY_LOCAL_ MACHINE\Software\Cyco\AutoManager Meridian\CurrentVersion\WebLink* article in the *Meridian Enterprise Administrator's Guide*.
- Set the **EnableFQDNS** registry value as described in the *HKEY_LOCAL_ MACHINE\Software\Cyco\AutoManager Meridian\CurrentVersion\Server* article in the *Meridian Enterprise Administrator's Guide*.
- Ensure the Meridian Enterprise Server computer name is correctly specified as described in the *Configure the connection to Meridian Enterprise Server* article in the *Meridian Enterprise Administrator's Guide*.
- Confirm that security delegation is correctly configured as described in the *Security delegation* article in the *Meridian Enterprise Administrator's Guide*.

Rendering Navisworks Models

Publisher is able to integrate the Navisworks Freedom viewer to render Navisworks models to the NWD format. This is also made possible by the AutoLISP feature of the AutoCAD rendering module as described in Configure the Autodesk AutoCAD Rendering Module Options.

To configure Publisher to render Navisworks models:

1. Install the following software on the Meridian Enterprise Server node where the publishing job will run:
   - Meridian Enterprise PowerUser
   - Meridian Enterprise Server and the AutoCAD rendering module
   - Autodesk AutoCAD
   - Autodesk Navisworks
     - Navisworks Freedom
     - Navisworks Manage (Roamer configuration at minimum)
2. Install the `NavisWorksViewer.reg` file that is provided in the `C:\Program Files (x86)\Common Files\Cyco Shared\Viewers` folder.

   Installing third-party viewer support is described in *Install Third-Party Viewers* in the *Meridian Enterprise User's Guide .*
3. Add the following AutoLISP function to the AutoCAD startup:

```
(defun MakeNWD (outfile outfile2)
  (command "NWDOUT" outfile)
  (command "quit")
)
```

4. Configure the publishing job as described in Configure the Autodesk AutoCAD Rendering Module Options with the settings described in the following table.

AutoLISP command options

Option	Description
File extensions	.dwg;.dxf
Rendition type	AutoLISP command
Name	MakeNWD
Output file extension	nwd
Property name	<None>

Page Size Names

The Inventor rendering module and the MicroStation rendering module accept the following page sizes when stored in a document property as described in Create And Edit a Rendering Profile.

With the Inventor rendering module, additional sizes may be provided by a particular printer driver. If the size that you want to use is missing, create a custom form as described in the operating system documentation. In all cases, thoroughly test all page sizes with the printer driver. Not all printer drivers may work with Publisher. Printing must work directly from Inventor without the integration of Publisher before printing through the Inventor rendering module is attempted.

Autodesk Inventor Page Sizes

- A1
- A2
- A3
- A4
- A5
- B4, B4 (JIS)
- B5, B5 (JIS)
- C, ANSI C
- D, ANSI D
- E, ANSI E
- Letter
- Quarto
- Ledger
- Legal
- Folio
- Executive

Microstation Page Sizes

- ANSI A, Letter
- ANSI B, Tabloid, Ledger
- ANSI C, C size sheet
- ANSI D, D size sheet
- ANSI E, E size sheet
- Arch A
- Arch B
- Arch C
- Arch D
- Arch E
- Arch E1
- A0, ISO A0
- A1, ISO A1
- A2, ISO A2
- A3, ISO A3
- A4, ISO A4

Include Data From Other Sources

Meridian Explorer can be configured to include data from other sources (for example,other MS SQL Server or Oracle databases not maintained by Meridian Explorer) along with its own data. This can be very helpful so that all of the data can be discovered by users from within the Meridian Explorer web client. This foreign data can be shown in searches, view columns, and property pages, but it cannot be updated from Meridian Explorer.

Meridian Explorer has an open design such that including other data sources can be easily done in the Meridian Explorer database itself as demonstrated in the following example T-SQL script.

