



# Install Cisco WAE

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## Install Cisco WAE

### Before you begin



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**Note** If upgrading from Cisco WAE 7.1.1, see [Upgrade from Cisco WAE 7.1.1.x, on page 2](#).

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- Confirm that you have met all requirements described in [Cisco WAE Server Requirements](#).
- If one does not yet exist, create a UNIX user (assigned to a group). You must be this UNIX user to run installation.

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**Step 1** Navigate to and download the Cisco WAE package from the [Cisco Download Software](#) site.

**Step 2** Log in to the server, copy the Cisco WAE package (`<wae_linux-xxxxx_bin>` or `<wae-darwin-xxxx.bin>`) to a local directory, and start a bash shell.

**Step 3** Install the Cisco WAE package.

```
# chmod 755 <wae_linux-xxxxx_bin> ; ./<wae_linux-xxxxx_bin>  
<wae_installation_directory>
```

The installation program creates a bash script file named `waerc` that sets the environment variables.

**Step 4** Source this file to get the settings.

```
# source <wae_installation_directory>/waerc
```

**Note** If, later, you get a "wae: command not found" error, reenter the command to source the settings.

**Step 5** Create a run-time directory.

```
# wae-setup <wae_run_time_directory>
```

**Step 6** (Optional) Edit the ~/.bash\_profile to source waerc settings automatically at login.

```
# echo "source ~/<wae_installation_directory>/waerc" >> ~/.bash_profile
```

**Step 7** Run Cisco WAE.

```
# cd <wae_run_time_directory>
# wae
```

### Example

For example:

```
# bash wae-linux-v7.0a3-2153-ga539952.bin wae_install
# source wae_install/waerc
# wae-setup wae_run
# echo "source ~/wae_install/waerc" >> ~/.bash_profile
# cd wae_run
# wae
```

### What to do next

Start and log in to Cisco WAE. For more information, see [Next Steps](#).

## Upgrade from Cisco WAE 7.1.1.x

This procedure outlines the steps necessary to upgrade from Cisco WAE 7.1.1.x.

### Before you begin

Download the upgrade script package (upgrade\_scripts.zip) from the same location where the Cisco WAE 7.1.2 software package resides in the [Cisco Download Software](#) site.

**Step 1** Start Cisco WAE 7.1.1.

**Step 2** Unzip the upgrade\_scripts.zip file and run the wae\_upgrade script.

```
# wae_upgrade.sh -export -install-dir <WAE_7.1.1_install_directory> -run-dir <WAE_7.1.1_run_directory>
  -conf-dir <store_config_data_directory>
```

**Step 3** Stop Cisco WAE 7.1.1.

```
# wae --stop
```

**Step 4** Install and run Cisco WAE 7.1.2.

**Step 5** Run the script to import all the configurations from Cisco WAE 7.1.1.

```
# wae_upgrade.sh -import -install-dir <WAE_7.1.2_install_directory> -run-dir <WAE_7.1.2_run_directory>
-conf-dir <import_data_config_directory>
```

**Step 6** Run collections in Cisco WAE 7.1.2 to update the network models.

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## Install Cisco WAE License

A license determines which Cisco WAE features are available for use. To obtain a license, contact your Cisco account representative.

Advanced OPM simulation, optimization, and predictive analysis functionality require a license. To install the license, complete the following steps:

**Step 1** Run the `license_install` tool, passing it the name of the license file (.lic extension). By default, the tool merges the features that are granted by the new license with those features in an existing license.

```
license_install -file <path>/<license_name>.lic
```

**Step 2** When prompted, enter the number that is associated with the directory in which you want to install the license.

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## Start and Stop Cisco WAE

From the Cisco WAE run-time directory, enter the relevant Cisco WAE CLI command to start or stop Cisco WAE services:

- `wae --start`—Starts or restarts Cisco WAE services.
- `wae --stop`—Stops Cisco WAE services.

