Cadmatic

Cadmatic eShare

Installation and Configuration Guide

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1. Introduction

This document provides information for administrative users who install and configure the Cadmatic eShare software.

Before starting to install, make sure your site meets the hardware and software requirements described in docs.cadmatic.com/systemrequirements.

Cadmatic eShare uses Cadmatic License Server to allocate licenses to eShare server and client computers. For detailed information on how to manage Cadmatic License Server and update license files, see Cadmatic License Server manual in docs.cadmatic.com.

2. Site preparations

Cadmatic eShare is based on client-server architecture. The server computer runs the Microsoft Internet Information Services (IIS) web server to host design project data stored in Microsoft SQL Server databases and on disk. Client computers access and modify the data on the server using a web browser with either HTTP or HTTPS connection. Client logins are authenticated using Microsoft Windows user authentication.

Note: Using an HTTPS connection requires a valid SSL certificate. See Enabling HTTPS binding for secure access to eShare.

The following topics provide information on preparing a site for Cadmatic eShare installation.

2.1. Prepare the server computer

Make sure that the computer to be used as the Cadmatic eShare server (host) computer is set up according to the system requirements available at docs.cadmatic.com/systemrequirements.

2.2. Install Microsoft SQL Server

Make sure that your site has Microsoft SQL Server installed. It can be installed on the Cadmatic eShare server computer, or it can be on another server computer in the same network that the eShare server can access.

Even though also Microsoft SQL Server Express, the free version of the database engine, is compatible with eShare, we recommend that you use it only for evaluation purposes, and not in mission-critical production use. If you are planning to use the Express edition, be aware that any performance issues that might occur can be due to its various built-in limitations, such as limited database size, limited access to RAM, and limited support for multiple CPUs and cores. You can download the free database engine and Microsoft SQL Server Management Studio from the Microsoft web site at www.microsoft.com.

Note: Starting from the 2016 edition, Microsoft SQL Server requires a 64-bit operating system.

When installing SQL Server, you might want to specify the following settings:

- On the Feature Selection page, select to install the component **SQL Server Replication**.
- On the Instance Configuration page, select to use a **Named instance**.
- On the Database Engine Configuration page, select to use **Mixed Mode** authentication, and specify the password of the SQL Server system administrator (sa) account.

You need to know the instance name and ID (*host**instance*), if using a named instance, and have a suitable SQL Server login, when installing eShare.

2.3. Install Cadmatic License Server

For detailed information on how to manage Cadmatic License Server and update license files, see Cadmatic License Server manual in docs.cadmatic.com.

Make sure that your site has a Cadmatic license server installed, that it is accessible to the Cadmatic eShare server computer, and that it contains the required eShare licenses:

- One eShare server license ('eShare Server').
- The required number of eShare user licenses. These can be either named licenses ('eShare User') or floating licenses ('eShare Client'), depending on the intended license configuration. See Licensing for more details on licensing.

You need to know the license server's host name and port number when installing eShare.

3. Installing the server

Perform the following to install Cadmatic eShare on the server computer. Depending on your site's IT policy, you can either let the eShare installer create the main database or have database administrator create the database.

Note: Before installation, make sure you have completed all Site preparations.

During the installation you are prompted to allow the installing or deployment of Microsoft C++ Runtime Components, Microsoft .NET, and Microsoft Internet Information Services (IIS), if needed.

Before installing, the installer shows the option **Download latest .NET updates**, which, when enabled, will during installation download the latest .NET updates, if newer compatible versions have been released after the eShare version was released.

Prerequisites

- SQL Server host name and instance name.
- SQL Server login name and password. This can be the default system administrator account, or it can be a user-defined account with the required permissions:
    - If the eShare installer creates the main database, the login must be allowed to create databases. The suitable server-level permission for this is "CREATE ANY DATABASE".
    - If your database administrator creates the main database, the login must be allowed to create tables. A suitable database-level role would be the combination of *db_datareader*, *db_datawriter*, and *db_ddladmin*.
- Cadmatic License Server's host name and port.
- Cadmatic eShare installation package.

For more information on SQL Server Database Permissions, see SQL Server Permissions Required by eShare.

Do the following:

1. Extract the eShare installation package to the disk, and launch *Setup.exe*.
2. If the required version of Visual C++ Runtime Component is not detected, you are prompted to install it.
3. If the required version of Microsoft .NET is not detected, you are prompted to install it.

The eShare installation wizard opens. Follow the instructions of the wizard and enter the requested information as described in the following steps.

4. After you have accepted the license agreement, the wizard checks whether your system has the required add-on components. Review the list to see if any components are missing from your system.
5. On the customization page:
    - Specify the folder where eShare is to be installed.
    - Select to create a start menu shortcut.
    - Select if you want to download the latest .NET updates. When enabled, the latest updates will be downloaded during installation, if newer compatible versions have been released after the eShare version was released.
    - Select if you want to create a Task Scheduler task for running eShare Backup on the server during weekends. Select the directory for the backups. The task can be later edited in the Task Scheduler.
6. On the web server settings page, specify the following settings for IIS:
    - **Web site name** – The web site name you want to use in IIS, to distinguish eShare from any other web sites you manage in IIS. Note that this is not the same as the DNS name used to access eShare with a browser.
    - **Port number** – The TCP port that the site uses. If the port is 80, users do not have to specify it when accessing eShare with a browser, but by default port 80 is reserved for the default web page of IIS. You can change the port configurations with the Internet Information Services (IIS) Manager application, as described in Configuring the URL used to access eShare.

      To use HTTPS binding, use port 443. HTTPS connection requires a certificate. If you have a certificate and have the rights to install it, select **Certificate** and browse to select the certificate file. If certificate is not given, a self-signed certificate is created and used. To redirect all HTTP requests to use HTTPS, enable **Allow only HTTPS**.

      HTTPS binding can also be taken into use later in IIS Manager. For more information, see Enabling HTTPS binding for secure access to eShare.

