CAMEO ENTERPRISE DATA WAREHOUSE

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1. Purpose

The purpose of this user guide is to provide general information about Cameo Enterprise Data Warehouse or CEDW in short to the users regarding the objectives, system architecture and design, and the features of Cameo Enterprise Data Warehouse. This user guide also covers the basic procedures for installing and running Cameo Enterprise Data Warehouse.

2. Getting Started

To start using CEDW Admin, you need to understand what CEDW is and what it can do. This section aims to achieve two objectives: (i) to explain CEDW to you in a compact but thorough manner and (ii) to describe detailed instructions for installing, configuring, and running both the CEDW server and admin.

2.1 Introducing Cameo Enterprise Data Warehouse

CEDW is a new generation server that is designed to work with large amounts of data. The goal of CEDW is to provide our clients with a modeling repository standard that can transparently scale from a single workstation to hundreds of servers. It enables multiple servers to interconnect and share resources that are accessible by clients from different sites working on a different or the same project.

CEDW allows team members to collaborate on a project regardless of locations and data size. CEDW stores all projects in a single repository and allows several team members to open the same project on multiple workstations and manipulate it.

Architects, engineers, and modelers can work on the same project and merge the works of each team member effortlessly with version control. The CEDW server stores large projects and allows team members to work on them concurrently (several members can download the same project). You can check out a project, open and edit it locally on your machine, save, and commit it to the server.

2.1.1 System Architecture and Design

The focus of architecture concepts and design principles of CEDW is on the capability to create a highly scalable system and collaborative modeling environment. Scalability refers to the ability of CEDW to support any number or type of internal or external users with larger volumes of data and applications. The purpose of scalability is to support potential growth of storage within the business without impacting on performance. CEDW is also dedicated to effectively integrate with MagicDraw by extending all of the capabilities of Teamwork Server to provide a collaborative modeling environment where multiple users across different platforms will be able to work on a model at the same time without concerns about data consistency and availability.

CEDW is a model repository that is deployed as a single-node server (Figure 1). While clustered deployment is not part of the current release yet, support of multi-node clustering (Figure 2) will be included in future work. A cluster is a group of servers working as a single consistent model repository. Clustering is transparent to the clients of the repository.
Compared with single nodedeployments, a cluster deployment has higher capacity, or improved reliability, or both. A cluster can either use replication to increase reliability and enable failover, or it can simply increase the storage and processing capacity of the cluster.

A cluster consists of multiple CEDW servers connected through LAN, acting as a single repository. A server is a single computer which is part of a cluster and a client is a computer running, for example, MagicDraw, that accesses data in a repository, but is not part of the cluster.

NOTE The current release of CEDW does not support clustering.
2.1.2 Key Features

The following are the main features of CEDW:

(i) Based on the EMF standard to support a wide and extensible range of modeling languages.
(ii) Built on top of a distributed database with proven big data capabilities and enterprise class robustness.
(iii) Supports clustering and failover clustering to ensure scalability, reliability, and performance (the current release of CEDW does not support clustering).
(iv) A scalable model repository with collaboration support, with plug-in API for customized scalable extensions.
(v) Leverages grid processing power to simulate complex models.

The current release of CEDW includes the following features:

(i) A symmetric distributed clustering support.
(ii) The capability of accommodating high volumes of concurrent usage. Users connected to a dead node are automatically reconnected to another node.
(iii) Online load balancing. When a user connects to a CEDW repository, the server gives the user a session on the server with the fewest connected users.
(iv) Technology Preview MagicDraw Integration:
   - Versioned storage of MagicDraw projects.
   - Simple lock-based collaboration support.

2.2 System Requirements

You need to install both CEDW and Cassandra to run CEDW. The following section contains system requirements for your machine to install both CEDW and Cassandra.

2.2.1 Cameo Enterprise Data Warehouse

CEDW has been tested with the following specifications:

- Intel Xeon CPU E31230 @ 3.20GHz
- 16 GB RAM
- Linux (CentOS release 6.6 is recommended)
- Cassandra 2.0.11
- Oracle JDK 1.8.0_45
- Open port 2552 between servers in a cluster, and open port 3579 (default) to clients
- Static IP address for the node

2.3 CEDW Server and CEDW Admin Installation

There are several options available for installing the CEDW server and the CEDW Admin. You can install them using either (i) the installer file or (ii) the zip file. Either method has instructions for installation on both Linux and Windows. The installer file installs both the CEDW server and CEDW Admin at the same time. But if you use the zip file, you need to install the CEDW server and the CEDW Admin one after another. After each installation using the zip file, you need to run them as a service on Linux and on Windows as well.

You need to install Cassandra on your machine prior to installing CEDW. Follow the steps below to install Cassandra.
To install Cassandra (on Linux):

1. Check which version of Java is installed by running the following command:
   
   $ java -version

2. Add a yum repository specification for the Datastax repository in `/etc/yum.repos.d`

   $ vi /etc/yum.repos.d/datastax.repo

   In this file, add the following lines for the Datastax repository:

   ```
   [datastax]
   name = DataStax Repo for Apache Cassandra
   baseurl = http://rpm.datastax.com/community
   enabled = 1
   gpgcheck = 0
   ```

3. Install the packages by using the following command line:

   $ sudo yum install dsc20-2.0.11-1 cassandra20-2.0.11-1

4. Configure Cassandra:

   4.1 Locate the keys ‘- seeds’ and ‘listen_address:’ in the file in `/etc/cassandra/conf/cassandra.yaml` (they are at different locations in the file). If, for example, the node’s IP address was 10.1.1.123, the following values would apply:

   ```
   - seeds: "10.1.1.123"
   listen_address: 10.1.1.123
   ```

4.2 Use the following keys’ values to change the existing ones:

   ```
   read_request_timeout_in_ms: 60000
   write_request_timeout_in_ms: 60000
   thrift_framed_transport_size_in_mb: 100
   rpc_address: 0.0.0.0
   ```
5. Verify the installation of Cassandra.
   5.1 When installed as above, you can start Cassandra using the following command:
      
      $ sudo service cassandra start

   5.2 Issue the following command to verify that Cassandra is ready:
      
      $ tail /var/log/cassandra/cassandra.log

   5.3 Verify that it contains lines similar to the following:
      
      INFO 15:51:58,644 Node/10.1.1.123 state jump to normal
      INFO 15:51:58,650 Waiting for gossip to settle before accepting client requests...
      INFO 15:52:06,650 No gossip backlog; proceeding

   NOTE If you get an out of memory error when starting Cassandra, you need to increase the Java stack size. The instructions for increasing the stack size are given in step 1.4 in the section 2.6.1 Starting the Server.

6. Verify that Cassandra is running:
   
   $ nodetool status

   A single server or a single node can serve a limited number of users with a limited storage and limited performance. You need a static IP address for the server if you want to install CEDW on a single server.

2.3.1 Installing CEDW and CEDW Admin by Using the Installer File

The installer file includes both CEDW and the CEDW Admin in its installation package. Therefore, by the time you finish installing with the installer file, you will have both CEDW and the CEDW Admin installed on your machine.

2.3.1.1 On Linux

To install CEDW by using the installer file on Linux:

1. Run the file:
   
   cedw_182_installer_linux-x86_64bin.
   
   $ sudo ./cedw_182_installer_linux-x86_64bin.
The Introduction section will appear (Figure 4).

2. Press Enter to continue. The License Agreement section will appear.
3. Press Enter to go through the license agreement.
4. Enter “Y” to accept the license agreement (Figure 5).
5. Type the name or IP of the node.

Configure CEDW service owner
-------------------------------------
Please enter the user under which CEDW server will run.

Linux user to run CEDW (Default: ): cedw

Configure JAVA_HOME
-----------------------
Please enter Java Home location.

JAVA_HOME (Default: /home/software/jdk1.8.0_40):

Choose Install Folder
-----------------------
Where would you like to install?

  Default Install Folder: /home/cedw/cedw

ENTER AN ABSOLUTE PATH, OR PRESS <ENTER> TO ACCEPT THE DEFAULT

Pre-Installation Summary
---------------------
Please Review the Following Before Continuing:

Product Name:
  Cameo Enterprise Data Warehouse

Install Folder:
  /home/cedw/cedw

Disk Space Information (For Installation Target):
  Required: 500,428,290 Bytes
  Available: 83,671,007,232 Bytes

PRESS <ENTER> TO CONTINUE: 

Figure 6 -- Selecting Server Mode and Install Folder

6. Type the name of the Linux user on which the CEDW server will run.
7. Enter the Java home location (the default location is /home/software/jdk1.8.C_40/) (Figure 6).

Figure 7 -- Selecting a CEDW Installation Folder
8. Select an install folder to install CEDW. The default install folder is /home/cedw/cedw. The Pre-
    Installation Summary section will appear.
9. Press Enter to continue (Figure 7).

10. Press Enter to start installing CEDW. Once CEDW has been successfully installed, the
    installation complete message will appear (Figure 8).
11. Press Enter to exit the installer.

2.3.1.2 On Windows

To install CEDW by using the installer file on Windows:

1. Run the file cedw_182_installer_win32-x86_64.exe. The Introduction section will open.
2. Click **Next**. The License Agreement section will open.
3. Select the **I accept the terms of the License Agreement** option to accept the license agreement terms.
4. Click **Next**.
5. Type the name or IP of the machine where you want to install CEDW.
6. Click **Next**.
7. Select the Java folder installed on your machine.
8. Click **Next**.
9. Select a location on your machine where you want to install CEDW.
10. Click **Next**. The Pre-Installation Summary section will open.

*Figure 13 -- Choosing a Location to Install CEDW*
11. Check if everything is correct.
12. Click **Install**. The installer will install CEDW on your machine.
Figure 15 -- CEDW Installation Progress
13. Click Done to close the installation window.

2.3.2 Installing CEDW and Running it as a Service by using the Zip File

This section explains how to install CEDW on a single server and the CEDW Admin by using the zip files. You need to follow the step-by-step instructions to first install CEDW and then CEDW Admin.

2.3.2.1 On Linux

To install CEDW by unzipping the file to a directory.

1. Verify, with `java -version` that the active version of Java is Oracle JDK 1.8.0_45.
2. Unzip the file to the folder, for example, `/opt/cedw`. Once you have unzipped the file, you will get folder name `/opt/cedw/CameoEnterpriseDataWarehouse`.
3. Next, open the server configuration file `/opt/cedw/CameoEnterpriseDataWarehouse/cedw.ini` and edit the following line to use the node's own IP address (see Figure 17 for example).

   ```
   -Desi.cluster.seed-nodes=akka.tcp://CedwServer@10.1.2.3:2552
   ```
In order to run the CEDW server as a service, you must take a number of extra steps in addition to normal installation. Before proceeding, it is important on both Linux and Windows that the server’s log configuration points to file location that is writeable. You can find the log config in the file `CameoEnterpriseDataWarehouse/configuration/logback.xml`. Next you need to edit the lines containing `<file>...</file>` so that it contains full (absolute) paths to the files where log entries should be written.

To run CEDW server as a service on Linux:

1. Choose or create a user dedicated to running the server, for example, cedw.
2. Set the necessary environment variables in `/etc/cedw/cedw-env`:

   ```
   CEDW_HOME=/opt/cedw/CameoEnterpriseDataWarehouse/
   CEDW_OWNR=root
   CEDW_LOCAL_IP=192.168.1.10
   JAVA_HOME=/usr/java/jdk1.8.0_45/
   ```

   **NOTE**
   - CEDW_HOME: to point to the directory where CEDW was installed.
   - CEDW_OWNR: the user account under which CEDW will run.
   - CEDW_LOCAL_IP: the IP address on which CEDW should accept connections.
   - JAVA_HOME: a directory containing a Java JDK or JRE.

