

EEforce 25.9 Documentation

Milbitt Software



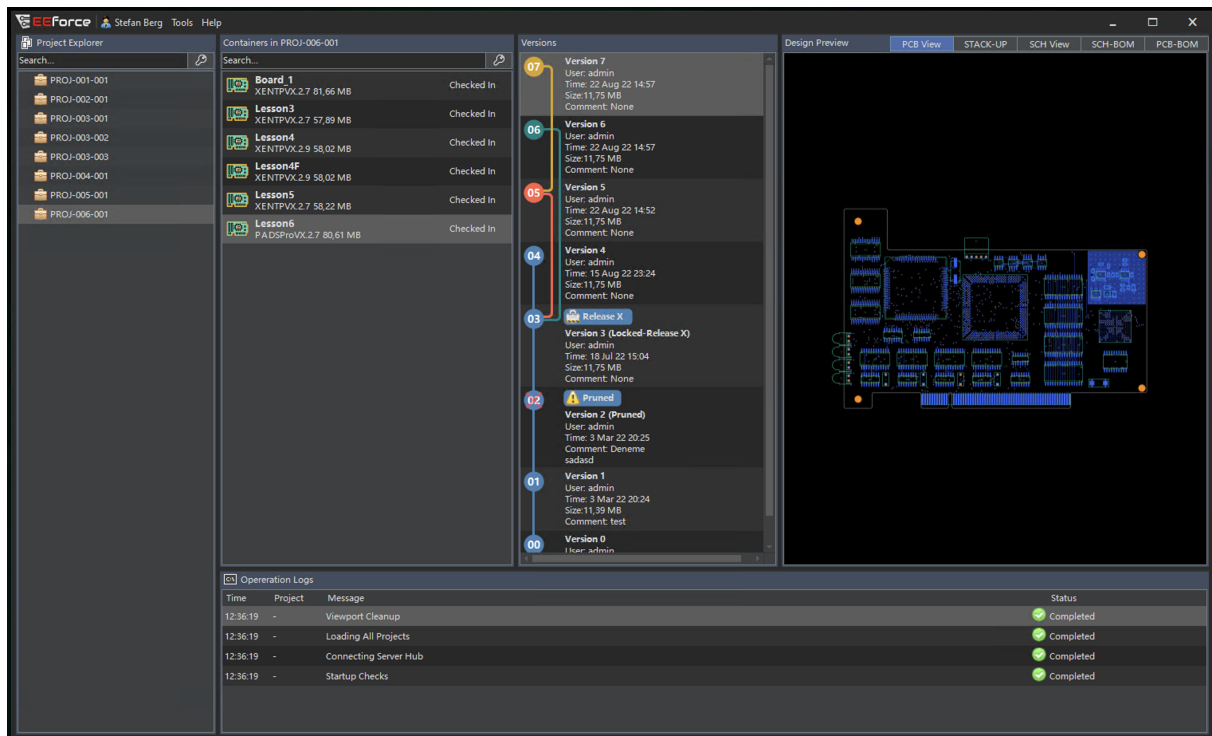
2025-09-01

Contents

Introduction	3
Key Features	3
Release Notes for Version 25.9	4
Introducing a New Web Interface for Administrators	4
OIDC 2.0-Compliant Single Sign-On (SSO) Support	5
EEforce Client Embedded in Server Installation with Auto-Update	5
Performance Improvements	6
Server Installation and Configuration	6
Prerequisites and Recommendations	6
Using the Installer	6
Installation Steps:	7
Starting and Stopping the Server	11
Using IIS Manager (UI)	11
Using Command Line (CLI)	12
Changing Server Settings after Installation	12
config.json	12
Relocating Storage	13
Setting Vault Permissions	13
SSL Certificate	13
Client Installation and Configuration	14
Prerequisites and Recommendations	14
Using the Installer	14
Installation Steps:	14
First-Run	19
Configurations	22
Licensing	27
License Types	27
Frequently Asked Questions	28
Project Operations	29
Using the Project Explorer Section	30
Creating a New Project	32
Changing a Project Name	33

Changing Project Users	33
Cloning a Project	34
Removing a Project	35
Container Operations	35
Importing a Container into a Project	36
Renaming a Container	38
Cloning a Container	39
Deleting a Container	39
Moving a Container to Another Project	39
Copying a Container to Another Project	41
Design Operations	42
Opening a Design in Read-Only Mode	43
Opening a Design for Editing (Check-Out)	43
Finishing Editing a Design (Check-In)	43
Cancelling Editing of a Design (Cancel-Checkout)	45
Remote Working	45
Exporting a Board for Remote Working	46
Importing a Remotely Updated Board	46
EEforce Web based Administration Interface	46
Login Dialog	47
Dashboard	48
User Management	49
Group Management	50
Project Management	51
Logs	52
Settings	53
Restart the Server/Log Out	53
EEforce Client Administration Options	55
Group Administration	55
User Administration	56
LDAP Configuration	56
SSO Configuration	57

Introduction



EEforce is a design lifecycle management software specifically designed to work with Mentor Graphics PADS and Xpediton PCB Electronics Design Tools. The software comprises two main components: Server and Client.

The Server securely stores all project files as versioned objects within an isolated vault. It allows authorized users to access and update these files while preserving the original files.

The Client software provides a user-friendly interface for interacting with designs in a reliable and straightforward manner. It is designed for simplicity while addressing the needs of hardware designers.

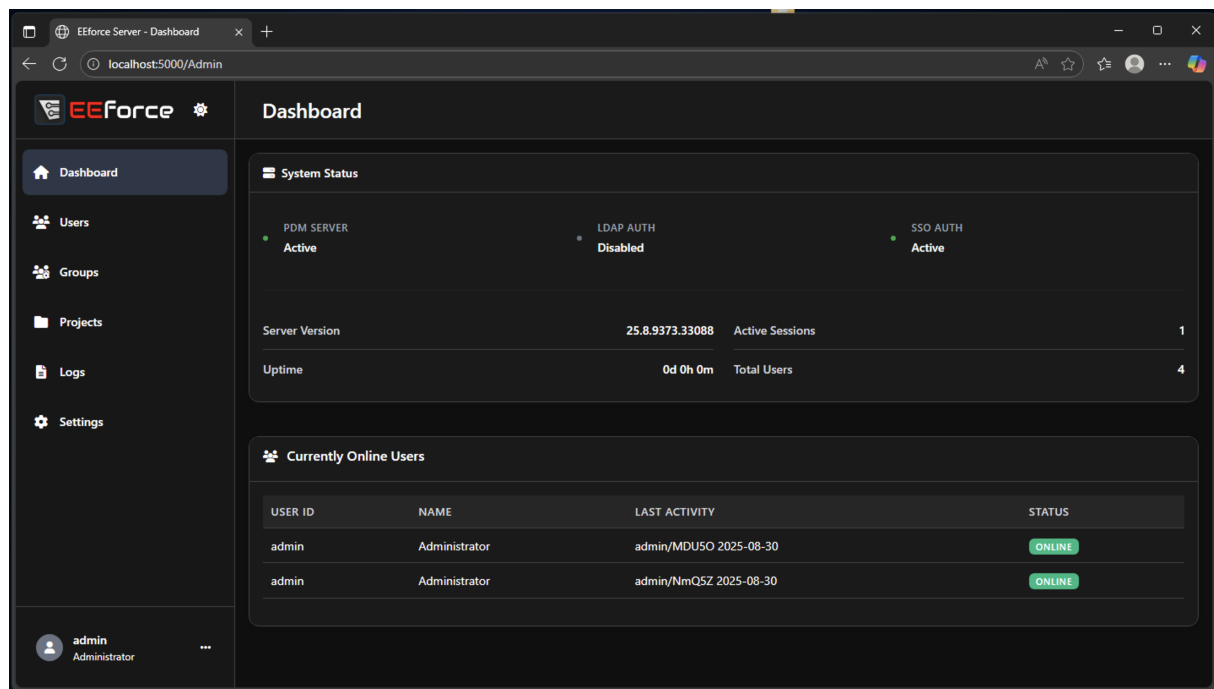
Key Features

- Provides a seamless integration with Xpediton, PADS Pro, while any type of data can be stored.
- Intuitive UI developed hardware designers in mind.
- Built-In Previews for PCB, Schematic, Stack-up, Schematic BOM and Layout BOM.
- Unlimited number of versions can be stored.
- Very low resource usage.

Release Notes for Version 25.9

The EEforce 25.9 release introduces several new features and enhancements. Below are some of the key highlights:

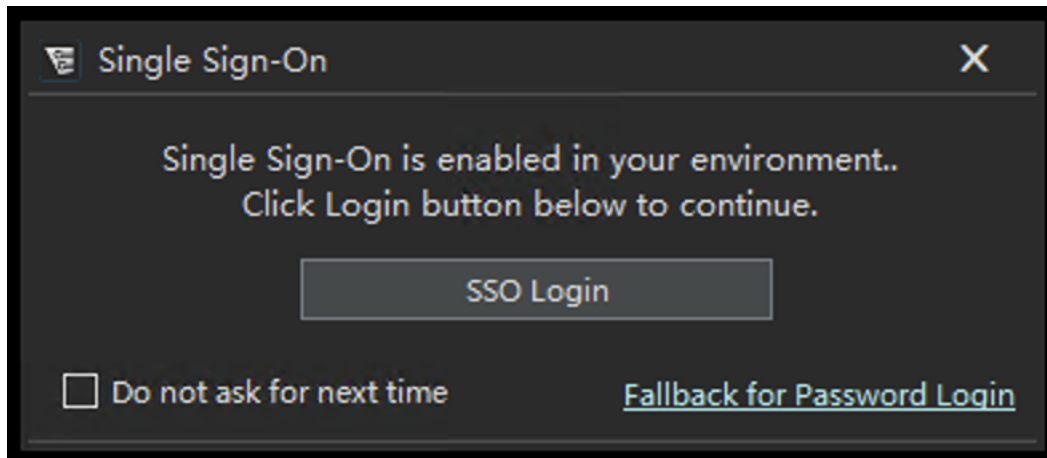
Introducing a New Web Interface for Administrators



Previously, system administrators managed EEforce primarily through the Client application or by directly editing configuration files. With this release, we are pleased to introduce a modern Web Interface that provides administrators with an intuitive and user-friendly experience. The interface currently focuses on four main areas: - User and Group Administration - Project Access Management - System Configuration - Log Monitoring

The web interface is currently in Beta. While the existing client-side interfaces remain available, we encourage users to adopt the Web UI and use the legacy interfaces only as a fallback. Please note that the legacy interfaces will be deprecated in future releases.

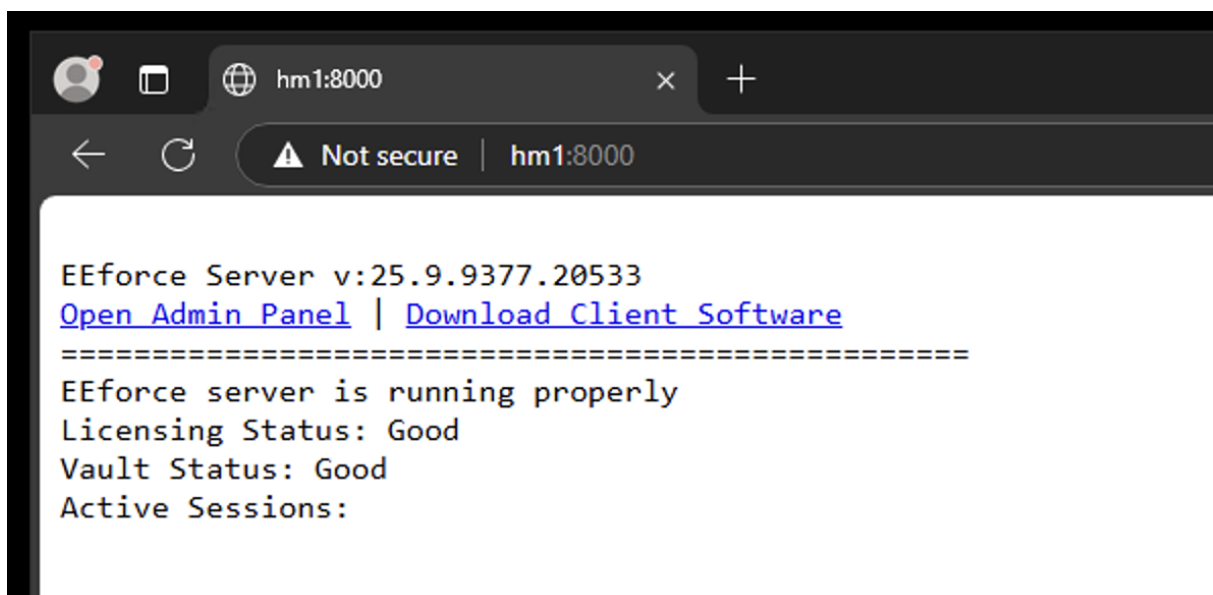
OIDC 2.0-Compliant Single Sign-On (SSO) Support



EEforce now supports OIDC 2.0-compliant Single Sign-On (SSO), enhancing both security and user convenience. Users can now authenticate using their existing credentials from supported identity providers, streamlining the login process and centralizing authentication.

When enabled, users are presented with an SSO login dialog, with the option to fall back to the standard login dialog. Selecting the SSO option redirects users to the configured identity provider for authentication. Upon successful authentication, users are automatically redirected back to the EEforce Client and logged in.

EEforce Client Embedded in Server Installation with Auto-Update



To improve user experience, the EEforce Client is now included directly within the server installation package. Users can simply navigate to the server URL in their browser and download the latest client version with a single click. Additionally, an auto-update mechanism ensures that the client remains synchronized with the server version. When administrators update the server, clients running older versions will automatically detect and install the latest version without requiring user intervention.

Performance Improvements

EEforce has always prioritized speed and reliability. In this release, we have implemented several backend optimizations to further enhance performance and stability, particularly in low-bandwidth environments. These improvements ensure a smoother and more reliable experience for all users.

Server Installation and Configuration

Prerequisites and Recommendations

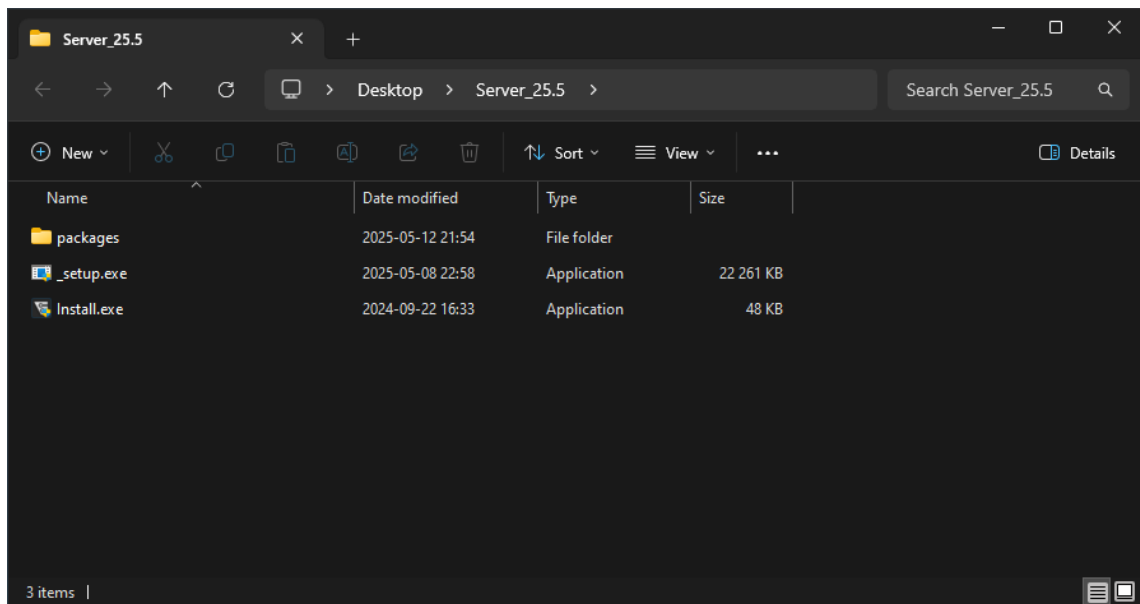
- **License File:** A valid license file specifically prepared for the server machine.
- **Supported Operating Systems:** Windows Server 2022 and 2025 (Core, Essentials, and Data Center editions), Windows 10/11 LTSC, Pro, and Enterprise editions.
- **Storage:** At least 20GB of available disk space is required, preferably on a local disk. A mapped network location may also be used. The required space depends on your usage and design sizes. NVMe or SSD drives with enterprise-grade durability are **recommended**. Consider RAID 10 for redundancy and performance if applicable.
- **RAM:** At least 4GB of free RAM when idle is **recommended**.
- **Backup:** A Windows shadow backup solution or a comparable third-party backup solution is **recommended**.
- **Network:** A reliable LAN connection between the server and client machines is **recommended**.
- **SWAP:** 4GB of swap space is **recommended**.
- **CPU:** 4 vCPUs are **recommended**.

Using the Installer

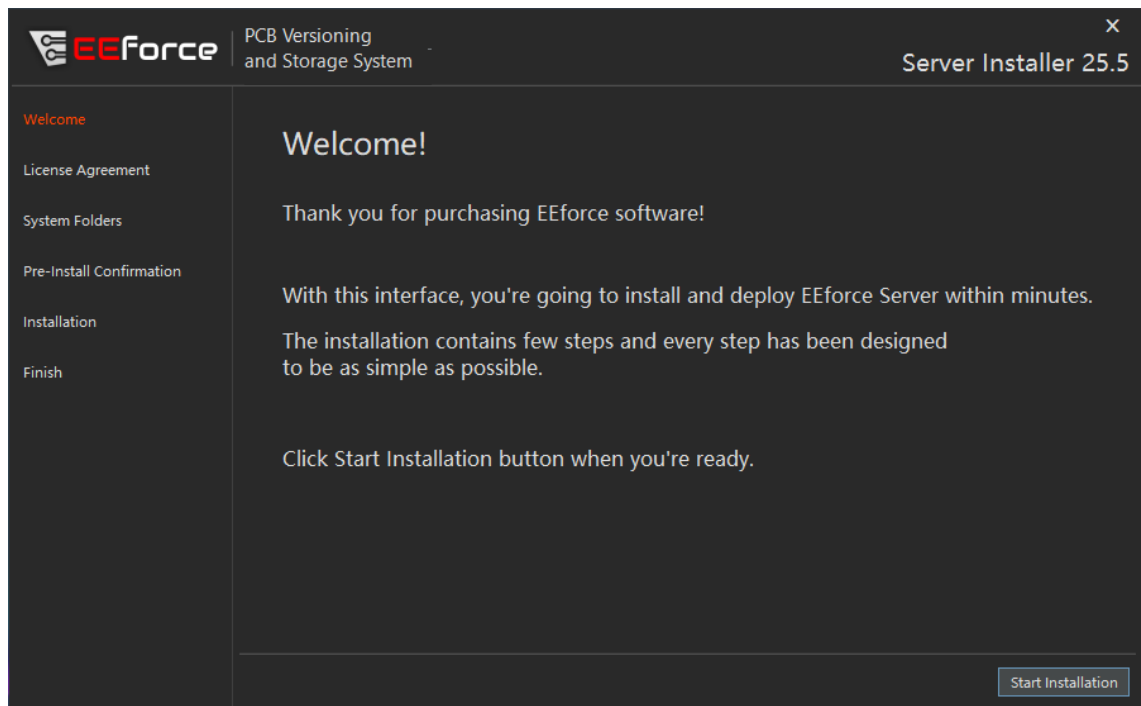
The Server Installer provides a robust, step-by-step installation process. You may follow the on-screen instructions or refer to the steps below.