      There might also be a conflict if some other application or system is reserving this commonly used port; for example, a default Skype configuration uses ports 80 and 443 if the port otherwise chosen for incoming connections becomes unavailable.

- **Application pool** – The name of the application pool created for eShare to isolate its working processes from those of any other web applications running on the same web server.

7. On the license server location page, specify the following:
   - **License Server** – Enter the network name or IP address of the Cadmatic License Server.
   - Select the user license type:
     - **Fixed Licenses** – Select if the licenses are of type 'eShare User'.
     - **Floating Licenses** – Select if the licenses are of type 'eShare Client'. Selected by default.
   - Select the authentication type:
     - **Windows Authentication (IIS)** – Select if the used authentication is Windows.
     - **Azure AD** – Select if the used authentication is Azure Active Directory.
8. On the SQL Server Settings page, specify the following:
   - **SQL Server instance name** – Enter the instance name as *host* or *host\instance*, as appropriate.
   - **SQL Server user name** – Enter the login name of a SQL Server user that has the required permissions.
   - **SQL Server password** – Enter the password for the specified login.
     Click the **Test** button now to test that SQL Server accepts the login.
   - Under **Create database**, select whether the main database is to be created automatically during installation or manually by a database administrator.
9. After completing the wizard, click **Yes** if prompted to restart the computer.
10. If the main database was not created during installation, refer to the instructions for creating the database in *Cadmatic eShare Database Administration Guide*.
11. Open a web browser and check that you can sign in to eShare with your Windows account.
    If you are using HTTPS binding, the URL to use could be, for example, *https://localhost*. If you are not using HTTPS binding, the URL to use could be, for example, *http://localhost*.

Note: The first sign-in automatically creates an eShare user account with system administrator permissions. This user can then add other users from **System Administration > User Management**, as described in *Cadmatic eShare Administration Guide*.

Note: During installation an application pool *eShareAuthAppPool* is created, which is used internally only when the inbuilt Windows authentication of IIS is not used.

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4. Upgrading a server installation

When you have an existing eShare server installation, you can run the eShare installer of a newer version release to upgrade your system.

Important: Create backups and save them to a secure location before the upgrade, so that they are available even after the upgrade.

An upgrade installation only updates the server binaries – it does not affect existing user data or user-defined settings.

Before performing an upgrade installation, make sure that eShare users are aware of the server going to be temporarily inaccessible, and that accessing eShare App after the installation will prompt them to upgrade eShare App.

Do the following:

- Launch the *Setup.exe* file of the new release, and follow the instructions of the wizard to perform an upgrade installation.

Note: Before installing, the installer shows the option **Download latest .NET updates**, which, when enabled, will during installation download the latest .NET updates, if newer compatible versions have been released after the eShare version was released.

5. System configuration

The following topics provide information on post-installation system configuration.

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5.1. Server logs

The Cadmatic eShare server stores maintenance and error data in log files. The log files are named by date and can be found under the *%ProgramData%\Cadmatic\EShare\logs* directory; the default location is *C:\ProgramData\Cadmatic\EShare\logs*.

The location of the log files can be checked and configured in Internet Information Services (IIS) Manager application settings. See Configuring application settings.

5.2. Integrated model and document publishing

Cadmatic Plant Modeller can export 3D models and project documents directly to Cadmatic eShare, using the Plant Modeller service. In a typical service configuration, documents are frequently updated to eShare while the more resource-intensive exporting of 3D models is specified to occur outside the main working hours.

For more details on setting up these export services, refer to the "Working with Cadmatic eShare" section of Cadmatic Plant/Outfitting online help.

5.3. Licensing

Cadmatic License Server handles allocating of licenses to Cadmatic eShare. The license types vary by application. The eShare server monitors license usage and availability, and eShare system administrator can customize license configuration and distribution.

5.3.1. eShare license types

- **eShare Server license** – License required for eShare server to operate. If server license is invalid or missing, users cannot generally access the system and a "No license" page is shown. See Server, REST API, and eMerge licenses.
- **User licenses** – These licenses determine how individual users can access eShare. There are two types of user licenses:
  - **Named licenses ("eShare User")** – Each license is assigned to a specific user account. See Named user licenses.
  - **Floating licenses ("eShare Client")** – A pool of licenses is shared by a larger group of users. See Floating user licenses.
- **REST API license** – A specific license required for third party integrations and to access public REST API endpoints (for example */api/public/v1/...*). Standard user licensing rules also apply to the user account making the API call. See Server, REST API, and eMerge licenses.
- **eMerge license** – A license required for using model importers. If more than one model is used or model importer settings are changed, this license is required. eMerge license is usually supplied together with eShare server license. See Server, REST API, and eMerge

licenses.

- **eGo licenses** – Device-specific licenses for eGo clients. See eGo licensing.
- **OCR license** – License for using cloud-based OCR functionality in eShare.

Note that all eShare licenses (excluding eGo device licenses) are acquired by eShare server and not by the client. This differs from other Cadmatic products where the client itself acquires the licenses.

The system also supports associating licenses with specific groups of users using License groups. See License groups.

5.3.2. Server, REST API, and eMerge licenses

eShare monitors the server and REST API licenses periodically. If the server license is not available, users are not allowed to start eShare sessions.

eMerge license is checked when a model is published.

The address used for checking these licenses is configured in *Cadmatic.LicenseServer* in Internet Information Settings (IIS) Manager application settings. See Cadmatic.LicenseServer.

5.3.3. Named user licenses

When named licenses are used, a new eShare user automatically gets a user license and can sign in to the system. The server configuration in *Cadmatic.MaxNumberOfUserLicenses* in Internet Information Settings (IIS) Manager application settings sets a limit for the total number or licenses that can be assigned, i.e. the maximum number of users that can be enabled at the same time. Each enabled user uses one license.