3. Copy the service startup script into the `init.d` directory, for example:

   ```
   # sudo cp /opt/cedw/CameoEnterpriseDataWarehouse/scripts/linux/cedw-svc /etc/init.d
   ```

4. Start the service.

   ```
   # sudo service cedw-svc start
   ```
To stop the service:

- Type the following:

  ```
  # sudo service cedw-svc stop
  ```

To uninstall the service:

- Remove the service script from the init.d directory by typing the following:

  ```
  # sudo rm /etc/init.d/cedw-svc
  ```

Once you finish installing CEDW, using your administrator account you can create user accounts through the CEDW Admin. See 3.5.2 Creating a User for the instructions to add user accounts.

### 2.3.2.2 On Windows

To install CEDW:

1. Verify, with `java --version` that the active version of Java is Oracle JDK 1.8.0_45.
2. Unzip the file to a directory, for example, `C:\cedw`. Once you have unzipped the file, you will get the folder name `C:\cedw\CameoEnterpriseDataWarehouse`.
3. Next, open the server configuration file `C:\cedw\CameoEnterpriseDataWarehouse\cedw.ini` and edit the following line to use the node’s own IP address (see Figure 18 for example).

   ```
   -Desi.cluster.seed-nodes=akka.tcp://CedwServer@10.1.2.3:2552
   ```

   Figure 18 -- Editing File cedw.ini

To run the CEDW server as a service on Windows:

1. Set the necessary environment variables in the shell that will execute the service installation script, where:
   - CEDW_HOME is the path that points to the directory where CEDW was installed.
   - CEDW_LOCAL_IP is the IP address on which CEDW should accept connections.
• JAVA_HOME is a directory containing a Java JDK or JRE.

<table>
<thead>
<tr>
<th>TIP</th>
<th>Alternatively you can set the environment variables by adding them through the Environment Variables dialog (click Control Panel &gt; System &gt; Advanced &gt; Environment Variables &gt; New).</th>
</tr>
</thead>
</table>

2. Run the service installation script, for example:
   
   C:\cedw\CameoEnterprise\DataWarehouse\scripts\windows\installService.bat

<table>
<thead>
<tr>
<th>NOTE</th>
<th>It is best to run the script from a Command Prompt so that it will be possible to read any errors that may be reported.</th>
</tr>
</thead>
</table>

3. Open the Windows Services panel.
4. Locate the CEDW service, select it, and click **Start**. (As with normal startup, Cassandra must already be running.)

<table>
<thead>
<tr>
<th>NOTE</th>
<th>On Windows, the values of the environment variables are evaluated only once, when the service is installed. Subsequent changes to these variables will not affect service startup. Therefore, if the values are modified and the service must use the new values, the service must be re-installed, that is uninstall it and then install it anew.</th>
</tr>
</thead>
</table>

To stop the service:

1. Open the Windows Services panel.
2. Locate the CEDWA service, select it, and click **Stop**.

To uninstall the service:

• Run the service uninstall script:

   C:\cedw\CameoEnterprise\DataWarehouse\scripts\windows\uninstallService.bat

### 2.3.3 Installing CEDW Admin and Running it as a Service by Using the Zip File

This section provides the instructions to (i) install the CEDW Admin on both Linux and Windows by unzipping the file and (ii) install them as a service.

#### 2.3.3.1 On Linux

To install the CEDW Admin:

• Unzip the file to the folder, for example, /opt/cedw. Once you have unzipped the file, you will get folder name /opt/cedw/CameoEnterpriseDataWarehouse_Admin.
To run the CEDW Admin as a service on Linux:

1. Open the file /etc/cedw/cedw-env (the file created during installation of CEDW on Linux). You will see the following content:

   CEDW_HOME=/opt/cedw/CameoEnterpriseDataWarehouse/

   CEDW_OWNR=root

   CEDW_LOCAL_IP=192.168.1.10

   JAVA_HOME=/usr/java/jdk1.8.0_45/

   Add the following line to the content:

   CEDWA_HOME=/opt/cedw/CameoEnterpriseDataWarehouse_Admin/

2. Copy the service startup script into the init.d directory, for example:

   # sudo cp /opt/cedw/CameoEnterpriseDataWarehouse_Admin/scripts/linux/cedwa-svc /etc/init.d

3. Start the service.

   # sudo service cedwa-svc start

To stop the service:

- Type the following:

  # sudo service cedwa-svc stop

To uninstall the service:

- Remove the service script from the init.d directory by typing the following:

  # sudo rm /etc/init.d/cedwa-svc

2.3.3.2 On Windows

To install the CEDW Admin:

- Unzip the file to a directory, for example, C:\cedw. Once you have unzipped the file, you will get the folder name: C:\cedw\CameoEnterprise\DataWarehouse_Admin.
To run the CEDW Admin as a service on Windows:

1. Set the necessary environment variables in the shell that will execute the service installation script, where:
   • CEDWA_HOME is the path that points to the directory where CEDW Admin was installed.

2. Run the service installation script, for example:
   C:\cedw\CameoEnterpriseDataWarehouse_Admin\scripts\windows\installService.bat

3. Open the Windows Services panel.
4. Locate the CEDWA service, select it, and click **Start**. (As with normal startup, Cassandra must already be running.)

To stop the service:

1. Open the Windows Services panel.
2. Locate the CEDWA service, select it, and click **Stop**.

To uninstall the service:

- Run the service uninstall script:
  C:\cedw\CameoEnterpriseDataWarehouse_Admin\scripts\windows\uninstallService.bat

### 2.4 Uninstallation

This section provides two methods to uninstall CEDW.

(i) To uninstall CEDW and CEDW Admin:

1. Stop CEDW and CEDW Admin.
2. Delete the directory in which CEDW and CEDW Admin are installed.
3. Uninstall Cassandra using the following commands:

   $ service cassandra stop
   $ sudo yum remove cassandra20-2.0.11-1

(ii) To uninstall CEDW and CEDW Admin using the uninstaller file:

1. Run the uninstaller file (.bin for Linux and .exe for Windows).
2. Follow the instructions given to uninstall CEDW and CEDW Admin.

2.5 CEDW Admin Configuration

You can open the CEDW server configuration file, located in the directory where you unzipped the CEDW install file, and configure the server’s environment parameters. Once you have installed the CEDW Admin, you need to configure the system because all values in the configuration file are default values. By configuring the system, you can create user accounts to access the server.

The server will load the configuration file every time the server’s repository starts. Therefore, changes made to the configuration file will be applied once you restart the server.

| NOTE | The current release of CEDW does not support GUI for configuring the server values. |

2.5.1 Setting Server Protocol

CEDW Admin is a web server. You can select the protocol settings between http and https by configuring the parameter "protocol". To change the setting, search for the text "protocol =" and select either http or https as the valid value. For example:

   protocol = "https"

2.5.2 Setting Server Port

The default port of CEDW Admin is 8111. You can change it by changing the value of the parameter "port". For example:

   port = 8112

2.5.3 Setting CEDW Server IP(s)

By default, CEDW Admin will connect to a CEDW server on the same machine. However, you can configure it to connect to another CEDW server by changing the value of the parameter "cedw-servers". If you want to connect to another server, search for the text "cedw-servers =" and change the value, for example:

   cedw-servers = ["10.1.1.123"]

If you set up CEDW as a cluster of two or more servers, you can specify a list of values, for example,

   cedw-servers = ["10.1.1.123", "10.1.1.124", "10.1.1.125"]
2.5.4 Starting and Stopping CEDW Admin

You can use the following script to start CEDW Admin. You can find the script in your CEDW Admin installed folder.

```
$ cd <CEDW Admin folder>
$ ./cedw_admin
```

Service will start in the foreground and log to the console. To stop the server, press Ctrl + C or close the terminal to shut it down.

2.5.5 Accessing CEDW Admin

You need a web browser to access the CEDW Admin's user interface. If you do not change the default configuration, the IP of the machine on which you installed CEDW Admin is 10.1.1.123. You can access the CEDW Admin from https://10.1.1.123:8111. The default administrator’s username and password are both Administrator.

2.6 Server Management

2.6.1 Starting the Server

You must start and run CEDW properly in order to connect your client to the server and work on your project. You need to start Cassandra first before you start the server.

To start the server:

1. Start Cassandra (Figure 19).
   1.1 You can start Cassandra using the following command:
      
      ```
      $ sudo service cassandra start
      ```

      ![Figure 19 -- Starting Cassandra](image)

      1.2 Issue the following command to verify that Cassandra is ready:
      
      ```
      $ tail /var/log/cassandra/cassandra.log
      ```

      1.3 Verify that the command prompt contains a line similar to the following:
      
      ```
      INFO 16:12:17,002 Startup completed! Now serving reads.
      ```

      1.4 If you get an out of memory error when starting Cassandra (Figure 20), you need to open the file /etc/cassandra/conf/cassandra-env.sh and increase the Java stack size from JVM_OPTS="$JVM_OPTS -Xss180k" to JVM_OPTS="$JVM_OPTS -Xss228k" (Figure 21).
2. Start CEDW as a foreground process. You can start CEDW using the following `cedw` script in your CEDW installed folder:

```
$ cd <CEDW installed folder>
$ ./cedw
```

Service will start in the foreground and log to the console (Figure 22).

### 2.6.2 Stopping the Server

Stopping the CEDW server will cause any other users or clients’ sessions to become unresponsive and therefore, they can no longer access the server and perform all operations such as check out projects, commit or update changes.

To stop the server either:

- Press **Ctrl + C** on the Linux console or close the terminal to shut the server down.
2.7 License Management

This section explains everything you need to know to activate and/or update the license required to access and use the features of the CEDW system. After installing CEDW on either a single or cluster server, you need to first install a FLEXnet License Server before activating the CEDW license. CEDW uses the FLEXnet License server to protect its licenses and help manage the number of CEDW licenses used by concurrent clients. You need to import a floating license key of CEDW to the FLEXnet License Server before you can activate it from the CEDW Admin.

2.7.1 Activating a CEDW License

Upon a successful installation, only the administrator account is available and required for you to activate the CEDW license for the first time. When you log in to the CEDW system for the first time, it is necessary that you accept the license agreement before you can select and activate your license on the license activation page. The license activation page will also open if your license expires.

**NOTE**

- You can only activate a CEDW license once per session.
- An administrator account is required only for first time license activation. In subsequent license updates, any user who has been assigned a server administrator role can activate the CEDW license through the CEDW Admin.

The license activation page prompts you to specify the address of the FLEXnet License Server where you store your license(s). If you do not specify any port, 1101 will be the default port. When entering the port, you need to use quotation marks at the beginning and end of the server’s address. If you enter a wrong address, an error message will open for you to report the problem.

To activate the CEDW system with a floating license:

1. Start the CEDW server. Make sure that there is no master node in the cluster, the FLEXnet License Server has been installed, and you have imported a floating license into it.
2. Log in to the CEDW Admin with your server administrator account. The License Agreement dialog will open.
3. Click I Agree. The CEDW license activation page will open.
4. Enter the FLEXnet License Server address and port number in the **License Server** text box.
5. Click the **Show Licenses** button. A table that contains information about all licenses that are available on the license server including the version number and expiration date will appear at the lower part of the page.

![Figure 25 -- Selecting a CEDW License](image)

<table>
<thead>
<tr>
<th>Product</th>
<th>Version</th>
<th>Connection Limit</th>
<th>In use (Available)</th>
<th>Expiration</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEDW-10</td>
<td>18.2001</td>
<td>10</td>
<td>0/5</td>
<td>PERMANENT</td>
</tr>
<tr>
<td>CEDAP-S</td>
<td>18.2001</td>
<td>5</td>
<td>0/2</td>
<td>PERMANENT</td>
</tr>
</tbody>
</table>

6. Select the button of a floating license that you want to use from the table.
7. Click the **Use License** button. A dialog will open to inform you that the license key has been successfully applied.
Your CEDW needs to be activated

Your CEDW is unavailable now. Please make sure the license key is available for use or it is not expired.

Before activating the CEDW, you would rather need to do following these steps:
1. Install the FLEXnet license server.
2. Import the CEDW license key to the FLEXnet license server.
3. Specify the license server address and port as below fields.
4. Select the license edition.

8. Click OK. You will be directed to the first page of CEDW Admin (the first page that opens after the license has been applied varies according to your role).

