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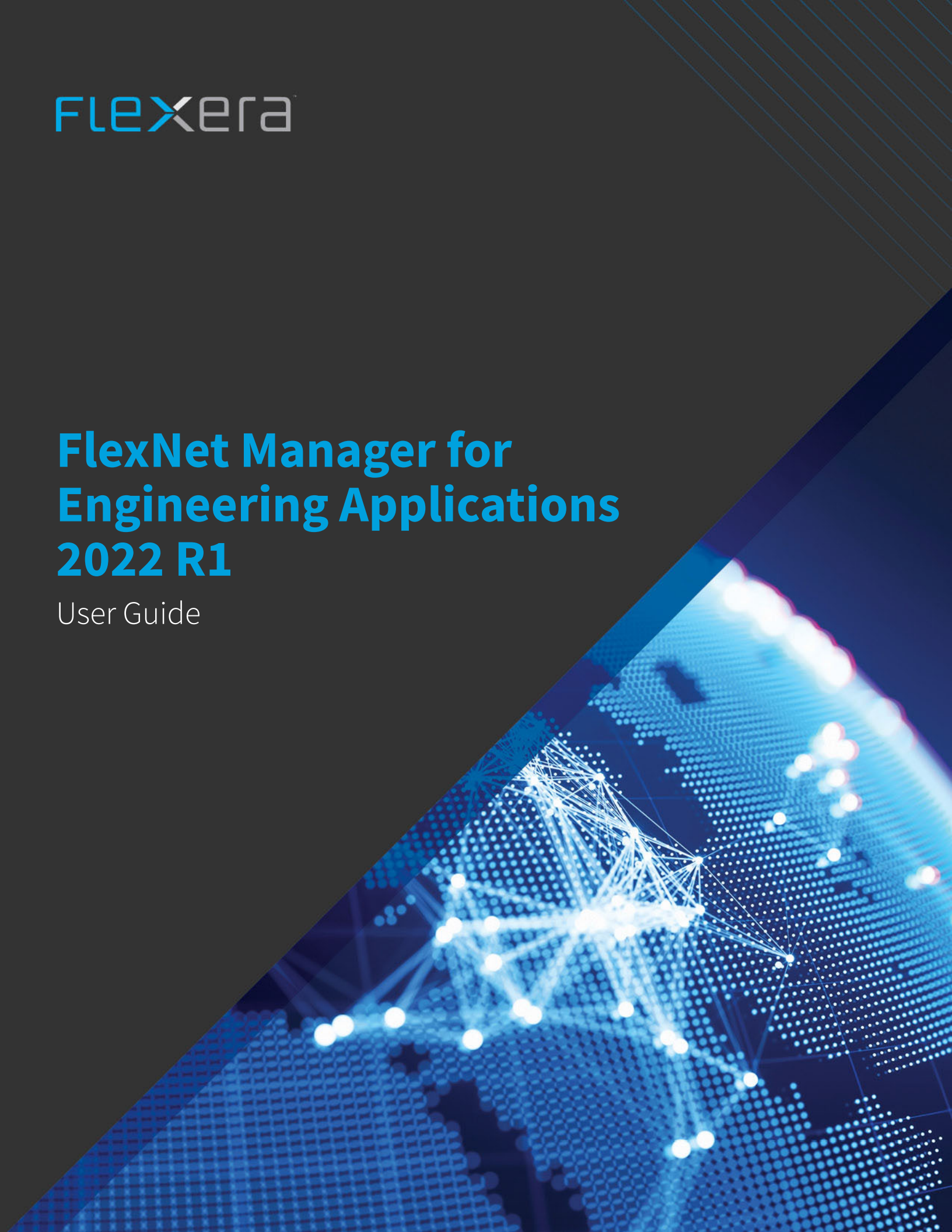
FlexNet Manager for Engineering Applications 2022 R1

User Guide

Legal Information

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Content

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Dashboard

The **Dashboard** is the initial interface to FlexNet Manager for Engineering Applications, enabling you to quickly view summary information about your vendor daemons and license servers, FlexNet Agents, most-active features, and alert messages.

Click the **Dashboard** tab to display the **Dashboard** page.

Tip • *To configure the number of rows displayed in the status tables, use the Manager System Configuration page. Specify a number in the Summary Table Size box.*

Vendor Daemon Status

The **Vendor Daemon Status** table shows the status of the vendor daemons in your environment—whether they are up (running), down (not running), or whether the status is unknown. The table also provides the name of the license server on which the vendor daemon resides.

- Click the name of a vendor daemon to configure or manage the vendor daemon.

- Click the name of a license server to configure or manage the license server.

Agent Status

The **Agent Status** table shows the current status of FlexNet Agents registered with FlexNet Manager for Engineering Applications— whether they are up (running), down (not running), or whether the status is unknown. The table also provides the name of the FlexNet Agent host.

Click the name of a FlexNet Agent to go to the Edit Agent page, where you can modify settings for the agent.

Alerts

The **Alerts** table displays current alert messages, including the date and time the alert was triggered. Alerts are categorized and color-coded according to severity.

- Error (red)

- Warning (yellow)

- Information (blue)

To dismiss an alert from the Alerts table, click its **Dismiss** button. You can dismiss all alerts using the Alerts Summary page.

If the number of current alerts exceeds the number of rows in the Alerts table, click the **more** link to go to the Alerts Summary page, where you can view all of the current alerts.

Most Active Features

The **Most Active Features** table lists the 10 features with the highest usage percentage. To determine the usage percentage (**% Licenses in Use** column), the number of licenses currently in use is divided by the total number of licenses available for a particular feature.

This table contains the following information:

- **Feature name**—Name of the active feature. Click the feature name to view feature usage by license pool. This enables you to view more specific information about the feature's usage, including the feature version and license server name. You can also view a list of users who have used the feature.

- **Vendor daemon**—Name of the vendor daemon that serves the feature.

- **Licenses in use**—Number of licenses in use for that feature, along with the total number of licenses available. For example, if the Licenses in Use value is 75/100, it means that 75 licenses are in use out of a total of 100 available licenses.

- **% licenses in use**—Percentage of licenses in use for the feature. This is the number of licenses in use, divided by the total number of available licenses for the feature.

Click the **more** link under the list of feature names to see a summary of usage by feature.

Freeing Licenses

Sometimes, an application stops responding (or *hangs*) and consumes a license that you want to free for use by someone else in your enterprise. If you need to free a license so it can be used by another user (if the license server was configured to allow licenses to be freed), click the feature name for which you want to free licenses. For more information, see Freeing Licenses by User.

See Also
FlexNetManaging License Servers, Vendor Daemons, and FlexNet Agents
Usage Activity
Alerts

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FlexNetManaging License Servers, Vendor Daemons, and FlexNet Agents

Functionality available from the **Servers** tab enables you to configure, manage, update, and view summary information about the FlexNet license servers, vendor daemons, and FlexNet Agents deployed in your environment. In addition, you can use the Not Recognizable License Servers page to view a list of license servers and vendor daemons that are no longer recognized by FlexNet Manager for Engineering Applications.

The following functionality is available from the **Servers** tab.

- **License Managers**—Configure and manage FlexNet license servers, viewing license server status, and view debug logs for license servers and FlexNet Agents.

- **Vendor Daemons**—Configure and manage vendor daemons, view vendor daemon status, add and edit options files, and rotate report logs.

- **Agents**—View the status of deployed FlexNet Agents, add and manage FlexNet Agents, and view FlexNet Agent logs.

- **Third-Party License Servers** and Third-Party Licensing Templates—Create templates for third-party (non-FlexNet and non-LUM) license servers, add and manage third-party license servers, and view status for third-party license servers.

  If you have enabled the display of IBM LUM license-server data, you can access the LUM Server page from this section.

- **Not Recognizable**—View lists of FlexNet license servers and vendor daemons that are no longer recognized by FlexNet Manager for Engineering Applications.

See Also
Working with FlexNet License Server Managers
Working with Vendor Daemons
Working with FlexNet Agents
LUM License Servers
Managing Third-Party License Servers
Not Recognizable License Servers and Vendor Daemons

Working with FlexNet License Server Managers

The **License Manager Summary** page displays a list of the FlexNet license servers in your environment that are managed by FlexNet Manager for Engineering Applications.

Available from the **Servers** tab (under the **License Managers** section), this page provides the following information:

- **License Server**—Display name of each license server. If the license server is a triad configuration (three license servers configured to accommodate failover), a triad icon is displayed to the right of the license server name.

  Click the license server name to go to the **Configure and Manage License Server** page, where you can manage the license server manager or configure the license server manager settings.

- **Port@Host**—Port and host setting for each license server manager. If the license server is a triad, this column lists the port and host settings for all three servers.

- **License Manager Status**—Status of each license server manager. Click the **Update Status** button to immediately refresh the status display for the license server.

  - Up—License server is currently running.

  - Down—License server is currently not running.

  - Unknown—License server status is not known.

  - Lost quorum—For license-server triads, this means that the quorum has been lost. A *quorum* requires that at least two of the three license servers are running and communicating with each other.

- **Vendor Daemon Status**—Status of the vendor daemons in each license server—whether the vendor daemons are up (running) or down (not running), or the status is unknown.

- **Last Update**—Time and date of the last license server manager status update. Click the **Update Status** button to immediately update the status for the license server manager.

- **Update Status button**—Click this button to immediately update the license server's status and the information displayed on this page.

You can sort the table by license server name and by license manager status.

See Also
FlexNetManaging License Servers, Vendor Daemons, and FlexNet Agents
Adding Single License Servers
Adding Triad License Servers
Updating License Server Status Manually
Configuring and Managing License Servers

Configuring and Managing License Servers

You can configure and manage your individual license servers using the **Configure and Manage License Server** page. This page contains two sections—License Server Status and License Manager Configuration. You can also schedule license-server updates from this page.

License Server Status

The **License Server Status** section displays information about the license server, and provides links to view debug logs and FlexNet Agent logs. For triad license-server configurations, this section provides information about all three license servers in the triad.

In this section, you can do the following:

- View the status of the license server manager (lmadmin or lmgrd), vendor daemons, and FlexNet Agent.

- View the version of the FlexNet Agent and the FlexNet Publisher version and location of the license server manager.

- Click a vendor daemon name to configure and manage the vendor daemon.

- Click the **View Debug Log** link to view the debug log for the license server manager.

- Click the **View Agent Log** link to view the FlexNet Agent log file.

- Click the **License Server Scheduling** link to enable and schedule automatic status updates and license file rereads.

Any FlexNet Manager for Engineering Applications user can view license server status and settings. However, to manage and configure a license server, a user must be assigned a role with the "Manage License Servers" permission.

Task **To manage the license server:**

1. From the **Servers** tab, under the **License Managers** section, click **License Manager Summary** to display the **License Manager Summary** page.

2. Click the display name of the license server you want to configure or manage to display the **Configure and Manage License Server** page.

   - To start the license server manager, click the **Start** button.

   - To shut down the license server manager, click the **Stop** button.

   - Click the **Reread All** button to have all of the license server's license files reread.

License Manager Configuration

The License Manager Configuration section shows the configured settings of the license server and its running settings. When the license server manager is restarted, the values specified in the **Configured Value** side become the running values for the license server, and are displayed in the **Running Value** side.

Task **To change license manager configuration settings:**

1. Click the **Servers** tab, then click **License Managers** to display the **License Manager Summary** page.

2. Click the license server's name to display its **Configure and Manage License Server** page.

3. In the **License Manager Configuration** section at the bottom of the page, edit the settings on the **Configured Value** (left) side.

Setting	Description
License Server Display Name	This string is used throughout FlexNet Manager for Engineering Applications to identify this license server manager.
lmgrd executable location	The path to the lmgrd executable (license server manager) on the license server.
lmutil executable location	The path to the lmutil executable on the license server.
License Manager Port	For lmgrd, select whether you want FlexNet Manager for Engineering Applications to: • Use the default port (in the range 27000 through 27009) • Use the specified port number
License Manager Options	Select whether you want to: • Allow licenses served by this license server to be freed. Freeing a license returns it to the pool of available licenses, so it can be used by someone else. • Allow remote shutdowns of the license server. This enables the **Stop** button for this license server, which enables a user with Manage License Servers permission to stop the license server from the **License Server Status** section of this page.
Auto-restart	Select this option to automatically restart the license server when it is down.
License Manager Command-line Parameters	This field enables you to pass an arbitrary string as a command-line option when starting lmgrd or lmadmin. Refer to the *FlexNet Publisher License Administration Guide* for information about command-line parameters that can be used and the platforms with which they can be used.
License Files or Directories	The full path to your license files or directories. If listing multiple license files or directories, separate items using colons (:) on UNIX systems, and using semicolons (;) on Windows systems.
Debug Logging	• To enable creation of a debug log, select **Enable debug logging**. • To append new debug log information to your existing debug log file, select **Append to debug log**. *Important • If **Append to debug log** is not selected, FlexNet Manager for Engineering Applications writes over the existing log file, effectively deleting the existing file.*
Debug Log Location	The full path to the debug log file. If debug logging is enabled, a debug-log location is required.
Notes	Notes about this license server manager. For reference only.

4. Click **Save**.

5. Restart the license server manager to change the configured settings to running settings.

See Also
FlexNetManaging License Servers, Vendor Daemons, and FlexNet Agents
Scheduling License Server Updates and License-File Rereads

Scheduling License Server Updates and License-File Rereads

You can change the default schedule for status updates and for license-file rereads.

You can also update license-server status manually.

Task | **To change the default settings for a license server:**

1. From the **Configure and Manage License Server** page, click the **License Server Scheduling** link to display the **License Server Scheduling** dialog.

This link is displayed only for users assigned a role with the Manage License Servers permission.

2. To disable automatic status updates, clear its **Enable** check box.

3. To change the schedule of status updates, select the **Enable Refresh License Server Status** check box and select an interval.

Note • The shorter the update interval, the more impact the automatic status updates may have on the overall performance of FlexNet Manager for Engineering Applications.

4. To enable automatic rereads of license files, select its **Enable** check box, and select an interval from the **Enable Reread License Files** menu.

5. Click **Save**.

You do not need to restart the license server for these changes to take effect.

Updating License Server Status Manually

You can change the status-update setting for each license server (using the process outlined above), or you can update the status manually.

Task | **To update the status of a license server manager manually:**

1. From the **Servers** tab, under the **License Managers** section, click **License Manager Summary** to display the **License Manager Summary** page.

2. Click the **Update Status** button of the license server whose status display you want to update.

See Also
Working with FlexNet License Server Managers

Adding Single License Servers

In order to monitor and manage the activity of your license servers, you must add the license servers to FlexNet Manager for Engineering Applications using the **Add Single License Server** page.

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*Note • If you need to add a license-server triad, use the **Add Triad License Servers** page. For information, see the topic, Adding Triad License Servers.*

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Task   ***To add a license server:***

1. From the **Servers** tab, under the **License Managers** menu, select **Add Single License Server**.

2. Complete the license-server settings. Required settings are indicated by a red asterisk.

Setting	Description
License server display name	Provide a unique name for this license server. This name is used throughout FlexNet Manager for Engineering Applications—in the user interface and in reports, for example—to identify the license server.
Agent	Select the FlexNet Agent that resides on the license server you are adding. This menu lists all of the FlexNet Agents that have been added to FlexNet Manager for Engineering Applications. If the license server's agent does not appear in the drop-down menu, add the FlexNet Agent using the **Add Agent** page.
lmgrd executable location	Specify the path to the lmgrd executable on the license server.
lmutil executable location	Specify the path to the lmutil executable on the license server.
License manager options	Select the options that you want to enable for this license manager: • **Allow licenses to be freed**—When this option is selected, the licenses served by this license server can be *freed*, or returned to the pool of available licenses. For more information, see the topics, Freeing Licenses by Feature and Freeing Licenses by User. • **Allow remote shutdown**—Select this option to enable remote shutdown of the license server. This enables the **Stop** button for the license server on the **Configure and Manage License Server** page. A user who has a role with the Manage License Servers permission can stop the license server.
Auto-restart	Select this option to automatically restart the license server when it is down.
License manager command-line parameters	This field enables you to pass a string as a command-line option when starting lmgrd or lmadmin. Refer to the *FlexNet Publisher License Administration Guide* for information about command-line parameters that can be used and the platforms with which they can be used.

Setting	Description
License files or directories	Type the full path to your license files or license-file directories. If you are listing multiple license files and/or directories, separate items using colons (:) on UNIX systems, and semicolons (;) on Microsoft Windows systems.
Debug logging	To set up debug logging: • **Enable debug logging**—Select this option to enable creation of a debug log for this license server. If this option is selected, you must specify a file location in the **Debug log location** setting. • **Append to debug log**—Select this option to append new debug-log information to this license server's existing debug-log file. This enables retention of previous debug-log information. *Important • If the option Append to debug log is not selected, the generation of new debug-log information will overwrite the existing log file, effectively deleting the existing file.*
Debug log location	The full path to the debug-log file. To enable debug logging, you must also select the **Enable debug logging** checkbox.
Notes	Notes/comments about this license server. For reference only.
Automatic status updates	Select this option to automatically refresh the display of this license server's status in FlexNet Manager for Engineering Applications, at the selected interval. If this option is not selected, you will be able to refresh the display of this license server's status only by clicking the license server's **Update status** button on the License Manager Summary page.
Automatic license-file rereads	Select this option to automatically reread the license files—specified in the **License files or directories** field—at the selected interval. A license-file reread causes the license server manager to reread the license files and to start any new vendor daemons that have been added. In addition, all currently running vendor daemons are signaled to reread the license files and their options files for changes.

3.   Click **Save**.

See Also
Working with FlexNet License Server Managers
Adding Triad License Servers
Scheduling License Server Updates and License-File Rereads

Adding Triad License Servers

If your software publisher enables it, you can configure a triad license server to provide three-server redundancy for failover protection. In order to monitor and manage the activity of your license-server triad, you must add the triad to FlexNet Manager for Engineering Applications using the **Add Triad License Servers** page.

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Note • *To add a single license server, use the **Add Single License Server** page. For information, see the topic, Adding Single License Servers.*

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Task   ***To add a license server:***

1. From the **Servers** tab, under the **License Managers** section, select **Add Triad License Servers**.

2. In the **License server display name** field, provide a unique name for this license server. This name is used throughout FlexNet Manager for Engineering Applications—in the user interface and in reports, for example—to identify the license server.

3. To enable automatic status updates for the license server, select the **Automatic status updates** check box. Select this option to automatically refresh the display of this license server's status in FlexNet Manager for Engineering Applications, at the selected interval.

   If this option is not selected, you will be able to refresh the display of this license server's status only by clicking the license server's **Update status** button on the License Manager Summary page.

4. To automatically reread the server's license files, select the **Automatic license-file rereads** check box, and specify an interval. Select this option to automatically reread the license files—specified in the **License files or directories** field (below)—at the selected interval.

   A license-file reread causes the license server manager to reread the license files and to start any new vendor daemons that have been added. In addition, all currently running vendor daemons are signaled to reread the license files and their options files for changes.

5. Complete the license-server settings for each license server in the triad. Required settings are indicated by a red asterisk.

Setting	Description
FlexNet Agent	Select the FlexNet Agent that resides on the license server you are adding. This menu lists all of the FlexNet Agents that have been added to FlexNet Manager for Engineering Applications.
	If the license server's agent does not appear in the drop-down menu, add the FlexNet Agent using the **Add Agent** page.
lmgrd executable location	Specify the path to the lmgrd executable on the license server.
lmutil executable location	Specify the path to the lmutil executable on the license server.

Setting	Description
License manager options	Select the options that you want to enable for this license manager: ● **Allow licenses to be freed**—When this option is selected, the licenses served by this license server can be *freed*, or returned to the pool of available licenses. For more information, see the topics, Freeing Licenses by Feature and Freeing Licenses by User. ● **Allow remote shutdown**—Select this option to enable remote shutdown of the license server. This enables the **Stop** button for the license server on the **Configure and Manage License Server** page. A user who has a role with the Manage License Servers permission can stop the license server.
Auto-restart	Select this option to automatically restart the license server when it is down.
License manager command-line parameters	This field enables you to pass a string as a command-line option when starting lmgrd or lmadmin. Refer to the *FlexNet Publisher License Administration Guide* for information about command-line parameters that can be used and the platforms with which they can be used.
License files or directories	Type the full path to your license files or license-file directories. If you are listing multiple license files and/or directories, separate items using colons (:) on UNIX systems, and semicolons (;) on Microsoft Windows systems.
Debug logging	To set up debug logging: ● **Enable debug logging**—Select this option to enable creation of a debug log for this license server. If this option is selected, you must specify a file location in the **Debug log location** setting. ● **Append to debug log**—Select this option to append new debug-log information to this license server's existing debug-log file. This enables retention of previous debug-log information. *Important • If the option Append to debug log is not selected, the generation of new debug-log information will overwrite the existing log file, effectively deleting the existing file.*
Debug log location	The full path to the debug-log file. To enable debug logging, you must also select the **Enable debug logging** checkbox.
Notes	Notes/comments about this license server. For reference only.

6. Click **Save**.

See Also
Working with FlexNet License Server Managers
Adding Single License Servers
Scheduling License Server Updates and License-File Rereads

Removing License Servers from FlexNet Manager for Engineering Applications Management

If you no longer want to use FlexNet Manager for Engineering Applications to manage a particular license server, you can remove that license server from management using the FlexNet Manager for Engineering Applications interface. Removing a license server from FlexNet Manager for Engineering Applications management does not delete the license server; it removes configuration information about the license server from the FlexNet Manager for Engineering Applications database and from the license server's FlexNet Agent.

Task   ***To remove a license server from FlexNet Manager for Engineering Applications management:***

1. From the **Servers** tab, under **License Managers**, click **License Manager Summary** to display the **License Manager Summary** page.

2. In the **License Server** column, click the name of the license server that you want to remove from FlexNet Manager for Engineering Applications management. This opens the **Configure and Manage License Server** page for the license server.

3. Click the **Remove** button at the bottom of the page, then click **OK** in the confirmation dialog.

    See Also
    FlexNetManaging License Servers, Vendor Daemons, and FlexNet Agents

Viewing the Debug Log

You can view debug log information for a license server using the **View Debug Log** page.

Task   ***To view the debug log for a license server:***

1. From the **Servers** tab, under **License Managers**, click **License Manager Summary** to display the **License Manager Summary** page.

2. Click the license server link to display the **Configure and Manage License Server** page for the license server.

3. Click the **View Debug Log** link to open the **View Debug Log** page.

    See Also
    FlexNetManaging License Servers, Vendor Daemons, and FlexNet Agents

Working with Vendor Daemons

The **Vendor Daemon Summary** page lists all of the vendor daemons that are managed by FlexNet Manager for Engineering Applications, providing the following information for each vendor daemon:

●   Vendor daemon name. (Click the vendor daemon name to configure or manage the vendor daemon.)

●   Display name of each license server.

●   Click the display name of a license server to configure or manage the license server.

- Port and host setting for each license manager.

- Status of each vendor daemon.

- Time and date of the last vendor daemon status update.

To update the status of a vendor daemon, click the **Update Status** button for the vendor daemon.

Required Permissions

Any FlexNet Manager for Engineering Applications user can view vendor daemon status and settings. To manage and configure a vendor daemon, however, a user must be assigned a role with the Manage Vendor Daemons permission.

Task

To view the vendor daemon summary:

From the **Servers** tab, under **Vendor Daemons**, click **Vendor Daemon Summary** to display the Vendor Daemon Summary page.

See Also
FlexNetManaging License Servers, Vendor Daemons, and FlexNet Agents
Common Vendor Daemon Mapping

Updating Vendor Daemon Status

You can change the setting for each license server (which will update status for the vendor daemon) or you can update vendor daemon status manually from the **Vendor Daemon Summary** page.

Task

To update the status of a vendor daemon manually:

1. From the **Servers** tab, under **Vendor Daemons**, click **Vendor Daemon Summary**.

2. Click **Update Status** for the vendor daemon.

See Also
FlexNetManaging License Servers, Vendor Daemons, and FlexNet Agents

Configuring and Managing Vendor Daemons

From the **Configure and Manage Vendor Daemon** page, you can specify settings (including vendor daemon group and report log rotation), add or edit an options file, and manage the vendor daemon (by starting or stopping it).

Required Permissions

Any FlexNet Manager for Engineering Applications user can view vendor daemon status and settings. To manage and configure a vendor daemon, however, a user must be assigned a role with the Manage Vendor Daemons permission.

Task **To go to the Configure and Manage Vendor Daemon page:**

1. From the **Servers** tab, under **Vendor Daemons**, click **Vendor Daemon Summary**.

2. Click the name of the vendor daemon you want to configure or manage. The **Configure and Manage Vendor Daemon** page is displayed.

3. The **Vendor Daemon** section contains the following information and settings.

Setting/Item	Description
Vendor Daemon Name	Name of the vendor daemon.
Vendor Daemon Group	Optional text field that can be used for sorting and searching on the **Vendor Daemon Summary** page.
License Server	Display name of the vendor daemon license server. (Click the license server display name to configure and manage the license server.)
Vendor Daemon Status	Shows whether the vendor daemon is up (running), down (not running), or whether the status is unknown.
Vendor Daemon Version	FlexNet Publisher version of the vendor daemon.
Edit Options File (button)	Click this button to edit the vendor daemon's options file.

4. The **Debug Log** section shows the path to the vendor daemon's debug log. Click the link to view the debug log content in the **View Debug Log** page. You can download the log file from the **View Debug Log** page.

> *Note • To change the debug log file location, specify it using the keyword* DEBUGLOG *in the options file. For more information on modifying the options file, see the FlexNet Publisher License Administration Guide (which is part of the FlexNet Publisher documentation set).*

5. The **Report Log** section provides information about the report log file, which contains the usage information output for the vendor daemon.

Setting/Item	Description
Report Log Path	Shows the path to the report log file. If the "append to file" option is set in the options file, the notation "(Append to file)" is displayed. > *Note • To change the report log file location, specify it using the keyword* REPORTLOG *in the options file. Precede the report log path with the + character to indicate that you want to append logging entries; otherwise, the report log file is overwritten each time the vendor daemon is started. For more information on modifying the options file, see the FlexNet Publisher License Administration Guide (which is part of the FlexNet Publisher documentation set).*

Setting/Item	Description
Log Rotation Scheduling	Enable the rotation of the report log and specify the rotation schedule. The scheduling options are as follows: ● Not scheduled ● Every 30 seconds ● Every n minutes ● Hourly, at an offset that you specify, past every hour—for example, at 15 minutes past every hour ● Daily at a time that you specify, using the 24-hour clock ● On selected days of the week at a specified time, using the 24-hour clock ● Monthly on the first day of the month at a specified time, using the 24-hour clock ● Monthly on the 16th day of the month at a specified time, using the 24-hour clock

6. Click **Save** to save any configuration changes.

Managing Vendor Daemons

To manage the vendor daemon:

● Click the **Start Daemon** button to start this vendor daemon.

● Click the **Stop Daemon** button to shut down this vendor daemon.

● Click the **Reread License Files** button to have the vendor daemon reread all of its license files.

● Click the **Rotate Report Log Now** button to immediately rotate the vendor daemon's report log.

See Also
FlexNetManaging License Servers, Vendor Daemons, and FlexNet Agents

Options Files: Passing Instructions to Vendor Daemons

You can pass instructions to a vendor daemon using an options file. The options file is where you specify the path to a report log file. To enable reporting for a vendor daemon, you must include the keyword `REPORTLOG` in the vendor daemon's options file, and specify the path to the report log file. See Enabling Report Logging for more information.

You can add a new options file, and you can edit an existing options file within FlexNet Manager for Engineering Applications using a text editor–style interface. (You can also import an options file at the command line.) FlexNet Manager for Engineering Applications automatically notes the newly configured options file during a reread of the vendor daemon's license files, or when the license server or vendor daemon is restarted.

The options file location must be either of the following:

● Specified on the `VENDOR` line of the license file that contains the vendor daemon's feature lines.

- In the same directory as the vendor daemon's license file with a file name that matches the vendor daemon name with an `.opt` extension (for example for a vendor daemon named *mycompany*, the options file must be named `mycompany.opt`).

To work with an options file within FlexNet Manager for Engineering Applications, a user must be assigned a role with the Manage Options for Vendor Daemons permission.

See Also
Importing or Editing Options Files Using the Edit Options File Page
Importing Options Files at the Command Line

Importing or Editing Options Files Using the Edit Options File Page

Task **To import or edit an options file for a vendor using the Edit Options File page:**

1. From the **Servers** tab, under **Vendor Daemons**, click **Vendor Daemon Summary**.

2. Click the name of the vendor daemon to open the **Configure and Manage Vendor Daemon** page.

3. Click the **Edit Options File** button to display the **Edit Options File** page. You can edit an existing options file (displayed in the text editor) or import a new options file (which will overwrite an existing options file).

    - To edit an options file, type in the edit box.

    - To add an options file, for the **Load Options File** field, browse to the file, then click **Import**.

        Important • When you import an options file, it replaces the existing options file.

4. Click the **Save** button to save your changes, or **Save and Reread** to save your changes and reread the vendor daemon's license files.

    If you click **Save**, the changes will not take effect until you reread the vendor daemon's license files, restart the vendor daemon, or restart the license server.

See Also
Options Files: Passing Instructions to Vendor Daemons
FlexNetManaging License Servers, Vendor Daemons, and FlexNet Agents
Enabling Report Logging

Importing Options Files at the Command Line

You can import an options file for a vendor daemon at the command line using the command `importoptionsfile`. Importing an options file at the command line replaces an existing options file.

*Note • To run this command, a user must have a role with the **Manage Options for Vendor Daemons** permission.*

Task   ***To import an options file at the command line:***

1. Ensure that the FlexNet Manager for Engineering Applications Admin server is running.

2. Open a Command Prompt window, and navigate to the installation directory for the FlexNet Manager for Engineering Applications Admin server.

3. Type the command `importoptionsfile` using the syntax shown in the following **Syntax** section. Refer to the **Parameters** table for parameter descriptions.

Syntax

`importoptionsfile -u<user> -p<password> -h<license server port@host> -v<vendor daemon name> -f<options file path> [-s<server>]`

Parameters

Table 3-1 • importoptionsfile Parameters

Parameter	Description
`–u`*user*	Specifies the FlexNet Manager for Engineering Applications user to run this command. The user must be assigned a role with the Manage Options for Vendor Daemons permission.
	Enclose the value in double quotes (""") if it contains a comma, semicolon, or ampersand (&).
`–p`*password*	Specifies the password for user.
	Enclose the value in double quotes (""") if it contains a comma, semicolon, or ampersand (&).
`–f<options file path>`	Specifies the path to the options file.
`–h<license server port@host>`	Specifies the license server port@host—for example: 28033@myhost
	This needs to match the Port@Host value that is displayed on the Configure and Manage License Server page.
	If the port is ANY, do not specify a port value—for example: @myhost
`–v<vendor daemon name>`	Specifies the vendor daemon name.
`–s<server>`	Specifies the URL for the FlexNet Manager for Engineering Applications Admin server, which must be an `https` connection.
	For example:
	`https://localhost:8445/flexnet`
	This is an optional argument. If no argument is specified, then the server is assumed to be:
	`https://127.0.0.1:<admin server port number>/flexnet`
`–r`	Reread licenses after the options-file import is complete.

Example

```
flexnet importoptionsfile –uadmin –padmin –h28033myhost –vacmeco –f"c:\files\acmeco.opt"
```

See Also
Configuring and Managing Vendor Daemons
Options Files: Passing Instructions to Vendor Daemons

Common Vendor Daemon Mapping

FlexNet Publisher provides a *common vendor daemon* option to software publishers who want to deploy a single vendor daemon that serves features previously served by other vendor daemons. This scenario typically applies to software publishers who have acquired or merged with other companies, where the individual companies have previously sold FlexEnabled applications with their own vendor daemons.

For example, *ABCware* merges with *DEFware*, and begins to deploy the new vendor daemon *abcdef*. When the *abcdef* vendor daemon registers with FlexNet Manager for Engineering Applications, it receives usage information only about features served by the *abcdef* vendor daemon. Data received about features served by previously deployed *abcware* and *defware* vendor daemons is disregarded. To ensure that FlexNet Manager for Engineering Applications receives all relevant data for the merged publisher's features, you must map the secondary vendor daemon names (*abcware* and *defware*) to the primary vendor daemon name (*abcdef*).

Use of a common vendor daemon enables the publisher to use one vendor daemon to serve features with different vendor names. A common vendor daemon configuration contains:

● One primary vendor daemon—This is the vendor daemon for the acquiring company.

● One or more secondary vendor daemons—These are the vendor daemons that were deployed prior to the merger or acquisition.

Task   ***To configure common vendor daemon mapping:***

1. Stop the Admin server if it is running.

2. Open a Command Prompt window and change to the following directory—

   <fnmea_admin_install_dir>/release/manager/webapps/flexnet/WEB-INF/classes

3. Open the file `secondaryVendors.properties`. (This is an empty file.)

4. Add the common vendor daemon mappings to the .properties file in the following manner:

   ```
   secondaryVendorName1=primaryVendorName
   secondaryVendorName2=primaryVendorName
   ```

   In the case of the previous example, the .properties file would contain the following:

   ```
   abcware=abcdef
   defware=abcdef
   ```

5. At the command prompt, change to the *<fnmea_admin_install_dir>* directory, then type the following command:

   ```
   flexnet site make
   ```

6. Restart the Admin server.

See Also
Working with Vendor Daemons

Working with FlexNet Agents

The **Agent Summary** page displays a list of all of the FlexNet Agents that communicate with FlexNet Manager for Engineering Applications. The following information is displayed on this page:

● FlexNet Agent name

● The license servers that are associated with the agent

● Port@host information for the FlexNet Agent and the license servers

● Status of the FlexNet Agent—whether the FlexNet Agent is up, down, or in an unknown state

● FlexNet Agent version and FlexNet Publisher version for the license servers

You can also add a FlexNet Agent using the **Add Agent** button on this page.

See Also
Viewing FlexNet Agents
Viewing FlexNet Agent Logs
Removing FlexNet Agents from FlexNet Manager for Engineering Applications Management
Managing FlexNet Agents

Viewing FlexNet Agents

In the **Agent Summary** page, you can view information about the FlexNet Agents associated with FlexNet Manager for Engineering Applications. You can click the FlexNet Agent name link to edit the FlexNet Agent's settings.

Task   ***To view FlexNet Agents managed by FlexNet Manager for Engineering Applications:***

1. From the **Servers** tab, under **Agents**, click **Agent Summary**. You can sort the list by agent name (Agent column) or Agent Status.

2. Click **Expand All** (top of the page) to expand the list of license servers that are associated with each FlexNet Agent. When the list is expanded, you can see all of the license servers associated with a particular FlexNet Agent, along with each license server's port@host, status, and version information.

    To view only the FlexNet Agent information, click **Collapse All**.

Initially, the row for an individual FlexNet Agent will be collapsed if all license servers associated with that FlexNet Agent are up (running).

Searching for FlexNet Agents

You can search for a FlexNet Agent by agent name, host name, license server name, or status.

Task   **To search for an agent:**

1.   Enter a string in the **Search for** field in the upper-right corner of the page.

2.   To limit the scope of your search, select an option from the **Search in** list.

See Also
Working with FlexNet Agents
Removing FlexNet Agents from FlexNet Manager for Engineering Applications Management
Viewing FlexNet Agent Logs
Managing FlexNet Agents

Removing FlexNet Agents from FlexNet Manager for Engineering Applications Management

If you no longer want FlexNet Manager for Engineering Applications to manage a particular FlexNet Agent, you can remove the agent using the Agent Summary page.

To remove a FlexNet Agent from FlexNet Manager for Engineering Applications, you must be assigned a role with the Manage Agents permission; you do not have this permission, the **Remove** button is disabled.

Task   **To remove FlexNet Agents from FlexNet Manager for Engineering Applications:**

1.   From the **Servers** tab, under **Agents**, click **Agent Summary**.

2.   Click **Remove** for the FlexNet Agent that you want to remove from FlexNet Manager for Engineering Applications management, then click **OK** in the confirmation dialog.

Important • Note the following:

●   *You must stop the FlexNet Agent on the license server machine or it will continue to run.*

See Also
Working with FlexNet Agents

Viewing FlexNet Agent Logs

You can view debug log information for a FlexNet Agent using the **View FlexNet Agent Log** page.

Task   **To view the debug log for a FlexNet Agent:**

1.   From the **Servers** tab, under **Agents**, click **Agent Summary** to display the Agent Summary page.

2.   Click **View Log** to view a FlexNet Agent's log.

See Also
Working with FlexNet Agents
FlexNetManaging License Servers, Vendor Daemons, and FlexNet Agents

Managing FlexNet Agents

You can add, connect to, and remove FlexNet Agents, using functionality available beneath the **Agents** tab.

Task   ***To add a FlexNet Agent:***

1.   From the **Servers** tab, under **Agents**, click **Add Agent**.

2.   Provide information about the FlexNet Agent.

Setting	Description
Agent Name	Provide a unique name for the FlexNet Agent.
Connection Protocol	Select the protocol used to connect to the FlexNet Agent—TCP or SSL.
Agent Host	Specify the host on which the FlexNet Agent resides.
Agent Port	Specify the port for the FlexNet Agent.

3.   Click **Save** to save the settings without connecting to the FlexNet Agent, or click **Save & Connect** to save the settings and attempt to connect with the FlexNet Agent.

After you add it, the FlexNet Agent appears in the **Agent Summary** page. From this page, you can click the FlexNet Agent's name to edit the FlexNet Agent's settings. You can also view the FlexNet Agent's log and remove the FlexNet Agent from FlexNet Manager for Engineering Applications management.

See Also
Working with FlexNet Agents
Managing Third-Party License Servers
Removing FlexNet Agents from FlexNet Manager for Engineering Applications Management

LUM License Servers

FlexNet Manager for Engineering Applications provides support for integrating data from IBM's Licensing Use Management (LUM) tool, which is used to monitor and track license usage. This enables your enterprise to use FlexNet Manager for Engineering Applications to view LUM concurrent usage activity and to run reports based on LUM data. (The LUM data includes license checkins and checkouts, and the total number of available licenses.)

Refer to the *FlexNet Manager for Engineering Applications 2020 R1 Reporting Guide* for information on configuring FlexNet Manager for Engineering Applications for use with LUM.

The LUM Servers page lists the LUM servers in your environment from which FlexNet Manager for Engineering Applications is capable of extracting LUM report logs. Each LUM server entry is distinct and corresponds to a specific vendor hosted on a LUM server machine. Using this page, you can add, edit, and remove LUM servers, as well as schedule report log rotation and server updates.

Task **To view LUM servers that have been added to FlexNet Manager for Engineering Applications:**

From the **Servers** tab, under the **Third-Party License Servers** section, click **LUM Servers** to display the **LUM Servers** page.

Displaying the LUM Servers Link

To display the **LUM Servers** link in the navigation bar, you must enable LUM from the LUM Configuration page.

See Also
Adding and Editing LUM License Servers
Scheduling LUM Server Report Log Rotation

Adding and Editing LUM License Servers

From the LUM Servers page, you can add a LUM server and edit the information for a LUM server that was previously added.

Multiple Vendors Within a LUM Server

If you have multiple vendors that run within a LUM server and your enterprise wants to obtain report logs from each of them, you must define each of these vendors in FlexNet Manager for Engineering Applications as a separate LUM server entry. Multiple LUM server entries may map to the same LUM server machine, but each of these entries must specify a different vendor.

Adding LUM License Servers

Note the following about time zone information and number formats: Some LUM server usage, license, and report log data (i4blt output) may have numbers with different number formats and the date/time strings that use different time zones. If you have LUM data containing time zone information and number formats that differ from the default settings (see the descriptions for the Time Zone, Number - Decimal Separator, and Number - Thousand Separator settings), and you want to bulk-import LUM report logs or import LUM report logs using the FlexNet Manager for Engineering Applications user interface, you must add (or edit) the LUM servers using the LUM Servers pages.

On the New LUM Server or Edit LUM Server page, you can specify the appropriate number formats and time zone for the LUM data. This enables FlexNet Manager for Engineering Applications to process the data correctly.

Task **To add a LUM license server to FlexNet Manager for Engineering Applications:**

1. From the **Servers** tab, under the **Third-Party License Servers** section, click **LUM Servers**.

2. Click **New LUM Server** to display the **New LUM Server** dialog.

3. In the **LUM Server** section, provide the required information (indicated by red asterisks) and any optional settings

Setting	Description
Name	Name of the LUM server. This must be unique.
Host	The network-resolvable host address where the LUM server resides.
Vendor	Vendor name that appears in the LUM server configuration.

Setting	Description
Time Zone	Select the time zone for the LUM server. The default time zone is the local time zone for the FlexNet Manager for Engineering Applications server.
Number - Decimal Separator	Specify Period or Comma. The default decimal separator is a period.
Number - Thousand Separator	Specify None, Period, or Comma. The default thousand separator is a comma.

4. In the **LUM Server Status Update** section, specify whether you want to refresh the data from this server on a periodic basis. This setting determines how often information is refreshed on **LUM Servers** page (server status) and on the **LUM Concurrent Usage** and **LUM Concurrent Usage - Users** pages (usage information).

Note that you can change the status-update schedule later, and you can refresh a LUM server's status at any time by clicking the **Refresh** link for the LUM server.

- Select **Do Not Refresh** if you do not want to schedule a periodic update of the LUM server's usage data.

- To update information from this LUM server periodically, select the **Refresh every ____ minutes** option and specify how often you want the selected server's status to be updated. Type a number between 1 and 60.

5. In the **LUM Report Log Rotation** section, specify whether you want to schedule LUM report log rotation. Note that you can change the log rotation schedule later.

- Select **Do Not Schedule** if you do not want LUM report log rotation to take place on a schedule.

  You can change the report log rotation schedule later.

- To schedule LUM report log rotation, select **Daily, starting at...** and specify the time at which you want rotation to begin.

6. Click **Save**.

Editing LUM License Servers

Task   ***To edit a LUM license server:***

1. Click the name link for the LUM license server you want to edit.

2. Change the settings as required, then click **Save**.

See Also
LUM License Servers
Scheduling LUM Server Report Log Rotation
Updating LUM License Server Status
Removing LUM Servers

Removing LUM Servers

Using the **LUM Servers** page, you can remove a LUM license server from FlexNet Manager for Engineering Applications. This means that LUM usage data will no longer be imported into FlexNet Manager for Engineering Applications and you will no longer be able to view concurrent usage activity for the LUM license server.

Task   ***To remove a LUM server:***

1. From the **Servers** tab, under **Third-Party License Servers**, click **LUM Servers** to display the **LUM Servers** page.

2. For the LUM server you want to remove, click **Remove**.

See Also
LUM License Servers
Scheduling LUM Server Report Log Rotation

Scheduling LUM Server Report Log Rotation

To ensure that your enterprise retains all LUM usage data, you can schedule report log rotation to occur at specified intervals. You can specify a report log rotation schedule when you add a LUM license server to FlexNet Manager for Engineering Applications. You can also specify a schedule or deactivate scheduling for an existing LUM license server.

Task   ***To update report log rotation scheduling for an existing LUM license server:***

1. From the **Servers** tab, under **Third-Party License Servers**, click **LUM Servers** to display the **LUM Servers** page.

2. Click the check box in front of the LUM license server for which you want to update the report log rotation schedule. You can update the schedule for multiple LUM license servers by selecting multiple check boxes.

3. Click **Log Rotation** to display the Update Report Log Rotation Schedule dialog.

4. Ensure that the servers displayed in the **Selected LUM Servers** box are the license servers for which you want to update the schedule.

5. In the **Report Log Rotation** section, specify the schedule for LUM report log rotation.

   - Select **Do Not Schedule** if you do not want LUM report log rotation to take place on a schedule.

   - To schedule LUM report log rotation, select **Daily, starting at...** and specify the time at which you want rotation to begin.

6. Click **Save** to update the schedule for the selected LUM license servers.

See Also
LUM License Servers
Adding and Editing LUM License Servers
Updating LUM License Server Status

Updating LUM License Server Status

When you add a LUM license server to FlexNet Manager for Engineering Applications, you specify whether you want to refresh the license server status at a specified interval. For LUM license servers that have been added to FlexNet Manager for Engineering Applications, you can refresh the license server status on demand, or change the status-update schedule.

This setting determines how often information is refreshed on the **LUM Concurrent Usage** and **LUM Concurrent Usage - Users** pages.

Updating LUM License Server Status on Demand

Task   ***To refresh LUM license server status on demand:***

1. From the **Servers** tab, under **Third-Party License Servers**, click **LUM Servers**.

2. Click the **Refresh** link in the row that contains the LUM license server whose status you want to update.

Changing the Schedule for LUM License Server Status Updates

Task   ***To update status update scheduling for an existing LUM license server:***

1. From the **Servers** tab, under **Third-Party License Servers**, click **LUM Servers**.

2. Click the check box in front of the LUM license server for which you want to update the status update schedule. You can update the schedule for multiple LUM license servers by selecting multiple check boxes.

3. Click **Status Updates** to display the **Change LUM Server Status Update Schedule** dialog.

4. Ensure that the servers displayed in the **Selected LUM Servers** box are the license servers for which you want to update the schedule.

5. In the **LUM Server Status Update** section, specify the schedule:

   - Select **Do Not Refresh** if you do not want to update LUM server status for the selected servers.

   - Select the **Refresh every ____ minutes** option and specify how often you want the selected server's status to be updated. Type a number between 1 and 60.

6. Click **Save** to update the schedule for the selected LUM license servers.

See Also
LUM License Servers
Adding and Editing LUM License Servers
Scheduling LUM Server Report Log Rotation

Managing Third-Party License Servers

Note • To use the third-party license server functionality, your enterprise must engage the assistance of Flexera Software's Professional Services team.

You can use FlexNet Manager for Engineering Applications to manage license servers for licensing systems other than FlexNet Publisher and IBM LUM.

Functionality for managing third-party license servers is available under the **Servers** tab (under the **Third-Party License Servers** heading); however, these navigation links are hidden by default. To display the **Third-Party License Servers Summary** and the **Third-Party Licensing Templates** links, you must select the **Enable support for third-party license servers** option on the System Configuration | Manager page.

Workflow for Adding Third-Party License Servers

The process for adding third-party license servers to FlexNet Manager for Engineering Applications includes the following tasks:

1. Deploy FlexNet Agents to the machines where the third-party license servers reside.

2. Add those FlexNet Agents to FlexNet Manager for Engineering Applications.

3. Create a report log definition to define the report log format used by the licensing system.

4. Create a licensing template to link to the report log definition and to define the command syntax and options that the FlexNet Agent will execute for the licensing system. If a particular license server uses different command definitions, you can customize those definitions on a per–license server basis.