Normally users can remain signed in and keep holding the license as long as needed. Inactivity and timeouts do not affect named licenses. However, eShare performs regular status check on active named users, and if more users have a license than the license server allows, the system starts deactivating non-administrative user accounts, in reverse alphabetical order. If deactivating all normal users does not release enough licenses the server starts deactivating system administrators.

5.3.3.1. Server options

These settings are configured in Internet Information Settings (IIS) Manager application settings. See Configuring application settings.

- *Cadmatic.LicenseServer* – License server address used for checking the license.
- *Cadmatic.UserLicenseType* – Set to 0 to use named licenses.

- *Cadmatic.MaxNumberOfUserLicenses* – Guides the total number of named licenses that can be assigned, requires license server validation.

5.3.4. Floating user licenses

When floating user licenses are used, a pool of licenses is shared across all users. Creating a new eShare user does not yet allocate a license to that user. When the user logs in the eShare server requests a license from the license server for the user's session, and when the user closes the browser or application, the license is returned to the license pool, becoming available to other users. This means that, unlike with named licenses, users can be enabled and disabled independently of the total number of licenses. The maximum number of licenses is specified by *Cadmatic.MaxNumberOfUserLicenses* in Internet Information Settings (IIS) Manager application settings.

If all licenses are already in use when a user tries to sign in, the following happens:

- If the user trying to sign in is a normal user, the login attempt fails and "No license" page is shown.
- If the user trying to sign in is a system administrator, a list of active users is displayed for selecting which user's session to terminate. The list also shows when each user was last seen and last active in eShare. **Last seen** means that the user had eShare open and **last active** means that the user did something actively in eShare.

If a floating license user closes eShare, the session is marked inactive after a 3-minute timeout after which the license is returned to the license pool. If the same user returns later, the session continues if there are licenses available.

If the user is inactive for the duration specified in *Cadmatic.FloatingLicenseTimeout*, the license is returned to the license pool. Once the user is active again, the session continues if there are licenses available. The default value is 45 minutes.

If the number of available floating licenses is reduced while users are active, eShare starts reclaiming licenses from active sessions by non-administrative users, starting from the least recently active first, to match the new lower license limit.

5.3.4.1. Server options

These settings are configured in Internet Information Settings (IIS) Manager application settings. See Configuring application settings.

- *Cadmatic.LicenseServer* – License server address used for checking the license.
- *Cadmatic.UserLicenseType* – Set to 1 to use floating licenses.
- *Cadmatic.MaxNumberOfUserLicenses* – Guides the total number of concurrent floating licenses that can be assigned, requires license server validation.
- *Cadmatic.FloatingLicenseTimeout* (Value in minutes) – Specifies how long a floating license can be idle before it is returned to the license pool. The default value is 45 minutes, the minimum is 5 minutes. If set to 0, the floating licenses are not reclaimed due to idleness.

5.3.5. eGo licensing

eGo licensing consists of two parts: licensing of the eGo application and licensing of the eShare connection.

5.3.5.1. eGo device licenses

Using eGo always requires a device-specific license. The device-specific licenses are acquired by entering an activation code, which is used to contact Cadmatic servers and request a license for the device. Once a license has been activated for a device, it can be only released by the license team at Cadmatic, for example, in case the device breaks.

The same activation code may be valid for requesting licenses for multiple devices. For example, one activation code could be used to activate eGo in 20 devices, depending on the number of purchased licenses. Although the activation code is the same, each of the devices receive their own device-specific license.

The activation code can be entered in the eGo application or passed as a parameter during installation. The activation code can also be entered in eShare in **System Administration > Devices**, which enables activating it for multiple devices at once. See Devices.

For the eGo license to remain valid, eGo must check with the licensing servers at least every 30 days.

5.3.5.2. eGo-eShare licensing

Using eGo with eShare requires an eShare user license, the same way as using eShare in the browser or eShare App does. It does not require any configuration and if a user can access eShare (browser or eShare App), they have access to eShare from eGo as well.

When eGo is connected to eShare, it uses one named or floating eShare license depending on the configuration. It is allowed for the same user to use eGo and eShare at the same time and it does not require any additional licenses.

5.3.6. License groups

Assigning users to different license groups allows different user groups to use different license server configurations. For example, it can be used to limit how many user licenses a subcontractor may acquire or enable connecting to more than one license server.

When no groups are defined, all users are in the “default” group, which respects the license configuration in Internet Information Settings (IIS) Manager application settings, as described in Named user licenses and Floating user licenses. License groups can be created in eShare in **System Administration > Licenses** and each license group overrides the user license application settings in IIS Manager for its assigned groups. See Licenses.

From the license server's point of view, each license group acts like a separate eShare server requesting separate user licenses. Each user can only be assigned to one license group at a time, and if that license group is out of licenses, the user is denied access. Any single user is always assigned to the same license pool regardless of whether licenses are available or not.

System administrators are always assigned to the “default” license group – otherwise changing settings could lock them out of the system.

5.3.7. Common licensing errors

Error	Description
"No License" or "User Deactivated" on login	The user logs in but faces a "no license" or "user deactivated" page. • Server license is missing: The server license may be missing, disabled, or the license server is down. • Named license user is disabled: User account does not have a license assigned as their account has been deactivated. This results in a "user deactivated" or "no license" page. • There are no floating licenses available: The maximum number of floating licenses allowed by the license server has been reached. Results in a "no license" page.