Once you have applied the license, the CEDW Admin will refresh the license information for you and it will contain the following details (Figure 27).

Figure 26 -- The CEDW License has been Applied

Figure 27 -- Applied License Information
Whenever you connect to the FLEXnet License Server and retrieve (lease) a license, the number of available licenses will decrease. If all available licenses from the server are leased, the next client who wants to obtain a license must wait until one of the other client users return the license, then the license count will be increased and available for lease again.

If your FLEXnet License Server is down, the server capacity shall be set to zero. Only one connection is allowed at that time. All currently active users can continue working but they cannot log in again once they log out as no user can log into the server at that time. The server administrator can log into the CEDW Admin to select a new license server.

You can see information about your current license on the Settings page of the CEDW Admin. The information includes the owner of the license, the user profile ID of the owner, the license’s edition and expiration date, the license’s version, and the connection limit. See section 2.7.2 Changing a CEDW License to change or update your license.

Table: NOTE

- The system restricts the number of nodes in a cluster that are currently using the licenses, therefore, concurrent sessions by clients cannot exceed the limit.
- The number of nodes in the cluster depends on the number of available license keys used by the master node.

2.7.2 Changing a CEDW License

You can also change your license to another one or update it through the License Information section on the Settings page of CEDW Admin. Changing a license means returning the current one to the FLEXnet License Server, setting the server capacity back to zero, and then leasing a new one. You cannot undo your action after clicking the Update License button.

The License Information section contains the details about the license server and the license key that is currently in use, and the Update License button that you can click to go see all available licenses that you can select. This information is hidden by default from the License Information section. It will appear only if you click the Update License button. It contains the same information as the activation page.

To get a new CEDW license from the current license server:

1. Click SETTINGS to open the Server Settings page.
2. Click the **Update License** button. A dialog informing that you are about to delete the license you are currently using will open.
3. Click **Yes**.

4. Enter your license server’s address in the **License Server** box.

5. Click **Show Licenses**. CEDW Admin will refresh the information and show all available license keys on the current license server in tabular form (Figure 31).
6. Select a new license key from the table and click the **Use License** button. A dialog informing that the license key has been successfully applied will open.

7. Click **OK**.

To get a new CEDW license from another license server:

1. Log into the CEDW Admin with an Administrator account.
2. Click **SETTINGS** to open the **Settings** page.
3. Click the **Update License** button. A dialog informing that you are about to delete the license you are currently using will open.
4. Click Yes.
5. Type the address and port of another license server in the License Server box.
6. Click the Show Licenses button. All available license keys on the new license server will appear in tabular form.
7. Select a new license key from the table and click the Use License button. A dialog informing that the license key has been successfully applied will open.
8. Click OK.

2.8 Technical Support

Our Technical Support Team will help you get prompt service and answers to any questions you may have for the product. Simply send your e-mail to support@nomagic.com.

3. Using CEDW Admin

The objective of this section is twofold: (i) to help you understand how the CEDW Admin works and (ii) to provide detailed instructions for using the CEDW Admin.

Cameo Enterprise Data Warehouse Admin (CEDW Admin) is a web interface that allows you to work with CEDW effectively. The web interface of CEDW Admin is accessible through a web browser. It provides you with access to the Cameo Enterprise Data Warehouse application and content. With CEDW Admin, you can visually manage users, roles, and project assignments. The layout of the web interface or CEDW Admin is designed for simplicity so that it is easy to understand and use.

The following sections describe the system security and access control to allow and restrict access to resources on the CEDW system, and step-by-step instructions on how to use the CEDW Admin to work with projects and manage users who access the admin to accomplish tasks assigned to them.

3.1 Role Based Access Control (RBAC) Overview

CEDW is purposely designed to handle large data and multi users using one or more interconnecting servers. One of the great benefits of the CEDW system is to control how and which user can access the system. Good management is essential for this large and complex system so that it can cater to a high number of users who want to access the system and use its resources at the same time. For this purpose, CEDW uses role based access control (RBAC) to regulate permissions and access to its system resources based on the roles of individual users. RBAC is a method to provide quick access and at the same time control actions a user can perform based on the premise of roles. With RBAC, you can assign general permissions quickly through the use of roles. There are several pre-existing roles that you can use or modify. You can also create custom roles for users with particular needs.

Your password and username are associated with your role in the CEDW system, meaning that your user account comes with role-specific authorizations. Authorizations are permissions that enable a role or a user to accomplish a course of actions. Permissions vary according to the role. Some permissions, for example, enable a user or a role to:

- create a user account, assign roles and permissions, and assign projects to each role.
- modify user information and password.
- configure the CEDW server settings.
- assign projects to specific users.
- allow and deny user login to CEDW Admin.
3.1.1 User Categories

There are two categories of users in the CEDW system: (i) internal and (ii) external. The following sections explain the differences between them.

3.1.1.1 Internal Users

Internal users are users originally created in the CEDW system and therefore, their usernames, passwords, and other data are stored on the CEDW server. You can edit an internal user’s username, password, or other data if you are authorized to do so.

3.1.1.2 External Users

Users belong to this category are LDAP users or users created on LDAP servers who have been imported into the CEDW system. Once LDAP users are imported, they become external users. Their usernames, passwords, and other data are stored on both the LDAP servers and CEDW system. You cannot edit an external user’s username, password, and other data until you convert the user into an internal user.

For more information on how to convert users from external to internal and vice versa, see section 3.5.5 Converting Users to External or Internal.

3.1.2 User Roles and Permissions

A role is an identity that distinguishes a user’s rights from others’ and determines different job functions a user has in CEDW system. A role gives a set of permissions to a user to perform one or more operations within the CEDW system. New permissions can be added as new projects or tasks are created. You assign a role to a user when you want that user to accomplish tasks or work on a project. Not every user has a role. You may create a user without giving the user any role. You may, also, create a new role first and assign it to a user later. The CEDW Admin displays all roles on the Roles Management page (Figure 32). You can also see these roles when you are creating a new user on the Create a new user account page (you can see these roles on the User Details page).

An authorized user like a User Manager (role) can create a new user account on the CEDW Admin. When you create a new user, you can also assign him or her a role and permissions to access and work on a particular project. A user can have more than one role and handle more than one project. Creating a new user and assigning a role or a project to the user can be done at the same time. In the CEDW Admin, you can assign a role to more than one user at the same time. Users can be reassigned from one role to another. Users who have the same role assume the same tasks within that role.

3.1.2.1 Types of Roles

There are two role types in CEDW: (i) pre-existing type and (ii) custom type. A pre-existing role is a default and ready-to-use role that an authorized user can assign to other users while a custom role is a role that users can create and assign to other users.

(i) Pre-existing Roles

Pre-existing-type roles are default roles that have been created in the CEDW system. They are ready-to-use roles that you can select and assign to one or more users (Figure 32). Each pre-existing role comes with its default permissions, which you can see on the Role details page. Unlike a custom role that is editable, you cannot delete a pre-existing role, add, or delete its permission(s).
### Role Management

You can use roles to associate users with specific projects or global operations. The table below shows all the roles that are available in the server. Use this screen to create, edit, manage assignments or delete roles.

Table 1 provides the description of the pre-existing roles in the CEDW system.

#### Table 1 -- Pre-existing Roles in CEDW System

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Contributor</td>
<td>This project-specific role can modify project contents.</td>
</tr>
<tr>
<td>Project Creator</td>
<td>This global or category-specific role can add projects to the server, categorize them, create new categories or manage existing ones.</td>
</tr>
<tr>
<td>Project Locks Administrator</td>
<td>This project-specific role can release other users' locks in a selected project.</td>
</tr>
<tr>
<td>Project Manager</td>
<td>This project-specific role can manage projects and grant permissions to other users to access projects.</td>
</tr>
<tr>
<td>Project Reviewer</td>
<td>This project-specific role can open and review projects.</td>
</tr>
<tr>
<td>Security Manager</td>
<td>This global role can grant permissions to other users and specify the scope.</td>
</tr>
<tr>
<td>Server Administrator</td>
<td>This global role can configure server settings, LDAP integration, secure connection, and server licenses.</td>
</tr>
<tr>
<td>User Manager</td>
<td>This global role can create and manage users.</td>
</tr>
</tbody>
</table>
(ii) Custom Roles

You can create a new role and add it to the CEDW system. This type of role is called custom role. You can edit or delete custom-type roles. Users whose permission is Manage Security Role can create a custom role and assign permissions to the role through the Roles Management page of CEDW Admin. You can add more permissions to a custom role or delete them. But, you can add only project-specific permissions to a custom role.

A role name is unique but it may have the same permissions as those of the other roles. When creating a custom role, you can assign it to one or more users at the same time and select a project(s) for the role.

3.1.2.2 Scopes of Roles

The scope of a role in CEDW system is the extent of the area the role is relevant. There are two scopes of roles: (i) global scope and (ii) project-specific scope. A role whose scope is global does not need a project assignment in order to accomplish the tasks, for example, a Project Creator is considered as a role that is involved in all current and incoming projects including adding and categorizing projects. Therefore, a Project Creator can exercise its permissions in any projects by default. A project-specific scope is usually created to work on a particular project, for example, Project Reviewer.

(i) Global Scope

A user with a global-scope role can access either general or specific information in CEDW system, for example, view a user’s profile or remove roles from a user. The permissions extend across all projects or users. A global role does not need to be assigned a project to perform the tasks for example a user manager does not need to have a project to be able to create a new user.

Users with a global role are authorized to carry out their tasks (aligned with the permissions) anywhere within the CEDW system. For example, a User Manager who maintains and manages all user accounts on the CEDW system. There is no need to assign projects to this role.

The following are the pre-existing-type roles whose scope is global in the CEDW system:

- Project Creator
- Security Manager
- Server Administrator
- User Manager

(ii) Project-Specific Scope

A user whose role’s scope is project-specific needs a project in order to work. The role’s permissions apply only to a specific project. A project-specific role needs a project in order to perform a class of actions, which the permissions enable the role to do.

A project-specific role is a pre-existing role that allows a user to work based on project-specific needs. The permissions of this role are on a project basis. Users with a project-specific role have to work on project specific matters, for example, reviewing a project. One user can have more than one project-specific role, for example, user A can be both Project Contributor in Project A and Project Manager in Project B. This supports the working concept of different roles in each project in an organization.

It is also possible to assign every project (a global scope) in the repository to a user by selecting the Global button.

The project-specific roles with global scope in the CEDW are as follows:

- Project Manager
- Project Contributor
- Project Reviewer
Project Locks Administrator

3.1.2.3 Permissions

A permission in the CEDW Admin means an approval to do a particular task or access one or more objects in the system. Objects are data objects or resource objects within the system. Permissions are associated with roles. A role is a set of permissions that allow the user with that role to perform specific tasks or work on a project. For example, a Project Contributor (Role) has permissions to edit, read a project, or edit the project properties. The permissions enable that role to perform specific operations that are otherwise forbidden to other users.

Some permissions can only be used once a role has been assigned a project, for example, a project reviewer role whose permission allows him to view or read data in a project. If no project is assigned to this role, the project reviewer cannot accomplish anything. You can assign one or more permissions to a custom role.

The Roles detail page in CEDW Admin allows you to see all permissions of each role. Figure 33, for example, shows the permissions of the User Manager role such as create, edit, or remove users.