5. Add the third-party license server to FlexNet Manager for Engineering Applications.

See Also
Managing FlexNet Agents
Adding Third-Party License Servers

Adding Third-Party License Servers

Before you can add a third-party license server to FlexNet Manager for Engineering Applications, you must first create a report log definition and create a licensing template to support the licensing system used by the license server. See the topic, Workflow for Adding Third-Party License Servers, for more information.

The license server command definitions are based on what is defined in a third-party licensing template, but you can customize these definitions on a per–license server basis.

Task   **To add a third-party license server:**

1. From the **Servers** tab, under **Third-Party License Servers**, click the **Third-Party License Server Summary**.

2. Click **New Third-Party License Server**.

3. Provide information about the license server.

Setting	Description
License server name	Provide a unique name for the third-party license server.
Licensing template	Select the third-party licensing template that FlexNet Manager for Engineering Applications should use for this license server.

Setting	Description
Agent	Select the FlexNet Agent that is installed on the machine where the third-party license server resides.
Time zone	Select the time zone for the third-party license server.
	By default, the time zone selected is the time zone of the FlexNet Manager for Engineering Applications server.

4. In the **License Server Command Definitions** section, you can optionally customize the commands for this individual license server. Click **Copy from template** to paste the commands that are defined in the selected third-party licensing template. Copying these commands will overwrite any text contained in the text boxes in this section. Modify any commands as necessary.

5. In the **License Server Status Update** section, indicate whether you want the license server status to be refreshed at a specified interval.

6. In the **Report Log Rotation** section, indicate whether you want the report logs to be rotated daily, at a specified time.

7. Click **Save**.

See Also
Managing Third-Party License Servers
Creating Report Log Definitions
Creating Licensing Templates for Third-Party License Servers

Creating Licensing Templates for Third-Party License Servers

A third-party licensing template links to a report log definition and enables you to provide the license server command syntax (and optional command options), along with the path to the executable that the FlexNet Agent will use to carry out the commands.

Before you can add a third-party license server to FlexNet Manager for Engineering Applications, you must first create a report-log definition and create a third-party licensing template to support the licensing system used by the license server. See Workflow for Adding Third-Party License Servers for more information.

Task   **To create a third-party licensing template:**

1. If you have not already done so, create a report-log definition. This is required before you can create a third-party licensing template.

2. From the **Servers** tab, under **Third-Party License Servers**, click **Third-Party Licensing Templates**.

3. Click **New Third-Party Licensing Template** to display the **New Licensing Template** dialog.

4. Complete the basic settings for the licensing template.

Setting	Description
Template name	Provide a unique name for the licensing template.

Setting	Description
Report log definition	Select the report log definition that specifies how FlexNet Manager for Engineering Applications should process the report log data returned by the FlexNet Agent.

5. In the **License Server Command Definitions** section, provide the command syntax and options that the FlexNet Agent will execute for the licensing system. For each command, provide the fully qualified path to the executable. This path must be accessible from the machine on which the FlexNet Agent resides.

6. Click **Save**.

See Also
Managing Third-Party License Servers
Creating Report Log Definitions

Not Recognizable License Servers and Vendor Daemons

You can view license servers and vendor daemons that are no longer recognized by FlexNet Manager for Engineering Applications in the **Not Recognizable License Servers** and the **Not Recognizable Vendor Daemons** pages (both available under the **Not Recognizable** section under the **Servers** tab).

Required Permissions

The **Not Recognizable** section is displayed only for users who are assigned a role with the one of the following permissions:

- View Not Recognizable License Servers and Vendor Daemons

- View and Manage Not Recognizable License Servers and Vendor Daemons

See Also
Not Recognizable License Servers
Not Recognizable Vendor Daemons

Not Recognizable License Servers

The **Not Recognizable License Servers** page displays a list of license servers in your enterprise that FlexNet Manager for Engineering Applications does not recognize because the FlexNet Agent is no longer communicating information about the license server. License servers might become unrecognizable due to local changes on the license server machine (for example, changes to the port or host).

This page provides the following information:

- License server name

- Port@host information

- Version of the lmgrd

- Date on which the license server was last updated

Task   ***To view not recognizable license servers:***

From the **Servers** tab, under **Not Recognizable**, click **License Servers**. This displays the **Not Recognizable License Servers** page.

Removing License Servers from FlexNet Manager for Engineering Applications Management

From the **Not Recognizable License Servers** page, you can remove unrecognizable license servers from FlexNet Manager for Engineering Applications management.

Task   ***To remove license servers from FlexNet Manager for Engineering Applications:***

1. From the **Servers** tab, under **Not Recognizable**, click **License Servers**. This displays the **Not Recognizable License Servers** page.

2. Select the check boxes in front of the license servers that you want to remove from FlexNet Manager for Engineering Applications management.

3. Click **Remove**.

See Also
Not Recognizable Vendor Daemons

Not Recognizable Vendor Daemons

The **Not Recognizable Vendor Daemons** page displays a list of vendor daemons in your enterprise that FlexNet Manager for Engineering Applications does not recognize because the FlexNet Agent is no longer communicating information about the vendor daemon. Vendor daemons might become unrecognizable due to local changes on the license server machine (for example, changes to the port or host).

This page provides the following information:

- Vendor daemon name

- Group

- License server name

- Port@host information

- Log rotation

- Date on which the vendor daemon was last updated

Task   ***To view not recognizable vendor daemons:***

From the **Servers** tab, under **Not Recognizable**, click **Vendor Daemons**. This displays the **Not Recognizable Vendor Daemons** page.

Removing Vendor Daemons from FlexNet Manager for Engineering Applications Management

From the **Not Recognizable Vendor Daemons** page, you can remove unrecognizable vendor daemons from FlexNet Manager for Engineering Applications management.

Task   ***To remove vendor daemons from FlexNet Manager for Engineering Applications:***

1. Click the **Servers** tab, click **Not Recognizable**, then click **Vendor Daemons**. This displays the **Not Recognizable Vendor Daemons** page.

2. Select the check boxes in front of the vendor daemons that you want to remove from FlexNet Manager for Engineering Applications management.

3. Click **Remove**.

See Also
Not Recognizable License Servers

4

Licenses

From the **Licenses** tab, you can view deployed licenses by type (concurrent or activatable, or by license rights representation), fulfillment records in trusted storage, or license files. Using pages under this tab, you can also add licenses, and delete inactive licenses.

You can do the following, using the pages available from the **Licenses** tab:

- View concurrent licenses

- View activatable licenses

- View detachable licenses

- View licenses in license files

- View license certificates

- View fulfillment records

- Add license certificates

- Delete inactive licenses

Viewing Concurrent Licenses

The **Licenses** tab enables you to view deployed licenses by type—concurrent or activatable, or by license rights representation—fulfillment records in trusted storage or license files. You can also add licenses, and delete inactive licenses.

Concurrent licenses are listed by feature. The following information is displayed for each feature:

- Name of the vendor daemon serving the feature

- Feature name

- Feature version

- Total Count: The total number of active licenses available for the feature.

- Concurrent: The number of concurrent licenses available for the feature

- Overdraft: The number of overdraft licenses available for the feature

- A link to access server information

Note • *The count of licenses reflects what is in the license file, but may not accurately reflect the total number that is available. FlexNet Manager for Engineering Applications sums all FEATURE lines. If a license file's FEATURE line uses the SUPERSEDE keyword, the total count may be inaccurate. To see the total count from the perspective of the license server, refer to the license-activity pages, available under the Activity tab.*

The list of concurrent licenses can be sorted by feature name, feature version, and vendor daemon name.

Task   ***To view concurrent licenses managed by FlexNet Manager for Engineering Applications, including detachable licenses:***

1.   From the **Licenses** tab, under **Concurrent Licenses**, click **All Concurrent Licenses** to open the **Concurrent Licenses** page. (To view only detachable licenses, click **Detachable Licenses Only**.)

2.   Click the **Servers** link for the feature of interest to display the **Concurrent Licenses - License Servers** page. This page displays the feature by a list of the license servers that serve it. The license server list can be sorted alphabetically.

For each license server, the following information is displayed:

- Display name of the license server

- Type of license line for the feature (for example: FEATURE, INCREMENT)

- License expiration date, or *permanent*, if the license never expires

- Total number of licenses for the feature on a given license server

- Number of concurrent licenses for the feature on a given license server

- Number of overdraft licenses available for the feature on a given license server

3.   To view detailed license certificate information, click the **Detail** link for a feature on a license server.

See Also
Licenses
Viewing Detachable Licenses Only

Viewing Detachable Licenses Only

Pages beneath the **Licenses** tab enable you to view deployed licenses by type—concurrent or activatable. From within concurrent licenses, you can view detachable licenses on the **Concurrent Licenses (Detachable Licenses Only)** page.

On this page, detachable licenses are listed by product. The following information is provided for each product:

- Vendor daemon name

- Product name

- Product version

- Total number of licenses available for the product

- Number of detachable licenses available for the product

- Number of overdraft licenses available for the product

- A link to access server information

You can sort the list of detachable licenses by product name, product version, or vendor daemon name.

Task   ***To view detachable licenses managed by FlexNet Manager for Engineering Applications:***

1. From the **Licenses** tab, under **Concurrent Licenses**, click **Detachable Licenses Only** to display the **Concurrent Licenses (Detachable Licenses Only)** page.

2. Click the **Servers** link for a product to display its **Detachable Licenses - License Servers** page, which displays the product by a list of license servers that serve licenses for it. The list can be sorted alphabetically.

    For each license server, the following information is displayed:

    - Display name of the license server

    - Fulfillment record ID for the given product

    - License expiration date

    - Total number of licenses for the product on a given license server

    - Number of detachable licenses for the product on a given license server

    - Number of overdraft licenses available for the product on a given license server

3. To view detailed fulfillment record information, click the **Detail** link for a product on a license server. This displays the **Fulfillment Record Details for Detachable** page, which provides the following information:

    - Product name and version

    - Suite ID, if any

    - Fulfillment record ID

    - Entitlement ID

    - Vendor daemon name

    - License server display name

    - Expiry of the license

    - A link to view the entire fulfillment record

    - Detachable and overdraft license count

    This page also contains links to other parts of the FlexNet Manager for Engineering Applications interface:

    - Click the vendor daemon name to open the **Configure and Manage Vendor Daemon** page.

    - Click the fulfillment record ID to view all the license lines in the fulfillment record.

    See Also
    Licenses
    Viewing Concurrent Licenses

Viewing Activatable Licenses

Pages beneath the Licenses tab enable you to see deployed licenses by type—concurrent or activatable, or by license rights representation—fulfillment records in trusted storage or license files. You can also add licenses, and delete inactive licenses.

Activatable licenses are listed by product in the **Activatable Licenses** page. The following information is provided for each product:

- Name of the vendor daemon serving the product

- Product name

- Product version

- Total number of licenses available for the product

- Number of activatable licenses available for the product

- Number of overdraft licenses available for the product

- A link to access server information

Task   ***To see activatable licenses managed by FlexNet Manager for Engineering Applications:***

1. From the **Licenses** tab, under **Activatable**, click **Activatable Licenses** to open the **Activatable Licenses** page. You can sort the list of activatable licenses by product name, product version, or vendor daemon name.

2. Click the **Servers** link for a product to display its **Activatable Licenses - License Servers** page. This page displays the product by a list of license servers that serve it. The server list can be sorted alphabetically.

   For each server, the following information is displayed:

   - Display name of the license server

   - Fulfillment record ID for the given product

   - License expiration date

   - Total number of licenses for the product on a given server

   - Number of activatable licenses for the product on a given server

   - Number of overdraft licenses available for the product on a given server

3. To view detailed fulfillment record information, click the **Detail** link for a product on a license server. This displays the **Fulfillment Record Details for Activatable** page, which contains the following information:

   - Product name and version

   - Suite ID, if any

   - Fulfillment record ID

   - Entitlement ID

   - Vendor daemon name

   - License server display name

- Expiry of the license

- Number of activatable and overdraft licenses for the product in the fulfillment record

- A link to view the entire fulfillment record

The **Fulfillment Record Details for Activatable** page contains links to other parts of the FlexNet Manager for Engineering Applications interface.

- Click the vendor daemon name to open the **Configure and Manage Vendor Daemon** page.

- Click the fulfillment record ID to open the Fulfillment Record Details page, on which you can view all the license lines in the given fulfillment record.

See Also
Licenses

Viewing Licenses in Fulfillment Records

Licenses that are represented as fulfillment records are listed by product on the **Fulfillment Records** page. Each line item on this page provides the following information:

- Product name and version for each fulfillment record

- Vendor daemon name for each fulfillment record

- Display name of the license server where trusted storage resides

- Fulfillment record ID

- Expiration date pertaining to fulfillment record

- A link to view fulfillment record details

The list of fulfillment records can be sorted by product name and version, vendor daemon name, server name, fulfillment record ID, or expiration date.

Task   ***To see licenses managed by FlexNet Manager for Engineering Applications that are represented as fulfillment records in trusted storage:***

1. From the **Licenses** tab, under Fulfillment Records, click **Fulfillment Records**.

2. Click the **Details** link for the fulfillment record of interest to open the **Fulfillment Record Details** page. This page displays the following information for a fulfillment record:

    - Fulfillment record ID

    - Corresponding entitlement ID

    - Product name and version

    - Suite ID, if any

    - Vendor daemon name

    - Display name of the license server on which trusted storage resides

- Expiration date of the license

- Original expiration date (in case of a transfer, the date on the original fulfillment record)

- Number of allowed hops (number of times a fulfillment is allowed to be transferred)

- Number of allowed repairs

- The count in the fulfillment record is listed by license type—activatable, concurrent, or detachable—and any allowable overdrafts.

- License traversal—shows the transfer history of the fulfillment record, including activation server and fulfillment ID on that server.

- The complete text of the license lines contained in the fulfillment record is provided.

See Also
Licenses

Viewing Licenses in License Files

The **License File Summary** page displays a list of the licenses managed by FlexNet Manager for Engineering Applications. The following information is displayed for each license file:

- Display names of the license servers on which license files reside. If the triad symbol ⚬⚬ appears to the right of the license-server name, it indicates that this is a triad (three-server) configuration.

- Path of the license file location

- Number of VENDOR lines in each license file

- Number of features in each license file

- A link to view certificates in a given license file

- A link to edit the license file

You can sort the data in this page by the **License Server** column.

*Note • License files are grouped together for triad license servers. If the license file names are not consistent on all three servers in a triad configuration, FlexNet Manager for Engineering Applications cannot list the license certificates and the license file is not editable. Therefore, no **Edit** link is displayed in this case.*

Task   ***To see licenses managed by FlexNet Manager for Engineering Applications that are represented in license files:***

1. From the **Licenses** tab, under **License Files**, click **License File Summary**.

2. Click the **Certificates** link for a license file to view information about the licenses contained in the file. This displays the **Licenses for License File** page, which provides the following information:

   - Feature name in license

   - Feature version in license

- Type of license line (for example, `FEATURE`, `INCREMENT`)

- Status of the license (expired, superseded, or active)

- Expiration date of the license, or *permanent*, if the license does not expire

- Number of concurrent licenses for this feature

- Number of overdraft licenses available for this feature

3. After clicking the **Certificates** link, you can click the **Detail** link for the license to display the **Certificate Details** page, where you can view the text of the license line.

Click the **Edit** link to display the **Edit Licenses** page, which enables you to add, edit, import, back up, and restore license certificates.

See Also:
Licenses

Viewing License Certificate Details

The **Certificate Details** page presents one license certificate at a time. The information presented in this view varies depending on whether the license certificate is in a license file, or is derived from a fulfillment record in trusted storage. The following table shows these differences.

Table 4-1 • Information on the Certificate Details page

Information	License Files	Trusted Storage
Feature name	*	*
Feature version	*	*
Type of license line (for example: `FEATURE`, `INCREMENT`)	*	*
License expiration (a specific date, or *permanent*, for licenses that do not expire)	*	*
Status of the certificate (for example: expired or active)	*	*
Product name		*
Vendor daemon name	*	*
Concurrent count		*
Concurrent overdraft count		*
Detachable count		*
Detachable overdraft count		*

Table 4-1 • Information on the Certificate Details page

Information	License Files	Trusted Storage
Total feature count in license line	*	
Total overdraft count	*	
Source of Certificate	*	*
Node-locked host ID of the license server serving the feature	*	
Text of license certificate	*	*

This page contains links to other parts of the FlexNet Manager for Engineering Applications interface.

- Click the vendor daemon name to open the **Configure and Manage Vendor Daemon** page.

- Click the license server display name to open the **Configure and Manage License Server** page.

See Also
Licenses

Adding and Editing License Certificates and License Files

Users assigned a role with the Manage Licenses permission can add a license certificate to an existing license file and edit existing license files.

Adding License Certificates

You can add a license certificate in FlexNet Manager for Engineering Applications using the **Edit Licenses** page.

Task   ***To add a license certificate:***

1. From the **Licenses** tab, under **License Files**, click **License File Summary**.

2. Click the **Edit** link (in the right-most column) for the license file to which you want to add a certificate.

3. In the **Edit Licenses** page, you can add license information either of the following ways:

   - Paste one or more license certificates into the text box.

   - Click the **Browse** button to navigate to a license file on your system, then click **Import** to import the license file. When you click **Import**, the license file contents are displayed in the text area.

4. Click **Save**. The license certificate is added to an existing license file on that license server.

5. Click **Save and Reread Vendor Daemon** so that the license server can start serving licenses from the certificate you just added.

If you manually edit a license certificate, the changes take effect the next time the license file is reread or the license server restarted.

Adding License Files

You can add a new *license file* to a license server in any of the following ways:

- Placing the new file on your license server machine.

- If the license file is not copied into an already-specified license directory, using the **FlexNet Agent Configurator** to add licenses managed by the FlexNet Agent.

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  *Note • After changes are made using the **FlexNet Agent Configurator**, the FlexNet Agent must be restarted for the changes to take effect in FlexNet Manager for Engineering Applications.*

- Rereading license files or restarting the license server.

Editing License Files

You can edit a license file directly in FlexNet Manager for Engineering Applications using the **Edit Licenses** page. As you receive updated license file certificates, you can copy and paste the updated certificates into the license file.

This functionality is especially useful in environments using a triad license server configuration. This view enables you to update a license file simultaneously on all license servers, instead of having to go to each server individually. For triads, the license file of the master server is displayed in the **Edit Licenses** page.

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Task   *To edit a license file in FlexNet Manager for Engineering Applications:*

1. From the **Licenses** tab, under **License Files**, click **License File Summary**.

2. Click the **Edit** link (in the right-most column) for the license file you want to edit.

3. In the text field, make your changes, then save the changes. You can also import a license file from a software publisher by browsing to a file on your network and then clicking **Import**. You must reread the license file in order for the changes to take effect.

4. Click **Save**. FlexNet Manager for Engineering Applications validates and updates the license file in the license server directory, regardless of whether the license server is running.

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Note • For triads, all three license files are updated.

The related features will be updated on pages beneath the **Licenses** tab only after the license server has been reread and the update is complete. The related features will be updated on pages beneath the **Activity** tab only after the reread is done.

License File Validation

When validating the license file, FlexNet Manager for Engineering Applications checks the following:

- Confirms that the license text field is not empty

- Port number (You cannot change the port number using the Edit Licenses page.)

- Syntax checking for all invalid keywords

- Invalid date format

- Incomplete feature line

If FlexNet Manager for Engineering Applications encounters an error during validation, it displays an error message with the line number where the error was encountered, a descriptive message, and the feature line.

Backing Up the License File

The actual license file on the file system is backed up and stored internally when you click the **Back up** button, regardless of whether the license server is running. This action does not back up the updated license content in the text box.

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Note • Only one backup copy is stored for each license file. (There is no multiple backup.)

Restoring the Backup License

When you click the **Restore** button, the backup copy of the license is displayed in the text box. The license file will be updated only if you click the **Save** or **Save and Reread Vendor Daemon** button. The current content in text box will be replaced with the backup copy.

Error Messages

When you save the edited license, FlexNet Manager for Engineering Applications validates the license. If the license is invalid, an error message is triggered, describing the error. For example, you cannot edit the port number on the SERVER line.

See Also
Licenses

Viewing and Deleting Inactive Licenses

Pages under the **Inactive Licenses** heading of the **Licenses** navigation tab display lists of licenses that are not currently active. You can view inactive licenses by type: Concurrent, Detachable only, and Activatable.

Information displayed about inactive licenses varies by license type. The following table shows these differences.

Table 4-2 • Inactive license information

Information	Valid for Concurrent Licenses	Valid for Detachable and Activatable Licenses
Status (expired, superseded, or active)	*	
Type (of license line)	*	
Feature name	*	
Feature version	*	
Vendor daemon	*	*
Expiration date	*	*

Table 4-2 • Inactive license information

Information	Valid for Concurrent Licenses	Valid for Detachable and Activatable Licenses
Count	*	*
Product Name		*
Product version		*
Fulfillment (ID)		*

Users assigned a role with the Manage Licenses permission can delete inactive licenses.

Task   ***To delete inactive licenses:***

1. From the **Licenses** tab, under **Inactive Licenses**, click **Concurrent Licenses** to display the **Inactive Concurrent Licenses** page.

2. Select the check box for the licenses that you want to delete, and click **Delete Selected Certificates**.

See Also
Licenses

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Usage Activity

Pages available from the **Activity** tab enable you to view summaries of usage primarily by license type, and to free licenses to be used by another user. You can view concurrent license activity by feature or by user; and detachable and activatable license activity by product or by host.

You can do the following, using the pages available from the **Licenses** tab:

- View a summary of concurrent license activity by feature

- View concurrent feature activity by license pool

- View concurrent activity in license pools by user

- Free licenses by feature

- View a summary of concurrent license activity by user

- Free licenses by user

- View concurrent feature activity for a single user

- View activatable license activity by product

- View activations for a product by fulfillment record

- View activation details for a fulfillment record

- View activations for a product by host

- View activatable license activity by host

- View detachable license activity by product

- View detachments for a product by fulfillment record

- View detachment details for a fulfillment record

- View detachments for a product by host

- View detachable license activity by host

Viewing Concurrent License Activity by Feature

Concurrent license activity is grouped by feature. In the **Concurrent by Feature - Summary** page, activity for each feature is listed by:

- Vendor daemon

- Feature name

- Total number of concurrent licenses available for each feature

- Number of concurrent licenses currently in use

- Percentage of the total licenses in use (Licenses in Use/Total Count)

Task   **To view concurrent license activity by feature:**

1.   From the **Activity** tab, under **Concurrent**, click **Concurrent by Feature** to display the **Concurrent by Feature - Summary** page.

2.   Click the **Pools** link for a feature to view the feature's activity by license pool.

3.   Click the **Users** link for a feature to view the feature's activity by user.

See Also
Usage Activity

Viewing Concurrent Activity by License Pool

On the **Concurrent Usage by Feature - Pools** page, the following information is displayed for each pool for the given feature:

- Feature version

- Display name of the license server on which the pool resides

- Total number of concurrent licenses for the given feature in the pool

- Number of concurrent licenses in use for that feature in the pool

- Percentage of licenses in use for that feature in the pool

Task   **To view concurrent license activity by license pool:**

1.   From the **Activity** tab, under **Concurrent**, click **Concurrent by Feature** to display the **Concurrent by Feature - Summary** page.

2.   Click the **Pools** link for a feature. This takes you to the **Concurrent Usage by Feature - Pools** page.

3.   Click the **Users** link for a license pool to see the users of licenses in the pool.

See Also
Usage Activity

Viewing Concurrent Activity in a License Pool by User

The **Concurrent by Feature - Pools - Users** page provides information about the feature and a list of the users of the license pool.

The feature information includes the feature name and version, display name of the license server on which the pool resides, and the vendor daemon serving the licenses.

The following information is displayed for each license checkout:

- **User**—User name of the user who checked out the license.

- **Host Name**—Host where the license is being used—where the user is logged in.

- **Display Name**—Name of the display where the license is being used.

- **Handle**—License handle that uniquely identifies a checkout.

- **Time of Checkout**—Date and time that the license for this feature was checked out.

- **Licenses in Use**—Number of licenses in use for this checkout.

- **Duration**—Time period for which the feature has been checked out.

You can free a license using this page. If multiple licenses are checked out to the same user and host at the same time, you can use the handle value to differentiate between them when freeing a license.

Task   ***To view users of concurrent licenses in a given license pool:***

1. From the **Activity** tab, under **Concurrent**, click **Concurrent by Feature** to display the **Concurrent by Feature - Summary** page.

2. Click the **Pools** link for a feature to display the **Concurrent Usage by Feature - Pools** page.

3. Click the **Users** link for a license pool.

See Also
Usage Activity

Viewing Concurrent Feature Usage by User

The **Concurrent Usage by Feature - Users** page displays the following information for each user:

- User name

- Feature name and version

- Host name and display name

- Time and duration of checkout

You can free a license using this page.

Task   **To view concurrent feature usage by user:**

1. From the **Activity** tab, under **Concurrent**, click **Concurrent by Feature** to display the **Concurrent by Feature - Summary** page.

2. Click the **Users** link for a feature to view the feature's activity by user. This takes you to the **Concurrent Usage by Feature - Users** page.

Freeing Licenses by Feature

Sometimes, an application stops responding (or *hangs*) and consumes a license that you would like to free so it can be used by another user. Note that if the application is active, it re-checks out the license shortly after it is freed.

Users assigned a role with the **Manage Licenses in Use** permission can free a license, if its license server was configured to allow licenses to be freed before the license server was started.

Task   **To locate a license by its feature name and free the license:**

1. From the **Activity** tab, under **Concurrent**, click **Concurrent by Feature** to display the **Concurrent by Feature - Summary** page.

2. Click the **Users** link for the feature to display the **Concurrent Usage by Feature - Users** page.

3. Select the check box next to the feature whose license you want to free.

4. Click **Free Selected Licenses**.

If the **Free Selected Licenses** button is disabled, it means the license server has not been configured to allow licenses to be freed (that is, it has been started with the `-x lmremove` option) and/or that the user is not assigned a role with the **Manage Licenses in Use** permission.

Note • Licenses that have been detached or activated cannot be freed.

See Also
Usage Activity
Freeing Licenses by User

Viewing Concurrent Activity by User

In the **Concurrent Usage by User - Summary** page, you can view the following information for each user:

● User name

● Host name

● Display name

● Number of licenses in use

- A link to view the licenses in use

Task   ***To view concurrent license activity by user:***

1. From the **Activity** tab, under **Concurrent**, click **Concurrent by User** to display the **Concurrent Usage by User - Summary** page.

2. Click the **Licenses** link to view a user's feature usage.

See Also
Usage Activity

Viewing Concurrent Usage for a Single User

In the **Concurrent Usage for Single User** page, you can view the:

- User name

- Host name (machine that is serving the concurrent license)

- Name and version of each feature

- Display name of the license server

- Date and time the feature was checked out

- Duration for which feature has been checked out

You can free a license from this page.

Task   ***To view concurrent license usage for a single user:***

1. From the **Activity** tab, under **Concurrent**, click **Concurrent by User** to display the **Concurrent Usage by User - Summary** page.

2. Click the **Licenses** link for the user.

See Also
Usage Activity

Freeing Licenses by User

Sometimes, an application stops responding (or *hangs*) and consumes a license that you would like to free for use by someone else in your organization. Free a license using the **Free Selected Licenses** button. If the application is active, it re-checks out the license shortly after it is freed.

Users assigned a role with the **Manage Licenses in Use** permission can free a license, if the license server was configured to allow licenses to be freed (that is, it was started with the `-x lmremove` option). The **Free Selected Licenses** button is disabled if the user does not have the correct permission or if the license server was not configured to allow licenses to be freed.

Note • Licenses that have been detached or activated cannot be freed.

Task   ***To locate a license by user and free the license:***

1.   From the **Activity** tab, under **Concurrent**, click **Concurrent by User** to display the **Concurrent Usage by User -
Summary** page.

2.   For the user whose license usage you want to view, click the **Licenses** link. This displays the **Concurrent Usage for
Single User** page, where you can view the feature checkouts for the user.

3.   Select the check box next to the features whose licenses you want to free.

4.   Click **Free Selected Licenses**.

If the **Free Selected Licenses** button is disabled, it means that the license server has not been configured to allow licenses
to be freed (that is, it has been started with the –x lmremove option) or that the FlexNet Manager for Engineering
Applications user is not assigned a role with the **Manage Licenses in Use** permission.

See Also
Usage Activity
Freeing Licenses by Feature

Viewing Activatable License Activity by Product

Activatable license activity is displayed in units of products. In the **Activated by Product - Summary** page, activity for each
product is listed by:

●   Product name

●   Vendor daemon

●   Total number of activatable licenses for each product

●   Number of licenses that have been activated (broken up by permanent and timebound activations)

●   Percentage of licenses that have been activated

Task   ***To view activatable license activity by product:***

1.   From the **Activity** tab, under **Activated**, click **Activated by Product** to display the **Activated by Product - Summary**
page.

2.   Click the **Fulfillments** link for a product to view the product's activations per fulfillment record.

3.   Click the **Hosts** link for a product to view all activation records for the product sorted by host.

See Also
Usage Activity

Viewing Activations for a Product by Fulfillment Record

You can view activatable license activity for a product by fulfillment record using the **Activated by Product - Fulfillment Records** page. The following information is displayed for each fulfillment record for the given product:

- Display name of the license server

- Fulfillment record ID

- Total number of activatable licenses on that server for the product

- Number of licenses that have been activated (broken up by permanent and timebound activations)

- Percentage of licenses that have been activated

- A link to view activation details

Task   ***To view activatable license activity for a product by fulfillment record:***

1. From the **Activity** tab, under **Activated**, click **Activated by Product** to display the **Activated by Product - Summary** page.

2. Click the **Fulfillments** link for the product of interest to open the **Activated by Product - Fulfillment Records** page.

3. Click the **Hosts** link for a fulfillment record to view activation details, such as host names and expiration dates.

See Also
Usage Activity

Viewing Activation Details for a Fulfillment Record

Task   ***To view activation details for a fulfillment record:***

1. From the **Activity** tab, under **Activated**, click **Activated by Product** to display the **Activated by Product - Summary** page.

2. Click the **Fulfillments** link for the product of interest. This displays the **Activated by Product - Fulfillment Records** page.

3. Click the **Hosts** link for the fulfillment record of interest to open the **Activated by Product - Fulfillment Records - Hosts** page. For each fulfillment record for a product on a license server, the following information is provided:

   - Host name (machine onto which license was activated)

   - Expiration date of the license—those with a specific expiration date are timebound activations; others are permanent activations.

   - Whether the license in use is an overdraft license

See Also
Usage Activity

Viewing Activations for a Product by Host

Task   ***To view activatable license activity for a product by host:***

1. From the **Activity** tab, under **Activated**, click **Activated by Product** to display the **Activated by Product - Summary** page.

2. Click the **Hosts** link for the product of interest. This takes you to the **Activated by Product - Hosts** page, where the following host information is displayed for each activated product:

    - Host name (machine on which activatable license now resides)

    - License server display name

    - Fulfillment record ID

    - Expiration date of the license—those with a specific expiration data are timebound activations; others are permanent activations.

    - Whether or not the license in use is an overdraft license

    See Also
    Usage Activity

Viewing Activatable License Activity by Host

In the **Activated by Host** page, you can view activatable license activity by host. In this page, the following information is provided for each host:

- Host name (machine on which activatable license now resides)

- Product name

- Vendor daemon

- License server display name

- Source fulfillment ID (fulfillment ID on the machine the license was detached from)

- Expiration date of the fulfillment—those with an expiry are timebound activations; others are permanent activations

- Whether the license in use is an overdraft license

Task   ***To view activatable license activity by host:***

From the **Activity** tab, under **Activated**, click **Activated by Host** to display the **Activated by Host - Summary** page.

The host list can be sorted alphabetically.

See Also
Usage Activity

Viewing Detachable License Activity by Product

Detachable license activity is displayed in units of products. The **Detached by Product - Summary** page displays activity for each product, including the following information:

- Product name

- Vendor daemon

- Total number of detachable licenses for each product

- Number of licenses that have been detached

- Percentage that have been detached

Task   ***To view detachable license activity by product***

1. From the **Activity** tab, under **Concurrent**, click **Detached by Product** to display the **Detached by Product - Summary** page.

2. Click the **Fulfillments** link for a product to view the product's detachments per fulfillment record.

3. Click the **Hosts** link for the product to view all detachment records for the product sorted by host.

See Also
Usage Activity

Viewing Detachments for a Product by Fulfillment Record

Task   ***To view detachable license activity for a product by fulfillment record:***

1. From the **Activity** tab, under **Concurrent**, click **Detached by Product** to display the **Detached by Product - Summary** page.

2. Click the **Fulfillments** link for the product. This displays the **Detached by Product - Fulfillment Records** page. The following information is displayed for each fulfillment record for the given product:

    - Display name of the license server

    - Fulfillment record ID

    - Total number of detachable licenses on that server for the product

    - Number of licenses that have been detached

    - Percentage of licenses that have been detached

    - A link to view detachment details

3. Click the **Hosts** link for a fulfillment record to view detachment details, such as host names and expiration dates.

See Also
Usage Activity

Viewing Detachment Details for a Fulfillment Record

Task   *To view detachment details for a given fulfillment record:*

1. From the **Activity** tab, under **Concurrent**, click **Detached by Product** to display the **Detached by Product - Summary** page.

2. Click the **Fulfillments** link for the product to go to the **Detached by Product - Fulfillment Records** page.

3. Click the **Hosts** link for the fulfillment record. This displays the **Detached by Product - Fulfillment Records - Hosts** page. For each fulfillment record for a product on a license server, the following information is provided:

   - Host name (machine on which detached license now resides)

   - Expiration date of the license

   - Whether the license in use is an overdraft license

   See Also
   Usage Activity

Viewing Detachments for a Product by Host

Task   *To view activatable license activity for a product by host:*

1. From the **Activity** tab, under **Concurrent**, click **Detached by Product** to display the **Detached by Product - Summary** page.

2. Click the **Hosts** link for the product to go to the **Detached by Product - Hosts** page, where the following host information is displayed for each detached product:

   - Host name (machine on which detached license now resides)

   - License server display name

   - Fulfillment record ID

   - Expiration date of the license

   - Whether or not the license in use is an overdraft license

   See Also
   Usage Activity

Viewing Detachable License Activity by Host

The **Detached by Host - Summary** page displays detachable license activity by host. This page provides the following information:

- Host name (machine on which detached license now resides)

- Product name

- Vendor daemon

- License server display name

- Source fulfillment ID (fulfillment ID on the machine from which license was detached)

- Expiration date of the fulfillment

- Whether the license in use is an overdraft license

The host list can be sorted alphabetically.

Task   ***To view detachable license activity by host:***

From the **Activity** tab, under **Concurrent**, click **Detached by Host** to display the **Detached by Host - Summary** page.

See Also
Usage Activity

LUM Concurrent Usage Activity

FlexNet Manager for Engineering Applications provides support for integrating data from IBM's Licensing Use Management (LUM) tool, which is used to monitor and track license usage. This enables your enterprise to use FlexNet Manager for Engineering Applications to view LUM concurrent usage activity and to run reports based on LUM data. (Refer to the *FlexNet Manager for Engineering Applications 2020 R1 Reporting Guide* for information on configuring FlexNet Manager for Engineering Applications for use with LUM.)

To view concurrent usage activity for LUM licenses, you must add LUM license servers to FlexNet Manager for Engineering Applications using the **LUM Servers** page.

The **LUM Concurrent Usage** page enables you to see how LUM-enabled licenses are being used in your enterprise. FlexNet Manager for Engineering Applications makes an i4blt request to the LUM license servers and brings back the product license status, which includes the total count of licenses, the number of licenses that are in use, and the users who are using the licenses. The **LUM Concurrent Usage** page displays all of this data, along with the vendor, product name and version, and percentage of licenses used.

This information is refreshed according to the interval specified for the **LUM Server Status Update** setting.

Click the **Users** link to drill down to the **LUM Concurrent Usage - Users** page, which displays a list of the users who are using the licenses.

Viewing LUM Concurrent Usage

To display the **LUM Concurrent Usage** link in the navigation bar, you must enable LUM from the **LUM Configuration** page.

Task   ***To view concurrent usage of LUM licenses:***

From the **Activity** tab, under **Concurrent**, click **LUM Concurrent** tab to display the **LUM Concurrent Usage** page.

See Also
LUM Concurrent Usage By Users

LUM Concurrent Usage By Users

The **LUM Concurrent Usage - Users** page displays a list of the users who are using LUM licenses for a particular product. For each user, this page displays the host name, the number of licenses currently in use, and the date on which the licenses were granted (how long the user has been using the licenses).

Task   ***To view users for LUM licenses:***

1. From the **Activity** tab, under **Concurrent**, click **LUM Concurrent** tab to display the **LUM Concurrent Usage** page.

2. Click the **Users** link for the product whose user list you want to see.

See Also
LUM Concurrent Usage Activity

6

Reporting on License Usage

The functionality available from the **Reporting** tab enables you to understand how licensed applications are used in your enterprise. Using FlexNet Manager for Engineering Applications reporting, you can generate a variety of license usage reports, which can assist you in making decisions about your organization's software assets and licensing requirements.

Using FlexNet Manager for Engineering Applications's investment planning functionality, you can also generate reports that show usage by product, rather than only by licensed feature.

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*Note • The **Flexera Analytics** and **Organizational Structures** sections are available under the **Reporting** tab only if Flexera Analytics (Cognos) has been configured.*

- **Classic** reports are FlexNet Manager for Engineering Applications historical reports—typically run overnight—that provide aggregated historical data, based on the data collected from report logs.

- **Flexera Analytics** reports are generated using Flexera Analytics reporting function. These reports can provide more immediate data because the reports can be generated more quickly.

- FlexNet Manager for Engineering Applications supports usage reporting based on organizational structure. Organizational structures enable grouping and sub-grouping of users, vendors, and hosts in a hierarchical order.

- If your organization uses applications from Autodesk, which implement tier-based licensing, see the **Tiers** section for information about enabling this functionality in FlexNet Manager for Engineering Applications.

- **Report log** files contain feature usage information and are generated by vendor daemons. However, a vendor daemon does not write report logs by default; this action must be enabled. The data in report logs is compressed and authenticated, and is used only by FlexNet Manager for Engineering Applications reporting.

- FlexNet Manager for Engineering Applications provides enterprises with the ability to import and report on usage from third-party report logs. Using the **Report Log Definitions** page, you can create definitions for non-FlexNet report logs to facilitate import into FlexNet Manager for Engineering Applications.

- Functionality available from the **Usage Data Maintenance** section enables you to delete usage data that is older than the specified number of months.

For more information about FlexNet Manager for Engineering Applications reporting, including the benefits of using Classic reports or Flexera Analytics reports, and the data models they use, see the *FlexNet Manager for Engineering Applications 2020 R1 Reporting Guide* and the *Flexera Analytics Guide*.

See Also
Classic Reporting
Flexera Analytics Reporting
Organizational Structures
Running Classic Reports
Enabling Report Logging
Usage Data Maintenance

Classic Reporting

Classic reports are FlexNet Manager for Engineering Applications traditional reports, which are typically run overnight to provide aggregated historical data, based on data collected from report logs. Classic reports do not display real-time data.

FlexNet Manager for Engineering Applications generates reports based on FlexNet license usage activity from usage report logs on a per–vendor daemon basis. See Report Logs for more information.

The basic steps to generate a Classic report include:

1. Enable FlexNet Licensing report logging. See Enabling Report Logging.

2. Choose the report type. See Classic Reporting.

3. Create a report configuration or use a previously created configuration.

4. Generate the report to view the results.

See Also
Reporting on License Usage
Classic Reporting
Organizational Structures
Importing Report Logs
Searching for Report Information

Classic Reporting

For all Classic reports, the only required field is a configuration name. Each report type has between two and six configuration pages that enable you to specify parameters for the report.

Table 6-1 • Classic reports

Report Name	Description
High Water Mark	Shows the maximum number of licenses used during a specified time period.
Peak Usage and Denial	Shows the number of peak usage licenses and the number of denials during a specified time period.
Raw	Raw report data in text format.

Table 6-1 • Classic reports

Report Name	Description
Server Coverage	Shows the amount of time that a license server has served licenses.
Summary Barchart	Bar chart that shows usage for each feature selected.
Unique User	Shows the number of unique users for selected vendors and/or features during a specified time period.
Usage Efficiency	Bar chart that shows how long each successive license for a feature was used.
Usage Over Time	Line graph that shows the maximum number of licenses in use over a specified time period.
Usage Summary	Text report that summarizes the usage statistics for each feature.

See Also
Reporting on License Usage
Flexera Analytics Reporting
Organizational Structures
Importing Report Logs
Searching for Report Information

High Water Mark Report

A **High Water Mark** report creates a line graph that shows the maximum number of licenses used during a specific time period. This report enables you to see when the peak (*high water*) times are for license usage.

The horizontal axis of the line graph measures time, scaled to fit all of the data for one feature into one window; the vertical axis measures the number of licenses used. For each feature, two lines are plotted—one representing available licenses and one representing used licenses.

Task   ***To create a High Water Mark report configuration:***

1. From the **Reporting** tab, under **Classic Reporting**, click **Report Configurations**. This displays the **Report Configurations** page.

2. For the High Water Mark Sample report configuration, click **Edit** to launch the Create Report Configuration Wizard.

3. In the Create Report Configuration: Naming page, provide a name and description for your report configuration, specify a date range, and select the vendor daemons and license server hosts from which you want report log data.

4. In the Create Report Configuration: Feature Selection page, select the features whose report logs you want to use to provide data, and specify how you want the features identified in the report.

5. In the Create Report Configuration: Filter Properties page, create filters to focus the data that is displayed in the report.

6. In the Create Report Configuration: Summary Options page, specify breakdown categories for report data and select the time periods to include in the report.

7. In the Create Report Configuration: Output Options page, select the report output format, specify sort order, and provide additional output-related information.

   To omit the line for available licenses, clear the **Show Available Licenses** check box.

8. In the Create Report Configuration: Graph Options page, customize the graphic elements of the report.

9. Click **Finish** or **Finish & Run**.

See Also
Running Classic Reports
Classic Reporting

Peak Usage and Denial Report

The **Peak Usage and Denial** report creates a bar chart report that shows the following information:

● Number of peak usage licenses within the specified summary period. You can specify a summary period with a granularity of seconds, minutes, hours, days, weeks, or months.

● Number of denials within the summary period, if there were any.

● An optional availability line, which shows the number of available licenses at a particular time.

● An optional overdraft line, which shows the number of overdraft licenses at a particular time.

Note • In rare cases, the vendor daemon reports unsupported events in the report log as ultimate denials, instead of as unsupported events. These events appear in the report log as ultimate denials, but unlike standard ultimate denial events, these events do not have any license feature associated with them. FlexNet Manager for Engineering Applications reports these events as unsupported events, rather than denials.

Task   **To create a Peak Usage and Denial report configuration:**

1. From the **Reporting** tab, under **Classic Reporting**, click **Report Configurations**. This displays the **Report Configurations** page.

2. For the Peak Usage and Denial report configuration, click **Edit** to launch the Create Report Configuration Wizard.

3. In the Create Report Configuration: Naming page, provide a name and description for your report configuration, specify a date range, and select the vendor daemons and license server hosts from which you want report log data.

4. In the Create Report Configuration: Feature Selection page, select the features whose report logs you want to use to provide data, and specify how you want the features identified in the report.

5. In the Create Report Configuration: Filter Properties page, create filters to focus the data that is displayed in the report.

6. In the Create Report Configuration: Summary Options page, specify breakdown categories for report data and select the time periods to include in the report.

7. In the Create Report Configuration: Output Options page, select the report output format, specify sort order, and provide additional output-related information.

8. In the Create Report Configuration: Graph Options page, customize the graphic elements of the report.

9. Click **Finish** or **Finish & Run**.

See Also
Running Classic Reports
Classic Reporting

Raw Report

A **Raw** report displays the raw data in text format. This enables you to use third-party tools to create a custom report for analyzing problems, such as the nature of certain denial or excessive events. This report provides information about individual usage events: It provides one line of data for every license checkout, listed in chronological order of checkin.

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Note • *In rare cases, the vendor daemon reports unsupported events in the report log as ultimate denials, instead of unsupported events. These events appear in the report log as ultimate denials, but unlike standard ultimate denial events, these events do not have any license feature associated with them. FlexNet Manager for Engineering Applications reports these events as unsupported events, rather than denials.*

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Task   ***To create a Raw report configuration:***

1. From the **Reporting** tab, under **Classic Reporting**, click **Report Configurations**. This displays the **Report Configurations** page.

2. For the Raw report configuration, click **Edit** to launch the Create Report Configuration Wizard.

3. On the Create Report Configuration: Naming page, provide a name and description for your report configuration, specify a date range, and select the vendor daemons and license server hosts from which you want report log data.

4. On the Create Report Configuration: Feature Selection page, select the features whose report logs you want to use to provide data, and specify how you want the features identified in the report.

5. On the Create Report Configuration: Filter Properties page, create filters to focus the data that is displayed in the report.

6. On the Create Report Configuration: Raw Report Output Properties page, select the report output format, specify sort order, and provide additional output-related information.

7. On the Create Report Configuration: Raw Report Fields page, select the order of the report columns.

8. Click **Finish** or **Finish & Run**.

See Also
Running Classic Reports
Classic Reporting

Server Coverage Report

A **Server Coverage** report shows how much time the license server has served licenses. This report enables you to see both the up time and any periods of down time (coverage gaps) for each vendor daemon. You can specify the duration of the coverage gap when you configure the report.

This report displays the time that the license server was up, as well as the following information:

● Periods of time that the license server was down

● Corrupted blocks of data in the report log

● Missing blocks of data in the report log

● Errors discovered with the report log during the report's generation

Task **To create a Server Coverage report configuration:**

1. From the **Reporting** tab, under **Classic Reporting**, click **Report Configurations**. This displays the **Report Configurations** page.

2. For the Server Coverage report configuration, click **Edit** to launch the Create Report Configuration Wizard.

3. In the Create Report Configuration: Naming page, provide a name and description for your report configuration, specify a date range, and select the vendor daemons and license server hosts from which you want report log data.

4. In the Create Report Configuration: Server Coverage Properties page:

   a. In the Report Output Directory field, specify an output directory where the report is copied, for example, `C:\ManagerReports`.

   b. In the Output Directory Options section, select one of the following options:

      ● **Overwrite the existing contents**—When the report is run, the output is copied to the directory specified in the Report Output Directory field, overwriting all files in the specified directory.

