C H A P T E R **1**

WAE Design GUI Installation

The WAE Design GUI is used by WAE Design users and by administrators who are creating plan templates for use in the WAE Live or WAE Design Archive applications.

This chapter provides instructions for installing the WAE Design GUI. You additionally need to install the WAE Design license and if applicable, install the floating license server.

License Installation—Description of WAE Design license types (dedicated and floating) and instructions on how to install them.

WAE Design Floating License Server—Procedure for installing and setting up the FlexNet Publisher license server. This is needed only if administering floating licenses.

The installation process does not install any drivers or require any changes to the operating system. You can download and install the files to any folder or directory.

Prerequisites

- A license is required for all features except for the example plan files. If you have questions about obtaining a license, contact your support representative or system administrator.

- Meet the necessary system requirements and package dependencies. For a list of these, see the *System Requirements* document on Cisco.com.

Windows and Mac Installation

Step 1   Download the Cisco WAE Planning software package from the Cisco download site.

Step 2   Extract the files in a location of your choice.

Step 3   (Optional for Mac software) Verify Cisco code signing of the software. See the Verifying Code Signing section.

Step 4   Install and verify the license. See the License Installation chapter.

Linux Installation

The Linux installation installs all planning software, which includes WAE Design. If you would like to verify Cisco code signing for the software image, see the Verifying Code Signing section.

Installer

An *installer* is an executable that runs a script to install the software in the proper locations. Although multiple packages are installed, they are used only if you have a license for them.

The installer performs the following tasks:

- Verifies:
  - Whether the device has the appropriate system requirements, including proper operating system, disk space, total memory, and required software packages.

    If the installer sees that you do not have the appropriate system requirements, it either exits, gives a warning, or prompts you whether to continue. Since the installer might be checking for more than what your specific requirements are, you can press "y" to attempt to continue.
  - Whether there are existing package installations; if there are, they are preserved.

- Provided you use the defaults, installs WAE Design software under `/opt/cariden/software/mate`. If you did not use the default directory, the path is `<installation_directory>software/mate`. It also creates the `/opt/cariden/software/mate/current` symbolic link to the most recently installed package. Throughout the documentation, this is referenced as `$CARIDEN_HOME`.

- Upon logging out and back in, the WAE username and associated permissions are set, and the environment variables are set.
  - For executables, the WAE user has read, write, and execute permissions. Users listed in `/etc/group` have read and execute permissions. All others have read-only permissions.
  - For non-executables, only the WAE user has read and write permissions. All other users have read-only permissions.

Installation

Step 1 Log in to the server as root or a user with administrative capabilities.

Step 2 Go to the directory where you downloaded the software, extract the .zip file, and execute the installer as root using a bash command. The software package is the installer that automates the installation process.

```
sudo bash <package>.bin
```

Installer Options	Description
`sudo bash wae-k9-<version>.bin`	Be prompted through the installation process.
`sudo bash wae-k9-<version>.bin -d <installation_directory>`	Specify a different installation directory. You are prompted through the remainder of the installation process.
`sudo bash wae-k9-<version>.bin -h`	Shows a usage statement for the installer.
`sudo bash wae-k9-<version>.bin -y`	Automatically respond "yes" to all questions without being prompted.

The process verifies the integrity of the installation using checksums. If a checksum fails, error messages appear and the installation process ends.

Depending on what the installation process finds, it might prompt you throughout the process to continue or not.

Step 3   When prompted, enter the following information.

Command Prompt	User Entry/Notes
Enter the installation directory	By default, the installation directory is set to /opt/cariden.
	If this is an upgrade, we recommend that you maintain the same installation directory as in the previous release. If this is a new installation, the recommendation is to keep this default.
	If the directory you entered does not exist, you are prompted as to whether to create it. If you answer "yes," an installation directory with root privileges is created.
Enter the WAE username	The default is "cariden" only if that username exists; its existing password remains intact. Otherwise, the default WAE username is "wae" and the password is "ciscowae." The WAE user is created automatically during installation.
	We recommend that you keep the default you receive.
	Note If you have installed the WAE Live datastore (mld), you cannot restart mld unless you start it with the same username used to install it.
Migrate WAE Collector files from previous installation?	Since this is a standalone WAE Design application installation, enter "No."
Do you want to activate the WAE Network Interface?	Since this is a standalone WAE Design application installation, accept the default answer of "No."
Do you want to uninstall the packages?	This question applies only if you have existing Automation software installed.

Step 4   Once the installation process stops, log out of the device or VM.

Step 5   Log back in using the WAE username.

Step 6   Stop the services that are automatically started since they are not used by the WAE Design application.

```
service wae-web-server stop
service wae-ni stop
service wae-svcs-dashui stop
service wae-svcs-db stop
service wae-svcs-logagent stop
service wae-svcs-metricsbkr stop
service wae-svcs-metricsd stop
service wae-svcs-mon stop
service wae-svcs-ui stop
```

Step 7   To ensure the above services do not restart upon reboot, use the following chkconfig command for each service that you stopped in the previous step.

```
sudo chkconfig <service_name> off
```

Example:

```
sudo chkconfig wae-ni off
```

To verify these services will not start on a reboot, use the following command and confirm these services are listed as off:

```
chkconfig --list | grep -i wae-
```

Step 8   Install and verify the license. See the License Installation chapter.

Verifying Code Signing

To verify Cisco code signing, complete the following procedures for each platform software image.

Note   There are no additional steps required for Windows systems. Code signing verification is automatically done during Windows installation.

Verifying Code Signing for Mac Software

Step 1   Enter the following command:

```
codesign -dvvv <path to .dmg file>
```

For example,

```
codesign -dvvv /home/builder/Downloads/MATE-k9-6.3dev-1815-g40a7ddb-MacOSX-x86_64.dmg
```

If code signing verification is successful, the following similar message will appear:

```
Executable=/home/builder/Downloads/MATE-k9-6.3dev-1815-g40a7ddb-MacOSX-x86_64.dmg
Identifier=MATE-k9-6.3dev-1815-g40a7ddb-MacOSX-x86_64.dmg
Format=generic
CodeDirectory v=20100 size=155 flags=0x0(none) hashes=1+2 location=embedded
CDHash=7f45338f9d774d1dbf5eb204884e2822b3a0a665
Signature size=4938
Authority=Cisco Systems, Inc
Authority=thawte SHA256 Code Signing CA
Authority=thawte Primary Root CA
Authority=Thawte Premium Server CA
Signed Time=Nov 24, 2015 1:03:01 PM
Info.plist=not bound
Sealed Resources=none

Internal requirements count=0 size=12
```

Verifying Code Signing for Linux Software

Prerequisites

- OpenSSL must be installed to run the command.
- Confirm that the .pem and .signature files were downloaded as part of the software .zip file.

Step 1   Enter the following command:

```
openssl dgst -sha256 -verify <path to .pem file> -signature <path to .signature file>
<path to wae-k9.bin file>
```

For example,

```
openssl dgst -sha256 -verify WAE.pem -signature
/home/user/Downloads/wae-k9-6.3.bin.signature /home/user/Downloads/wae-k9-6.3.bin
```

If code siging verification is successful, the following message appears:

```
Verified OK
```