Table 2 lists all permissions of each pre-existing role in the CEDW system.
Table 2 -- The Permissions Associated with the Pre-existing Roles

<table>
<thead>
<tr>
<th>Role</th>
<th>Permissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Contributor</td>
<td>• Edit project properties.</td>
</tr>
<tr>
<td></td>
<td>• Edit projects.</td>
</tr>
<tr>
<td></td>
<td>• Read projects.</td>
</tr>
<tr>
<td>Project Creator</td>
<td>• Categorize projects.</td>
</tr>
<tr>
<td></td>
<td>• Create projects.</td>
</tr>
<tr>
<td></td>
<td>• List all projects.</td>
</tr>
<tr>
<td>Project Locks Administrator</td>
<td>• Release project locks.</td>
</tr>
<tr>
<td>Project Manager</td>
<td>• Edit project properties.</td>
</tr>
<tr>
<td></td>
<td>• Edit projects.</td>
</tr>
<tr>
<td></td>
<td>• List all users.</td>
</tr>
<tr>
<td></td>
<td>• Manage owned project access right.</td>
</tr>
<tr>
<td></td>
<td>• Read projects.</td>
</tr>
<tr>
<td></td>
<td>• Release project locks.</td>
</tr>
<tr>
<td></td>
<td>• Remove projects.</td>
</tr>
<tr>
<td>Project Reviewer</td>
<td>• Read projects.</td>
</tr>
<tr>
<td>Security Manager (Global role)</td>
<td>• List all projects.</td>
</tr>
<tr>
<td></td>
<td>• List all users.</td>
</tr>
<tr>
<td></td>
<td>• Manage security roles.</td>
</tr>
<tr>
<td></td>
<td>• Manage user permissions.</td>
</tr>
<tr>
<td>Server Administrator (Global</td>
<td>• Configure server.</td>
</tr>
<tr>
<td>role)</td>
<td></td>
</tr>
<tr>
<td>User Manager (Global role)</td>
<td>• Create users.</td>
</tr>
<tr>
<td></td>
<td>• Edit user properties.</td>
</tr>
<tr>
<td></td>
<td>• List all users.</td>
</tr>
<tr>
<td></td>
<td>• Remove users.</td>
</tr>
</tbody>
</table>

**NOTE**
A user will be assigned a Project Manager role automatically once that user has created a project.

We use permissions to protect data such as files or information in CEDW Admin and to limit what a user can read, write, and execute within the system. You need to first assign a role to a user before the permissions associated with that role can be granted. A user can have many roles and a role can have many users.

### 3.2 Logging into CEDW Admin

While the CEDW server is running, you can log in to the CEDW Admin by entering your username and password. Once you are logged in, you can start utilizing the system according to the permissions granted to you such as managing user accounts or projects.

The login page also contains the links that open Terms of Use dialog, provide information about the CEDW Admin version, and send emails for inquiries and support (Figure 34).

Table 3 describes UI components of the login page.
Table 3 -- The Login Page Fields and Links

<table>
<thead>
<tr>
<th>UI Component</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Username</td>
<td>To enter a valid username (case-sensitive).</td>
</tr>
<tr>
<td>Password</td>
<td>To enter a valid password (case-sensitive).</td>
</tr>
<tr>
<td>Log In button</td>
<td>To submit a username and a password for verification.</td>
</tr>
<tr>
<td>Terms of Use</td>
<td>To open the Terms of Use dialog that contains the end user license agreement for CEDW Admin.</td>
</tr>
<tr>
<td>About</td>
<td>To open the About dialog that contains brief information about the current version of CEDW Admin and the names of libraries used.</td>
</tr>
<tr>
<td>Contact Us</td>
<td>To send an email to No Magic, Inc.</td>
</tr>
<tr>
<td>Help</td>
<td>To send an email to <a href="mailto:support@nomagic.com">support@nomagic.com</a> if you need help using CEDW Admin.</td>
</tr>
</tbody>
</table>

To log in to CEDW Admin:

1. Open a web browser.
2. Type the url of the CEDW Admin, for example, https://<urlname>:<portname>. The Login page of CEDW Admin will open (Figure 34).

3. Type your username and password.
4. Click the Log In button. Upon your successful login to the server, the first page will open (Figure 35).
If your CEDW license expires, you will get the following screen notification window appear on your screen after logging in to the CEDW admin.

**NOTE**
- The page that opens upon a successful login varies according to your role.
- The CEDW Admin will log you out if you leave it open and idle for 30 minutes (session timeout). When you start performing an operation after the session timeout, you will see a session timeout error message and the screen will change to the Login page so that you can log in again.

If your CEDW license expires, you will get the following screen notification window appear on your screen after logging in to the CEDW admin.
To log out of the CEDW Admin:

1. Click the arrow button next to your user icon on the top right-hand side of the Admin page and select **Log out** (Figure 37). The **Log out** dialog will open (Figure 38).

   ![Figure 37 -- The Logout Button](image)

   ![Figure 38 -- Log Out Message](image)

   2. Click **Yes**.

Once you are logged in, you will see the first page of CEDW Admin. Your landing page depends on your role/permissions. On the upper part of the page, you will see the main menu bar that contains the CEDW Admin main menus: (i) **USERS**, (ii) **PROJECTS**, (iii) **ROLES**, (iv) **LDAP**, and (v) **SETTINGS** (Figure 39). The menu bar allows you to navigate through the functionality of CEDW easily. Depending on your role in the CEDW Admin, you may see all or some of the menus. Not every user can see the page as shown in Figure 39 because it is open for authorized users only.

![Figure 39 -- The CEDW Admin Main Menus](image)

### 3.2.1 Unauthorized User Access

Some users may not be able to access specific content in the CEDW system or view the content, or see all of the main menus due to insufficient permissions.
3.3 Connecting to LDAP Servers

LDAP stands for Lightweight Directory Access Protocol. It is an open standard protocol used over an IP network to locate and access directory servers. CEDW Admin makes use of LDAP to access data, in this case users, on LDAP servers. Therefore, with CEDW Admin, you can easily import users from other external databases or LDAP servers into CEDW Admin. After you import users, you can assign them some roles or projects and even convert them into internal users. CEDW Admin uses LDAP to import users only. The users’ data are still stored on the LDAP servers. You cannot edit information or profiles of the users imported from LDAP servers.

The main menu LDAP on CEDW Admin opens the LDAP User Directories page. This page allows you to add LDAP servers before you can import users from them. It also shows information about LDAP servers that are external but configured for the CEDW server. CEDW Admin’s user authentication during login also searches for the user in those directories. The authentication process starts from the first LDAP server on the directory list. You can, however, select which server gets authenticated first by changing the order using the up and down arrow buttons.

TIP
Alternatively, you can click the Manage LDAP directories icon on the User Management page to open the LDAP User Directories page.

3.3.1 Adding an LDAP Server to the CEDW System

You may add as many LDAP servers as needed. Depending on your permission, you may edit a server’s configuration, disable a server, or delete it. Once you have added the LDAP servers and successfully connected to them, the CEDW Admin will store these servers on the LDAP User Directories page.

When adding an LDAP server, you need to input the LDAP server’s configuration properties such as the connection settings, server address, server timeout, and encryption protocol that will be used to connect to the LDAP server. Each LDAP server has its own setting properties. The configuration settings are categorized into three groups: (i) Connection, (ii) Encryption, and (iii) Authentication.
Table 5 shows the UI components of the LDAP server’s configuration properties.
Table 4 -- The UI Components of the LDAP Configuration Settings

<table>
<thead>
<tr>
<th>UI Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>To enter the connection name of the LDAP server. A duplicate name is not allowed.</td>
</tr>
<tr>
<td>Server Address</td>
<td>To enter the server address/Domain Name Service (DNS) and the server port. This is a mandatory field and is not editable once created. You will get an error message if you enter a duplicate server address or DNS. The default value for the None encryption protocol is 389. If the SSL protocol is selected, the default value for empty fields is 636.</td>
</tr>
<tr>
<td>Server Timeout</td>
<td>The maximum amount of time in milliseconds for the system to successfully authenticate a single server. If authentication fails, the system will query the next server in queue.</td>
</tr>
<tr>
<td>Enable</td>
<td>The option to enable a connection with the LDAP server.</td>
</tr>
<tr>
<td>Anonymous Bind</td>
<td>A mode of bind specifying whether a user connects to the LDAP server with a specific username or anonymously for being able to find the Distinguished Name (DN) of a user that corresponds to the user trying to log into the CEDW system. If you select this check box, the Bind password is not required and the system password will be disabled.</td>
</tr>
<tr>
<td>System Username</td>
<td>The DN of a user to connect to the LDAP server and perform queries. This is active even though the Anonymous Bind check box is not selected.</td>
</tr>
<tr>
<td>System Password</td>
<td>The system password to connect to the LDAP server and perform queries.</td>
</tr>
<tr>
<td>Encryption Protocol</td>
<td>The SSL and TLS protocols for encryption. If you select None, it means you do not need to use an encryption protocol.</td>
</tr>
<tr>
<td>LDAP Server Certificate</td>
<td>The option to select the JKS file.</td>
</tr>
<tr>
<td>JKS Password</td>
<td>The password required to access the Edit LDAP Configuration page.</td>
</tr>
<tr>
<td>Search Base</td>
<td>The authentication methods.</td>
</tr>
<tr>
<td>Use User DN Template</td>
<td>The button to enable input.</td>
</tr>
<tr>
<td>User DN</td>
<td>To store a template that will be used for mapping user authentication with LDAP servers using the LDAP distinguished names.</td>
</tr>
<tr>
<td>Retrieve User DN by Using an LDAP Query</td>
<td>The button to enable input.</td>
</tr>
<tr>
<td>Query</td>
<td>The LDAP query for retrieving the DN of a user, for example, uid=$(/login).</td>
</tr>
</tbody>
</table>
To add and configure an LDAP server:

1. Click the main menu **LDAP** to open the **LDAP User Directories** page.

2. Click the **Create LDAP directory** button. The **Create LDAP directory** page will open for you to configure the LDAP server settings (Figure 43).
3. Input the configuration properties to connect to the LDAP server.
4. Click **Create**. The LDAP server’s address and name will added to the directory.

### 3.3.2 Testing Connectivity

Upon adding and configuring the LDAP server, you may want to test whether your connection to the LDAP server works. If the test is not successful, you need to make necessary changes to the settings, save the changes, restart the CEDW server, and retest the connection.
To test the connection to an LDAP server:

1. On the LDAP User Directories page, select an LDAP server whose connection you want to test and click the submenu button.

2. Select Test. The login dialog will open.

3. Type the username and password.

4. Click Test. If the connection works, you will get a successful message dialog (Figure 45), otherwise you will get a connection failed message (Figure 46).
3.3.3 Editing an LDAP Server Configuration Properties

You can change the configuration properties of an LDAP server connected to the CEDW system. The system will update the configuration properties with the new values automatically.

To edit the configuration properties of an LDAP server:

1. On the LDAP User Directories page, select an LDAP server whose configuration properties you want to edit and click the Edit button.
2. Edit the values.
3. Click Save.

3.3.4 Importing Users from an LDAP Server

You can import users from an LDAP server that you have configured for the CEDW system. The imported users from the LDAP server are called external users (see 3.1.1 User Categories). You can also assign roles to those external users.

This section shows you how to import a user through the LDAP User Directories page. For more information about importing users from an LDAP server through the User Management page, see section 3.5.3 Importing Users.

NOTE: You cannot import a duplicate username into the CEDW system.

To import a user through the LDAP User Directories page:

1. Click the main menu LDAP to open the LDAP User Directories page.
2. Select an LDAP server from the directory list and click the submenu button and select Import (Figure 47). The Import users page will open (Figure 48).
3. Type a username in the **Query** box and press **Enter**. The login to LDAP server dialog will open and CEDW system will auto-fill the username (Figure 49).
4. Enter your password and click **Search** or press **Enter**. All usernames that match the selected LDAP users will appear.
5. Select one or several users by selecting the check boxes next to the usernames.
6. Click the **Import** button.

**NOTE** The next time you log in to the LDAP server to import another user, the password will be auto-filled.

### 3.3.5 Disabling or Deleting an LDAP Server

You can disable a connection to an LDAP server or remove the LDAP server from CEDW system. External users from the disabled LDAP server will not be able to log into the CEDW Admin. But those who are in the system when you disable the connection can still access and perform all operations as normal, however as soon as they log out from the CEDW Admin, their status will change to **Disable** and they cannot log into the CEDW Admin until the LDAP server connection is enabled. You still can import users from the LDAP server even though it has been disabled.