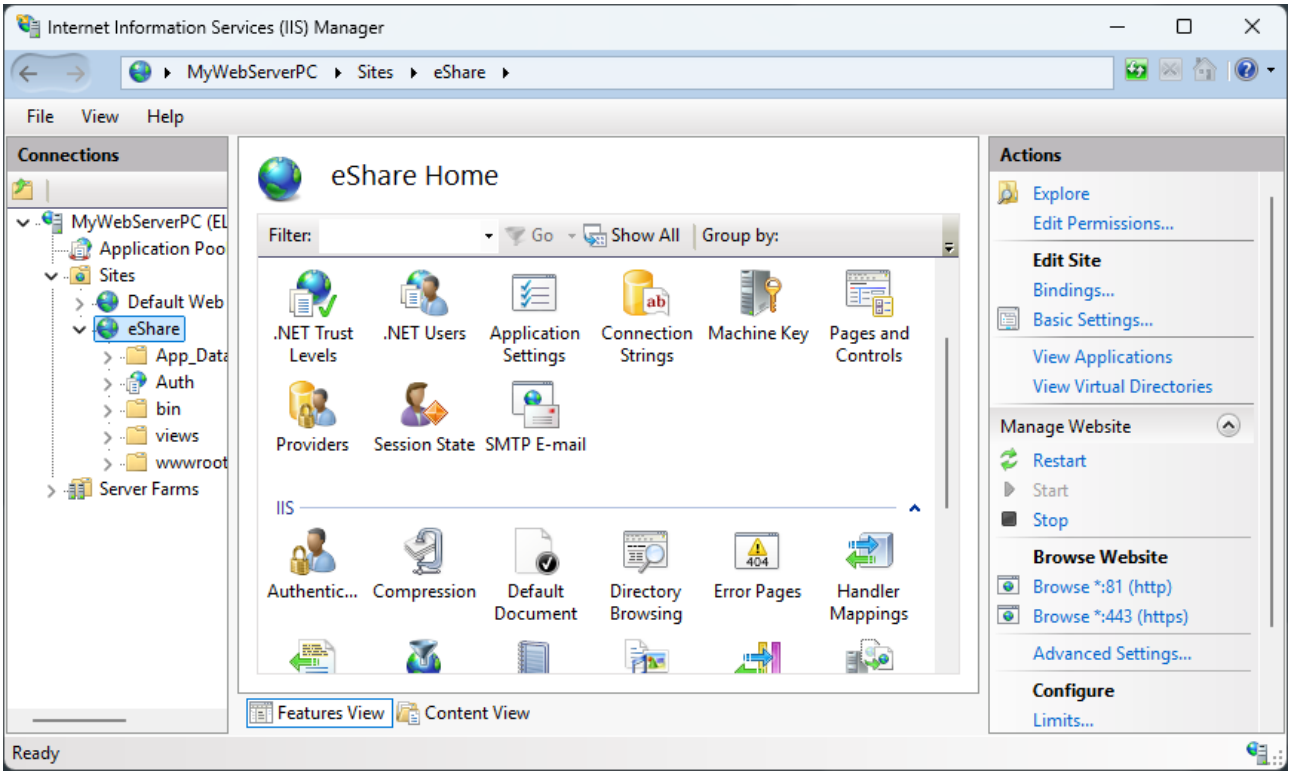
Error	Description
"No License" after being idle (floating user license)	The user's floating license has been released to the license server due to configured floating license timeout. Once the user is active again but there are no available licenses, "no license" page is shown.
"Session Terminated"	Can occur for any user (named or floating license) due to attempting to use eShare on multiple computers or browser at the same time. Multiple tabs on the same browser are not considered multiple sessions and will not result in termination of the session.

5.3.8. Special cases

- **OCR License** – OCR is performed using a service hosted in Cadmatic Cloud.
- **eGo sessions** – eGo sessions exist in parallel to eShare sessions, and a user can have both sessions open at the same time. The same rules apply to both sessions.
- **Service sessions** – Plant Modeller/Service account sessions. These can exist parallel to eShare sessions and do not take a license, but are limited to specific endpoints.
- **System administrators** – System administrators are always a part of the main user license group to prevent invalid license group configurations from blocking access to the system.

5.4. Internet Information Services (IIS) Manager

Installing Cadmatic eShare automatically installs the Internet Information Services (IIS) web server. You can use the Internet Information Services (IIS) Manager application to change web server settings.



5.4.1. Configuring automatic server restart

Cadmatic eShare server is set to restart daily at 02:45 A.M. This releases any system resources that the server might have reserved but no longer needs. The restart takes roughly a minute and during this time the server is unavailable. Use the Internet Information Services (IIS) Manager application to change the restart settings, if needed.

Do the following:

1. Sign in to the eShare server computer with administrative privileges, and open the Internet Information Services (IIS) Manager application.
2. In the Connections pane, click **Application Pools**.
3. In the Application Pools main view, right-click eShareApplicationPool (the name might be different, if changed when installing eShare), and select either **Recycling** or **Advanced Settings** to specify the Recycling options.
    - You can set the server to restart at a specific time, after a specified time interval, or after a given amount of requests. (All can be selected at the same time.)
    - You can specify the maximum limits of virtual and private memory.

- You can specify which events to log when recycling occurs.

4. Restart the application pool for the changes to take effect.

5.4.2. Configuring the database connection string

Use the Internet Information Services (IIS) Manager application to edit the database connection string, for example to change the database login. The login specified in the connection string is the login that performs all eShare database operations.

Do the following:

1. Sign in to the eShare server computer with administrative privileges, and open the Internet Information Services (IIS) Manager application.
2. In the Connections pane, browse to **Sites > eShare**.
3. In the main view, open **Connection Strings**.
4. Double-click the Main row, and edit the connection string as required.
5. Restart the web server for the changes to take effect.

5.4.3. Configuring application settings

Use the Internet Information Services (IIS) Manager application to edit general application settings.

Editing the application settings will automatically restart the eShare server.

Do the following:

1. Sign in to the eShare server computer with administrative privileges, and open the Internet Information Services (IIS) Manager application.
2. In the Connections pane, browse to **Sites > eShare**.
3. In the main view, open **Application Settings**. Edit the settings as appropriate. We recommend that you do not change settings that are not described in the following table.

Setting	Description
Cadmatic.AI.Disabled	Specifies whether Cadmatic AI is enabled or disabled. Set by default as false. • False/Not set – Cadmatic AI is enabled. • True – Cadmatic AI is disabled.