Installation Steps:

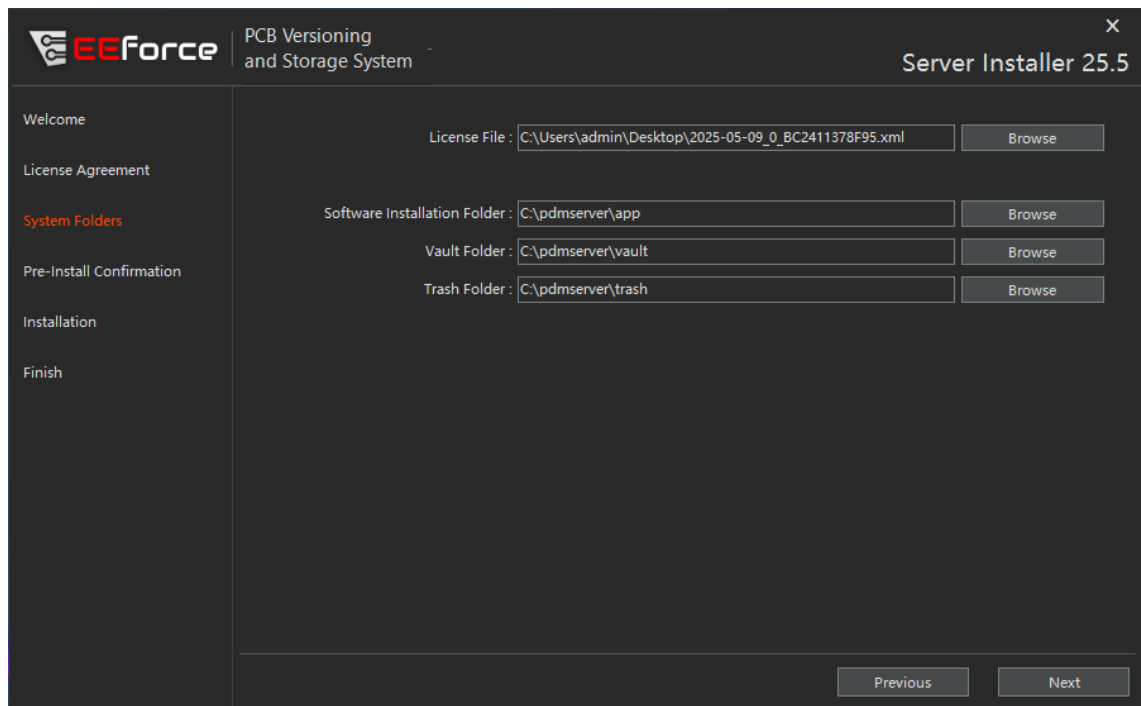
1. Download the latest installation package from our [Support Portal](#). Installation files are provided as ZIP packages, such as **Server_25.5.zip**. Version numbers may vary.
2. Extract the ZIP file to a convenient folder.
3. The extracted folder should appear as follows:



4. Run **Install.exe**. If prompted by Windows for permission, allow access.
5. You should see a welcome window similar to this:



6. Click the **Start Installation** button.
7. The **End User License Agreement** will be displayed. Please read it carefully and click **I Agree** to proceed. Note that accepting the License Agreement is a legally binding action.
8. After accepting the agreement, the System Folders configuration form will appear:

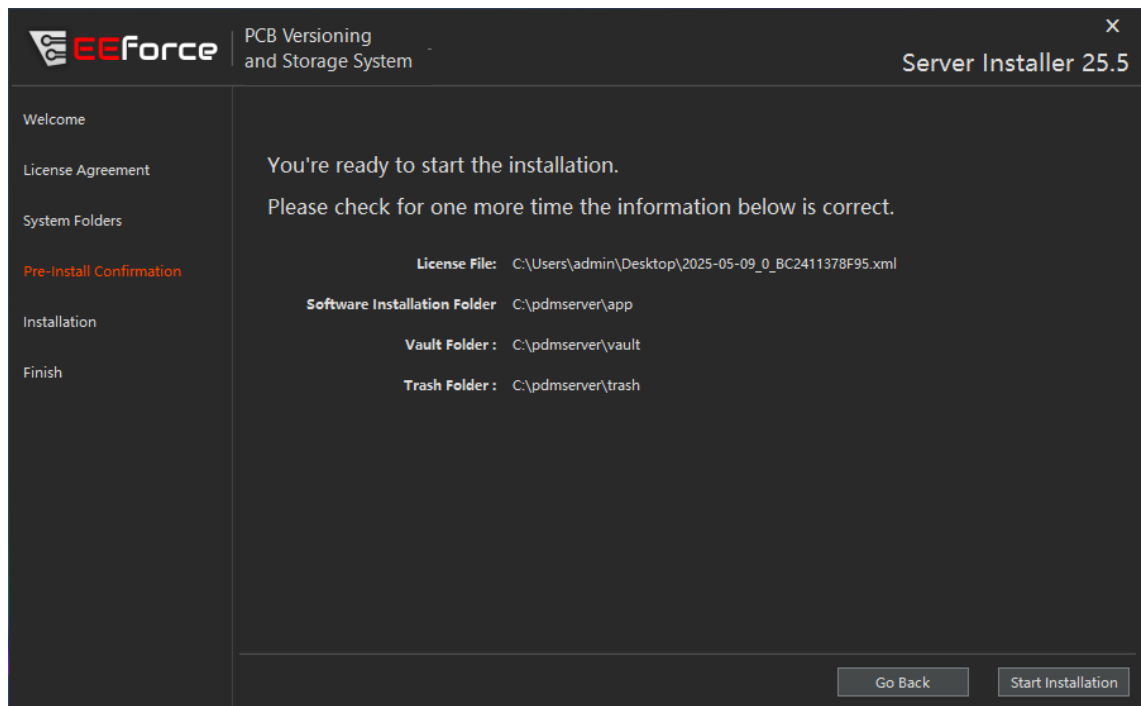


- **License File:** The license file authorizes the software to run on this computer. Obtain a valid license file from your authorized reseller.
- **Software Installation Folder:** This folder stores the software executables. It is strongly recommended to create a folder on your local hard drive for this purpose. Required space is less than 150MB.
- **Vault Folder:** This folder stores design files. Allocate at least 20GB of space for the Vault. The folder may reside on a network path, but it must be within a mapped drive. Read and write speeds are important; lower speeds can impact check-out/check-in performance. Set up regular backups for this folder. Windows shadow copy is recommended.
- **Trash Folder:** Deleted design files are moved to the Trash folder rather than being permanently deleted. This safety feature helps prevent data loss. Allocate at least 5GB of storage for the Trash folder and perform regular manual cleanups.

All fields on this page must be completed. After installation, you can modify folder paths and user lists by editing the **config.json** file in the installation folder.

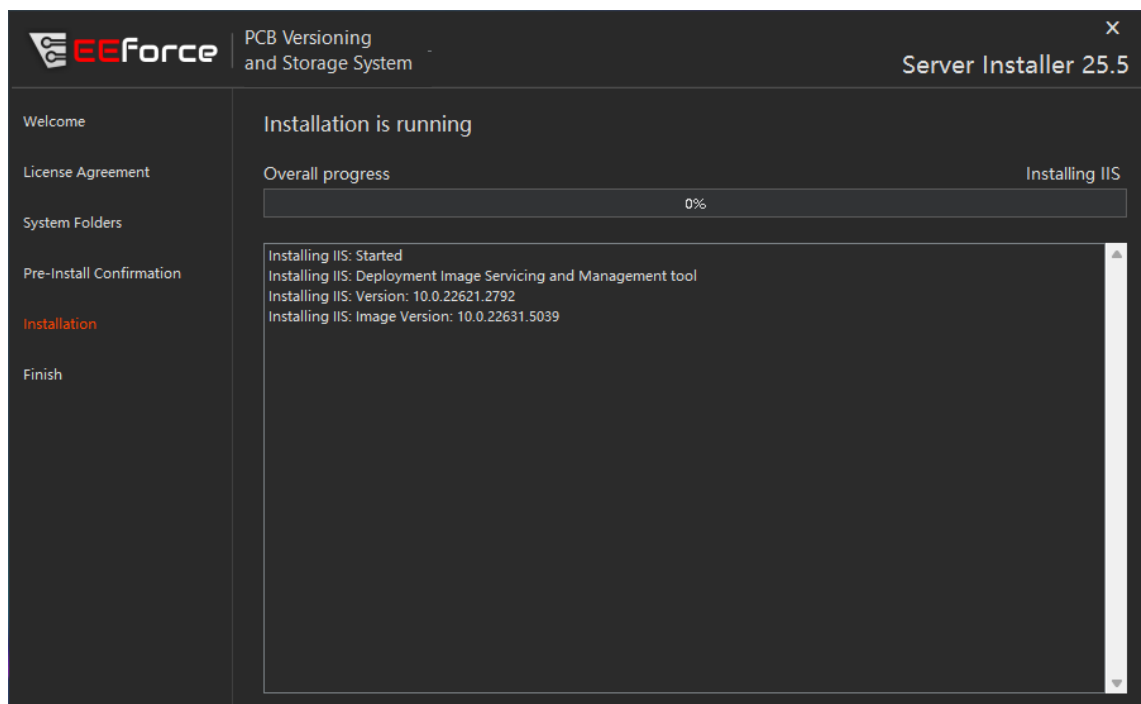
When finished, click the **Next** button.

9. The next screen is a final confirmation before installation begins. Review the information you entered on the previous screen.

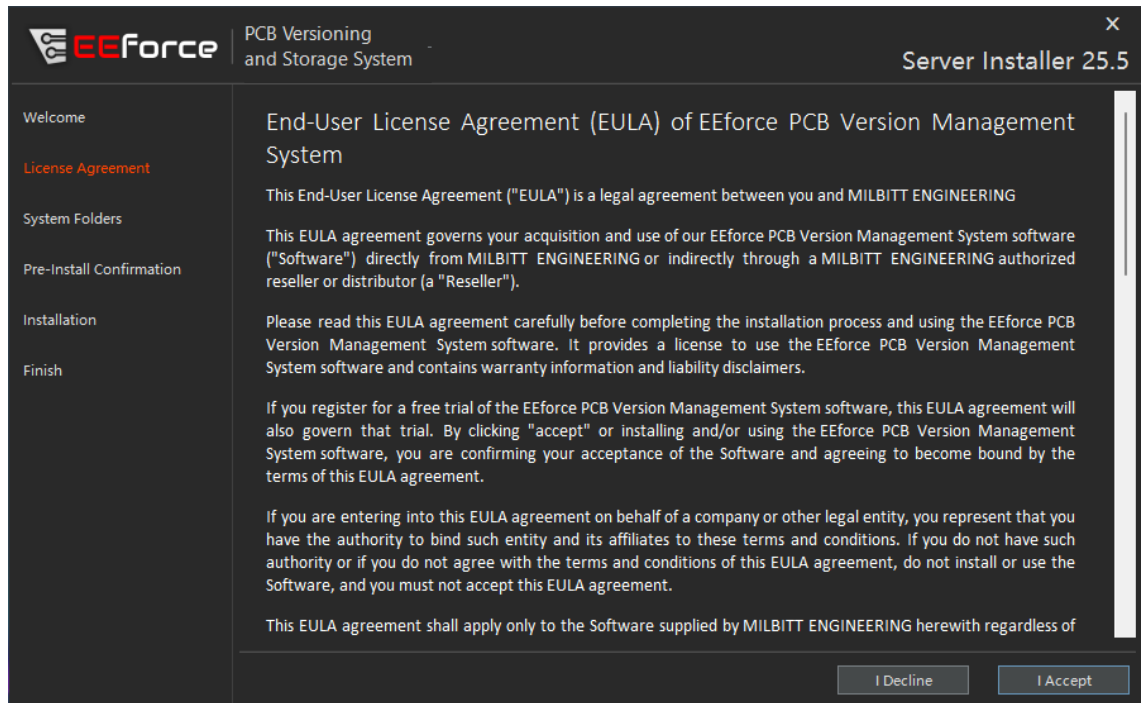


If all information is correct, click the **Start Installation** button.

10. The installer will now create the necessary folders, install required Windows packages, and deploy the IIS server. Please allow the installer to complete this process. Upon completion, the final page will be displayed.



11. When installation is complete, a confirmation page will be shown. If you see this page, the server has been installed and is operational.



Note the server address provided. You may now close the installation window and begin using the server. Refer to the following section for post-installation administration details.

Starting and Stopping the Server

The EEforce Server operates as an IIS (Internet Information Services) application. You can start or stop the server using the IIS Manager graphical interface:

Using IIS Manager (UI)

1. Open IIS Manager:

- Press **Windows** + **R**, type `inetmgr`, and press Enter.
- Or
 - Search for **Internet Information Services (IIS) Manager** in the Start menu and open it.

2. Locate Your Server Application:

- In the left panel (Connections), expand your server name.

- Click on **Application Pools** to view all application pools.
- Locate the application pool used by EEforce Server (e.g., `EEforceApplicationPool`).

3. Start or Stop the Server:

- Right-click the relevant application pool.
- Select **Start** to run the server, or **Stop** to shut it down.

::: warning Keep in Mind: Stopping the application pool or site will make the EEforce Server unavailable to users until it is started again. :::

Using Command Line (CLI)

For Windows Server Core users or those who prefer the command line, the EEforce Server can be managed using PowerShell or the `appcmd` utility.

Using PowerShell Start EEforce Server:

```
1 Start-WebAppPool -Name "EEForceApplicationPool"
```

Stop EEforce Server:

```
1 Stop-WebAppPool -Name "EEForceApplicationPool"
```

Changing Server Settings after Installation

config.json

Directory paths used for storage are defined in the **config\config.json** file within the application directory. You can edit this file to change the locations of the vault and trash folders. The file is in JSON format and can be modified with any text editor.

```
1 {
2     "Configurations": {
3         "VaultFolder": "C:\\pdmserver\\vault", // Vault folder location
4         "TrashFolder": "C:\\pdmserver\\trash", // Trash folder location
5     }
6 }
```

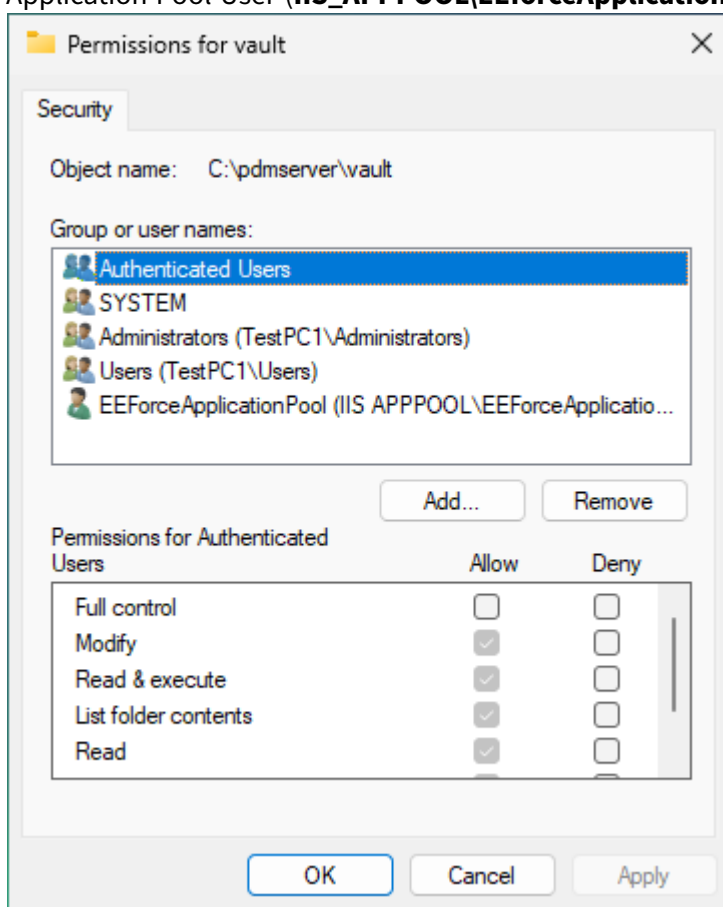
After changing folder paths, you must restart the **EEForce Server** instance using **Internet Information Services (IIS) Manager**. Refer to the section above for instructions.

Relocating Storage

- To relocate storage folders, first stop the **EEForce Server**.
- Move your vault folder to the desired location and update the **config.json** file to reflect the new path.

Setting Vault Permissions

If you use a network drive for storage folders or manually relocate them, you must grant the IIS Application Pool User (**IIS_APPPOOL\EEforceApplicationPool**) full permissions for these folders.



SSL Certificate

EEforce does not manage SSL certificates directly. SSL/TLS termination and certificate management are handled by the reverse proxy (IIS). System administrators should add and manage SSL certificates in IIS as needed. It is recommended to use a certificate from a trusted authority. Self-signed certificates may be used if they are also installed on client machines.

Your IIS site should now be accessible via HTTPS using the installed SSL certificate.

Client Installation and Configuration

Prerequisites and Recommendations

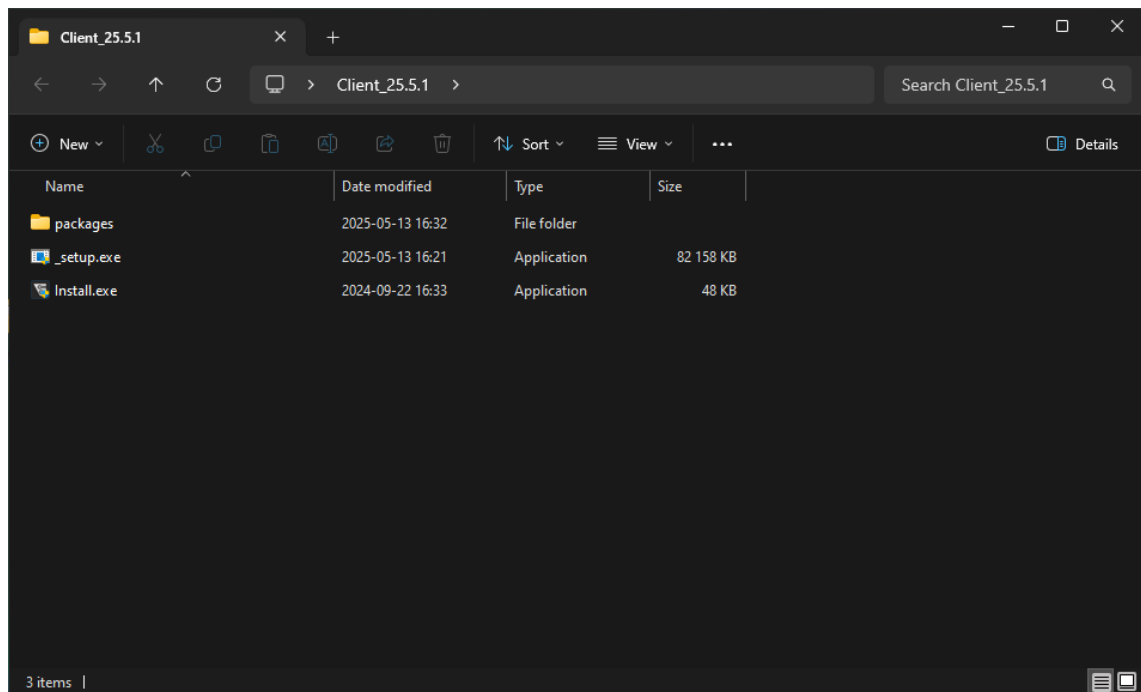
- **Supported Operating Systems:** Windows 10 x64, Windows 11 x64.
- **Administrative Privileges:** Required to install the software.
- **Network Requirements:** A stable LAN connection between the server and client machines is recommended.
- **Storage Requirements:** A minimum of 4GB of available disk space is recommended on a local disk. NVMe or SSD drives are highly recommended for optimal performance.

Using the Installer

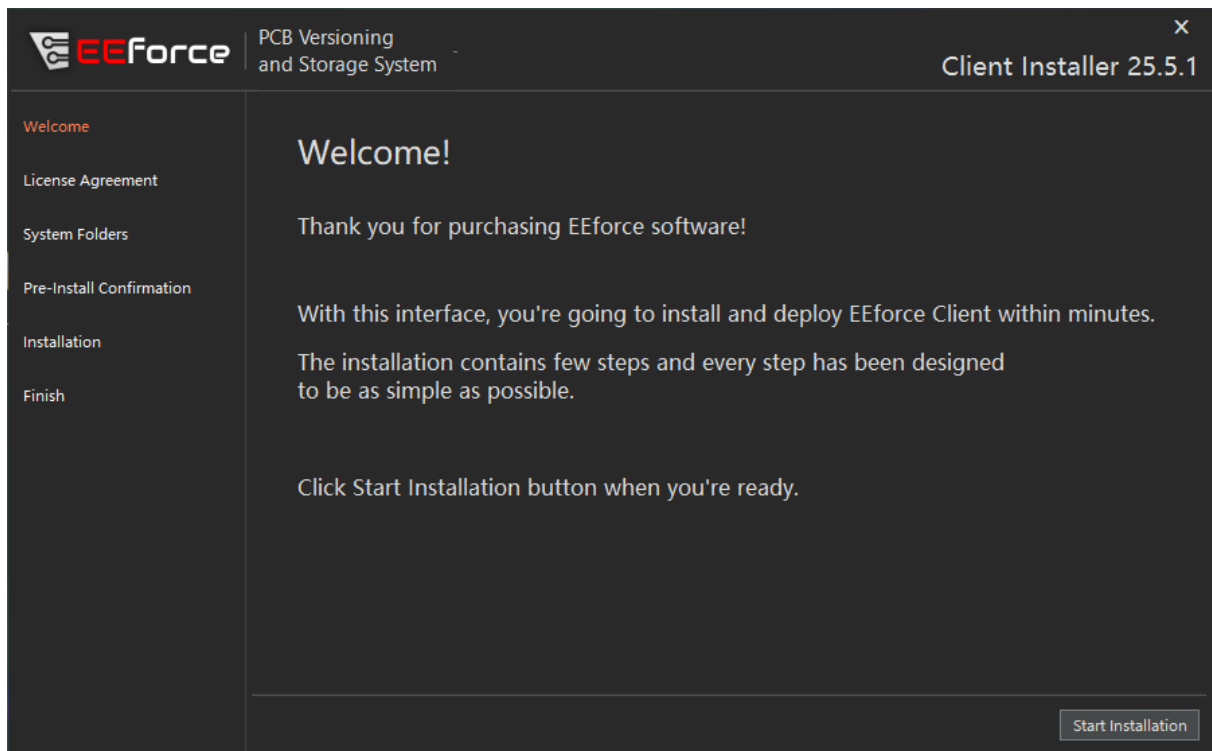
The Client Installer is designed to provide a seamless, step-by-step installation experience. Follow the instructions provided in the software or refer to the steps outlined below.