Example

```
---------------------------------------------------------------------
---------
-- Prepare the database with sample data
---------------------------------------------------------------------
---------

-- A sample table (or view) containing the external data
CREATE TABLE [ExternalData] (
       [ID] [int] IDENTITY(1,1) NOT NULL,
       [Area] [nvarchar](255) NOT NULL,
       [Description] [nvarchar](255) NOT NULL
)
GO

-- Add some data in the sample table
INSERT INTO [ExternalData] ([Area],[Description]) VALUES
      ('Area1','Description on Area 1'),
      ('Area2','Description on Area 2'),
      ('Area3','Description on Area 3'),
      ('Area4','Description on Area 4')
GO

-- Make sure the Explorer database has a match for the foreign key
UPDATE DocumentRevisionCustom SET DocumentRevisionCustom.c_Custom_
Area='Area1'
GO

---------------------------------------------------------------------
---------
-- Configure the external properties
---------------------------------------------------------------------
---------
```

```
-- Create the table definition in the Explorer database
-- With a foreign key relation on [c_Custom_Area]
INSERT INTO [DocumentTableDefinition] ([TableName],[UnderlyingName],
[Relation])
     VALUES (
        'ExternalData',                -- The alias name of the
external table
        'ExternalData',                -- The name of the external
table
        'ExternalData.Area=DocumentRevisionCustom.c_Custom_Area') --
The foreign key relation
GO

-- Create a property set for the external properties
INSERT INTO [DocumentPropertySet] ([Name]) VALUES
('MyExternalProperties')
GO

-- Create the property definition for an external property
BEGIN
DECLARE @PSID int;

       SELECT @PSID = ID FROM [DocumentPropertySet] WHERE
[Name]='MyExternalProperties';

       INSERT INTO [DocumentProperty]
           ([DocumentPropertySetID]
           ,[Name]
           ,[DisplayName]
           ,[ColumnName]
           ,[DataType]
           ,[Length]
           ,[Indexed]
           ,[HasLookupIndex]
           ,[InFullText]
           ,[PropertyType]
           ,[TableAlias]
           ,[ColumnAlias]
           ,[AllowClientGridColumn]
           ,[AllowClientCriteria])
       VALUES
           (@PSID
           ,'MyExternalProperties.AreaDescription'
           ,'Area Description'
           ,'Description'
           ,'String'
           ,255
           ,0
```

```
            ,0
            ,0
            ,2
            ,'ExternalData'
            ,'ExternalData'
            ,1
            ,1);
END
GO
```

Web API Reference

Meridian Enterprise Server provides web-based APIs that other applications can use to retrieve document information from the Meridian Explorer repository.

To use these APIs, the other application must make a standard AJAX HTTP or HTTPS request by sending parameters in a URL. The parameters specify which information to retrieve and from where, for example, the Meridian Explorer view name, the document filter name, and document IDs.

The request is fulfilled using the security credentials of the calling process and the standard Meridian Explorer user privileges are applied.

Depending on the API and the parameters that are requested, the Meridian Enterprise Server web service returns a JavaScript Object Notation (JSON) message that contains the matching information.

Each API is described with examples in the following topics.

GetDocument

Gets information about a specific revision of a single document.

Syntax

Request the latest revision of a document:

```
https://
<ServerName>
/BCEnterprise/api/getdocument.ashx?viewid=<ViewName>&DocID=<DocID>
```

Request specific revision of a single document:

```
https://
<ServerName>
/BCEnterprise/api/getdocument.ashx?viewid=
<ViewName>&RevID=<RevID>&pn=<PropSet1.PropName1|<PropSet2.PropName2>
```

Parameters

Parameters are not case-sensitive.

Name	Description
DOCID	The unique Meridian Enterprise **GlobalID** value of the document. Required when **REVID** is not specified. Returns the current revision of the document.
REVID	The Meridian Enterprise **VersionID** value of the document. When specified, **DOCID** is ignored. Returns the specified revision of the document.
VIEWID	The Meridian Explorer **View ID** value from which to get the document information. The value was specified when the view was created as described in Create And Edit Repository Views.
PN	One or more optional property names separated by the vertical bar character (|).