Setting	Description
Cadmatic.Auth.Cookie.DefaultExpirationSeconds	Specifies the cookie expiration time. Typically cookie expiration is set to match the expiration of the original token (for OIDC/Entra ID). If unavailable (using Cadmatic.IntegratedSecurity), the expiration time set here is used. By default set to 12 hours (43200) which is a sensible value.
Cadmatic.Auth.Cookie.ForceDefaultExpiration	Forces cookies to always use the default expiration period no matter how long-lasting the original token was. Set by default as false.
Cadmatic.Auth.IsLegacyLoginEnabled	Specifies whether the legacy login endpoint used by previous versions of Cadmatic tools is enabled or disabled. For now this setting is enabled by default while migration to the new system is ongoing. The setting will be disabled by default at some point in the future.
Cadmatic.Auth.RedirectWhitelist	Used by third party integrations that want to utilize the eShare web login. The value is formatted as a space separated list ("https://address1 https://address2").
Cadmatic.AutoCadFontsFolderName	AutoCAD fonts might be necessary for correct displaying of documents. This setting specifies the path to the AutoCAD fonts folder. Alternatively, copy the font files from AutoCAD to *%ProgramData%\Cadmatic\eShare\AutoCadFonts*.
Cadmatic.AutomatedClientUpdates	Specifies whether automated updates to the latest client version are allowed. • False – The automated updates are not

Setting	Description
	allowed. • True – The automated updates are allowed.
Cadmatic.AzureAD.ClientId	Specifies the client ID for Azure AD authentication. Cadmatic.AzureADSecurity must be first set to *true* to use Azure AD authentication.
Cadmatic.AzureAD.ClientSecret	Not needed for Azure AD/Entra ID authentication. Used for some internal integrations.
Cadmatic.AzureAD.Domain	Specifies the domain used for Azure AD authentication. Cadmatic.AzureADSecurity must be first set to *true* to use Azure AD authentication.
Cadmatic.AzureAD.TenantId	Specifies the tenant ID for Azure AD authentication. Cadmatic.AzureADSecurity must be first set to *true* to use Azure AD authentication.
Cadmatic.AzureADSecurity	Specifies if Microsoft Azure Active Directory authentication is used. • False – Azure AD authentication is not used. • True – Azure AD authentication is used. If set to true, note that all other authentication methods must be turned off. After setting to true, set Cadmatic.AzureAD.Domain, Cadmatic.AzureAD.ClientId, and Cadmatic.AzureAD.TenantId settings to values necessary for your Azure AD.
Cadmatic.CacheFolderName	Specifies the location of the submodel cache. Important: eShare may permanently delete any files and folders from this path, so it

Setting	Description
	should not be used by users or applications for any other purpose. Changing the path after initial installation may break existing projects.
Cadmatic.DatabaseAdapterTrustedConnection	Specifies if a trusted connection ("Trusted_connection=True;" in the connection string) is allowed to be used in eShare's data sources and adapters that connect to an SQL database. This mainly affects eShare's database adapter. • Enabled – Trusted connections work as usual. • Disabled – Trusted connections are blocked by eeShare. When updating eShare from an earlier version, this setting is set by default as *Enabled*. For fresh installations of eShare, it is set by default as *Disabled*.
Cadmatic.DatabaseCommandTimeoutSeconds	Specifies the default database command timeout in seconds. The default value is 900.
Cadmatic.DocumentFolderName	Specifies the location of stored documents published from Cadmatic design applications. Important: eShare may permanently delete any files and folders from this path, so it should not be used by users or applications for any other purpose. Changing the path after initial installation may break existing projects.
Cadmatic.Documents.AreEncrypted	This setting enables encryption for documents and maps opened online. When encryption is used, documents and maps are encrypted when they are

Setting	Description
	transferred to the browser and when they are stored in the browser's cache. Encrypting documents increases security. Set by default as true. • False – Online document and map encryption is not used. • True (default) – Online document and map encryption is used. If the setting is missing from AppSettings.Config, encryption is used. Documents and maps taken offline are always encrypted, regardless of this setting. **Note:** After changing this setting, restart the website and run **Clear Project Cache**. This replaces documents already stored in the browser cache with versions that match the new setting.
Cadmatic.DownloadedDocumentLinksToApp	Specifies the link target of the links in downloaded documents. • False – The link target is the eShare web site. • True – The link target is eShare App.
Cadmatic.DziFolderName	Specifies the location of document viewer cache. **Important:** eShare may permanently delete any files and folders from this path, so it should not be used by users or applications for any other purpose. Changing the path after initial installation may break existing projects.
Cadmatic.DziMaxDpi	Specifies the maximum quality of a document that is displayed in the document viewer. The value can be

Setting	Description
	between 150-1 200 dpi, the default being 400 dpi. However, if the document is very large, the document viewer might lower the quality.
Cadmatic.DziMaxNumberOfPages	Specifies how many pages of a multi-page document to show in the built-in document viewer. If the user is opening a document that has more pages, the user is prompted that only the specified number of pages are shown, and to see the whole document the user should download it and open it in a separate viewer application.
Cadmatic.DziMinDpi	Specifies the minimum quality of a document that is displayed in the document viewer. The value can be between 150-1200 dpi, the default being 200 dpi.
Cadmatic.EbmFolderName	Specifies the location of internal model files. **Important:** eShare may permanently delete any files and folders from this path, so it should not be used by users or applications for any other purpose. Changing the path after initial installation may break existing projects.
Cadmatic.EnableModelDownloadButton	Specifies whether normal users, admins, or anyone is able to see the link to download the project model file. • All / True – The download link is visible to users with the required permissions. • Admin – The download link is visible only for project and system admins. • None – The download link is not visible to anyone.