      Important • *If this option is selected, all existing files in the Report Output Directory will be deleted and replaced with the report output.*

      ● **Do not overwrite.** —Creates subdirectories (in the report output directory) for reports based on their timestamps. The timestamp is of the format *YYMMDDHHmmssSSS* (where *SSS* represents milliseconds), for example, `C:\ManagerReports\150527213046255` for May 27, 2015, 9:30:46 p.m. Each time the report is run, a new subdirectory is created.

      ● **Do not overwrite.** Create subdirectories using report names and timestamps.—Creates subdirectories (in the report output directory) for reports based on their configuration name. Each subdirectory, in turn, has subdirectories based on timestamps, for example, `C:\ManagerReports\Usage_Over_Time_Sample1\070527213046255` for the configuration "Usage Over Time Sample1," run on May 27, 2007, 9:30:46 p.m.

   c. In the Post-Processing Command field, specify any post-processing commands that you want to invoke after the report is generated.

    d.   In the Coverage Gap Threshold field, specify the coverage gap threshold in seconds. By default, only gaps in license service exceeding 15 minutes (900 seconds) are shown.

5.   Click **Finish** or **Finish & Run**.

See Also
Running Classic Reports
Classic Reporting

Summary Barchart Report

The **Summary Barchart** report creates a bar chart that shows usage for each feature. This report allows you to compare license usage across users and features. Based on calculations made in a Usage Summary Report, this report enables you to see the volume of usage.

By default, this report shows usage for each feature. The bars are arranged in alphabetical order. License usage is displayed as columns whose heights represent the following metrics:

- **Num Used**: Number of licenses checked out

- **% Used**: Percentage of available license hours used

- **Hours Used**: Number of available license hours used

- **Max Used**: Maximum number of licenses checked out at a time

Task   ***To create a Summary Barchart report configuration:***

1.   From the **Reporting** tab, under **Classic Reporting**, click **Report Configurations**. This displays the **Report Configurations** page.

2.   For the Summary Barchart report configuration, click **Edit** to launch the Create Report Configuration Wizard.

3.   In the Create Report Configuration: Naming page, provide a name and description for your report configuration, specify a date range, and select the vendor daemons and license server hosts from which you want report log data.

4.   In the Create Report Configuration: Feature Selection page, select the features whose report logs you want to use to provide data, and specify how you want the features identified in the report.

5.   In the Create Report Configuration: Filter Properties page, create filters to focus the data that is displayed in the report.

6.   In the Create Report Configuration: Summary Options page, specify breakdown categories for report data and select the time periods to include in the report.

7.   In the Create Report Configuration: Output Options page, select the report output format, specify sort order, and provide additional output-related information.

8.   In the Create Report Configuration: Graph Options page, customize the graphic elements of the report.

9.   Click **Finish** or **Finish & Run**.

See Also
Running Classic Reports
Classic Reporting

Unique User Report

A **Unique User** report shows the number of unique users for specified vendors and/or features during a given time period. This report enables you to see which features are most and least heavily used by your organization.

Task **To create a Unique User report configuration:**

1. From the **Reporting** tab, under **Classic Reporting**, click **Report Configurations**. This displays the **Report Configurations** page.

2. For the Unique User Sample report configuration, click **Edit** to launch the Create Report Configuration Wizard.

3. In the Create Report Configuration: Naming page, provide a name and description for your report configuration, specify a date range, and select the vendor daemons and license server hosts from which you want report log data.

4. In the Create Report Configuration: Feature Selection page, select the features whose report logs you want to use to provide data.

   Note • For this report, features are identified only by the feature name, so only the Feature Name option is available in the "Describe Features by" list.

5. In the Create Report Configuration: Output Options page, select the report output format, specify sort order, and provide additional output-related information.

   - The following Sort Order options are available:

     - **Feature only**—The report will display unique user counts by the specified features.

     - **Vendor then Feature**—The report will display unique user counts by vendor, with the feature breakdown within the vendor information.

     - **None**—The report will only display one total number of unique users for the selected vendors and/or features.

   - To include a list of the user names, select the "Include User Names" check box. The report will list all of the unique users at the end of the report.

     In addition to displaying the unique user name list for all features or vendor/features at the end of the report, you can also display user names for feature or vendor/feature breakdowns (that is, show links for each feature/vendor. Click the link to view the unique user names for the feature/vendor.)

6. Click **Finish** or **Finish & Run**.

See Also
Running Classic Reports
Classic Reporting

Usage Efficiency Report

A **Usage Efficiency** report creates a bar chart that shows how long each successive license for a feature was in use. This report enables you to see the efficiency of license usage and to more accurately determine how many licenses your organization needs for a particular feature.

This report shows you the maximum number of licenses checked out at one time compared to the total number of licenses available. The first bar in the graph shows how long the first license for that feature was checked out, the second bar shows how long a second license was checked out, and so on, up to the maximum number of licenses checked out at one time.

Several notations may appear on this report, representing the following types of unusual usage:

- Usage of overdraft licenses—denoted by an asterisk (*****). For example, a bar marked as **4*** represents the amount an overdraft license is used.

- Usage in excess of the license limit—denoted by a question mark (**?**). For example, a bar marked as **5?** represents the amount five licenses were used simultaneously if the license limit were less than five.

Task   ***To create a Usage Efficiency report configuration:***

1. From the **Reporting** tab, under **Classic Reporting**, click **Report Configurations**. This displays the **Report Configurations** page.

2. For the Usage Efficiency report configuration, click **Edit** to launch the Create Report Configuration Wizard.

3. In the Create Report Configuration: Naming page, provide a name and description for your report configuration, specify a date range, and select the vendor daemons and license server hosts from which you want report log data.

4. In the Create Report Configuration: Feature Selection page, select the features whose report logs you want to use to provide data, and specify how you want the features identified in the report.

5. In the Create Report Configuration: Filter Properties page, create filters to focus the data that is displayed in the report.

6. In the Create Report Configuration: Summary Options page, specify breakdown categories for report data and select the time periods to include in the report.

7. In the Create Report Configuration: Output Options page, select the report output format, specify sort order, and provide additional output-related information.

8. In the Create Report Configuration: Graph Options page, customize the graphic elements of the report.

9. Click **Finish** or **Finish & Run**.

See Also
Running Classic Reports
Classic Reporting

Usage Over Time Report

A **Usage Over Time** report creates a line graph that shows the maximum number of licenses in use over a period of time. This report enables you to see the average number of licenses being used over a specified time period, and can reflect usage trends.

The horizontal axis of the line graph is time, scaled to fit all of the data for one feature into one window. The vertical axis is the number of licenses used. For each feature, two lines are plotted: one representing available licenses and one representing used licenses.

In the Output Options page, you can omit the line for available licenses by clearing the **Show Available Licenses** check box.

Task   ***To create a Usage Over Time report configuration:***

1. From the **Reporting** tab, under **Classic Reporting**, click **Report Configurations**. This displays the **Report Configurations** page.

2. For the Usage Over Time report configuration, click **Edit** to launch the Create Report Configuration Wizard.

3. In the Create Report Configuration: Naming page, provide a name and description for your report configuration, specify a date range, and select the vendor daemons and license server hosts from which you want report log data.

4. In the Create Report Configuration: Feature Selection page, select the features whose report logs you want to use to provide data, and specify how you want the features identified in the report.

5. In the Create Report Configuration: Filter Properties page, create filters to focus the data that is displayed in the report.

6. In the Create Report Configuration: Summary Options page, specify breakdown categories for report data and select the time periods to include in the report.

7. In the Create Report Configuration: Output Options page, select the report output format, specify sort order, and provide additional output-related information.

8. In the Create Report Configuration: Graph Options page, customize the graphic elements of the report.

9. Click **Finish** or **Finish & Run**.

See Also
Running Classic Reports
Classic Reporting

Usage Summary Report

A **Usage Summary** report provides textual output that summarizes the usage statistics for each feature. The top section of the report provides information about the report parameters—including when the report was run, the vendors and license server hosts included in the report—and a list of the features with and without activity.

Feature activity includes all feature events, including checkouts, denials, unsupported requests, and queued requests. If you chose to sort the report data by feature, you can click a feature name in the "Features with activity" section to view the specific activity for that feature.

Note • *In rare cases, the vendor daemon reports unsupported events in the report log as ultimate denials, instead of unsupported events. These events appear in the report log as ultimate denials, but unlike standard ultimate denial events, these events do not have any license feature associated with them. FlexNet Manager for Engineering Applications reports these events as unsupported events, rather than denials.*

The bottom section of the report, with default settings, contains one line per feature and multiple columns per line, depending on the breakdown categories you selected. These columns are described in the following table.

Table 6-2 • Usage Summary Feature Activity Information

Column Name	Description
Max Avail	Maximum license count available for the specified time period. When the availability for a feature is unlimited, the Max Avail is displayed as Uncounted.
Hrs Avail	Available license count multiplied by the time available. When the availability for a feature is unlimited, the Hrs Avail is displayed as n/a.
Requests	Total number of license requests: Used + Denied + Unsupp (unsupported) **Note •** *RIF-formatted output does not include this column.*
Used	Number of license requests fulfilled.
Duplicates	Number of licenses requests where duplicate grouping was used to prevent the need to use a new license
Queued	Number of license requests queued.
Denied	Number of license requests denied. If the client application was built using FlexNet Licensing 9.0 or later, only true (ultimate) denial events by Vendor Daemon will be in the report. All that are not ultimate denial events are ignored.
Unsupp	Number of license requests not fulfilled because the feature is unsupported. These are also referred to as exception events.
%Denied	Percent of license requests that were denials. For more information, see "License Denials."
Max	Maximum number of licenses used simultaneously, including overdraft licenses.
Hours	Number of available license hours used.
Total Used	Total number of license hours used.Unlike **Hours**, this include license hours where the usage was reduced due to duplicate-grouping, and as such may be greater than **Hrs Avail**.
%Used	Percent of available license hours used. The formula is: % Used = Used hours / Available hours * 100

Note • *For more information on how duplicate grouping can affect license usage, review "Duplicate Grouping" in the concepts guide.*

Denials in Usage Summary Report:

If there are denials in your reports where the maximum available number of licenses was never used, some of the possible reasons are listed below, including an example for each:

- **The number of available licenses changed during the report period.**

  For example, you may have started your report when you had ten licenses of Feature A. A few months later, while you were writing to the same report log, you add ten more Feature A licenses. Your report would now show a maximum number of available licenses as being 20, and maximum number of used licenses as being 18, but also shows eight denials. These denials probably occurred when you only had ten available licenses.

- **A vendor enabled the "use all features" switch.**

  For example, if this switch is enabled and you try to check out a license for a feature that has multiple feature lines (some of which are already checked out), denials will be logged for each feature line that is already in use until the license server finds an available license.

- **Some licenses are reserved for particular users.**

  For example, if someone outside of the reservation group tries to check out a reserved license, the request will be denied because even though all licenses for a feature are not checked out, they are not available to all users. License reservations are set in a vendor daemon's options file.

- **Some users are excluded from the group of users who can check out a license.**

  For example, a particular user may be denied from checking out a license even though not all of the available licenses are checked out. A particular user can be excluded through a vendor daemon's options file.

- **The total number of licenses for a feature are divided among multiple license servers.**

  For example, when all licenses for a feature allocated to a particular license server are checked out, additional requests from that server will be denied even though licenses are available for the same feature from another server.

Task   ***To create a Usage Summary report configuration:***

1. From the **Reporting** tab, under **Classic Reporting**, click **Report Configurations**.

2. For the Usage Summary report configuration, click **Edit** to launch the Create Report Configuration Wizard.

3. In the Create Report Configuration: Naming page, provide a name and description for your report configuration, specify a date range, and select the vendor daemons and license server hosts from which you want report log data.

4. In the Create Report Configuration: Feature Selection page, select the features whose report logs you want to use to provide data, and specify how you want the features identified in the report.

5. In the Create Report Configuration: Filter Properties page, create filters to focus the data that is displayed in the report.

6. In the Create Report Configuration: Summary Options page, specify breakdown categories for report data and select the time periods to include in the report.

7. In the Create Report Configuration: Output Options page, select the report output format, specify sort order, and provide additional output-related information.

8.   Click **Finish** or **Finish & Run**.

See Also
Running Classic Reports
Classic Reporting

Report Configurations

Before generating a report using Classic Reporting, you must create a report configuration. The report configuration defines the parameters used in creating the reports from the set of available report logs.

You create report configurations using the Report Configurations page; you can import a configuration, edit an existing configuration, or create a new one. In each case, you are presented with the Report Configuration wizard consisting of several steps. The series of steps vary depending on the type of report.

Note • To add, edit, copy, or import report configurations, the user must have a role with the View/Add/Edit/Copy/Import/ delete Report Configurations permission.

See Also
Importing Report Configurations
Creating Report Configurations
Copying Report Configurations
Editing Report Configurations
Deleting Report Configurations
Running Classic Reports
Report Configuration Pages

Importing Report Configurations

If you have report configurations from SAMreport that you want to use in FlexNet Manager for Engineering Applications, you can use the **Report Configurations** page to import the report configuration files.

Task   *To import a report configuration:*

1.   From the **Reporting** tab, under **Classic Reporting**, click **Report Configurations**. This displays the **Report Configurations** page.

2.   In the **Import Report Configuration** field (in the upper-right corner), enter the fully qualified path—including the file name— to the report configuration you want to import, or click the **Browse** button to navigate to the report configuration file.

3.   Click **Import**.

See Also
Reporting on License Usage
Creating Report Configurations
Deleting Report Configurations
Report Configuration Pages

Creating Report Configurations

You can create a new, customized report configuration based on a FlexNet Manager for Engineering Applications report type.

Task   ***To create a new report configuration:***

1. From the **Reporting** tab, under **Classic Reporting**, click **Report Configurations**. This displays the **Report Configurations** page.

2. From the Report Types list in the upper-right corner, select the report type on which you want to base this report configuration and click **Create**.

3. In the **Configuration Name** field on the **Naming** page, provide a unique name for the report configuration. Without a unique name, the report configuration cannot be saved.

4. Depending on which report type you choose, between two and six definition pages guide you through the process of creating a report configuration.

5. At any time during the process, you can:

    ● click **Finish** to save your report configuration. or

    ● click **Finish & Run** to save your report configuration and run the report.

You can later edit your report configuration or run a report based on the configuration.

In addition to creating a new report configuration, you can:

● Use a sample report configuration as it is.

● Import a previously created report configuration and use its parameters.

● Copy an existing report configuration.

You can also invoke post processing for your reports directly from FlexNet Manager for Engineering Applications.

See Also
Reporting on License Usage
Copying Report Configurations
Editing Report Configurations
Importing Report Configurations
Deleting Report Configurations
Report Configuration Pages

Copying Report Configurations

FlexNet Manager for Engineering Applications provides the capability to copy an existing report configuration. This enables you to easily create a report that has the same report specifications with a few exceptions (for example, a different date range, vendor daemon, or host server).

Task   ***To copy an existing report configuration:***

1. From the **Reporting** tab, under **Classic Reporting**, click **Report Configurations**. This displays the **Report Configurations** page.

2. Click the **Copy** button next to the report whose configuration you want to copy.

When you copy a report configuration, FlexNet Manager for Engineering Applications clones the existing report configuration and displays the first page of the report wizard. As you go through the report configuration wizard, you can make changes specific to this version of the copied report configuration, creating a new report based on an existing report.

All report data are copied except for the **Configuration Name** and the report title.

- The new configuration name will be "*Original Report Configuration Name* - Copy n," where n is the copy number. For example, if you created two copies of the High Water Mark report, the second copy would be named "High Water Mark Sample - Copy 2."

- The new report title will be "main original report title + appendix for new report configuration name." For example, if the existing report title is "Sample HWM - Copy" and the new report configuration name is "HWM - Copy 4," the new report title is "Sample HWM - Copy 4." The purpose is to use the same appendix as the report configuration.

When you copy a report configuration, FlexNet Manager for Engineering Applications copies the values in the **Report Output Directory** and **Output Directory Options** settings (available on the **Output Options** page of the report wizard). If a report output directory is specified in the original report configuration, FlexNet Manager for Engineering Applications displays a warning message on the first page of the report wizard asking you to change the report output directory or the output directory options, so your copied report does not overwrite existing report output.

You can save your copied report configuration at any time by clicking the **Finish** button, available on most of the report wizard pages.

To cancel the copied report configuration, click the **Cancel** button. FlexNet Manager for Engineering Applications exits the report wizard and returns to the **Report Configurations** page; the cloned report is not created.

See Also
Reporting on License Usage
Creating Report Configurations
Editing Report Configurations
Importing Report Configurations
Deleting Report Configurations
Report Configuration Pages

Editing Report Configurations

You can edit an existing report configuration using the **Report Configurations** page.

Task   ***To edit a report configuration:***

1.   From the **Reporting** tab, under **Classic Reporting**, click **Report Configurations**. This displays the **Report Configurations** page.

2.   Click the **Edit** button of the report configuration you want to edit and depending on which report type you choose, between two and six pages walk you through the modification of a report configuration. Any changes you save will modify the named report configuration.

3.   Click **Finish** at any point during the process to save your configuration changes and exit the report wizard, or click **Finish & Run** to save your configuration changes and run the report.

See Also
Reporting on License Usage
Creating Report Configurations
Copying Report Configurations
Importing Report Configurations
Deleting Report Configurations
Report Configuration Pages

Deleting Report Configurations

Deleting a report configuration also deletes all saved reports generated using the report configuration.

Required Permissions

A user must have the Super Administrator role to delete a report configuration.

Task   ***To delete a report configuration:***

1.   From the **Reporting** tab, under **Classic Reporting**, click **Report Configurations**. This displays the **Report Configurations** page.

2.   Select the report configuration that you want to delete. Note that you can select multiple report configurations to delete.

3.   Click **Delete**.

4.   In the dialog box that appears, click **OK**.

See Also
Reporting on License Usage
Creating Report Configurations
Copying Report Configurations
Editing Report Configurations
Importing Report Configurations
Report Configuration Pages

Report Configuration Pages

To create a report, you select a report type and work through the report configuration pages presented for the report type. Depending on the report type you select, FlexNet Manager for Engineering Applications displays between two and six report configuration pages, which enable you to customize your report with regard to the usage information shown and how that information is displayed.

Table 6-3 • Report Configuration Pages

Page Name	Description
Naming	Enables you to provide a name and description for the report configuration, select a date range, and specify which vendor daemons and license server hosts you want to use for reporting data.
Feature Selection	On this page, you select report logs to be used for the report that contain the specified features and specify how features are described in the report.
Filter Properties	Provides a mechanism for filtering the data that is shown in a report.
Summary Options	Enables you to select report breakdown categories and define the time periods for which you want usage data.
Output Options (Raw Report Output Properties)	Using this page, you specify the report format and the order in which you want data displayed in the report. In addition, you can specify an output directory for the report and use post-processing commands on the report data.
Raw Report Fields	For Raw reports, this page enables you to select the order of the columns for each report from the provided fields.
Graph Options	On this page, you can customize the look of your finished report.
Server Coverage Properties	For Server Coverage reports, use this page to specify an output directory for the report, use post-processing commands on the report data, and specify a gap threshold.

See Also
Classic Reporting
Common Report Log Definitions

Create Report Configuration: Naming

On the **Naming** page, you provide a name and description for the report configuration, select a date range, and specify which vendor daemons and license server hosts you want to use for reporting data.

Task   **To specify information on the Naming page:**

1. Specify the settings as described in the following table.

Setting	Description
Configuration Name	Type a unique name for this report configuration. This will be used to identify the report configuration in the Report Configurations list.
Configuration Description	Type a description that explains what data this report configuration will display.
Date/Time Range	Specify a date range for the report data using one of the following options: ● Select a specific start and end date using the calendar buttons. ● Select a number of prior days. ● Select a number of prior months. ● Select a predefined date range from the list.
Vendor Daemons	Select the vendor daemon(s) from which you want to use report log data. If you want to use report log data from all of your vendor daemons, select **--ALL--**. *Tip • To select multiple vendor daemons, press the* **Ctrl** *key while selecting items in the list.*
License Server Hosts	Select the license server hosts from which you want to use report log data. If you want to use report log data from all of your license server hosts, select **--ALL--**. *Tip • To select multiple license server hosts, press the* **Ctrl** *key while selecting items in the list.*

2. Click **Next**.

See Also
Report Configuration Pages

Create Report Configuration: Feature Selection

In the **Feature Selection** page, you select report logs to be used for the report that contain the specified features and specify how features are described in the report. This step limits the amount of data that FlexNet Manager for Engineering Applications has to process to generate the report.

Task   **To specify feature selection options:**

1. In the **Features** box, select the features whose report logs you want to use to generate this report. Only the report logs that contain the selected features are used to generate this report. If those report logs contain additional features, the additional features also appear in the report.

   For example, if you want a report to show usage data only for feature f3, all report logs that do not contain data about feature f3 are will not be used to generate the report. The report logs that do contain data about feature f3 usage also contain data about features f4 and f5, so your report will show usage for features f3, f4, and f5.

   Select --ALL-- to use all of the report logs (containing all of the listed features) to generate the report.

   Tip • To show only data for specific features, add a filter using the Filter Properties *page. Select Feature ==* featureName *for each feature for which you want to show usage information.*

2. For the **Describe Features by** option, select how you want FlexNet Manager for Engineering Applications to identify features in the report.

Option	Description
Feature Name	The report will identify features only by the feature name. For example, if feature f3 has version 1.0 and 2.0, the report will not distinguish between the different versions, but will display information about feature f3 version 1.0 and f3 version 2.0 as feature f3.
Feature Name and Version	The report will identify features by feature name and by version. For example, if feature f3 has version 1.0 and 2.0, the report will distinguish between the different versions, and will display separate information about feature f3 version 1.0 and f3 version 2.0.
Feature Name and Asset Info	The report will identify features by feature name and by asset information.
Feature Name and License Key	The report will identify features by feature name and by license key.

3. Click **Next**.

See Also
Report Configuration Pages

Create Report Configuration: Filter Properties

The **Filter Properties** page enables you to create filters to limit the data that is shown in a report. For example, you may want your report to show only usage information for feature f3, so you would create a filter to limit the data to only usage of that feature.

See Filtering Report Data for more information about creating report filters.

Task   ***To specify filter properties:***

1.   Select a report filter category from the **Category** list.

2.   From the **Operator** list, select an operator symbol.

3.   In the **Event Filter** field, type the value that for which you want to filter.

4.   To add another filter, click **Add New Filter** and repeat steps 1 through 3.

5.   For Raw and Usage Summary reports: In the **Event Types** section, specify which event types you want to appear in the report.

Event Type	Description
Used	A Used event consists of a license checkout/checkin pair. The number of Used events is summed over the time period of a report, and the duration that licenses are used is displayed in a report. License usage is calculated as the time between a checkout and its checkin.
Queued	A Queued event consists of a queue/dequeue pair. The number of Queued events is summed over the time period of a report, but the duration a license request is queued before being denied or granted is not displayed (however, queued duration can be calculated from data in a Raw report). If an application is configured for queuing and none of its licenses are available, a Denied event and a Queued event are written into the report log with the same timestamp. The application will continue to try to gain a license until one becomes available. Additional denials are not written for each try while queued or if a license is never granted. A queued request will remain queued until it is granted unless the vendor daemon goes down, the license server is shut down, or the request is canceled or timed out.
Denied	The number of denial events is summed over the time period of a report. A denial is instantaneous and has no duration associated with it. The why field in a Raw report gives the reason why a denial occurred. If filtering "false" denials is enabled, the report includes the number and percentage of "false" denials that were eliminated.

Event Type	Description
Exceptions	Exception (unsupported) events are generated when the license server receives a request for a feature it does not know about. Exceptions usually occur when the application and the license server are looking at two different license files.
	The application reads its license file and thinks it can get a license for the feature, but when it asks the license server for a license, the license server denies the request and logs it as an exception.
	The most common instances of exceptions are:
	• The feature exists in the application's license file, but not in the license server's license file.
	• The version of the feature in the application's license file is later than the version(s) in the license server's license file. (The license server grants a license if the request is for an earlier version but it does not grant a license if the request is for a later version.)

6. For Peak Usage and Denial, Raw, and Usage Summary reports, specify how you want to handle spurious (or "false") denials. See the topic, How Are Denials Analyzed?, for more information.

   • In the **Denial Filtering** section, select the **Eliminate spurious denials** option if you want to eliminate spurious (or "false") denials. A spurious denial can occur when an application requests a license from a license server that uses a license file containing several INCREMENT lines for the same feature. In this case, it is possible to trigger a cluster of denials reported before a successful checkout is obtained.

   • In the **Time interval** box, specify a number of seconds. During this time, denials for the same feature, user, host, process id, and report log file that occur in clusters are qualified for denial.

7. Click **Next**.

See Also
Report Configuration Pages
Filtering Report Data
How Are Denials Analyzed?
Report Filter Categories
Report Filter Operator Symbols

How Are Denials Analyzed?

FlexNet Manager for Engineering Applications analyzes the denials in each report log and eliminates spurious ("false") denials from a report. All qualified denials (both regular denials and ultimate denials) occurring with in the time specified in the **Time interval** setting of the Filter Properties page are considered together.

• If, at the end of the time interval, the license has not been granted, the last denial is reported and all previous denials are eliminated from the report.

• If a series of denials is followed by a checkout, then the checkout is reports and all denials are eliminated.

See Also
Filtering Report Data
Create Report Configuration: Filter Properties

Create Report Configuration: Summary Options

Using the **Summary Options** page, you select report breakdown categories and define the time periods for which you want usage data.

Task   *To specify summary options:*

1.   In the **Breakdown Categories** section, select the categories you want to use in this report. Report breakdown
      categories enable you to specify categories for which you want the report to display data. You can specify multiple
      breakdown categories.

Breakdown Category	Description
Expiration Date	Enables you to know when a license is expiring and who is using that license so you can decide whether to renew the license depending on the level of license usage.
Hostid on Feature Line	Enables you to compare the usage among multiple report logs from multiple license servers. This helps with load balancing on the servers.
Group	Enables you to group users to represent a department or project. Reports can be broken down by group to provide an allocation of cost by project or department. Reserving licenses can be done by group also.
User	Enables you to see usage per user.
User Display Name	Enables you to see usage per display name.
FlexNet Licensing Version	Provides the version of FlexNet Publisher licensing being used.
User Host Name	Enables you to determine if a user is using multiple licenses on different machines. The host name might be a user's department or country.
User IP Address	Provides the IP address of the machine that the application is running on. This is usually assigned dynamically.
User Platform	Provides the type of platform the application is running on. Allows you to know if old versions are being used, or if the wrong platform is being used.
User Product Version	Shows the version of the product that is used
User Project	Provides a project's number. A project number is set in an environment variable and can be reported for several reasons, including the cost of software for a project.
Checkout Data	Value of CHECKOUT_DATA passed by the application to the license server when the license was checked out.
Vendor String	Provides the version numbers of a string of applications in the package.
Version	Provides the application's version number, which enables you to identify the version that the user is using and track who is using which version of the software.

2.   In the **Time Periods to Include** section, specify the days and time ranges for which you want usage data. The report
      will contain only the data from the selected time periods.

      For example, to include only usage data for Monday through Friday, from 8:00 a.m. to 6:00 p.m., and for Saturday from
      8:00 a.m. to noon, select the following:

3. From the **Summary Period** list, choose the unit of time for which you want the report to calculate usage activity.

- For High Water Mark and Usage Over Time reports, the summary period represents the granularity of the report. Longer summary periods are useful when generating Usage Over Time and High Water reports over long reporting periods to control the size of the report.

- For Peak Usage and Denial, Summary Barchart, and Usage Summary reports, the summary period represents the time interval by which to subdivide the report—an individual bar or line of data is displayed per summary period. For example, using a summary period of Month shows usage statistics on a monthly basis for the entire reporting period. If the summary period is too small, the report display may be unreadable.

Changing the default **Summary Period** setting affects the efficiency of the FlexNet Manager for Engineering Applications report generator. Setting a summary period for a Usage Over Time or High Water Mark report reduces the amount of data and can result in less overall memory usage and faster report execution and display. Conversely, setting a summary period for a Summary Barchart or Usage Summary report—or changing the summary period for a Peak Usage and Denial report to a smaller unit—increases the amount of calculations and memory required.

Choose a summary period that is appropriate for the type of report you are generating and the duration of your report data.

4. Select the **Show Zero Usage** check box to display all features in a report, regardless of whether they have been used during the report period.

Note • This option is available for Usage Over Time, High Water Mark, Summary Barchart, and Usage Summary reports.

See Also
Report Configuration Pages

Create Report Configuration: Output Options (also Raw Report Output Properties)

In the **Output Options** page (also the **Raw Report Output Properties** page), you specify the report format and the order in which you want data displayed in the report. In addition, you can specify an output directory for the report and use post-processing commands on the report data.

Task   ***To specify output options:***

1.   In the **Output Format** section, select the manner in which you want to view the report output. You can specify multiple output formats.

Output Format	Description
HTML	HTML report output can be viewed in an HTML browser.
XML	Report output is generated as XML. The Report Inbox provides a link to the XML output.
Image	Graphical report output is saved to files in PNG or JPEG format
RIF	Output in Report Interchange Format (RIF) is available for all reports except Summary Barchart reports. RIF is a simple, flexible, plain text format that is designed to pass tabular information between the report generator and another application, such as a spreadsheet. Specify a delimiter—choose space, tab, or specify a custom delimiter. **Important •** *Do not use double quotes ("), single quotes ('), or a backslash (\) as the RIF delimiter.*
Text	Report output is saved to a text file.

2.   In the **Sort Order** section, specify how you want the report output ordered. Report output can be ordered by feature name and by the breakdown category value. When you select breakdown category settings, default sort order settings are automatically set. You can override these default settings by changing the sort order specifications in the list.

To change the sort order:

a.   Select the breakdown category value that you want to move.

b.   Click the arrow buttons to move the value up or down in the list.

3.   For Summary Barchart reports: From the **Summarize** list, choose how you want the report to show usage for each feature that was used. License usage is displayed as bars whose heights represent one of the following metrics.

- Number Used—Number of licenses checked out

- Percent Used—Percentage of available license hours used

- Hours Used—Number of available license hours used

- Max Used—Maximum number of licenses checked out at a time

4.   Select the **Additional Options** that you want to apply.

Option	Description
Show Available Licenses	Select this option to show the number of available licenses for a particular feature.

Option	Description
Auto-Reduce Large Datasets	If the report dataset is particularly large, FlexNet Manager for Engineering Applications will automatically reduce the number of data points. *Note • To avoid automatic data reduction, reduce the number of data points by choosing a different summary period or by narrowing the date range of the report.*

5. In the **Report Output Directory** field, specify an absolute path for the output directory location—for example, C:\ManagerReports. The Report Output Directory is a folder located on the disk, where additional copies of the reports generated, will be saved. This directory is called the base directory, and the directory that you specify must already exist. The directory also needs to have write permission so the report output can be copied there.

Note • The Report Output Directory is in addition to the FlexNet Reporting's internal reports repository, which is located at \data\reports\output *on the FlexNet Reporting server. When you delete a FlexNet Manager for Engineering Applications report, the report is deleted from the internal reports repository; however, reports contained in the Report Output Directory are not deleted. You must manually delete reports in the Report Output Directory.*

6. In the **Output Directory Options** section, select one of the following options:

- **Overwrite the existing contents**—When the report is run, the output is copied to the directory specified in the Report Output Directory field.

   Important • If this option is selected, all existing files in the Report Output Directory will be deleted before reports output is written to this directory.

- **Do not overwrite.** Create subdirectories using timestamps.—Creates subdirectories (in the report output directory) for reports based on their timestamps. The timestamp is of the format *YYMMDDHHmmssSSS* (where *SSS* represents milliseconds), for example, C:\ManagerReports\091027213046255 for October 27, 2009, 9:30:46 p.m. Each time the report is run, a new subdirectory is created.

- **Do not overwrite.** Create subdirectories using report names and timestamps.—Creates subdirectories (in the report output directory) for reports based on their configuration name. Each subdirectory, in turn, has subdirectories based on time stamps, for example, C:\ManagerReports\Usage_Over_Time_Sample1\091027213046 for the configuration "Usage Over Time Sample1," run on October 27, 2009, 9:30:46 p.m.

7. In the **Post-Processing Command** field, specify any post-processing commands that you want to invoke after the report is generated.

8. Click **Next**.

See Also
Report Configuration Pages

Create Report Configuration: Raw Report Fields

On the **Raw Report Fields** page, you select the order of the columns for each report from the following fields.

Table 6-4 • Raw Report Fields

Field	Description
Count	Number of licenses in request
Duration	Amount of time event lasted
Event	Type of event
End Time of Event	Time at which the event ended
Start Time of Event	Time at which the event started
Group	`GROUP` name in end-user options file for vendor
Host Group	`HOST_GROUP` name in end-user options file for vendor
User	User name
User Display Name	User display name (UNIX only)
FlexNet Licensing Version	Product's FlexNet Licensing version
User Host Name	User host name
User IP Address	User IP address (*nnn.nnn.nnn.nnn*)
User Platform	Platform on which the application was compiled to run. 📄 **Note •** *Requires FlexNet Licensing version 5 or later in* `lmgrd`*, vendor daemon, and FLEXenabled application.*
User Product Version	Version of the product used
User Project	User `LM_PROJECT` environment variable (or Windows registry)
Checkout Data	Value of `CHECKOUT_DATA` passed by the application to the license server when the license was checked out
Vendor String	`VENDOR_STRING=`*text* on `FEATURE` or `INCREMENT` line
Reason for Denial/Checkin	Reason a license was denied or checked in
Process ID	Useful to display when trying to eliminate spurious denials—Spurious denials are eliminated only when they come from the same process.

Table 6-4 • Raw Report Fields

Field	Description
Checkout Handle	An identifier assigned by a vendor daemon to a license checkout—This identifier is not unique because checkout handles are recycled and reused by the vendor daemon. When correlating shared usage, it is helpful to show the checkout handle and shared checkout handle for each event so it is easy to spot which licenses were shared.
Shared Checkout Handle	An identifier assigned by a vendor daemon for a previous checkout with which this checkout was shared—This identifier is not unique because checkout handles are recycled and reused by the vendor daemon. When correlating shared usage, it is helpful to show the checkout handle and shared checkout handle for each event so it is easy to spot which licenses were shared.
Shared Handle Group	An identifier assigned by a vendor daemon representing a group of one or more license checkouts that were satisfied with the same license—This identifier is not unique because shared group identifiers are recycled and reused by the vendor daemon.
Vendor Daemon	Name of the vendor daemon
License Server Host Name	Host name of the license server machine
Vendor Daemon Version	FlexNet Licensing version of the vendor daemon
License Server Hostid	Hostid of the license server machine

See Also
Report Configuration Pages
Raw Report

Create Report Configuration: Graph Options

The **Graph Options** page enables you to customize the look of your finished report. You can use a predefined (or standard) style or you can create a custom look, in which you choose a color scheme, define text properties, and specify a line style.

Using Predefined Graph Options

FlexNet Manager for Engineering Applications provides several predefined graphic themes, which you can apply to your reports.

Task   ***To specify predefined graph options:***

1. In the Title box, type the title that you want displayed on the finished report.

2. For the Style option, select **Standard**.

3. In the Theme section, click a theme image to select a graphic theme for your report.

4. Click **Finish**.

Using Custom Graph Options

If you want full control over the way in which your report data is displayed, use the Custom style option to define report graph options.

Task   **To specify custom graph options:**
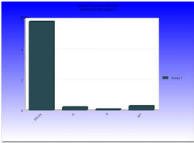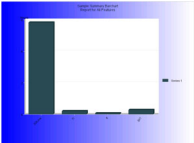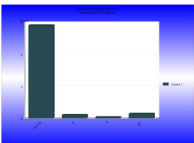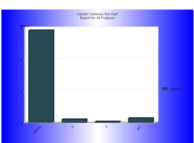
1. In the Title box, type the title that you want displayed on the finished report.

2. For the Style option, select **Custom**.

3. Specify the colors that you want to apply to different graphical elements. You can either type a hexadecimal color code or use the color selector to pick a color.

> **Note** • *Not all elements are used in every report configuration.*

Element	Description
Background	Background color for the entire report.
Text	Color used for all text used in the report. **Tip** • *To maximize readability, choose a text color that contrasts with the background color (and the auxiliary color, if you choose to use a gradient effect).*
Plot Area	Color used for the report plot area, which is the area bounded by the axes. This is where your report data graph is displayed.
Usage	Color used to display the license usage line.
Available	Color used to display the available license line.
Overdraft	Color used to display the overdraft license line.

4. Specify whether you want to use a color gradient in the report background.

Option	Description
Style	Choose whether you want to apply a gradient effect to the report background. With a gradient, the color that you specified for the background color fades into the color you specify in the **Auxiliary Color** field. The following sample graphics use blue as the background color and white as the auxiliary color. ● None—No gradient applied; the report background is a solid color. ● Top Bottom—The background color (top) fades into the auxiliary color (bottom). ● Left Right—The color on the left side of the report fades into the color on the right side of the report. ● Top Bottom Mirror—The background color is used on the top and bottom of the report background, fading into the auxiliary color in the horizontal middle. ● Left Right Mirror—The background color is used on the right and left sides of the report background, fading into the auxiliary color in the vertical center.
Auxiliary Color	The color that, when used with the selected background color, creates the gradient effect.

5. For Summary Barchart reports, select a Bar Color Palette option.

6. If you want to use 3D effects in your report, select the **Use 3D effect** check box and choose the pixel depth from the list.

7.   Specify the report text properties.

Option	Description
Font	The font to use for all text displayed in the report. Available fonts are dependent on your machine's platform. **Using International Characters in Reports** The use of international characters in reports may require special fonts. For example, if a feature, host, or user name contains Japanese characters, then a report with that feature or breakdown will provide a report image with those Japanese characters in the title. To correctly display international characters in a report, you must specify a font that has the required characters.
Style	Whether you want to use Normal, Bold, Italic, or Bold Italic font for the text displayed in your report.
Size	Font size, in points.

8.   Choose a line style.

Option	Description
Width	Width, in pixels, of the lines displayed in the graph.
Style	Line style.

9.   Click **Finish**.

See Also
Report Configuration Pages

Filtering Report Data

FlexNet Manager for Engineering Applications enables you to tailor reports to evaluate and show the data that you want. To limit and focus the data displayed in a report, you create filters using the Filter Properties page of the Report Configuration Wizard.

Report filter categories—when used in conjunction with filter operator symbols and event filters—enable you to narrow the focus of your reports.

All specified filters must be satisfied, except in cases where you specify multiple event filters for the same category. If multiple filters are specified for the same category, only one of the filter conditions must be satisfied.

For example, if you create the following filter conditions—

•   User Host Name == abc

•   User Host Name == def

•   User == jsmith

—the report will included usage data collected for the user host name abc OR def AND for the user jsmith.

Task   ***To specify a filter:***

1.   On the Filter Properties page of the Report Configuration Wizard, select a report filter category from the **Category** list.

2.   From the **Operator** list, select an operator symbol.

3.   In the **Event Filter** field, type the value that for which you want to filter.

4.   To add another filter, click **Add New Filter** and repeat steps 1 through 3.

To remove a filter, click the **Remove** link to the right of the filter condition.

See Also
Report Configuration Pages
Report Filter Categories
Report Filter Operator Symbols
Running Classic Reports

Report Filter Categories

The following table lists the filter categories that you can apply to your report data, including filter category descriptions and the categories' property types—whether the filter category is a BOOLEAN, DATE, STRING, or STRING_LIST property.

See Report Filter Operator Symbols for information about which operators can be used with which Filter Property Types.

Table 6-5 • Report Filter Categories

Filter Category	Filter Property Type	Description
Feature	STRING	FEATURE name

Table 6-5 • Report Filter Categories

Filter Category	Filter Property Type	Description
Reserved User or Group	STRING_LIST	USER or GROUP that is RESERVEd in the vendor's options file. This filter category can be used in the following ways: • If no Reserved User or Group filter is applied, all features are used to report usage. • If Reserved User or Group == *‹string›* filter is applied, the *‹string›* is treated as either a name of a user or a user group. Only features that have the specified user or user group named in its RESERVE list in the vendor daemon's options file are used for reporting. All other features are filtered out. • If Reserved User or Group =~ *‹string›* filter is applied, the *‹string›* is treated as a pattern of either a name of a user or a user group. The * character is treated as a wildcard. Only features that have the specified user or user group—that match the pattern—on its RESERVE list in the vendor daemon's options file are used for reporting. All other features are filtered out. • If Reserved User or Group != *‹string›* filter is applied, the *‹string›* is treated as either a name of a user or a user group. Only features that do not have the specified user or user group named on its RESERVE list in the vendor daemon's options file are used for reporting. All other features are filtered out. • If Reserved User or Group !~ *‹string›* filter is applied, the *‹string›* is treated as a pattern of either a name of a user or a user group. The * character is treated as a wildcard. Only features that have the user or user group —that match the pattern—on its RESERVE list in the vendor daemon's options file that do not match the pattern are used for reporting. All other features are filtered out.

Table 6-5 • Report Filter Categories

Filter Category	Filter Property Type	Description
Included User or Group	STRING_LIST	USER or GROUP that is INCLUDEd in the vendor's options file. This filter category can be used in the following ways: ● If no Included User or Group filter is applied, all features are used to report usage. ● If Included User or Group == *\<string\>* filter is applied, the *\<string\>* is treated as either a name of a user or a user group. Only features that have the specified user or user group named in its INCLUDE list in the vendor daemon's options file are used for reporting. All other features are filtered out. ● If Included User or Group =~ *\<string\>* filter is applied, the *\<string\>* is treated as a pattern of either a name of a user or a user group. The * character is treated as a wildcard. Only features that have the specified user or user group—that match the pattern—on its INCLUDE list in the vendor daemon's options file are used for reporting. All other features are filtered out. ● If Included User or Group != *\<string\>* filter is applied, the *\<string\>* is treated as either a name of a user or a user group. Only features that do not have the specified user or user group named on its INCLUDE list in the vendor daemon's options file are used for reporting. All other features are filtered out. ● If Included User or Group !~ *\<string\>* filter is applied, the *\<string\>* is treated as a pattern of either a name of a user or a user group. The * character is treated as a wildcard. Only features that have the user or user group —that match the pattern—on its INCLUDE list in the vendor daemon's options file that do not match the pattern are used for reporting. All other features are filtered out.
License Key	STRING	License key on FEATURE or INCREMENT line
Version	STRING	Version on FEATURE or INCREMENT line
Vendor String	STRING	VENDOR_STRING=*text* on FEATURE or INCREMENT line
Hostid on Feature Line	STRING	HOSTID on FEATURE or INCREMENT line
Distributor Information	STRING	dist_info=*text* on FEATURE or INCREMENT line
User Information	STRING	user_info=*text* on FEATURE or INCREMENT line
Asset Information	STRING	asset_info=*text* on FEATURE or INCREMENT line
Issuer	STRING	ISSUER=*text* on FEATURE or INCREMENT line
Notice	STRING	NOTICE=*text* on FEATURE or INCREMENT line

Table 6-5 • Report Filter Categories

Filter Category	Filter Property Type	Description
Expiration Date	DATE	Expiration date (in the format *dd-mmm-yyyy*) for a feature as specified on the FEATURE or INCREMENT line (string with wildcards) in the license file.
		To create an Expiration Date filter condition, use the date format *mm/dd/yyyy* in the Event Filter field. For example, 04/19/2016 and 4/19/2016 are valid values for the date 19-apr-2016.
		Note • The specified year must be four digits in length.
		Expiration dates can also be specified as permanent in the license file, which means that the feature never expires. Permanent features have their expiration dates stored as NULL in the database.
		Because expiration dates are always either a date or the literal permanent, the NULL value in the database is never overloaded to mean "not defined." (Expiration dates are always considered to be "defined.")
		Using the Expiration Date filter category, you can filter features that have a permanent expiration date by constructing a filter condition using the keyword permanent. For example, if you create the filter condition Expiration Date == permanent, the filter will pick up all features whose expiration date is permanent in the license file.
		The following rules apply when using the keyword permanent as a value for an Expiration Date filter condition:
		• It is valid only as a keyword for the Expiration Date filter category. When used with any other filter category, it is treated as a string.
		• It is case insensitive.
		• Only the == and != operators are valid for use with permanent.
Serial Number (SN)	STRING	SN=*nnn* on FEATURE or INCREMENT line
Issued	DATE	ISSUED=*dd-mmm-yyyy* on the FEATURE or INCREMENT line.
		This is the date that the feature was issued, as specified in the license file.
		To create an Issued filter condition, use the date format *mm/dd/yyyy* in the Event Filter field. For example, 04/19/2016 and 4/19/2016 are valid values for the date 19-apr-2016.
		Note • The specified year must be four digits in length.
		The issued date may not have been specified in the license file, in which case the data is NULL in the database. Features that have no issued date specified cannot be filtered by issue date.

Table 6-5 • Report Filter Categories

Filter Category	Filter Property Type	Description
Suite Package	BOOLEAN	The Suite Package filter works in the following ways: • If no Suite Package filter is applied, all features are used to report usage. • If Package Component == Y or N (both Y and N behave the same way), only features that are packages that are suites are reported on. All others (package components themselves and features outside of packages) are filtered out. • If Package Component != Y or N (both Y and N behave the same way), features that are packages that are suites are filtered out. All others (package components themselves and features outside of packages) are reported on. **Important •** *Using other filter operator symbols will not result in a valid filter.*
Package Component	BOOLEAN	The Package Component filter works in the following ways: • If no Package Component filter is applied, all features are used to report usage. • If Package Component == Y or N (both Y and N behave the same way), only package component features are reported on. All others (packages themselves and features outside of packages) are filtered out. • If Package Component != Y or N (both Y and N behave the same way), only package component features are filtered out. All others (packages themselves and features outside of packages) are reported on. Using other filter operator symbols will not result in a valid filter.
User	STRING	User name
User IP Address	STRING	User IP address (*nnn*.*nnn*.*nnn*.*nnn*)
User Platform	STRING	Platform on which the application was compiled to run
User Display Name	STRING	User display name (UNIX only)
User Project	STRING	Use LM_PROJECT environment variable (or Windows registry)
FlexNet Licensing Version	STRING	Product's FlexNet Publisher licensing version
User Host Name	STRING	User host name
User Product Version	STRING	Version of product actually used
Checkout Data	STRING	Value of CHECKOUT_DATA passed by the application to the license server when the license is checked out
Group	STRING_LIST	GROUP name in end-user options file for vendor
Host Group	STRING_LIST	HOST_GROUP name in end-user options file for vendor

Report Filter Operator Symbols

You can use report filter operator symbols to construct expressions to filter the data in your reports. The following table describes each filter operator symbol and the filter property types with which you can use them.