Response Values

Value	Type	Description
DownloadUrl	URL	Location to download the document rendition in Adobe PDF format or empty if the document content is not available.
DownloadUrlSource	URL	Location to download the document in its original formator empty if the document content is not available.
GlobalID	String	The unique Meridian Enterprise **GlobalID** value of the document.
Name	String	The Meridian Enterprise display name of the document.
PropertiesUrl	URL	Location of the Meridian Explorer properties page of the document.
RevisionGlobalID	String	The unique Meridian Enterprise **VersionID** value of a specific revision of the document.
ViewerUrl	URL	Location to open the document in the Meridian Explorer viewer (if installed).

Example

Request:

```
https://MyServerName/BCEnterprise/api/getdocument.ashx?viewid=DOC_
MyView&DocID={44611503-105A-11DD-0000-B406F7688C98}
```

Response:


```
{
"GlobalID":"{44611503-105A-11DD-0000-B406F7688C98}",
"RevisionGlobalID":"{5266D671-105B-11DD-0000-B406F7688C98}",
"Name":"0011-08-2400n001.dwg",

"DownloadUrlSource":"http://MYSERVER/bcenterpriseex/download?ViewID=D
OC_B09E8\u0026RevID=12520\u0026CT=RevisionContent",
"DownloadUrl":"http://MYSERVER/bcenterpriseex/download?ViewID=DOC_
B09E8\u0026RevID=12520\u0026CT=Rendition",
"ViewerUrl":"http://MYSERVER/bcenterpriseex/DOC_
B09E8\u0026revisionid=12520\u0026content=true\u0026IsLatest=False",
"PropertiesUrl":"http://MYSERVER/bcenterpriseex/DOC_
B09E8\u0026revisionid=12520\u0026content=false\u0026IsLatest=False"
}
```

GetDocuments

Gets information about multiple documents.

Syntax

Request:

```
http://
<ServerName>
/BCEnterprise/api/GetDocuments.ashx?VIEWID=
<ViewName>
&DOCFILTER=
<FilterName>&pn=<PropertyName|PropertyName|...>&PARAMETER=VALUE
```

Parameters

Parameters are not case-sensitive.

Name	Description
DOCFILTER or *TAGFILTER*	The Meridian Explorer internal filter name from which to get the document information.
VIEWID	The Meridian Explorer **View ID** value from which to get the document information. The value was specified when the view was created as described in Create And Edit Repository Views.
PAGEINDEX	Optional starting document index number in the result set at which to return the list of documents.
PAGESIZE	Optional maximum number of documents to return when many results are expected. By default, up to 100 documents will be returned.
pn	Optional names of the properties to return in the response. Separate property names with the vertical bar (|) character.
PARAMETER	The parameter defined in the filter specified for **DOCFILTER**.
VALUE	The value of the parameter defined in the filter specified for **DOCFILTER**.

Response Values

The response includes a header and a structured list of the values for the matching documents.

Header Values

Value	Description
PageIndex	The number of the page of results in the response or 0 if paging is disabled.
ActualCount	The number of matching documents.

The values for each matching document are described in the following table.

Value	Type	Description
DownloadUrl	URL	Location to download the document rendition in Adobe PDF format or empty if the document content is not available.
DownloadUrlSource	URL	Location to download the document in its original format or empty if the document content is not available.
GlobalID	String	The unique Meridian Enterprise **GlobalID** value of the document.
Name	String	The Meridian Enterprise display name of the document.
Properties	String	A list of name/value pairs for the properties listed by the **pn** parameter in the request. Values are returned in the appropriate JSON data type for the corresponding properties.
PropertiesUrl	URL	Location of the Meridian Explorer properties page of the document.
RevisionGlobalID	String	The unique Meridian Enterprise **VersionID** value of a specific revision of the document.
RevisionNumber	String	The revision number of the document.
StartDate	DateTime	The UTC date the document was last released.
TypeName	String	The Meridian Enterprise type of the document.
ViewerUrl	URL	Location to open the document in the Meridian Explorer viewer (if installed).