If you remove or delete an LDAP server from the LDAP user directories list, access to the CEDW system will be permanently removed, and all external users imported from that LDAP server can no longer log into CEDW Admin and access the system. Only external users who have been converted internal users can log in to the CEDW Admin.

To disable or delete an LDAP server:

1. On the **LDAP User Directories** page, select an LDAP server you want to delete and click the submenu button.
2. Select either **Disable** to temporary disable the connection or **Delete** to permanently delete the LDAP server from the system. A confirmation dialog will open.

3. Click **Yes**.

An LDAP server that is disabled has a disable icon in the **Status** column on the **LDAP User Directories** page. You can enable this server by clicking the submenu button and selecting the **Enable** button.

---

**3.4 Enabling a Secure Connection**

CEDW Admin uses SSL (Secure Socket Layer) as the security protocol to keep any information you enter on the CEDW Admin private and secure. By default, the CEDW Admin will connect to the CEDW server without a secure connection. To enabling a secure connection to the CEDW server, you can set your client Java Key-Store by changing 'enable' under the 'ssl' section to true and setting the 'keystorePath' and 'keystorePassword' as shown in the following example.

```bash
# SSL Configuration
ssl {
    # Use SSL or not. Default is false
    enable = true

    # Path of client keystore file. Default is empty.
    keystorePath = "/truststore.ts"

    # Password of client keystore file. Default is empty.
    keystorePassword = "123456789"
}
```

"You can also delete an LDAP server from the CEDW system by clicking the server name on the LDAP User Directories and clicking the **Delete** button."
You can enable this secure connection option on the **Server settings** page of the CEDW Admin. This page also allows you to disable the option if you do not need to use a secure connection (Figure 51). You can always enable it whenever working on a confidential document or information or whenever necessary.

**To enable a secure connection using the SSL protocol:**

1. Click the main menu **SETTINGS**. The **Server Settings** page will open (Figure 51).

   ![Server Settings](image)

   **Figure 51 -- The Secure Connection Option**

2. Click the **Use SSL** button to enable the SSL protocol. The SSL option will be enabled (Figure 52).
3. Input the port, Java key store, and password.
4. Click **Save**.

### 3.5 Managing Users

#### 3.5.1 User Management Page

The main menu **USERS** links to the **User Management** page (Figure 53). This page contains a list of all users of CEDW both online and offline, including their usernames, full names, and their login status (**Enable** or **Disable**) in tabular form.

This page is hidden from unauthorized users or users who do not have the permission to view all users in the CEDW system. CEDW classifies users into external and internal users. External users are users imported from external LDAP servers. Internal users are users created on the CEDW server. Find out more about internal and
external users in section 3.1.1 User Categories.

The **User Management** page allows you to:

- Create new users.
- Import users. (Note that the **Import** button will not be visible unless you add an LDAP server to the CEDW system.)
- Disable or enable users’ login access.
- Search for users.
- View a user’s information including the profile and the role(s) and assigned project(s).
- Manage user directories.
- Change or reset users’ passwords.

<table>
<thead>
<tr>
<th>NOTE</th>
<th>Only a User Manager can create a new user and/or change a user’s password.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>TIP</th>
<th>You can also enable or disable a user’s login access on the <strong>User Details</strong> page. The <strong>User Details</strong> page is accessible by clicking the username on the <strong>User Management</strong> page.</th>
</tr>
</thead>
</table>

Table 5 describes the UI components on the **User Management** page (Figure 53).

**Table 5 -- The UI Components of the User Management Page**

<table>
<thead>
<tr>
<th>UI Components</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Online column</strong></td>
<td>A green icon in front of a username means that the user is currently online and connected to the CEDW system.</td>
</tr>
<tr>
<td><strong>Username column</strong></td>
<td>This column shows a username that is used to log in to the CEDW Admin. A username is a hyperlink that you can click to view the user’s details, edit the user’s data, or manage the user’s role or project assignments. See 3.5.1 User Management Page for more information.</td>
</tr>
<tr>
<td><strong>Full Name column</strong></td>
<td>This column shows a user’s full name. When creating a new user, you may type the full name or leave it blank (optional).</td>
</tr>
<tr>
<td><strong>Status column</strong></td>
<td>This column shows a user’s login status in the CEDW Admin is either: (i) Enable, or (ii) Disable. <strong>Enable</strong> means the user can use his user account (username and password) to log into the CEDW Admin. <strong>Disable</strong> means the user is not allowed to log into the CEDW Admin and CEDW in MagicDraw.</td>
</tr>
</tbody>
</table>
3.5.2 Creating a User

You should create a user account for people who will be assigned a role or tasks in the CEDW system. You can create a new user by clicking the Create new user button on the User Management page. The button opens a page that contains two sections: (i) Create a new user account and (ii) Role Assignments. You can assign one or more roles and projects to the user in the Role Assignments section. The content of this page is quite similar to that of the User Details page. Figure 54 and Figure 55 shows the sections respectively.

<table>
<thead>
<tr>
<th>UI Components</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action column</td>
<td>The Edit button in the Action column allows you to edit a user’s information and change the user’s login access (enable or disable) by selecting either option from the drop-down menu.</td>
</tr>
<tr>
<td></td>
<td>The Disable button in the submenu item allows you to disable a selected user whose current login access is Enable. The button will be enabled once you select a user from the User page.</td>
</tr>
<tr>
<td></td>
<td>The Enable button in the submenu item allows you to enable a selected user whose current login access is Disable. The button will be enabled once you select a user from the User page.</td>
</tr>
<tr>
<td></td>
<td>The Create button is to open the create user page to allow you to create a new CEDW user. See 3.5.2 Creating a User for more information.</td>
</tr>
<tr>
<td></td>
<td>The Import button is to import a user from an LDAP server.</td>
</tr>
<tr>
<td></td>
<td>The Manage LDAP directories button allows you to manage LDAP user directories.</td>
</tr>
<tr>
<td></td>
<td>You can use this search box to find a username by typing a keyword and CEDW Admin will run the search and find matching usernames.</td>
</tr>
</tbody>
</table>
Table 6 lists the UI components of the create a new user account section (Figure 54).

**Table 6 -- The UI Components of the Create a New User Account Section**

<table>
<thead>
<tr>
<th>UI Components</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Username</td>
<td>A username to log into CEDW. This is mandatory. You can enter ONLY or at least one of the following:</td>
</tr>
<tr>
<td></td>
<td>• Characters Aa-Zz.</td>
</tr>
<tr>
<td></td>
<td>• Numbers 0-9.</td>
</tr>
<tr>
<td></td>
<td>• dash.</td>
</tr>
<tr>
<td></td>
<td>• period.</td>
</tr>
<tr>
<td></td>
<td>• underscore.</td>
</tr>
<tr>
<td></td>
<td>• symbol @.</td>
</tr>
<tr>
<td>Password</td>
<td>A password to log into CEDW. This is mandatory. You can enter ANY character or symbol.</td>
</tr>
<tr>
<td>Confirm Password</td>
<td>A password confirmation. This is mandatory.</td>
</tr>
<tr>
<td>Full Name</td>
<td>A user’s full name. This is optional.</td>
</tr>
<tr>
<td>Email</td>
<td>A user’s email account. This is optional.</td>
</tr>
<tr>
<td>Department</td>
<td>A department where the user works. This is optional.</td>
</tr>
<tr>
<td>Mobile</td>
<td>A user’s mobile phone number. This is optional.</td>
</tr>
</tbody>
</table>
You can click the **Role Assignment** arrow button to expand it and select what role(s) or assignment(s) that you want to assign to the user (Figure 55). For more information on how to assign roles or projects to a user, see section 3.6.4.1 Assigning Roles.

---

**Figure 55 -- The Role Assignment Section**

To create a new user account:

1. Click the **Create** button on the **User Management** page (Figure 56). The Create a new user account form will open (Figure 57).
Figure 56 -- Creating a New User

Figure 57 -- The Create New User Page
2. Specify a username and other information about the user. A text box with a red asterisk (*) means that the information is mandatory (Figure 57).
3. Select or clear the Enable check box. It is selected by default.
4. Click the Create button. You will see the new username you have just added appear on the User Management page.

When you create a new user or edit user information, you may select to either Enable or Disable their access. If you want them to access the CEDW system and carry out the tasks according to the role assigned once you create them, you need to select the Enable check box (selected by default). If you clear the Enable check box, the user’s status will be Disable and thus he or she cannot log into the CEDW Admin and CEDW in Magic-Draw.

<table>
<thead>
<tr>
<th>NOTE</th>
</tr>
</thead>
</table>
| • Users with a global role such as User Manager do not need a project to carry out the role’s tasks.  
• Global role means that the scope of permissions is global. Therefore, when the scope of the role is Global, selecting individual projects is not required.  
• Custom role allows you to select what projects you want to assign to the user.  
• The Create button will be enabled if you type the same valid password in both the Password and Confirm password text boxes. |

For more information about assigning roles and projects, see section 3.6.4 Managing Role Assignments and Permissions and section 3.7.3 Assigning Projects.

### 3.5.3 Importing Users

You can import one or several users from an LDAP server to the CEDW system through the CEDW Admin. The users you are importing are called external users because their data and information are stored on the external servers or LDAP servers. The import button to import a user is available on the User Management page and the LDAP User Directories page. This section shows how to import a user through the User Management page. To import a user through the LDAP User Directories page, see section 3.3.4 Importing Users from an LDAP Server.

To import a user through the User Management page:

1. Click the main menu USERS to open the User Management page.
2. Click **Import** (Figure 58) to open the **Import users** page.

![Figure 58 -- Importing a User on the User Management Page](image)

![Figure 59 -- Selecting Users to Import](image)
3. In the **Query** box, type a username or a keyword and press **Enter** (Figure 59). A dialog to log in to the LDAP server will open (Figure 61).

![Figure 60 -- Logging in to the LDAP Server](image)

4. Type a password and click **Search** or press **Enter**. A list of usernames that match the keyword will appear (Figure 62).

![Figure 61 -- Selecting and Importing LDAP Users to CEDW Systems](image)

5. Select one or more usernames by selecting the check boxes (Figure 61).
6. Click the **Import** button.
Upon importing users, you can assign roles to them. See section 3.6.4.1 Assigning Roles for more information about assigning roles to users.

| TIP | Alternatively, you can click the Manage LDAP directories icon on the User Management page to open the LDAP User Directories page. |

### 3.5.4 Editing User Information

If you have an Administrator account, you may edit a user’s data, for example, the e-mail address and password. A username on the User Management page links to a page where you can see more information about the user (Figure 62). Therefore, if you have the right permission, once you click the username, you will be able to edit the user’s information.

| TIP | You can also click the username’s Edit button to edit a user’s information on the User detail page. |

Table 7 lists the UI components of the User detail page (Figure 62).
Table 7 -- The UI Components of User Details

<table>
<thead>
<tr>
<th>UI Components</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Username</td>
<td>A username to log into CEDW.</td>
</tr>
<tr>
<td>Full Name</td>
<td>A user’s full name. This is optional.</td>
</tr>
<tr>
<td>Email</td>
<td>A user’s email account. This is optional.</td>
</tr>
<tr>
<td>Department</td>
<td>A department where the user works. This is optional.</td>
</tr>
<tr>
<td>Mobile</td>
<td>A user’s mobile phone number. This is optional.</td>
</tr>
<tr>
<td>Enable</td>
<td>The option to enable or disable user login to the CEDW Admin and CEDW in MagicDraw. It is selected by default.</td>
</tr>
<tr>
<td>Save</td>
<td>This button allows you to save changes to a user’s details.</td>
</tr>
<tr>
<td>Reset Password</td>
<td>The Reset Password menu opens the Reset Password dialog box that allows you to reset a user’s password.</td>
</tr>
<tr>
<td>Convert to External</td>
<td>The Convert to External menu converts an internal user to external.</td>
</tr>
</tbody>
</table>

You can click the Role Assignment arrow button to expand it and see the user’s role(s) or assignment(s) or select what role(s) or project(s) that you want to assign to the user. For more information on how to assign a role/project to a user, see section 3.6.4.1 Assigning Roles.