Table 6-6 • Report Filter Operators

Filter Operator	Description	Use With Filter Property Types
==	Identical to	• BOOLEAN • STRING • STRING_LIST
=~	Matches (with wildcards): * – Match any number of characters ? – Match any single character *pattern** – Match *pattern* at beginning of text **pattern* - Match *pattern* at end of text **pattern** – Match *pattern* anywhere in text **pattern1* *pattern2** - Match multiple patterns; separate with spaces	• BOOLEAN • STRING • STRING_LIST
!=	Not equal to	• BOOLEAN • STRING • STRING_LIST
!~	Does not match (with wildcards) See wildcard description under =~	• BOOLEAN • STRING • STRING_LIST
>	Greater than	DATE
<	Less than	DATE

Running Classic Reports

You generate reports based on the report configurations that you define. From the **Report Configurations** page, you can immediately run a report manually or you can set up a schedule for the report to run.

📄

Note • *Only a user with the Super Administrator role or the user who originally started running the report can cancel a report while it is in progress, whether the report is run manually or by the FlexNet Manager for Engineering Applications scheduler.*

📋

Task   **To run a report immediately:**

1. From the **Reporting** tab, under **Classic Reporting**, click **Report Configurations**. This displays the **Report Configurations** page.

2. Click the **Run** button to the right of the report configuration that you want to run.

3. A dialog appears, asking if you want to run the report. Click **OK**.

4. Go to the **Report Inbox** to view the report output.

📄

Note • *You may need to refresh the page by pressing **F5** or clicking the **Refresh** button for your web browser.*

See Also
Reporting on License Usage
Running Classic Reports
Viewing Classic Report Output in the Report Inbox

Scheduling Classic Reports

Using the **Report Scheduling** page, you can schedule a report to run at the same time on specified days. This way, you can schedule a report to run nightly, weekly, monthly, and so on.

📄

Note • *Only a user with the Super Administrator role or the user who originally started running the report can cancel a report while it is in progress, whether the report is run manually or by the FlexNet Manager for Engineering Applications scheduler.*

📋

Task   **To run a report at scheduled times:**

1. From the **Reporting** tab, under **Classic Reporting**, click **Report Configurations**. This displays the **Report Configurations** page.

2. Click the **Schedule** button to the right of the report configuration for which you want to schedule a run. This opens the Report Scheduling page.

3. In the **Run Report** section, click one of the radio buttons:

    ● Not Scheduled—This report is not scheduled to run.

- These days at (hh:mm)—Specify a time (using a 24-hour clock) and select the days of the week on which you want the report to run.

- These months on day (number of day in a month) at (hh:mm)—Select the day, specify a time (using a 24-hour clock), and select the months on which you want the report to run.

4. Click **Save**.

After the report runs, the report output is available in the **Report Inbox**.

See Also
Reporting on License Usage
Running Classic Reports
Viewing Classic Report Output in the Report Inbox

Viewing Classic Report Output in the Report Inbox

As soon as a Classic report begins to run, it is displayed in the list on the **Report Inbox** page. Reports remain listed on this page until they are deleted.

Note • *Only a user with the Super Administrator role or the user who originally ran the report can delete a report from the Report Inbox, whether the report is run manually or by the FlexNet Manager for Engineering Applications scheduler.*

The **Report Inbox** page provides the following information for each report:

- Status of the report run (Failed, Running, Canceled, or Complete)

- Report configuration name and a link to the report output

- User who ran the report

- The date and time at which the report was run

- Progress of a report run (expressed as a percentage of completion)

Task   ***To view report output:***

1. From the **Reporting** tab, under **Classic Reporting**, click **Inbox**. This displays the **Report Inbox** page.

2. When the status for a report is Complete, you can view the report by:

    - Clicking the **Text** or **Image** link under the Configuration Name.

      This displays the report output in a new browser window.

    - Clicking the **Download** button for that report.

      This archives all report components into a `.zip` file and displays a folder of file names using a ZIP utility. From here, use the ZIP utility according to standard practice.

    - Checking the report output directory.

      When creating a report configuration, you can specify a report output directory in the **Output Options** page.

3. Click the **View Log** button for a report to view the report's status log.

📄

> *Note • The **View Log** button is not displayed while the report status is Running.*

Click the **Delete** button for a report to remove the report output.

See Also
Reporting on License Usage
Running Classic Reports
Scheduling Classic Reports

Specifying Post-Processing Options

FlexNet Manager for Engineering Applications provides the ability to configure a script that can be called when a report completes. The post-processing scripting (also known as command-line option) support provides a way to enter a single scripting expression in the FlexNet Manager for Engineering Applications interface. This allows typical post-generation steps (such as user ID replacement and customized formatting) to be directly invoked after the report has been produced.

Report post-processing options are available in the Raw Report Output Properties page of the Report Configuration Wizard.

The last three settings on this page (Report Output Directory, Output Directory Options, and Post-Processing Command) are relevant for post-processing functionality. The first two settings—Report Output Directory and Output Directory Options—deal with the configuration of the external copy of the generated report, and the Post-processing Command setting is where you specify post-processing command-line parameters.

The external report copy is independent of the post processing, but if in reaction to the completed and copied report, you want to execute a script or some other program, you can populate the Post-Processing Command field. In this field, you can specify the command that FlexNet Manager for Engineering Applications should execute after the report has been generated. This command typically includes the path of an executable (which can be a script processor) together with some input to properly process the report.

In many cases, the post-processing script needs additional input parameters to efficiently process the report. This input can include the location of the output directory, the list of files produced for the report, the type of report produced, and so on.

FlexNet Manager for Engineering Applications provides a number of command-line parameters that you can use for post processing. These input parameters are added to the script with a dollar sign ($) prepended to the keyword and at run time replaced by the real values. For example, the expression—

```
/usr/bin/perl /opt/scripts/postproc.pl $outputDir $outputFiles
```

—will be emitted to the command line—

```
/usr/bin/perl /opt/scripts/postproc.pl /opt/reportOut MonthlyRaw.rif
```

—if the output directory is set to "/opt/reportOut" and the report is a raw report named "MonthlyRaw."

See Also
Command-Line Parameters
Testing Post-Processing Scripts
Error Scenarios
Report Post-Processing Examples

Command-Line Parameters

The following parameters are available for use in the **Post-Processing Command** text field.

Table 6-7 • Post-Processing Command-Line Parameters

Parameter	Description	Report Types		
$outputDir	Name of the output directory of the external copy of the generated report	All	Report Output Directory	Enter a location; test to validate that spaces in the location are correctly substituted.
$outputFiles	Comma-separated list of names of output report files	All	None	Dependent on report type. Note that the ReportConfigurationName.fns file will always be present, containing the report generation log.
$errorStatus	Indicates whether a report ran successfully.	All	None	An error number of 0 indicates that the report ran successfully; all other numbers indicate an error.
$errorLine	Error description (can be empty).	All	None	Contains the error description when $errorStatus<>0; otherwise contains an empty string "".
$reportType	The report type that was run.	All	None	One of: FLEXnet.Usage.Raw, FLEXnet.Usage.ServerCoverage, FLEXnet.Usage.Summary, FLEXnet.Usage.Efficiency, FLEXnet.Usage.SummaryBarchart, FLEXnet.Usage.HighWaterMark, FLEXnet.Usage.OverTime
$user	The FlexNet user who ran the report.	All	None	Example: admin
$features	Comma-separated list of features included in the report.	All	Features selection on page 2 of the report wizard	Example: feature1,feature2
$servers	Comma-separated list of license servers included in the report	All	License Server Hosts on page 1 of the report wizard	Example: host1,host2
$vendorDaemons	Comma-separated list of vendor daemons included in the report	All	Vendor Daemons on page 1 of the report wizard	Example: avend,bvend,cvend
$startDate	Start date of the report.	All	Date/Time Range on page 1 of the report wizard	Example: 8/1/05 12:00 AM

Table 6-7 • Post-Processing Command-Line Parameters

Parameter	Description	Report Types		
$endDate	End date of the report	All	Date/Time Range on page 1 of the report wizard	Example: 8/1/05 12:00 AM
$showZero	Indicates where unused features are included	High Water Mark, Summary Barchart, Usage Over Time, Usage Summary	Usage setting with Show Zero Usage selected (Summary Options page of report wizard)	True or False; dependent on whether this option was selected in the FlexNet Manager for Engineering Applications interface
$filter	Comma-separated list of filter expressions	Raw	Event Types (Filter Properties page of the report wizard	Used, Queued, Denied, and Exceptions (dependent on selections made in the FlexNet Manager for Engineering Applications interface)
$eventFilter	Comma-separated list of event filters	All	Filters specified in the Filter Properties page of the report wizard	Example: User=="jdoe",feature=="feature1"
$delimiter	Field delimiter on reports	All reports except Summary Barchart and Server Coverage	Output Format (wherever the output format can be represented as RIF)	The delimiter can be a space, tab, or any other value.
$showAvail	Indicates whether a group of available licenses is also on graphs (Usage Over Time)	High Water Mark, Usage Over Time	Additional Options: Show Available Options setting selected (Output Options page of the report wizard)	True or False; dependent on whether this option was selected in the FlexNet Manager for Engineering Applications interface
$elimFalseDenials	Denial elimination algorithm is turned on and has the specified window	Raw, Usage Summary	Denial Filtering: "Eliminate spurious denials" option (Filter Properties page of the report wizard)	True or False; dependent on whether this option was selected in the FlexNet Manager for Engineering Applications interface
$sortOrder	Sort order of the records on the report	All	Sort Order on Output Options page of the report wizard	f or fb or empty

Table 6-7 • Post-Processing Command-Line Parameters

Parameter	Description	Report Types		
`$featureUniq`	Mode of feature identification	All	Value in "Describe Features by" field (Feature Selection page of the report wizard	name, name_ver, name_asset, name_key
`$timeInSeconds`	Show time value in RIF files as UNIX seconds since 00:00:00 January 1, 1970 GMT	Raw	Output Format: "Time as Seconds" set to Yes (Output Properties page of the report wizard)	True or False; dependent on whether this option was selected in the FlexNet Manager for Engineering Applications interface

Note • You should use parameters that are applicable to the report type you are defining. Using parameters not applicable to the report type will result in indeterminate values at run time.

Parameters that can have an empty value (`$features`, `$servers`, `$vendorDaemons`, `$filter`, `$eventFilter`) should be used only in cases where the corresponding report configuration values are not empty. If the report configuration setting does not contain a value for a specified parameter, no argument will be emitted, which can cause the argument interpreter in the post-processing script to confuse the next argument with the value of the current argument.

Example: The list of servers is specified (`$servers`), but in the License Server Host selection on the Naming page (step 1) of the Report Configuration Wizard, none has been selected (indicating to run the report for all license server hosts). Then no argument will be emitted by the post-processing invocation. In case another parameter is specified, the argument evaluation logic can easily mistake the value for the next argument as the list of servers.

After you specify the post-processing expression, you can complete the report configuration. When you finish the report configuration, FlexNet Manager for Engineering Applications validates the external output directory and the post-processing expression.

After saving the report configuration, you can run the report. FlexNet Manager for Engineering Applications will generate the report, copy the report to the external directory, and then invoke the post-processing script.

See Also
Specifying Post-Processing Options
Testing Post-Processing Scripts
Error Scenarios
Report Post-Processing Examples

Testing Post-Processing Scripts

It is recommended that you use a test script first to see the command-line arguments that are being passed in and to compare them to the expected values. The following code sample shows a simple perl script which will emit the argument values into the report log file, which can be retrieved from the **Report Inbox** page.

```
print "Post-processor command line arguments:\n";
foreach $arg (@ARGV) {
```

```
        print "\t$arg\n";
    }
```

When you understand the command-line parameters, you can adjust your existing post-processing scripts or programs to interpret the report data.

See Also
Specifying Post-Processing Options
Command-Line Parameters
Error Scenarios
Report Post-Processing Examples

Error Scenarios

There are two different error scenarios—report generation failure and post-processing failure.

- In the first scenario, the report generation in FlexNet Manager for Engineering Applications fails for some reason. In this case, the $errorNum parameter contains a nonzero value and the $errorLine parameter contains a description of the problem. In most cases, you can analyze the report generation log file (a file named *ReportConfigurationName*.fns located in the output directory) to troubleshoot the problem. The status of the report in the Report Inbox will show Failed.

- In the second scenario, the post processing fails and returns a non-zero exit status. (This is the return value of the process). The status of the report in the Report Inbox will also show Failed. This will not allow access to the data FlexNet Manager for Engineering Applications successfully produced.

See Also
Specifying Post-Processing Options
Command-Line Parameters
Testing Post-Processing Scripts
Report Post-Processing Examples

Report Post-Processing Examples

Example 1: Monthly Extraction of Raw Data

Use Case: FlexNet Manager for Engineering Applications should provide the Raw data format for the managed licensing system on a monthly basis. A nightly raw report is run on the first day of the next month to extract the data. The post processing includes replacing of the user IDs with full User names and department information.

Report Configuration: Define a raw report configuration with the following settings.

1. Set the Date/Time Range to "Prior Month," scheduled at the first of each month. Because the raw report contains data for the entire system, all of the server hosts, vendor daemons and features are included.

2. The Event Types (on the Filter Properties page) can be restricted to Used, Queued and Denied, because exceptions are not relevant to the further processing.

3. On the Raw Report Output Properties page, select the RIF format. Note that for this format, there is no parameter because the you can deduce the report output format based on the file endings of output files.

4.   Select "Time as Seconds" and specify the appropriate location in the Report Output Directory field. Also, select the
     "Overwrite the content" option (in case the output after post processing does not need to be preserved) and specify
     the post-processing command (in this example, Perl on Unix is used):

     ```
     /usr/bin/perl /opt/cblecken/perl/rawProcess.pl $outputDir $outputFiles $errorStatus $errorLine
     $reportType $user $startDate $endDate $eventFilter $delimiter    $elimFalseDenials $sortOrder
     $featureUniq $timeInSeconds
     ```

     These are all of the parameters that apply to a Raw report. As noted previously, because none of the servers host,
     vendor daemons or features are selected, the associated parameters $servers, $vendorDaemons, and $features are
     not included in the post-processing command expression. They should be included only in case a non-zero selection
     has been made.

5.   Next, the Raw Report Fields page lists the fields you can select to include in the Raw report. The list of Raw report fields
     is not included in the list of parameters, because the Raw RIF format will describe the number of columns and the
     name of the columns in the report itself and it is more consistent to take the column numbers and column names from
     the report.

Report Generation: Given the sample perl script from the previous code sample (which writes the parameters to stdout),
generating a report from this configuration leads to the following invocation on the command line as described in the
following table.

Table 6-8 • Example 1 command-line arguments

Argument	Description
/opt/*username*/extout	Output directory
Raw_Sample.txt,Raw_Sample.fns	Output files; the .fns file contains the debug log
0	Report generation successful
""	No error message
FLEXnet.Usage.Raw	Indicates Raw report
Admin	The user running the report
3/1/06 12:00 AM	Report start date
3/26/06 12:00 AM	Report end date
used,queued,denied	The event type filters; all selected except Exceptions
	The delimiter; not visible because it is a space
true	False denials enabled
f	Sort by feature
name	Distinguish features by name
true	Dates are recorded in UNIX seconds

Example 2: Month-to-Date High Water Mark

Use Case: Every day the aggregated High Water Mark report is calculated for the entire month up to today. This report should include only a subset of vendor daemons (for this example, the two vendor daemons "examlmd" and "exanlmd"). This report is run every night.

Report Configuration: Define a High Water Mark report configuration with the following settings.

1. Set the Date/Time Range to "Month to Date," scheduled to run every night. Also select the vendor daemons "examlmd" and "exanlmd" from the Vendor Daemons selection box. Do not select anything for the license server hosts or the features (on the Feature Selection page).

2. On the Summary Options page, select the "Show Zero Usage" option.

3. On the Output Options page, select the RIF and the Image output format. In the Additional Options section, select the "Show Available Licenses" and "Auto-Reduce Large Datasets" options.

4. Specify the appropriate location in the Report Output Directory field. Also, select the "Overwrite the content" option (in case the output after post processing does not need to be preserved) and specify the post-processing command (in this example, Perl on Unix is used):

    ```
    /usr/bin/perl /opt/cblecken/perl/hwmProcess.pl $outputDir $outputFiles $errorStatus $errorLine
    $reportType $user $vendorDaemons $startDate $endDate $showZero $showAvail $sortOrder $featureUniq
    ```

5. On the Report Scheduling page (available by clicking the **Schedule** button for the report from the Report Configurations page), schedule the report to run on the first of each month.

Report Generation: Given the sample perl script from the previous code sample (which writes the parameters to `stdout`), generating a report from this configuration leads to the following invocation on the command line as described in the following table.

Table 6-9 • Example 2 command-line arguments

Post-Processor Command-Line Arguments	Description
/opt/*username*/extout	Output directory

Table 6-9 • Example 2 command-line arguments

Post-Processor Command-Line Arguments	Description
High_Water_Mark_Sample2.png, High_Water_Mark_Sample0.png, High_Water_Mark_Sample1.png, High_Water_Mark_Sample3.png, High_Water_Mark_Sample4.png, High_Water_Mark_Sample5.png, High_Water_Mark_Sample6.png, High_Water_Mark_Sample0.htm, High_Water_Mark_Sample1.htm, High_Water_Mark_Sample2.htm, High_Water_Mark_Sample3.htm, High_Water_Mark_Sample4.htm, High_Water_Mark_Sample5.htm, High_Water_Mark_Sample6.htm, High_Water_Mark_Sample_toc.htm, High_Water_Mark_Sample.fns	Output files; the .fns file contains the debug log
0	Report generation successful
""	No error message
FLEXnet.Usage.HighWatermark	Indicates High Water Mark report
Admin	The user running the report
examlmd,exanlmd	Vendor daemon list
2/1/96 12:00 AM	Report start date
10/20/06 12:00 AM	Report end date
false	Do not show zero regions
true	Show the available licenses
f	Sort by feature
name	Distinguish features by name

Flexera Analytics Reporting

As FlexNet Manager for Engineering Applications accumulates more and more usage data for your organization, you may want to provide interactive or dynamic, fast-performing reporting mechanisms. FlexNet Manager for Engineering Applications includes access to Flexera Analytics functionality, which is powered by IBM Cognos Business Intelligence. Flexera Analytics uses a different structure to model data than that used for Classic reporting, so it can deliver reports much more quickly.

To generate Flexera Analytics reports, use the Cognos functionality available from the **Flexera Analytics** section under the **Reporting** tab. To access help for Cognos, you can view documentation for both Query Studio and Report Studio, available from the Flexera Product and License Center (https://flexerasoftware.flexnetoperations.com) or from the IBM website at http://www.ibm.com/analytics/us/en/technology/cognos-software.

Before you can run Flexera Analytics reports, you must aggregate your usage data to populate the data warehouse. See the topic, Report Data Aggregation, for information.

*Note • The **Flexera Analytics** section under the **Reporting** navigation tab is displayed only if Flexera Analytics has been configured, **and** if the user has a role with the Assign Cognos Roles permission, the Run and Cancel Aggregation permission, and/or has been assigned a Cognos role. The user must have a Cognos role to run reports using Flexera Analytics. See the section, Cognos Roles, for more information.*

Cognos Reporting

The **Cognos Reporting** link takes you to the IBM Cognos Connection interface, which serves as the gateway to all of the Cognos custom reporting functionality, including Query Studio and Report Studio.

On this page, a number of out-of-the-box reports are available to you. Refer to the *Flexera Analytics 2020 R1 Guide* for report details.

Important • Before you can run Flexera Analytics reports, you must aggregate your usage data to populate the data warehouse. See the topic, Report Data Aggregation, for information.

To access help for Cognos custom reporting, you can view documentation for both Query Studio and Report Studio, available from the Flexera Product and License Center (https://flexerasoftware.flexnetoperations.com), or from the Cognos Web site at http://www.ibm.com/analytics/us/en/technology/cognos-software.You can also click the help (question-mark) icon on the IBM Cognos Connection toolbar.

See Also
Flexera Analytics Reporting
Cognos Roles
Cognos Administration
Reporting on Feature Usage (Historical Feature Reports)
Operational Dashboard
Report Data Aggregation
Aggregation Status
Organizational Structures

Operational Dashboard

FlexNet Manager for Engineering Applications provides an Operational Dashboard that provides data about license usage, denials, and license server status for both FlexEnabled and LUM-enabled applications. The Operational Dashboard does not provide usage monitoring for features that have unlimited availability (are uncounted).

Accessible from within the FlexNet Manager for Engineering Applications user interface, the Operational Dashboard opens in a separate browser window. The Operational Dashboard uses the Cognos Business Insight feature, which provides a flexible and configurable framework for you to view your enterprise's usage data. (For information about working with IBM's Business Insight dashboard, click the help icon located in the toolbar at the top of the Operational Dashboard window.)

By default, the Operational Dashboard contains five mini-versions of reports (called *report widgets*). You can drag the report widgets around the dashboard page to display data where you want to see it. You can also add your own reports to the Operational Dashboard.

Server Time Zones and Accurate Display of Usage Data

Because the Operational Dashboard uses time zone information from both the reporting database server and the Flexera Analytics (Cognos) server to display usage data, it is important that both the reporting database server and the Flexera Analytics (Cognos) server are in the same time zone. It is also recommended that the FlexNet Manager for Engineering Applications servers be in the same time zone.

See Also
Operational Dashboard Report Widgets
Opening the Operational Dashboard

Operational Dashboard Report Widgets

The Operational Dashboard is composed of report widgets, which are small, self-contained reports that you can move around the dashboard space. By default, the following report widgets are displayed.

- **Feature Usage**—An area graph that shows feature usage for a specified time period. The red line at the top of the graph represents total availability for the feature. Use the menus in the upper-left corner of the widget to filter usage data by time period and feature name (by selecting the vendor name first, then specifying the feature name for which you want to see usage data). The time period you specify for the Feature Usage report widget is the time period that is

used for the Features by Peak Usage report widget. Changing the time period for either report updates the data displayed in the other report.

- **Features by Peak Usage**—A table showing the 100 features with the highest peak usage for a given time period. The table provides the vendor name, feature name, type of license (whether FlexNet or LUM), the peak percentage used within the time period, and a small area graph showing usage for the time period. (The red line represents total availability for the feature during the specified time period.) Selecting All Data for the time period shows data for a rolling two-week period. The time period you specify for the Features by Peak Usage report widget is the time period that is used for the Feature Usage report widget. Changing the time period for either report updates the data displayed in the other report.

- **Excessive Users (by time)**—A table that shows the users who have the highest feature usage (measured by time of usage and the number of licenses). Use the list at the top to specify whether you want to see excessive usage across all features or only for a specific feature.

- **Feature Denials**—A bar graph that shows license denials for a rolling two-week period. Use the list at the top of the widget to show all denials during the time period or only capacity-based denials, where a feature is denied because it is being used up to its current capacity. Viewing capacity-based denials can help you determine whether you need to free up some licenses or perhaps purchase some additional licenses for a specific feature.

- **License Server Status**—A table showing the status of the license servers in your environment. The Type column identifies whether the server is a FlexNet license server (FLEX) or a LUM license server (LUM).

You can create your own reports and add them as report widgets to the dashboard. See Customizing the Operational Dashboard for information.

See Also
Operational Dashboard
Opening the Operational Dashboard
Customizing the Operational Dashboard

Opening the Operational Dashboard

You can access the Operational Dashboard from within the FlexNet Manager for Engineering Applications user interface and from a Cognos pane.

Task   ***To access the Operational Dashboard from FlexNet Manager for Engineering Applications:***

From the **Reporting** tab, under **Flexera Analytics**, click **Operational Dashboard**.

The Operational Dashboard opens in a separate browser window.

Task   ***To access the Operational Dashboard from a Cognos pane:***

1. From the Cognos Connection user interface, in the Public Folders tab, open **FlexNet Manager Suite**, then open **FlexNet Manager for Engineering Applications Reports**.

2. Click the **Operational Dashboard** link.

   The Operational Dashboard opens in a separate browser window.

See Also
Operational Dashboard
Operational Dashboard Report Widgets
Customizing the Operational Dashboard

Customizing the Operational Dashboard

You can customize the Operational Dashboard by moving and adding report widgets. To move the report widgets, simply drag and drop them around the dashboard space.

You can add customized reports that you have created to the Operational Dashboard and remove existing report widgets from the Operational Dashboard.

Although you cannot overwrite the Operational Dashboard that is included in the FlexNet Manager for Engineering Applications Reports folder, you can save your own version of the Operational Dashboard by re-naming it and saving it in the appropriate folder. You can then set Cognos permissions on your customized Operational Dashboard to specify whether other Cognos users are able to view it. See Reporting on Feature Usage (Historical Feature Reports) for information. (If you save your version to your My Folders location, your customized dashboard can be viewed only by you.)

Adding Report Widgets to the Operational Dashboard

Task   *To add a report widget to the Operational Dashboard:*

1. From the **Insert** menu, select **Insert Content**. This opens the Content pane on the right side of the page.

2. Browse to the report object that you want to add.

3. Right-click on the report object, then choose **Insert**.

Note that not all reports will work well as report widgets. If a report is very complex, the data may become difficult to read if the report is reduced to widget size.

Removing Report Widgets from the Operational Dashboard

Task   *To remove a report widget from the Operational Dashboard:*

1. Select the report widget.

2. Click the Widget Actions icon in the upper-left corner of the report widget, then select **Remove from Dashboard**.

See Also
Operational Dashboard
Operational Dashboard Report Widgets

Cognos Administration

The Cognos Administration page is displayed only for users who have been assigned the Web Administrator Cognos role. Using the Cognos Administration page, you can perform tasks related to successfully using Cognos functionality as part of FlexNet Manager for Engineering Applications.

From this page, you can:

- Test the connection to the Cognos server.

- Import a Flexera Analytics package.

- Update the datasources used by Cognos.

Assigning FlexNet Manager for Engineering Applications Users to Cognos Roles

By default, FlexNet Manager for Engineering Applications users do not have assigned Cognos roles. A FlexNet Manager for Engineering Applications user with the Assign Cognos Roles permission must manually assign Cognos roles. See Cognos Roles for more information.

See Also
Cognos Reporting
Testing the Cognos Connection
Importing Flexera Analytics Packages
Updating the Cognos Datasources
Cognos Roles

Testing the Cognos Connection

You can test whether the connection to the Cognos (Flexera Analytics) server is working correctly from within the FlexNet Manager for Engineering Applications interface.

Task   ***To test the connection to the Cognos server:***

1.   From the **Reporting** tab, under **Flexera Analytics**, click **Cognos Administration**.

2.   Click **Test Connection**.

A message is displayed at the top of the page, to indicate whether the connection is working or—if the connection is not working—to provide diagnostic information about the potential connection issue.

Cognos Server Configuration Settings

Configuration settings for the Cognos server are on the System Configuration | Reporting page. Refer to the values for the following settings:

- Cognos server host

- Cognos server port

- Cognos web services port

- Cognos Token Lifetime

Cognos Token Lifetime:

It determines how long the token that FNMEA creates for Cognos to authenticate will live for. The setting appears in the System Configuration, under the Reporting section.

The setting has a minimum value of 60, a default value of 60, and a maximum value of 315,360,000.

This setting controls the lifetime of the token FNMEA generates when a user access Flexera Analytics via the 'Cognos Reporting' menu item. For normal use of Flexera Analytics, the lifetime of this token can be kept short. However, when scheduling reports to run at a later time or on a reoccurring basis, Cognos will cache the token and use it when running the scheduled report. In this scenario, the token lifetime can be increased to ensure the scheduled report executes as expected.

See Also
Cognos Reporting
Cognos Administration
Importing Flexera Analytics Packages
Updating the Cognos Datasources
Cognos Roles
Configuring the Reporting Service

Importing Flexera Analytics Packages

To use Flexera Analytics reporting, you need to configure the database and import the data model and reports that Cognos uses to generate and display reports. The data model and reports are provided in Flexera Analytics *packages*, which are available for download from the Flexera Software Product and License Center:
https://flexerasoftware.flexnetoperations.com

Note • To import a Flexera Analytics package, a user be assigned the Web Administrator Cognos role.

Before Importing a Package

To successfully import a package, you must first do the following:

● Ensure that the Cognos server is running.

● Use the Test Cognos Connection functionality to determine whether the connection to the Cognos server is working properly.

● Verify that the following settings have been specified on the Reporting page (under the System Configuration tab): Cognos server host, Cognos server port, and web services port.

● Download the package from the Flexera Software Product and License Center (https://flexerasoftware.flexnetoperations.com), to the following directory (create a deployment folder if one does not exist):

    Flexera\fnmea\analytics\deployment\

Task   ***To import packages:***

1. From the **Reporting** tab, under **Flexera Analytics**, click **Cognos Administration**.

2. Click **Import Package** to import the package for Flexera Analytics Reporting.

All of the packages in the `Flexera\fnmea\analytics\deployment\` directory will be imported.

Updating the Cognos Datasources

Cognos uses both FlexNet Manager for Engineering Applications Admin and Reporting databases as its datasources. If the database or database credentials have been changed, you may need to update or reset the datasources.

Before updating the datasources, ensure that:

- The Cognos server is running.

- The following settings have been specified on the System Configuration | Reporting page (available under the **Admin** tab): Cognos server host, Cognos server port, and web services port.

Task   ***To update the Cognos datasources:***

1. From the **Reporting** tab, under **Flexera Analytics**, click **Cognos Administration**.

2. If you are using Oracle, you may need to provide different database service names while updating the datasources. To do this, provide service names in the **Admin Server** and **Reporting Server** fields in the **Oracle Database Service Names** box. (By default, these fields contain the database service names that were provided at installation time.)

   To reset the database service names to the original database service names that were provided in the Configurator at installation time, click **Reset Service Names**.

3. Click **Update Datasources** to update the datasources that Cognos uses.

Cognos Roles

The **Cognos Roles** page displays a list of the available Cognos roles, the number of users for which your enterprise is licensed for each role, the number of licenses available for each role, and a list of the FlexNet Manager for Engineering Applications users who have been assigned each role.

To see the **Cognos Roles** link in the navigation bar (which enables you to access the Cognos Roles page), you must have a FlexNet Manager for Engineering Applications role with the **Assign Cognos Roles** permission.

The Cognos roles provide access to various pieces of reporting functionality, as described in the following table. By default, each role can be assigned to a limited number of users. To see how many FlexNet Manager for Engineering Applications users are can be licensed for each Cognos role, refer to the **Cognos Roles** page.

Contact Flexera if your enterprise requires additional licenses for a particular Cognos role.

Table 6-10 • Cognos roles

Role	Description
Analytic User	A user assigned this role has access to all Cognos Reporting capabilities, including: • Running and configuring Flexera Analytics reports. • Accessing the Operational Dashboard, and add/modify items on the Operational Dashboard. • Using Studio capabilities. • Using Cognos Workspace and Cognos Workspace Advanced capabilities.
Web Administrator	A user assigned this role has access to all Cognos Reporting capabilities (defined for the Analytic User role), and access to Cognos Administrative capabilities, including: • Administering the Cognos BI Software environment in relation to server, security, and report-scheduling administration. • Viewing and using all functionality on the Cognos Administration page (in FlexNet Manager for Engineering Applications)—including testing the Cognos connection, importing Cognos packages, and updating the Cognos datasources.

See Also
Viewing Cognos Roles
Assigning Cognos Roles

Viewing Cognos Roles

The **Cognos Roles** page provides a table showing the Cognos roles, how many licenses you have for each role, how many licenses are available for each role, and a list of the users assigned to each role.

Cognos Role	Licensed	Available
Web Administrator	1 users	0 users
Analytic User	20 users	17 users

Figure 6-1: Table showing the number of licensed Cognos roles and the number of FlexNet Manager for Engineering Applications users for which the role is available.

Contact Flexera if your enterprise requires additional licenses for a particular Cognos role.

Task   ***To view the Cognos Roles page:***

From the **Reporting** tab, under **Flexera Analytics**, click **Cognos Roles**.

*Note • If the **Cognos Roles** link is not visible in the navigation bar, verify with your FlexNet Manager for Engineering Applications administrator that you have the Assign Cognos Roles permission.*

See Also
Cognos Roles
Assigning Cognos Roles

Assigning Cognos Roles

The **Assign Cognos Roles** page enables a user with the **Assign Cognos Roles** permission to assign Cognos roles to FlexNet Manager for Engineering Applications users. Only users with a role that has the **Assign Cognos Roles** permission can view this page and assign Cognos roles to FlexNet Manager for Engineering Applications users.

By default, the **Super Administrator** role has the **Assign Cognos Roles** permission.

Task   ***To assign Cognos roles to FlexNet Manager for Engineering Applications users:***

1.   From the **Reporting** tab, under **Flexera Analytics**, click **Cognos Roles**.

If the **Cognos Roles** link is not visible on the navigation bar, verify with your FlexNet Manager for Engineering Applications administrator that you have the Assign Cognos Roles permission.

2.   Click **Assign Cognos Roles** to display the **Assign Cognos Roles** page.

3.   For each role, select the FlexNet Manager for Engineering Applications users to which you want to assign the Cognos role, and use the right-arrow button to move the users to the **Users Assigned this Role** box. Hold down the **Ctrl** key while selecting to select multiple users. Note that there is a limit to the number of users who can be assigned to each Cognos role.

Tip • To quickly find a user, click in the "All FNM-EA Users" list and begin typing the user name.

4.   Click **Save Cognos Role Assignments**.

See Also
Cognos Roles
Viewing Cognos Roles

Report Data Aggregation

For increased reporting efficiency, Flexera Analytics (Cognos) reports are built from data contained in a set of database tables called the *data warehouse*, which stores usage data. *Aggregation* is the process that parses the report log data that has been imported to FlexNet Manager for Engineering Applications and populates the data warehouse with usage data. It is sometimes referred to as a *roll-up*.

Important • *You must aggregate your usage data before you can run Flexera Analytics reports.*

You can run aggregation on your enterprise's report log data in two ways:

- Incremental Aggregation—Run aggregation for specified vendor daemons and/or for a specific time period.

- Periodic Aggregation—Run aggregation on a regularly scheduled, periodic basis.

To view the status of aggregation tasks, go to the Aggregation Status page.

For a detailed description of the Flexera Analytics data model, see the *Flexera Analytics Guide*.

Required Permissions

To schedule, run, and cancel data aggregation, a user must have a role with the Run and Cancel Aggregation permission.

Tip • *To improve aggregation performance, consider defining single-master-feature products if your enterprise uses products that can be configured in this way—products containing a single master feature, where that feature cannot be mapped to any other product. See Single-Master-Feature Product Mapping for information.*

See Also
Incremental Aggregation
Periodic Aggregation
Aggregation Status

Incremental Aggregation

Using the Incremental Aggregation page, you can schedule incremental data aggregation, which enables you to control the data set used for, and the timing of data aggregation. For example, you may want to aggregate only data for a specific vendor daemon or data from before a particular date.

Incremental aggregation can be useful when you are first setting up the FlexNet Reporting data warehouse or if your enterprise has FlexNet Manager for Engineering Applications's Planner functionality and going through the software license–planning process.

You can also use the Incremental Aggregation scheduler to import organizational-structure data from an LDAP domain. (See Importing Organizational-Structure Data from LDAP for more information about this functionality.)

If you want to schedule the aggregation task to take place on a recurring, periodic basis, use the Periodic Aggregation page.

Note • *To schedule, run, and cancel data aggregation, a user must have a role with the Run and Cancel Aggregation permission.*

Task	**To define an incremental data aggregation:**

1. From the **Reporting** tab, under the **Usage Data Maintenance** section, click **Incremental Aggregation** to display the Incremental Aggregation page.

2. For the Aggregation Data Set, specify whether you want to run aggregation:

    *   For all vendor daemons

    *   For only selected vendor daemons. Hold down the **Control** key to select multiple vendor daemons.

3. For the Aggregation Increment, specify which data you want to aggregate:

    *   Data from all unprocessed report logs for the selected vendor daemons.

    *   Data from a specified period for the selected vendor daemons. Specify the beginning and end dates for the period.

4. Select the **Import Org Structure...** check box if you want to import organizational-structure data from an LDAP domain prior to aggregation. When this option is selected, FlexNet Manager for Engineering Applications will import organizational-structure data for all organizational structures that are associated with LDAP domains.

    This option is displayed only if an organizational structure has been created and mapped to an associated LDAP domain.

5. Run the aggregation immediately or schedule it to run at a later time.

    *   Click **Run Now** to run this incremental aggregation immediately.

    *   Specify a date and time, then click **Save Schedule** to run this incremental aggregation at the specified time. The time zone is that of the FlexNet Reporting server.

If you choose to schedule the incremental aggregation to run at a later time, the aggregation is displayed in the Scheduled Aggregation list at the bottom of the page. To delete a scheduled incremental aggregation, select the check box in front of the aggregation entry and click **Delete**. Incremental aggregation tasks cannot be edited.

At the top of the page, the status for the last aggregation will be displayed. If an aggregation is currently running, this will be displayed as well.

See Also
Report Data Aggregation
Periodic Aggregation
Flexera Analytics Reporting
Aggregation Status

Periodic Aggregation

For ongoing reporting using FlexNet Reporting, you can set up aggregation to run on a recurring, periodic basis using the Periodic Aggregation page. Periodic aggregation processes all report log data that has been imported to FlexNet Manager for Engineering Applications since the most recent aggregation was run.

You can also use the Periodic Aggregation scheduler to import organizational-structure data from an LDAP domain. (See Importing Organizational-Structure Data from LDAP for more information about this functionality.)

Periodic aggregation does not run if it is set to "Not scheduled".

Note • To schedule, run, and cancel data aggregation, a user must have a role with the Run and Cancel Aggregation permission.

Task   ***To define periodic aggregation:***

1. From the **Reporting** tab, under the **Usage Data Maintenance** section, click **Periodic Aggregation** to display the Periodic Aggregation page.

2. Select the **Import Org Structure…** check box if you want to import organizational-structure data from an LDAP domain prior to aggregation. When this option is selected, FlexNet Manager for Engineering Applications will import organizational-structure data for all organizational structures that are associated with LDAP domains.

3. Specify how frequently you want periodic aggregation to run. When periodic aggregation is defined for specific days or months, the time zone used is that of the FlexNet Reporting server.

    ● **Not scheduled**—Periodic aggregation does not run. Select this option to turn off the periodic aggregation task.

    ● **These days**—Specify the days of the week and the time using the 24-hour clock.

    ● **These months**—Specify the day of the month for the selected months, and the time using the 24-hour clock.

4. Click **Save**.

See Also
Report Data Aggregation
Incremental Aggregation
Flexera Analytics Reporting
Aggregation Status

Aggregation Status

The Aggregation Status page displays a list of Completed, Canceled, In Progress, Failed, and Pending aggregation tasks. You can delete aggregation tasks and can also cancel an in-progress aggregation, or restart a canceled or failed aggregation.

Note • To schedule, run, and cancel data aggregation, a user must have a role with the Run and Cancel Aggregation permission.

Task   ***To view the aggregation status:***

From the **Reporting** tab, under the **Usage Data Maintenance** section, click **Aggregation Status**.

See Also
Flexera Analytics Reporting
Report Data Aggregation
Organizational Structures

Reporting on Feature Usage (Historical Feature Reports)

The following predefined feature-usage reports are available in FlexNet Manager for Engineering Applications if you have Package 2011 or later installed for Flexera Analytics. These reports enable you to see how features are being used within your organization. You can identify usage trends, see which organizations are using features more heavily, and see which organizations are spending the most on feature usage.

Many of these reports can be run for *hybrid organizational structures* (by selecting a hybrid organizational structure in the **Organizational Structure** prompt). When you select a hybrid organizational structure, you can also opt to see usage for a specific license server (or for all license servers). See Hybrid Organizational Structures for information.

Important • *Before you can run Flexera Analytics reports, you must aggregate your usage data to populate the data warehouse. See the topic, Report Data Aggregation, for information.*

Table 6-11 • Feature Usage (Historical Feature) reports

Report	Description	Run for Hybrid Org Structures?
Feature Chargeback	Summarizes feature usage and cost by organizational unit, for a specified time period. This report requires you to specify a cost factor using the costFactor attribute.	Yes
Feature Peak Usage Trend	Shows the daily peak usage trend for a feature, along with a trend line showing a projected usage trend.	Yes
Feature Usage by Organization Table	Displays the total used time for selected features for users within an organization.	Yes
Feature Usage Table	Displays the total used time for selected features, listed by license server. This report requires a license server–based organization.	
Organization Total Usage Chart	Shows the total usage time for selected features, by portions of the organization.	Yes
Peak Borrowed Licenses by Feature	Shows the peak borrowed licenses for all features from a selected vendor daemon, for a specified time period. This report can serve as the starting point for analyzing borrow usage.	
Peak Borrowed Licenses vs Total Peak Licenses	Shows total peak licenses and peak borrowed licenses for a specified time period.	
Peak Usage by Organization Over Time	Shows the peak usage of specified features by an organization, for a specified time period.	Yes
Peak Usage by Server Over Time	Shows the peak license usage from each license server, along with the total number of available licenses. This report requires a license server–based organization.	

Table 6-11 • Feature Usage (Historical Feature) reports

Report	Description	Run for Hybrid Org Structures?
Users with Borrowed Licenses	Lists all users who consumed a borrowed license for a feature on a specified date.	

See Also
Running Feature Usage (Historical Feature) Reports
Hybrid Organizational Structures

Running Feature Usage (Historical Feature) Reports

To run a basic version of a report, click the report name. You will be shown the parameters you can set via drop-down menus, as well as the option to view a description of the report including explanations of the parameters. For all of the reports, you can choose to run the report using hourly, daily, or monthly data. Your choice will depend on whether you want more data granularity (hourly) or better report performance (monthly).

You can perform a number of other actions on each report, which are shown to the right of the report name. You can select the following:

- Set properties

- Run with options

- Open with Report Studio

- Create a report view of this report

- Schedule

Many of these reports can be run for *hybrid organizational structures* (by selecting a hybrid organizational structure in the **Organizational Structure** prompt). When you select a hybrid organizational structure, you can also select to see usage for a specific license server. See Hybrid Organizational Structures for information.

Important • Before you can run Flexera Analytics reports, you must aggregate your usage data to populate the data warehouse. See the topic, Report Data Aggregation, for information.

Task   ***To run a feature usage report:***

1. From the **Reporting** tab, under the **Flexera Analytics** section, click **Cognos Reporting**.

2. In the Cognos Connection pane, click the **FlexNet Manager Suite** folder to open it.

3. Click the **FlexNet Manager for Engineering Applications Reports** folder, then click the **Historical Feature Reports** link.

4. Click a report name to open the report's prompt pages.

5. Specify the report settings. Click **Report parameters description (show/hide)** to view report and parameter descriptions.

6.   Click **Finish**.

See Also
Reporting on Feature Usage (Historical Feature Reports)
Hybrid Organizational Structures

Feature Chargeback Report

The Feature Chargeback report displays a summary of feature usage by organizational unit for a specified time period, along with the organizational unit's total cost of using each feature and the organizational unit's overall total cost for the time period. The report also provides a summary of the total hours used for all specified features and the total cost for all specified features during the time period.

This report requires you to specify an organizational structure. Within the report, you can drill through the hierarchical levels in your organizational structure, eventually arriving at per-user data.

Note • *If you have enabled an organizational structure for hybrid aggregation, you can run this report for a hybrid organizational structure (by selecting a hybrid organizational structure in the* **Organization** *prompt). This enables you to see usage for a specific license server. See* Hybrid Organizational Structures *for information.*

By default, the cost factor used in the report is 1. To specify a different cost factor to be used in this report, you must use the costFactor attribute in an XML file.

See Running Feature Usage (Historical Feature) Reports for the steps to run this report.

Organization Unit	Feature	COST_FACTOR	Total Used Time (Hours)	Total Cost
Department A	sx_cdslink	250	434.8	108,693.12
	sx_wva	43	635.5	27,325.38
Department A			**1,070.2**	**136,018.50**
Department B	sx_cdslink	250	18.1	4,517.29
	sx_wva	43	1,897.4	81,589.18
Department B			**1,915.5**	**86,106.47**
Department C	sx_cdslink	250	73.1	18,266.32
	sx_wva	43	3,184.0	136,911.68
Department C			**3,257.1**	**155,178.00**
Department D	sx_cdslink	250	394.0	98,503.96
	sx_wva	43	509.0	21,887.93
Department D			**903.0**	**120,391.89**
Department E	sx_cdslink	250	0.0	11.87
	sx_wva	43	0.0	2.04
Department E			**0.1**	**13.92**
Summary			**7,145.9**	**497,708.78**

Figure 6-2: Portion of a Feature Chargeback report.

See Also
Reporting on Feature Usage (Historical Feature Reports)
Running Feature Usage (Historical Feature) Reports

Feature Peak Usage Trend Report

This report shows the daily peak usage trend of a selected feature, for a specified time period and organizational structure. The report also plots a trend line into the future, based on an end date that you specify when configuring the report.

Note • *If you have enabled an organizational structure for hybrid aggregation, you can run this report for a hybrid organizational structure (by selecting a hybrid organizational structure in the* **Organization** *prompt). This enables you to see usage for a specific license server. See* Hybrid Organizational Structures *for information.*

Figure 6-3: Feature Peak Usage Trend report

See Also
Reporting on Feature Usage (Historical Feature Reports)
Running Feature Usage (Historical Feature) Reports

Feature Usage by Organization Table Report

This report displays the total used time for selected features for users in an organization, and allows for additional filtering by organizational units.

Note • *If you have enabled an organizational structure for hybrid aggregation, you can run this report for a hybrid organizational structure (by selecting* **User** *in the* **Organization type** *prompt and selecting a hybrid organizational structure in the* **Organization** *prompt). This enables you can to see usage for a specific license server. See* Hybrid Organizational Structures *for information.*

See Running Feature Usage (Historical Feature) Reports for the steps to run this report.