Installation Steps:

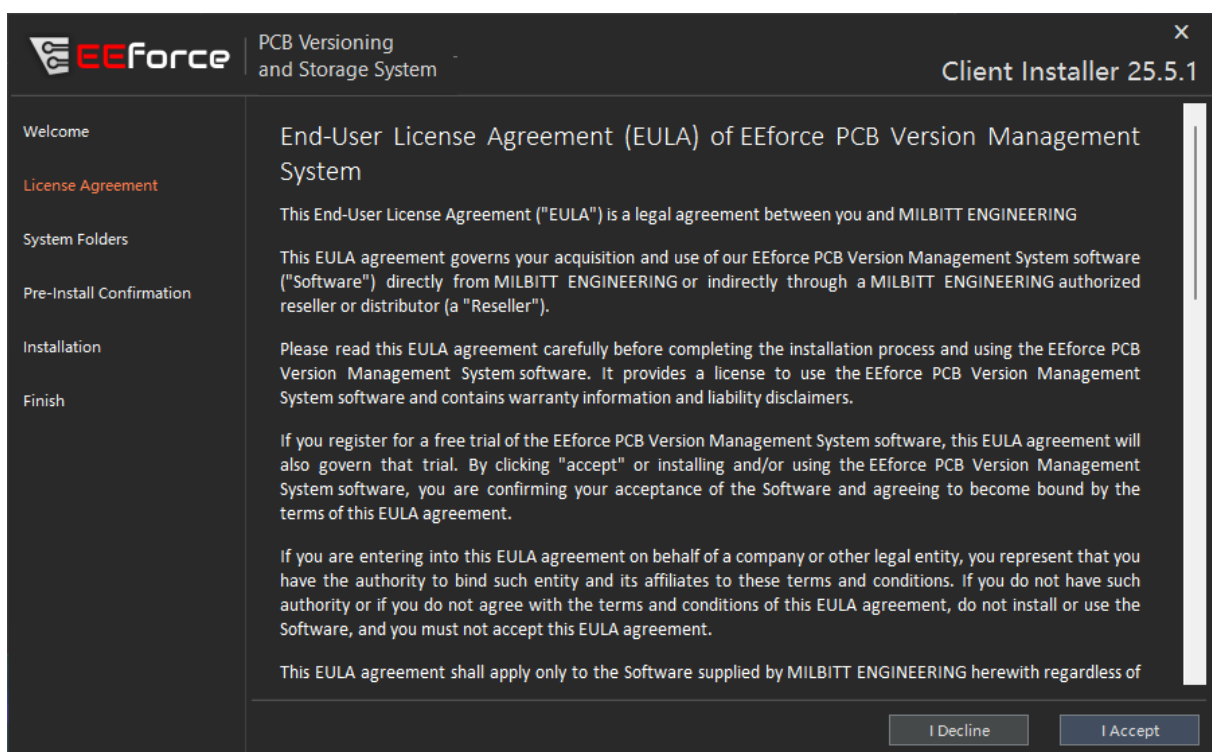
1. Download the latest version of the installation package from our [Support Portal](#) or obtain it from your IT department. Installation files are provided in ZIP format, with names such as **Client_25.5.zip**. Note that version numbers may vary.
2. Extract the ZIP file to a convenient location on your system.
3. The extracted folder should contain the following files:



4. Run **Install.exe**. If prompted by Windows, grant the necessary permissions.
5. The installer will verify whether the required runtimes are installed. If any are missing, the installer will attempt to install them automatically. This process may take some time, depending on your system configuration and the number of packages required.
6. The welcome screen will appear:



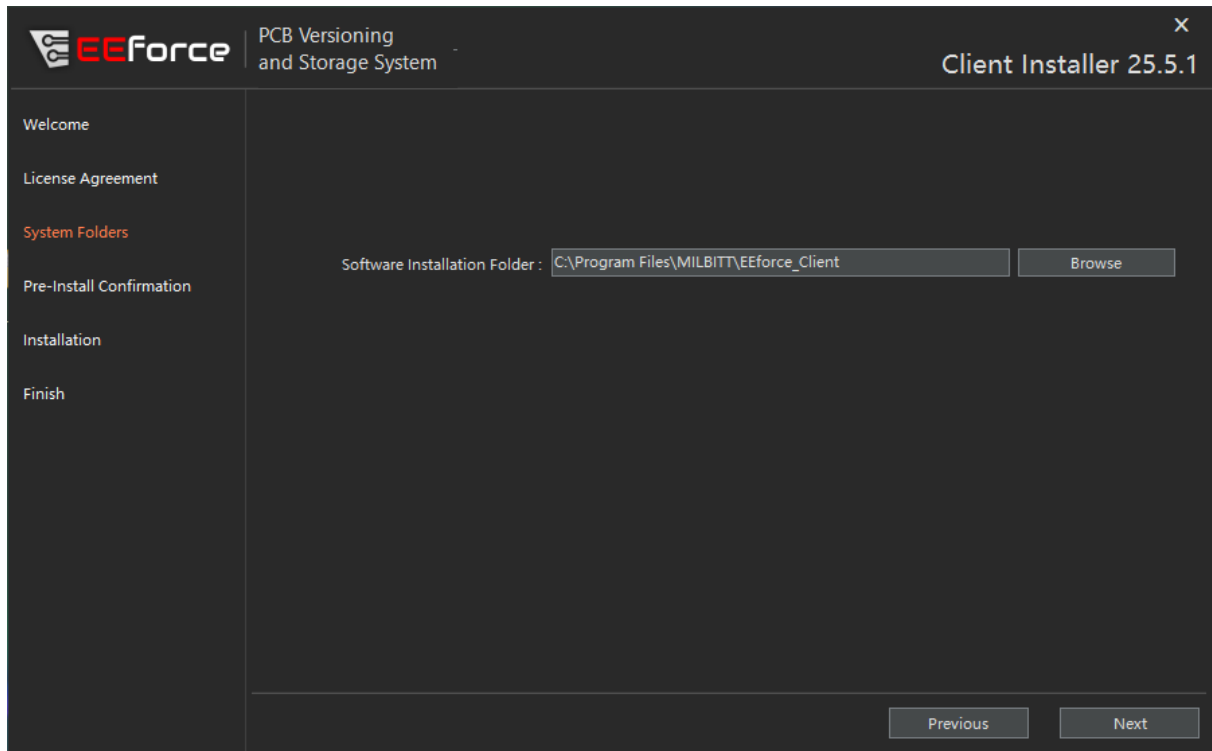
7. Click the **Start Installation** button to proceed.



8. The **End User License Agreement** will be displayed. Please read it carefully and click the **I Agree**

button to proceed. Note that accepting this agreement constitutes a legally binding action.

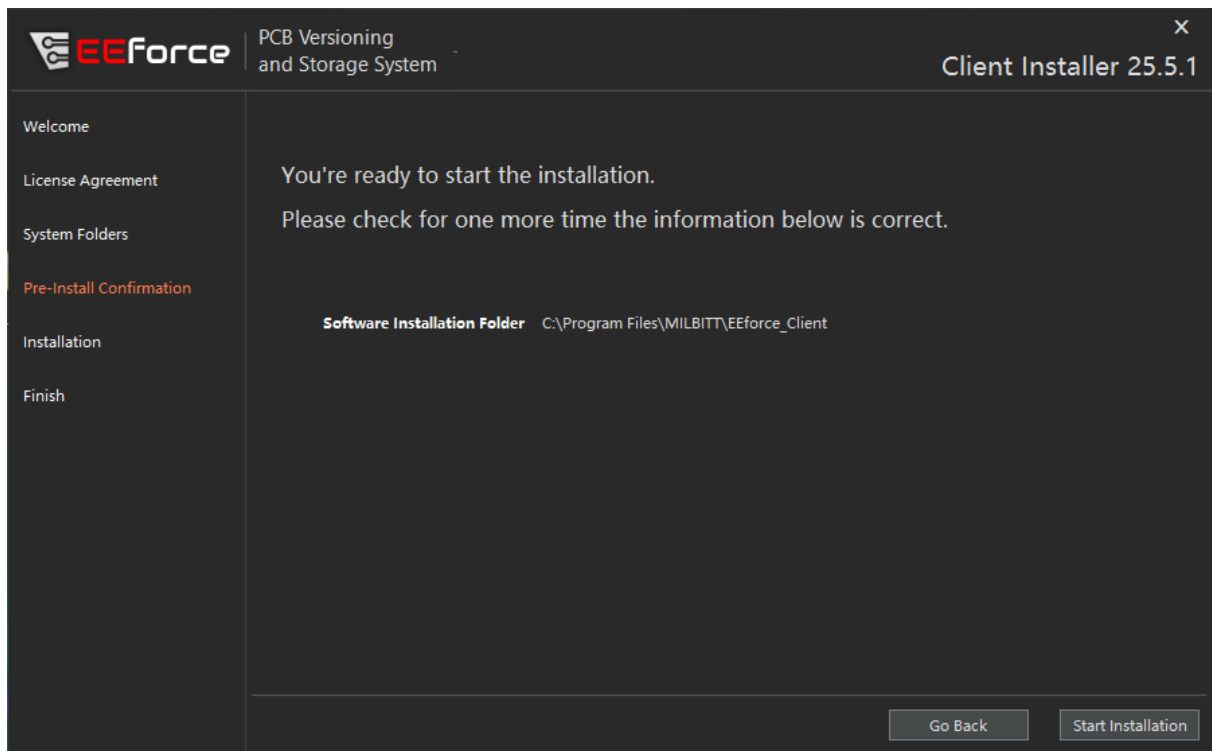
9. After accepting the License Agreement, the System Folders configuration screen will be displayed:



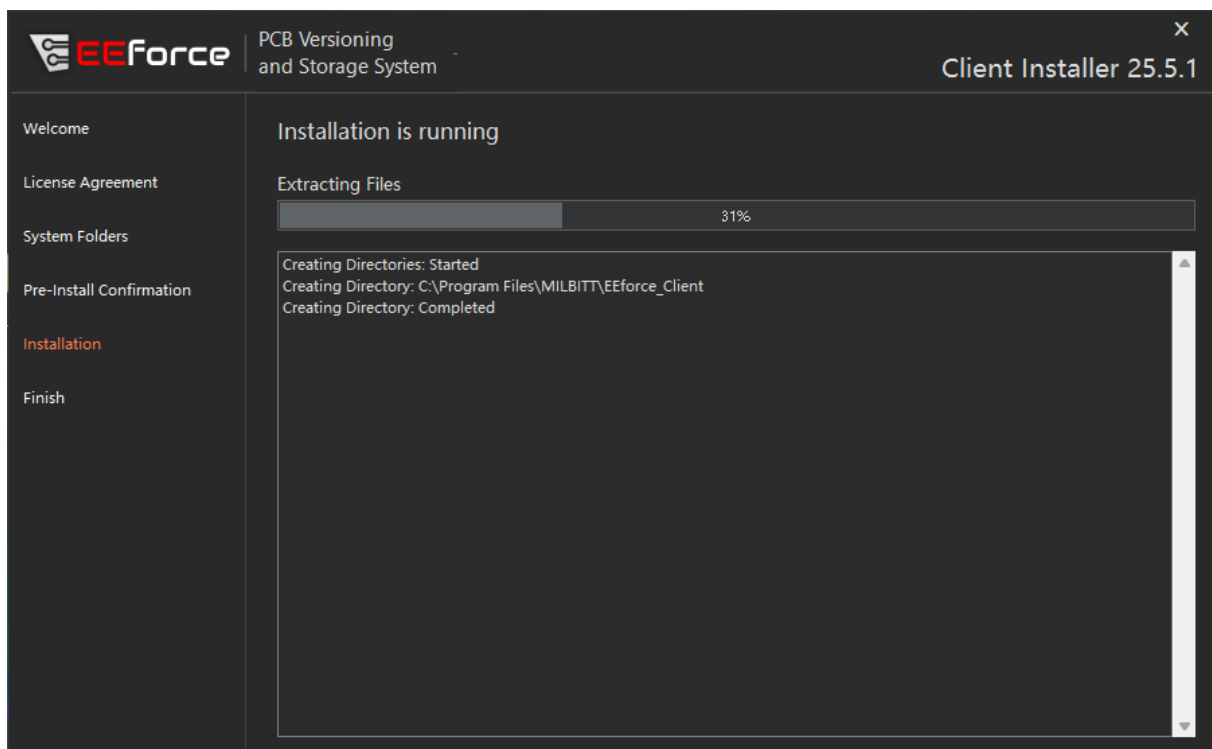
- **Software Installation Folder:** This folder is used to store the software executables. It is recommended to use the default location. The required space is less than 50 MB.

Click **Next** to continue.

10. The next screen is the final checkpoint before installation begins. Verify that the information entered on the previous screen is correct.

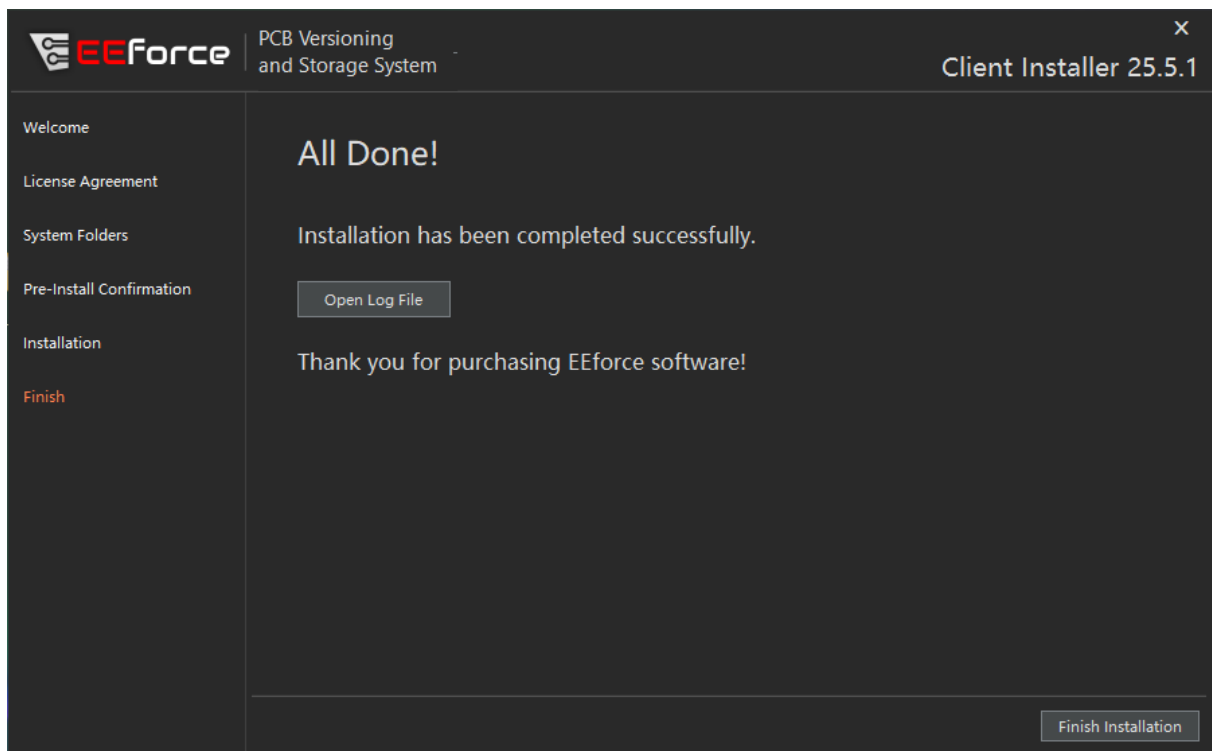


If the information is correct, click **Start Installation**.



11. The installer will take care of the installation of the software at this stage. It should be fairly a short

wait.



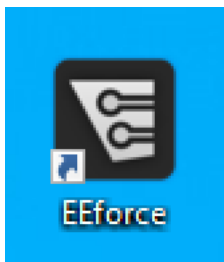
12. When the installation is complete, the completion page will be displayed. This indicates that the installation was successful. Click **Finish Installation** to close the installer window.

First-Run

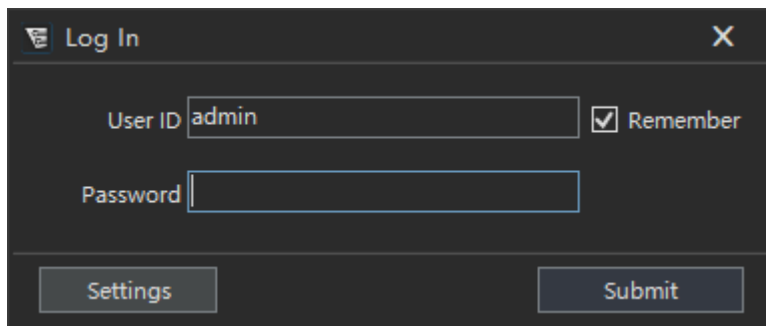
After installation, some configurations, such as the Server URL, must be updated. Follow the steps below to complete the configuration.

First Run Steps

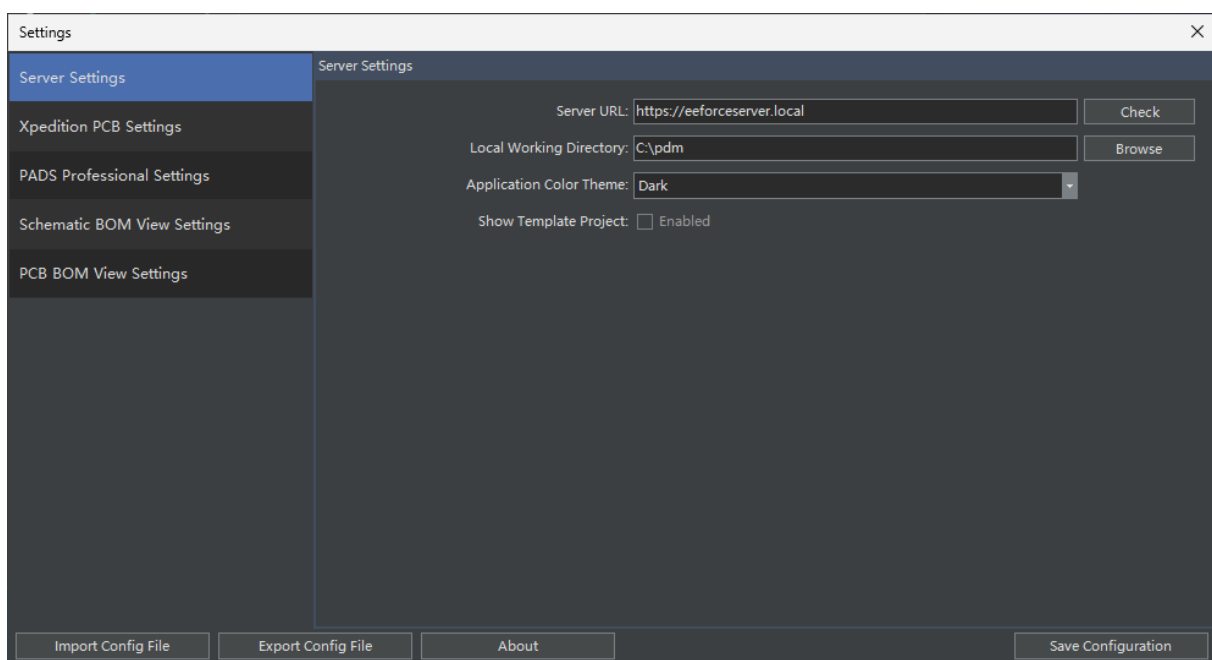
1. After the installation is finished, the EEforce icon should appear on your desktop. Click it to open the software.



2. When the application opens, the login dialog will appear. The connection settings must be updated on the first start. Click the **Settings** button.



3. In the settings window, update the **Server URL** input with your server address. This information is provided after the server installation. If you do not know your server address, contact your system administrator.



4. After updating the Server URL, click the **Save Configuration** button.

::: info Server URL in Testing Environment or Server Machine If you are working on the Server Machine or installed the server on your local computer for testing purposes, you should be able to connect it using **http://localhost:8000** :::

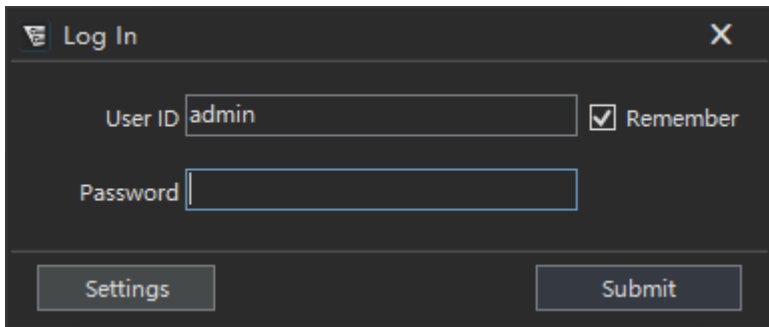
5. Return to the login window and enter the credentials provided by your administrator.

::: info **Default Admin Password**

If you are deploying the system for the first time, use the default admin credentials.