Setting	Description
	If set to All or True, project-specific permissions can be configured in eShare in **Project Admin > Submodels**. **Note:** For upgraded installations, if Cadmatic.EnableModelDownloadButton is set to All or True, and Cadmatic.Models.AreEncrypted is set to False, all users are able to download the model. New installations start with an empty list, i.e. only administrators are allowed to download the model.
Cadmatic.ExcelLinksToApp	Specifies the link target of the Excel object IDs exported by search. • False – The link target is the eShare web site. • True – The link target is eShare App.
Cadmatic.FloatingLicenseTimeout	Specifies the time after which floating licenses can be taken from idle users if someone else needs the license. The value is set in minutes and the minimum value is 5. If set to 0, floating licenses cannot be taken from idle users. The default value is 45.
Cadmatic.HTTP.ForwardedHeader	When using session logging, eShare reports the IP addresses of user sessions. When eShare is used behind a reverse proxy, this setting needs to be set "X-Forwarded-For" or equivalent for IP tracking to be accurate.
Cadmatic.IntegratedSecurity	Set to true by the eShare server installer when Windows authentication is selected, false otherwise.

Setting	Description
	Enables use of Windows Authentication provided by IIS. Cannot be enabled at the same time as Cadmatic.AzureADSecurity or Cadmatic.OIDCSecurity.
Cadmatic.IsAttributeStagingTableUsed	Determines whether eShare uses a faster method for publishing. • True – Publishing is faster but eShare requires execute permissions on its stored procedures. • False – Publishing is slower and eShare does not require any additional permissions.
Cadmatic.IsOnlyLocalHelpUsed	Determines whether eShare uses only the local help and does not try to reach http://docs.cadmatic.com. • True – Only local help is used. • False (default) – eShare attempts to first reach https://docs.cadmatic.com, but if the site is not reachable, the local help is used.
Cadmatic.JsonWebToken.DefaultExpirationPeriod	Specifies the expiration time of JSON Web Token or cookie in eShare. The value is set in seconds and it can range from 3 minutes to 365 days. Default is 180 days. To override the expiration time set by the authentication provider, Cadmatic.JsonWebToken.ForceDefaultExpirationPeriod must be set to *true*.
Cadmatic.JsonWebToken.ForceDefaultExpirationPeriod	Specifies if the expiration time of JSON Web Token or cookie set in Cadmatic.JsonWebToken.DefaultExpirationPeriod overrides the expiration time set by the authentication provider. • False – The value set in

Setting	Description
	Cadmatic.JsonWebToken.DefaultExpirationPeriod does not override the value set by the authentication provider. • True – The value set in Cadmatic.JsonWebToken.DefaultExpirationPeriod overrides the value set by the authentication provider.
Cadmatic.LicenseServer	Specifies the server address in the format *server:port*, or just *server* if the port is the default port. For example, if the license server is running on port 2989 on a server named 'license', set the value to 'license:2989'.
Cadmatic.LogsFolderName	Specifies the location of stored server log files.
Cadmatic.MapsFolderName	Specifies the location of stored maps. **Important:** eShare may permanently delete any files and folders from this path, so it should not be used by users or applications for any other purpose. Changing the path after initial installation may break existing projects.
Cadmatic.MaxExcelObjectsCount	Specifies the maximum number of objects that can be exported from eShare search results to a Microsoft Excel file. The value must be between 20 000 and 1 048 576; the default is 500 000. If the search function finds more objects, the export file will only contain the first objects, in no specific order. Excel export can have a significant impact on

Setting	Description
	computer's memory consumption. For example, exporting 1 000 000 objects might consume up to 10 GB of RAM, and several simultaneous exports of that size would require the server to have at least 64 GB – 128 GB of RAM. If the value is set too high for the amount of available RAM, the server application will run out of memory and the export crashes.
Cadmatic.MaxMultiSelectCount	Specifies how many objects the user can select at a time. The default value is 20 000. If the user attempts to select more objects than specified here, the properties pane reports the selection instead, for example: "Too many objects selected (150000): no details are shown for more than 20000 objects". In such case, eShare does not send any attribute request for that selection, in other words, a very large selection no longer loads data sources or external adapters needlessly. The upper bound value is 10 000 000. The actual value used in deployment may depend on server capacity, complexity of the project configuration, number of statuses and so on.
Cadmatic.MaxNumberOfCollisions	Specifies the maximum number of reported collisions. The value must be between 1 000 and 100 000; the default is 10 000.
Cadmatic.MaxNumberOfDocumentIndexingThreads	Specifies the maximum number of threads that the eShare server can use when indexing. This affects the combined load generated by all the data sources doing indexing in all of the projects on the eShare server. If left empty, a default value is used, which uses most of the cores available on the server computer.

Setting	Description
	The value can be a whole number OR a decimal number, and the default value is the logical processor count – 1. • If using a whole number, it directly defines the maximum number of threads to use. The value can be between 1 and *n* where *n* is the logical processor count of the server * 2. • If using a decimal number, the maximum number of threads is obtained with the following formula: logical processor count * the decimal number, rounded down
Cadmatic.MaxNumberOfInitializationThreads	Specifies the maximum number of threads that the eShare server can use when starting up. This affects the loading time of enabled adapters and data sources. The value can be a whole number OR a decimal number, and the default value is the logical processor count – 1. • If using a whole number, it directly defines the maximum number of threads to use. The value can be between 1 and *n* where *n* is the logical processor count of the server * 2. • If using a decimal number, the maximum number of threads is obtained with the following formula: logical processor count * the decimal number, rounded down
Cadmatic.MaxNumberOfModelImportingThreads	Specifies the maximum number of threads that the eShare server can use when importing models. This affects the combined load generated by all model

