



CHAPTER 5

Licensing

The following topics describe the Prime Network licensing mechanism and how to view a basic license report:

- [Licensing Overview, page 5-1](#)
- [Licensing for Upgrades from Cisco ANA 3.6.x and 3.7.x, page 5-2](#)
- [Licensing and Gateway Server High Availability, page 5-2](#)
- [Obtaining a License File, page 5-3](#)
- [Installing and Updating a License File, page 5-4](#)
- [Viewing the License Report, page 5-5](#)
- [Troubleshooting Licensing Issues, page 5-5](#)



Note

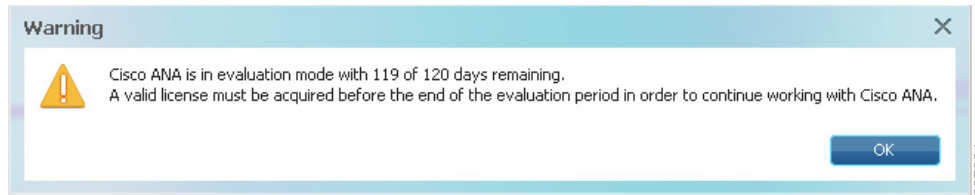
A Prime Network base license must be registered and activated within 120 days of installation or upgrade. If there are no valid license files on the gateway server, Prime Network acts as an evaluation version. This means that it has full functionality for 120 days after installation, and then it expires and UI connections will be disallowed.

Licensing Overview

Prime Network provides a mechanism for managing, validating, and enforcing basic licenses. Licenses are encrypted files that are stored on the gateway server. The gateway server keeps track of the licenses by communicating with the FlexNet license validation server, which is provided with the Prime Network image.

All purchased Prime Network basic licenses must be registered and activated by installing the license file on the Prime Network server.

If a user logs into a GUI client and Prime Network detects a license violation, a warning message is displayed, as illustrated in [Figure 5-1](#).

Figure 5-1 License Warning Message at GUI Login

Prime Network validates the basic license at system startup. The following basic license types are supported:

- Base (K9)—For production networks. Includes 3 UI licenses.
- Lab (LAB-K9)—For lab or staging networks. Includes 5 UI licenses. At UI login, the user is notified that the installation is a Lab installation.
- Evaluation—For time-based evaluation period (120 days). At UI login, the number of days remaining in the evaluation period is displayed. When the evaluation period expires, a System event is generated.

If a base or lab license is missing, the installation is assumed to be an evaluation version.

Licensing for Upgrades from Cisco ANA 3.6.x and 3.7.x

If you are upgrading from Cisco ANA 3.6.x or Cisco ANA 3.7.x, keep the following in mind:

- Upgrade from Cisco ANA 3.7.x: If you are upgrading from a registered version of Cisco ANA 3.7, no new license files are required. To check whether you have a valid license file installed on the Prime Network gateway server, see [Viewing the License Report, page 5-5](#).
- Upgrade from Cisco ANA 3.6.x: A new license file is required because there is no automatic transfer of licenses from Cisco ANA 3.6.x. Contact your Cisco account representative or send an e-mail to ask-ana-licensing@cisco.com to get a new license file, and install it on the Prime Network 3.7 gateway server within 120 days of the upgrade.

Licensing and Gateway Server High Availability

If you using gateway server high availability, you must do the following:

1. Purchase two base kit licenses.
2. Contact your Cisco account manager and ask them to manually generate the licenses for the additional gateway server(s). (Because users receive only one Product Activation Key (PAK), they can only generate one license file.)
3. Place a copy of all gateway server license files in the license directory `NETWORKHOME/Main/ha/licenses` on an active gateway. This directory is part of the Prime Network partition that is shared (local redundancy) or replicated (geographical redundancy) between servers in the gateway server high availability solution.

If you add new licenses, you must copy them to this directory on the active gateway. After installing new license files, the license server should be restarted using the `resetLicenses.pl` script (see [Installing and Updating a License File, page 5-4](#)).

**Note**

All gateway licenses should be copied to `NETWORKHOME/Main/ha/licenses` on the active gateway.

Obtaining a License File

Prime Network software must be registered via Cisco.com in order to obtain a license file (*.lic). The license file will be sent to you by e-mail and must be installed on the Prime Network gateway server. See [Installing and Updating a License File, page 5-4](#).

A Product Authorization Key (PAK number) is used for identification purposes when you register the software to request a license file. The PAK number is an automatically generated identification key that represents the specific software and hardware covered by the license. You will find the PAK number at the bottom of the Software License Claim Certificate supplied with the Prime Network package. An example PAK number is ANA-3X-JAB-XXXXXX. Each PAK number is unique and can be registered only once.

**Note**

If you cannot find the PAK number, contact your Cisco account representative or send an e-mail to ask-ana-licensing@cisco.com for assistance.

To obtain the license file:

- Step 1** Go to the licensing web page at <http://www.cisco.com/go/license> and enter your Cisco.com user credentials to enter the Product License Registration process. If you are not a registered Cisco.com user, create an account and log in.
- Step 2** Enter the PAK number that appears in the Software License Claim Certificate you received with your Prime Network package and click **Submit**.
- Step 3** Enter the hostname and host ID of the Prime Network gateway server.