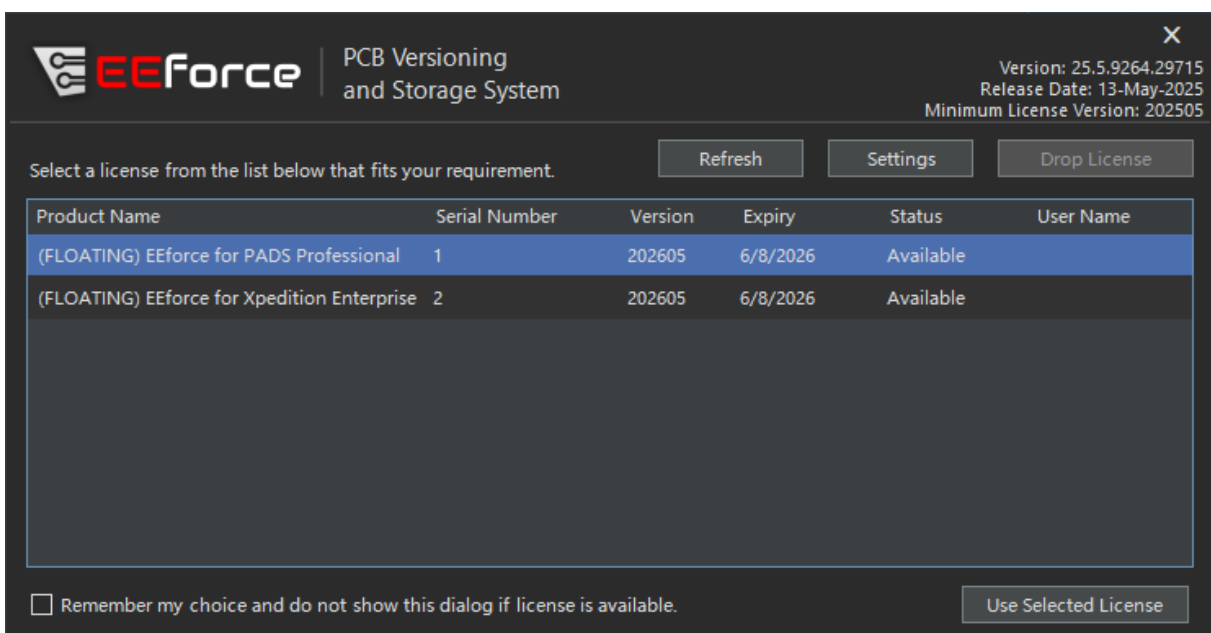
```
1 User ID: admin
2 Password: Passw0rd
```

:::



The 'Log In' dialog box features a dark gray background. At the top left is a small icon of a document with a checkmark, followed by the text 'Log In'. At the top right is a close button with an 'X' icon. Below the title bar, there are two input fields: 'User ID' with the text 'admin' and 'Password' which is currently empty. To the right of the 'User ID' field is a checkbox labeled 'Remember' which is checked. At the bottom of the dialog, there are two buttons: 'Settings' on the left and 'Submit' on the right.

5. When you enter the correct login credentials, the license selection window will appear.



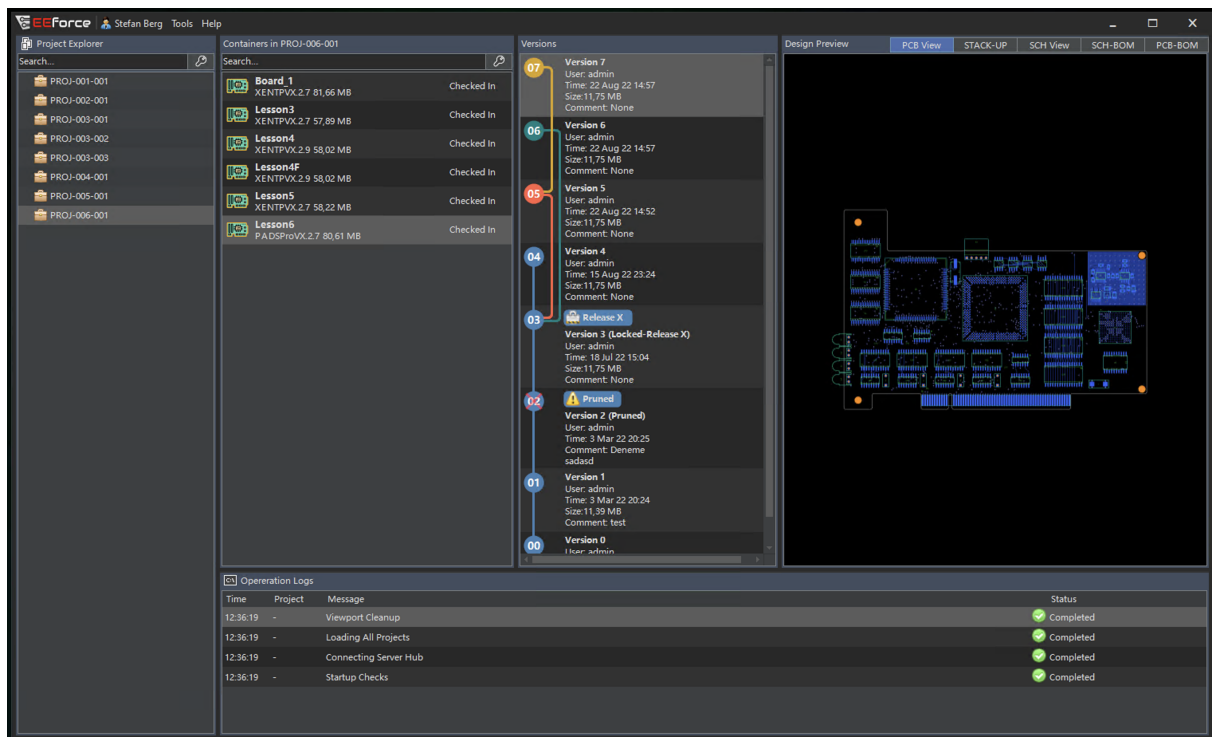
The 'License Selection' dialog box has a dark gray background. At the top left is the 'EEforce' logo. To its right is the text 'PCB Versioning and Storage System'. At the top right, there is a close button with an 'X' icon and version information: 'Version: 25.5.9264.29715', 'Release Date: 13-May-2025', and 'Minimum License Version: 202505'. Below the header, there is a text prompt: 'Select a license from the list below that fits your requirement.' To the right of this prompt are three buttons: 'Refresh', 'Settings', and 'Drop License'. Below the prompt is a table with the following data:

Product Name	Serial Number	Version	Expiry	Status	User Name
(FLOATING) EEforce for PADS Professional	1	202605	6/8/2026	Available	
(FLOATING) EEforce for Xpedition Enterprise	2	202605	6/8/2026	Available	

Below the table is a large empty rectangular area. At the bottom left, there is a checkbox labeled 'Remember my choice and do not show this dialog if license is available.' At the bottom right, there is a button labeled 'Use Selected License'.

Select an available license and click the **Use Selected License** button.

6. If the selected license is available, the main interface of the EEforce Client Software will be displayed.



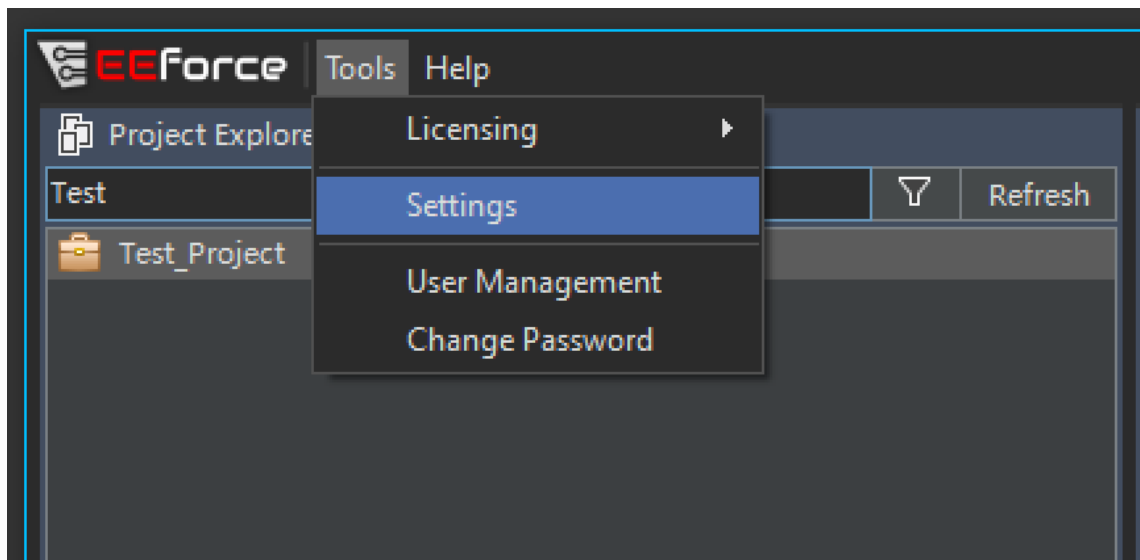
The installation and initial configuration of the EEforce Client are now complete. Next, configure the PADS/Xpediton installation locations. Refer to the **Configuration** section for more information.

Configurations

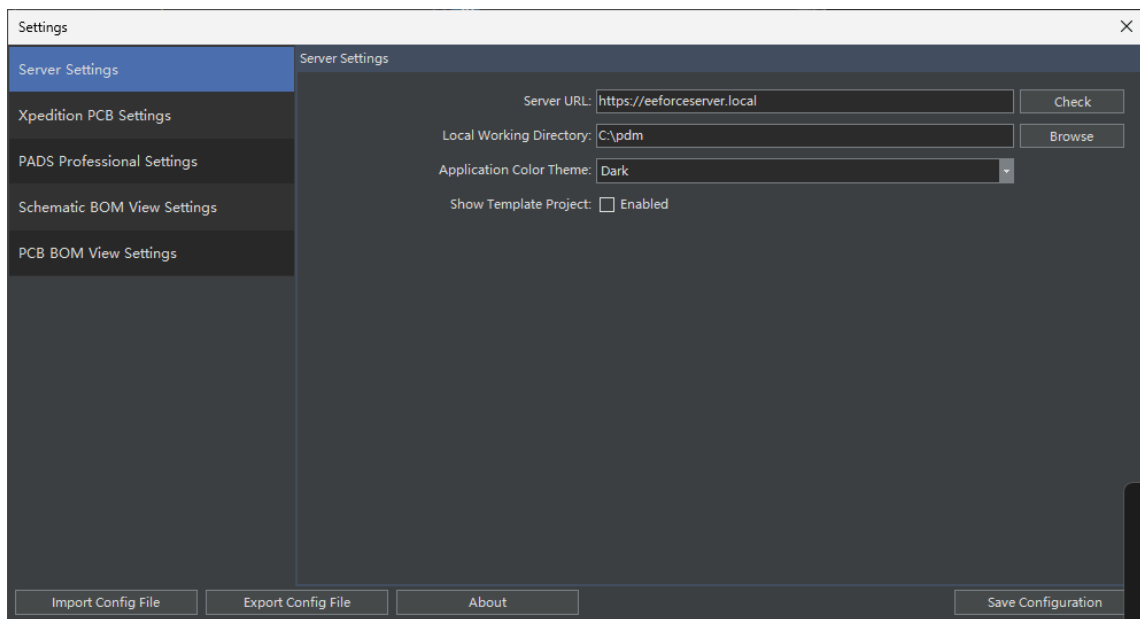
Before using the Client Software, complete the following configurations:

Configuration Steps

1. In the EEforce software, go to the **Tools** menu at the top of the screen and click **Settings**.



2. The Settings window will appear:



The Settings window contains three sub-windows: Server Settings, Xpedition PCB Settings, and PADS Professional Settings. Click the menu on the left side of the window to display the associated configuration page on the right side.

3. On the **Server Settings** page, you can edit the following settings:

Server URL:

Local Working Directory:

Application Language:

- **Server URL:** The URL used to connect to the server. Obtain this information from your system administrator and do not change it unless explicitly instructed to do so.
- **Local Working Directory:** The software requires a local folder to download and open design files. This folder typically stores temporary files and should be a local folder.
- **Application Language:** Select the language for the user interface. **This option is under development. Currently, only English is available. Additional languages will be added in future software updates.**

4. On the **Xpedition PCB Settings** page, you can edit the following settings:

Xpedition PCB Settings

Xpedition PCB Support: ☒ Enabled

SDD_HOME Path:

Central Library File: ☒ Enabled

Databook File: ☒ Enabled

Borders.ini File: ☒ Enabled

Speccomps.ini File: ☒ Enabled

Busconts.ini File: ☒ Enabled

Part Lister Config Name: ☒ Enabled

- **Xpedition PCB Support:** Enable or disable the use of Xpedition PCB. Designs created with Xpedition PCB cannot be opened if this option is disabled. Note that Xpedition support is an optional feature. Enabling this option does not grant access unless you are using the required license option.
- **SDD_HOME Path:** To use Xpedition PCB with EEforce software, specify the SDD_HOME folder in your Xpedition PCB installation path.

- **Central Library File:** Override the Central Library file settings specified in the PRJ file. This is an optional operation. Use environment variables (as in the example) or specify an LMC file directly.
- **Databook File:** Override the Databook file settings specified in the PRJ file. This is an optional operation. Use environment variables (as in the example) or specify a DBC file directly.
- **Borders.ini File:** Override the Borders.ini file settings specified in the PRJ file. This is an optional operation. Use environment variables (as in the example) or specify an INI file directly.
- **Speccomps.ini File:** Override the Speccomps.ini file settings specified in the PRJ file. This is an optional operation. Use environment variables (as in the example) or specify an INI file directly.
- **Busconts.ini File:** Override the Busconts.ini file settings specified in the PRJ file. This is an optional operation. Use environment variables (as in the example) or specify an INI file directly.
- **Part Lister Config Name:** Override the Part Lister Config Name settings specified in the PRJ file. This is an optional operation. Before using this configuration, ensure that a BOM configuration file with the same name exists in the WDIR or project folder.

5. On the **PADS Professional Settings** page, you can modify the following settings:

PADS Professional Settings

PADS Professional Support: ☒ Enabled

SDD_HOME Path: C:\MentorGraphics\PADSProVX.2.7\SDD_HOME Browse

Central Library File: ☐ Enabled \${CENT_LIB_PATH}/RFTR_Library.lmc Browse

Databook File: ☐ Enabled \${CENT_LIB_PATH}/RFTR_Library.dbc Browse

Borders.ini File: ☐ Enabled \${CENT_LIB_PATH}/borders.ini Browse

Speccomps.ini File: ☐ Enabled \${CENT_LIB_PATH}/speccomp.ini Browse

Busconts.ini File: ☐ Enabled \${CENT_LIB_PATH}/busconts.ini Browse

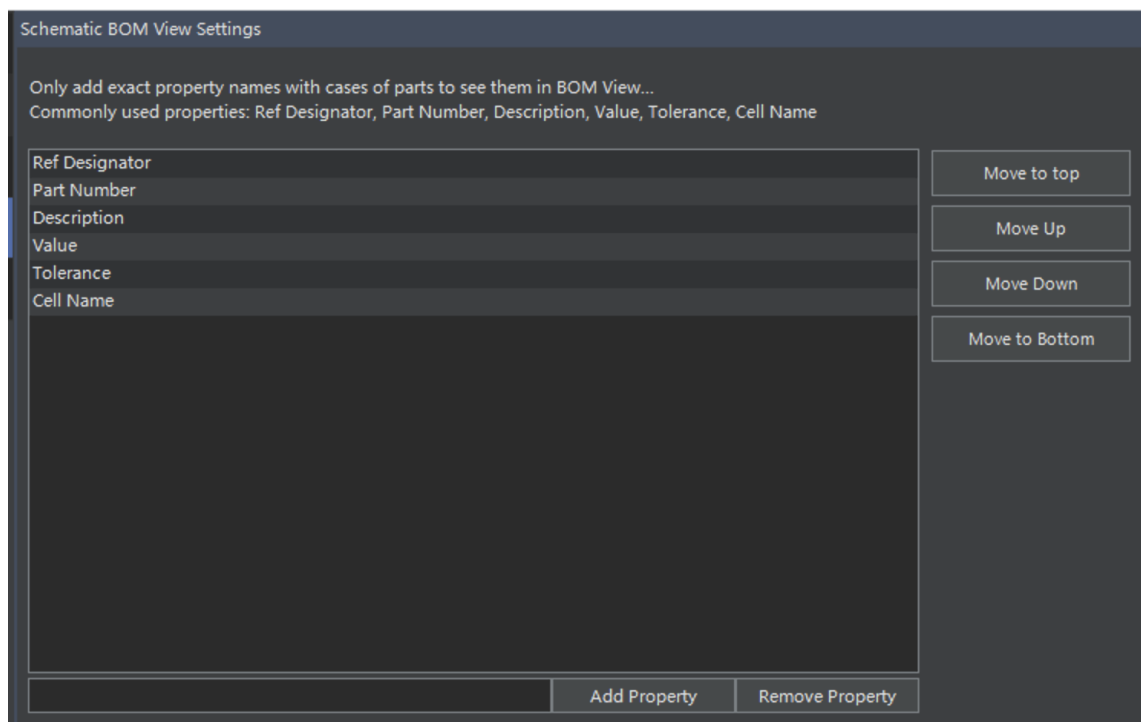
Part Lister Config Name: ☐ Enabled RFTR-BOM

- **PADS Professional Support:** Enable or disable the use of PADS Professional. Designs created with PADS Professional cannot be opened if this option is disabled.
- **SDD_HOME Path:** To use PADS Professional with EEforce software, specify the SDD_HOME

folder in your PADS Professional installation path.

- **Central Library File:** Override the Central Library file settings specified in the PRJ file. This is an optional operation. Use environment variables (as in the example) or specify an LMC file directly.
- **Databook File:** Override the Databook file settings specified in the PRJ file. This is an optional operation. Use environment variables (as in the example) or specify a DBC file directly.
- **Borders.ini File:** Override the Borders.ini file settings specified in the PRJ file. This is an optional operation. Use environment variables (as in the example) or specify an INI file directly.
- **Speccomps.ini File:** Override the Speccomps.ini file settings specified in the PRJ file. This is an optional operation. Use environment variables (as in the example) or specify an INI file directly.
- **Busconts.ini File:** Override the Busconts.ini file settings specified in the PRJ file. This is an optional operation. Use environment variables (as in the example) or specify an INI file directly.
- **Part Lister Config Name:** Override the Part Lister Config Name settings specified in the PRJ file. This is an optional operation. Before using this configuration, ensure that a BOM configuration file with the same name exists in the WDIR or project folder.

6. On the Schematic BOM Settings page, you can modify the following settings:



- Add or remove parameters that would be visible on the SCH BOM Preview
- Reorder parameters

7. On the PCB BOM Settings page, you can modify the following settings:

The screenshot shows the 'PCB BOM View Settings' dialog box. It has a title bar with the same text. Below the title bar, there is a message: 'Only add exact property names with cases of parts to see them in BOM View...' followed by 'Commonly used properties: Ref Designator, Part Number, Description, Value, Tolerance, Cell Name'. The main area is a list box containing the following items: PARTNO, PARTNUMBER, Value, Tolerance, and Cell Name. To the right of the list box are four buttons: 'Move to top', 'Move Up', 'Move Down', and 'Move to Bottom'. At the bottom of the dialog box are two buttons: 'Add Property' and 'Remove Property'.

- Add or remove parameters that would be visible on the PCB BOM Preview
- Reorder parameters

Licensing

A license is an authorization, provided as an XML file, that we issue to each customer. The license file specifies the types and quantities of licenses authorized. The license file is stored on the server and distributed to client machines. When a user launches the Client Software, the server checks for available and appropriate licenses and presents a list to the user. The user selects a license from the available options, which is then locked for the duration that the Client Software is running. When the user closes the Client Software, the license is released and becomes available for other users.

License Types

License Period: Perpetual vs. Term A Perpetual License grants the licensee the right to use the software indefinitely. A Term License, on the other hand, is a subscription-based license that allows

the licensee to use the software for a specific period, typically one year.

License Kind: Floating vs. Node-Locked A Node-Locked license is restricted to a specific user's machine. A Floating license can be used on any machine within the network.

License Option: PADS Pro vs. Xpedition + PADS Pro You have two options: If you will only use the software with PADS Professional, you can choose the **PADS Pro** option, which is more economical. If you are using Xpedition, or both Xpedition and PADS Professional, you will need the **Xpedition + PADS Pro** option.

License Upgrade Options A Perpetual license includes one year of upgrades and support. After this period, you can continue to use the latest version released during your active upgrade period, but you will not be able to use newer versions released after the upgrade period expires. To continue receiving upgrades and support, you can purchase a License Upgrade package for an additional year.

Frequently Asked Questions

What versions of PADS are supported?

We support all versions of PADS Professional.

What versions of Xpedition are supported?

We support all VX versions and newest releases with year/month number like 2409 and 2504.

Can I import old PADS designs (non-Professional)?

Yes, you can use Folder container for any kind of data including old PADS designs. But it will not be seamlessly integrated as you would have for PADS Professional.

Where is my data stored?

All data is stored within the Vault folder in the Server.

Can I access my server via the Internet?

Yes, you can use VPN connection to securely access your resources.