Example

Request:

```
http://<ServerName>/BCEnterprise/api/GetDocuments.ashx?VIEWID=DOC_
B09E8&DOCFILTER=MyFilter&pn=Custom.Discipline|Custom.Part&DISCIPLINE=
ELECTRICAL
```

Response:


```
{"PageIndex":0,"ActualCount":2,"Documents":
[
{
"GlobalID":"{44611503-105A-11DD-0000-B406F7688C98}",
"RevisionGlobalID":"{5266D671-105B-11DD-0000-B406F7688C98}",
"Name":"0011-08-2400n001.dwg",
"RevisionNumber":"A",
"TypeName":"Drawing",
"StartDate":"\/Date(1290523017457)\/",

"DownloadUrlSource":"http://MYSERVER/bcenterpriseex/download?ViewID=D
OC_B09E8\u0026RevID=12520\u0026CT=RevisionContent",
"DownloadUrl":"http://MYSERVER/bcenterpriseex/download?ViewID=DOC_
B09E8\u0026RevID=12520\u0026CT=Rendition",
"ViewerUrl":"http://MYSERVER/bcenterpriseex/DOC_
B09E8\u0026revisionid=12520\u0026content=true\u0026IsLatest=False",
"PropertiesUrl":"http://MYSERVER/bcenterpriseex/DOC_
B09E8\u0026revisionid=12520\u0026content=false\u0026IsLatest=False",
"Properties":[{"Name":"Custom.Discipline","Value":"Electrical"},
{"Name":"Custom.Part","Value":"2400"}]},
{"GlobalID":"{95E6A33C-F13E-11DD-0000-B406F7688C98}",
"RevisionGlobalID":"{1B0B1337-7868-11DF-0000-B406F7688C98}",
"Name":"0011-07-2000n001.xls",
"RevisionNumber":"B",
"TypeName":"Drawing",
"StartDate":"\/Date(1276604294360)\/",

"DownloadUrlSource":"http://MYSERVER/bcenterpriseex/download?ViewID=D
OC_B09E8\u0026RevID=12523\u0026CT=RevisionContent",
"DownloadUrl":"http://MYSERVER/bcenterpriseex/download?ViewID=DOC_
B09E8\u0026RevID=12523\u0026CT=Rendition",
"ViewerUrl":"http://MYSERVER/bcenterpriseex/DOC_
B09E8\u0026revisionid=12523\u0026content=true\u0026IsLatest=False",
"PropertiesUrl":"http://MYSERVER/bcenterpriseex/DOC_
B09E8\u0026revisionid=12523\u0026content=false\u0026IsLatest=False",
"Properties":[{"Name":"Custom.Discipline","Value":"Electrical"},
{"Name":"Custom.Part","Value":"2000" }]}
]
}
```

Glossary

A

Active Directory

A Microsoft directory service that provides central authentication and authorization services for Windows-based computers.

AMFS

The InnoCielo File System service that makes vaults available through the Windows file system.

approved

A workflow status that indicates that a document that has been approved for reproduction, distribution, manufacture, or construction.

archive

When used as a noun, a repository of obsolete documents kept for possible future reference. When used as a verb, the process of exporting obsolete documents from a repository.

assign to work area

The process of creating a copy of a document in a work area to isolate its changes from the original revision in the Main area.

attribute

When used to describe a file system, it is a property of a file such as Hidden, System, or Read Only. When used to describe an AutoCAD drawing, a named object in a drawing that is included in a block definition and used to store alphanumeric data.

audit log

A system-generated record of the date and time of user actions that create, modify, or delete critical business data.

audit trail

A system-generated record of the date and time of user actions that create, modify, or delete critical business data.

authorization key

The ten character hexadecimal code generated by BlueCielo ECM Solutions that authorizes a software license indefinintely. Authorization keys are generated based on the license serial number, license key, and return key specific to each installation.