Feature Usage by Organization Table

Start Date:	Jun 1, 2007 12:00:00 AM
End Date:	Jul 31, 2007 12:00:00 AM
Vendor:	magma
Features:	BLAST_BUILDER, BLAST_CREATE, BLAST_FUSION_APX, BLAST_PLAN, BLAST_PLANPRO, BLAST_PLANSVP, BLAST_POWER, BLAST_RAIL, BLAST_SI, BLAST_SPEED, BLAST_VIEW, BLAST_WRAP, QUARTZ_TIME

Feature Name	Year	Month	Org Node Name L2	Org Node Name L3	Org Node Name L4	User Name	Total Used Time (hours)	First Name	Last Name	E-mail	Phone Number
BLAST_BUILDER	2007	June	Shanghai	B11	C113	robc	7.22	Rob	Cee	robc@server.com	555-1111
				B12	N/A	sophias	1.64	Sophia	See	sophias@server.com	555-1112
				B13	N/A	alexp	7.74	Alex	Pi	alexp@server.com	555-1113
		July	Shanghai	B12	N/A	sophias	7.53	Sophia	See	sophias@server.com	555-1112
				B13	N/A	alexp	29.83	Alex	Pi	alexp@server.com	555-1113
			Washington DC	B21	B22	lorie	0.03	Lori	Ee	lorie@server.com	555-1116
						tomv	0.69	Tommy	Vee	tomv@server.com	555-1115
BLAST_CREATE	2007	June	Shanghai	B11	C113	robc	0.23	Rob	Cee	robc@server.com	555-1111
				B12	N/A	sophias	0.33	Sophia	See	sophias@server.com	555-1112
				B13	N/A	alexp	8.97	Alex	Pi	alexp@server.com	555-1113
		July	Shanghai	B12	N/A	sophias	0.07	Sophia	See	sophias@server.com	555-1112
				B13	N/A	alexp	13.22	Alex	Pi	alexp@server.com	555-1113
			Washington DC	B21	B22	lorie	0.03	Lori	Ee	lorie@server.com	555-1116
BLAST_FUSION_APX	2007	June	Shanghai	B11	C113	robc	0.01	Rob	Cee	robc@server.com	555-1111
				B13	N/A	alexp	9.27	Alex	Pi	alexp@server.com	555-1113
		July	Shanghai	B12	N/A	sophias	0.46	Sophia	See	sophias@server.com	555-1112
				B13	N/A	alexp	20.51	Alex	Pi	alexp@server.com	555-1113
			Washington DC	B21	B22	lorie	10.15	Lori	Ee	lorie@server.com	555-1116
BLAST_PLAN	2007	June	Shanghai	B13	N/A	alexp	0.16	Alex	Pi	alexp@server.com	555-1113
		July	Shanghai	B13	N/A	alexp	0.14	Alex	Pi	alexp@server.com	555-1113

Filters(show/hide)

Level 2 Org Node:	Org Node Name L2
Level 3 Org Node:	Org Node Name L3
Level 4 Org Node:	

Figure 6-4: Feature Usage by Organization Table report

See Also
Reporting on Feature Usage (Historical Feature Reports)
Running Feature Usage (Historical Feature) Reports

Feature Usage Table Report

This report displays the total used time for selected features, listed by license server. Optionally, peak usage may also be displayed *if* a license server–based organization has been created (prior to aggregation).

See Running Feature Usage (Historical Feature) Reports for the steps to run this report.

Feature Usage Table

Start Date: June 1, 2007
End Date: July 31, 2007
Vendor: magma
Features: BLAST_BUILDER, BLAST_CREATE, BLAST_FUSION_APX, BLAST_PLAN, BLAST_PLANPRO, BLAST_PLANSVP, BLAST_POWER, BLAST_
                BLAST_SPEED, BLAST_VIEW

Feature Name	Year	Month	License Server Name	Availability Max Count	Peak Licenses	Available Time (hours)	Total Time Used (hours)	Percentage of Hours Used
BLAST_BUILDER	2007	June	ServerORD	2	2	192	16.61	8.65%
		June				192	16.61	8.65%
		July	ServerORD	2	2	336	38.08	11.33%
		July				336	38.08	11.33%
	2007					528	54.69	10.36%
BLAST_BUILDER						528	54.69	10.36%
BLAST_CREATE	2007	June	ServerORD	2	2	192	9.54	4.97%
		June				192	9.54	4.97%
		July	ServerORD	2	2	336	13.32	3.96%
		July				336	13.32	3.96%
	2007					528	22.85	4.33%
BLAST_CREATE						528	22.85	4.33%
BLAST_FUSION_APX	2007	June	ServerORD	2	2	192	9.29	4.84%
		June				192	9.29	4.84%
		July	ServerORD	2	2	336	31.11	9.26%
		July				336	31.11	9.26%
	2007					528	40.40	7.65%
BLAST_FUSION_APX						528	40.40	7.65%
BLAST_PLAN	2007	June	ServerORD	2	2	192	0.16	0.08%
		June				192	0.16	0.08%
		July	ServerORD	2	1	336	0.17	0.05%
		July				336	0.17	0.05%
	2007					528	0.33	0.06%
BLAST_PLAN						528	0.33	0.06%
BLAST_PLANPRO	2007	June	ServerORD	2	2	192	0.12	0.06%
		June				192	0.12	0.06%
		July	ServerORD	2	1	336	0.17	0.05%
		July				336	0.17	0.05%
	2007					528	0.29	0.05%
BLAST_PLANPRO						528	0.29	0.05%

Figure 6-5: Feature Usage Table report

See Also
Reporting on Feature Usage (Historical Feature Reports)
Running Feature Usage (Historical Feature) Reports

Organization Total Usage Chart Report

This report displays a table showing total usage for selected features, for a specified organizational structure. Drill-through functionality in the report enables you to look into lower levels of the organization. The report also provides a bar graph that displays usage by the top 20 organizations.

Note • *If you have enabled an organizational structure for hybrid aggregation, you can run this report for a hybrid organizational structure (by selecting a hybrid organizational structure in the* **Organization** *prompt). This enables you to see usage for a specific license server. See* Hybrid Organizational Structures *for information.*

See Running Feature Usage (Historical Feature) Reports for the steps to run this report.

Org Node Name L3	Feature	Total used time (hours)
A▓▓▓▓	bplcaddata	10.02
A▓▓▓▓		**10.02**
A▓▓	bplcaddata	7.70
A▓▓		**7.70**
B▓▓▓▓	bplcaddata	0.00
	bplcaddatant	0.00
B▓▓▓▓		**0.00**
B▓▓▓7	bplcaddata	89.42
	bplcaddatant	88.86
B▓▓▓▓		**178.28**
B▓▓▓▓	bplcaddata	1.54
	bplcaddatant	1.54
B▓▓▓▓		**3.09**
B▓▓▓▓	bplcaddata	93.04
	bplcaddatant	2.10
B▓▓▓▓		**95.14**
B▓▓▓▓	bplcaddata	61.92
	bplcaddatant	61.92
B▓▓▓▓		**123.84**
B▓▓▓▓	bplcaddata	446.67
	bplcaddatant	446.66
B▓▓▓▓		**893.34**
B▓▓▓▓	bplcaddata	125.47
	bplcaddatant	125.47
B▓▓▓▓		**250.94**
B▓▓▓▓	bplcaddata	73.44
	bplcaddatant	73.44
B▓▓▓▓		**146.89**
B▓▓▓▓	bplcaddata	87.91
	bplcaddatant	87.91
B▓▓▓▓		**175.82**
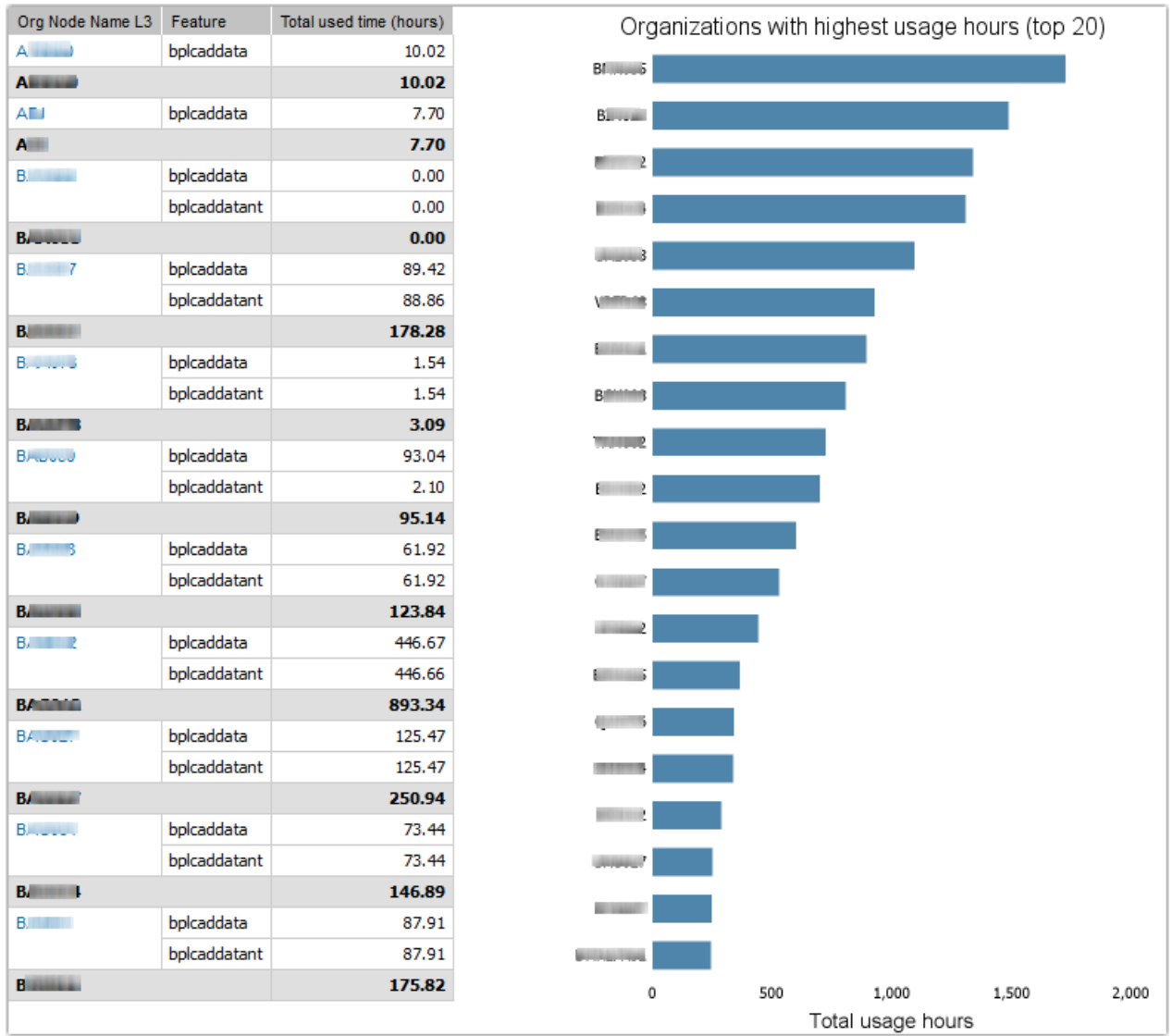
Figure 6-6: Organization Total Usage Chart report

See Also
Reporting on Feature Usage (Historical Feature Reports)
Running Feature Usage (Historical Feature) Reports

Peak Borrowed Licenses by Feature

This report shows the peak borrowed licenses for all features from a selected vendor daemon, for a specified time period. It excludes features for which no borrowed licenses were used.

This report can serve as a starting point for analyzing Borrow usage. It includes drill-down functionality to the Peak Borrowed Licenses vs Total Peak Licenses report, which provides further drill-down into the Users with Borrowed Licenses Report report.

See Also
Reporting on Feature Usage (Historical Feature Reports)
Running Feature Usage (Historical Feature) Reports

Peak Borrowed Licenses vs Total Peak Licenses

This report shows daily total peak licenses and peak borrowed licenses used, over a specified time period. It provides drill-down functionality to the Users with Borrowed Licenses Report report.

See Also
Reporting on Feature Usage (Historical Feature Reports)
Running Feature Usage (Historical Feature) Reports

Peak Usage by Organization Over Time Report

This report displays a graph showing the peak usage of specified features by the entire organization, and by the different nodes within the organization. The report also shows maximum feature availability. A separate graph is produced for each of the specified features.

In addition to the graphs, this report provides a table for each feature, showing maximum availability and peak license usage by year/month, and by organizational-structure node.

Note • *If you have enabled an organizational structure for hybrid aggregation, you can run this report for a hybrid organizational structure (by selecting a hybrid organizational structure in the* **Organization** *prompt). This enables you to see usage for a specific license server. See Hybrid Organizational Structures for information.*
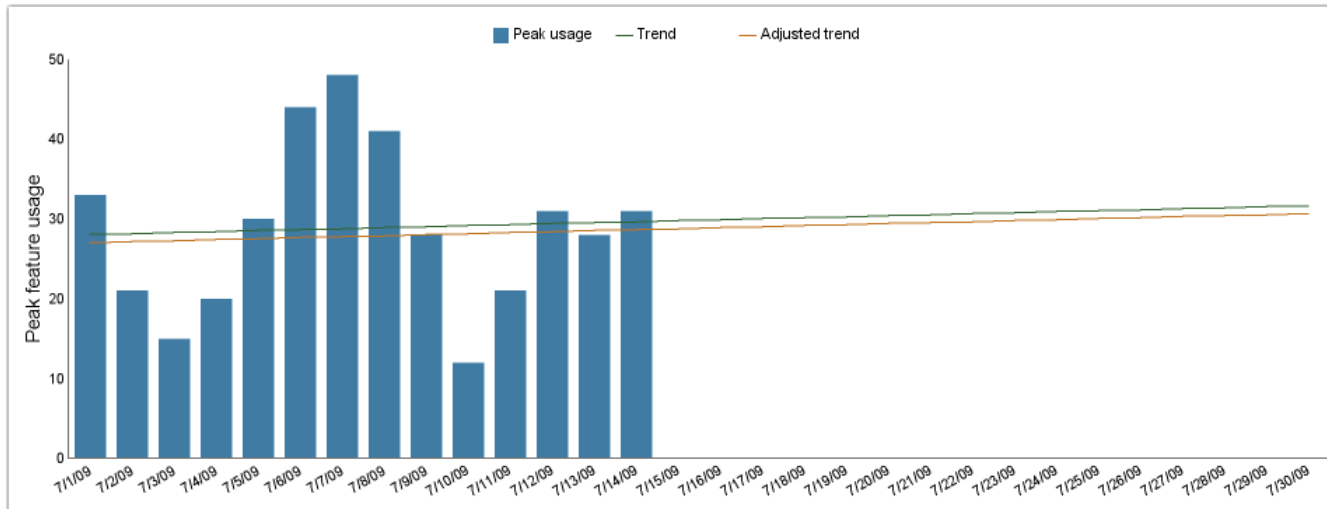
See Running Feature Usage (Historical Feature) Reports for the steps to run this report.

Year	Month	Org Node Name L2	Org Node Name L3	Availability Max Count	Peak Licenses
2009	June			130	22
				130	1
				130	1
				130	1
				130	1
				130	1
				130	1
				130	1
				130	1
				130	1
				130	1
				130	1
				130	1
				130	1
				130	1
				130	1
				130	1
				130	1
				130	1
				130	1

Figure 6-7: Peak Usage by Organization Over Time report

See Also
Reporting on Feature Usage (Historical Feature Reports)
Running Feature Usage (Historical Feature) Reports

Peak Usage by Server Over Time Report

This report displays an area chart showing the peak licenses that have been used from each license server, with reference to the total number of available licenses.

See Running Feature Usage (Historical Feature) Reports for the steps to run this report.
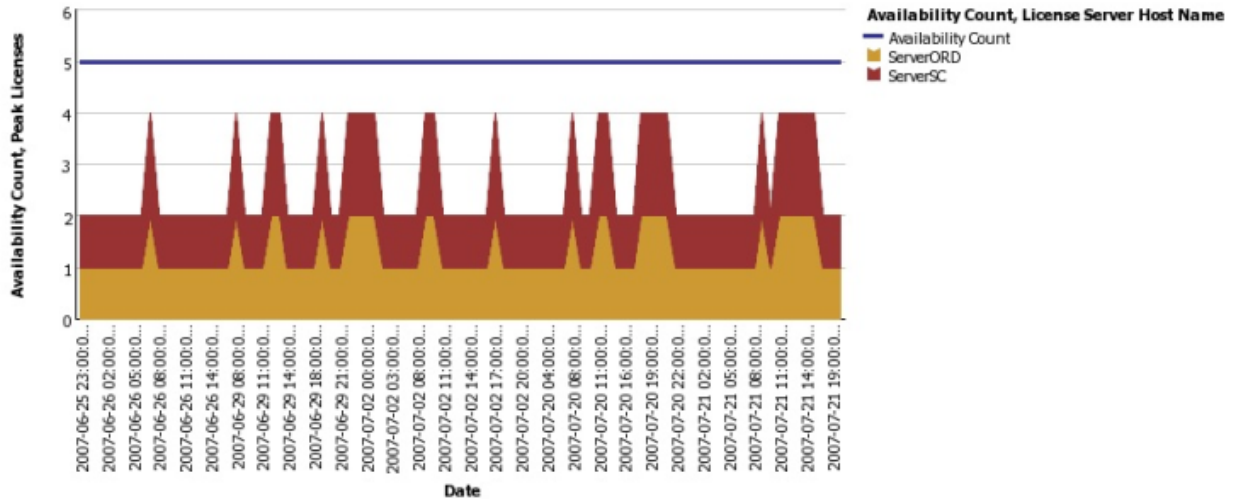
Figure 6-8: Peak Usage by Server Over Time report

See Also
Reporting on Feature Usage (Historical Feature Reports)
Running Feature Usage (Historical Feature) Reports

Users with Borrowed Licenses Report

This report lists all users who consumed a borrowed license for a selected feature, on a specified date.

See Also
Reporting on Feature Usage (Historical Feature Reports)
Running Feature Usage (Historical Feature) Reports

Reporting on Product Usage

As part of its investment planning functionality, FlexNet Manager for Engineering Applications provides product-based usage reporting. These are Cognos report definitions that provide reports and graphs based on product usage rather than on feature usage.

To facilitate product usage–based reporting, FlexNet Manager for Engineering Applications maps the usage of licensed features to the products with which the features are associated. You must provide the feature-to-product association, which you can do by adding features to products or assigning unassigned features to products. (You can also specify these associations using a product definition XML file.)

FlexNet Manager for Engineering Applications uses the product usage aggregation process to determine which features combine to create usage for which product.

FlexNet Manager for Engineering Applications offers several predefined product usage reports.

See Also
Product Usage Reports
Investment Planning
Product Usage Aggregation
Product Resolution Process

Product Usage Reports

For use with its investment planning functionality, FlexNet Manager for Engineering Applications offers the following predefined product usage reports.

For more information about product usage reporting, see Reporting on Product Usage.

- Product Peak Usage Report

- Product Chargeback Report

- Product Daily Peak Usage Report

- Product Peak Usage Occurrences Report

- Product Peak Usage Trend (Remix) Report

See Also
Investment Planning
Product Usage Aggregation
Product Resolution Process

Product Peak Usage Report

The *Product Peak Usage* report is similar to the Product Daily Peak Usage report, except that it takes no date parameters; it displays peak usage for all time. You can choose to display product peak usage as absolute peak usage or as a percentage of the available licenses.

The first view of the report displays peak usage by year. Drill-through functionality enables you to see peak usage by quarters, months, days, and then hours.

This report provides tooltips and can be displayed as a bar chart or line chart.

Task   ***To run the Product Peak Usage report:***

1.   From the **Reporting** tab, under the **Flexera Analytics** section, click **Cognos Reporting**.

2.   In the Cognos Connection pane, click the FlexNet Manager Suite folder.

3.   Click the FlexNet Manager for Engineering Applications Reports folder, then click the Product Reports folder.

4.   In the list of reports, click Product Peak Usage Report.

5.   Specify the report settings. Click "Description (show/hide)" to view setting descriptions.

6.   Click **Finish**.

See Also
Product Usage Reports

Product Chargeback Report

The Product Chargeback report displays, by organizational unit, the total number of product usage hours and the organizational unit's percentage of overall usage for a specified product. This enables you to see which departments are using which products the most and provides the basis for assigning costs to individual departments.

This report requires you to specify an organizational structure.

2006

		Department A	Department B	Department C	Department D	Department E
October	Total Used Time	2,865,465	7,696,406	4,408,403	1,772,683	
	Percentage of Total Use	17.1%	46.0%	26.3%	10.6%	
	Cost	25.67	68.95	39.49	15.88	
November	Total Used Time	655,594	9,276,533	20,555,083	9,508,023	103,943
	Percentage of Total Use	1.6%	23.1%	51.3%	23.7%	0.3%
	Cost	2.45	34.70	76.89	35.57	0.39
December	Total Used Time	2,106,098	13,613,365	4,751,764	36,834,919	2,148,030
	Percentage of Total Use	3.5%	22.9%	8.0%	62.0%	3.6%
	Cost	5.31	34.35	11.99	92.93	5.42

2007

		Department A	Department B	Department C	Department D	Department E
January	Total Used Time	1,776,689	1,606,573	3,635,593	4,479,115	2,229,984
	Percentage of Total Use	12.9%	11.7%	26.5%	32.6%	16.2%
	Cost	19.41	17.55	39.72	48.94	24.37
February	Total Used Time	200,240	28,263	453,729	394,352	151,262
	Percentage of Total Use	16.3%	2.3%	37.0%	32.1%	12.3%
	Cost	24.46	3.45	55.43	48.18	18.48

Figure 6-9: Portion of a Product Chargeback report.

Task   ***To run a Product Chargeback report:***

1.   From the **Reporting** tab, under the **Flexera Analytics** section, click **Cognos Reporting**.

2.   In the Cognos Connection pane, click the FlexNet Manager Suite folder.

3.   Click the FlexNet Manager for Engineering Applications Reports folder, then click the Product Reports folder.

4.   In the list of reports, click Product Chargeback Report.

5.   Specify the report settings. Click "Description (show/hide)" to view setting descriptions.

6.   Click **Finish**.

Product Daily Peak Usage Report

The *Product Daily Peak Usage* report displays peak product usage for each day in a specified time period. This report supports the display of data from multiple products at one time, in series. You can choose to display product peak usage as absolute peak usage or as a percentage of the available licenses.

The data can be displayed as a bar chart or a line chart. The report contains tooltips.

Task   ***To run the Product Daily Peak Usage report:***

1. From the **Reporting** tab, under the **Flexera Analytics** section, click **Cognos Reporting**.

2. In the Cognos Connection pane, click the FlexNet Manager Suite folder.

3. Click the FlexNet Manager for Engineering Applications Reports folder, then click the Product Reports folder.

4. In the list of reports, click Product Daily Peak Usage Report.

5. Specify the report settings. Click "Description (show/hide)" to view setting descriptions.

6. Click **Finish**.

Product Peak Usage Occurrences Report

Similar to a report provided by LinkRight Tracker, the *Product Peak Usage Occurrence*s report displays a bar chart that indicates the number of occurrences for each peak usage value for a product during a specified time period. This provides a histogram of peak usage values.

This report provides tooltips.

Task   ***To run the Product Peak vs. Occurrence report:***

1. From the **Reporting** tab, under the **Flexera Analytics** section, click **Cognos Reporting**.

2. In the Cognos Connection pane, click the FlexNet Manager Suite folder.

3. Click the FlexNet Manager for Engineering Applications Reports folder, then click the Product Reports folder.

4. In the list of reports, click Product Peak Usage Occurrences.

5. Specify the report settings. Click "Description (show/hide)" to view setting descriptions.

6. Click **Finish**.

Product Peak Usage Trend (Remix) Report

The *Product Peak Usage Trend* report displays peak product usage for each day in a specified time period, and uses that usage to draw a trend line that continues to a specified point in the future. A second trend line, parallel to the first, is drawn, elevated by the number of licenses required to keep the peak usage always beneath the trend line. Tooltips are displayed for both the bars and lines in the graph.

The purpose of this report is to accompany a remix, although it can be run independently.

Task   ***To run the Product Peak Usage Trend report:***

1.   From the **Reporting** tab, under the **Flexera Analytics** section, click **Cognos Reporting**.

2.   In the Cognos Connection pane, click the FlexNet Manager Suite folder.

3.   Click the FlexNet Manager for Engineering Applications Reports folder, then click the Product Reports folder.

4.   In the list of reports, click Product Peak Usage Trend Report.

5.   Specify the report settings. Click "Description (show/hide)" to view setting descriptions.

6.   Click **Finish**.

See Also
Product Usage Reports

Product Usage Aggregation

FlexNet Manager for Engineering Applications uses a data-aggregation process (also referred to as a *roll-up*) to determine which products are being used at your enterprise, based on the feature-usage data generated by report logs. During this process, FlexNet Manager for Engineering Applications analyzes feature usage events to create

FlexNet Manager for Engineering Applications makes the product determinations based on the feature-to-product associations that you provided.

Because some features can be part of multiple products, FlexNet Manager for Engineering Applications uses the *product resolution process* to determine which product in the set of possible products is correct for a particular feature. The result of this determination is provided in a product choice.

See Also
Product Resolution Process
Product Choices

Product Resolution Process

A single feature may be part of more than one product. To determine to which product a particular feature belongs, FlexNet Manager for Engineering Applications uses a process called *product resolution*.

The following factors are used to create a product choice for a feature (in the order listed):

1.   Product with the lowest net cost.

2.   Product with the fewest number of features defined.

3. Product with the largest number of licenses.

See Also
Product Choices
Product Usage Aggregation

Reporting on Tier-Based Usage

FlexNet Manager for Engineering Applications provides two tier-based usage reports, specifically for customers who use Autodesk products (which use tier-based licensing). To enable tier-based usage reporting, you must first define tiers by grouping features together.

See Tiers for information about how to create tiers and report on usage.

The following tier-based usage reports are available:

- Tier Usage Report

- Tier Usage Hourly Report

See Also
Tiers
Creating Tiers

Tier Usage Report

The Tier Usage report displays the daily peak usage for a tier, and optionally calculates the cost of the usage (calculated using either the peak or the second-highest peak). This report can be used for billing purposes.

Data is presented in a list that shows costs, followed by a chart and list that shows peak usage for all the days in the specified time period. You can drill through to the hourly report by clicking one of the dates in the lists, which will launch the hourly report for that day, using the same options.

Options for configuring the report include:

- Calculate cost based on peak or second-highest peak, or not at all.

- Interval for the report, either the Previous Month, Previous Quarter, or a custom data range (where you specify start and end dates).

- Select the organization to report on (it is always the top level of the organization that is reported against).

- Select the tier to report on.

- Optionally include breakdown by features—there are three options: Tier data only, Feature data only, or Tier + Feature data.

Task   ***To run the Tier Usage report:***

1. From the **Reporting** tab, under the **Flexera Analytics** section, click **Cognos Reporting**.

2. In the Cognos Connection pane, click the FlexNet Manager Suite folder.

3. Click the **FlexNet Manager for Engineering Applications Reports** folder, then click the **Tier Reports** folder.

4. In the list of reports, click **Tier Usage Report**.

5. Specify the report settings. Click "Description (show/hide)" to view setting descriptions.

6. Click **Finish**.
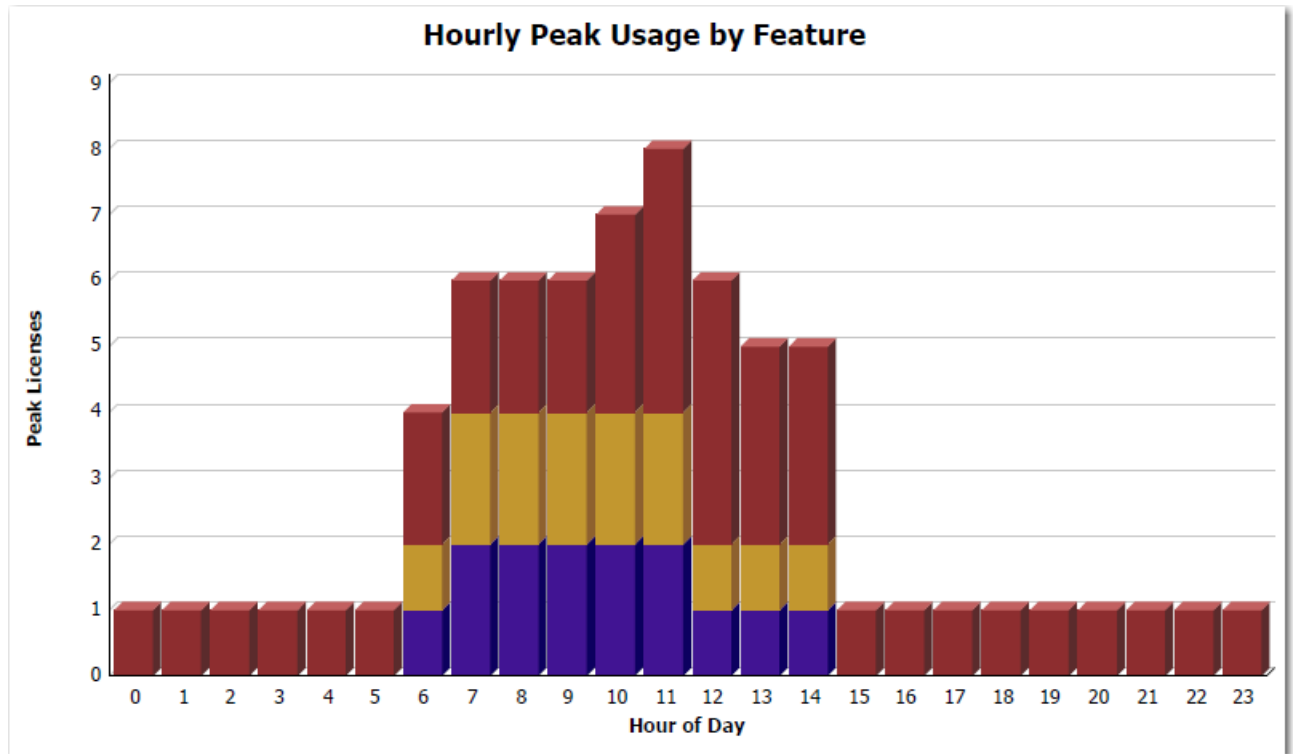
Figure 6-10: Part of the Tier Usage report, showing Hourly Peak Usage by Feature.

See Also
Tiers
Reporting on Tier-Based Usage

Tier Usage Hourly Report

The Tier Usage Hourly report is similar to the Tier Usage Report, except that it does not provide the option to calculate costs. To specify the reporting interval, you select start and end dates and times.

Task   *To run the Tier Usage Hourly report:*

1. From the **Reporting** tab, under the **Flexera Analytics** section, click **Cognos Reporting**.

2. In the Cognos Connection pane, click the FlexNet Manager Suite folder.

3. Click the **FlexNet Manager for Engineering Applications Reports** folder, then click the **Tier Reports** folder.

4. In the list of reports, click **Tier Usage Hourly Report**.

5. Specify the report settings. Click "Description (show/hide)" to view setting descriptions.

6. Click **Finish**.

Tier Usage Hourly Report

Date: Oct 20, 2010
Tier: Tier A

Hourly Tier Usage

Hour of Day	Total Used Time (seconds)	Peak Licenses
0	3,600	1
1	3,600	1
2	3,600	1
3	3,600	1
4	3,600	1
5	3,600	1
6	4,287	4
7	14,594	6
8	21,600	6
9	21,600	6
10	23,117	7
11	20,882	7

Hourly Feature Usage

Hour of Day	Tier Name	Feature Name	Total Used Time (seconds)	Peak Licenses
0	Tier A	48800ACD_2006_0F	3,600	1
1	Tier A	48800ACD_2006_0F	3,600	1
2	Tier A	48800ACD_2006_0F	3,600	1
3	Tier A	48800ACD_2006_0F	3,600	1
4	Tier A	48800ACD_2006_0F	3,600	1
5	Tier A	48800ACD_2006_0F	3,600	1
6	Tier A	44400ADTRPVD_10_1F	313	1
		44600ADTRPVSR_10_1F	314	1
		48800ACD_2006_0F	3,660	2
7	Tier A	44400ADTRPVD_10_1F	3,808	2
		44600ADTRPVSR_10_1F	3,810	2
		48800ACD_2006_0F	6,976	2

Figure 6-11: Part of the Tier Usage Hourly report.

See Also
Tiers
Reporting on Tier-Based Usage

Consumptive Token Reports

These reports are specific to the Autodesk consumptive-token–based licensing model. The reports enable your organization to see the total number of tokens consumed in a month, with breakdowns by day and by product family.

*Important • Both of the consumptive-token reports require information—**product family** and **token cost**—that is not contained in the report logs. Before running the reports, you must supply this information using an XML file. See the section, Specifying Additional Feature Data Using an XML File, for information on how to provide the information to be used in the reports.*

The following reports are available:

- Consumptive Token Monthly Summary Report

- Consumptive Token Monthly Summary with Contract Report

Consumptive Token Monthly Summary Report

The **Consumptive Token Monthly Summary** report provides a tabbed interface that shows token-consumption information for a specified month. Tokens are considered consumed when a user accesses a feature that has a token-cost associated with it. Because tokens are granted per day, continued use of the feature during the same day will not result in additional token consumption; however, use of the feature on a different day will result in the additional token consumption.

Tokens are consumed by product family. If a user checks out one feature from a product family, the tokens that are consumed will enable the user to use any other feature in the same product family without consuming additional tokens.

Important • Consumptive-token reports rely on additional feature data (product family and token cost) that must be manually imported into FlexNet Manager for Engineering Applications using an XML file. See the section, Specifying Additional Feature Data Using an XML File, for information.

The report displays the following information for the specified month:

- Total number of tokens consumed

- Number of unique users

- Breakdown of token usage, both by days and by product families

- Out-of-scope tokens and usage hours (*Out-of-scope* usage refers to usage of tokens that are not part of your organization's contract with Autodesk.)

Running the Report

This is an active report. After you run the report, you must save the output file. The output file contains all the data necessary to view the report, so access to the FlexNet Manager for Engineering Applications Reporting server is not required.

This report may take a long time to run. Email delivery of the report is recommended.

Consumptive Token Monthly Summary with Contract Report

The **Consumptive Token Monthly Summary with Contract** report provides a tabbed interface that shows token-consumption information for a specified month, along with month-to-date token consumption and the token consumption for each month in the contract year. Tokens are considered consumed when a user accesses a feature that has a token-cost associated with it. Because tokens are granted per day, continued use of the feature during the same day will not result in additional token consumption; however, use of the feature on a different day will result in the additional token consumption.

Tokens are consumed by *product family*. If a user checks out one feature from a product family, the tokens that are consumed will enable the user to use any other feature in the same product family without consuming additional tokens.

Important • Consumptive-token reports rely on additional feature data (product family and token cost) that must be manually imported into FlexNet Manager for Engineering Applications using an XML file. See the section, Operational Dashboard Report Widgets, for information.

The report displays the following information for the specified month:

- Total number of tokens consumed

- Number of unique users

- Breakdown of token usage, both by days and by product families

- Out of scope tokens and usage-hours (*Out-of-scope* usage refers to usage of tokens that are not part of the enterprise's contract with Autodesk.)

- Information about the tokens consumed to date, and the number of tokens consumed in each month during the contract year. This enables enterprises to compare the number of tokens consumed to the number of tokens to which they are entitled.

Running the Report

This is an active report. After you run the report, you must save the output file. The output file contains all the data necessary to view the report, so access to the FlexNet Manager for Engineering Applications Reporting server is not required.

This report may take a long time to run. Email delivery of the report is recommended.

Reporting on Token-Based Usage

FlexNet Manager for Engineering Applications provides predefined reports that enable you to report on token-based license usage. These reports are designed for customers who use products from Cadence.

These reports enable you to see more granular information about usage; to see how individual capabilities (sub-features) contribute to the peak usage of their parent *tokenized* features. The following reports are available:

- Token-Capability Peak Usage Report

- Token-Capability Peak Percentage Usage Report

Enabling Token-Capability Reporting

Task   **To enable token-based reporting functionality in FlexNet Manager for Engineering Applications:**

1. Select the Token-Based Reporting option, available under the Admin | System Configuration tab (in the Reporting section).

2. Depending on whether the report log data containing token-based usage information have been imported into FlexNet Manager for Engineering Applications:

    - If the report log data containing information about token-based usage have already been imported into FlexNet Manager for Engineering Applications, you need only to re-aggregate the data after updating to FlexNet Manager for Engineering Applications 2020 R1.

    - If the report log data have *not* been imported into FlexNet Manager for Engineering Applications, you need to import the report logs containing token-based usage information, then aggregate the data.

See Also
Report Data Aggregation
Token-Capability Peak Usage Report
Token-Capability Peak Percentage Usage Report

Token-Capability Peak Usage Report

This report can be run against hourly, daily, and monthly usage data. It displays a chart and a list, both of which show— over time—the counts of each capability that contribute to the parent tokenized feature's peak for that time period. The sum of these capability counts equals the feature's peak usage. The data can be displayed in two different formats—a horizontal list, suitable for a small number of data points, and a vertical list, which is better for larger amounts of data.

Options for configuring the report include:

● Time Interval—Hourly, Daily, or Monthly

● Organization—Specify the organization for which you want to display usage data.

● Feature—The list contains only the features that are broken down into capabilities.

● List format—Specify how the data should be displayed in the report. You can change this setting from the main page of the report.

Task   ***To run the Token-Capability Peak Usage report:***

1. From the **Reporting** tab, under the **Flexera Analytics** section, click **Cognos Reporting**.

2. In the Cognos Connection pane, click the FlexNet Manager Suite folder.

3. Click the **FlexNet Manager for Engineering Applications Reports** folder, then click the **Token-Capability Reports** folder.

4. In the list of reports, click **Token-Capability Peak Usage Report**.

5. Specify the report settings. Click "Description (show/hide)" to view setting descriptions.

6. Click **Finish**.

Figure 6-12: Part of a Token-Capability Peak Usage report.

See Also
Reporting on Token-Based Usage

Token-Capability Peak Percentage Usage Report

This report is similar to the Token-Capability Peak Usage Report report, except that instead of showing the actual usage counts for the individual capabilities, it shows them as percentages, either of the feature peak or of availablity. The chart can be displayed either as a line chart or a stacked bar chart, which is useful for seeing these values as percentages of the whole.

Options for configuring the report include:

- Time Interval—Hourly, Daily, or Monthly

- Organization—Specify the organization for which you want to display usage data.

- Feature—The list contains only the features that are broken down into capabilities.

- Measure—Whether usage data should be displayed as a percentage of the feature peak, or of availability. You can change this setting from the main page of the report.

- Format—Whether data should be displayed in a horizontal or vertical list, and whether the chart should be a line chart or a stacked bar chart. You can change this setting from the main page of the report.

Task   **To run the Token-Capability Peak Percentage Usage report:**

1. From the **Reporting** tab, under the **Flexera Analytics** section, click **Cognos Reporting**.

2. In the Cognos Connection pane, click the FlexNet Manager Suite folder.

3. Click the **FlexNet Manager for Engineering Applications Reports** folder, then click the **Token-Capability Reports** folder.

4. In the list of reports, click **Token-Capability Peak Percentage Usage Report**.

5. Specify the report settings. Click "Description (show/hide)" to view setting descriptions.

6. Click **Finish**.
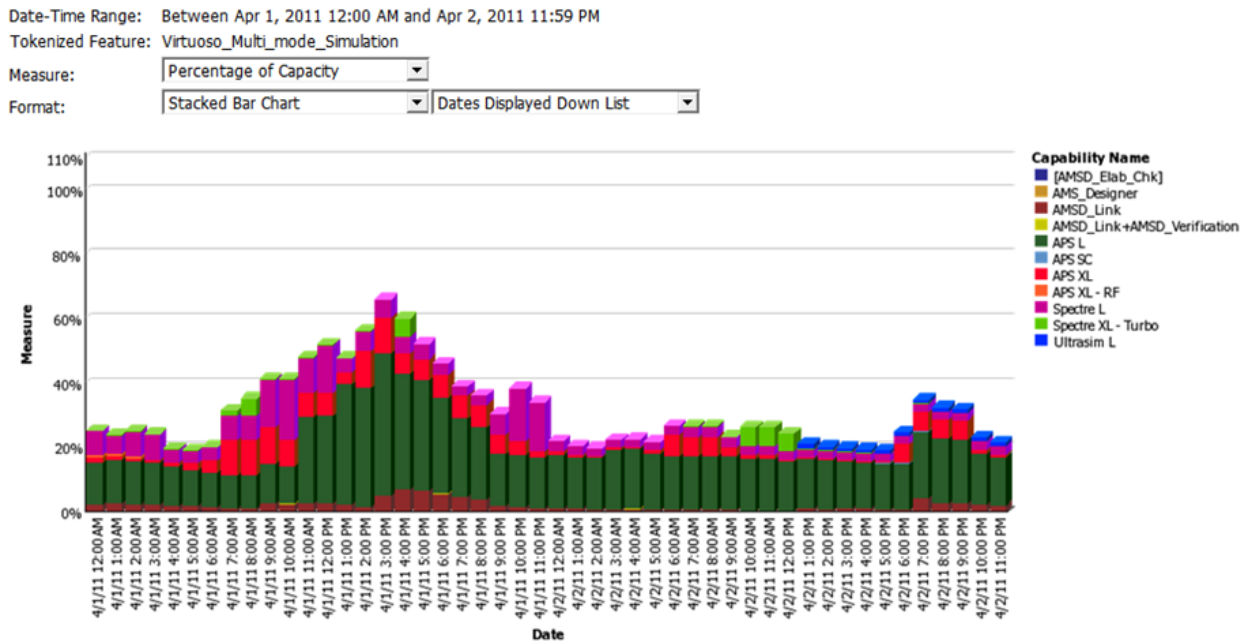
Figure 6-13: Part of a Token-Capability Peak Percentage Usage report.

See Also
Reporting on Token-Based Usage

Usage Statistics Reports

Usage Statistics reports provide detailed information on how products and features are being used in your enterprise. The reports provide data about peak usage, unique users, and ultimate denials for selected products or features. You can use the data in these reports to assist you in making decisions regarding renewals and contract remixes.

The Usage Statistics reports are available in the **FlexNet Manager for Engineering Applications Reports** folder, available from the **Cognos Reporting** page of the FlexNet Manager for Engineering Applications user interface.

Usage Statistics reports are available for:

● Feature Usage Statistics Reports—Peak usage, denials, and availability information for selected features.

● Product Usage Statistics Reports—Peak usage, denials and availability information for selected products.

Important • *Before running Usage Statistics reports, you must complete the tasks described in the following section, Prerequisites for Running Usage Statistics Reports.*

Note • *These reports are not fully compatible for use with* hybrid organizational structures. *If you have enabled organizational structures for hybrid aggregation, these reports will run, but will show usage data by organization structure* **without** *breakdown by license servers.*

Prerequisites for Running Usage Statistics Reports

In order to successfully run Usage Statistics reports for product– or feature-based reports, you must have organizational structures defined, and your organization's reporting data must be aggregated. For product-based reports, product-to-feature mapping must be in place.

Ensure that the following tasks are completed before running the reports. You complete these tasks using the FlexNet Manager for Engineering Applications user interface.

- For product-based reports, map features to products, using the functionality available under the **Planner** tab. (See Investment Planning for information.)

- For both product– and feature-based reports, define organizational structures using the pages available under the **Reporting** tab, in the Organizational Structures section.

- For both product– and feature-based reports, run data aggregation using the aggregation functionality available under the **Reporting** tab, in the Usage Data Maintenance section.

Feature Usage Statistics Reports

Feature Usage Statistics reports provide usage and availability information for a selected feature or group of features, for a specified group of users.

Note • *Usage Statistics reports support the use of only user-based organizational structures.*

Note • *These reports are not fully compatible for use with* hybrid organizational structures. *If you have enabled organizational structures for hybrid aggregation, these reports will run, but will show usage data by organization structure* **without** *breakdown by license servers.*

Feature Peak Usage Summary Report

The **Feature Peak Usage Summary** report is the entry point to all of the other feature usage-statistics reports. It provides a tabular overview of a group's feature-usage activity, including peak usage, denials, unique users, and overall number of usage hours.

The Feature Peak Usage Summary report serves as the gateway to the other reports, which are available as drill-through reports. To access the detailed reports, click the links within the Feature Peak Usage Summary report.

Statistics Detailed Reports

The detailed reports are available as drill-through links from the Feature Peak Usage Summary report.

- **Feature Peak Usage Details**—Column graph that shows the selected feature's daily peak usage over the reporting period, along with optional lines for maximum availability and average peak usage.

- **Count of Peak Occurrences**—Column graph that shows, for the selected feature, how many times (days) a given peak-usage number occurred during the reporting period.

- **License Request Daily Denials**—Column graph that shows the number of ultimate denials for the feature over the reporting period.

- **Denial Details**—Provides information about each denial that occurred on a given day, for the selected feature.

Running the Feature Usage Statistics Reports

The Feature Usage Statistics reports are available in the **FlexNet Manager for Engineering Applications Reports** folder, available from the **Cognos Reporting** page of the FlexNet Manager for Engineering Applications user interface.
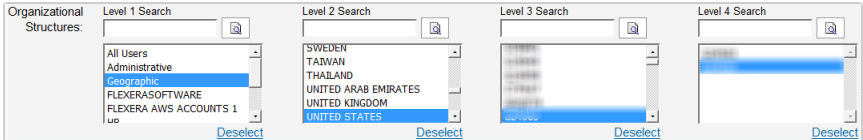
The initial interface for the Feature Usage Statistics reports is the Feature Peak Usage Summary report. From this report, you can click links to the drill-through reports, which provide more granular data.

Task **To run the Feature Usage Statistics reports:**

1. To ensure that data are available, complete the Prerequisites for Running Usage Statistics Reports.

2. From the **Reporting** tab, under **Flexera Analytics**, click **Cognos Reporting**.

3. In the **Cognos Connection** pane, in the **Public Folders** tab, click the **FlexNet Manager Suite** link to open the package containing the report folders.

4. Click the **FlexNet Manager for Engineering Applications Reports** link, then click the **Usage Statistics Reports** link.

5. Click one the **Feature Usage Statistics** link to display the **Feature Peak Usage Summary** prompt page.

6. In the prompt page, specify the information that you want to see in the report. You can search for items in any of the lists using the search boxes above the lists.

Prompt	Description
Organizational Structures	Select, by organizational-structure level, the group of users for whom you want to view usage data. When you select an item in the Level 1 Search list, (other than All Users), a Level 2 Search list is displayed, containing the members of the Level 1 selection. This is repeated down to Level 4. *Note • For Usage Statistics reports, data is available only for user-based organizational structures.*

Prompt	Description
Software Producers	Select the software producers for whom you want to see usage data, then click the right-arrow to move them to the right selection box. Press the **Ctrl** key while selecting items to select multiple items at one time.
	This selection filters the items that are available in the Vendor Daemons prompt.
Vendor Daemons	Select the vendor daemons whose features you want to see, then click the right-arrow to move them to the right selection box. Press the **Ctrl** key while selecting items to select multiple items at one time.
	This selection filters the items that are available in the Features prompt.
Features	Select the features for which you want to see usage data, then click the right-arrow to move them to the right selection box. Press the **Ctrl** key while selecting items to select multiple items at one time.