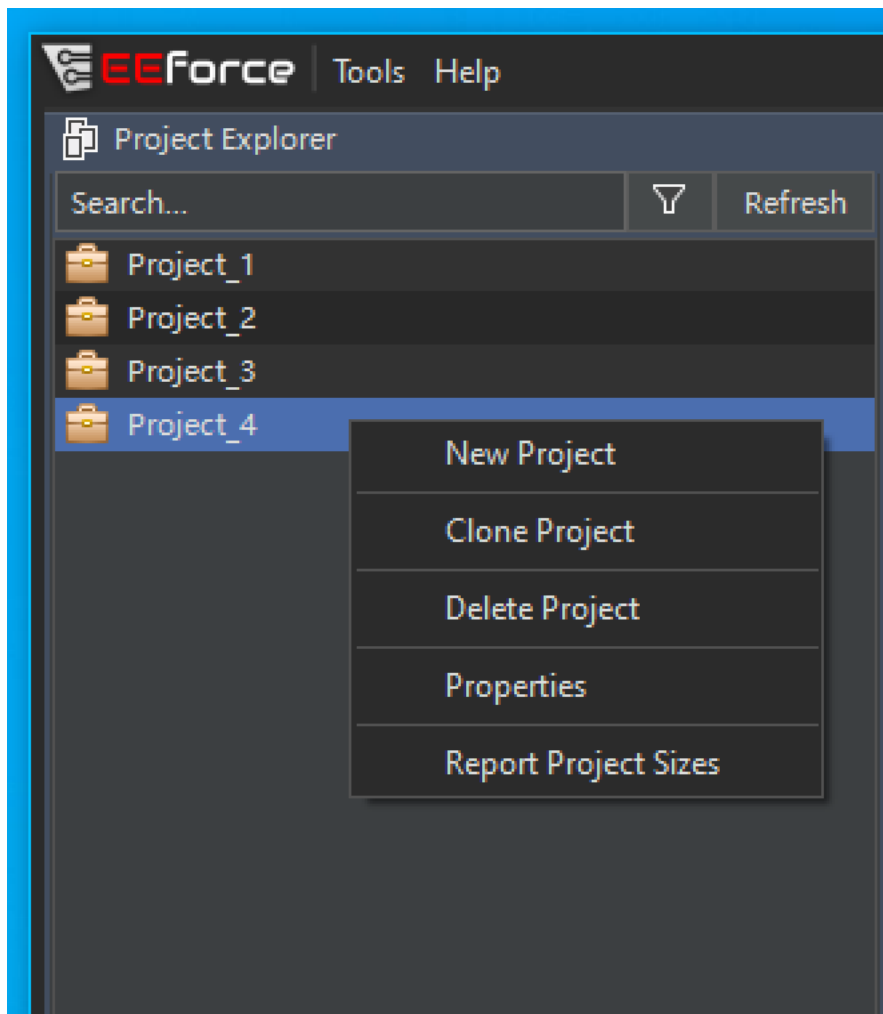
Project Operations

::: info **Project Naming Format** Projects are stored as folders in the **Vault** and must follow Windows naming conventions. This means:

- The name cannot be any of these reserved device names (with or without an extension): [CON](#), [PRN](#), [AUX](#), [NUL](#), [COM1–COM9](#), [LPT1–LPT9](#)
- The name cannot contain any of these characters: <, >, :, ", /, \\, |, ?, *, or any control character (ASCII 0–31)
- The name cannot end with a space or a period (.)
- The name must have at least one valid character

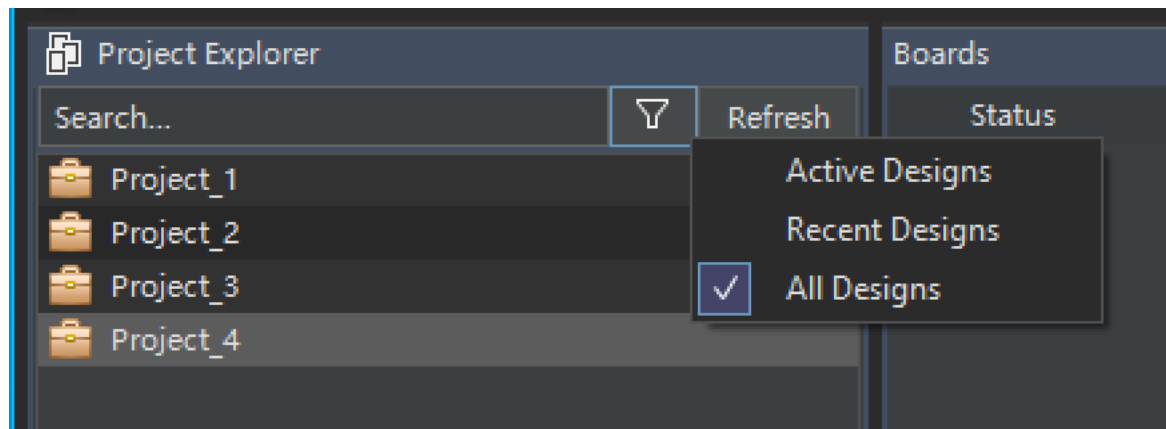
For more details, see the [Microsoft naming conventions documentation](#). :::

Projects are the highest level structure in EEforce. Design files are stored as **Containers** and **Containers** are stored in Projects. Access permissions are set at the project level. Projects are stored in the **Vault** and are displayed in the **Project Explorer** section of the EEforce Client.



Using the Project Explorer Section

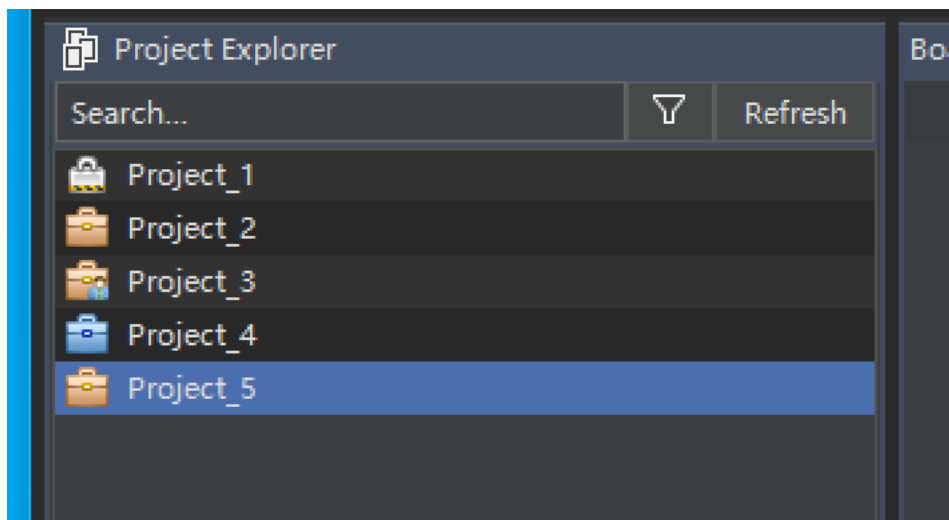
The Project Explorer section displays a list of projects. It includes a search option and a filter option. Your filter preferences are saved and restored when you reopen the software.



Filter Options:

- **Active Designs:** Displays only projects containing a checked-out design. Check-outs can be performed by any user in the system.
- **Recent Designs:** Displays only projects that you have recently checked out.
- **All Designs:** Displays all projects in the system.

In the Project Explorer section, projects are displayed with different icons, each indicating a different status:

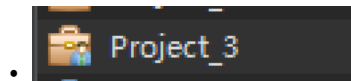


-  Project_1

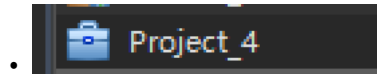
Read-Only Projects: The lock icon indicates that you do not have edit permissions for the project. You can open design content in read-only mode.

-  Project_2

Available Projects: This is the default appearance for projects that you have edit rights for. This icon also indicates that no user is actively working on the project.



Actively Used Projects: This icon indicates that you have edit rights for the project, but another user is currently working on one or more designs within the project.



Active Projects: This icon indicates that you have edit rights for the project and that you have checked out one or more designs within the project.

Creating a New Project

To create a new project, follow the steps below. Note that only you and super users will be able to edit the project information.

1. Right-click anywhere in the **Project Explorer** section.
2. Click the **New Project** button in the popup menu.
3. A dialog box will appear. Enter the name of the new project and click **OK**.

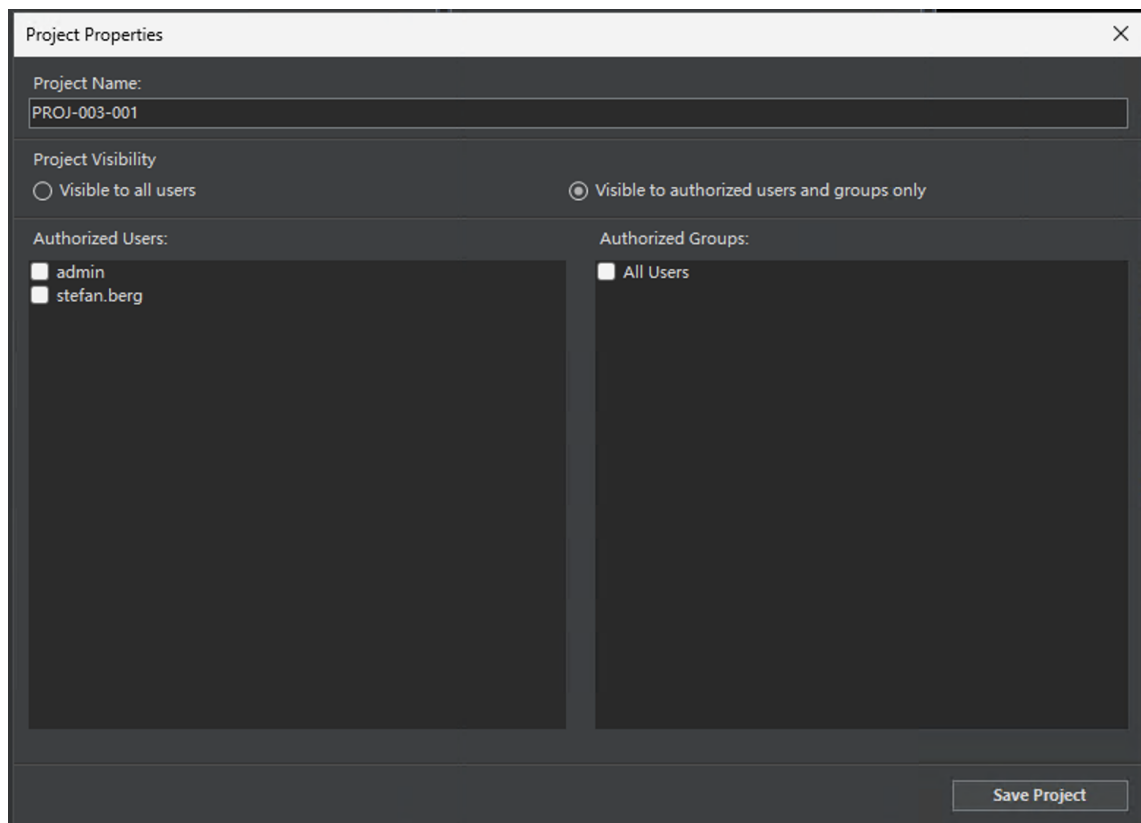
A screenshot of a 'New Project' dialog box. The dialog has a title bar with 'New Project' and a close button. It contains a 'Project Name:' text field. Below it, 'Project Visibility' is set to 'Visible to all users' with a radio button. To the right is an option 'Visible to authorized users and groups only' with an unselected radio button. Below these are two sections: 'Authorized Users:' with a list containing 'admin' and 'stefan.berg', each with an unchecked checkbox; and 'Authorized Groups:' with a list containing 'All Users' with an unchecked checkbox. At the bottom right is a 'Save Project' button.

4. The new project should now be visible in the Project Explorer section.

Changing a Project Name

There must be no active check-outs in the project, and you must have editing permissions. To change the project name, follow the steps below:

1. Right-click the project name in the Project Explorer section.
2. Click the **Properties** button in the popup menu.
3. The Properties dialog box will appear:

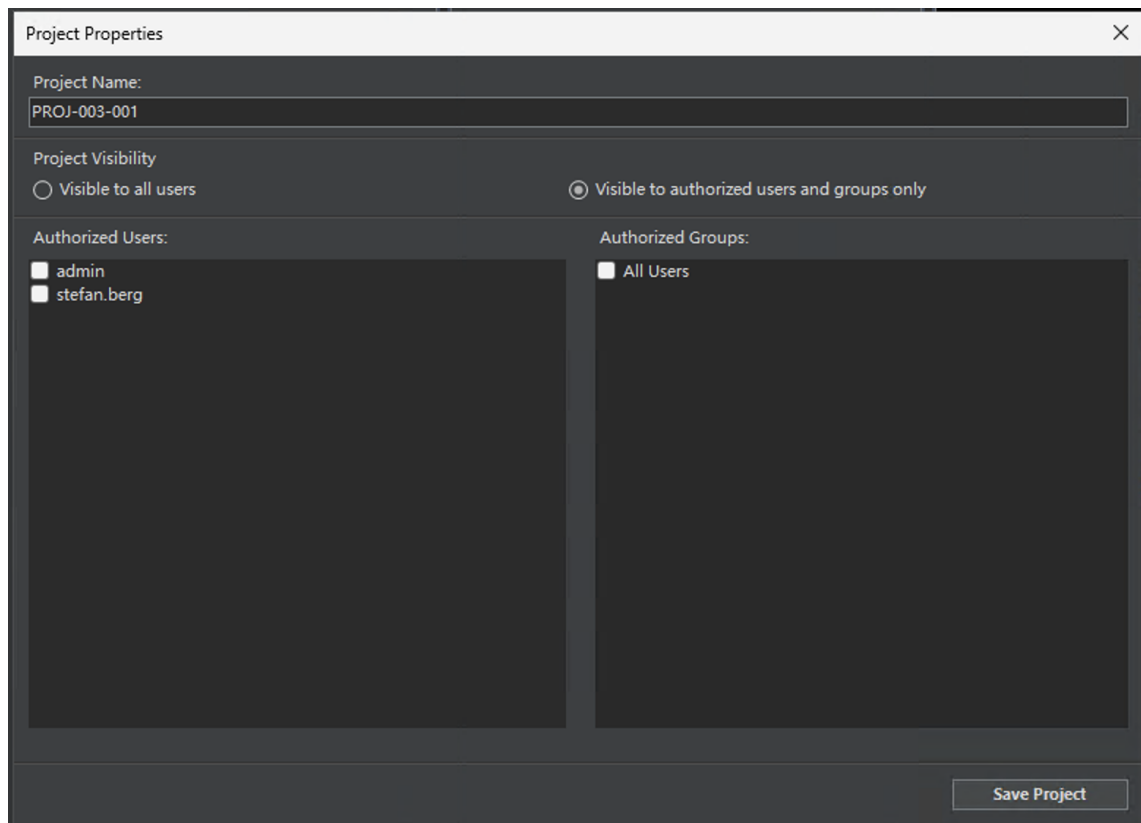
The screenshot shows a 'Project Properties' dialog box with a dark theme. At the top, there's a title bar with a close button. Below it, the 'Project Name' field contains 'PROJ-003-001'. Under 'Project Visibility', the 'Visible to authorized users and groups only' option is selected. The 'Authorized Users' list on the left includes 'admin' and 'stefan.berg'. The 'Authorized Groups' list on the right includes 'All Users'. A 'Save Project' button is located at the bottom right.

4. Enter the new name in the **Project Name** input box.
5. Click the **Save Properties** button.

Changing Project Users

There must be no active check-outs in the project, and you must have editing permissions. To change the project users, follow the steps below:

1. Right-click the project name in the Project Explorer section.
2. Click the **Properties** button in the popup menu.
3. The Properties dialog box will appear:



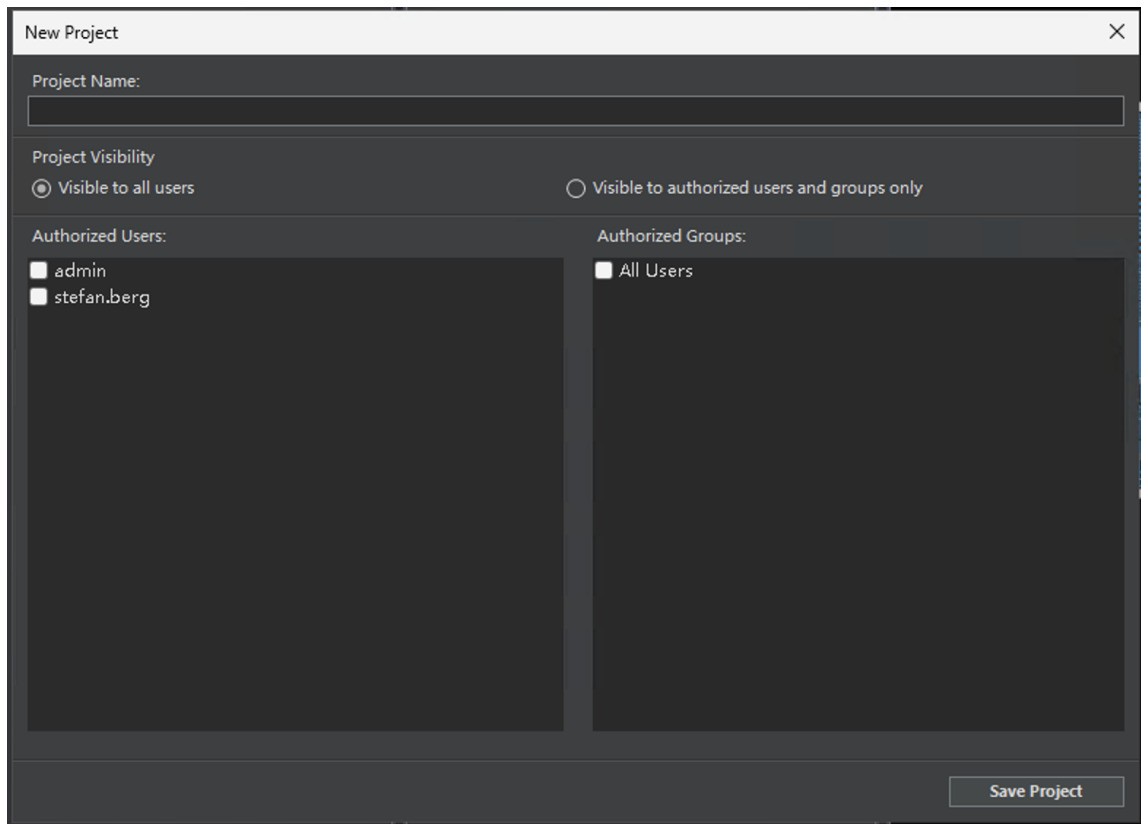
4. To add a new user: Select the user from the drop-down box below the Authorized Users list, and click the **Add** button.
5. To remove an existing user: Select the user in the Authorized Users List, and click the **Remove Selected** button.
6. Click the **Save Properties** button.

Cloning a Project

There must be no active check-outs in the project, and you must have editing permissions. Cloning a project will copy all design files to a new project. Follow the steps below:

1. Right-click the project name in the Project Explorer section.
2. Click the **Clone Project** button in the popup menu.

3. A dialog box will appear. Enter the name of the new project and click **OK**.



4. The cloned project should now be visible in the Project Explorer section.

Removing a Project

There must be no active check-outs in the project, and you must have editing permissions. Removing a project will also remove all contained designs. If you are sure you want to remove the project, follow the steps below:

1. Right-click the project name in the Project Explorer section.
2. Click the **Delete Project** button in the popup menu.
3. A confirmation dialog will appear. If you are sure you want to remove the design, click **OK**.
4. The project should be removed from the Project Explorer list.

Container Operations

::: tip **Allowed and Forbidden Characters in Container Names Allowed:** - English letters (A–Z, a–z) - Numbers (0–9) - Underscore ()

Forbidden: - Spaces - Special characters: <, >, \, :, ", /

Container names must: - Be unique - Be between 3 and 40 characters long - Only use allowed characters above

Examples of valid names: - `Main_Container_01` - `Project123` - `Container_v2`

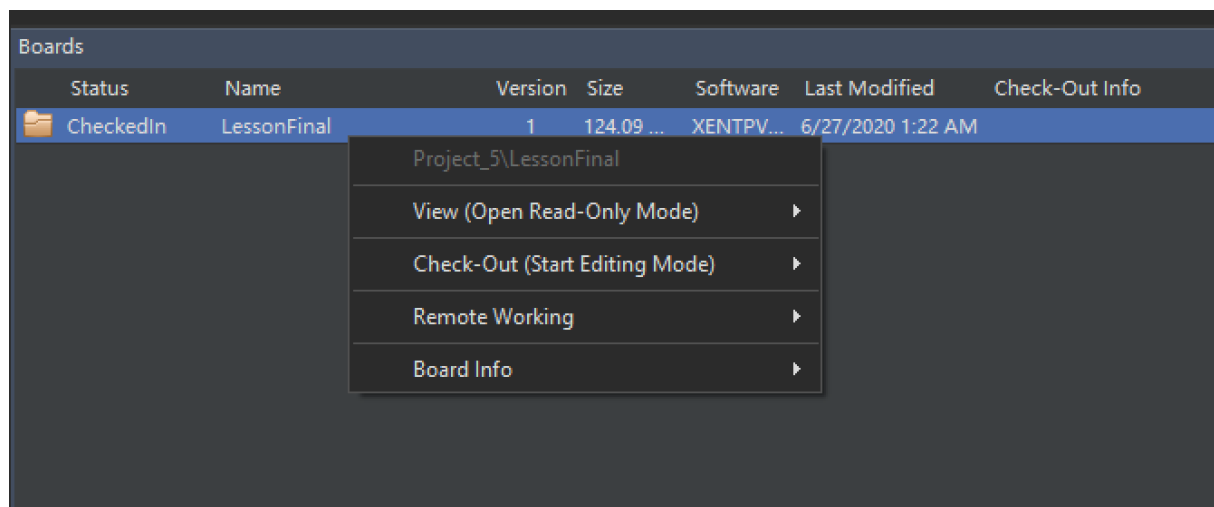
Examples of invalid names: - `Main Container` (contains a space) - `Container#1` (contains #) - `Bo` (too short) - `Container/01` (contains /) :::

Containers are versioned items which can be a PCB Design, Multi-Board Panel Design or a Folder container. EEforce stores container versions in the vault and allows users to check in and check out these versions.