B

baseline

When used to describe Meridian Enterprise, a named moment in time in the history of a vault, such as a milestone.

Basic Authentication

A method designed to allow a web browser, or other client program, to provide credentials – in the form of a user name and password – when making a request from a server.

briefcase

An Accruent portable document package. A briefcase is a single file in an archive format that may contain multiple discrete documents. Briefcases may be in open standard formats such as ZIP and RAR, the Accruent BRC format, or custom formats. A briefcase may also contain document metadata in a data file and, in the Accruent BRC format, document redlines.

C

client

A computer, object, or program that obtains data or services from a server.

COM

Component Object Model - an interface standard for software componentry by Microsoft used to enable interprocess communication and dynamic object creation by programs.

content

The electronic data associated with a document.

content indexing

The process of extracting and indexing text data from documents for full-text searching. See also "full text search".

context

When used to describe Meridian Enterprise, a frame of reference comprised of a specific compartment of a vault and a moment in time for viewing the content of a vault.

criterion

A search filter condition comprised of a property name, operator, and value.

current
In general, the object that a user has selected or an object that is currently within the scope of a programming expression. When used to describe the history of a document, the latest revision of a document, which might not yet be released.

D

data source
An external data file or database that provides data that is presented by or imported into a Accruent system.

database
A structured set of document metadata used by a Accruent system. The database may be managed by Hypertrieve, SQL Server, or Oracle depending on the system.

DB
An Oracle database.

DCOM
Distributed Component Object Model - a Microsoft proprietary technology for software components distributed across several networked computers to communicate with each other.

derive
To create a new document based on an existing document. Also the name of a Meridian Enterprise command.

destination state
The state of a Meridian Enterprise workflow that follows a workflow transition.

details page
A type of property page that displays the properties of a document.

digital signature
A digitized image of a person's handwritten signature. See also "electronic signature".

discard
When used to describe Meridian Enterprise, to cancel the process of revising a document and delete the file copy that is being edited.

document
Information recorded on a medium (paper, digital media, and so on) for communication to others.

document controller
A person within a facility owner/operator organization that is responsible for the management of project documents.

document type
A classification of documents that share one or more document management characteristics such as format, purpose, or security.

document type workflow
A predetermined sequence of steps through which a document must be processed to generate a new approved revision in Meridian Enterprise. The workflow is defined by the document type from which the document was created.

document view
A view of a Meridian Explorer repository that displays documents.

document workflow interlock
A rule consisting of specific document types and property filters that limit when a project's workflow may proceed. Interlocks are configured by a System Administrator with the Meridian Enterprise Configurator application. Interlocks are available only with the Meridian Advanced Project Workflow Module.

domain controller
A server that responds to security authentication requests (logging in, checking permissions, and so on) within a Windows Server domain.

dynamic collection
A Meridian Enterprise saved search in which the search criteria are reevaluated and the results are updated whenever the collection is displayed.

E

e-signature
An electronic indication that a person adopts the contents of an electronic message. See also "digital signature".

ECM
Engineering Content Management. Content management as it applies specifically to engineering.

EDM
Engineering Document Management. Document management as it applies specifically to engineering documents.

effectivity

An attribute of a Meridian Enterprise property that determines when changes to its value apply within the life cycle of a document.

electronic signature

An electronic indication that a person adopts the contents of an electronic message. See also "digital signature".

environment

An organization's overall computing platform.

Explorer view

The view of a Meridian vault that displays documents organized within the Field-Path Relation.

external page

A type of property page that displays a web page that is hosted on a different information system.

F

Field-Path Relation

A hierarchical structure defined by properties that determines the folder structure of a vault and the locations of documents according to the values of the properties.