Setting	Description
	importers and models. The value can be a whole number OR a decimal number, and the default value is the logical processor count – 1. • If using a whole number, it directly defines the maximum number of threads to use. The value can be between 1 and *n* where *n* is the logical processor count of the server * 2. • If using a decimal number, the maximum number of threads is obtained with the following formula: logical processor count * the decimal number, rounded down
Cadmatic.MaxNumberOfModelPublishingThreads	Specifies the maximum number of threads that the eShare server can use when publishing models. This affects the combined load generated by all models published on the eShare server. The value can be a whole number OR a decimal number, and the default value is the logical processor count – 1. • If using a whole number, it directly defines the maximum number of threads to use. The value can be between 1 and *n* where *n* is the logical processor count of the server * 2. • If using a decimal number, the maximum number of threads is obtained with the following formula: logical processor count * the decimal number, rounded down
Cadmatic.MaxNumberOfUserLicenses	Specifies the maximum number of user licenses that

Setting	Description
	eShare server is allowed to allocate. This can be used to specify how many users can sign in to a single eShare server when multiple eShare servers use the same license server. Or, it can be used to temporarily reduce the number of simultaneous users on a single eShare server, for example if needing to troubleshoot performance issues. Supported value range: 1-999. If the parameter is missing or its value is outside the valid range, the maximum number of users that can sign in is the same as the total number of available user licenses. In a multi-server scenario this can result in one eShare server being allowed to allocate all available licenses.
Cadmatic.Models.AreEncrypted	This setting enables client cache encryption that prevents the use of eShare client cache unless there is an active online connection to eShare server. Encrypting models increases security. Set by default as true. • False – Client cache encryption is not used. • True (default) – Client cache encryption is used.
Cadmatic.OIDC.AudienceList	When eShare is called with a JWT access token issued by the OIDC provider, this is a space-separated list of accepted audiences for the token. If not set, falls back to client ID.
Cadmatic.OIDC.Authority	OIDC issuer URI, used to look up the OIDC discovery url. For example, "https://accounts.google.com" for Google logins. Set by default to false.
Cadmatic.OIDC.ClientId	Sets the client ID of the OIDC application.

Setting	Description
Cadmatic.OIDC.ClientSecret	Client secret of the OIDC application. **Note:** This is usually optional for eShare installations without Wave.
Cadmatic.OIDC.LoginClaim	The claim on the ID token used to map OIDC users to eShare user "login". Depends on the identity provider, could be "sub" or "preferred_username". Set by default to "preferred_username".
Cadmatic.OIDC.ResponseType	Changes OIDC response type; should not be changed in most setups. Set by default to "code".
Cadmatic.OIDCSecurity	When set to true, enables OIDC login. If set, Cadmatic.IntegratedSecurity and Cadmatic.AzureADSecurity must be false.
Cadmatic.PdmsExchangerFolderName	This setting specifies the path to the PDMS eXchanger installation folder.
Cadmatic.PdsExchangerFolderName	This setting specifies the path to the PDS eXchanger installation folder.
Cadmatic.PointCloudFolderName	Specifies the folder eShare uses to store point clouds. Point cloud files can be manually added to the project folders under it, and once added they will be processed and shown by eShare automatically. **Important:** eShare may permanently delete any files and folders from this path, so it should not be used by users or applications for any other purpose. Changing the path after initial installation may break existing projects.

Setting	Description
Cadmatic.PdfLegendFontOrFileName	Specifies the PDF stock font name (for example, Times-Bold, or Helvetica), or the full path to a Unicode TrueType font that will be used for the document legend (for example, *C:\data\code2003.ttf*). If the setting is empty, Helvetica is used by default. Allowed stock font names are listed in the PDF Reference 1.7, pages 1109-1110, Table H.3. https://wwwimages2.adobe.com/content/dam/acom/en/devnet/pdf/pdfs/pdf_reference_1-7.pdf
Cadmatic.RemovePointCloudSourceFilesAfterSync	Specifies if eShare should automatically remove point cloud source files when point clouds are added (to save space). • False (default) – The point cloud source files are not automatically removed. • True – The point cloud source files are removed automatically. If *Cadmatic.RemovePointCloudsWithoutSourceFiles* is set to *true*, it overrides this setting.
Cadmatic.RemovePointCloudsWithoutSourceFiles	Specifies if eShare should remove point clouds without source files. • False (default) – The point clouds without source files are not removed. • True – The point clouds without source files are removed automatically. If set to *true*, this overrides *RemovePointCloudSourceFilesAfterSync* setting.
Cadmatic.SevenZip.CompressionLevel	eShare packs models (EBM/EBMX), submodels, and offline packages with 7-Zip. Specifies the 7-Zip compression level, 1–9 (mirrors

Setting	Description
	the 7-Zip -mx switch; 1 = fastest packing with larger files, 9 = slowest with smallest files). Default: 1. An empty value or 0 means "not configured" and the default applies. Values outside the valid range are adjusted to the nearest valid value; a non-numeric value prevents the server from starting. At startup,eShare exports the effective value into the EBMX_CompressionLevel process environment variable, which the compression helper processes inherit. If these variables are already set machine-wide with valid values, they take priority over the configured settings. The effective values are written to the eShare log at startup.
Cadmatic.SevenZip.PackThreadCount	eShare packs models (EBM/EBMX), submodels, and offline packages with 7-Zip. Specifies the number of 7-Zip compression threads, 1–number of logical processors (mirrors the 7-Zip -mmt switch). Default: a third of the logical processors, clamped to the [2, 12] range. An empty value or 0 means "not configured" and the default applies. Values outside the valid range are adjusted to the nearest valid value; a non-numeric value prevents the server from starting. At startup, eShare exports the effective value into the EBMX_PackThreadCount process environment variables, which the compression helper processes inherit. If these variables are already set machine-wide with valid values, they take priority over the configured settings. The effective values are written to the eShare log at startup.
Cadmatic.SharedFolderRootPath	Specifies the folders on eShare server from which