When a user checks out a Container, the server automatically locates the latest or specified version and sends it to the user's computer.

When a user checks in a design, all design files on the local computer are packaged as a ZIP file and sent to the server. The server then stores this file in the project folder and updates its metadata.

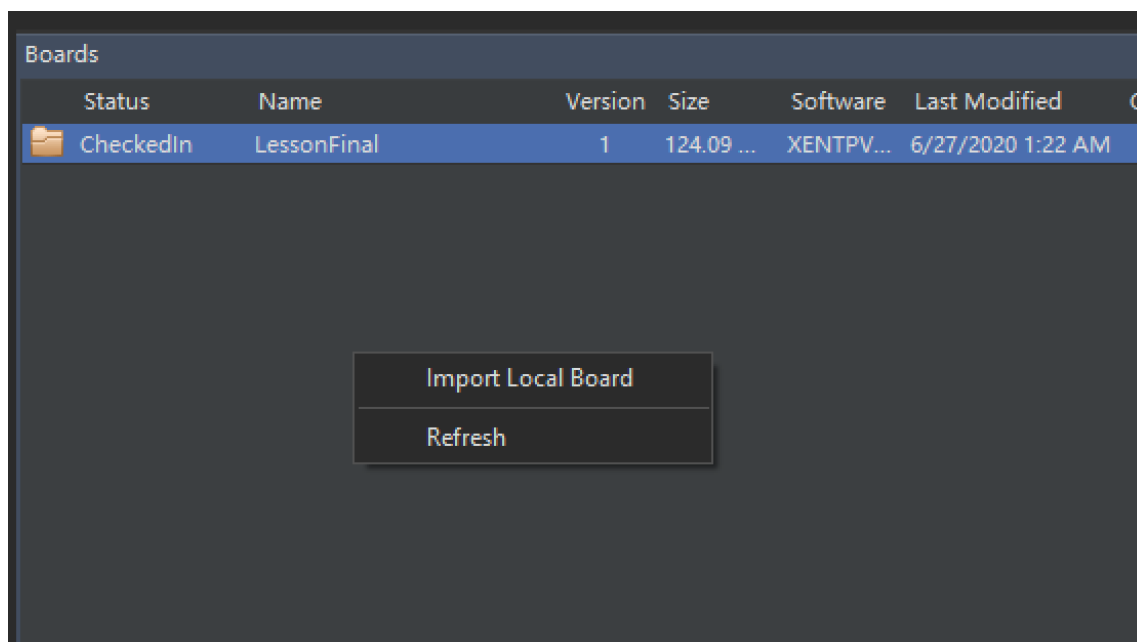
Container operations are accessed via the **Right-Click Menu** in the **Containers** section.



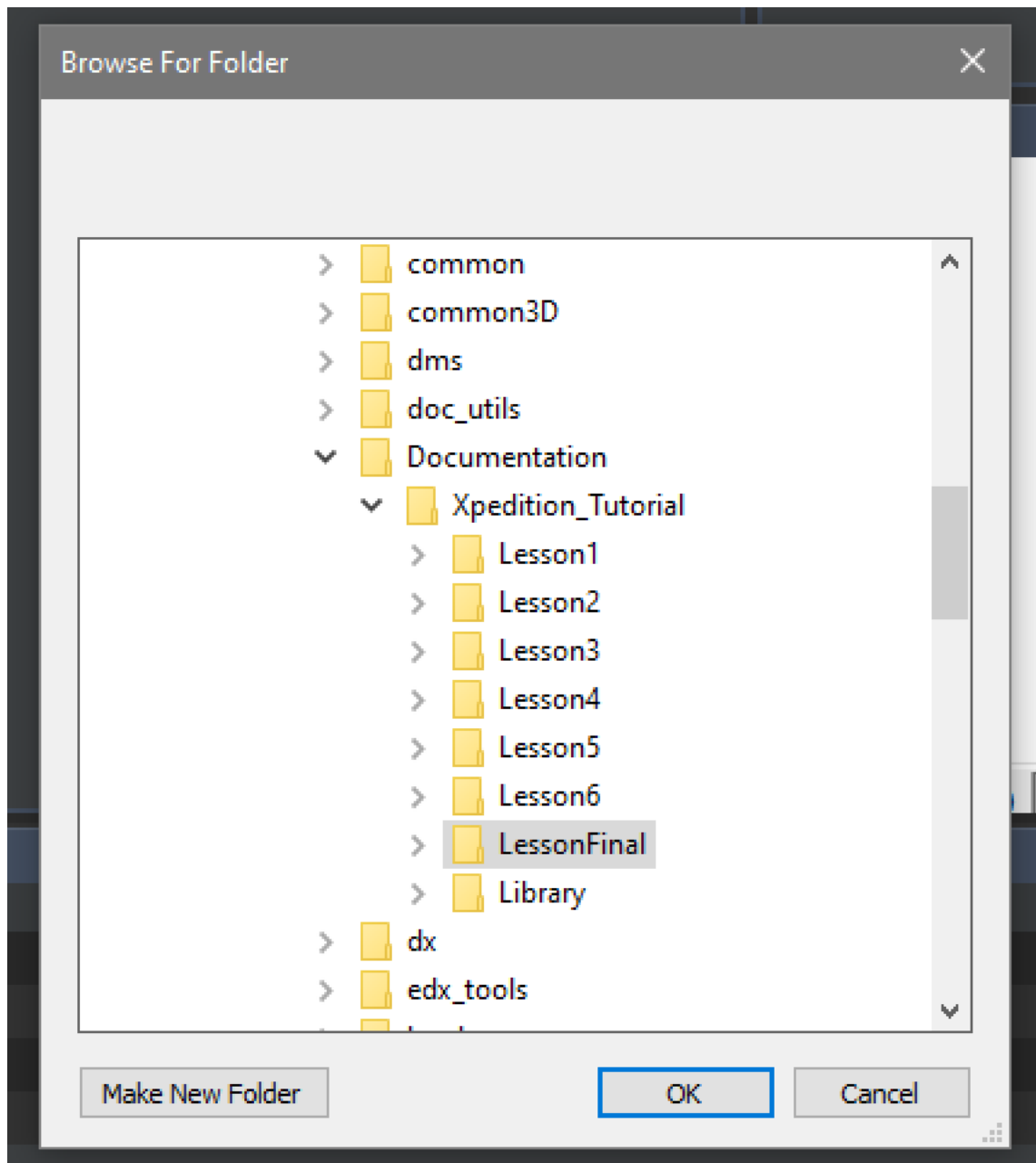
Importing a Container into a Project

To import an external design into a project, follow these steps:

1. Select the target project in the **Project Explorer** section. If you do not have a project yet, refer to the [Creating New Project](#) section.
2. After selecting the target project, right-click an **empty** area in the **Containers** section. A small menu will appear.



3. Click the **Import Local Container** button.
4. Locate the root folder of your design in the folder browser dialog.



Ensure that you select the folder containing the project (schematic) file.

5. Wait for the process to complete, and monitor the status in the **Operation Logs** section.

Renaming a Container

Note: Renaming is only possible when the Container is in the **Checked-In** state.

1. Right-click the Container.

-
2. In the popup menu, go to **Container Info** and click the **Rename** button.
3. A dialog box will appear. Enter the new name and click **OK**.

Cloning a Container

Note: Cloning is only possible when the Container is in the **Checked-In** state.

1. Right-click the Container.
2. In the popup menu, go to **Container Info** and click the **Clone** button.
3. A dialog box will appear. Enter a name for the new Container and click **OK**.

Deleting a Container

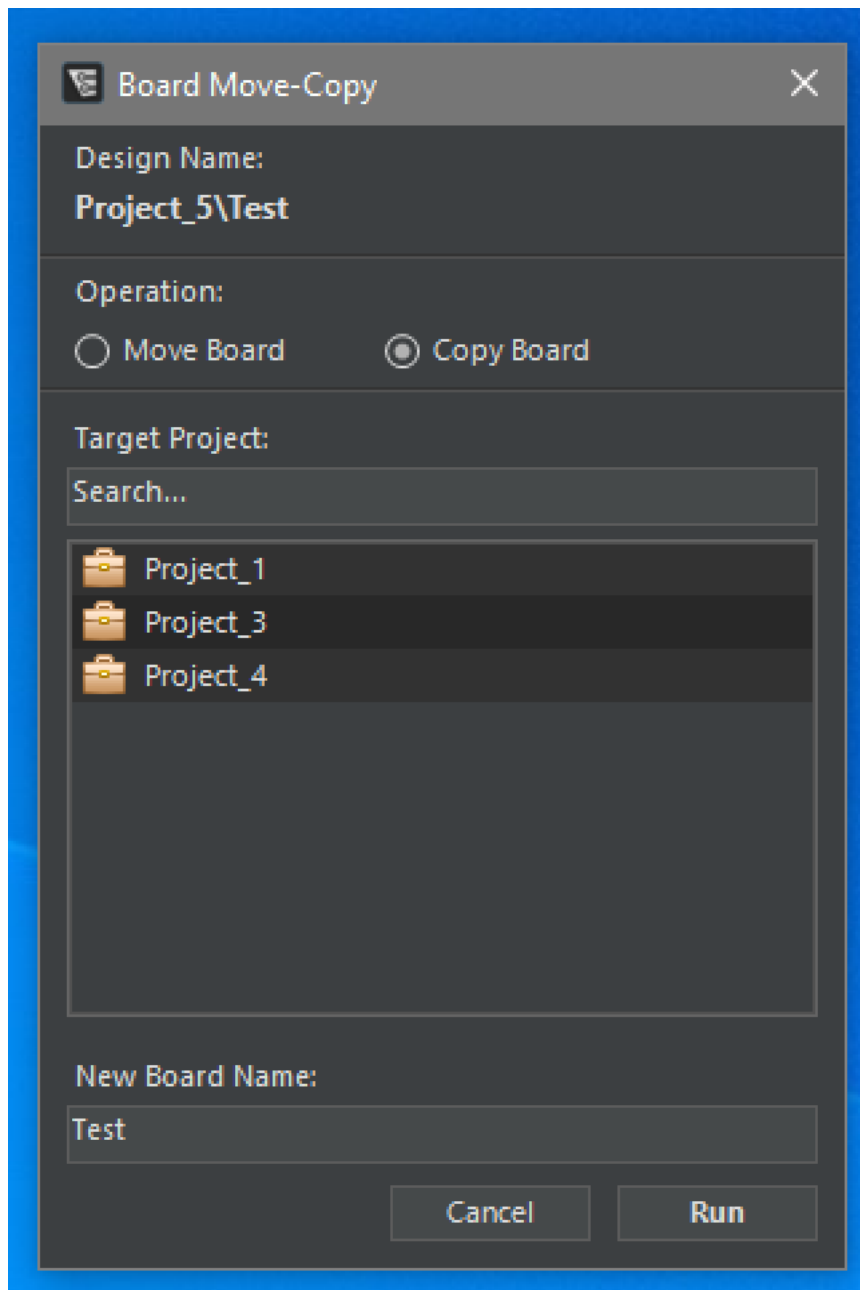
Note: Deleting is only possible when the Container is in the **Checked-In** state.

1. Right-click the Container.
2. In the popup menu, go to **Container Info** and click the **Delete** button.
3. A confirmation dialog will appear. If you are sure you want to delete the project, click **OK**.

Moving a Container to Another Project

Note: Moving is only possible when the Container is in the **Checked-In** state.

1. Right-click the Container.
2. In the popup menu, go to **Container Info** and click the **Move/Copy to Another Project** button.
3. A dialog box will appear.

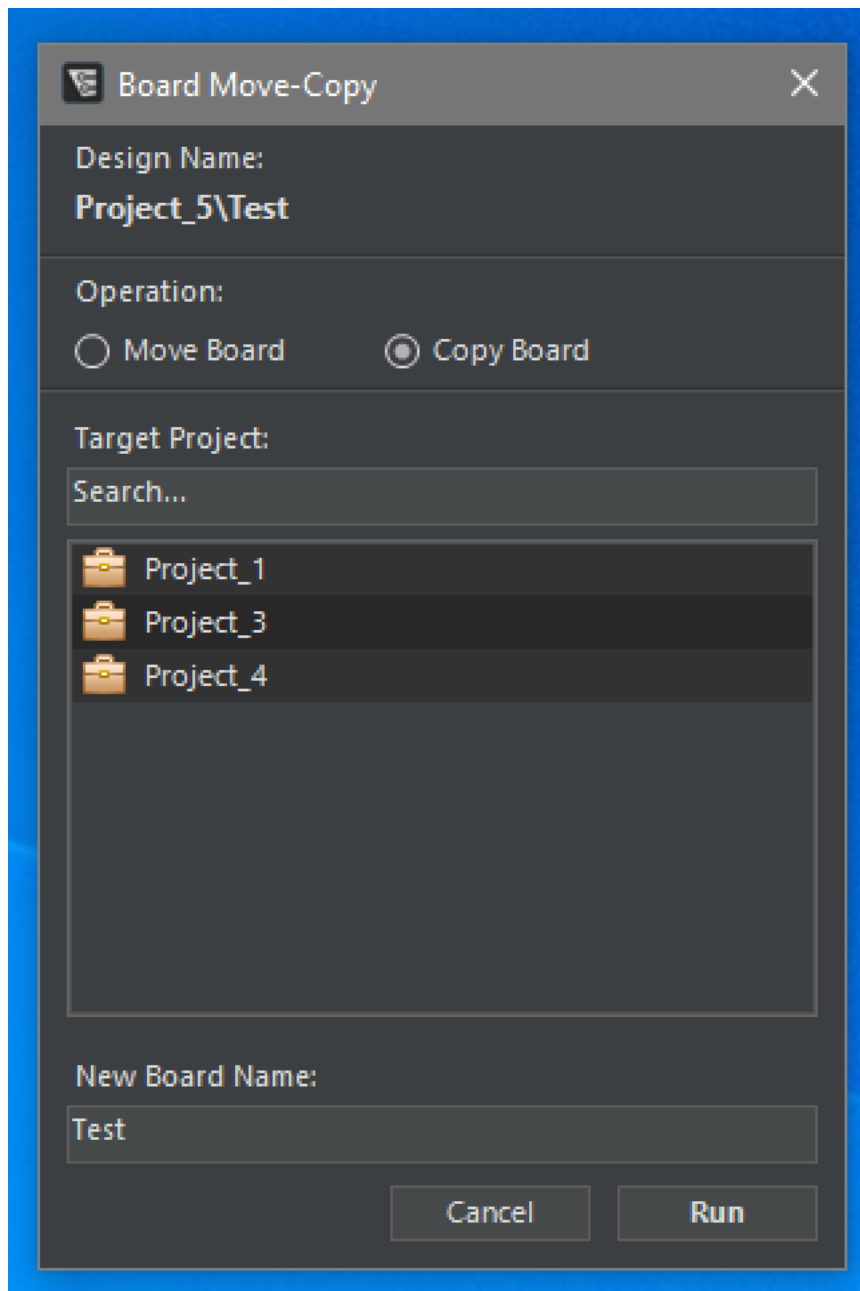


4. Select the **Move Container** option under the **Operation** section.
5. Select the target project from the list.
6. Enter a new name for the project, or leave it as is if you do not want to change the name.
7. Click **OK**.

Copying a Container to Another Project

Note: Copying is only possible when the Container is in the **Checked-In** state.

1. Right-click the Container.
2. In the popup menu, go to **Container Info** and click the **Move/Copy to Another Project** button.
3. A dialog box will appear.



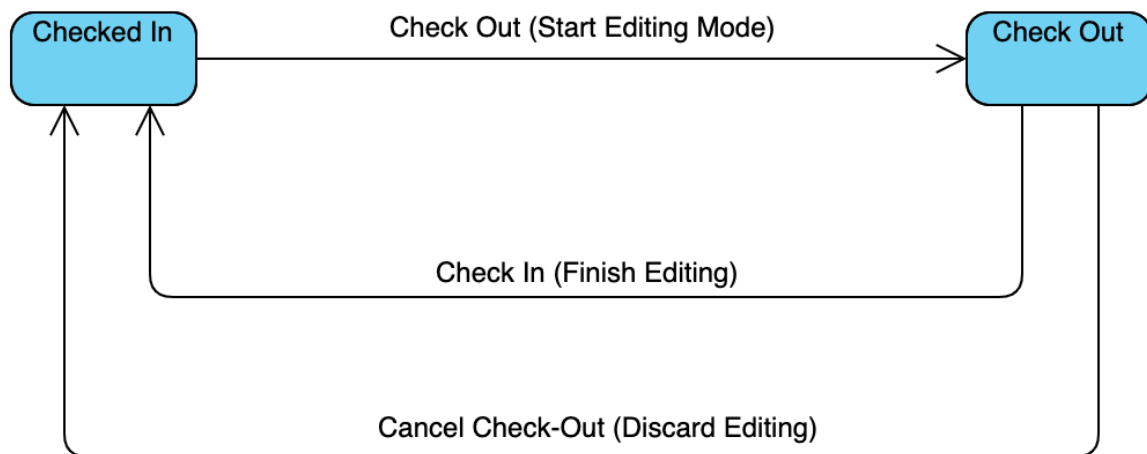
4. Select the **Copy Container** option under the **Operation** section.
5. Select the target project from the list.
6. Enter a new name for the project, or leave it as is if you do not want to change the name.
7. Click **OK**.

Design Operations

This section continues the discussion from the Board Operations section, explaining interactions with design files. Design files are managed using a **State Machine** system, where designs have states and each state only accepts specific actions.

Design States

- **Checked In:** The design is stored in the server vault and is not currently being edited. You can check out the design if you have the required permissions.
- **Checked Out:** The design is stored in the server vault, but a copy has been opened for editing by a user. Only the user who has checked out the design can edit it.



Operations

- **Check Out (Start Editing Mode):** Available when the design is in the Checked-In state. This operation downloads the desired version of the design to your local computer and changes the design state to Checked-Out. Only the user who checked out the design can make edits.

- **Check In (Finish Editing):** Available after you have checked out a design. After editing the design, use this operation to upload your changes to the server. This will increment the design version and unlock the design for editing.
- **Cancel Check-Out (Discard Editing):** Available if you have checked out a design. If you have not made any changes, you can undo the check-out with this operation. Use this operation with caution, as the local copy of the design will be removed.

Opening a Design in Read-Only Mode

While you can check out a design for editing, many users may only need to open the design for viewing. To accommodate this, there is an option to open the design without checking it out. This operation downloads a copy of the design files to your local computer, allowing you to open them with the available tools. However, you will not be able to save any changes. To open a design in read-only mode:

1. Right-click the board or the desired version.
2. Select the desired action under the **View (Open Read-Only Mode)** menu.

Opening a Design for Editing (Check-Out)

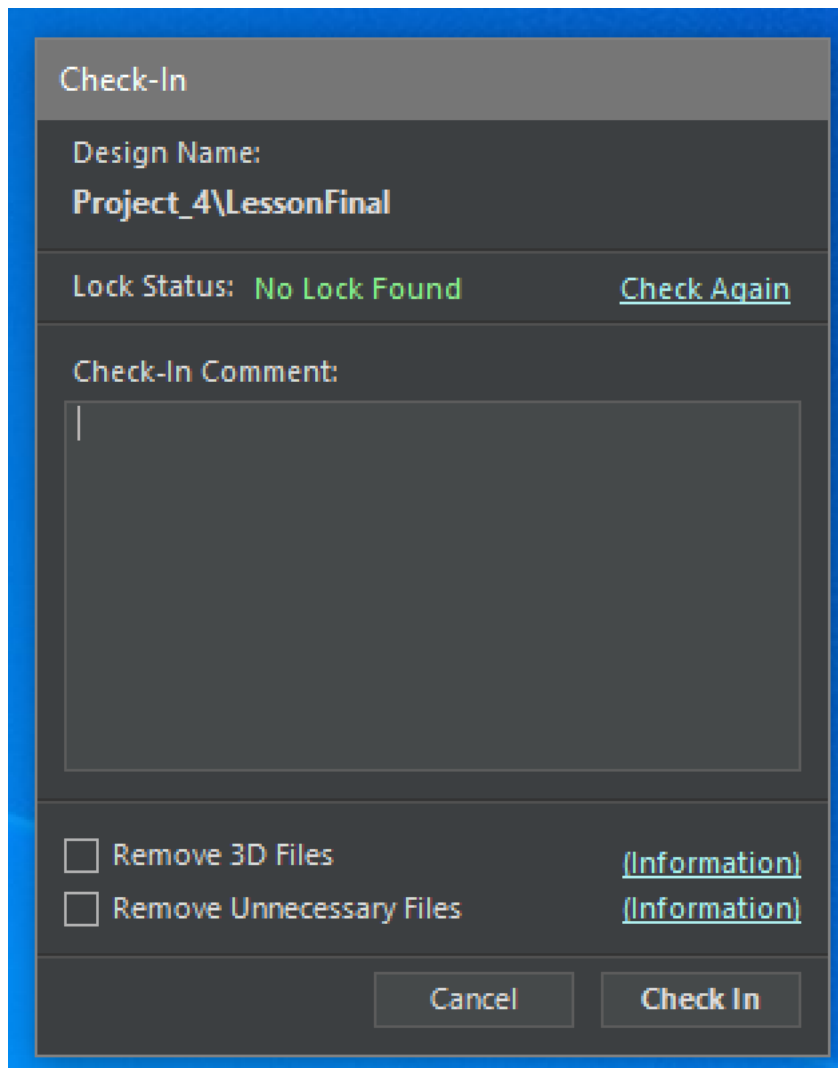
As explained above, you can open a design for editing by using the **Check Out** procedure:

1. Right-click the board or the desired version.
2. Select the desired action under the **Check Out (Start Editing Mode)** menu.