7.   Click **Run report**.

Feature Peak Usage Summary Report

When you run a Feature Usage Statistics report, the first view is the **Feature Peak Usage Summary** report. This report provides a view of your organization's feature usage for a given time period, and it includes the information described in the following table.

You can view data for the past 3 months, 6 months, or 12 months by clicking the corresponding tab at the top of the report. The reporting period covers *n* complete months of data prior to the current date. The reporting period begins on the first day of the first month and ends on the last day of the last month in the period. For example, if you run the report on 06/12/2017, the following date ranges apply:

● 3 Months: 03/01/2017–05/31/2017

● 6 Months: 12/01/2016–05/31/2017

● 12 Months: 06/01/2016–05/31/2017

You can view more detailed usage data by clicking a link within the report.

Note • *This report is not fully compatible for use with* hybrid organizational structures. *If you have enabled organizational structures for hybrid aggregation, this report will run, but will show usage data by organization structure* **without** *breakdown by license servers.*

Table 6-12 • Feature Peak Usage Summary Report information

Metric	Description
Feature name	Display name of the feature.

Table 6-12 • Feature Peak Usage Summary Report information

Metric	Description
Available	The maximum number of feature licenses available during the reporting period. If a delta icon △ is displayed to the left of the number, it indicates that the maximum number of available licenses has changed at least once during the period.
Peak	The highest daily peak usage that occurred during the reporting period, for a specific feature. Click a number link to open the Feature Peak Usage Details Report for a feature.
Count of peak	The number of times during the reporting period that the highest daily peak usage occurred. For example, if the highest daily peak usage during the period was 20 and this usage number occurred twice during the reporting period, the **Count of peak** value would be 2. Click a number link to open the Count of Peak Occurrences Report (Feature).
Average peak	The average daily peak during the period. This is the sum of the daily peaks divided by the number of days in the reporting period.
Denials	The number of ultimate denials for this feature during the reporting period. Click a number link to open the License Request Daily Denials Report (Feature).
Unique users	Number of unique users who used this feature during the reporting period.
Hours of usage	Total number of hours this feature was in use during the reporting period.

Figure 6-14: Feature Peak Usage Summary report

Feature Peak Usage Details Report

The **Feature Peak Usage Details** report presents a column graph that shows the daily peak number of licenses used for the reporting period. This enables you to see the variation in peak license usage from day to day, for the selected feature.

- Select the **Show maximum availability** checkbox to display a line showing the maximum license availability for the feature over the period.

- Select the **Show average peak usage** checkbox to display a line showing the feature's average daily peak usage over the period.

*Note • This report is not fully compatible for use with hybrid organizational structures. If you have enabled organizational structures for hybrid aggregation, this report will run, but will show usage data by organization structure **without** breakdown by license servers.*
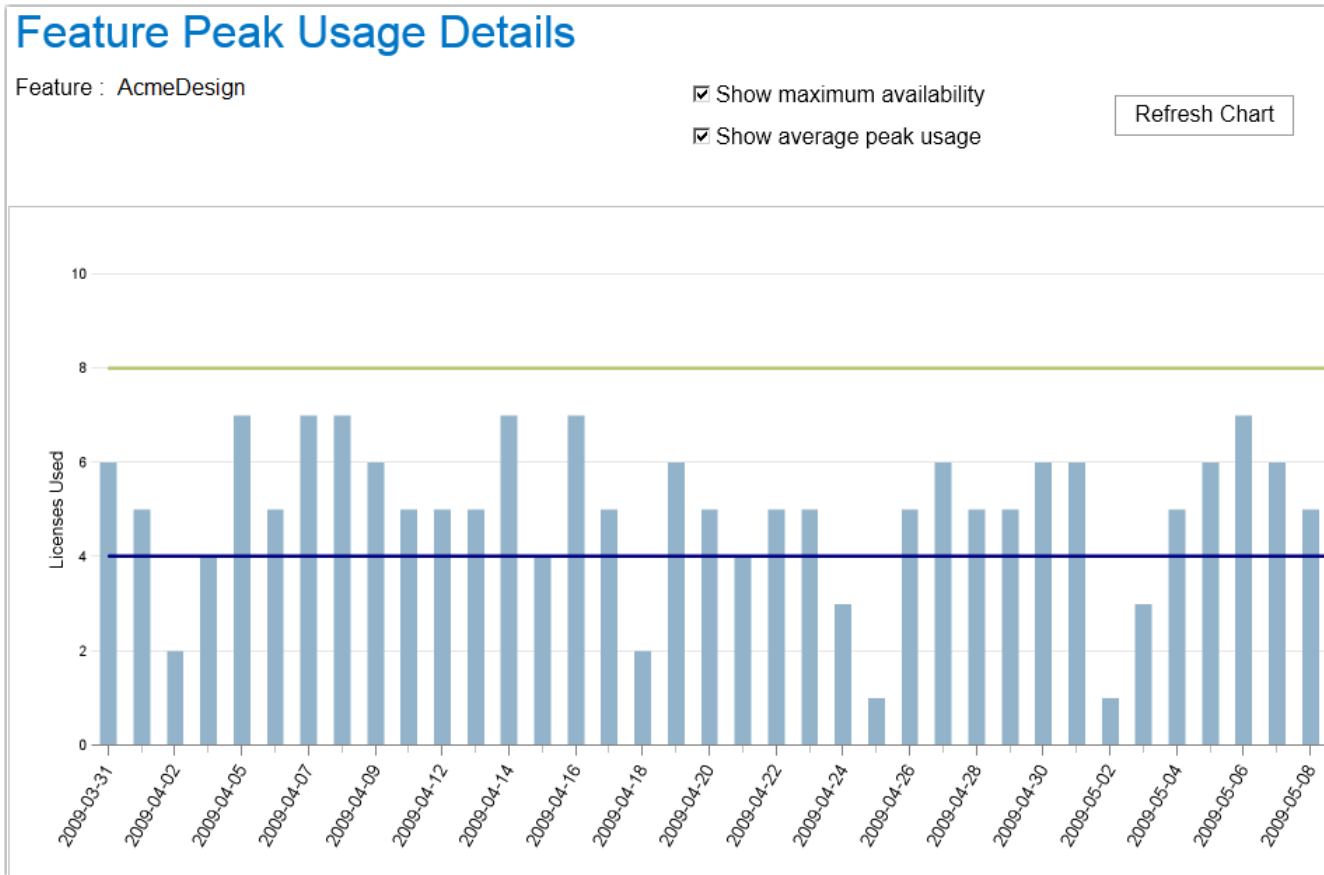
Figure 6-15: Feature Peak Usage Details report

Count of Peak Occurrences Report (Feature)

The **Count of Peak Occurrences** report for features shows the number of times (occurrences) that daily peak license usage for the selected feature was equal to *n* during the period. This enables you to see how often different peak-usage levels are occurring throughout a period, and where peak-usage levels are clustered.

This report also provides the following textual information at the top:

● Maximum number of licenses available during the reporting period.

● Maximum peak used during the reporting period.

● Average peak usage during the reporting period.

Hover your mouse pointer over a column to view the exact number of peak occurrences for a given peak usage. In the following image, daily peak usage of 4 licenses occurred 8 times during the reporting period. The maximum peak usage was 7, and this occurred 22 times during the reporting period.

Note • This report is not fully compatible for use with hybrid organizational structures. *If you have enabled organizational structures for hybrid aggregation, this report will run, but will show usage data by organization structure **without** breakdown by license servers.*
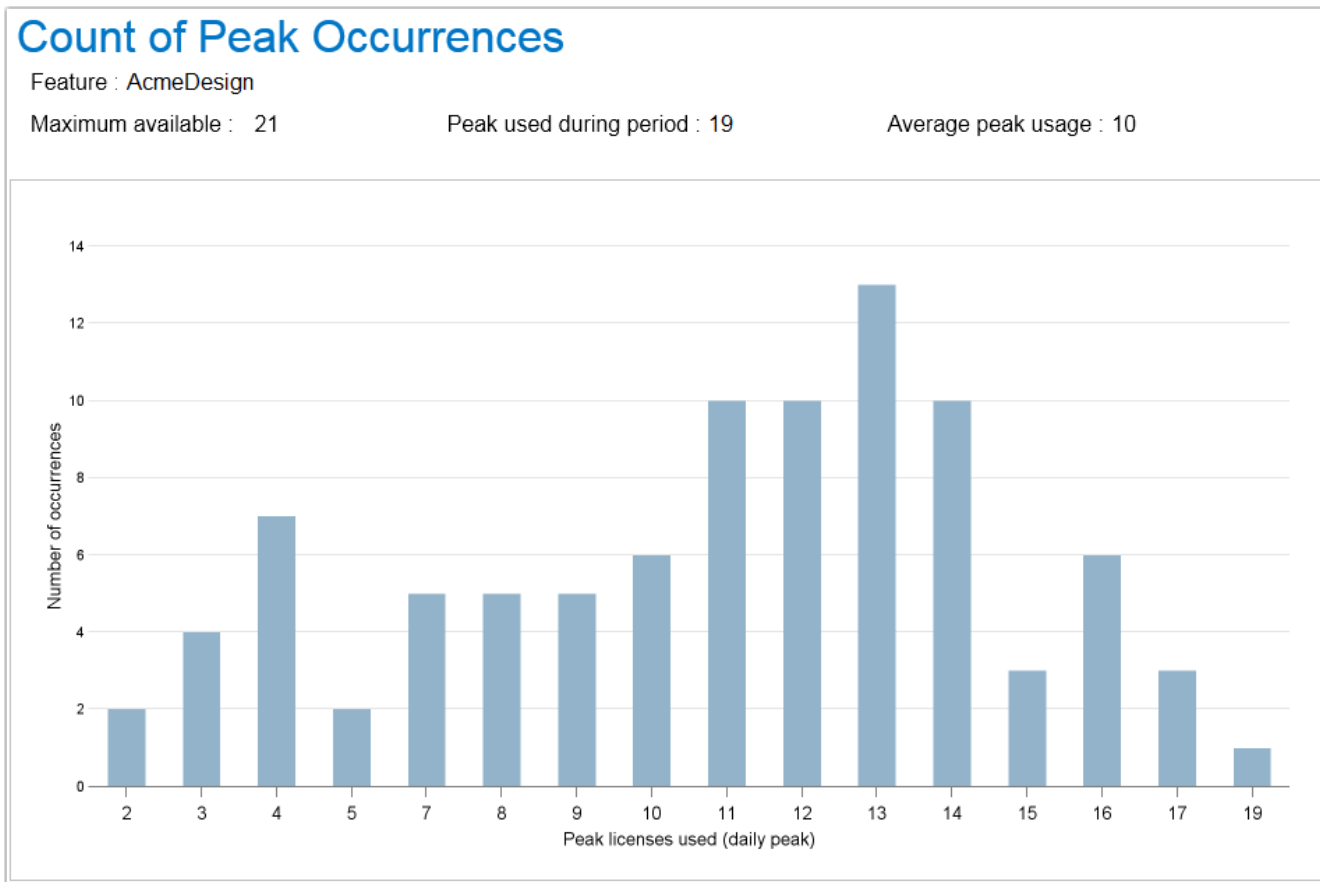
Figure 6-16: Count of Peak Occurrences report for a feature

License Request Daily Denials Report (Feature)

The License Request Daily Denials report shows the number of ultimate denials per day, for a given feature. In this report, you can do the following:

● Hover your pointer over a column in the graph to see the number of ultimate denials that occurred on a specific day.

● Click on a column to open the Denial Details Report (Feature), which provides information about the denials that occurred on that day.

*Note • This report is not fully compatible for use with hybrid organizational structures. If you have enabled organizational structures for hybrid aggregation, this report will run, but will show usage data by organization structure **without** breakdown by license servers.*

License Request Daily Denials

Feature :   AcmeDesign

Date Range : 3 Months
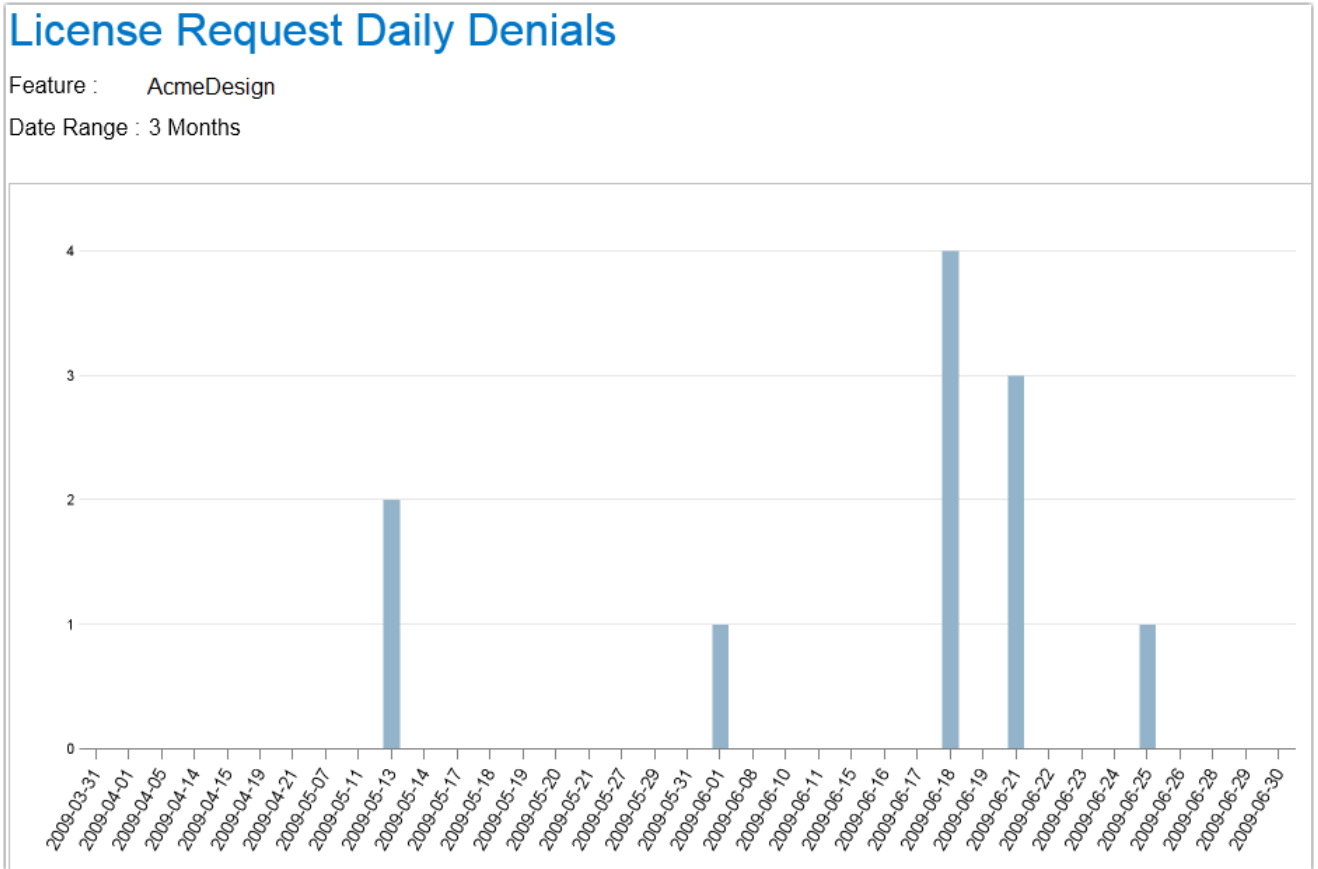
Figure 6-17: License Request Daily Denials report

Denial Details Report (Feature)

The **Denial Details** report provides details about each denial that occurred for a feature on a given date. It provides the following information:

- License server host name for the server that issued the denial

- User name of the user who received the denial

- Date and specific time of the denial

- Denial reason

*Note • This report is not fully compatible for use with hybrid organizational structures. If you have enabled organizational structures for hybrid aggregation, this report will run, but will show usage data by organization structure **without** breakdown by license servers.*

Denial Details

Feature :   32500
Date :   May 27, 2009

License Server Host Name	User Name	Event Date Time	Reason
License_server_1	User_1	Apr 20, 2009 6:41:40 PM	Licensed number of users already reached.
License_server_1	User_2	Apr 20, 2009 4:25:55 PM	Licensed number of users already reached.
License_server_1	User_2	Apr 20, 2009 6:43:19 PM	Licensed number of users already reached.
License_server_2	User_2	Apr 20, 2009 6:43:20 PM	Licensed number of users already reached.
License_server_2	User_1	Apr 20, 2009 6:43:23 PM	Licensed number of users already reached.

Figure 6-18: Denial Details report

Product Usage Statistics Reports

Product Usage Statistics reports provide usage and availability information for a selected product or group of products, for a specified group of users.

Note • Usage Statistics reports support the use of only user-based organizational structures.

Note • These reports are not fully compatible for use with hybrid organizational structures*. If you have enabled organizational structures for hybrid aggregation, these reports will run, but will show usage data by organization structure **without** breakdown by license servers.*

Product Peak Usage Summary Report

The **Product Peak Usage Summary** report is the entry point to all of the other product usage-statistics reports. It provides a tabular overview of a group's product-usage activity, including peak usage, denials, unique users, and overall number of usage hours.

The Product Peak Usage Summary report serves as the gateway to the other reports, which are available as drill-through reports. To access the detailed reports, click the links within the Product Peak Usage Summary report.

Statistics Detailed Reports

The detailed reports are available as drill-through links from the Product Peak Usage Summary report.

- **Product Peak Usage Details**—Column graph that shows the selected product's daily peak usage over the reporting period, along with an optional line for average peak usage.

- **Count of Peak Occurrences (Product)**—Column graph that shows, for the selected product, how many times (days) a given peak-usage number occurred during the reporting period.

- **License Request Daily Denials**—Column graph that shows the number of ultimate denials for the product over the reporting period.

- **Denial Details**—Provides information about each denial that occurred on a given day, for the selected product.

Running the Product Usage Statistics Reports

The Product Usage Statistics reports are available in the **FlexNet Manager for Engineering Applications Reports** folder, available from the **Cognos Reporting** page of the FlexNet Manager for Engineering Applications user interface.

The initial interface for the Product Usage Statistics reports is the Product Peak Usage Summary report. From this report, you can click links to the drill-through reports, which provide more granular data.
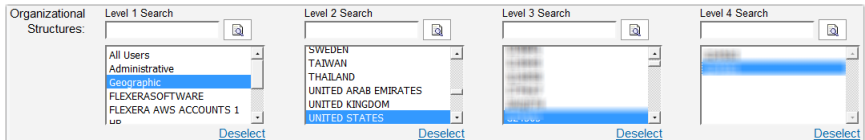
Task   ***To run the Product Usage Statistics reports:***

1. To ensure that data are available, complete the Prerequisites for Running Usage Statistics Reports.

2. From the **Reporting** tab, under **Flexera Analytics**, click **Cognos Reporting**.

3. In the **Cognos Connection** pane, in the **Public Folders** tab, click the **FlexNet Manager Suite** link to open the package containing the report folders.

4. Click the **FlexNet Manager for Engineering Applications Reports** link, then click the **Usage Statistics Reports** link.

5. Click one the **Product Usage Statistics** link to display the **Product Peak Usage Summary** prompt page.

*Note • Data on product-based usage are available only if you have mapped features to products using the functionality available under the **Planner** tab. For information, see Investment Planning.*

6. In the prompt page, specify the information that you want to see in the report. You can search for items in any of the lists using the search boxes above the lists.

Prompt	Description
Organizational Structures	Select, by organizational-structure level, the group of users for whom you want to view usage data. When you select an item in the Level 1 Search list, (other than All Users), a Level 2 Search list is displayed, containing the members of the Level 1 selection. This is repeated down to Level 4. *Note • For Usage Statistics reports, data is available only for user-based organizational structures.*
Software Producers	Select the software producers for whom you want to see usage data, then click the right-arrow to move them to the right selection box. Press the **Ctrl** key while selecting items to select multiple items at one time. This selection filters the items that are available in the Products prompt.

Prompt	Description
Products	Select the products for which you want to see usage data, then click the right-arrow to move them to the right selection box. Press the **Ctrl** key while selecting items to select multiple items at one time.

7. Click **Run report**.

Product Peak Usage Summary Report

When you run a Product Usage Statistics report, the first view is the **Product Peak Usage Summary** report. This report provides a view of your organization's product usage for a given time period, and it includes the information described in the following table.

You can view data for the past 3 months, 6 months, or 12 months by clicking the corresponding tab at the top of the report. The reporting period covers *n* complete months of data prior to the current date. The reporting period begins on the first day of the first month and ends on the last day of the last month in the period. For example, if you run the report on 06/12/2017, the following date ranges apply:

- 3 Months: 03/01/2017–05/31/2017

- 6 Months: 12/01/2016–05/31/2017

- 12 Months: 06/01/2016–05/31/2017

*Note • This report is not fully compatible for use with hybrid organizational structures. If you have enabled organizational structures for hybrid aggregation, this report will run, but will show usage data by organization structure **without** breakdown by license servers.*

You can view more detailed usage data by clicking a link within the report.

Table 6-13 • Product Peak Usage Summary Report information

Metric	Description
Product name	Display name of the product.
Available	The maximum number of product licenses available during the reporting period. If a delta icon △ is displayed to the left of the number, it indicates that the maximum number of available licenses has changed at least once during the period. *Important • Product-availability information is available only if you have input contract data using investment-planning functionality (available under the **Planner** tab in FlexNet Manager for Engineering Applications). For information on using this functionality, see the **Investment Planning** section in the product's online help.*

Table 6-13 • Product Peak Usage Summary Report information

Metric	Description
Peak	The highest daily peak usage that occurred during the reporting period, for a specific product. Click a number link to open the Product Peak Usage Details Report for a product.
Count of peak	The number of times during the reporting period that the highest daily peak usage occurred. For example, if the highest daily peak usage during the period was 20 and this usage number occurred twice during the reporting period, the **Count of peak** value would be 2. Click a number link to open the Count of Peak Occurrences Report (Product).
Average peak	The average daily peak during the period. This is the sum of the daily peaks divided by the number of days in the reporting period.
Denials	The number of ultimate denials for this product during the reporting period. Click a number link to open the License Request Daily Denials Report (Product).
Unique users	Number of unique users who used this product during the reporting period.
Hours of usage	Total number of hours this product was in use during the reporting period.

| 3 Months | 6 Months | 12 Months |

Product Peak Usage Summary

(Show/hide) report settings

Product name	Available	Peak	Count of peak	Average peak	Denials	Unique users	Hours of usage
Advanced Packaging Engineer 3D		7	9	3	45	997	944.63
Allegro(R) Design Entry CIS 210		12	1	6	20	492	2,830.12
Allegro(R) Design Entry HDL 210		4	27	2	54	487	781.42
Assura(TM) Design Rule Checker		4	1	1	3	31	225.34
Assura(TM) Graphical User Interface Option		6	1	2		31	371.95
Assura(TM) Layout Vs. Schematic Verifier		3	2	1		31	143.99
Automatic Cell Characterization		17	2	9		52	4,337.48
Autoplace option for SPECCTRA(R) autorouter (AR256U)		1	1	1	1	1	0.00
BONeS DESIGNER PRO		2	1	1		3	245.74
Cadence (R) First Encounter - GPS		1	49	1	4	7	436.50
Cadence (R) SOC Encounter - GPS		2	17	1	16	8	755.75
Cadence(R) Accelerated Transistor-level Simulator		18	1	3		39	1,024.03
Cadence(R) Chip I/O Planner		1	18	1	2	83	8.53

Figure 6-19: Product Peak Usage Summary report

Product Peak Usage Details Report

The **Product Peak Usage Details** report presents a column graph that shows the daily peak number of licenses used for the reporting period. This enables you to see the variation in peak license usage from day to day, for the selected product.

Select the **Show average peak usage** checkbox to display a line showing the product's average daily peak usage over the period.

Note • *This report is not fully compatible for use with* hybrid organizational structures. *If you have enabled organizational structures for hybrid aggregation, this report will run, but will show usage data by organization structure* ***without*** *breakdown by license servers.*
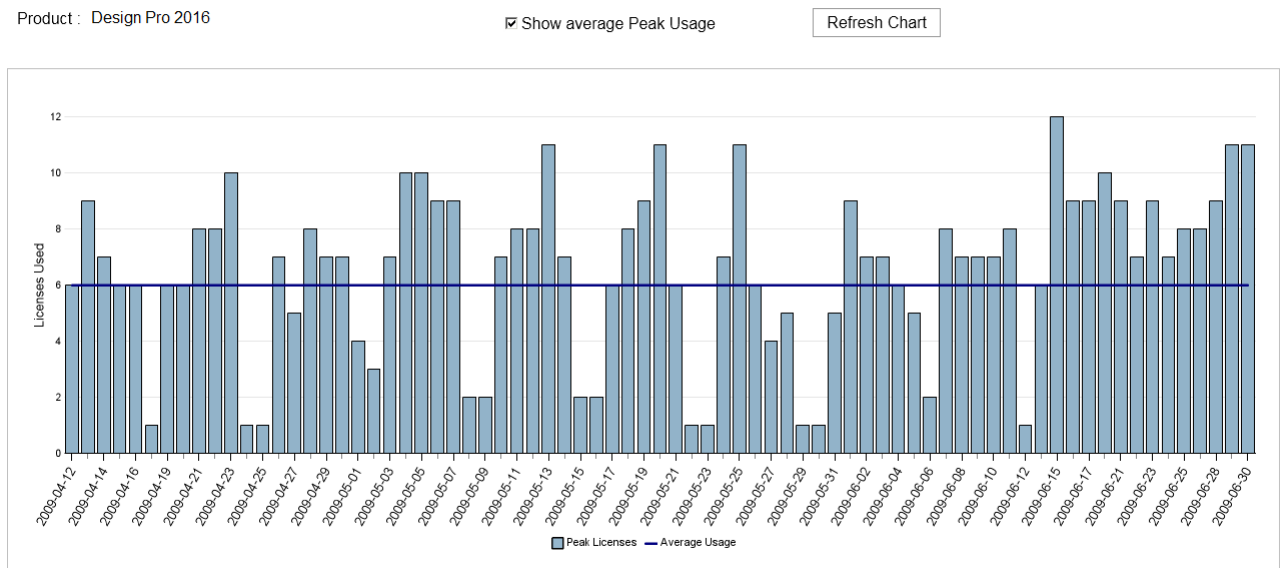
Figure 6-20: Product Peak Usage Details report

Count of Peak Occurrences Report (Product)

The **Count of Peak Occurrences** report for a product shows the number of times (occurrences) that daily peak license usage for the selected product was equal to *n* during the period. This enables you to see how often different peak-usage levels are occurring throughout a period, and where peak-usage levels are clustered.

This report also provides the following textual information at the top:

● Maximum peak used during the reporting period.

● Average peak usage during the reporting period.

Hover your mouse pointer over a column to view the exact number of peak occurrences for a given peak usage. In the following image, daily peak usage of 7 licenses occurred 15 times during the reporting period. The maximum peak usage was 12, and this occurred once during the reporting period.

*Note • This report is not fully compatible for use with hybrid organizational structures. If you have enabled organizational structures for hybrid aggregation, this report will run, but will show usage data by organization structure **without** breakdown by license servers.*
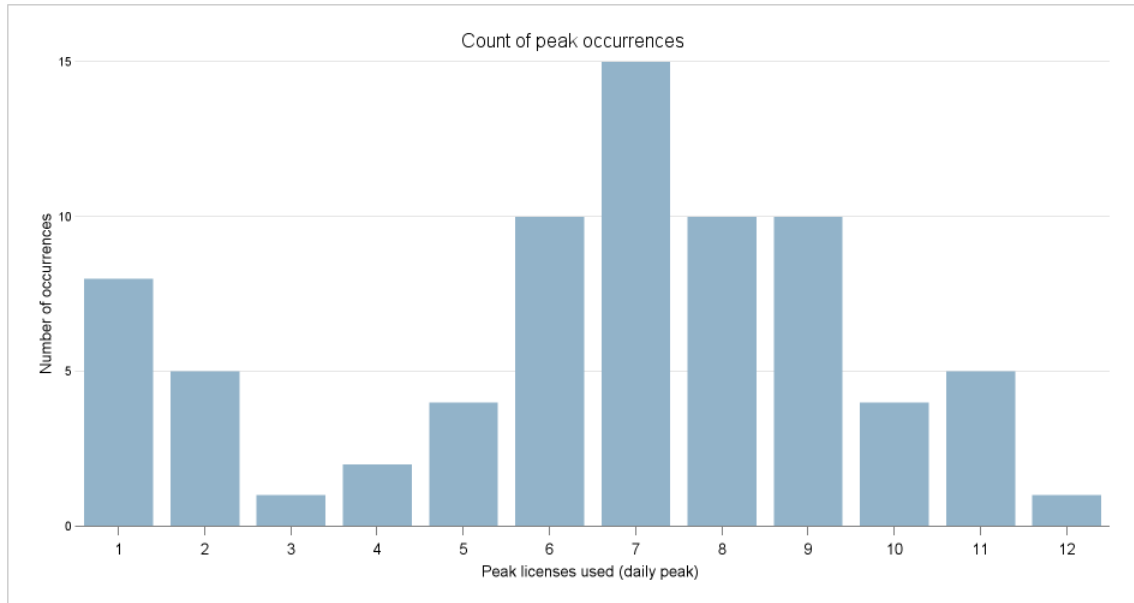
Figure 6-21: Count of Peak Occurrences report for a product

License Request Daily Denials Report (Product)

The License Request Daily Denials report shows the number of ultimate denials per day, for a given product. In this report, you can do the following:

- Hover your pointer over a column in the graph to see the number of ultimate denials that occurred on a specific day.

- Click on a column to open the Denial Details Report (Product) report, which provides information about the denials that occurred on that day.

*Note • This report is not fully compatible for use with hybrid organizational structures. If you have enabled organizational structures for hybrid aggregation, this report will run, but will show usage data by organization structure **without** breakdown by license servers.*

Denial Details

Product : Design Pro 2016

Date : May 13, 2009

License Server Host Name	User Name	Event Date Time	Reason
License_server_1	User_1	Apr 20, 2009 6:41:40 PM	Licensed number of users already reached.
License_server_1	User_2	Apr 20, 2009 4:25:55 PM	Licensed number of users already reached.
License_server_1	User_2	Apr 20, 2009 6:43:19 PM	Licensed number of users already reached.
License_server_2	User_2	Apr 20, 2009 6:43:20 PM	Licensed number of users already reached.
License_server_2	User_1	Apr 20, 2009 6:43:23 PM	Licensed number of users already reached.

Figure 6-22: License Request Daily Denials report for a product

Denial Details Report (Product)

The **Denial Details** report provides details about each denial that occurred for a product on a given date. It provides the following information:

- License server host name for the server that issued the denial

- User name of the user who received the denial

- Date and specific time of the denial

- Denial reason

*Note • This report is not fully compatible for use with hybrid organizational structures. If you have enabled organizational structures for hybrid aggregation, this report will run, but will show usage data by organization structure **without** breakdown by license servers.*

Denial Details

Product : Design Pro 2016

Date : May 13, 2009

License Server Host Name	User Name	Event Date Time	Reason
License_server_1	User_1	Apr 20, 2009 6:41:40 PM	Licensed number of users already reached.
License_server_1	User_2	Apr 20, 2009 4:25:55 PM	Licensed number of users already reached.
License_server_1	User_2	Apr 20, 2009 6:43:19 PM	Licensed number of users already reached.
License_server_2	User_2	Apr 20, 2009 6:43:20 PM	Licensed number of users already reached.
License_server_2	User_1	Apr 20, 2009 6:43:23 PM	Licensed number of users already reached.

Figure 6-23: Denial Details report for a product

Specifying Additional Feature Data Using an XML File

You can use an XML file to specify additional feature data for use in Flexera Analytics reports. Using an XML file, you can specify the following feature information:

- User-friendly feature name—using the **displayName** attribute.

- Product family for use in consumptive-token–based reports—using the **softwareCategory** attribute.

- Token cost for use in consumptive-token–based reports or cost factor for use in chargeback reports (Feature Chargeback Report or Product Chargeback Report)—using the **costFactor** attribute.

You can import feature data in the XML file, in one of the following ways:

- At the command line, using the command `importVendorFeatureInfo`. The XML file containing the feature information can have any name.

- By copying an XML file named `vendor_feature.xml` to the directory `<data_dir>\vendorFeatureInfo`. The XML file *must be named* `vendor_feature.xml`.

See Also
Specifying Feature Information: XML Attributes
Importing a Feature-Information XML File at the Command Line
Importing a Feature-Information XML File by Copying the File to a Directory
Example XML File and Impact on the Database

Specifying Feature Information: XML Attributes

You can specify attributes in an XML file to provide information for use in Flexera Analytics reports. You can import this XML file at the command line, or copy it to the directory `<data_dir>\vendorFeatureInfo`. (If you copy the file to the vendorFeatureInfo directory, the file *must be named* **vendor_feature.xml**.)

To specify information about product family and token cost for consumptive-token–based reports, and the cost factor for chargeback reports, use the attributes as described in the following table.

Table 6-14 • Information for use in reports

Attribute in XML file	Information
costFactor	This attribute can be used to provide information for the following reports:
	- **Chargeback reports**: Specify a cost factor for use in use in chargeback reports (Feature Chargeback Report or Product Chargeback Report). This factor is multiplied by the usage hours to calculate the total cost of usage.
	- **Consumptive-token reports**: Specify a token cost. For every license checkout of a given feature in the product family on a given day, a specified number of tokens is consumed. (See Consumptive Token Reports for information about the reports.)
displayName	Feature display name. Use this attribute to specify a user-friendly feature name for use in reports.
softwareCategory	Use in consumptive-token reports to specify a product family. Every feature in a consumptive-token–based licensing model is assigned to a product family, and each product family has an associated token cost.

Importing a Feature-Information XML File at the Command Line

You can import an XML file to provide additional feature data and to update existing feature data, using the command `importVendorFeatureInfo`. The XML file should include a list of vendors with features. Feature information (displayName, softwareCategory, and costFactor) will be updated for the features specified in the XML file.

The properties specified in the XML file (costFactor, displayName, and/or softwareCategory) will be updated in the RPTDW tables. Properties that are not specified in the XML file will be set to NULL in the database. This way, the XML file provides the most current information about what information is in the database. For more information, see Example XML File and Impact on the Database.

Important • If the XML file lists a feature, but does not specify a value for some of the feature's properties (costFactor, displayName, and/or softwareCategory), those properties will be set to NULL in the RPTDW table in the database.

In order for all feature information to be accurately updated, it is recommended that you run the `importVendorFeatureInfo` command *after aggregation has finished*. The XML import does not insert new features into the database; it only updates features that already exist in the database. To ensure that all features exist in the database, you must run aggregation prior to importing the XML file.

Command-Line Syntax

```
flexnet importVendorFeatureInfo –u<user> –p<password> –f"<filename_with_path>" [-s<server>]
```

For example:

```
flexnet importVendorFeatureInfo -uadmin -padmin -f"c:\vendorFeatureInfo.xml"
```

A sample XML file can be found in the following directory:

`<reporting_server_installation_dir>\site\sample\VendorFeatureInfoSample.xml`

Table 6-15 • importVendorFeatureInfo Parameters

Parameter	Description
–u `<user>`	Specifies the user to run this command. The user must be assigned a role with the View and Manage Investment Planner permission in FlexNet Manager for Engineering Applications. If no such users are configured, the user **admin** can be specified.
–p`<password>`	Specifies the password for the user.
–f`<filename_with_path>`	Specifies an XML file containing the vendors and features to be imported. If the path name contains spaces, the value must be enclosed in double quotation marks.
–s`<server>`	Specifies the URL for the FlexNet Manager for Engineering Applications Admin server, which must be an `https` connection. For example: `https://localhost:8445/flexnet` This is an optional argument. If no argument is specified, then the server is assumed to be: `https://127.0.0.1:<admin server port number>/flexnet`

See Also
Specifying Additional Feature Data Using an XML File
Specifying Feature Information: XML Attributes
Importing a Feature-Information XML File by Copying the File to a Directory
Example XML File and Impact on the Database

Importing a Feature-Information XML File by Copying the File to a Directory

You can use an XML file named `vendor_feature.xml` to provide and update information about cost factor, software category, and display name (for both vendor and feature). FlexNet Manager for Engineering Applications will automatically import the information at the end of the aggregation process.

The properties specified in the XML file (costFactor, displayName, and/or softwareCategory) will be updated in the RPTDW tables. Properties that are not specified in the XML file will be set to `NULL` in the database. This way, the XML file provides the most current information about what information is in the database. For more information, see Example XML File and Impact on the Database.

Important • If the XML file lists a feature, but does not specify a value for some of the feature's properties (costFactor, displayName, and/or softwareCategory), those properties will be set to `NULL` in the RPTDW table in the database.

Task ***To import feature data using an XML file:***

1. Ensure that the XML file is named `vendor_feature.xml`. (Rename the file if necessary.)

2. Create the following directory in the shared data directory:

   <data_dir>`\vendorFeatureInfo\`

3. Copy the file `vendor_feature.xml` into the directory: *<data_dir>*`\vendorFeatureInfo\`

When aggregation is run, the file `vendor_feature.xml` will be imported and the RPTDW tables will be updated with the information contained in the file. If the XML file does not specify a property, the unspecified property will be set to `NULL` in the database.

See Also
Specifying Additional Feature Data Using an XML File
Specifying Feature Information: XML Attributes
Importing a Feature-Information XML File at the Command Line
Example XML File and Impact on the Database

Example XML File and Impact on the Database

The following is an example XML file to specify additional feature information that is not contained in the report logs.

```
<AllVendors>
    <vendor name="vendor1">
        <feature name="f1" displayName="feature1" softwareCategory="sc1" costFactor="32" />
        <feature name="f2" softwareCategory="sc1" costFactor="31" />
        <feature name="f3" />
    </vendor>
</AllVendors>
```

In the previous example, the following updates would be made to the database:

- For vendor **vendor1**, the displayName property will be set to `NULL` because it is not specified.

- For feature **f1**, all properties (displayName, softwareCategory, and costFactor) will be updated because they are all specified.

- For feature **f2**, the softwareCategory and costFactor properties will be updated, while the displayName property will be set to `NULL` because it is not specified.

- For feature **f3**, all properties (displayName, softwareCategory, and costFactor) will be set to `NULL` because they are not specified.

See Also
Specifying Additional Feature Data Using an XML File
Specifying Feature Information: XML Attributes
Importing a Feature-Information XML File at the Command Line
Importing a Feature-Information XML File by Copying the File to a Directory

Organizational Structures

*Note • The **Organizational Structures** section (under the **Reporting** tab) is displayed only if Flexera Analytics Flexera Analytics (Cognos) has been installed and configured. The user must also have a role with the View Org Structures or View and Manage Org Structures permission.*

FlexNet Manager for Engineering Applications supports the creation of organizational structures. Organizational structures enable grouping and sub-grouping of users, projects, and license server hosts in hierarchical order. Organizational structures act as a "rule set" for how to distribute license usage across various areas of your enterprise. You can use organizational structures in reporting, and for license distribution (if you use Investment Planning functionality). See Contract Pools for more information about license distribution.

For example, you can create organizational structures for all of the users in your organization, based on the departments to which they belong. You can create another organizational structure based on the geographical location to which users belong. Both organizational structures can exist in the FlexNet Manager for Engineering Applications system at one time and you can generate reports for either group or for subgroups of these two organizational structures.

Organization structures are made up of nodes that are arranged in a tree structure. There is a single *root node* at the top of each organizational structure. *Leaf nodes* (nodes that have no child nodes) for each organizational structure are defined by the type of the structure—for example, each leaf node of a User ID organizational structure corresponds to a user ID. The nodes between the root node and the leaf nodes are known as *intermediate nodes*. There can be an arbitrary number of intermediate levels in each organizational structure, and multiple intermediate nodes can have the same name, as long as they have different parent nodes. (For example, there could be Engineering nodes beneath each of the Japan, Australia, and Germany nodes.) A leaf-level node could have an intermediate parent node of any level. A leaf node cannot have another leaf-level node as a parent. A leaf-level node cannot have more than one parent node on the same date. Leaf nodes on the same level must be unique. (For example, there cannot be two Smith leaf nodes beneath Germany's Engineering node.)

You can define user–, project– or host-based organizational structures using the **Add Organizational Structure** page, or you can define the organizational structures in an XML file and import the file. After creating an organizational structure, you can import organizational-structure data from an LDAP domain.

To view a list of your enterprise's organizational structures, use the **Organizational Structures** page.

See Also
Viewing Organizational Structures
Adding Organizational Structures
Updating Organizational Structures Using XML
Importing Organizational-Structure Data from LDAP
Custom User Attributes
Hybrid Organizational Structures
Virtual Organizational Structures

Viewing Organizational Structures

The **Organizational Structures** page (available from the **Reporting** tab) displays a list of all of the organizational structures that have been created using FlexNet Manager for Engineering Applications or imported using an XML file (or a CSV file, for virtual organizational structures). The Organizational Structures list provides the following information about your organizational structures.

Table 6-16 • Organizational Structures information

Item	Description
Organizational structure name	Click the organizational-structure name to open the **View Organizational Structure** page for this organization. From here, you can add and assign users (for user-based organizational structures), and access the **Edit Organizational Structure** page.
Organizational structure type	The type of organizational structure: • **User ID**—Structure with users as the end nodes. • **Hosts**—Structure with license-server hosts as the end nodes. • **Projects**—Structure with projects as the end nodes.
Hybrid aggregation	This column applies only to user ID–based organizational structures, and will say **Enabled** if this structure is enabled for hybrid aggregation. With hybrid aggregation, usage data is aggregated for on both the organizational and the license-server level. For more information, see Hybrid Organizational Structures.
Virtual org	This column indicates whether the organizational structure is a virtual (or ad-hoc) organizational structure. For information, see Virtual Organizational Structures.
LDAP domain association	Indicates whether there is a domain associated with the organizational structure. If a domain is associated, you can click the link to open the **LDAP Association and Mapping** page for the organizational structure. If an organizational structure is associated with an LDAP domain, you can import LDAP data from this page. For information, see Associating Organizational Structures with LDAP Domains and Defining Attribute Mappings.

The Organizational Structures list contains the All Users organizational structure, which is the default (and empty) user organizational structure provided by FlexNet Manager for Engineering Applications. You can use this organizational structure to organize users in your organization, or you can create any number of new organizational structures for the same set of users.

When you run the aggregation for the first time, the aggregation process brings unassigned users into the FlexNet Manager for Engineering Applications system. You can assign these unassigned users to this (or to another) organizational structure.

See Also
Adding Organizational Structures
Updating Organizational Structures Using XML
Importing Organizational-Structure Data from LDAP
Custom User Attributes
Hybrid Organizational Structures
Virtual Organizational Structures

Adding Organizational Structures

You can add and modify organizational structures using the pages available from the **Organizational Structures** section (beneath the **Reporting** tab) in the FlexNet Manager for Engineering Applications interface, or you can import an XML file that defines the organizational structure.

Note • To add and work with organizational structures, the user must also have a role with the View and Manage Org Structures permission.

Task   **To add an organizational structure from the user interface:**

1. From the **Reporting** tab, under **Organizational Structures**, click **Create Organizational Structure** to display the **Add Organizational Structure** page.

2. Specify the organizational structure settings. Required settings are identified by a red asterisk (*****).

Setting	Description
Organizational Structure Type	Select the type of organizational structure: ● **User ID**—Structure with users as the end nodes. ● **Hosts**—Structure with license server hosts as the end nodes. ● **Projects**—Structure with projects as the end nodes.
Organizational Structure Name	Unique, descriptive name for the organizational structure.
Organizational Structure Level	Optional metadata about the hierarchical levels to be included in this organizational structure. For example, if you have an organizational structure named Geographic, you might have three hierarchical levels named (Level 1) Continent, (Level 2) Country, and (Level 3) City.

3. For user-based organizational structures (Organizational Structure Type = User ID), you can opt to enable the organizational structure for hybrid aggregation—aggregation of feature usage on both the organizational and license-server level). To enable hybrid aggregation:

   a. Select the **Enable aggregation...** checkbox.

   b. Using the **Vendor Daemons** options boxes, select the vendor daemons for which you want to enable hybrid aggregation.

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> **Note** • See the topic, *Hybrid Organizational Structures, for more information.*

4. Click **Save** or **Save and Add Another**.

See Also
Organizational Structures
Defining Organizational Structures Using an XML File
Importing Organizational-Structure Data from LDAP
Hybrid Organizational Structures
Virtual Organizational Structures

Viewing Organizational Structure Details

The View Organizational Structure page provides information about the selected organizational structure.

From this page, you can:

- Access the Edit Organizational Structure page.

- Add new leaf nodes or intermediate notes to the organizational structure.

- Assign an unassigned node to the organizational structure.

- View a *snapshot* the organizational structure of the organizational structure as of a specified date.

- View the history of a parent-leaf node relation and delete relations.

- Expand nodes in the hierarchy to show more detail.

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Task   ***To view organizational structure details and view a snapshot:***

1. From the **Reporting** tab, under **Organizational Structures**, click **Organizational Structures**.

2. Click the name of organizational structure to open its View Organizational Structure page.

3. To view a snapshot of the structure, specify a date in the "Show Organizational Structure as of" field, then click **Refresh**. (The date must be in the past.) This shows the organizational structure as it was on the specified date.

See Also
Organizational Structures
Editing Organizational Structures
Viewing and Deleting Parent Node Relationships

Editing Organizational Structures

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> **Note** • To add and work with organizational structures, the user must also have a role with the *View and Manage Org Structures* permission.

Task   ***To edit an organizational structure:***

1. From the **Reporting** tab, under **Organizational Structures**, click **Organizational Structures**.

2. Click the name of the organizational structure that you want to edit.

3. On the View Organizational Structure page, click the **Edit Organizational Structure** link.

4. Edit the organizational structure settings.

5. Click **Save**.

See Also
Organizational Structures
Importing Organizational-Structure Data from LDAP

Adding Nodes to Organizational Structures

After you define the organizational structure, you add nodes to define the structure's hierarchy. You can add organization (or intermediate) nodes, add leaf nodes (users, license server hosts, or projects), and assign unassigned leaf nodes to a structure.

Note • *To add and work with organizational structures, the user must also have a role with the View and Manage Org Structures permission.*

See Also
Adding Organization (Intermediate) Nodes
Adding Leaf Nodes (Users, License Server Hosts, and Projects)
Assigning Unassigned Leaf Nodes (Users, License Server Hosts, and Projects)

Adding Organization (Intermediate) Nodes

Organization nodes are the intermediate levels in an organizational structure's hierarchy. You can add multiple levels of organization nodes, depending on the complexity of the organizational structure.