Setting	Description
	Excel data sources can read Excel or CSV files and enables the **Browse** button in Excel data source adapter. The setting includes the folder's subfolders. Changes require server restart. The format contains one or more entries separated by semicolons, each a display name and a full folder path joined by a vertical bar. Example: **Shared Folder Display Name|\\fileserver\shared;Archive|D:\Archive** A display name is what project administrators see; the path is never shown when selecting files with **Browse**. A single entry can contain a semicolon in its path, but several entries cannot. • Behavior when set: the Excel file of a data source must be inside one of the folders. A file outside the folders, or given as a relative path, is refused with an error that names the folders, both when the file is chosen in the adapter configuration and when the data source loads. Browse lists the folders as its top level when there is more than one and only ever shows their contents. The adapter shows a chosen file as "Folder name > relative path". • Behavior when not set: unchanged. Any path readable by the eShare server account may be used, and there is no **Browse** button. • Invalid entries: an entry that is malformed, relative, repeats a name, or lies inside or above another entry's folder is skipped and logged as an error; the other entries stay in force. A folder that does not exist is created; one that cannot be created is kept and logged,

Setting	Description
	so files outside it remain refused. **Important:** For upgraded installations, a server that already had this setting with a single folder keeps it unchanged, but any Excel data sources whose files are located outside that folder stop loading until the file is moved into a shared folder or its folder is added as a second entry.
Cadmatic.TempFolderName	Specifies the generic temporary folder used by eShare. **Important:** eShare may permanently delete any files and folders from this path, so it should not be used by users or applications for any other purpose. Changing the path after initial installation may break existing projects.
Cadmatic.UserLicenseType	Specifies whether to use named licenses or floating licenses. Make sure that the license file contains licenses that match the selected licensing type. Supported values: • 0 – Use named licenses. License server must contain licenses of type 'eShare User'. • 1 – Use floating licenses. License server must contain licenses of type 'eShare Client'. If the parameter is missing or its value is outside the valid range, the system uses named licenses by default.

4. After making the last change, wait for the server to restart and changes to take effect.

5.4.4. Configuring the URL used to access eShare

Use the Internet Information Services (IIS) Manager application to bind a specific host name or host names to the Cadmatic eShare web site, so that users can access eShare with a friendly URL instead of having to use the server computer's IP address or network name.

To perform site binding to enable HTTPS, so that browsers can securely connect to eShare, see Enabling HTTPS binding for secure access to eShare.

For detailed information about configuring site bindings, refer to the documentation provided with IIS.

Prerequisites

- The host name to use is known to the Domain Name Service (DNS) of your site.

Do the following:

1. In the Connections pane, under **Sites**, right-click **eShare** and select **Edit Bindings**. The Site Bindings dialog opens.
2. To change the IP address or port of the default binding, or to add a host name for it, select its row and then click **Edit**.
3. Click **Close**.
4. Restart the web server for the changes to take effect.

5.4.5. Enabling HTTPS binding for secure access to eShare

Advanced web technologies, like the plugin-free 3D embedded in the user interface, require HTTPS protocol to be used. When HTTPS protocol is used, the inbound and outbound eShare network traffic is encrypted with the Transport Layer Security (TLS) protocol.

To utilize HTTPS properly, a valid SSL (Secure Sockets Layer) certificate is required. An SSL certificate is a digital certificate that authenticates a website's identity and enables an encrypted connection. SSL is a security protocol that creates an encrypted link between a web server and a web browser. Using an SSL certificate secures online transactions and keeps information private and secure. This will allow the client to “trust” the server and a secure connection can be formed. Without a valid certificate, there will be “not secure” related warnings and some domain policies can prevent connection if the certificate is not valid.

Proper certificates are issued by CA (Certificate Authorities) which the browser will trust by default. Domain computers can be configured to trust a certain certificate by installing it to the certificate store.

For more information, see Microsoft's documentation on setting up SSL in IIS: https://docs.microsoft.com/en-us/iis/manage/configuring-security/how-to-set-up-ssl-on-iis.

If you want to enforce use of HTTPS on administrative level, see Enabling HTTP Strict Transport Security (HSTS).

Prerequisites

- A valid SSL certificate for the fully qualified domain name.
- Using the fully qualified domain name with a valid SSL certificate to establish the secure connection.

Do the following:

1. To load the certificate file to the Internet Information Services (IIS), in the Connections pane, select the server, and double-click **Server Certificates**.
2. In the Server Certificates page, in the Actions pane, select **Import**. The Import Certificate dialog opens.
3. Browse and select the license file and select **OK**.
4. To enable the HTTPS binding, in the Connections pane, under **Sites**, right-click **eShare** and select **Edit Bindings**. The Site Bindings dialog opens.
5. Select **Add**. The Edit Site Binding dialog opens.
6. In the Edit Site Binding dialog, specify the following settings:
   - **Type** – Select **https**.
   - **IP address** – Select **All unassigned**
   - **Port** – Select **443**. Using other port for HTTPS is not supported.
   - **Host name** – Enter the host name.
   - **Require Server Name Indication** – Enabling this setting is recommended to mitigate man-in-the-middle attacks.
   - **SSL certificate** – Select the certificate from the drop-down menu or browse with **Select** to find it.

   Select **OK** to confirm settings.
7. If HTTP binding is no longer needed, select the HTTP binding on the list and select **Remove**.

Note: If HTTP binding is removed, all integrations to eShare need to be revised for possible configuration changes.

5.4.6. Enabling HTTP Strict Transport Security (HSTS)

In newer versions of Internet Information Services (IIS) Manager, administrator can enforce HTTPS to be used and redirect all HTTP requests to HTTPS.

Prerequisites

- Internet Information Services Manager 10.0 version 1709 or newer.

Note: Enabling HSTS is site-specific.

Do the following:

1. In IIS Manager, in the Connections pane, under **Sites**, select the site which settings to modify.
2. In Actions pane, under Configure, select **HSTS**. Edit Website HSTS dialog opens.
3. Select **Enable**.
4. Enable **Redirect Http to Https**.
5. Select **OK** to confirm the changes.