## Update Packages or Templates

If any packages or templates are updated or added in the `<wae_run_time_directory>/packages` directory, you must do one of the following:

- Restart Cisco WAE by running a package reload command.

```
# wae --with-package-reload
```

- Request a package reload using the Cisco WAE CLI.

```
# request packages reload
```

For example, you must perform a package reload when edit the `wae.conf` file.

# Troubleshoot a Cisco WAE Installation

To check the status of Cisco WAE, enter `wae --status`.

Cisco WAE comes with standard logging features in the YANG run time. Cisco WAE logs to multiple log files in the `<wae-run-time>/logs` directory.

The LDAP authentication logs are logged in `[wae-run-time]/logs/wae-ldap-auth.log` file. The tool located in `[wae-install-dir]lib/exec/test-java-ssl-conn` is useful to test SSL connectivity for java applications like LDAP Authentication and EPNM notifications which provide useful information to debug certification issues.

The most useful log is `<wae-run-time>/logs/ncs-java-vm.log`. Most Cisco WAE packages log to this file. Some Cisco WAE packages also log to `<wae-run-time>/logs/ncs-python-vm-<package-name>.log`. The following example shows Python-VM based logs:

```
[wae@wae logs]$ pwd
/home/wae/wae-run/logs
[wae@host logs]$ ls -ltr ncs-python-vm*
-rw-rw-r-- 1 wae wae    0 Feb 26 07:50 ncs-python-vm-cisco-wae-opm-tte.log
-rw-rw-r-- 1 wae wae    0 Feb 26 07:50 ncs-python-vm-cisco-wae-get-plan.log
-rw-rw-r-- 1 wae wae    0 Feb 26 07:50 ncs-python-vm-cisco-wae-dmdmesh-creator-nimo.log
-rw-rw-r-- 1 wae wae    0 Feb 26 07:50 ncs-python-vm-cisco-wae-layout-nimo.log
-rw-rw-r-- 1 wae wae    0 Feb 26 07:50 ncs-python-vm-cisco-wae-opm-load-plan.log
-rw-rw-r-- 1 wae wae    0 Feb 26 07:50 ncs-python-vm-cisco-wae-dmddeduct-nimo.log
-rw-rw-r-- 1 wae wae    0 Feb 26 07:50 ncs-python-vm-cisco-wae-archive.log
-rw-rw-r-- 1 wae wae 2238 Feb 26 07:50 ncs-python-vm.log
-rw-rw-r-- 1 wae wae 270 Feb 26 08:20 ncs-python-vm-nso_wae_nodes_insert.log
```

By default, the log level is set to INFO. You can configure logging in the following ways:

- Define the log level of various logs in the run-time directory `wae.conf` file. For information about the `wae.conf` file, see the *Cisco WAE User Guide*.
- Use the Expert Mode to set logging capabilities for some network interface modules (NIMOs). For example, you can set logging capabilities such as topology NIMOs and the `lsp-snmp-nimo` module. For information about the Expert Mode, see the [Cisco WAE User Guide](#).
- Use the Cisco WAE CLI to define the log level for various NIMO components. To define the log level, enter the following command at the command line:

```
admin@wae% set java-vm java-logging logger <nimo-component> level <level-x>
```

Level types are `level-info`, `level-debug`, and `level-all`. The logs are saved to `ncs-java-vm.log` and can be used for troubleshooting.

The following table lists basic NIMO components.

NIMO Component	Description
com.cisco.wae	General debugging
com.cisco.wae.nimo.topo	Topology-based NIMO debugging
com.cisco.wae.nimo.lspconfig	LSP configuration through NED debugging

<b>NIMO Component</b>	<b>Description</b>
com.cisco.wae.nimo.lsp	LSP debugging
com.cisco.wae.nimo.snmptrafficpoller	SNMP traffic poller debugging
com.cisco.cisco.wae.aggr	Aggregation debugging
com.cisco.wae.nimo.optical	Optical NIMO debugging