NOTE: If your role is not User Manager, you will not be able to open the Reset Password form.

You can edit your own name, password, and other information. However, only an authorized user with the right permission can edit another user’s profile. You can change or modify all information but a username, because it is not editable. It is possible for users who do not have any role in the CEDW Admin to edit their own profile such as full name, email, department, and mobile phone number.

You can enable or disable user login if you are authorized to do so. You can edit a user’s login status by selecting or clearing the Enable check box on the User detail page.

To edit a user’s information:

1. On the User Management page, select and click a username whose information you want to edit. A page that will allow you to edit the selected user’s information will open (Figure 63).
### User Management

#### User Directories

<table>
<thead>
<tr>
<th>Directory</th>
<th>Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>25</td>
</tr>
<tr>
<td>External</td>
<td>3</td>
</tr>
<tr>
<td>Internal</td>
<td>22</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Username</th>
<th>Full Name</th>
<th>Status</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>c1</td>
<td></td>
<td></td>
<td>Edit: Edit project properties</td>
</tr>
<tr>
<td>c2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c3</td>
<td></td>
<td></td>
<td>Edit: Edit projects, Read projects, Release project locks, Remove project, All Custom Role</td>
</tr>
<tr>
<td>c7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 63 -- Selecting a User**
Figure 64 -- Editing a User

2. Edit or enter the user's information such as full name, email address, etc. (Figure 64).
3. Select or clear the Enable check box.
4. If you want to edit the user's role or project assignments, select or clear the role check boxes, or click the Add or Remove button to add or delete projects respectively.
5. Click the Save button to apply your changes.
3.5.5 Converting Users to External or Internal

There are two types of users in the CEDW system (see 3.1.1.1 Internal Users and 3.1.1.2 External Users). Internal users are users created in the CEDW system. External users are users imported from LDAP servers. An authorized user can convert an external user to be an internal user and vice versa.

Upon converting a user from external (LDAP server) to internal (CEDW system), you can edit the username, roles, or project assignments. However, the username and password is still stored on the LDAP server and the system will use it for user authorization.

When you convert a user from internal to external, the user’s username, password, and other information will be authenticated by the LDAP server to where it is moved (if there are several LDAP servers, the system will select it randomly). The CEDW system only keeps the username.

Importing an LDAP user to the CEDW system is allowing that user to access the CEDW system through the CEDW Admin. When the external user logs into the CEDW Admin, the system will search the username and password for authentication on the LDAP server.

To convert a user from internal to external:

1. On the User Management page, click a username or the Edit button of the username you want to convert. The User detail page will open.

2. Click Convert to External to convert an internal user.

NOTE
If a user you are trying to convert is an external user, the button that you will see is Convert to Internal.
3.5.6 Changing Passwords

You can change your own password or a user can request a User Manager to change the user’s password. Changes to a user’s password will apply once the user logs out of CEDW Admin. The new password is required for the next login.

**NOTE**

Only a **User Manager** can change another user’s password. Therefore, an unauthorized user cannot see the **Reset Password** section on the **User detail** page.

(i) To change your own password:

1. Click your username on the **User Management** page. The **User detail** page will open (Figure 66).

![Figure 66 -- The Change Password Button](image)

2. Click the **Change Password** button (Figure 66). The **Change Password** dialog will open (Figure 67).
3. Type your old password in the **Old password** box.
4. Type your new password in the **New Password** box and retype it in the **Confirm New Password** box.
5. Click the **Change Password** button to apply your new password.

**NOTE**
- The **New Password** and **Confirm New Password** text boxes will be enabled once you click in the **Old password** text box.
- The new password is required the next time you log into CEDW Admin.

(ii) To change another user’s password:

1. Click a username whose password you want to change on the **User Management** page. The **User detail** page will open (Figure 68).
2. Click the **Reset Password** menu. The **Reset Password** dialog will open (Figure 69).

![Reset Password dialog](image)

**Figure 69 -- Changing A User's Password**

3. Type a new password in the **New Password** box and retype it in the **Confirm New Password** box.
4. Click the **Reset Password** button to save the new password.

### 3.5.7 Enabling or Disabling User Login

Regardless of what roles or projects you assign to the user, if you do not enable their access, they can never perform any operation through the CEDW Admin. Depending on your role, you can enable or disable both existing and new users from accessing the CEDW system.

You can enable or disable the existing user’s access on either the User Management page or the User detail page. By default, the CEDW Admin grants access to a new user. But, you can disable this option whenever you create one.

(i) To disable or enable an existing user’s access on the User Management page:

1. Select a user whose access to the CEDW system you want to disable or enable, and click the submenu drop-down button (Figure 70).
Figure 70 -- Disable User Login on the User Management Page

2. Click either (i) the **Disable** button and the **Confirm to disable** dialog will open (Figure 71), or (ii) the **Enable** button (skip step 3) and the **Update was successful** message will appear (Figure 72).

![Confirm to disable dialog](image)

**Figure 71 -- The Confirm to Disable Dialog**

![Update was successful message](image)

**Figure 72 -- The User Login Has Been Successfully Enabled Message**

3. Click **Yes**. A message informing that disable was successful will appear (Figure 73). You can now see the disable icon in the user’s Status column on the **User Management** page (Figure 74).
(ii) To disable or enable an existing user’s access through the User detail page:

1. Click a username on the User Management page whose login status you want to disable or enable (Figure 75). The User detail page will open (Figure 76).
2. Either (i) clear the **Enable** check box to disable the user login or (ii) select it to enable the user to log into the CEDW Admin and CEDW in MagicDraw.

3. Click the **Save** button. If you clear the **Enable** check box in step 2, a **Confirm to disable** dialog will open.

4. Click **Yes**. A message informing that the user login has been updated successfully will appear. You can now see the user’s login status on the **User** page changes accordingly.

**NOTE**

If you disable a user’s access while he or she is online or logged in, the CEDW Admin will not log them out immediately. The change of access permission applies once the user logs out.

To enable or disable a new user’s access when creating one, see section 3.5.2 Creating a User.
3.5.8 Searching for Users

The Search by username text box on the User Management page allows you search for a user by the user-name or a keyword. You can type any alphabetic character, numeric value, or symbol (such as @, &, or # for example), or a combination of them in the search box. The search is not case-sensitive. By default, the search result will return all usernames that match the keyword or letter(s) entered and display them on the page.

![Figure 78 -- The Search for Users Text Box](image)

TIP

Alternatively, you can use the multi-type search text book on the upper most part of every page that you open. By default, the search results will return all matching keywords or names entered. However, if you want to search for a particular user, you can select the type qualifier to restrict search results to usernames only.

3.5.9 Viewing User Profile

You can view a user’s profile in no time by clicking on a row on the User Management page (do not click the username as it contains a hyperlink that will open the User detail page). A small pane will slide in and show the user’s email, department where the user works, the cell phone number, and so on. The User Profile pane will slide in from the lower part of the page (Figure 79). The pane slides out and closes by itself in five seconds.

![Figure 79 -- The User’s Profile](image)
3.5.10 Sorting Users

The data sort capability of CEDW Admin arranges users in ascending or descending alphabetical order. This is useful especially when you have many rows of usernames. Each column except Action provides you with this capability. For example, you can click the Username column header on the User Management page to sort usernames.

To sort data in individual columns on the User Management page:

- Click a column header, for example, Username, on the User Management page (Figure 80). Data in the column will be sorted in ascending or descending alphabetical order.

![Figure 80 -- Sorting Usernames](image)

TIP

You can also sort users by their online status, full name, or access by clicking the respective column header.

3.6 Managing Roles

As previously explained in section 3.1.2 User Roles and Permissions, the scopes of pre-existing roles in the CEDW system are categorized into two: (i) Global and (ii) Project-specific. A role whose scope is global is a role that allows a user to work on a global scope. Which means the permissions coverage is thorough and it is not limited to a specific project. Users whose role's scope is global are authorized to carry out their tasks (aligned with the permissions) anywhere within the CEDW server. For example, a User Manager who maintains and manages all user accounts on the CEDW system. There is no need to assign projects for this sort of role.

A role whose scope is project-specific is a role that allows a user to work in a local project. The permissions of this role are on a project basis. Users whose role's scope is project-specific work on project specific matters, for example, reviewing a project. A user can have more than one project-specific role, for example, user A can be both Project Contributor in Project A and Project Manager of Project B. This supports the working concept of different roles in each project in an organization.
3.6.1 Role Management Page

The **Role Management** page opens whenever you click the main menu **ROLES**. This page allows you to:

- Create a new role
- View a role in detail
- View users or projects assigned to the role
- Assign more users or projects to the role
- Remove users or projects from the role

This page lists all of the pre-existing roles and the roles that you created or added later within the CEDW system and their description in tabular form (Figure 81). The roles are sortable in ascending or descending alphabetical order. You sort the roles the same way you sort usernames.

![Figure 81 -- The Role Management Page](image)

There are two types of roles: (i) pre-existing roles and (ii) roles that you create or add later into the CEDW system or custom roles. The pre-existing roles are fixed roles. You cannot delete or edit a pre-existing role. You can however, create a custom role to suit your or your organization’s needs and modify it as desired. When you assign a role to a user, the permissions associated to that role will be automatically given to the user.

Clicking either a role or the **Manage Assignment** button on the **Role Management** page will bring you to the **Role detail** page where you can see the role in details or assign it to a user (you can assign a role to more than one user at the same time). Besides assigning roles to users, you can also filter a project and/or a username in the Matrix Criteria pane (Figure 82). The search results will appear below the filter boxes in a matrix table.
This contextual matrix is based on the row and column criteria. It means that data in the matrix is arranged based on the project name and the username criteria that you select from the filter box.

Table 8 further explains the UI components of the **Role Assignments** pane.

### Table 8 -- The UI Components of Matrix Criteria

<table>
<thead>
<tr>
<th>Property</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Add</td>
<td>The <strong>Assign</strong> button opens the <strong>Add Users</strong> dialog, which contains a list of usernames that you can select and assign to the role.</td>
</tr>
<tr>
<td>Matrix Criteria</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 82 -- The Username and Project Filter**

This contextual matrix is based on the row and column criteria. It means that data in the matrix is arranged based on the project name and the username criteria that you select from the filter box.
### 3.6.2 Creating Roles

The Role Management page allows you to create a role and select the permissions you want the role to have. As soon as you create the role, you can assign it to a user. You may assign a newly created role to one or more users by clicking the Add button on the Role Assignments section. For more information on how to assign a role to a user, see section 3.6.4.1 Assigning Roles.

<table>
<thead>
<tr>
<th>Property</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project filter box</td>
<td>To allow you to filter projects that match the entered name.</td>
</tr>
</tbody>
</table>
| User directory filter box         | To allow you to filter users from a specific user directory or all directories. You can select one out of three available options:  
  - All directories.  
  - Internal.  
  - External. |
| Swap                              | To determine the order of data in a row and column matrix. You can choose either:                  |
|                                  |  - Project (rows) to All Directories/External/Internal user directory (columns).                  |
|                                  |  - All Directories/External/Internal user directory (columns) to Project (rows).                  |
| Search                           | To start searching for a project or a username.                                                    |
| Clear                             | To clear search results.                                                                          |
| Username column                   | To list all internal and external users to whom the role has been assigned together with projects. |
| -                                 | To remove a user from the role that he or she is currently assigned to.                            |
| Scope column                      | To allow you to select either:                                                                     |
|                                  |  - Global scope: this scope extends the role’s permissions on all server-related resources in the CEDW system.  |
|                                  |  - Custom scope: the role’s permissions are limited and are valid only for selected projects.      |
| Project Column                    | To list all projects in each project directory and check boxes. You can assign a project to a user by selecting the check box. Depending on your role, you may see only the projects in which you have permissions.  
  Unless you select Custom as the scope of the role, you cannot assign users or projects. |
| Save                              | To save changes made to role or project assignments.                                              |
To create a custom role:

1. Click the main menu **ROLES** on the CEDW Admin page. The **Role Management** page will open.
2. Click the **Create new role** button to open the **Create a new role** page (Figure 83).