Finishing Editing a Design (Check-In)

As explained above, you can upload your local copy of the design as a new version by using the **Check In** procedure:

1. Right-click the board that is currently Checked-Out by you.
2. Click the **Check In (Finish Editing)** button.
3. A dialog box will appear:

A screenshot of a 'Check-In' dialog box. The dialog has a blue border and a dark gray background. At the top, the title 'Check-In' is in a lighter gray bar. Below the title, the 'Design Name' is 'Project_4\LessonFinal'. The 'Lock Status' is 'No Lock Found' in green text, with a blue 'Check Again' link to its right. Below this is a 'Check-In Comment' section with a large text area. At the bottom, there are two checkboxes: 'Remove 3D Files' and 'Remove Unnecessary Files', each with a blue '(Information)' link to its right. At the very bottom are 'Cancel' and 'Check In' buttons.

Check-In

Design Name:
Project_4\LessonFinal

Lock Status: **No Lock Found** [Check Again](#)

Check-In Comment:

☐ Remove 3D Files [\(Information\)](#)

☐ Remove Unnecessary Files [\(Information\)](#)

[Cancel](#) [Check In](#)

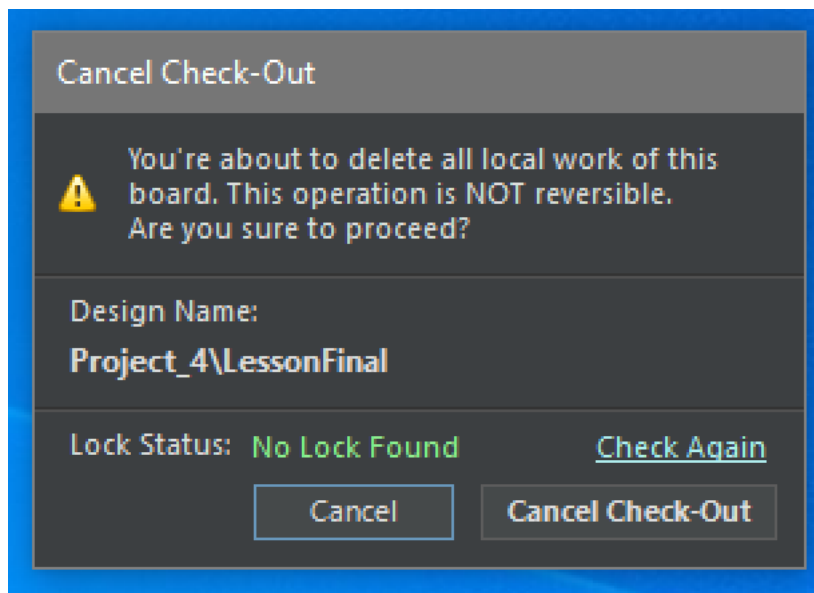
4. **Lock Status:** If the design is **LOCKED**, a program is still running on your computer that is locking some of the design files. Check for any open editor windows, close them, and click the **Check Again** button.
5. **Check-In Comment:** You can add a short comment describing the reason for this check-in. This comment will be displayed in the versions section.
6. **Remove 3D Files Option:** 3D files can consume significant disk space. If you have not made any 3D-related changes, there may still be leftover files. Select this option to remove all 3D information stored in the design.
7. **Remove Unnecessary Files:** Some files, such as log files and old CCZ files, do not need to be stored in the design. Select this option to remove these files.
8. After completing the steps above, click the **Check-In** button to complete the process. Allow time

for the design to upload to the server, and monitor the status in the **Operation Logs** section.

Cancelling Editing of a Design (Cancel-Checkout)

As explained above, you can undo a check-out if you do not want to upload your local copy to the server. Note that this operation will remove all local files related to the design.

1. Right-click the board that is currently Checked-Out by you.
2. Click the **Cancel Check-Out (Discard Editing)** button.
3. A confirmation dialog will appear.



4. **Lock Status:** If the design is **LOCKED**, a program is still running on your computer that is locking some of the design files. Check for any open editor windows, close them, and click the **Check Again** button.
5. After completing the steps above, click the **Cancel Check-Out** button to complete the process.

Remote Working

These features are designed for users who need to work outside of the system (e.g., remote workers) and still be able to integrate their updates into the system.

Exporting a Board for Remote Working

Exporting a design for remote working creates a ZIP file containing all design files, allowing you to work on the design offline.

1. Select the project from the **Project Explorer** section.
2. Select the board you want to work on remotely in the **Boards** section.
3. Right-click the board and go to the **Remote Working** menu.
4. Choose **Check Out**.
5. A file dialog will appear. Choose a convenient folder and specify a name for the ZIP file.
6. Click **Save**.
7. You can now work with the ZIP file.

Importing a Remotely Updated Board

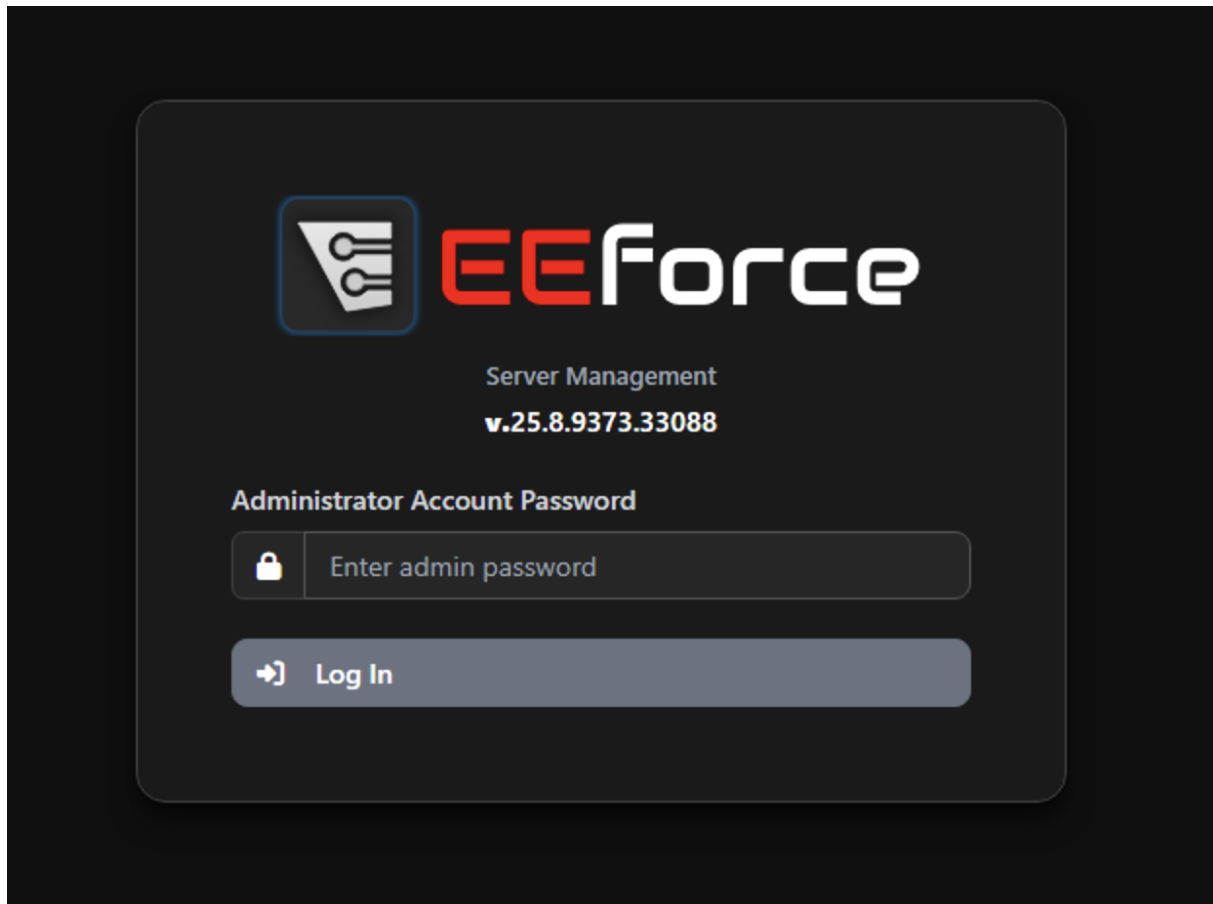
To import local files as a new version of a board after working offline, follow this procedure:

1. Select the project from the **Project Explorer** section.
2. Select the board to which you want to import the new version in the **Boards** section.
3. Right-click the board and go to the **Remote Working** menu.
4. Choose **Import Package**.
5. A folder selection dialog will appear. Locate and select the design you wish to import.
6. Allow time for the process to complete, and monitor its status in the Operation Logs section.

EEforce Web based Administration Interface

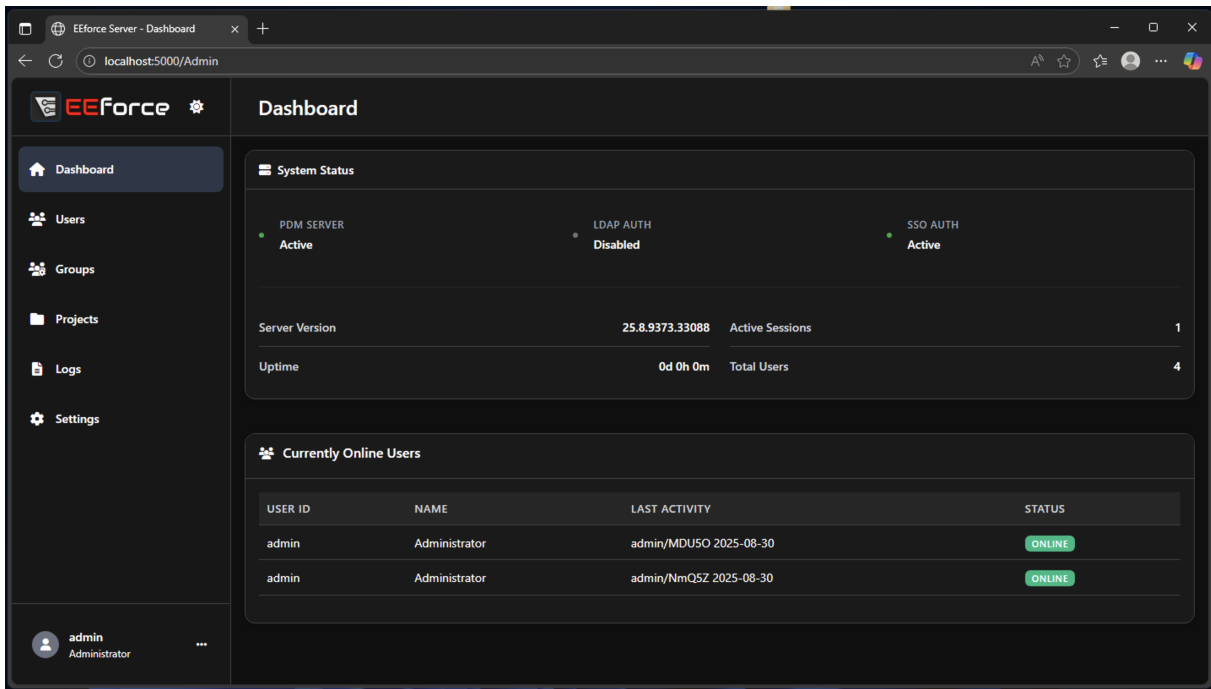
To access the web interface go to this address from your browser: - <SERVER-ADDRESS>/Admin

Login Dialog



You will be asked to provide Administrator password as it's meant to be used by Administrator only.

Dashboard

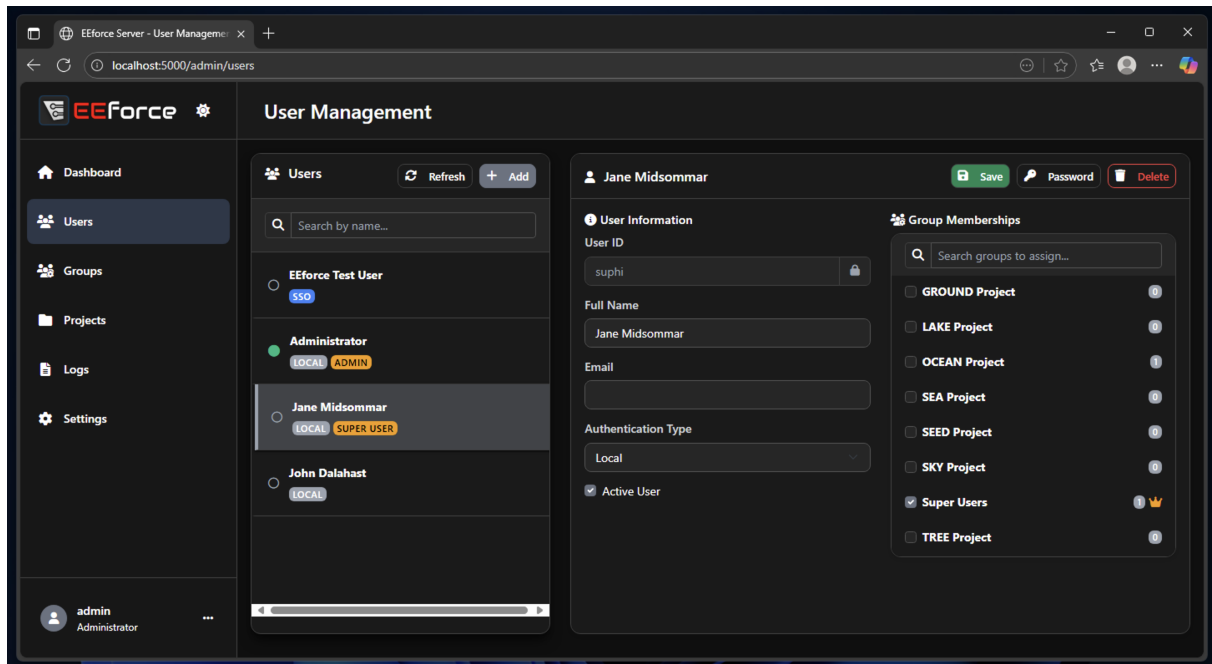


The screenshot shows the EEforce Server Dashboard in a web browser. The browser address bar shows 'localhost:5000/Admin'. The dashboard has a dark theme and a sidebar on the left with navigation links: Dashboard, Users, Groups, Projects, Logs, and Settings. The main content area is titled 'Dashboard' and contains two sections. The 'System Status' section shows three status indicators: PDM SERVER (Active), LDAP AUTH (Disabled), and SSO AUTH (Active). Below these are two rows of system metrics: Server Version (25.8.9373.33088) and Active Sessions (1), and Uptime (0d 0h 0m) and Total Users (4). The 'Currently Online Users' section contains a table with two rows of user data.

USER ID	NAME	LAST ACTIVITY	STATUS
admin	Administrator	admin/MDU5O 2025-08-30	ONLINE
admin	Administrator	admin/NmQ5Z 2025-08-30	ONLINE

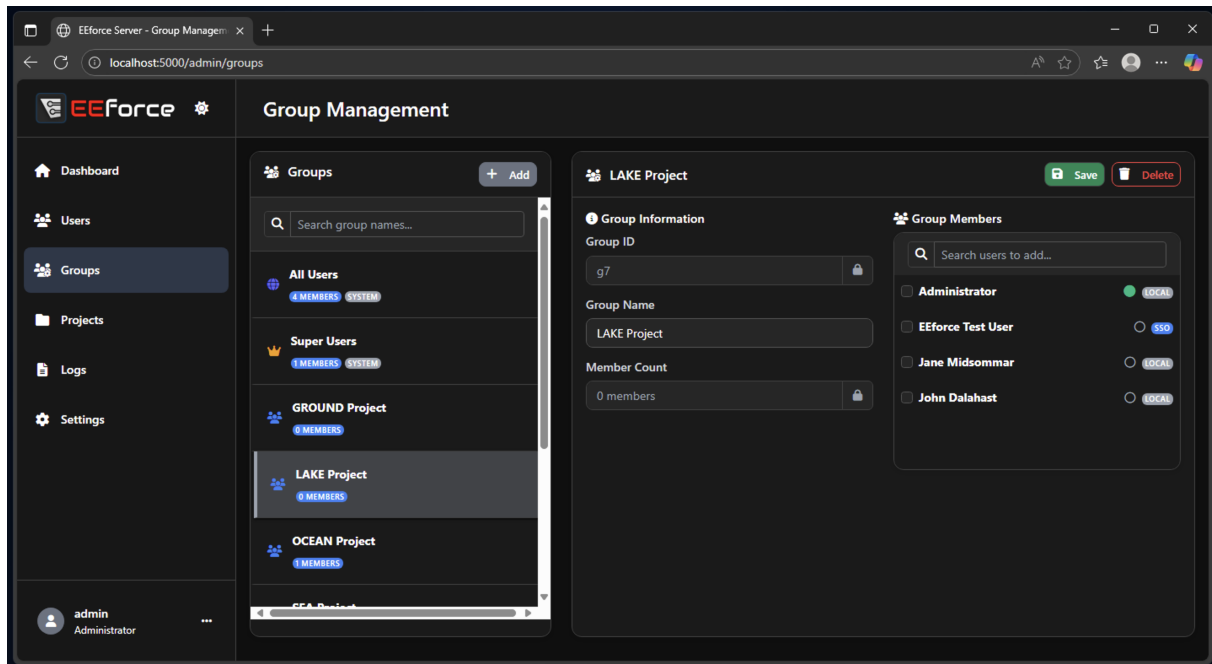
Dashboard page is designed to provide you a basic overview about the server status. You can monitor the server uptime, active services and users.

User Management



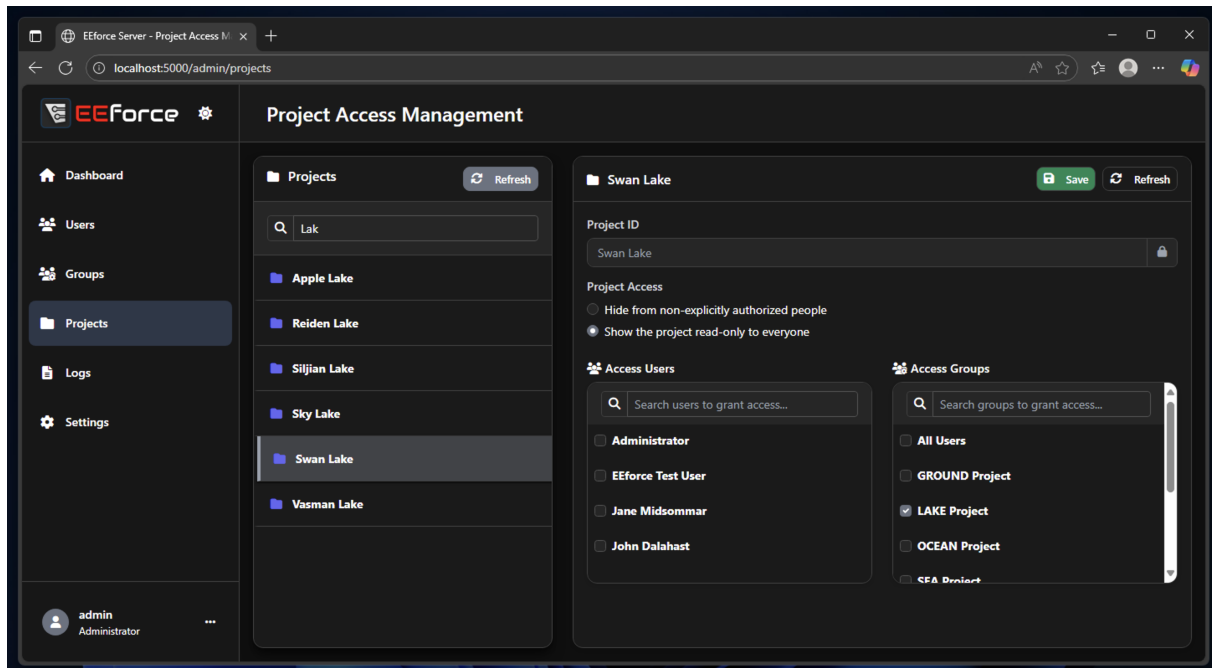
In User Management page, you can create, modify and delete users. Select an user from the list and modify its name and which groups it's a part of.

