# **EEforce 25.5 Documentation**

Milbitt Software



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## Contents

Introduction	3
Key Features	3
Server Installation and Configuration	4
Prerequisites and Recommendations	. 4
Using the Installer	4
Installation Steps:	4
Starting and Stopping the Server	9
Using IIS Manager (UI)	9
Using Command Line (CLI)	9
Changing Server Settings after Installation	10
config.json	10
Relocating Storage	10
Setting Vault Permissions	10
SSL Certificate	11
Client Installation and Configuration	11
Prerequisites and Recommendations	. 11
Using the Installer	. 12
Installation Steps:	. 12
First-Run	. 17
Configurations	20
Licensing	26
License Types	26
Frequently Asked Questions	27
Project Operations	27
Using the Project Explorer Section	. 29
Creating a New Project	. 30
Changing a Project Name	31
Changing Project Users	32
Cloning a Project	. 33
Removing a Project	34
Container Operations	34
Importing a Container into a Prainet	25

Renaming a Container	37 38 38 38
Copying a Container to Another Project	40
Design Operations	41
Opening a Design in Read-Only Mode	42
Opening a Design for Editing (Check-Out)	42
Finishing Editing a Design (Check-In)	42
Cancelling Editing of a Design (Cancel-Checkout)	44
Remote Working	44
Exporting a Board for Remote Working	45
Importing a Remotely Updated Board	45
User Management	46
Creating a New User	46

We are actively updating the documentation of EEforce. Some information may be outdated or incomplete. We appreciate your understanding and patience as we work to improve the documentation.

## Introduction



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EEforce is a design lifecycle management software specifically designed to work with Mentor Graphics PADS and Xpedition 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 Xpedition, 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.

## **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:

Server_25.5	× +		– o ×
$\leftarrow \rightarrow \uparrow c$	🖵 > Desktop > Server_2	5.5 >	Search Server_25.5 Q
🕀 New ~ 🔏 🖸	Î () & Ú 🕅	, Sort ~ ≣ View ~ ····	📑 Details
Name	Date modified	Type Size	
🚞 packages	2025-05-12 21:54	File folder	
耳 _setup.exe	2025-05-08 22:58	Application 22 261 KB	
😼 Install.exe	2024-09-22 16:33	Application 48 KB	
3 items			{data

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



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- 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:

	PCB Versioning			×
Geerorce	and Storage System		Server	Installer 25.5
Welcome				
	License File	: C:\Users\admin\Desktop\2025-05-09_0_BC2411378F95.xn	nl	Browse
License Agreement				
	Software Installation Folder	: C:\pdmserver\app		Browse
	Vault Folder	: C:\pdmserver\vault		Browse
Pre-Install Confirmation	Trash Folder	: C:\pdmserver\trash		Browse
Installation				
Finish				
		Pre	vious	Next
				{(0a

zoomable}

- **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.

	PCB Versioning		×
Geerorce	and Storage System		Server Installer 25.5
Welcome			
License Agreement	You're ready to start the	installation.	
System Folders	Please check for one mo	ore time the information below is correct	t.
	License File:	C:\Users\admin\Desktop\2025-05-09_0_BC2411378F95.xr	nl
Installation	Software Installation Folder	C:\pdmserver\app	
	Vault Folder :	C:\pdmserver\vault	
Finish	Trash Folder :	C:\pdmserver\trash	
		G	o Back Start Installation

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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.



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

<b>€</b> EEForce	PCB Versioning and Storage System	× Server Installer 25.5
Welcome License Agreement System Folders Pre-Install Confirmation	End-User License Agreement (EULA) of EEforce PCB Vers System This End-User License Agreement ("EULA") is a legal agreement between you and MILBI This EULA agreement governs your acquisition and use of our EEforce PCB Version Man ("Software") directly from MILBITT ENGINEERING or indirectly through a MILBITT reseller or distributor (a "Reseller")	ion Management ITT ENGINEERING Jagement System software ENGINEERING authorized
Installation Finish	Please read this EULA agreement carefully before completing the installation process Version Management System software. It provides a license to use the EEforce P System software and contains warranty information and liability disclaimers.	and using the EEforce PCB CB Version Management
	If you register for a free trial of the EEforce PCB Version Management System software, also govern that trial. By clicking "accept" or installing and/or using the EEforce P System software, you are confirming your acceptance of the Software and agreeing terms of this EULA agreement.	, this EULA agreement will CB Version Management to become bound by the
	If you are entering into this EULA agreement on behalf of a company or other legal enti have the authority to bind such entity and its affiliates to these terms and condition authority or if you do not agree with the terms and conditions of this EULA agreement Software, and you must not accept this EULA agreement.	ity, you represent that you is. If you do not have such t, do not install or use the
	This EULA agreement shall apply only to the Software supplied by MILBITT ENGINEERI	NG herewith regardless of Decline I Accept