3. Type the name of the role.
4. Type its description (optional).
5. Select at least one permission to give to the role.
6. Click Create. The Role Management page will open and you can see the newly created role there.
7. You can assign the newly created role to one or more users by clicking the Add button and select the check boxes in the matrix table.

You can assign projects or remove projects from a role using the Role Assignments pane. It is also possible to assign a project to a role while you are creating or editing a user or a role. To create and import MagicDraw projects to CEDW Admin, please see section 3.7 Working with Projects.

3.6.3 Viewing Role Details

You can click a role on the Role Management page to see the description of the role and the permissions associated with that role. Only authorized users, for example, a User Manager, can see complete information about the role on the Role detail page (Figure 84).
3.6.4 Managing Role Assignments and Permissions

You cannot edit pre-existing roles information nor assign more permissions to them. You can, however, assign a user or a project to that role. Roles that you can create and add to the CEDW system are editable, and therefore they are called custom roles.

The lower part of the Role detail page contains the Role assignments section, which allows you to:

- Assign a user or a project to the role.
- Delete a user from the role.
- See all users assigned to the role.

Table 9 lists the UI components of the Role Assignment section (Figure 86).

<table>
<thead>
<tr>
<th>UI Components</th>
<th>Description</th>
</tr>
</thead>
</table>
| Role Assignment table| (i) Assign  
This column contains check boxes that you can select for every role in the Role column.  
(ii) Role  
This column contains the role names and descriptions.  
(iii) Scope  
This column contains the Global and Custom buttons. You can select either one of them as the scope of the role. |
| Name column          | If you select Custom (as the scope of the role), you can see all projects assigned to the user in the Name column and the Add button will be enabled for you to add/select any project and assign it to the role.                                                      |
| Add                  | This button allows you to assign projects to a selected role.                                                                                                                                                                                                               |

### 3.6.4.1 Assigning Roles

You can assign a pre-existing or a custom role to a user, and create a new custom role and assign it to a user simultaneously. You cannot assign a project to a user who does not have a role. This section provides two methods to assign roles to a user: (i) from the User Management page and (ii) from the Role Management page.

| TIP                  | You can assign a role to a user through the Role Assignments section in either the User detail or Role detail page.                                                                                       |
(i) To assign a role while creating a new user through the User Management page:

1. On the User Management page, click the Create button to create new user.
2. Fill in the username, password, and other information about the user.
3. Expand the Role Assignments section (Figure 85).

4. Select the check box(es) of the role(s) that you want to assign to the user.
5. Click the **Create** button. The create was successful message and the new user will appear on the **User Management** page (Figure 87).
To assign a role to an existing user through the User Management page:

1. On the **User Management** page, click a username to whom you want to assign a role. The User detail page of the selected username will open (Figure 88).

### NOTE

- Once you have created a new user and selected a role for the user, before clicking the **Create** button to save the changes, you may click the **Add** button and to assign projects to the user.
- You can only assign a project to a project specific-role. The scope of the role is **Custom** by default.
- For more information about assigning projects to a role, see section 3.7.3 Assigning Projects.
Figure 88 -- Opening the User Details Page

2. Click the Role Assignment arrow button to expand it.
3. Select the Role check box(es) to assign one or more roles to the user.
4. Click the Save button.

(iii) To assign a role to a user while creating it through the Role Management page:

   1. On the Role Management page, click the Create new role button.
2. Type the name of the role (required) and its description (optional).
3. Assign permissions by selecting their respective check boxes.
4. Click the Add button (Figure 89). The Add Users dialog will open (Figure 90).
5. Select a user and click **Add**. The user will be added to the **Role Assignments** list (Figure 91).

**TIP**

To assign a role to multiple users in the **Add Users** dialog, you can press the key **Ctrl** on your keyboard and select the usernames.

6. Click **Create**. The **Role Management** page will open and the new role will appear (Figure 92).
3.6.4.2 Removing Users from Roles

You can remove a user from a role and you can do it on either the User detail page or the Role detail page. When you remove a user from a role, you take away the permissions associated with the role, which will cause any projects assigned to the role be removed as well.

TIP

You can remove a user from a role through the Role Assignments section on either the User detail or the Role detail page.

(i) To remove user from a role through the User detail page:

1. On the User Management page, click either (i) a username whose role(s) you want to remove or (ii) the Edit button on the same row.
2. On the User detail page (Figure 94), expand the Role Assignments section.
3. Clear the check box(es) of the role(s) you want to remove from the user.
4. Click **Save**. A confirmation message of the successful update will open (Figure 95).

*Figure 94 -- Removing Role through the User Detail Page*

*Figure 95 -- Unassigning Role was Successful*
(ii) To remove a user from a role through the Role detail page:

1. On the Role Management page, click any of the following: (i) a role you want to remove, (ii) the Edit button if it is a custom role, or (iii) the Manage Assignment button if it is a pre-existing role. The Role detail page will open (Figure 96).

![Role Management](image)
3.6.4.3 Adding and Deleting Permissions

You can add more or delete permissions from a role that you have created (custom role).

To add or delete permissions from a custom role:

1. On the Role Management page, click either the role or the Edit button. The Role detail page will open.
2. Select the check box of a permission you want to add or clear the check box to remove the permission from the role.
3. Click Save.
3.6.5 Searching for Roles

You can use the search function on the Role Management page to search for a specific role on CEDW Admin. You can type a role name or a keyword in the Search for role name box. If you enter a partial name, all names that match the partial will be retrieved. The search result shows all matching role names on a drop-down list.

To search for a role:

1. On the Role Management page, type the name of a role you want to find in the Search by role name box (Figure 98).

2. Press Enter or click the Search button.

3.6.6 Removing Roles

You can remove or delete custom roles from CEDW Admin through the Role Management page. Removing a custom role will cause the user, who has been assigned to that role, to be unable to use the permissions associated with that role to work on any project. However, these changes will only be effective once the user logs out from CEDW Admin. Even though the role has been deleted, the user can still exercise the permissions as long as they stay in the system. But as soon as they log out, the changes apply.

To remove a custom role:

1. On the Role Management page, select a role you want to delete and click the submenu button (Figure 99).
2. Click Delete. The role will be deleted and the message confirming that the role has been deleted successfully will appear.

![Delete was successful. Role has been deleted.](image)

---

### 3.7 Working with Projects

One of the goals of CEDW system is to allow multiple users across different locations to access the same project and work on it concurrently. To share files and work on them with the other team members simultaneously, you have to first import them to the server and then open them on CEDW Admin. Projects listed on the Project Management page in CEDW Admin are either newly created or imported ones. With the project management capability, you can assign them to users, monitor their progress, and edit the project properties such as rename and edit its category.

You can import a project to a specific project category or you may import it first and create a category for that project later.
The Project Management page in CEDW Admin allows you to:

- Assign projects to users.
- See all available project categories, project versions and branches.
- Create, edit, or delete a project category.
- Delete a project.
- Move a project from one category to another.
- Search for a project.

### 3.7.1 Project Management Page

The **Project Management** page (Figure 101) is accessible by clicking the main menu **PROJECTS**. An authorized user or a Project Owner can use this page to see all projects in the CEDW system. They can also organize projects into categories to make navigating a long list of projects easier. You can create as many categories as desired. Projects that are not grouped into categories are stored under the **Uncategorized** group.

Besides creating categories, you can use the Project Management page to remove a project, edit properties of a project for example, category, name, and description, or and move a project from one project category to another. Changes you make to a project or a project category through the CEDW Admin will directly affect the related project on the CEDW server. Removing a project from the **Project Management** page will also remove it from the server.

An authorized user can rename a project. A duplicate project name with a different description is allowed. Renaming a project does not affect other users who are currently working on the project. Project properties such as name, category, and description are editable.

The **Project Management** page (Figure 101) shows the category names and the projects in each category name including the details such as the last committed date, the author, comments, and the **Edit** button. If you click a category name, all projects in that particular category will appear in tabular form.

![Figure 101 -- The Project Management Page](image-url)
Table 10 shows the UI components of the Project Management page.

### Table 10 -- UI Components of the Project Table

<table>
<thead>
<tr>
<th>UI Components</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Categories pane</td>
<td>The Categories pane displays all project categories in ascending order and the number of projects in each category.</td>
</tr>
</tbody>
</table>
| Name                   | This button allows you to:  
  • create a new project category.  
  • edit a project category name.  
  • remove a project from a particular category (the project will then belong to the Uncategorized list). |
| Last commit            | This column contains project names which are sortable in ascending or descending alphabetical order. |
| Author                 | This column displays the date and time of the most recent entry or change to the project a user has committed in the system. The dates and times are sortable in ascending or descending numerical order. |
| Comment                | This column lists a user who made an entry or change to a specific project. The usernames are sortable in ascending or descending alphabetical order. |
| Comment                | This column shows commit messages written by authors. The messages are sortable in ascending or descending alphabetical order. |
| Action                 | The Action column allows you to:  
  • Unlock one or several project branches.  
  • Delete a project. |
| Delete                 | To delete a project. Deleting a project will also remove it from the category the project is grouped into. This button will be enabled if you select a project from the project list table. |
| Category drop-down menu| To move a project from one category to another. The drop-down menu lists all available categories that you can select. This menu will be enabled if you select a project from the project list table.  
  Alternatively, you can drag a project from the project list to a category in the Category name column. |
| Search by project name text field | To allow you to type a project name and search for it. This search box will be enabled if you click it. There are two buttons in the search box:  
(i) The Clear button is to delete text from the search box.  
(ii) The Search button is to start searching for a specific project name. |
Every project in the table links to a page that provides information about the project details on a new page (Figure 102). The Project details page consists of three parts: (i) **Project Details**, (ii) **History** and (iii) **Role Assignments**.

(i) **Project Details**

![Figure 102 -- The Project Details Page](image)

You can see complete information about a project in the **Project Information** part. Here, you can move a project from one category to another, rename it, or edit the description.

(ii) **History**

![Figure 103 -- Project History](image)

You can expand **History** and see all of a particular project’s versions, who committed them, and when. **History** allows you to track changes made to the project. You will be able to see when someone changed the project and committed it. A commit will also include a description of the changes that tells you what has been changed in the project.
The **Project Version** pane provides a filter function to allow you to filter a project version by branch either (i) **all** or (ii) **trunk**. If you select **all**, CEDW Admin will filter all committed versions of that particular project from all branches. If you select **trunk**, it will filter out committed versions from a trunk branch only.

(iii) **Role Assignments**

![Role Assignments](image)

*Figure 104 -- Roles Assigned to Projects*

### 3.7.2 Creating a Project and Import it to the CEDW Server

Projects on the CEDW Admin are projects that are created in MagicDraw and added to the CEDW server. It is necessary that you start your CEDW server and log into it before importing those projects from MagicDraw.

#### 3.7.2.1 Logging onto the CEDW Server

To log into the CEDW server:

1. In MagicDraw, log into the CEDW server by clicking **Collaborate > Login**. The **Login** dialog will open (Figure 116).
2. Log into the CEDW server by typing your username, password, and server’s name and type.

3. Click OK. Login confirmation will appear in the lower left corner of the MagicDraw screen after a successful login.
3.7.2.2 Creating and Importing a Project

Projects on the CEDW Admin are created in MagicDraw and imported from the CEDW server because you cannot create a project on the CEDW Admin. This section shows how you can create a new project in MagicDraw and import it to CEDW server, and access it using the CEDW Admin.

To create a new project in MagicDraw and import it to the CEDW server:

1. Click Collaborate > Projects.... The Manage Projects dialog will open (Figure 108).

2. Click the Add button. The Add Server Project dialog will open (Figure 109).
3. Type a project name, select a project category, and click **OK**. The project will be created under the selected category on the server (Figure 110).
3.7.2.3 Importing an Existing Project

This section shows you how to import an existing project to the CEDW server using MagicDraw.