Group Management



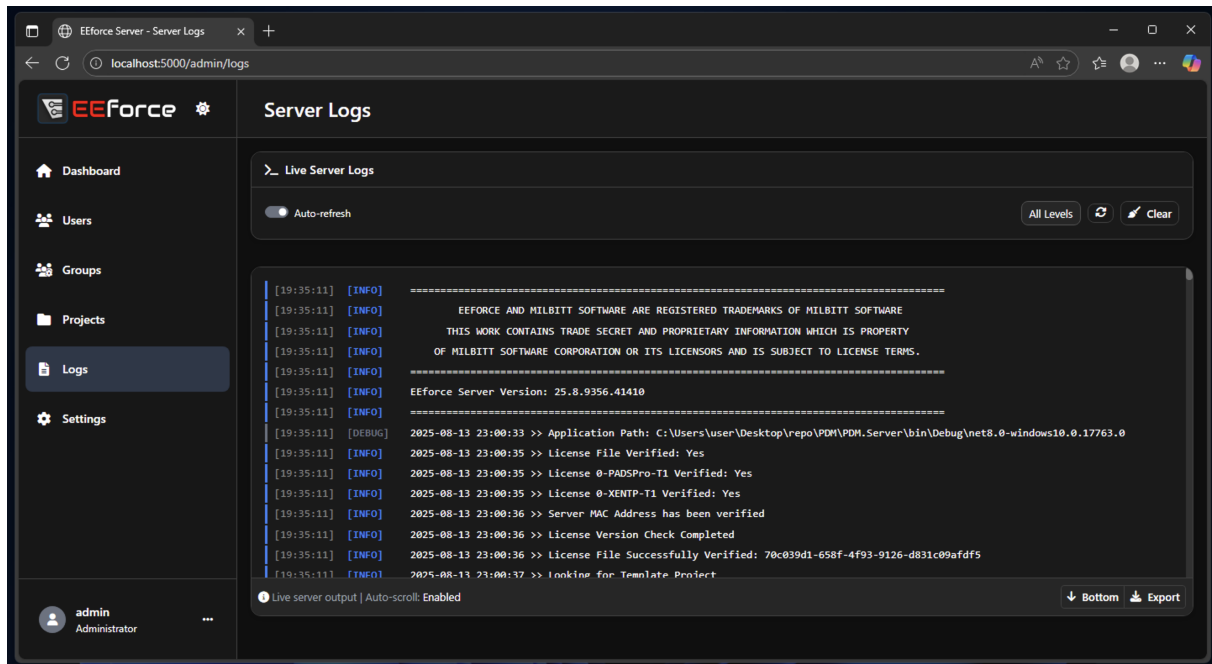
In Group Management page, you can create, modify and delete groups. Select a group from the list and modify its name and member users.

Project Management



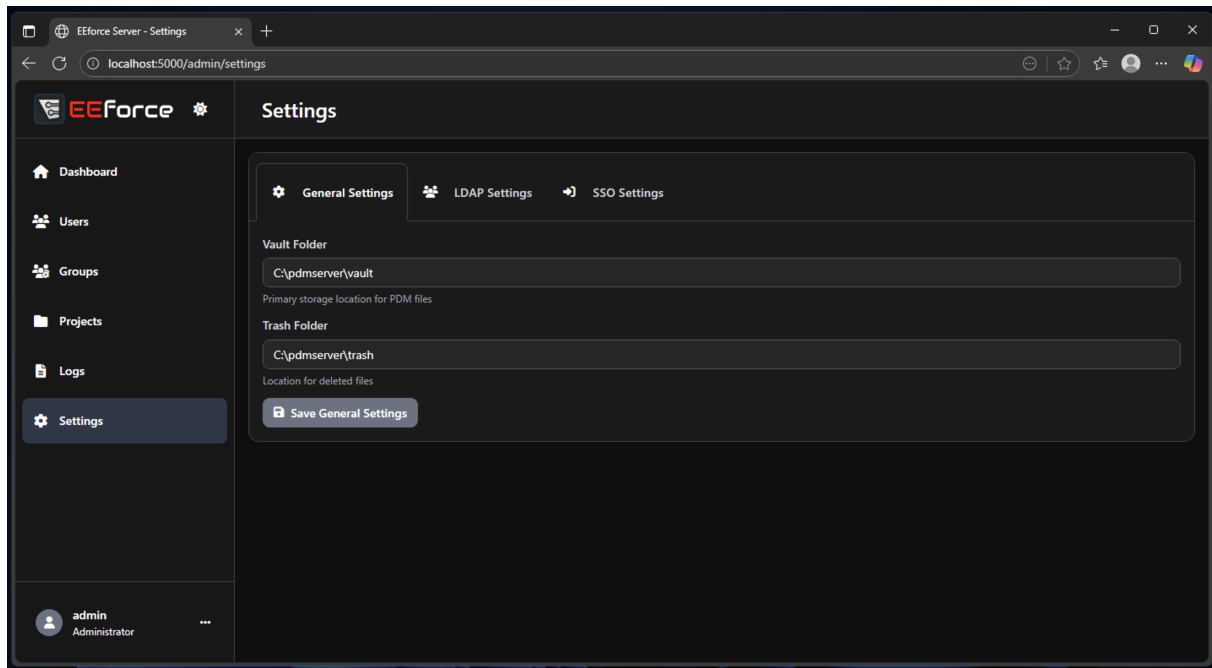
In Project Management page, you can modify groups' access configuration, user list and group list. Note that it's currently not possible to create or delete or rename a project in the web interface as they have deep links with vault and the file system, we approach these objects with caution.

Logs



In Logs page, you can monitor the activity on the server side. It's helpful to identify issues see debug information.

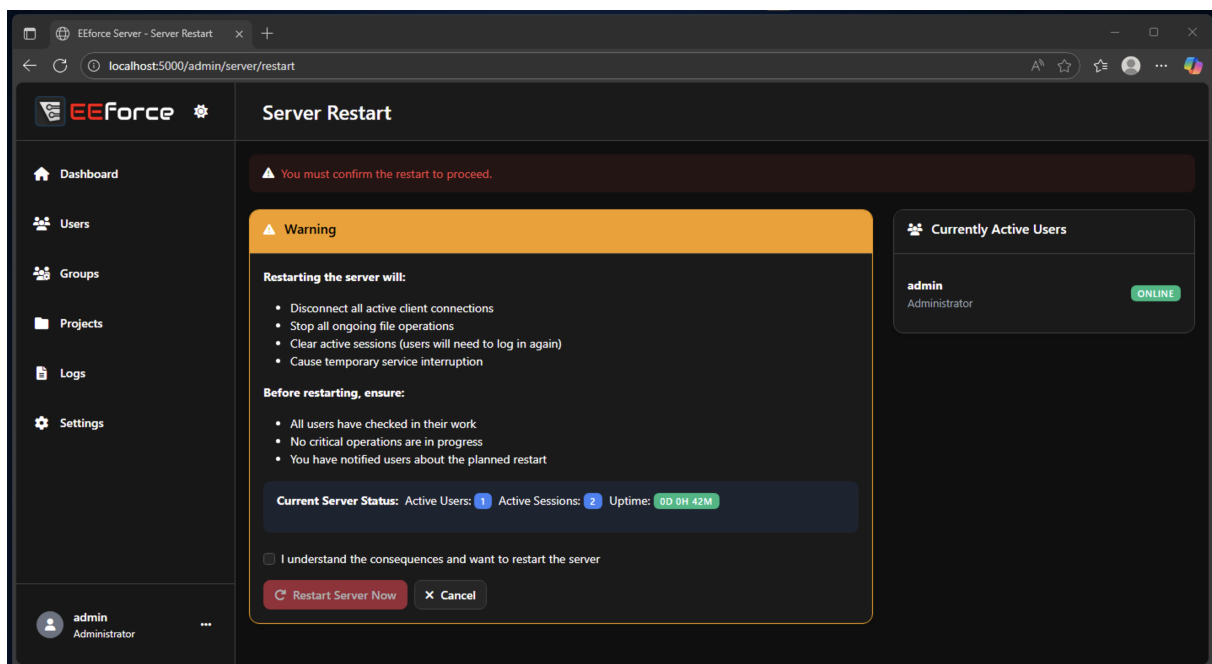
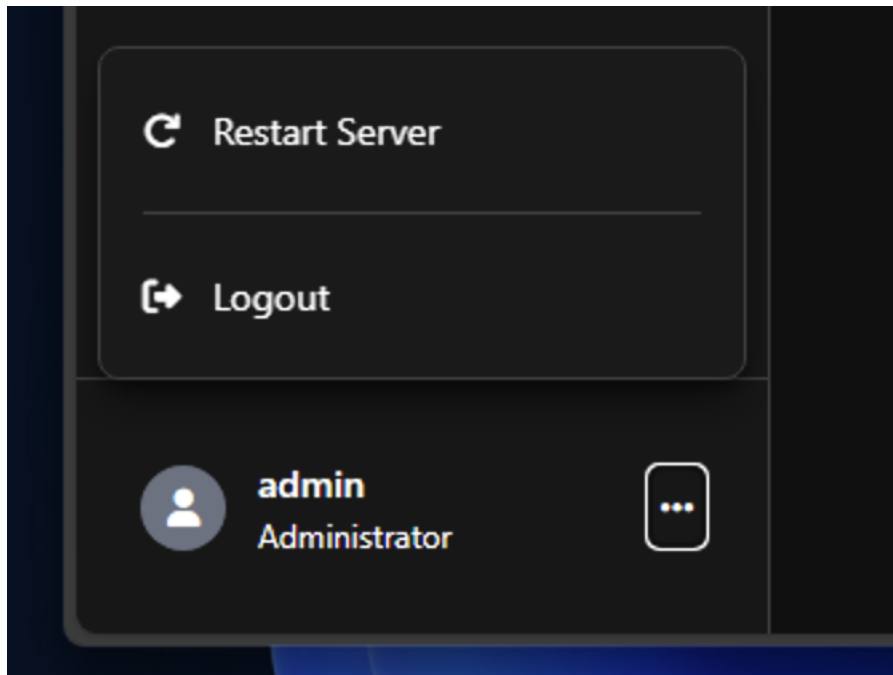
Settings



In Settings page, you can modify certain parameters like system folder, SSO and LDAP Configuration. Please note that the system folder location changes are only becomes effective after server restart.

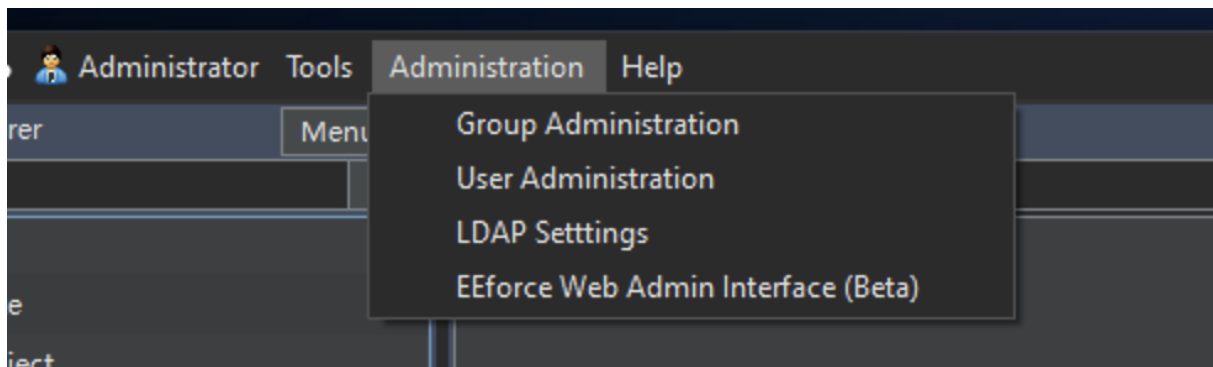
Restart the Server/Log Out

Click the three-dots menu icon next to user name, located in bottom left of the page. Click **Restart Server** button to access Server Restart Confirmation Page. Likewise, click on the Logout button to Log Out from the interface.



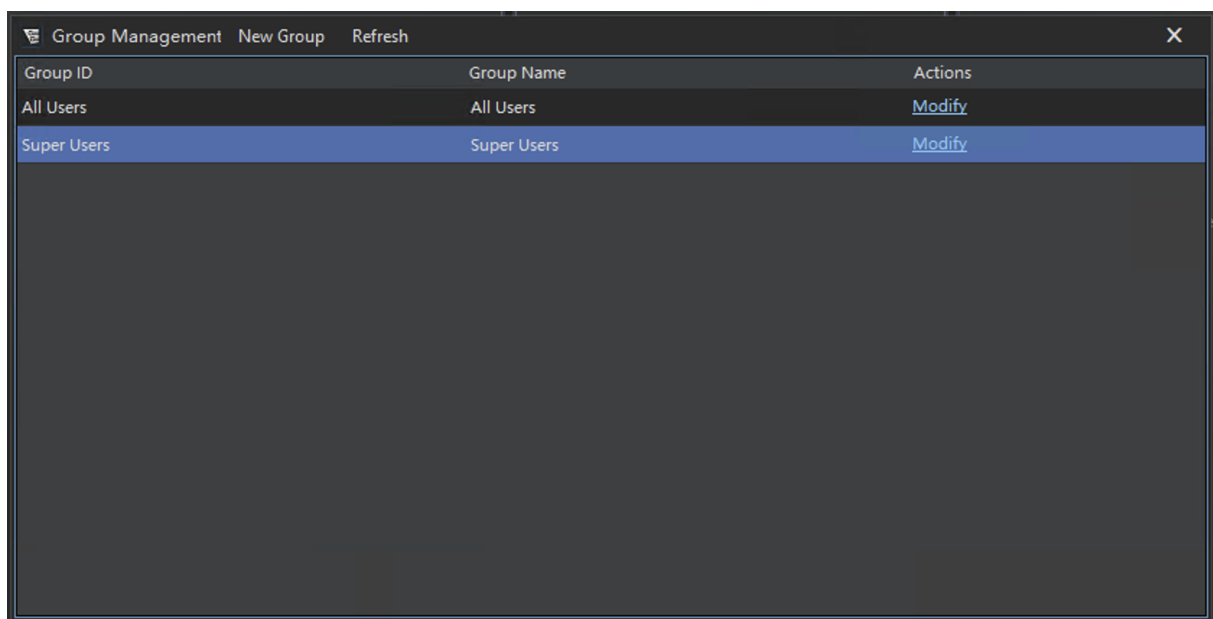
The Restart procedure should be done with caution. The users must be logged out before restarting the server.

EEforce Client Administration Options



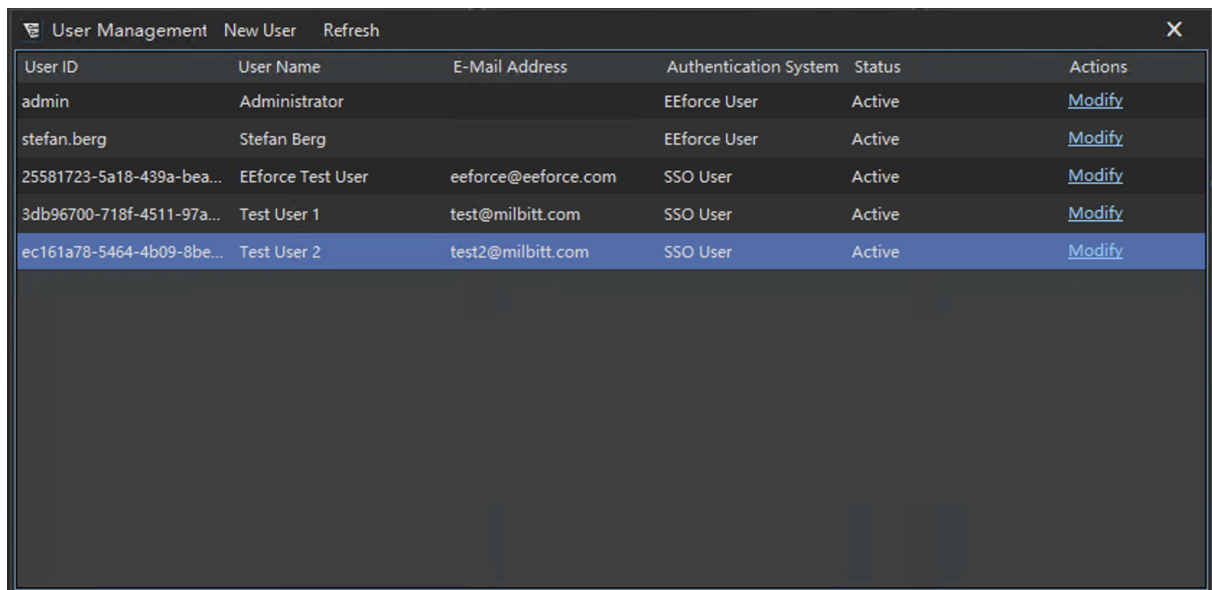
As in web interface, Administrator user can manage users, groups and LDAP configuration from the EEforce Client. We are going to retire these interfaces in future versions as we see Web Interface has been matured. We recommend you to try the Web Interface first.

Group Administration



Under the Group Management Window, you can create, modify, and delete user groups. You can also assign users to groups and manage group permissions.

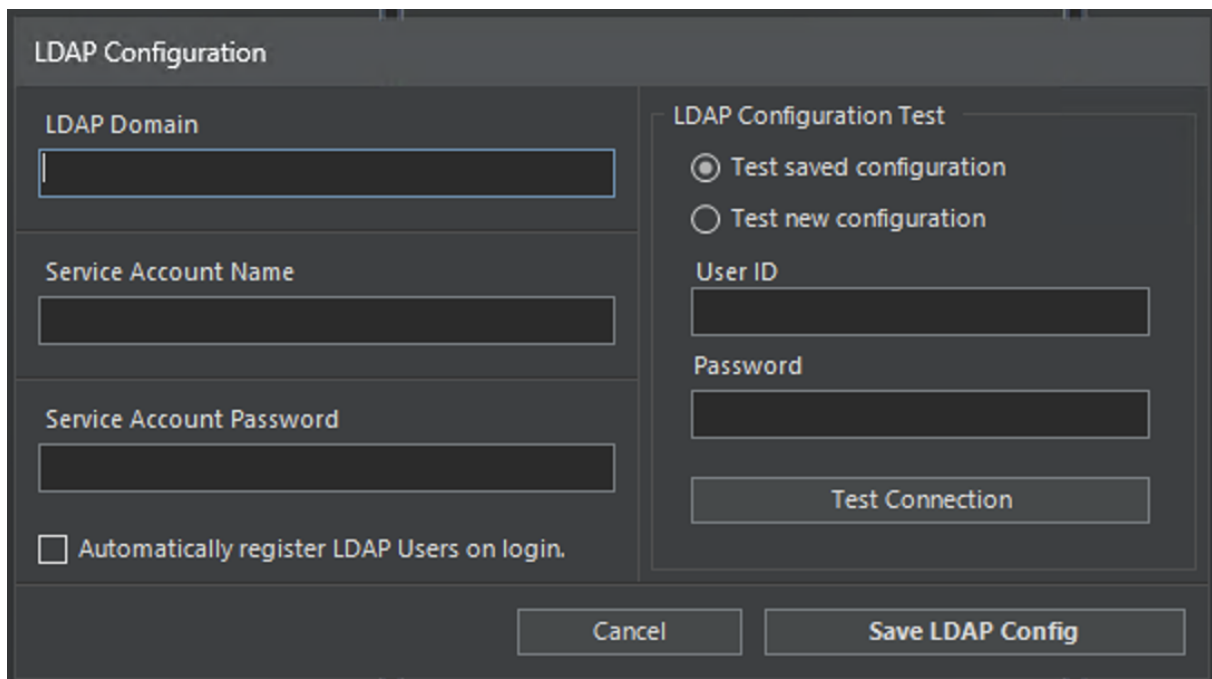
User Administration

A screenshot of the 'User Management' window. It has a title bar with 'User Management', 'New User', and 'Refresh' buttons, and a close button 'X'. The window contains a table with columns: 'User ID', 'User Name', 'E-Mail Address', 'Authentication System', 'Status', and 'Actions'. There are five rows of user data. The last row is highlighted in blue. Below the table is a large empty space.

User ID	User Name	E-Mail Address	Authentication System	Status	Actions
admin	Administrator		EEforce User	Active	Modify
stefan.berg	Stefan Berg		EEforce User	Active	Modify
25581723-5a18-439a-bea...	EEforce Test User	eeforce@eeforce.com	SSO User	Active	Modify
3db96700-718f-4511-97a...	Test User 1	test@milbitt.com	SSO User	Active	Modify
ec161a78-5464-4b09-8be...	Test User 2	test2@milbitt.com	SSO User	Active	Modify

Under the User Management Window, you can create and modify user accounts. There are certain limitation based on user type, such as SSO users cannot be modified through this interface because all information is coming from the designated Identity Provider.

LDAP Configuration

A screenshot of the 'LDAP Configuration' window. It has a title bar with 'LDAP Configuration'. The window is divided into two main sections. The left section contains three text input fields: 'LDAP Domain', 'Service Account Name', and 'Service Account Password'. Below these is a checkbox labeled 'Automatically register LDAP Users on login.'. The right section is titled 'LDAP Configuration Test' and contains two radio buttons: 'Test saved configuration' (selected) and 'Test new configuration'. Below these are two text input fields: 'User ID' and 'Password'. At the bottom of the right section is a 'Test Connection' button. At the bottom of the window are two buttons: 'Cancel' and 'Save LDAP Config'.

Under the LDAP Configuration Window, you can configure the settings for LDAP integration. This includes specifying the LDAP Domain, Service Account information. You can also test the connection to the LDAP server to ensure that the configuration is correct.

If you wish to automatically provision users from LDAP, you can enable the “Automatically Register LDAP Users on login” option. This will create user accounts in EEforce based on the information retrieved from the LDAP directory on their first attempt to log in to the server.

SSO Configuration

It's only possible to set up SSO details from the Web Interface. See [Administration From Web Interface](#)