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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 "UseNTLMAuth": false // Legacy, do not modify
6 }
7 }
```

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.

Permissions for vault			×
curity			
)bject name: C:\pdmserver\vau	ult		
roup or user names:			
Authenticated Users			
Administrators (TestPC1\Admi     Administrators (TestPC1\Admi     Sers (TestPC1\Users)     EEForceApplicationPool (IIS A	inistrators) APPPOOL\EEForc	eApplicatio	
	Add	Remove	
emissions for Authenticated Isers	Allow	Deny	
Full control		Ο.	
Modify	<i>~</i>		
Read & execute			
List folder contents			
Read	<b>_</b>		
			-
ОК	Cancel	Apply	

## **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.
- Admin privileges are required to install the software.

- Network: A reliable LAN connection between the server and client machines is recommended.
- **Storage:** At least 4GB of available disk space is recommended in a local disk. NVMe or SSD drives are **recommended**.

### **Using the Installer**

The Client Installer has been developed to provide a robust step-by-step installation experience. You can follow the instructions in the software or as listed below.

### Installation Steps:

- Obtain the latest version of the installation package either from our Support Portal or your IT department. We publish installation files in ZIP package format with names like Client\_25.5.zip. Version numbers may be different than the example here.
- 2. Extract the ZIP file to a convenient folder.
  - × Client\_25.5.1 □ > Client\_25.5.1 > Search Client\_25.5.1 (+) New ~ ↑↓ Sort ~ 🔳 View ~ .... Details Name Date modified Туре 🚞 packages 2025-05-13 16:32 File folder setup.exe 2025-05-13 16:21 Application 82 158 KB 😼 Install.exe 2024-09-22 16:33 Application 48 KB ■□ {data-3 items
- 3. The extracted folder should contain the following files:

- zoomable}
- 4. Run Install.exe. If prompted by Windows, grant the necessary permissions.

- 5. The installer will check for the required runtimes are installed. If any are missing, the installer will try to install them automatically. This may take some time, depending on your system configuration and the number of packages to be installed.
- 6. The welcome window should appear:



zoomable} 7. Click the **Start Installation** button.

### EEforce 25.5 Documentation

#### 2025-05-12



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- 8. You should see the **End User License Agreement**. Please take time to read it carefully and press the **I Agree** button. Please note that approving this License Agreement is a legally binding action.
- 9. After accepting the License Agreement, the System Folders form will be displayed:

🖉 💶 Force	PCB Versioning and Storage System		Client	× Installer 25.5.1	
Welcome					
License Agreement					
System Folders					
Pre-Install Confirmation	Software Installation Folder :	C:\Program Files\MILBITI\EEforce_Client		Browse	
Installation					
Finish					
			Previous	Next {d	lata

• **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**.



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



zoomable} 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.



{data-zoomable} 2. When the application opens, the login dialog will appear. The

connection settings must be updated on the first start. Click the **Settings** button.

🗑 Log In	×
User ID admin	Remember
Password	
Settings	Submit

{data-zoomable} 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.

Settings			×
Server Settings	Server Settings		
Xpedition PCB Settings	Server UR	L: https://eeforceserver.local	Check
PADS Professional Settings	Local Working Director Application Color Them	y: C:\pdm e: Dark	Browse
Schematic BOM View Settings	Show Template Projec		
PCB BOM View Settings			
Import Config File Export C	Config File About		Save Configuration

zoomable} 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.