Folders view

The view of a Meridian Enterprise vault that displays documents organized by the vault's Field-Path definition.

FS

An acronym for file system.

full-text search

A method of searching for text contained in document content as opposed to searching document metadata. See also "content indexing."

G

grid view

Name of a Meridian Explorer view mode that displays search results in tabular format.

GUID

An acronym for Globally Unique Identifier.

H

history

A configurable option of a Meridian vault that causes it to save changes to documents and metadata over time. Allows users to view prior revisions of documents and their property values at specific moments in the past.

History mode

A configurable option of a Meridian vault that causes it to save changes to documents and metadata over time. Allows users to view prior revisions of documents and their property values at specific moments in the past.

HTTP

An acronym for Hypertext Transfer Protocol.

hybrid drawing

A drawing composed of both vector graphics and raster image files.

I

import

The process of creating a new file in a vault from a file outside the vault or repository .

inactive user

A user account that has been deactivated. The account is not deleted but the user cannot use the application. The account can be reactivated later.

initiate

The act of starting a new revision of a document by performing the first step of a workflow.

issue code

The name of a Meridian Transmittal Management Module property that stores a standard keyword or phrase. The issue code describes the reason why a transmittal was issued.

L

layout

A configurable arrangement of items on a form or page.

LDAP

An acronym for Lightweight Directory Access Protocol.

Local Workspace

A portion of disk space on a user's computer reserved for caching documents when they are viewed or edited. Using Local Workspace improves performance when working with very large documents. Meridian Enterprise's local workspaces can be synchronized with the vault at a configurable interval.

lookup list

A list of predetermined values for a property that is presented to the user for selection. Lookup lists can be either managed in the application or linked to an external database or query.

M

Main area

The area of a Meridian vault where released documents reside.

manager

The Meridian user who initiated the current document workflow and the only person with permission to change the current To-Do Person.

master document

In Meridian Enterprise, a released document from which one or more project copies are made that become either independent documents or new revisions of the master document. Master documents are designated by Meridian Enterprise and the Meridian Advanced Project Workflow Module. In Accruent Project Portal, a document to which a master file is attached.

Meridian Enterprise Server application server

The Meridian Enterprise Server data access and business services running on a server computer. May also be used to refer to the server hosting the services.

Meridian Explorer client

The Meridian Explorer application installed on the Meridian Enterprise Server web server.

metadata

Information that classifies, supplements, or describes a document. Metadata is commonly used to find documents as opposed to searching for data within documents (see “full-text search”). Metadata may also be used for a variety of other purposes.

N

NAT

An acronym for Network Address Translation.

Navigation view

A view of a Meridian vault that displays documents organized in a hierarchical structure according to a predefined set of properties.

O

OS

An acronym for operating system.

OU

An acronym for organizational unit.

P

package

A set of files that are used together for a common purpose. The files are often bound together in a single archive file for convenience when transporting, such as .zip and .msi files. Examples of file packages are software distribution packages and submittal packages. See also “briefcase.”

pane

A separate area of a split or single window used to display related data.

performance counter

Stores the count of specific program activities on a computer to conduct low-level performance analysis or tuning.

PowerUser

The Meridian desktop client software. Not related to the Windows administrative group Power Users.

PowerWeb

The Meridian Enterprise web browser-based client application.

preselection

A property filter that can be applied to a Meridian Explorer view to limit the number of visible items.

privilege

The right of a user to view specific data or execute a specific command. Privileges are assigned by a System Administrator.

project copy

A copy of a master document made for the purpose of creating a new independent document or creating a new revision of the master document. Project copies can be created in Meridian Enterprise.

project definition

A template used to create special folders in a vault that can represent design project processes. Project definitions are configured by a System Administrator with the Meridian Enterprise Configurator application. Meridian Advanced Project Workflow Module project definitions consist of a custom folder type, a workflow, and optional project workflow interlocks or document workflow interlocks. A project definition may restrict folders from being created at the root of a vault and may restrict creation of subprojects (Meridian Advanced Project Workflow Module only).