Task   ***To add a node to an organizational structure:***

1. From the **Reporting** tab, under **Organizational Structures**, click **Organizational Structures**.

2. Click the name of the organizational structure to which you want to add a node. This displays the View Organizational Structure page.

3. Click **New Organization** to display the Add Organization page.

4. Specify the organization node settings. Required settings are identified by a red asterisk (*).

Setting	Description
Organization Name	Name for the organization node.

Setting	Description
Belongs to	Click **Select** to display the Select Organization dialog, where you can select the parent node for this organization node. All non-leaf nodes are displayed.
Start Date	Specified as *mm/dd/yyyy*, the start date for this organization node's parent-child relationship, inclusive of the date specified.
Notes	Optional notes about the organizaton.

5. Click **Save**.

See Also
Organizational Structures
Adding Leaf Nodes (Users, License Server Hosts, and Projects)
Assigning Unassigned Leaf Nodes (Users, License Server Hosts, and Projects)

Adding Leaf Nodes (Users, License Server Hosts, and Projects)

In the hierarchy of an organizational structure, leaf nodes are the end nodes—they have no child nodes. Depending on the organizational structure type, the leaf nodes may be users, license server hosts, or projects. For example, if you create an organizational structure with the type User ID, the leaf nodes in the structure's hierarchy are users.

You can add leaf nodes manually or assign unassigned leaf nodes in FlexNet Manager for Engineering Applications.

Task   ***To add a leaf node to an organizational structure:***

1. From the **Reporting** tab, under **Organizational Structures**, click **Organizational Structures**.

2. Click the name of the organizational structure to which you want to add a leaf node.

3. Depending on the organizational structure type, click the **New User**, **New License Server Host**, or **New Project** link (in the upper-right corner). This displays the **Add User**, **Add License Server Host**, or the **Add Project** page.

4. Specify the leaf node settings. Required settings are identified by a red asterisk (*).

Setting	Description
User ID **License Server Host ID** **Project Name**	Name or ID for the leaf node.
Parent Organization	Click **Select** to display the Select Organization dialog, where you can select the parent node for this organization node. All non-leaf nodes are displayed.
Start Date	Specified as *mm/dd/yyyy*, the start date for this leaf node's parent-child relationship, inclusive of the date specified.

Additional optional settings may be available, depending on the type of leaf node.

> **Tip •** *For user nodes, you can define* custom user attributes *to provide additional information that is specific to your enterprise.*

5.   Click **Save**.

See Also
Organizational Structures
Assigning Unassigned Leaf Nodes (Users, License Server Hosts, and Projects)
Custom User Attributes

Assigning Unassigned Leaf Nodes (Users, License Server Hosts, and Projects)

In the hierarchy of an organizational structure, leaf nodes are the end nodes—they have no child nodes. Depending on the organizational structure type, the leaf nodes may be users, license server hosts, or projects. For example, if you create an organizational structure with the type User ID, the leaf nodes in the structure's hierarchy are users.

You can add leaf nodes manually or assign unassigned leaf nodes in FlexNet Manager for Engineering Applications.

Task   ***To assign an unassigned leaf node:***

1.   From the **Reporting** tab, under **Organizational Structures**, click **Organizational Structures**.

2.   Click the name of the organizational structure to which you want to assign an unassigned leaf node.

3.   Depending on the organizational structure type, click the Assign Unassigned Users, Assign Unassigned Hosts, or Assign Unassigned Projects link (in the upper-right corner). This displays a list of the unassigned leaf nodes, if there are any.

4.   From the Unassigned Nodes list, select unassigned nodes to assign them to the organizational structure.

5.   To specify a parent node:

   a.   Click Select in the "Assign to" field.

   b.   In the Select Organization dialog that appears, expand the structure to find the parent node that you want.

   c.   Select the node, then click **OK**.

6.   Click **Assign to Organization**.

See Also
Organizational Structures
Adding Organizational Structures

Hybrid Organizational Structures

Your enterprise may need to provide usage data for an organizational structure, where the data is specific to the licenses served from an individual license server. To do this, you need usage data that is aggregated for the organizational structure and for the license server. You can use *hybrid organizational structures* to do this, for user-based organizational structures.

When you create a hybrid organizational structure (or update an existing organizational structure to be a hybrid organizational structure), you enable the organizational structure for hybrid aggregation that is based on the vendor daemons you select. FlexNet Manager for Engineering Applications aggregates the data by organizational structure and by license server.

To create a hybrid organizational structure, you enable aggregation by license server, then specify the vendor daemons for which you want FlexNet Manager for Engineering Applications to aggregate usage by license server. Usage for vendor daemons that are not identified in the hybrid-organization definition will be aggregated as usual. (That is, usage data by license server will not be available unless a vendor daemon is specified in the hybrid-organization definition.)

You can enable hybrid aggregation for both standard user-based organizational structures and for virtual organizational structures.

Use Case: Providing Multi-Dimensional Usage Data to a Vendor

For example, a vendor might want to see usage data for your Geographic organizational structure, for the AcmeCo (vendor daemon: acmeco) features served by License Server 1. To do this, you would carry out the following steps:

1. Create a hybrid organizational structure (or enable hybrid aggregation for an existing organizational structure).

2. Add vendor daemon **acmeco** to the **Selected vendor daemons** list for the organizational structure.

3. Run one of the historical feature reports that is supported for use with hybrid organizational structures. See the topic, Using Hybrid Organizational Structures in Historical Feature Reports, for a list of reports.

4. In the **License server** prompt for the report, select **Specified license server**, then **License Server 1**.

5. Run the report.

See Also
Organizational Structures
Creating Hybrid Organizational Structures
Virtual Organizational Structures
Using Hybrid Organizational Structures in Historical Feature Reports

Using Hybrid Organizational Structures in Historical Feature Reports

After you have created hybrid organizational structures, you can select the hybrid organizational structures in the historical feature reports that are available in Flexera Analytics 2020 R1 reports. This enables you to report on feature usage by *both organizational structure and license server*. (The report will prompt you to select a license server after you select the vendor daemon and the features on which you want to report.)

Important • You must run aggregation if you have added new vendor daemons to FlexNet Manager for Engineering Applications. Vendor daemons will not appear in the vendor daemon list until aggregation is complete. Also note that adding a large number of vendor daemons for hybrid aggregation may result in longer aggregation times.

The following historical feature reports can be used with hybrid organizational structures:

● Feature Chargeback Report

● Feature Peak Usage Trend Report

● Feature Usage by Organization Table Report

- Organization Total Usage Chart Report

- Peak Usage by Organization Over Time Report

See Also
Organizational Structures
Creating Hybrid Organizational Structures
Virtual Organizational Structures
Reporting on Feature Usage (Historical Feature Reports)

Creating Hybrid Organizational Structures

A hybrid organizational structure is one in which selected vendor daemons are enabled for hybrid aggregation—where usage is aggregated by organizational structure and by license server. You can create a new hybrid organizational structure, or modify an existing organizational structure to enable hybrid aggregation.

Note • You can enable hybrid aggregation only for user-based organizational structures.

Creating New Hybrid Organizational Structures

Task **To create a new hybrid organizational structure:**

1. From the **Reporting** tab, under **Organizational Structures**, click **Create Organizational Structure**. This opens the Add Organizational Structure page.

2. For **Organizational Structure Type**, select **User ID**. (Hybrid organizational structures are available only for user-based organizational structures.)

3. In the **Organizational Structure Name** box, provide a unique, descriptive name for your organizational structure.

4. Define the levels for the organizational structure. For each level:

    a. Type a descriptive level name.

    b. Click **Add Level**.

5. Click the **Enable aggregation...** checkbox.

6. In the selection box, move the vendor daemons you want to select to the **Selected vendor daemons** box. To select multiple vendor daemons at one time, hold down the **Ctrl** key while selecting items.

7. Click **Save**.

The selected vendor daemons will appear at the bottom of the **View Organizational Structure** page for the organizational structure.

Modifying Existing Organizational Structures for Hybrid Aggregation

Task   *To modify an existing organizational structure to make it a hybrid structure:*

1. From the **Reporting** tab, under **Organizational Structures**, click **Organizational Structures**.

2. In the list of organizational structures, click the name of the organizational structure for which you want to enable hybrid aggregation. This opens the **View Organizational Structure** page for that structure.

    At the bottom of this page, you can see any vendor daemons that have been enabled for hybrid aggregation (in the **Vendor Daemons** list).

3. Click the **Edit Organizational Structure** link.

4. Click the **Enable aggregation...** checkbox.

5. In the selection box, move the vendor daemons you want to select to the **Selected vendor daemons** box. To select multiple vendor daemons at one time, hold down the **Ctrl** key while selecting items.

6. Click **Save**.

See Also
Organizational Structures
Virtual Organizational Structures

Virtual Organizational Structures

A virtual organizational structure is an ad hoc, user-based organizational structure that you can create for specific—often temporary—reporting use cases. You can use virtual organizational structures to combine usage for users that belong to multiple organizational structures—for example, users who are part of a functional department *and* a specific geographic location.

You create virtual organizational structures by importing a CSV file containing the organizational-structure definition. (See the topic, Creating Virtual Organizational Structures, for information about creating virtual organizational structures.)

To allow for easy organizational-structure definition, virtual organizational structures have only two levels when they are created: a top level (root node) and a leaf level (users). You can modify an existing virtual organizational structure via the FlexNet Manager for Engineering Applications user interface.
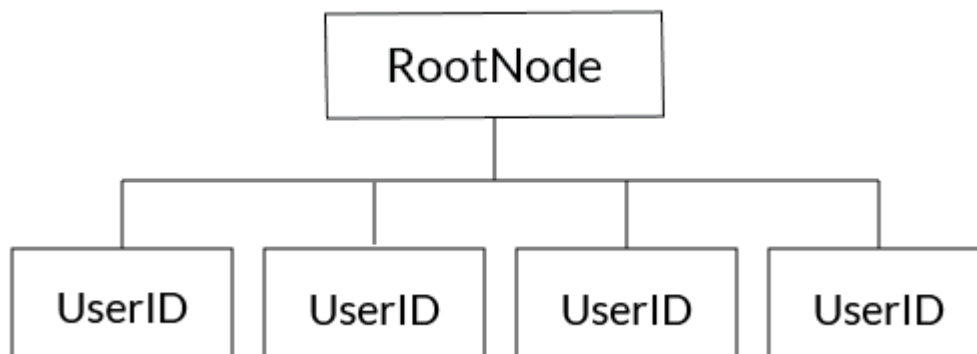
Figure 6-24: Diagram of a virtual organizational structure

Limitations

Virtual organizational structures have the following limitations:

- There is no LDAP integration for virtual organizational structures.

- Virtual organizations cannot be modified or updated via CSV import. If you attempt to import the same CSV file more than once, it will trigger an exception. You can modify a virtual organizational structure via the FlexNet Manager for Engineering Applications user interface.

Enabling Virtual Organizational Structures for Hybrid Aggregation

You can enable virtual organizational structures for *hybrid aggregation*—multi-dimensional aggregation where usage data is aggregated on the basis of organization *and* license server. (See Hybrid Organizational Structures for information.)

See Also
Organizational Structures
Creating Virtual Organizational Structures

Creating Virtual Organizational Structures

To create a virtual organizational structure, do the following:

1. Create a CSV (comma-separated values) file that defines the virtual organization structure.

2. Import the CSV file using the organizational-structure–import functionality available in FlexNet Manager for Engineering Applications.

CSV File Structure for Defining Virtual Organizational Structures

The file must contain a unique organization name and a comma-separated list of user IDs. You can have any number of user IDs on a single line. There is a single, unique parent or root (specified using the keyword **Organization name**) for all of the leaf nodes (user IDs).

Important • *The keyword **Organization name** must be spelled exactly as shown. The string that follows the keyword* ***Organization name*** *represents the name of the root node.*

The following shows the format for a virtual organization structure named *Engineering Germany*, that contains several users.

```
Organization name: Engineering Germany
userID1, userID2, userID3,
userID4, userID5, userID6
```

Importing this CSV file into FlexNet Manager for Engineering Applications will create a virtual organizational structure with a root node of Engineering Germany. The second level of this virtual organizational structure will contain six users: userId1, userId2, userId3, userId4, userId5 and userId6.

Importing the CSV File to Create a Virtual Organizational Structure

You import a CSV file to create a virtual organizational structure. Importing a virtual organizational structure is the same as importing an organizational structure using an XML file. The file extension (.csv) tells FlexNet Manager for Engineering Applications that this is a virtual organizational structure.

Task   ***To import a virtual organizational structure, using a CSV file:***

1. From the **Reporting** tab, under the **Organizational Structures** section, click **Organizational Structures**.

2. Click the **Browse** button in the upper-right part of the page and browse to the CSV file that contains your definition for the virtual organizational structure.

3. Click **Import**.

Note • *Virtual organizations cannot be modified via CSV-file import. If you attempt to import the a CSV file containing the same organization name as a previously imported file, it will trigger an exception. You can modify a virtual organization via the FlexNet Manager for Engineering Applications user interface.*

See Also
Organizational Structures
Hybrid Organizational Structures

Custom User Attributes

You can use custom user attributes in your user-based organizational structures. These custom attributes enable you to provide additional information for users that you add to your organizational structures—whether you add the users manually or via LDAP import. These custom user attributes can be used, for example, to identify contract employees working within your organization.

These custom user attributes can be used in reporting. You can also use the custom attributes when adding user-based organizational structures using XML. See Sample XML: User Organizational Structure for the syntax.

Providing User-Friendly Custom User-Attribute Names

You can provide user-friendly names for the custom user attributes using the **Custom User-Attribute Names** page. After you update the user-attribute names, the names that you provide are used on the **Add User** and **LDAP Domain Association and Mapping** pages.

Note • *If you use XML to add or update a user-based organizational structure, you must use the syntax provided in the example, Sample XML: User Organizational Structure, to specify custom user attributes: custom1, custom2, and so on. The user-friendly names you provide using the **Custom User-Attribute Names** page are used in the FlexNet Manager for Engineering Applications user interface, and are not for use in XML.*

Task   ***To define custom user attributes:***

1. From the **Reporting** tab, under the **Organizational Structures** section, click **Custom User-Attribute Names**. This opens the **Custom User-Attribute Names** page.

2. In the text boxes, type or edit the names you want to use for the custom user attributes. (You can provide up to 13 custom user-attribute names.)

3. Click **Save**.

See Also
Organizational Structures
Importing Organizational-Structure Data from LDAP
Adding Nodes to Organizational Structures
Sample XML: User Organizational Structure

Editing Leaf Nodes

Using the Edit User/Edit License Server Host/Edit Project page, you can change the parent node for the leaf node and provide a new start date for the parent-leaf node relationship.

Note • To add and work with organizational structures, the user must also have a role with the View and Manage Org Structures permission.

Task   **To edit a leaf node:**

1. From the **Reporting** tab, under **Organizational Structures**, click **Organizational Structures**.

2. Click the name of the organizational structure for which you want to edit a leaf node. This displays the View Organizational Structure page.

3. Click the leaf node name to display the Edit page for the leaf node.

4. Edit the settings as necessary. Click **Select** in the Parent Organization field to select a new parent organization for this leaf node.

See Also
Organizational Structures
Adding Organizational Structures

Viewing and Deleting Parent Node Relationships

You can view the history of the relationships between the parent node and intermediate or leaf nodes. For a particular node, the History dialog shows the displays all of the parent relationships for the node, along with the start and end dates for each relationship. This provides a history of transitions for a particular node and can be useful if you need to correct a mistake that was made moving a node between parents. You can delete a relationship using the History dialog and re-add the node as necessary.

Note • To add and work with organizational structures, the user must also have a role with the View and Manage Org Structures permission.

Example

Suppose that node **n1** was a child of parent **p1** from January 1, 2010, through February 1, 2010. Then the node **n1** was moved to parent **p2** on February 1, 2010. In this example, the relationship history would be displayed as follows.

Table 6-17 •

Name	Parent	Start Date	End Date	
n1	p1	Jan 1, 2010	Feb 1, 2010	Delete
n1	p2	Feb 1, 2010		Delete

When deleting relationships, note the following:

- For intermediate nodes, if there is more than one row (showing more than one relationship), no Delete link is displayed. History cannot be deleted for the past for intermediate nodes; only for relationships scheduled to commence in the future.

- When you delete the last row in history, the node moves back to the parent in the row immediately preceding the deleted row. and the end date for that row no longer contains a date.

- If you delete the first row in history, all other rows are deleted and the node is moved to the unassigned pool.

Task   **To view and delete parent node–leaf node relations:**

1. From the **Reporting** tab, under **Organizational Structures**, click **Organizational Structures**.

2. Click the name of the organizational structure to display the View Organizational Structure page.

3. For the node whose relation with the parent you want to view, click **History**.

See Also
Organizational Structures
Adding Organizational Structures

Importing Organizational Structure XML Files

You can define organizational structures using an XML file, then import the XML file into FlexNet Manager for Engineering Applications. The organizational structure can then be viewed and edited using the FlexNet Manager for Engineering Applications interface.

You can import organizational structure XML files in two ways—using the **Import** button on the Organizational Structures page in the FlexNet Manager for Engineering Applications interface and using the command-line utility `flexnet importorgstructure`.

To import organizational structure XML files, a user must have a role with the Import Org Structures from Command Line permission.

Note • Because importing large files from the Organizational Structures page may take a significant amount of time, it is recommended that you use command-line import if the organizational structure XML file is larger than 150 MB.

Importing from the Organizational Structures Page

Task   ***To import an organizational structure XML file from the Organizational Structures page:***

1. From the **Reporting** tab, under **Organizational Structures**, click **Organizational Structures**.

2. In the **Location** field, type the path or click **Browse** to navigate to your XML file.

3. Click **Import**.

Importing from the Command Line Using flexnet importorgstructure

Task   ***To import an organizational structure XML file at the command line:***

1. Ensure that FlexNet Manager for Engineering Applications Admin and FlexNet Manager for Engineering Applications Reporting are running.

2. Open a Command prompt and change to the FlexNet Manager for Engineering Applications Admin installation directory *<fnm_admin_installdir>*.

3. Type the following command:

   flexnet importorgstructure -u*<username>* -p*<password>* -f*<orgstructure-file-name-with-path>*

   To view help for this utility, run the command:

   flexnet importorgstructure help

See Also
Organizational Structures
Defining Organizational Structures Using an XML File

Defining Organizational Structures Using an XML File

FlexNet Manager for Engineering Applications provides the XML schema for the organizational structure `orgStructure.xsd` and sample XML files in the FlexNet Reporting installation directory at `\site\samples`. The schema ensures that an organizational structure contains only one type of entities (leaf-nodes)—that is, a host organizational structure can never contain users or projects.

The organizational structure schema enables you to contain one or more structures in a single XML file at the time of import. The organizational structures can be one of three types—`userOrgStructure`, `hostOrgStructure`, or `projectOrgStructure`. The userOrgStructure can contain at least one or more userOrgNodes or one or more users. The userOrgNode should contain at least one more user or one or more userOrgNode as its child. The hostOrgStructure and projectOrgStructure have a similar hierarchy.

In an organizational structure, the leaf nodes (users, hosts, or projects) can be grouped into organization nodes (for example, userOrgNode), which could be grouped under other OrgNodes or the OrgStructure. The organizational structure is associated with a start date (startDate). Reports could be run for leaf nodes, organization unit nodes or structures. The organizational structure is validated to ensure that a child node would never have more than one parent at a time.

See Special Characters for information about how to express some characters using XML.

Special Characters

In the XML file, some special characters must be written in a particular way to be processed correctly.

Table 6-18 • XML Special Characters

Character	Syntax
& (ampersand)	&
< (less than)	<
> (greater than)	>
" (double quote)	"
' (single quote/apostrophe)	'

Sample XML: User Organizational Structure

The following XML example shows how to add a user-based organizational structure to FlexNet Manager for Engineering Applications. The `notes` attribute can contain up to 1,000 characters.

You can include up to 13 custom user attributes in the XML for a user-based organizational structure. To include a custom user attribute, use the following format—

    custom*n*="value"

—where *n* is the custom attribute number. For example, you might use a custom attribute (*custom1*) to identify a contractor's company affiliation and another custom attribute (*custom2*) to indicate whether an employee is working remotely or in-house:

    custom1="ContractCo"
    custom2="remote"

In the FlexNet Manager for Engineering Applications user interface, you can provide user-friendly names for the custom user attributes using the **Custom User-Attributes Names** page. Note that you must use the format custom*n* to specify custom user attributes in the XML file, even if you have provided user-friendly names for the attributes.

Note • The `isnew` *flag has been deprecated. The flag must be present in the XML file, but the value is not processed*

```
<?xml version="1.0" encoding="UTF-8"?>
<orgStructures startDate="2005-01-01" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="orgStructure.xsd">
    <userOrgStructure name="Sample Users Org Structure" isNew="true">
        <userOrgNode name="FNM Users" notes="All users using FNM product">
            <userOrgNode name="Engg">
                <user name="jon" firstName="John" lastName="Kent" address1="A Street" address2="Suite 402"
city="San Francisco" state="CA" postalCode="00000" country="USA" phoneNumber="123-000-0000"
cellNumber="000-000-0000"  email="jon@companyname.com" department="Engg" status="active"
custom1="ContractCo"/>
                <user name="mayu" firstName="Mayu" lastName="Aegie" address1="A Street" address2="Suite
402" city="San Francisco" state="CA" postalCode="00000" country="USA" phoneNumber="123-000-0000"
cellNumber="000-000-0000"  email="maegie@companyname.com" department="QA" status="active"
custom1="ContractCo"/>
            </userOrgNode>
            <userOrgNode name="Services">
                <user name="cathy" firstName="Cathy" lastName="Olsen" address1="A Street" address2="Suite
302" city="San Francisco" state="CA" postalCode="00000" country="USA" phoneNumber="123-000-0000"
cellNumber="000-000-0000"  email="cathy@companyname.com" department="Sales" status="active"/>
                <user name="rob" firstName="Rob" lastName="Rodriguez" address1="A Street" address2="Suite
202" city="San Francisco" state="CA" postalCode="00000" country="USA" phoneNumber="123-000-0000"
cellNumber="000-000-0000"  email="rob@companyname.com" department="Support" status="active"/>
            </userOrgNode>
        </userOrgNode>
    </userOrgStructure>
</orgStructures>
```

See Also
Organizational Structures
Updating Organizational Structures Using XML
Special Characters
Custom User Attributes

Sample XML: License Server Host Organizational Structure

The following XML example shows how to add a license server host–based organizational structure to FlexNet Manager for Engineering Applications. The notes attribute can contain up to 1,000 characters.

📄

Note • *The* isnew *flag has been deprecated. The flag must be present in the XML file, but the value is not processed*

```
<?xml version="1.0" encoding="UTF-8"?>
<orgStructures startDate="2005-01-01" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="orgStructure.xsd">
    <hostOrgStructure name="Sample Host Org Structure" isNew="true">
        <hostOrgNode name="North America" notes="Hosts in US and canada">
            <host name="eunomia" displayName="Eunomia"/>
            <host name="irene" displayName="Irene"/>
        </hostOrgNode>
        <hostOrgNode name="Europe">
            <host name="astrea" displayName="Astrea"/>
            <host name="hebe" displayName="Hebe"/>
        </hostOrgNode>
    </hostOrgStructure>
```

```
</orgStructures>
```

See Also
Organizational Structures
Updating Organizational Structures Using XML
Special Characters

Sample XML: Project Organizational Structure

The following XML example shows how to add a project-based organizational structure to FlexNet Manager for Engineering Applications. The notes attribute can contain up to 1,000 characters.

📄

Note • *The* isnew *flag has been deprecated. The flag must be present in the XML file, but the value is not processed*

```
<?xml version="1.0" encoding="UTF-8"?>
<orgStructures startDate="2005-01-01" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="orgStructure.xsd">
    <projectOrgStructure name="Sample Projects Org Structure" isNew="true">
        <projectOrgNode name="FlexNet" notes="FlexNet projects">
            <project name="FlexNet Manager" displayName="FlexNet Manager" />
            <project name="FlexNet Operations" displayName="FlexNet Operations" />
        </projectOrgNode>
    </projectOrgStructure>
</orgStructures>
```

The notes attribute can contain up to 1,000 characters.

See Also
Organizational Structures
Updating Organizational Structures Using XML
Special Characters

Updating Organizational Structures Using XML

An organizational structure can be updated to have additional nodes, delete nodes and move nodes from one parent to another by modifying and re-importing the organizational structure. The update is always done incrementally and cannot retroactively change an organizational structure. In the cases where the organizational structure is modified and needs to be taken back to a previous state at the previous time, it is recommended to delete a structure and re-import.

You can re-use a previously imported XML file to create an updated organizational structure. (Note that the isnew flag has been deprecated. The flag must be present in the XML file, but the value is not processed.)

Organizational structures can be updated to add a node that was previously deleted, as long as the start date for the node being re-added is not prior to the end-date for the same node. While updating the organizational structure, it is validated to ensure that no child node exists prior to its parent node. The best way to ensure the changes made to the structure are valid is to provide an appropriate start-date for a structure. The start-date for a structure can never be in the past.

Another key consideration with regard to updating an existing organizational structure is that the names of the existing nodes must remain the same. If a node is renamed, FlexNet Manager for Engineering Applications treats the two nodes as two different nodes belonging to different time periods.

Running Report Data Aggregation After XML Import

When updating an organizational structure using XML, you can delete any leaf node. However, the deleted nodes are not moved to the unassigned pool immediately after the update. After updating an organizational structure using XML, you must run the report data aggregation process. The aggregation process moves deleted leaf nodes that had usage data, to the unassigned pool.

See Also
Organizational Structures
Adding Organizational Structures
Report Data Aggregation

Importing Organizational-Structure Data from LDAP

FlexNet Manager for Engineering Applications enables you to import the organizational and user data for an organizational structure from a defined LDAP domain. Prior to importing the LDAP data, you must associate the organizational structure with an LDAP domain, and map the domain attributes to specific levels in the organizational structure. You must import report logs before importing data from LDAP.

LDAP Data Import Process

The process for importing organizational-structure data from LDAP is as follows:

1. Create an organizational structure. Only one mapping can be defined per organizational structure.

2. Define any custom user attributes that you require. Custom user attributes enable you to provide user information that is specific to your enterprise.

3. Add an LDAP domain association and map domain attributes to levels in the organizational structure, then test the mapping for a specified user.

4. Import report logs. The LDAP import will import only the users found in previously imported report logs.

5. Import LDAP organizational-structure data on demand or set up a schedule for LDAP data import using the Periodic Aggregation scheduler.

After LDAP data is imported, the attribute–organizational structure mapping cannot be changed. You can, however, change the user attribute mappings.

See Also
Associating Organizational Structures with LDAP Domains and Defining Attribute Mappings
Importing LDAP Data on Demand
Custom User Attributes

Associating Organizational Structures with LDAP Domains and Defining Attribute Mappings

You can associate organizational structures with LDAP domains and define attribute mappings using the **LDAP Association and Mapping** page.

> **Note •** *Use the* ***Custom User-Attribute Names*** *page to define any custom attributes that you require. These custom user attributes enable you to provide and map to user information that is specific to your enterprise.*

Task   ***To map LDAP attributes to organizational structure levels:***

1. From the **Reporting** tab, under **Organizational Structures**, click **Organizational Structures**.

2. If necessary, add an organizational structure. (Only one mapping can be defined per organizational structure.)

3. Select the checkbox to the left of the organizational structure to which you want to add the LDAP association, and click the **Add LDAP association** button (at the top of the page). The **LDAP Domain Association and Mapping** page is displayed.

4. From the **Domain** list, select the domain from which you want to import organizational-structure data.

    If you select a new domain from the list after completing some of the mapping, the attribute mappings will be reset.

5. In the **Attribute Retrieval User ID** field, specify the LDAP user ID that you want FlexNet Manager for Engineering Applications to use to retrieve the attribute list, then click **Retrieve Attribute List for User**.

    This populates the mapping sections of the page using the specified user's LDAP attributes.

6. In the **Attribute-Organizational Structure Mapping** section, map the LDAP attributes to the organizational-structure levels. The first level (Level 1) will be the name of the organizational structure with which you are associating the LDAP domain. The last level should be user names (leaf nodes of the organizational structure).

    After LDAP data is imported, this attribute-organizational structure mapping cannot be changed. (This section will be displayed as view only.)

7. In the **User Attribute Mapping** section, map the user attributes.

8. To test the mapping, specify a user ID in the **User ID** field, then click **Test mapping for selected user**.

    The mapping test shows the attribute data for the specified user to the right of the Level mapping menus (in the **Attribute - Organizational Structure Mapping** section).

9. Click **Save mapping**.

See Also
Importing Organizational-Structure Data from LDAP
Importing LDAP Data on Demand
Custom User Attributes

Importing LDAP Data on Demand

You can import LDAP data on demand by clicking the **Import LDAP Data** button from the **Organizational Structures** page.

To import LDAP data on a schedule, you can use the Periodic Aggregation scheduler to import organizational-structure data from LDAP prior to aggregating report log data.

Task   **To import LDAP organizational-structure data:**

1.   From the **Reporting** tab, under **Organizational Structures**, click **Organizational Structures**.

2.   Click the checkbox in to the left of the organizational structure for which you want to import LDAP data, then click **Import LDAP data** (at the top of the page).

Note • *If the organization has no domain association, you will need to* add an LDAP association.

3.   In the **Import Data from LDAP Domain** dialog box, specify a start date for the organizational structure, then click **Import now**.

See Also
Importing Organizational-Structure Data from LDAP
Associating Organizational Structures with LDAP Domains and Defining Attribute Mappings

Reporting on Usage By Project

Using organizational structures, you can enable reporting by project. This way, you can see the usage of software products by various project teams in your enterprise.

Setting the LM_PROJECT Environment Variable

In order to enable reporting by project, all users working on the same project must set the environment variable *LM_PROJECT* to a string that describes the project. FlexNet Manager for Engineering Applications groups usage by project, as defined by what *LM_PROJECT* was set to when the application was run.

See Also
Organizational Structures

Tiers

Autodesk licenses its applications as individual features, and groups those applications into tiers. Each application tier has a set price that can differ from other tiers.

To provide reporting based on tiers rather than features, FlexNet Manager for Engineering Applications provides functionality that enable you to group features (Autodesk applications) into tiers for aggregation purposes, and to run reports on those tiers.

This functionality is available from the **Tiers** section, which is under the **Reporting** tab in the user interface.

Task   ***The basic process for reporting on tier-based usage is as follows:***

1. Turn on Tiers functionality to display the **Tiers** tab in the FlexNet Manager for Engineering Applications user interface. The **Tiers** tab is displayed when both of the following conditions are true:

   - The Tier-Based Reporting System Configuration option must be selected. (This option is available from the Admin tab, under System Configuration, then Reporting.)

     If the Tier-Based Reporting option was not selected, you must log out and log back in to FlexNet Manager for Engineering Applications after selecting the option, to be able to see the Tiers tab.

   - To work with tier functionality, a user must have a role with the appropriate permission level.

     - To manage tiers from the FlexNet Manager for Engineering Applications user interface, a user must have a role that has the View and Manage Investment Planner permission.

     - To import tiers from the command line, a user must have a role that has the Import Products and Contracts from Command Line permission.

2. If the usage data is not already in FlexNet Manager for Engineering Applications, bulk-import the report log data that contains information about tier-based usage.

3. Create tiers—in one of the following ways:

   - Importing Tier Definitions Using XML—This is the recommended way to add tier definitions. You can import tier definitions from the command line or from the **Tiers** page in the user interface.

   - Adding Tiers Using the Add Tier page—You can define tiers using the **Add Tier** page in the FlexNet Manager for Engineering Applications user interface.

4. Run (or re-run) aggregation. You need to re-run aggregation in the following cases:

   - One or more tiers has been deleted.

   - You have imported tier definitions, either using the **Import Tiers** button on the **Tiers** page or by importing the definition file at the command line.

5. Run usage reports. See Reporting on Tier-Based Usage for descriptions of the predefined reports that are specific to tier-based usage.

A feature can be part of only one tier.

See Also
Creating Tiers
Editing Tiers
Creating Tiers

Creating Tiers

You can create tiers manually using the **Add Tiers** page in the FlexNet Manager for Engineering Applications user interface, or by importing an XML file (either from the user interface or from the command line).

You can create tiers in the following ways:

- Importing XML Tier Definitions Using the User Interface

- Importing XML Tier Definitions Using the Command Line

- Adding Tiers Using the Add Tier page

To create a tier, you provide a name for the tier, then add features to the tier. A feature can belong to *only one tier*.

See Also
Tiers
Importing Tier Definitions Using XML
Adding Tiers Using the Add Tier page
Editing Tiers
Viewing and Deleting Tiers

Importing Tier Definitions Using XML

You can use define tiers in FlexNet Manager for Engineering Applications by importing an XML file containing the tier definitions. The import can be initiated in two ways:

- From the command line

- Using the Add Tiers page

Importing tier definitions is the recommended way to create tiers. Your vendor typically will provide you with a predefined XML file that you can import. After importing the XML file, you can use the Edit Tier page in the FlexNet Manager for Engineering Applications user interface to make incremental changes to your tier definitions.

Important • The XML file must contain a complete list of tier-feature definitions. The import will delete all previously created tier definitions from FlexNet Manager for Engineering Applications. You will need to run aggregation after importing the definitions.

See Also
Tiers
Importing XML Tier Definitions Using the User Interface
Importing XML Tier Definitions Using the Command Line
XML Tier Definition Format

Importing XML Tier Definitions Using the User Interface

You can import tier definitions contained in an XML file in two ways—from the FlexNet Manager for Engineering Applications user interface and from the command line.

Important • The XML file must contain a complete list of tier-feature definitions. The import will delete all previously created tier definitions from FlexNet Manager for Engineering Applications. You will need to run aggregation after importing the definitions.

Task　**To import tier definitions contained in an XML file using the FlexNet Manager for Engineering Applications user interface:**

1. From the **Reporting** tab, under **Tiers**, click **Tier Summary**.

2. Click **Browse** to browse to your tier definition XML file.

3. Click **Import Tiers**.

4. Read the warning message that appears (regarding the deletion of tier-definition and aggregation data) and click **OK** if you want to continue the import.

The tier definition will be added to FlexNet Manager for Engineering Applications and the information will appear in the table at the bottom of the Tiers page. To edit information contained in a tier, click the `<Tier Name>` link to display the Edit Tiers page.

See Also
Tiers
Importing XML Tier Definitions Using the Command Line
XML Tier Definition Format
Editing Tiers
Viewing and Deleting Tiers

Importing XML Tier Definitions Using the Command Line

You can import tier definitions contained in an XML file in two ways—using the Add Tiers page, and from the command line.

Important • *The XML file must contain a complete list of tier-feature definitions. The import will delete all previously created tier definitions from FlexNet Manager for Engineering Applications. You will need to run aggregation after importing the definitions.*

Task　**To import tier definitions contained in an XML file using the command line:**

1. Ensure that FlexNet Manager for Engineering Applications Admin and Reporting are running.

2. Open a Command prompt and change to the FlexNet Manager for Engineering Applications Admin installation directory *<fnm_admin_installdir>*.

3. Type the following command:

```
flexnet importtiers -u<username> -p<password> -f<tier-definition-file-name-with-path>
```

To view help for this utility, run the command:

```
flexnet importtiers help
```

See Also
Tiers
Importing XML Tier Definitions Using the User Interface
XML Tier Definition Format
Editing Tiers
Viewing and Deleting Tiers

XML Tier Definition Format

The following shows the format for a tier-definition XML file. The file specifies tier name and an optional cost, then assigns features for a specified vendor to the tier. A feature can belong to only one tier.

```
<?xml version="1.0" encoding="UTF-8"?>
<allTiers>
<tier name="tierABC" cost="3000">
    <vendor name="vendorA">
        <feature name="f1" />
        <feature name="f2" />
        <feature name="f3" />
        <feature name="f4" />
    </vendor>
    <vendor name="vendorB">
        <feature name="f11" />
        <feature name="f12" />
        <feature name="f13" />
    </vendor>
</tier>
<tier name="tierXYZ" cost="5000">
    <vendor name="vendorA">
        <feature name="f5" />
        <feature name="f6" />
    </vendor>
    <vendor name="vendorC">
        <feature name="f21" />
        <feature name="f22" />
    </vendor>
</tier>
</allTiers>
```

See Also
Tiers
Importing XML Tier Definitions Using the User Interface
Importing XML Tier Definitions Using the Command Line
Viewing and Deleting Tiers

Adding Tiers Using the Add Tier page

You can manually create tiers using the Add Tier page in the FlexNet Manager for Engineering Applications user interface.

The lists of vendors and features displayed in the Add Tier page are populated after aggregation has been run.

Task   ***To add a tier using the Add Tier page:***

1. From the **Reporting** tab, under **Tiers**, click **Create Tier** to display the Add Tier page.

2. In the **Tier Name** field, type a unique name for this tier.

3. In the **Cost** field, type an optional cost. This must be an integer.

4. In the **Step 1** box, select one or more vendor daemons to display their features in the Step 2 box on the right. To select multiple vendor daemons, hold down the **Ctrl** key while selecting vendor daemon names.

    After you have selected the vendor daemons, click the arrow key to display the vendor daemons' features. You can add features from different vendor daemons to the same tier.

5. In the **Step 2** box, select the features that you want to add to the tier. Features that appear in gray text belong to another tier and cannot be selected. (A feature can belong to only one tier.) To select multiple features, hold down the **Ctrl** key while selecting feature names.

6. After you have selected the features that you want to add to the tier, click **Add to Tier**.

7. Click **Save**. The tier now appears in the Tiers list.

See Also
Tiers
Editing Tiers
Importing Tier Definitions Using XML
Viewing and Deleting Tiers

Editing Tiers

To edit an existing tier, use the Edit Tier page in the FlexNet Manager for Engineering Applications user interface.

Task   ***To edit a tier:***

1. From the **Reporting** tab, under **Tiers**, click **Tier Summary**.

2. Click the tier name to display the Edit Tier page for the selected tier.

3. Make the required changes.

4. Click **Save**.

See Also
Tiers
Creating Tiers
Importing Tier Definitions Using XML
Viewing and Deleting Tiers

Viewing and Deleting Tiers

The tiers that have been created or imported are listed in the Tiers page, which is available beneath the Reporting tab. The Tiers page displays the tier name, cost associated with the tier, and the names of the features that compose the tier.

Task   *To view tiers:*

From the **Reporting** tab, under **Tiers**, click **Tier Summary**.

Task   *To delete a tier:*

Select the check box in front of the tier you want to delete and click **Delete**. To delete all tiers, select the check box in the top row, to the left of the Tier Name column label, then click **Delete**.

See Also
Tiers
Creating Tiers
Editing Tiers

Report Logs

Report log files contain feature usage information and are generated by vendor daemons. However, a vendor daemon does not write report logs by default; this action must be enabled. The data in report logs is compressed and authenticated and is used only by FlexNet Manager for Engineering Applications Reporting.

In the Report Logs page, you can view information for report logs that have been imported into FlexNet Manager for Engineering Applications; the following information is displayed.

- Status—Aggregating, Importing, Failed, or Complete—The value in the Status column indicates whether the report log is in the process of being aggregated, is in the process of being imported, the import has failed, or the import process is complete.

- Vendor daemon name

- License server host name

- Start and end date of the log

- Original file name

- File size

Task   *To view report logs that have been imported into FlexNet Manager for Engineering Applications:*

1. From the **Reporting** tab, under **Report Logs**, click **Report Log Summary**.

2. Select the report log and click the **Download** button. FlexNet Manager for Engineering Applications provides the report log in a `.zip` file and asks whether you want to open the `.zip` file or save it.

Click the **Delete** button for a report log to remove it.

Select multiple report logs for delete or download by selecting the check box to the left of the Status heading.

Note • *A status of **Aggregating** indicates that data aggregation is in progress. Report logs cannot be deleted until the status is **Complete**.*

You can import a report log using this page.

To rotate report logs, FlexNet Manager for Engineering Applications must know the location of the report log by reading the report log name configured in the options file. If you change this location, you must update the options file with an absolute path to the report log. For example, if the report log resides at `c:\vendors\report.rl`, then you must specify `c:\vendors\report.rl` and not `report.rl`.

See Also
Importing Report Logs
Enabling Report Logging
Managing (Rotating) Report Logs
Bulk Importing Existing Usage Data

Importing Report Logs

You can import an existing report log file to FlexNet Manager for Engineering Applications, so FlexNet Manager for Engineering Applications can ingest the report log data into the reporting database and use the data to create a report.

Task   **To import a report log:**

1. From the **Reporting** tab, under **Report Logs**, click **Report Log Summary**.

2. In the Import Report Log field, enter the name of the report log you want to import, or click the **Browse** button to navigate to the report log.

3. Click **Import**.

The report log is immediately displayed in the Report Logs list. While FlexNet Manager for Engineering Applications is importing the log file, the Status column will display Importing. When the status changes to Complete, the import process is finished and you can use the report log data to run reports.

You may need to refresh the view (by clicking the Refresh toolbar button or pressing **F5**) to update the report log status.

Important • *The maximum file size for import is 250 MB; however, importing large files may take a significant amount of time. Flexera recommends that you use the bulkimport command-line functionality to import report logs that are larger than 150 MB.*

See Also
Organizational Structures
Enabling Report Logging
Managing (Rotating) Report Logs
Bulk Importing Existing Usage Data

Managing (Rotating) Report Logs

As a vendor daemon runs for a period of time, the size of the report log increases. If your enterprise has a lot of license usage activity, the report log can become very large in a short period of time.

FlexNet Manager for Engineering Applications provides the ability to automatically archive the usage data from the active report log to a new archive report log file, thus flushing out the active report log file to zero bytes. This process is known as *rotating* the report log. See Report Log Administration for details about archived report logs.

You can configure a rotation schedule based on the rate at which usage data is generated. Each time the active report log is rotated, the resulting new archive file is cataloged, the usage data is loaded into the FlexNet Reporting database, and the data becomes available to report configurations.

When you schedule the report log rotation time, the time you need to specify is based on the FlexNet Manager for Engineering Applications server time, and not your local time if that is different.

Task   ***To set up an automatic report log rotation schedule:***

1.   From the **Servers** tab, under **Vendor Daemons**, click **Vendor Daemon Summar**y.

2.   Click the name for the vendor daemon of interest.

3.   Modify parameters in the **Report Log** section of the **Configure and Manage Vendor Daemon** page.

4.   Click **Save**.

---

*Note • The only usage data available to report configurations is that which has been rotated. To ensure the newest data is available for configurations, rotate the report log manually by clicking the **Rotate Report Log Now** button on the **Configure and Manage Vendor Daemon** page. Depending on your license usage, you should wait a few hours or a few days after enabling report logging before rotating the report log to allow a significant amount of usage data to accumulate.*

See Also
Organizational Structures
Enabling Report Logging

Report Log Administration

Each time a report log is rotated, an archive report log file is copied to the machine on which FlexNet Manager for Engineering Applications resides.

●   Rotated report logs are stored with unique file names on the machine on which FlexNet Manager for Engineering Applications resides. Each time the active report log is rotated, a new archive file is created.

●   Report log archives accumulate to a sizable quantity over time on the license server machine. Consider deleting older archive files that are no longer needed.

On the FlexNet Manager for Engineering Applications Admin machine:

1.   The report log is copied in preparation for loading to the FlexNet Manager for Engineering Applications Reporting database.

2.   FlexNet Manager for Engineering Applications validates the report log file to verify that the:

- File can be read.

- Log header exists.

- Header has a `hostname`.

3. A catalog entry is made in the FlexNet Manager for Engineering Applications Reporting database. The entry includes the following information:

- File name

- Host name

- File size

4. Usage data contained in the report log is parsed and loaded to the FlexNet Manager for Engineering Applications Reporting database.

5. Report log metadata—containing, for example, feature names which are used to populate menus in the Report Configuration pages—is loaded to the FlexNet Manager for Engineering Applications Reporting database.

6. The usage data contained in the FlexNet Manager for Engineering Applications Reporting database is available to report configurations.

Note • A copy of the report log is also retained on the FlexNet Agent machine in the `data` directory for the FlexNet Agent installation.

FlexNet Manager for Engineering Applications archive logs are stored on the license server machine with file names of the format:

<server_name>-<vendor_name>-yyMMddhhmmss-<sequence_number>`.rl`

Table 6-19 • Report Log Name Components

Component	Description
`<server_name>`	Name of the license server host.
`<vendor_name>`	Name of the vendor daemon.
`yyMMddhhmmss`	Timestamp (in 24-hour format) corresponding to the time at which the report log is rotated by the vendor daemon, local to the system that originally created the report log.
`<sequence_number>`	A running sequence number that the FlexNet Agent appends to the file name to ensure uniqueness if the report log is rotated twice within the same second.

For example, consider the archive report log with the name:

`TestLicenseServer1-avend10-150910104137-401.rl`

This file was written on September 10, 2015 at 10:41:37 by the vendor daemon avend10 on the license server TestLicenseServer1.

See Also
Organizational Structures
Importing Report Logs
Enabling Report Logging
Managing (Rotating) Report Logs
Bulk Importing Existing Usage Data

Enabling Report Logging

Each report log that FlexNet Manager for Engineering Applications processes must contain usage data written by a single vendor daemon running on a single machine. Therefore, to enable report logs whose data can be loaded into the FlexNet Reporting database for report processing, you must enable report logging for each instance of a vendor daemon.

To enable reporting for a vendor daemon, you must include the keyword REPORTLOG in the vendor daemon's options file, and specify the path to the report log file. You can edit a vendor daemon's options file from the FlexNet Manager for Engineering Applications user interface. See Options Files: Passing Instructions to Vendor Daemons for more information.

Task   ***To enable report logging:***

1. From the **Servers** tab, under **Vendor Daemons**, click **Vendor Daemon Summar**y.

2. Click the name link of the vendor daemon for which you want to enable logging. This displays the Configure and Manage Vendor Daemon page.

3. Click **Edit Options File** to display the Edit Options File screen. Here you can modify directly the content of the vendor daemon's options file.

4. In the options file text box, type the following:

    `REPORTLOG +<path_to_report_log_file_name.rl>`

    Specify the full path to where you want FlexNet Manager for Engineering Applications to write the report log, including the file name. The report log file must have the file extension `.rl`. FlexNet Manager for Engineering Applications adds the line to the vendor daemon's options file.

    The leading "+" character tells the vendor daemon to append to the specified file each time it starts, rather than clearing and overwriting the file. There is no space after the "+" character. If you do not include the "+" character, a new report log will overwrite the existing report log file.

5. Click **Save**, then click **Reread License Files**.

6. In the Log Rotation Scheduling section, indicate whether you want to rotate the report log on a scheduled basis. You can rotate the report log manually by clicking the **Rotate Report Log Now** button.