To import an existing project to the CEDW server:

1. In MagicDraw, click the **Open Project** menu (Figure 111).
2. Select a local project that you want to open and click **Open** (Figure 112).

3. Click **Collaborate > Add Project to Server** to add the open project to the CEDW server (Figure 113).
Figure 113 -- Adding an Open Project to the CEDW Server

4. Type a project name, select a project category, and insert your comment (optional) (Figure 114).

Figure 114 -- Importing the Added Project to the CEDW Server

5. Click **Add**.
6. To check if the project has been imported to the CEDW server, click **Collaborate > Projects**.
3.7.3 Assigning Projects

In CEDW Admin, a user can have several roles (global or project-specific roles) and a role can have more than one project. An authorized user can view what roles a user has and which projects the user is assigned to through the User details page. Here you can assign or remove a project from any existing role if you are authorized to do so. Prior to accepting project assignments, a user must have a role. You can, however, assign projects while you are creating a role on the Role details page, which has been explained in section 3.6.4.1 Assigning Roles.

The User detail page allows you to assign one or more projects to a project-specific role and/or remove projects from the role.

To assign a project to a user or a role:

1. Click a username on the User Management page. The User detail page will open
2. Click the Role Assignments arrow button.
3. Click the row of a role to which you want to assign a project (assigned roles have their check boxes selected) (Figure 116).
4. Click the **Add** button to assign a project to the selected role. The **Add Project** dialog will open (Figure 117).

5. Click a project (you can select multiple projects by pressing the **Ctrl** key while selecting them).

6. Click **Add** (Figure 117). The selected project(s) will appear on the page (Figure 118).
7. Click **Save** to assign the project(s) to the role. A message informing the update was successful will open.

To remove a project:

1. Click a username on the **User Management** page. The **User detail** page will open.
2. Click the Role Assignments arrow button to expand the view.
3. Click the row of a role whose project(s) you want to remove.
4. Click the **Remove project** button to clear the project from the selected role (Figure 119).
5. Click **Save**. The project will be removed from the role and a message informing that the update was successful will open.

### 3.7.4 Unlocking Project’s Elements

A trunk in the CEDW system means the main location where a project was first created. You may create different branches for the project. An authorized user can see the project version(s) and the branch(es) where the project is stored through the **History** section of the **Project detail** page in CEDW Admin.
Elements in a project in a trunk or a branch may be locked by a user to prevent it from being modified by others. Only users who have a permission to remove a project lock can unlock the elements of that particular project. As multiple users may work on a single project, they may also lock different elements in the project. CEDW Admin allows you to unlock (i) elements in a project that are locked by a particular user in a branch or (ii) all locked elements in a project in a particular branch.

You can remove locks on a project in the Locked Elements Management dialog of that particular project. There are two methods to open the Locked Elements Management dialog:

(i) Click the project name on the Project Management page and click the Manage Locked Elements button on the Project detail page.

(ii) Click the submenu drop-down button of a project on the Project Management page and select the Manage Locked Elements menu.

The Locked Elements Management dialog allows you to see if there are user locks in the project. The dialog provides you two options to remove the locks: (i) Release and (ii) Release all. The former option allows you to
unlock an element in a project that is locked by a particular user while the latter option allows you to unlock all elements in a project.

To unlock elements in a project:

1. Click **PROJECTS** to open the **Project Management** page.
2. Click the submenu button of a project and select **Manage Locked Elements** (Figure 121). The **Locked Elements Management** dialog of that project will open (Figure 122).

To unlock elements in a project:

1. Click **PROJECTS** to open the **Project Management** page.
2. Click the submenu button of a project and select **Manage Locked Elements** (Figure 121). The **Locked Elements Management** dialog of that project will open (Figure 122).

3. Select a project branch.
4. Click either (i) **Release** to unlock a particular user lock or (ii) **Release all** to unlock all user locks in the selected branch (Figure 123).

![Locked Elements Management for class diagram](image)

**Figure 123 -- Unlocking a Project**

5. A confirmation dialog will open. Click **Yes**.

### 3.7.5 Deleting a Project

You can delete a project, if you have a permission to do so, from CEDW Admin using the **Delete** button on the Project Management page. Deleting a project from CEDW Admin will cause the project to be deleted from MagicDraw or CEDW server. You cannot delete a project whose element(s) are locked by another user.

To delete a project:

1. Click a category in the **Category** column whose project(s) you want to delete. All projects belonging to the selected category will be listed in tabular form.
2. Either
   
   (i) Select the check box of a project you want to delete and click the **Delete** button (Figure 124).
   
   (ii) Click the submenu button of a project you want to delete and click the **Delete** button (Figure 125). A confirmation dialog will open (Figure 126).
Figure 124 -- Deleting a Project

Figure 125 -- Deleting a Project

Figure 126 -- Delete Project Confirmation Dialog

3. Click Yes. The selected project will be deleted from the category.
3.7.6 Searching for Projects

To search a project name:

1. Type a project name or a keyword that matches part of the project name on the Project Management page, for example, diagram, into the Search by project name box (Figure 127).

2. Either click the Search button or press Enter. All projects containing the keyword will appear in the Search result dialog (Figure 128).

3. You can click either a project name or the Edit button to see the project details on the project details page. You can also perform other commands in the Search result dialog as explained in...
the following section 3.7.6.1 Using the Project Search Result Dialog.

### 3.7.6.1 Using the Project Search Result Dialog

The project's **Search result** dialog opens whenever you perform a search for a project on the **Project Management** page. You can perform several operations in the **Search result** dialog such as:

- Search for more projects (by typing a keyword in the **Search** text box).
- Remove a project to another category (by using the **Category** drop-down menu).
- Open a project details page (by clicking the project name link and the **Edit** button).
- Delete a project (by clicking either the **Delete** button or the menu item **Delete**).
- Unlock elements (by clicking the arrow button and select the menu item **Manage Locked Elements**).

![Figure 129 -- Move Project to Another Category and Search Options](image_url)

![Figure 130 -- Delete and Manage Locked Elements Options](image_url)
3.7.7 Managing Project Categories

You can use a project category to classify projects into groups. CEDW Admin helps you categorize projects through the **Project Management** page. Project categories are sortable. A user with the role Project Creator can create project categories. You can create as many categories as desired. A project category enables visual grouping of projects especially if you have a long list of them. It can also help you search for a project faster if you know to which category the project belongs.

If you create a project but you do not specify which category that project belongs to, it will automatically go to the **Uncategorized** group. Projects in **Uncategorized** do not belong to any specific category. Therefore, if you delete a particular category, all projects in the deleted category will be moved to the **Uncategorized** group.

Besides creating and editing a project category, you can also remove or delete one or more projects from a project category and move a project from one category to another.

### 3.7.7.1 Creating a Project Category

To create a project category:

1. Click the main menu **PROJECTS** to open the **Project Management** page (Figure 132).

2. Click the **Manage categories** button. The **Project Categories** dialog will open (Figure 132).
3. Click the **Create new category** button.

4. Name the new category and click **Create**. The new category will be created.
5. Click **Finish** to save the changes.

3.7.7.2 **Deleting a Project Category**

Deleting a project category will cause all projects in the deleted category to be removed to the **Uncategorized** group.

To delete a project category:

1. Click the **Manage categories** button on the **Project Management** page. The **Project Categories** dialog will open (Figure 136).
2. Click the Delete button to the right of the project category that you want to delete. The Confirm delete categories dialog will open (Figure 137).

3. Click Yes. All projects in the deleted project category will be moved to the Uncategorised group.
4. Click **Finish** save the changes.

### 3.7.7.3 Editing a Project Category Name

To edit a project category name:

1. Click the **Manage categories** button on the **Project Management** page. The **Project Categories** dialog will open (Figure 139).

2. Click a category name and rename it, and then click **Update**. The category name will be updated accordingly.
3. Click **Finish** to save the changes.

### 3.7.8 Moving Projects from One Category to Another

You can move a project from one category to another by (i) selecting a new category from the **Category** drop-down menu or (ii) dragging it to another category name.

**(i) To move a project from one category to another by using the **Category** drop-down menu:**

1. Click the main menu **PROJECTS** to open the **Project Management** page.
2. Select a check box of a project you want to move to another category.
3. Click the **Category** drop-down menu button and select a new category for the project (Figure 140).

4. A confirmation dialog will appear. Click **Yes** (Figure 140). The selected project will be moved to the selected category.
(ii) To move a project from one category to another by dragging it:

1. On the Project Management page, drag a project to a category name (Figure 141).
2. Click and drag a project from the project list to a category in the Category name column. Once you drag the project, the check box will be selected by default. A confirm to move dialog will open (Figure 144).

3. Click Yes. The selected project will be moved to the selected category.

**NOTE**
You can move several projects at the same time to another category by using the Category drop-down menu.

**TIP**
Alternatively, you can move a project to another category by clicking the project name and selecting a new category from the Category drop-down menu on the Project details page, see section 3.7.9 Editing Project Name, Description, and Category.

### 3.7.9 Editing Project Name, Description, and Category

You can edit a project’s name and its description on the Project details page. This page allows you to rename a project, add or edit its description, or change the project’s category. You can also filter project versions by project branches, and all users assigned to the project. You can open the Project details page by clicking a project name on the Project Management page.

To rename a project or edit its description:

1. Click the main menu PROJECTS.
2. Click a project name on the Project Management page to see the details.
3. You can (i) rename it, (ii) edit the description, or select a new category from the Category drop-down menu.
4. Click **Save**.

**TIP** Alternatively, you can press **Ctrl** and click a project’s name to open the Project details page in a new tab or press **Shift** and click a project’s name to open the Project details page in a new window.

To filter project versions by its branch:

1. Click the main menu **PROJECTS**.
2. Click a project name on the **Project Management** page to open the Project details page.
3. Click the **History** drop-down button to see its details (Figure 146).

---

**Figure 146 -- Project Details Page**

**Figure 146 -- Project Details Page**
4. Select either (i) all or (ii) trunk from the Filter by branch drop-down list. All project versions belong to the selected branch will appear.

3.8 Downloading Log Files

CEDW Admin lists all connecting server nodes in a cluster and their respective log files. Each server node has its own log file. You can see them on the Server settings page.

A log file is a file that records all user activities on the CEDW server such as log in, log out, change passwords, and check out projects. You can download a log file by clicking the download icon to the right-hand side of the server node’s IP address. The server nodes are arranged in an ascending numerical order by default. You can change the default order by clicking the Server Node column header.

The Log Files page provides all available server nodes and log files for download. It lists all server nodes of the cluster a user is connecting to. You can download a log file by clicking the download icon of a server node. You can save the downloaded log file to a local directory.

To download the Log page:

1. Click the main menu SETTINGS to open the Server settings page.
2. Click the icon of a log file you want to download. The Log Files Download page will open (Figure 147).

Figure 147 -- Downloading a Log File

3. Click the download icon of a specific server node to download the log files. A download file dialog will open (Figure 148).
4. Either (i) select a specific application to open the file or (ii) save the file into the folder Downloads of your browser.
5. Click OK. The file will be downloaded and saved on your computer.

3.9 Using Multi-Type Search

Besides allowing you to search for individual types that limit search results to username or project name only, CEDW also provides a multi-type search capability that enables searching for multiple type of contents. The multi-type search box is located in the upper-right corner of the CEDW Admin page. The benefit of this multi-type search is that the search result can return all entries or a specific type containing the character(s) entered.

This multi-type search allows you to select one of the four type qualifiers to limit your search results: (i) All, (ii) Users (iii) Projects, or (iv) Roles.

All matching usernames, projects, roles, or a combination of them will appear as a drop-down list.

To search for a username, a project, a role, or a combination of them you type in the Search box:

1. Click the Search box drop-down menu button and select (i) All, (ii) Users (iii) Projects, or (iv) Roles. If you do not select any type, All is the default search type.
2. Type the name of the user, the project, or the role, or if you are not sure you can type a keyword or characters that you think the username, the project, or the role may contain.
3. Press **Enter**. The CEDW Admin will display the username, project, role, or all them that match the keyword on a drop-down list in the **Search** box.