project folder

A folder created from a project definition template.

project workflow

The workflow of a project folder as defined by the project definition template from which it was created. Configured by a System Administrator with the Meridian Enterprise Configurator application.

project workflow interlock

A rule comprised of specific sub-project folder types and property filters that is applied to a project or subprojects that limits when a project's workflow may proceed. Interlocks are configured by a System Administrator with the Meridian Enterprise Configurator application. Interlocks are available only with the Meridian Advanced Project Workflow Module.

property

Descriptive data used to identify, classify, and find documents. Properties are organized into related groups called property sets.

property navigation

A dynamic search method in which a user progressively reduces the number of documents found by selecting from additional property values.

property page
A secondary window, usually displayed with a tab, that displays the properties of an object such as a document.

property set
A group of related properties.

publish
To create a copy of a document in another information system, optionally in a different electronic format.

purge
To completely and permanently delete data from a system.

Q

query
A search command comprised of one or more search criteria often expressed in Structured Query Language (SQL) syntax.

Quick Change
A very simple document workflow consisting of only two steps, Start Quick Change and Release Quick Change that may or may not increment the document's revision number depending on the configuration of the document type.

R

reassign
To immediately assign a document to the current work area for additional changes after discarding or releasing the current revision.

recovery log
The log of vault documents that can be executed in order to export the documents from a vault to a specified location on the file system. The recovery log is created for use in the event of a critical disaster to provide continued access to documents.

redline
Corrections to a drawing made graphically on a copy of the drawing. Redlines can be created for electronic drawings with the InnoCielo viewer by a user with the appropriate security privileges.

reference
: A link that represents a relationship between two documents. References can be created automatically by Meridian (for example, AutoCAD External Reference) or manually by a user.

reference type
: A classification of references that share one or more document management characteristics such as purpose, source or destination document types, or security.

references page
: A type of property page that displays the references of a document.

related documents page
: A type of property page that displays the documents that are related to the selected object.

related tags page
: A type of property page that displays the asset tags that are related to the selected document.

release
: The final step (transition) of a Meridian Enterprise workflow. When describing project workflow, refers to a new revision of a master document that was created from the content of a project copy. When describing document type or workflow definition workflows, refers to a new revision of the document that was created by completing the document's workflow.

render
: Rendition (noun) refers to a copy of a document in a format other than the original. Render (verb) refers to the process of creating a rendition.

rendition
: Rendition (noun) refers to a copy of a document in a format other than the original. Render (verb) refers to the process of creating a rendition.

repository
: The largest logical container of a document management system for storing documents and metadata. A repository commonly contains all of the documents for a single organization, division, department, workgroup, or other purpose, organized into folders and sub-folders. The fundamental container of a Meridian Explorer system.

result grid
: A configurable grid view used to display documents or tags found by a search.

retire
: To classify a document as obsolete and prevent it from being revised.

return code
: A standard keyword or phrase that represents the reason why a submittal was issued.

review
: The process of evaluating the accuracy and completeness of revisions to a document.

revision
: A milestone in a document's history that represents approved information at particular point in time identified by a number or letter.

revisions page
: A type of property page that displays a list of the revisions of a document.

revoke
: The act of canceling revision of a working copy of a document and deleting the copy being edited.

role
: A named set of privileges to which users or groups are assigned by an administrator.

RPC
: Acronym for Remote Procedure Call.