```
    User ID: admin
    Password: Passw0rd
```

٠	٠	٠

🗑 Log In	×	
User ID admin	Remember	
Password		
Settings	Submit	{data-zoomable}

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

Select a license from the list below that fits yo	rsioning orage System ur requirement.	Re	fresh	R Minimur Settings	X Version: 25.5.9264.29715 elease Date: 13-May-2025 m License Version: 202505 Drop License
Product Name	Serial Number	Version	Expiry	Status	User Name
(FLOATING) EEforce for PADS Professional		202605	6/8/2026	Available	
(FLOATING) EEforce for Xpedition Enterprise	2	202605	6/8/2026	Available	
Remember my choice and do not show thi	is dialog if license is av	vailable.			Jse Selected License {data

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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.

### 2025-05-12

### EEforce 25.5 Documentation



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The installation and initial configuration of the EEforce Client are now complete. Next, configure the PADS/Xpedition 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**.

🖉 🗉 Force 🛛	Tools Help			
🛱 Project Explore	Licensing	×		
Test	Settings		V	Refresh
Test_Project	User Management Change Password			

2. The Settings window will appear:

Settings	X
Server Settings	Server Settings
Xpedition PCB Settings	Server URL: https://eeforceserver.local Check
PADS Professional Settings	Application Color Theme: Dark
Schematic BOM View Settings	Show Template Project: 🔲 Enabled
PCB BOM View Settings	
Import Config File E	Dort Config File About Save Configuration

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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:	http://localhost:8000		
Local Working Directory:	C:\pdm	Browse	
Application Language:	English 👻		
			data-

- **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: C:\MentorGr	aphics\EEVX.2.7\SDD_HOME	Browse
Central Library File: 🔽 Enabled	\${CENT_LIB_PATH}/MILBITT_Library.lmc	Browse
Databook File: 🔽 Enabled	\${CENT_LIB_PATH}/MILBITT_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	MILBITT-BOM	

zoomable}

• **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  S{CENT_LIB_PATH}/RFTR_Library.lmc	Browse
Databook File: Denabled \${CENT_LIB_PATH}/RFTR_Library.dbc	Browse
Borders.ini File: 🗌 Enabled 🛛 🖁 🕻 CENT_LIB_PATH}/borders.ini	Browse
Speccomps.ini File: DEnabled \${CENT_LIB_PATH}/speccomp.ini	Browse
Busconts.ini File: DEnabled \${CENT_LIB_PATH}/busconts.ini	Browse
Part Lister Config Name: 🔲 Enabled RFTR-BOM	
zoomable}	

- **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:



- 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:

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- 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:



**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

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**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.

Project\_3 {data-zoomable}

**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.



{data-zoomable}

**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**.



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:



- 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.

Boar	ds						
	Status	Name	Version	n Size	Software	Last Modified	Check-Out Info
	CheckedIn	LessonFinal	1	124.09	XENTPV	6/27/2020 1:22 AM	
			Project_5\Lesso				
			View (Open Rea	id-Only Mod	e)	•	
			Check-Out (Sta	rt Editing Mo	ode)	•	
			Remote Workin	g		•	
			Board Info			•	

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

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## 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.

Boards							
Status	Name	Vers	sion S	Size	Software	Last Modified	C
盲 CheckedIn	LessonFinal	i	1	24.09	XENTPV	6/27/2020 1:22 AM	
		Import Local Boa	ard				
		Refresh					

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- 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.

🖲 Board Move-Cop	y	×
Design Name:		
Project_5\Test		
Operation:		
O Move Board	Copy Board	
Target Project:		
Search		
Project 1		
Project_3		
🔤 Project_4		
New Board Name:		
Test		
	Cancel	Run

- 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.

E Reard Maria Const	
Board Move-Copy	
Design Name:	
Project_5\Test	
Operation:	
Move Board     Opy Board	
Target Project:	
Search	
Project 1	i I
Project 3	
Project 4	
New Board Name:	
Test	
Council Dura	
Cancel Run	

- 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.



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### 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:

Check-In	
Design Name:	
Project_4\LessonFinal	
Lock Status: No Lock Found	<u>Check Again</u>
Check-In Comment:	
Remove 3D Files	(Information)
	(Information)
	Intolliation
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.

Cancel Check-Out			
You're about to delete all local work of this board. This operation is NOT reversible. Are you sure to proceed?			
Design Name: Project_4\LessonFinal			
Lock Status: No Lock Found <u>Check Again</u> Cancel Cancel Cancel Check-Out			

- 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.

::: warning Under Construction This document is a work in progress and may not be complete. :::

## **User Management**

😼 User Managem	ent New User	Refresh		×
User ID	User Name	Role	Authentication System	Status
admin	Administrator	admin	EEforce User	Active
stefan.berg	Stefan Berg	superuser	EEforce User	Active

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The User Management window provides an overview of all registered users in the system. Here, you can view user details, search for users, and perform actions such as creating, editing, or deleting user accounts.

## Creating a New User

In the User Management window, click the **New User** button. The following dialog box will appear:

Add New User	
User ID	
User Name	i
Password	
Retype Password	
Role	
Super User  Normal User	
Cancel Save	
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The New User dialog allows you to enter the necessary information for a new user account, such as username, email, password, and user roles. Fill in the required fields and click **Save** to create the new user.