**Note**

- If you do not know the host ID, log into the Prime Network gateway server and enter the command `hostid`.
- For linux, the license file should be generated with both hostname and MAC address.

- Step 4** Fill in the rest of the requested information, including your e-mail address, and submit the request. Your license file and user information will be sent within 1 hour to the e-mail address you specified. If you do not receive an e-mail within 1 hour, contact your Cisco account representative or send an e-mail to ask-ana-licensing@cisco.com for assistance.

**Caution**

Do not edit the contents of the .lic file in any way. The contents of the file are signed and must remain intact.

When you receive the license file, install it as described in [Installing and Updating a License File, page 5-4](#).

Installing and Updating a License File

When you receive the license file (*.lic) after registering the software, you must install it on the Prime Network gateway server within 120 days after installation. The license file is held and managed by the FlexNet license validation server, which is provided with the Prime Network image.

You can also use this procedure to update an existing license, or install additional licenses.

When Prime Network is installed, the FLEXNET_HOME environment variable is set to *NETWORKHOME/utills/operating-system/FlexNet*. [Table 5-1](#) lists the contents used by the licensing framework.



Note

If you are using gateway server high availability, be sure to install new licenses in the correct directory as listed in [Table 5-1](#). If you do not copy licenses into the correct directory, the license server will not start.

Table 5-1 License Directory Structure on Gateway Server

Directory Contents	Directory Location	
FlexNet binaries and Cisco daemon	\$FLEXNET_HOME/bin	
FlexNet and liccontrol logs	\$FLEXNET_HOME/logs	
License file storage	For gateways in a gateway server high availability environment	\$ANAHOME/Main/ha/licenses
	All other configurations	\$FLEXNET_HOME/licenses

Use the following procedure to install and update license files. These procedures can be performed at any time.

- Step 1** Log into the Prime Network gateway as *network user*. (*network user* is the operating system account for the Prime Network application, created when Prime Network is installed; for example, **network39**.)
- Step 2** For all licenses:
 - a. Copy the license file to the \$FLEXNET_HOME/licenses directory.
 - b. Enter the following command to make sure that the file is detected:

```
# liccontrol reread
```
- Step 3** If you are using gateway server high availability environment, copy all licenses to an additional location so it can be accessed by all gateways in the environment.

- a. Copy all server license files to the *NETWORKHOME/Main/ha/licenses* directory on the active gateway. This directory is part of the Prime Network partition that is shared (local redundancy) or replicated (geographical redundancy) between servers in the gateway server high availability solution.
- b. On the active gateway, enter the following commands to make sure that the files are detected. (You only need to do this once.)

```
# liccontrol stop
# perl $ANAHOME/Main/ha/resetLicenses.pl
# liccontrol start
```

Viewing the License Report

The License Report window provides basic license information, such as whether the installation is running a Production or Lab license. It is displayed when you choose **Global Settings > License Report**.

The following information is displayed in the License Report window.

Field	Description
Date	License Report generation time
Basic License	Production, Lab, or Unlicensed Evaluation.
Operating Mode	Backend designation denoting the type of management Prime Network is performing: ELM (foundation and element management), NAS (network and service monitoring), or ACT (service activation).
Evaluation Days Remaining	For Unlicensed Evaluation, the number of days remaining (out of 120)

Troubleshooting Licensing Issues

If you encounter any issues with Prime Network licenses, contact your Cisco account representative or send an e-mail to ask-ana-licensing@cisco.com for assistance.

At any time you can check license compliance by generating a License Report; see [Viewing the License Report, page 5-5](#). You can also check the license log files at *\$FLEXNET_HOME/logs*.

These topics provide additional troubleshooting information:

- [License Violation Messages, page 5-6](#)
- [Stopping and Starting the License Server, page 5-6](#)

License Violation Messages

To detect licensing issues, you can check for license-related System events in Prime Network Events. Prime Network generates warning events for license violations. The events are logged in the database and are visible from the System tab in Prime Network Events. System events are generated in the following scenarios.

License Violation Message	Details/Action Required
You are using an Prime Network without a license. The evaluation period is expired.	When the evaluation license expires, client connections are disallowed.
You are using an Prime Network evaluation license which expires in <i>x</i> days	
The installation of Prime Network is compliant only for LAB usage and cannot be used in production network.	Informational message; no action required.

Stopping and Starting the License Server

Whenever you run the `networkctl status` command on the gateway, Prime Network provides information about component processes using the following format:

```
Checking if license server is up and running      [ status ]
```

The status information may be any of the following:

Status	Description
OK	A license file was found and the license server is up and running.
LOADED	The license server is starting. If it remains LOADED and does not change to OK, there might be a problem with the license file. Contact your Cisco account representative or send an e-mail to ask-ana-licensing@cisco.com .
NO LICENSE	No license file exists; the license server is not started.
ERROR	A problem occurred while starting the license server.

To manage the license server, use the `liccontrol` command (for example, when installing new license files):

```
liccontrol [start | restart | reread ]
```

The `liccontrol reread` detects new licenses; that is, it reads them and activates them. If you run `liccontrol start` and there are no license files installed, the license server will not start.