S

saved search
: A user-defined set of search criteria that is saved for future reuse.

scope
: A Meridian Enterprise feature that limits vault functionality and the visible information to named sets. A scope can be selected by users to make the system easier to use or to gain access to different documents.

search layout
: A configurable combination of repository navigation and search filter parameters used by Meridian Explorer.

server
: A centralized computer or application that provides services to one or more client computers or applications in a network.

shared workspace

A special folder in a Meridian Enterprise vault that is used to store files to support multi-user applications. The vault folder is mapped to a shared network location outside the vault that is used instead of local workspaces on the users' computers. Meridian Enterprise synchronizes the contents of the shared network location with the vault folder. Configurable options control other behaviors specific to using a shared workspace.

shortcut bar

The name of the accordion control containing shortcuts to views, vaults, and baselines that can be displayed in the left pane of the Meridian Enterprise desktop application.

SID

An acronym for System Identifier. A name that identifies a specific instance of a running Oracle database.

SMTP

An acronym for Simple Mail Transport Protocol.

snapshot

A read-only copy of metadata made so that slower data backup processes can occur while the application continues writing to its data. Backing up a snapshot minimizes maintenance downtime.

source state

The state of a workflow that precedes a workflow transition.

SSL

An acronym for Secure Sockets Layer or Transport Security Layer.

SSL/TLS

An acronym for Secure Sockets Layer or Transport Security Layer.

static collection

Saved search results that are displayed without reevaluating the search criteria.

sub-project

A Meridian Enterprise project folder contained within another project folder that can represent a subordinate process. Subprojects are available only with the Meridian Advanced Project Workflow Module.

submit

When used to describe a document, means to check in the working copy of a document that is under revision. Equivalent to releasing a document from a workflow.

submittal

A package of documents received by an organization for review, reference, modification, or final delivery.

T

tag

A vault or repository record that represents a logical asset stored in a separate maintenance management system. The logical asset represents a physical asset that is present at a facility that is managed with the maintenance management system. A tag may reference one or more documents, or the reverse.

tag type

The document type that is configured for use as asset tags.

thumbnail

A small preview image that is shown to assist the user in identifying a file.

TLS

An acronym for Secure Sockets Layer or Transport Security Layer.

To-Do List

The name of a navigation view in Meridian Enterprise.

transaction isolation

A property in a database system that defines how and when the changes made by one operation become visible to other concurrent operations.

transition conditions

Property value filters and logical expressions that are evaluated to determine the validity of a workflow transition to be executed by a user.

transition equivalence

The equality of a Meridian Enterprise transition in one document workflow to a transition in another document workflow. Transition equivalence makes it possible to execute a transition for one document in a batch of documents and have it also execute transitions in the other documents within the batch even if the transitions don’t have the same name, source state, or destination state. Configured by a System Administrator with the Meridian Enterprise Configurator application. Transition equivalence is available only with the Meridian Advanced Project Workflow Module.

transmittal sheet

A cover letter for a submittal that lists the names and other property values of the documents that are included in the submittal. It might also include comments about the status of the documents or the project, instructions to the recipient, and a date by which a response to the submittal is due back to the sender.

U

unretire

To reverse the effects of retiring a document so that it can be revised.

URL

An acronym for Uniform Resource Locator used to specify Internet and intranet addresses.

V

vault

A Meridian repository for storing documents related by organization, division, department, workgroup, or purpose.

VBScript

The Visual Basic scripting language (Visual Basic Scripting Edition).

version

A document derived or copied from another document of the same revision.

VPN

An acronym for Virtual Private Network.

W

WAN

An acronym for wide area network.

watermark

Textual or graphic information overlaid on a printed document used to indicate authenticity or validity.

Web Access

The Meridian Enterprise web browser-based client application.

web client

A client application that is presented in a web browser.

Work Isolation mode

The vault setting that defines how and when the changes made by one user become visible to other concurrent users.

workflow

A predetermined sequence of steps used to produce standardized results.

working copy

A temporary copy of a document made for making changes as an alternative to document workflow.

workstation

A personal computer used by an individual in a network. A workstation is the client in a client/server system.

X

X-Ref

An AutoCAD drawing that is linked to, but not inserted into, the current drawing. Changes made to referenced drawings (X-Refs) are automatically displayed in the current drawing when the current drawing is opened.

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