7. Stop and restart the vendor daemon for the changes to take effect, by clicking the **Stop Daemon** and then the **Start Daemon** buttons.

FlexNet Manager for Engineering Applications adds the options file path to the VENDOR line in the license file. For example:

    `VENDOR vendor options=options_file_path`

Redundant License Server Configurations

The options file and license files for each license server in a redundant license server configuration must be set up in order for report logging to continue when the master changes. If a master license server goes down, the new master reads its

license and options files and writes to its own report log. Additionally, each vendor daemon in the configuration must write to a separate report log.

See Also
Organizational Structures
Importing Report Logs
Enabling Report Logging
Managing (Rotating) Report Logs
Options Files: Passing Instructions to Vendor Daemons

Bulk Importing Existing Usage Data

To import existing usage data, use the `bulkimport` command of the *flexnet_man_dir*/`flexnet` utility. This command imports report logs that you may have accumulated prior to installing FlexNet Manager for Engineering Applications.

In FlexNet Manager for Engineering Applications, the `bulkimport` command does the following:

● Writes a catalog entry (for each report log) to the FlexNet Manager for Engineering Applications database.

● Parses the report logs and puts the data into the FlexNet Reporting database, where FlexNet Manager for Engineering Applications can access it.

Syntax

`flexnet bulkimport -uusername -ppassword -ffolder [-ccustomerid] [-sserver] [-r]`

The parameters in [brackets] are optional.

Note • If the value for the `–uusername`, `–ppassword`, or `–ffolder` parameter contains a comma, semicolon, or ampersand (&), enclose the value in double quotes ("").

Parameters

Table 6-20 • bulkimport Parameters

Parameter	Description
–u*user*	Specifies the FlexNet Manager for Engineering Applications user to run this command. The user must be assigned a role with the Bulk Import Report Logs permission.
	Enclose the value in double quotes (“”) if it contains a comma, semicolon, or ampersand (&).
–p*password*	Specifies the password for user. For the user admin, the password is admin.
	Enclose the value in double quotes (“”) if it contains a comma, semicolon, or ampersand (&).
–f*folder*	A directory containing report logs, with .rl extensions. If folder names contain embedded spaces, enclose them in double quotes.
	To specify an individual report log, provide the report log file name.
	Enclose the value in double quotes (“”) if it contains a comma, semicolon, or ampersand (&).
–s*server*	Specifies the URL for the FlexNet Manager for Engineering Applications Admin server, which must be an https connection.
	For example:
	`https://localhost:8445/flexnet`
	This is an optional argument. If no argument is specified, then the server is assumed to be:
	`https://127.0.0.1:<admin server port number>/flexnet`
–r	Specifies whether the *folder* should be processed recursively. Recursive processing means that FlexNet Manager for Engineering Applications will search any subdirectories of *folder* for report logs to be imported.
	• To process folder recursively, append any of the values true, yes, or 1 to -r (for example, -ryes) or do not specify an argument. If no argument is specified, *folder* is processed recursively.
	• To prevent recursive processing, append any of the values false, no, or 0 to -r (for example, -rno).

Example

To import all of the usage data in report logs in a particular directory, type:

```
flexnet bulkimport -uadmin -padmin -f”directory with report logs”
```

See Also
Importing Report Logs

Common Report Log Definitions

FlexNet Manager for Engineering Applications provides common report log importing—available with a separate license from Flexera—which enables enterprises to define a report log format, then import those report logs into FlexNet Manager for Engineering Applications using the user interface or at the command line.

This functionality enables enterprises to import non-FlexNet (and non-LUM) report logs for usage reporting and tracking purposes. In this way, FlexNet Manager for Engineering Applications provides for comprehensive reporting across your engineering and technical application usage and enables you to do consolidated planning for your enterprise-wide software licensing needs.

Creating a common report log definition is also the first step in the process of managing a third-party license server using FlexNet Manager for Engineering Applications.

The process for working with non-FlexNet report log data is:

1. Create a report definition in FlexNet Manager for Engineering Applications, using functionality available from the Report Log Definitions tab.

2. Format your report log files properly, generate or convert them to match the formats that you have defined.

3. Import the properly formatted report logs using the command-line `bulkimport` utility or using the Import button on the Report Logs page.

4. Create and generate reports based on your usage data.

Report Log Definitions page

The Report Log Definitions page displays a list of all of the custom report log definitions that you have created. This page displays the following information:

● Name of the report log definition.

● License system for which this report log definition was created.

● File extension of the report log to be imported.

From this page, you can delete existing report log definitions and move to the Add Report Log Definition or the Edit Report Log Definition pages.

See Also
Creating Report Log Definitions
Formatting Common Report Log Files
Importing Common Report Logs

Creating Report Log Definitions

To enable FlexNet Manager for Engineering Applications to report on non-FlexNet license usage, you create report log definitions that describe the structure of the usage events. FlexNet Manager for Engineering Applications uses this definition to parse usage event data contained in report logs when they are imported.

Task   **To add a report log definition:**

1.   From the **Reporting** tab, under **Report Log Definitions**, click **Create Report Log Definition** to display the Add Report Log Definition page.

2.   In the top section, provide the following information. Required settings are identified by a red asterisk (*****).

Setting	Description
Name	Unique name for the report log definition.
License System	The license system for which you are creating this report log definition. Choose one of the predefined options or choose a Custom option if the license system is not listed.
	After you choose a license system for a report log definition, the license system option is removed from this list and cannot be used for future report log definitions.
File Extension	The file extension that is used for the report logs.
	FlexNet Manager for Engineering Applications uses the file extension to determine which report log definition it must use to parse the report log file when it is imported.
Delimiter	Specifies what is used to delimit data contained in the report log file.
	The maximum delimiter size is five.
Each Item Value Double Quoted	Select this check box if all of the item values in the report log are in double quotes. Values must be in double quotes if any of the values in the report log contain delimiters. This includes values in the header, feature list, usage events section, and footer.
	For example, if your report logs use commas as delimiters and one of the values contains a comma, then all values in the report log must be enclosed in double quotes.
	● If a value contains double quotes, it must be escaped with a backslash (\\).
	● For optional items, if the values do not exist, double quotes with empty values are required.
	See Formatting Common Report Log Files for information on how the report log file must be formatted. See Common Report Log Examples for an example.
Event Matching Rule	Specifies how FlexNet Manager for Engineering Applications should match license-grant and license-release events in the report log.
	● **Duration**—Matches the value (license-grant timestamp minus duration) to the license-release timestamp of events that have the same feature name, feature version, user name, and user host, to determine whether the events match. If you choose Duration, you must specify a column number for the Duration property (in the Properties section).
	● **Transaction ID**—Matches license-grant and license-release events where the transaction ID is the same. If you choose Transaction ID, you must specify a column number for the Transaction ID property (in the Properties section).

3.   In the Usage Event Data section (bottom of the page), specify where usage event data is located in the report log file. To do this, specify the Column Number in the report log in which the usage-event property's value is contained. The listed properties will be imported to FlexNet Manager for Engineering Applications (if they exist in the report log file); all other properties contained in the report log file are ignored.

For some properties, additional information about how the value is formatted in the report log file is required. Provide this information in the "Format of Data in Report Log" field. Required settings are identified by a red asterisk (*). Click the sample links at the top of the section to view examples.

Most properties are self explanatory; however, some require you to identify how the information is formatted or identified in the report log:

- **Date/Time _n_**—In the report log file, the date/time must be expressed in GMT. In the "Format of Data in Report Log" field, specify the format of the date and time using Java patterns. At minimum, Date/Time 1 is required, but if the license event's date/time information spans multiple columns, you can specify which columns contain which date/time information by using multiple Date/Time fields.

   For information about the Java date and time patterns, see Oracle's documentation page:
   https://docs.oracle.com/javase/7/docs/api/java/text/SimpleDateFormat.html

   Example using only Date/Time 1

   | Date/Time 1 | MM/dd/yyyy HH:mm:ss | * | 3 | * |

   Example using all Date/Time fields

Date/Time 1	EEE	*	3	*
Date/Time 2	MM/dd/yyyy		4	
Date/Time 3	HH:mm:ss		5	

- **Event Type**—Specify the value used to indicate whether a license event is a license grant (or check-out), a license release (or check-in), or a denial. If you have multiple event types that indicate license grant or license release (for example, if one event type indicates a borrowed license), you would convert all license grant and release events to be simple license grant and release events, then use the Reason ID field to indicate the nature of the event.

   For example, you might have event type 1 as a license grant and event type 5 as a borrowed license grant. When you generate your report logs, you would map event type 5 to event type 1, but specify a reason ID for borrowed license grants in the license event (and specify the Reason ID column when creating your report log definition). When FlexNet Manager for Engineering Applications parses the data for that license event, it looks at the Reason ID column to determine whether the license grant is a simple license grant or a borrowed license grant.

- **Number of Licenses**—The number of licenses involved in the usage event—checked out, checked in, or denied.

   In the report log file, this value must be a positive integer.

- **Duration**—If you chose "by Duration" for the Event Matching Rule setting, you must specify the column number of the Duration property.

   In the report log file, this value must be a positive integer that specifies the duration in seconds.

- **Transaction ID**—If you chose "by Transaction ID" for the Event Matching Rule setting, you must specify the column number of the Transaction ID property. In the report log file, this value must be a positive integer.

- **Reason ID**—This property is used in conjunction with license grant (checkout) or license denial events. In the report log file, this value must be one of the Reason ID numbers provided in the following table.

Reason ID	Description
3	Normal.
13	Borrowed.
55	No such feature exists.
60	Feature has expired.
76	Request for more licenses than this feature supports.
88	Not authorized to use this product.

- **Process ID**—In the report log file, this value must be a positive integer.

4. Click **Save**.

See Also
Common Report Log Definitions
Formatting Common Report Log Files

Editing Report Log Definitions

You can edit an existing report log definition to change every setting, except the License System setting.

Task   ***To edit a report log definition:***

1. From the **Reporting** tab, under **Report Log Definitions**, click **Report Log Definitions**.

2. Click the name of a report log definition to display its Edit Report Log Definition page.

3. Edit the settings, then click **Save**.

See Also
Common Report Log Definitions

Deleting Report Log Definitions

Deleting a report log definition will not delete any previously imported usage data.

Task   ***To delete report log definitions:***

1. From the **Reporting** tab, under **Report Log Definitions**, click **Report Log Definitions**.

2. Select the check box in front of the report log definitions you want to delete, then click **Delete**.

Formatting Common Report Log Files

Before FlexNet Manager for Engineering Applications can process data contained in non-FlexNet report logs, you must ensure that the report logs are formatted in a way that enables FlexNet Manager for Engineering Applications to read them. Each report log must contain license event data only for a single license server and vendor daemon.

Each report log contains the following information:

- Common Report Log Header Section—Required

- Feature List with Tokens Owned (Available Count) Section—Optional

- License Events—All license event data

- Common Report Log Footer Section—Required

Common Report Log Header

The report log header is required and must be at the beginning of the report log. The first line of the header must be -Report Log Header Begin- and the last line must be -Report Log Header End-. The header defines the following items:

- **Server**—Name of the license server.

- **Vendor**—Name of the vendor daemon.

- **Start Date**—The start date of the report log, which can be the same as or prior to the first license event time. The format should follow the Date/Time format used in defining the report log.

📄

Note • *The End Date value of a report log file from the same license server/vendor daemon should be the same as the Start Date value of the subsequent report log file. This enables you to detect if there is any missing usage data.*

Report Log Header Example

```
-Report Log Header Begin-
Server: xyz.test.com
Vendor: testVendor
Start Date: Mon,3/15/2010,9:00:55
-Report Log Header End-
```

Feature List with Tokens Owned (Available Count)

The feature list with tokens owned is optional and must be after the report log header. In this section, you can define the number of tokens owned (the available count) for the features in the Feature List section. The first line of the header must be -Feature List Begin- and the last line must be -Feature List End-.

In the Feature List section, each feature must be formatted as follows:

`[feature name][delimiter][feature version][delimiter][tokens owned]`

The delimiter is defined in the report log definition.

Note • If the report log does not contain a Feature List section or if a feature is not listed in the section, FlexNet Manager for Engineering Applications uses a token count (available count) of unlimited.

Feature List Example

```
-Feature List Begin-
f1,2.8,10
f2,2.8,8
f3,1.0,20
-Feature List End-
```

See Also
Common Report Log Definitions
Formatting Common Report Log Files
Common Report Log Examples

Common Report Log Footer

The report log footer is required and must be at the end of the report log. The first line of the footer must be -Report Log Footer Begin- and the last line must be -Report Log Footer End-. The footer defines the following:

● **End Date**—The end date of report log. It can be the same as or later than the last license event time. The format should follow the Date/Time format used in defining the report log.

Note • The End Date value of a report log file from the same license server/vendor daemon should be the same as the Start Date value of the subsequent report log file. This enables you to detect if there is any missing usage data.

Report Log Footer Example

```
-Report Log Footer Begin-
End Date: Tue,1/5/2010,10:30:09
-Report Log Footer End-
```

See Also
Common Report Log Definitions
Formatting Common Report Log Files
Common Report Log Examples

Importing Common Report Logs

After you have created a common report log definition and generated or converted your report log files to align with the format you defined, you can import the report logs in one of two ways:

- From the FlexNet Manager for Engineering Applications interface, using the Import button on the Report Logs page.

- At the command line, using the `bulkimport` command.

At import time, FlexNet Manager for Engineering Applications uses the report log file's file extension to determine which common report log definition it must use to parse the report log file.

FlexNet Manager for Engineering Applications uses the event matching rule to determine which license events should be matched together. For the license-grant events or license-release events that do not have matching license events, FlexNet Manager for Engineering Applications uses the report log starting time (contained in the report log header) or ending time (contained in the report log footer) to complete the events.

See Also
Common Report Log Definitions
Formatting Common Report Log Files

Common Report Log Examples

This section provides snippets of sample common report logs—one without item values in double quotes and one with item values in double quotes. If any of the report log values contain the character or combination of characters that serves as the delimiter, then all report log values must be in double quotes and you must select the Each Item Value Double Quoted check box when creating the common report log definition.

Example Report Log with Item Values Not in Double Quotes

```
-Report Log Header Begin-
Server: server1.acmeco.com
Vendor: vendor1
Start Date: Mon,3/15/2010,9:00:55
-Report Log Header End-
-Feature List Begin-
feature1,1.0,12
feature2,1.2,8
...
featureN,1.0,10
-Feature List End-
featureN,1.0,Mon,3/15/2010,10:12:38,1,1,1,bw345,bw345xp,,1,,,,,
featureN,1.0,Mon,3/15/2010,10:12:38,0,1,1,bw345,bw345xp,,1,,,,,
feature1,1.0,Mon,3/15/2010,9:00:55,1,1,1,le123,le123xp,,1,,,,,
feature1,1.0,Mon,3/15/2010,9:00:55,1,1,1,le123,le123xp,,1,,,,,
...(more events)
-Report Log Footer Begin-
End Date: Tue,3/16/2010,10:30:09
-Report Log Footer End-
```

Example Report Log with Item Values in Double Quotes

```
-Report Log Header Begin-
Server: "test.xyz.com"
```

```
Vendor: "avend"
Start Date: "Fri","1/1/2010","06:00:00"
-Report Log Header End-
-Feature List Begin-
"avendf1","1.0","12"
"avendf2","1.0","3"
"avendf3","15.0","10"
-Feature List End-
"avendf3","15.0","Fri","1/1/2010","07:05:00","0","1","1","jsmith","abc.xyz.com",
"11.6","1","-","-","-","test,v1","-"
"avendf3","15.0","Fri","1/1/2010","07:10:00","2","1","300","jsmith","abc.xyz.com",
"11.6","4","-","-","-","test\"v1\"","-"
...(more events)
-Report Log Footer Begin-
End Date: "Mon","2/1/2010","06:59:59"
-Report Log Footer End-
```

See Also
Formatting Common Report Log Files
Importing Common Report Logs

Usage Data Maintenance

If your enterprise has used FlexNet Manager for Engineering Applications for a long period of time and/or has a high volume of usage data, you may accumulate a large amount of usage (both report log and aggregation) data. To help you manage the volume of usage data, you can delete database data that you no longer need to keep.

All usage aggregation data is stored separately in the database. Hourly usage data consumes more space than daily usage data (24 hours in one day), and daily usage data consumes more space than monthly usage data (~30 days in one month). If you delete hourly usage aggregation data, but retain daily usage aggregation data, it can free a substantial amount of database space. However, you would still be able to run reports based on the daily usage aggregation data. This enables you to generate reports to see the usage breakdown by day, but the reports will not provide the ability to drill down to hourly usage.

Required Permissions

To view the Usage Data Maintenance tab and access the functionality available from this tab, a user must have a role with the Manage Usage Data Maintenance permission.

Task   ***To enable usage data maintenance:***

1. Click the **Reporting** tab, then click the **Usage Data Maintenance** tab.

2. Select one of the cleanup service options and specify the number of months that you want to keep the data. Data will be removed from the database after the number of months specified.

3. Click **Save**.

See Also
Organizational Structures
Report Data Aggregation
Best Practices for Usage Data Maintenance

Best Practices for Usage Data Maintenance

By default, usage data maintenance is not enabled. If your reporting system has newly imported files that were never aggregated and you are unsure how many months of data you may need for reporting, it is recommended that you leave the Usage Data Maintenance settings disabled at first.

After aggregation is finished and you have analyzed your Flexera Analytics (Cognos) reports, you can specify the appropriate hourly, daily, and monthly Usage Data Maintenance settings. These three settings can have different values based on business needs—for example, your enterprise may need to retain 12 months of monthly usage data, six months of daily usage data, and three months of hourly usage data in the system.

While enabling Usage Data Maintenance, be sure to consider aggregation scheduling. When you save the Usage Data Maintenance settings, the data cleanup service will be invoked immediately. While the usage data cleanup service is running, if a scheduled or manually triggered aggregation starts, the aggregation may try to save the usage data and the data cleanup service may try to delete the usage data for the same timeframe. This could result in undesired behavior. Before running aggregation, check the reporting `flexnet.log` to determine whether the data cleanup service is in process.

The following example demonstrates how the aggregation process works:

1. FlexNet Manager for Engineering Applications builds hourly aggregation for seven days (default configuration). The input is transactional data.

2. FlexNet Manager for Engineering Applications build daily aggregation for the same seven days. The input is hourly aggregation.

3. FlexNet Manager for Engineering Applications build monthly aggregation in a similar way, taking input from daily aggregation.

In this scenario, if you re-run aggregation for a past period of time—for example, six months from now—and you have a three-month retention policy for hourly aggregation, it may result in creating hourly aggregation for the time beyond the retention date just to support the re-aggregation for daily and/or monthly aggregation. Normally the "extra" data will be deleted later, but the best practice is to disable the usage data maintenance settings *prior* to aggregation that may overlap in time with the retention intervals.

It is recommended you define your data-retention time intervals such a way that there is a "buffer time interval" that ensures that the usage data for cleanup would not overlap with any possible usage data for reports or aggregations.

Usage Data Cleanup Service Log Messages

When running each type of data cleanup service (hourly, daily, or monthly), the following line appears in the log to indicate that the data cleanup service is running:

    Starting Hourly Cleaning activity for *<from-date>* to *<to-date>*

When the data cleanup service is finished, it will log the following:

    Stopping Usage Data Cleanup Service.

If the data cleanup service found no usage data, it logs the following:

    Hourly cleanup activity found no data to clean up.

See Also
Usage Data Maintenance

Mapping Generated User Names and Filtering by Application-Server Host

Usage events for some vendors result in a large number of randomly generated user names, where the user names contain appended characters and/or numbers. For example, if users access applications using a browser, the usage events are assigned randomly generated user names (user473796471_137, user1946733051_472, and so on). This causes issues because the generated user names do not appear in organizational structures, and the volume of the data impacts the organizational structure–import process.

To resolve this issue and prevent future report log–import issues, you must create an XML mapping file (**vendorFeatureForRandomUser.xml**) to map the randomly generated user names to fixed user names. In the XML file, you specify which vendor and feature-name combinations should map to a given user name. As a result of the mapping, you can report on consolidated usage.

In addition, you can filter which generated user names are consolidated, by the application-server host (the user host name in the usage event). That is, you can specify in another XML file, **vendorHostForRandomUser.xml**, which application-server–host names are relevant when mapping generated user names to a fixed user name.

The two XML files enable you to consolidate randomly generated user names on the basis of the following:

> vendor + feature + application-server host

Mapping Generated User Names to Fixed User Names

Map randomly generated user names to fixed names to allow for consolidated reporting.

Task: ***To map generated user names to fixed user names:***

1. Create an XML file with the name **vendorFeatureForRandomUser.xml**. The XML file should have the same format as the following Example XML File: Mapping Generated User Names.

2. Copy the file to the user data directory. By default, this directory is located at *<fnmea_install_directory>*\data.

At the time of report-log import, FlexNet Manager for Engineering Applications checks the XML file for any changes. If there are changes to the file (if the file has been updated), FlexNet Manager for Engineering Applications will read the file for new mappings.

Example XML File: Mapping Generated User Names

This file must be named **vendorFeatureForRandomUser.xml**.

```
<?xml version="1.0" encoding="UTF-8"?>
  <vendorDaemons>
    <vendorDaemon name="acmeCo">
        <feature name="designExec" newUserName="RollupUser1"/>
        <feature name="projectAdmin" newUserName="RollupUser2"/>
        <feature name="projectEdit" newUserName="RollupUser3"/>
    </vendorDaemon>
    <vendorDaemon name="sampleCo">
        <feature name="drawSet" newUserName="RollupUser4"/>
        <feature name="graphics" newUserName="RollupUser5"/>
        <feature name="proDraw" newUserName="RollupUser6"/>
        <feature name="proMap" newUserName="RollupUser11"/>
```

```
        <feature name="workShop" newUserName="RollupUser12"/>
    </vendorDaemon>
  </vendorDaemons>
```

Filtering the Mapping by Application-Server Host

You can refine the user-name mapping by filtering the mapping by application-server host.

Task: *To filter mapping by application-server host:*

1. Create an XML file with the name **vendorHostForRandomUser.xml**. The XML file should have the same format as the following Example XML File: Filtering by Application-Server Host.

2. Copy the file to the user data directory. By default, this directory is located at *<fnmea_install_directory>*\data.

Example XML File: Filtering by Application-Server Host

This file must be named **vendorHostForRandomUser.xml**.

```
<?xml version="1.0" encoding="UTF-8"?>
<vendorDaemons>
  <vendorDaemon name="acmeCo">
    <host name="abc-123"/>
    <host name="def-123"/>
    <host name="hij-123"/>
  </vendorDaemon>
  <vendorDaemon name="sampleCo">
    <host name="abc-123"/>
    <host name="def-123"/>
  </vendorDaemon>
</vendorDaemons>
```

In this case, the random user names generated by feature usage (as specified in the file **vendorFeatureForRandomUser.xml**) will be consolidated and mapped to a fixed user name *only* if the application-server host for the vendor daemon is specified in the file **vendorHostForRandomUser.xml**.

Reporting on IBM Rational Products: Mapping Features to Products

During product aggregation, FlexNet Manager for Engineering Applications automatically maps IBM token-based feature usage to product usage. (You do not need to import or create the product definitions manually.) This mapping is done using the product information provided in either the feature lines (using the VENDOR_STRING keyword), or—for JazzToken-related usage events, using information provided by a vendor-defined string (which is included in the checkout event).

IBM Rational Products (All Except JazzToken)

For all IBM Rational products (that are not JazzToken), the product name is provided in the vendor-defined string, using the keyword VENDOR_STRING in the feature line.

One feature can be mapped to only one product.

Example Feature Line

```
INCREMENT ibmrft ibmratl 7.0 15-jul-2016 1 \
VENDOR_STRING=0|Floating|0|0:t,TLSTOK,2.0,ibmrft,10:FUNCTIONAL_TESTER \
sort=180 DUP_GROUP=UH ISSUED=15-jul-2015 SIGN="BA10 5398 B890 \
6780 A012 338B 31B2 01B2 90A8 2250 BC09 6251 6854 3025 B985"
```

In this example:

- **ibmrft** is the capability name.

- **TLSTOK** is the feature.

- **FUNCTIONAL_TESTER** is the product name.

- **10** is the token cost for the feature, TLSTOK. That is, a count of 10 TLSTOK checkouts corresponds to 1 count of product usage for the product FUNCTIONAL_TESTER.

Example Checkout

```
CHECKOUT TLSTOK (in use: 11 of 5000) (tot used: 11 sec: 0)handle:0X66 who(matwood IBM-ABC999988888
IBM-ABC99000000 i86_n3 000.222.111.333) flexver:11/8 ver: 1.0 nlicreq: 11 nlicact: 11 vdef:
ibmrft#u#matwood#u# group: 2
```

JazzToken Products

For Jazz-based products, the product name is not defined in the feature line. Instead, the product name is found only in the checkout, via a vendor-defined string in the checkout data. In the checkout data, the product-name string is surrounded by the characters #p#.

Example Feature Line

```
INCREMENT JazzToken ibmratl 3.02 15-jul-2016 1 \
VENDOR_STRING=IBM:t,TLSTOK,2.0,JazzToken,1 ISSUER=IBM \
ISSUED=15-jul-2014 SIGN="BA10 5398 B890 6780 A012 338B 31B2 \
01B2 90A8 2250 BC09 6251 6854 3025 B985"
```

Example Checkout

```
CHECKOUT TLSTOK (in use: 97 of 2000) (tot used: 145 sec: 918729)handle:0X4D4 who(matwood cdal-
vmwjasprod 3388 cdal-vmwjasprod x64_n6 000.222.111.333) flexver:99/99 ver: 1.0 nlicreq: 8 nlicact: 8
vdef: JazzToken#u#matwood#u##s#JAZZ(32555be2-4d2d-2e1f-24f3-bb3a0fa221ba)#s#
#p#Change and Configuration Management#p# group: 24 cpu_usage: 473 1302 0 0
```

In this example:

- **TLSTOK** is the feature.

- **Change and Configuration Management** is the product name.

- **JazzToken** is the capability name.

Authoring and Modifying Reports to Use Hybrid Organizational Structures

You may want to create new feature-based reports—or modify existing feature-based reports—to use hybrid organizational structures. When an organizational structure is enabled for hybrid aggregation, the usage data are aggregated by multiple dimensions: by organizational structure (for example, geographic location) *and* by license server.

When you use hybrid organizational structures, you can develop Flexera Analytics reports to show usage data that is aggregated on these two dimensions. To do this, you need to author your reports (or make modifications to existing reports) to identify whether the organizational structure is a hybrid organizational structure, and, if so, to enable the report user to select a license server, in addition to an organizational structure.

When you run aggregation for a hybrid organizational structure, the aggregation process creates additional records in the database.***

If an organizational structure is enabled for hybrid aggregation, the report user can select a license server—in addition to selecting an organizational structure—during the report-configuration process. These selections (organizational structure and license server) can be used to filter the information that is shown in the report. (By default the historical-usage reports show data from *all* license servers.)***

See Also
Hybrid Organizational Structures
Prompts for Hybrid Organizational Structure Reports
Report Filters and Expressions for Hybrid Organizational Structure Reports***

Prompts for Hybrid Organizational Structure Reports

Typically, you author a feature-based usage report to filter the results by organizational structure. If you want the report user to select the organizational structure, you would include a value prompt to let them make the selection.

A value prompt to get the parameter to filter by organizational structure might be similar to the following:

Figure 6-25: Typical prompt for organizational structure

For this prompt, the query would use the query subject **Org Type Name** as the data item used to populate the prompt menu. The user's selection in this prompt can be used to create a parameterized filter—in this example, the organization selected will be used for the parameter **ParameterOrgStructure**. You can use this parameter to filter the data shown in the report by applying the following detail filter: [Org Type Name] = ?ParameterOrgStructure?
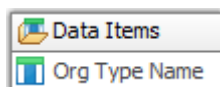
Figure 6-26: Data item for a typical organizational-structure prompt query

***When you use hybrid organizational structures and want report users to be able to select a license server for which they want to view data, your prompt for the organizational structure needs to collect two pieces of information about the organizational structure—the name of the organizational structure (**Org Type Name**) and the value of the **Is Hybrid** flag for the organizational structure, which indicates whether the organizational structure is hybrid or not (1 for hybrid, 0 for non-hybrid). These query subjects are part of the **Org-Feature-Product Details** namespace.
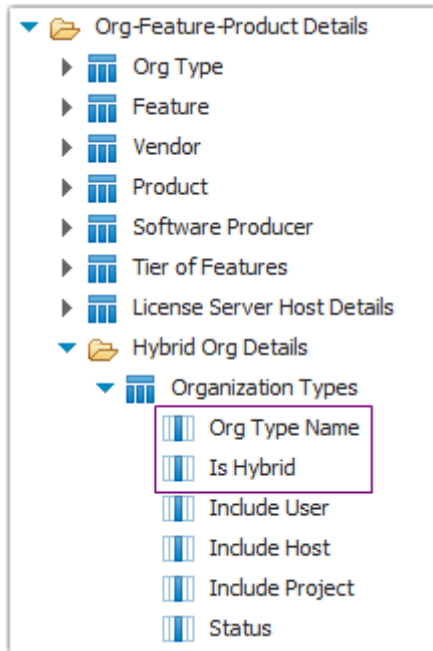
Figure 6-27: Query subjects for use with hybrid organizational structures

If you are creating a report (or modifying an existing) report to use hybrid organizations, you may want to let the user select a license server to configure and filter the report by multiple dimensions—by organizational structure (for example, by geographic organization) and by license server.

Because the data model now has two data items that must be used to identify the organizational structure - to determine whether the organizational structure is hybrid. ***

In order to get the necessary information, you need to structure your query to get three data items—**Org Type Name**, **Is Hybrid**, and a combined data item that concantenates the two values (here, called **OrgData_concantenate**).
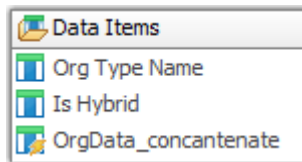
Figure 6-28: Organizational structure query data items

The **Org Type Name** and **Is Hybrid** query subjects are from the *** namespace. The expression for the concantenated data item is:

[Org Type Name] + cast([Is Hybrid], char(1))

This gives us the organizational-structure name with the Is Hybrid flag value appended to the end of the name string. We can parse that string later to separate the organization name from the concantenated string.

The value of this parameter can be parsed, then used to filter your report results.
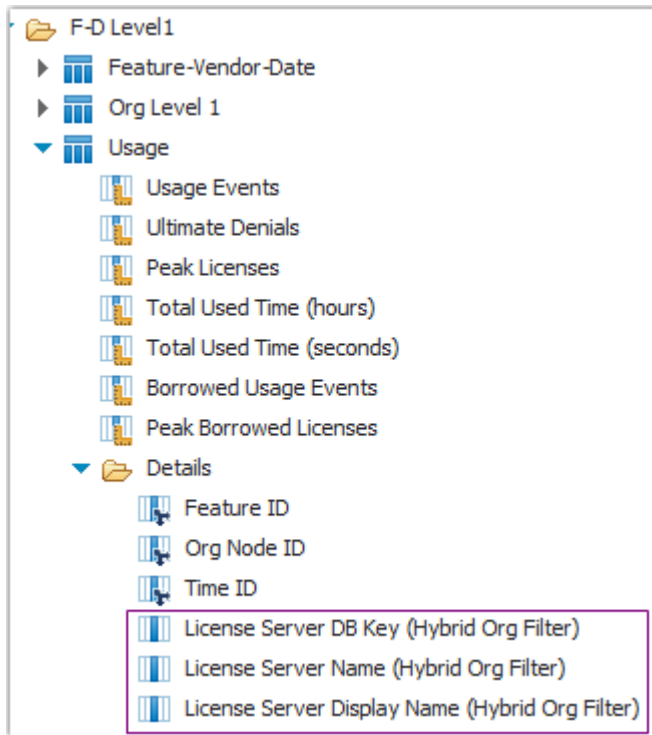
Figure 6-29: Hybrid Org Filter query subjects in Feature-Org OLAP

 ***To display usage for all license servers, the detail filter for your query must set the **License Server DB Key (Hybrid Org Filter)** data item to null.

[Org Type Name] = ?ParameterOrgStructure? *** this is the report filter***

License server selection***

When you enable an organizational structure for hybrid aggregation, you select the vendor daemons for which you want to run hybrid aggregation. In your reports, you use query subjects in the **Hybrid Org Details** folder of the **Org-Feature-Product Details** namespace.

To display a list of license servers for the selected hybrid organizational structure, you can add a value prompt that cascades from the vendor-selection prompt. (Hybrid aggregation is based upon vendor selection.***) The query for this prompt uses two query subjects as data items: **License Server Host Name** and **Vendor Name**. These query subjects are located in the **Hybrid Org Details** folder in the **Org-Feature-Product Details** namespace.
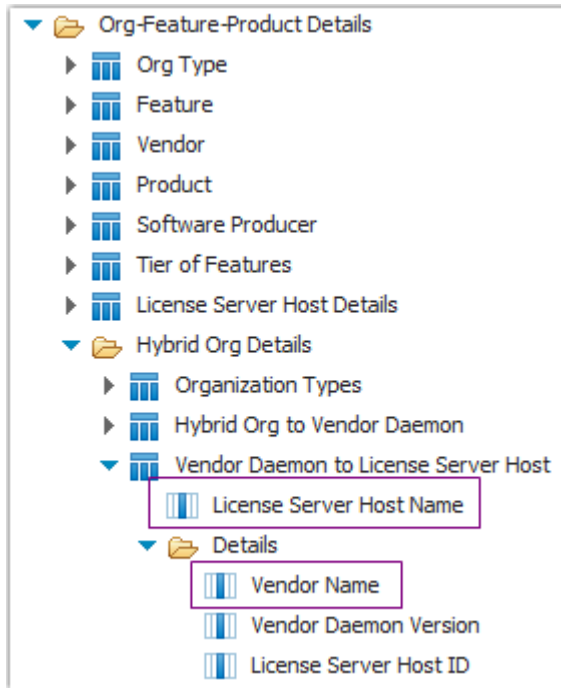
Figure 6-30: Query subjects for mapping vendor daemon to license server

See Also
Hybrid Organizational Structures
Authoring and Modifying Reports to Use Hybrid Organizational Structures
Report Filters and Expressions for Hybrid Organizational Structure Reports***

Report Filters and Expressions for Hybrid Organizational Structure Reports***

Within the report, you will need to parse the concantenated organizational-structure string to be able to use the name of the organizational structure to filter report data.***

To parse the Org Type Name string to get the organization name without the Is Hybrid flag appended, you can use the following expression:

substring (?ParameterOrgStructure?, 1, character_length (?ParameterOrgStructure?) - 1)

Filter Expression***

In your report query, you need to create a detail filter to filter the usage data by the license server if the user selected a license server for a hybrid organizational structure.

To do this, you will first find out whether a license-server selection was made. If the parameter for the license server value is not empty, your filter will be by the specified license server. If the parameter is empty, you need to set the License Server DB Key to NULL.***

```
if ( #prompt('ParameterLicenseServer', 'string', sq('Empty'))# <> 'Empty')
then( [F-M Level2].[Usage].[License Server Name (Hybrid Org Filter)]= ?ParameterLicenseServer?)
```

```
else if ( #prompt('ParameterLicenseServer', 'string', sq('Empty'))# = 'Empty')
then ( [F-M Level2].[Usage].[License Server DB Key (Hybrid Org Filter)]= NULL)
else (0=0)
```

See Also

Hybrid Organizational Structures
Authoring and Modifying Reports to Use Hybrid Organizational Structures
Prompts for Hybrid Organizational Structure Reports

7

Investment Planning

FlexNet Manager for Engineering Applications provides investment-planning functionality that enables your enterprise to analyze product-usage trends in order to forecast future product-licensing needs and license distribution for your entire organization.

Using the investment-planning functionality available from the **Planner** tab, you can map licensed features to the software products that are used in your organization. This feature-to-product mapping enables FlexNet Manager for Engineering Applications to report on product usage, in addition to feature usage. Using the product-usage reports, you can discover usage trends and use this information to optimize your product license purchases by remixing your contract pools according to the terms specified in your license contract.

Key Investment Planner Features

Key investment-planning features include:

- The ability to input and manage contractual data.

- Feature-to-product mapping to facilitate product-based usage reporting.

- Remix calculations and renewal-planning analysis to show where license re-allocation may benefit your enterprise.

- Combined with organizational structure functionality, functionality that enables you to accurately calculate chargebacks for different departments and project groups within your enterprise.

See Also
Basic Investment Planning Steps
Products
Contracts
Product Choices

Basic Investment Planning Steps

The following basic steps are necessary to compare your enterprise's contract (licensing) data to actual product usage.

1. Add information about software producers (companies that create software products) and software vendors (companies that sell software products).

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Note • The software producer and the software vendor may be the same company, if you purchased the product directly from the software producer.

2. Add products to FlexNet Manager for Engineering Applications, then associate licensed features with the products.

3. Input contract data.

4. Select the **Product Aggregation** setting in Admin | System Configuration | Reporting. This enables reporting on the products that you have defined.

5. Run reports to view product-based usage trends.

6. Compare the usage trends shown in the reports to the entitlements specified in your contracts to determine whether you are under- or over-licensing specific software products in your enterprise.

7. Run remixes to determine where your enterprise may be able to optimize licensing costs by purchasing licenses for a different mix of products.

See Also
Investment Planning
Products
Contracts
Product Choices

Products

The **Products** page, available from the **Planner** tab, displays a list of the products that have been added to and/or imported into FlexNet Manager for Engineering Applications.

A software product is composed of one or more licensed features. A software producer creates a product by grouping together separately licensed features and distributing the products to its enterprise customers, along with the feature licenses.

The same feature can be used in multiple products. This practice enables a software producer to create different product tiers, where each tier contains progressively more (and/or more advanced) features. For example, a software producer may have a professional and an express version of a product, where both products include the same core features, but the professional version includes additional advanced features that are not included with the express version.

Enabling Product-Based Reporting

To enable product-based reporting in FlexNet Manager for Engineering Applications, you must do the following:

1. Add products.

2. Map those products to licensed features.

3. Select the **Product Aggregation** check box (available on the Admin | System Configuration | Reporting page).

See Also
Importing Product Definitions
Editing Products
Adding Features to Products

Adding Products

Before you can map licensed features to a product (to provide for product-based reporting), you create a product definition in FlexNet Manager for Engineering Applications. After you add a product, you assign features to the product to provide the basis for product-level usage reporting.

Task   ***To add a product:***

1.   From the **Planner** tab, under **Products**, click **Products** to display the **Products** page.

2.   Click the **Add Product** button.

3.   In the Add Product page, provide the product settings. Required settings are identified by a red asterisk (*****).

Setting	Description
Software Producer	Specify the software producer that makes this product or, if you have already added software producers, select one from the list. If the software producer does not appear in the list, type the name of the software producer in the text box. This adds the software producer to the FlexNet Manager for Engineering Applications system. The software producer will appear in both the **Software Producer** list (under the **Products** tab) and on the **Software Producers** page.
Product Name	Name of the software product whose usage you want to track. You will later associate licensed features with the product.
Part Number	The product's part number or SKU (shop-keeping unit).
Version	The product version.
Family	Specify a product family or choose one from the list. When you type a family name, the name is added to the **Existing Families** drop-down menu.
Category	Specify a product category or choose one from the list. The category typically identifies the type of product. For example, the product might belong to the EDA (electronic design automation) category. When you type a category name, the name is added to the **Existing Categories** drop-down menu.
Notes	Notes about the product. These are for reference only.

4.   Click **Save**.

See Also
Products
Viewing Product Details
Adding Features to Products
Editing Products
Adding Features to Products

Importing Product Definitions

You can import product definitions contained in an XML file to populate the FlexNet Manager for Engineering Applications database. The imported products will be displayed on the **Products** page.

Product import can be done in two ways:

● Using the Products page in the FlexNet Manager for Engineering Applications interface.

● From the command line, using the `importproducts` command.

The XML file must contain product definitions from a single software producer. If the XML file contains a reference to a software producer that does not already exist in the FlexNet Manager for Engineering Applications system, FlexNet Manager for Engineering Applications creates the software producer.

See Product Definition XML Format for information about the XML file format and the location of `.xml` and `.xsd` sample files.

See Also
Importing Product Definitions from the Products page
Importing Product Definitions from the Command Line
Product Definition XML Format

Importing Product Definitions from the Products page

Task   **To import product definitions:**

1. Click the Planner tab, then click the Products tab to display the Products page.

2. In the Location box (located in the upper-right corner of the page), specify or browse to the XML file containing product definitions, then click **Import Products**.

The import process triggers an error message if the imported XML file contains one of the following:

● A product definition for a product with the same part number, product version, and software producer that already exists in FlexNet Manager for Engineering Applications.

● A reference to a vendor daemon that is assigned to a different software producer.

See Also
Product Definition XML Format
Editing Products
Adding Features to Products

Importing Product Definitions from the Command Line

You can import product definitions contained in an XML file, from the command line. These product definitions populate the FlexNet Manager for Engineering Applications database and are displayed on the Products page.

See Product Definition XML Format for information about the XML file format and the location of `.xml` and `.xsd` sample files.

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Note • *To import product definition XML files from the command line, a user must have a role with the **Import Products and Contracts from Command Line** permission.*

📋

Task

To import a product definition XML file from the command line:

1. Open a Command prompt and switch to the FlexNet Manager for Engineering Applications Admin directory.

2. Run the `importproducts` command, using the following syntax and the parameters described in the following table.

Syntax

`importproducts -u<user> -p<password> -f<filename_with_path> [-s<server>]`

Table 7-1 • importproducts command-line parameters

Parameter	Description
–u*<user>*	Specifies the user to run this command. The user must be assigned to any role with the **Bulk Import Report Logs** permission. If no such users are configured, the user admin can be used.
–p*<password>*	Specifies the password for the user.
–f*<filename_with_path>*	Specifies the full path to an XML file containing the products to be imported. If the path contains spaces, the value must be enclosed in double quotes. See Product Definition XML Format for information on formatting the product XML file.
–s*<server>*	Optional parameter that specifies the URL for the FlexNet Manager for Engineering Applications Admin server. This must be an `https` connection. For example: `https://localhost:8888/flexnet` If this parameter is not specified, then FlexNet Manager for Engineering Applications assumes the server to be: `https://127.0.0.1:8888/flexnet`.

Example

`flexnet importproducts –uadmin -padmin -f"c:\Producer ABC Products.xml"`

See Also
Product Definition XML Format
Editing Products
Adding Features to Products

Product Definition XML Format

The following XML example is from the sample file provided. The product and feature settings are the same as the settings presented in the FlexNet Manager for Engineering Applications user interface for the Add Product and Add Product Feature pages.

```
<producer category="EDA Tools" name="Producer ABC" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance" xsi:noNamespaceSchemaLocation="products.xsd">
    <product category="PCB Layout" family="Board Designer" name="Board Designer Expert" number="100002"
    version="1">
    <feature daemonName="abcd" name="BoardDes" licenseSystem="flex" licensesPerProduct="1"
    minimumVersion=""/>
    <feature daemonName="abcd" name="layoutPlus" licenseSystem="flex" licensesPerProduct="1"
    minimumVersion=""/>
    <feature daemonName="abcd" name="floorPlanner" licenseSystem="flex" licensesPerProduct="1"
    minimumVersion=""/>
    </product>
</producer>
```

All settings that are required in the user interface are also required in the XML file, except for the following feature settings:

- The `licenseSystem` attribute is optional. Valid values are "flex" or "lum"; the default value is "flex".

- The `licensesPerProduct` attribute is optional. The default value is "1".

Product Definition Sample Files

To assist you in creating product definition files for import, FlexNet Manager for Engineering Applications provides the following sample files in the FlexNet Reporting installation directory (in `\site\samples`):

- **ProductSample.xml**—Contains the format for product definition import with example data.

- **products.xsd**—Contains the formal definition that can be used by XML editors to ensure the XML files are correct.

See Also
Importing Product Definitions
Editing Products
Adding Features to Products

Exporting Product Definitions

From the **Products** page, you can export all product definitions to a `.csv` (comma-separated values) file. Exporting this data may be helpful if you need to migrate data from one instance of FlexNet Manager for Engineering Applications to another (for example, in the case of a divestiture or spin-off), or if you want to work with your product data using another tool (for example, a spreadsheet).

Task   ***To export product-definition information to a .csv file:***

1. From the **Planner** tab, under **Products**, click **Products**.

2. On the **Products** page, click the export button 　, then click **OK** in the confirmation dialog. This will export definition information for all products.

3. Open or save the exported .csv file.

See Also
Importing Product Definitions

Editing Products

Task

To edit an existing product:

1. From the **Planner** tab, under **Products**, click **Products**.

2. On the **Products** page, click the product name to open its **View Product** page.

3. Click **Edit Product**.

4. On the **Edit Product** page, edit the product settings.

5. Click **Save**.

See Also
Products
Viewing Product Details
Editing Products
Adding Features to Products
Adding Features to Products

Viewing Product Details

The **View Product** page displays the details for the selected product. From this page, you can:

● Access the **Edit Product** page.

● View a list of licensed features that are mapped to the product. (You can also access the **Add Product Feature** page.)

● View a list of product licenses that are associated with the product. You add product licenses to contract pools.

Task

To view product details:

1. Click the Planner tab, then click the Products subtab to display the Products page.

2. Click the *<product_name>* link to display the View Product page.

See Also
Products
Editing Products
Adding Features to Products
Product Licenses

Adding Features to Products

A feature is a discrete, separately licensed unit of functionality. A single feature can be a part of multiple products. FlexNet Manager for Engineering Applications tracks usage by feature. To enable usage reporting by product (which are composed of one or more features), you must associate licensed features with products.

You can also use the Assign Features page to assign unassigned features to products.

Task   ***To associate features with products:***

1.   From the **Planner** tab, under **Products**, click **Products**.

2.   On the **Products** page, click the name of the product to which you want to add features.

3.   On the bottom half of the **View Product** page, click the **Features** tab, then click **Add Product Feature**.

4.   On the **Add Product Feature** page, specify the feature settings. Required settings are identified by a red asterisk (*****)

Setting	Description
Vendor Daemon	Select the vendor daemon that serves the feature. The list contains all vendor daemons that are assigned to the software producer that makes this product. When you select a vendor daemon, the **Feature Name** list is populated with all of the features that are associated with the selected vendor daemon. If the list is empty, type the name of the vendor daemon name in the text field. Also, specify whether the vendor daemon serves features that use FlexNet or IBM LUM licensing.
Feature Name	Select the feature that you want to assign or map to this product. If the list is empty, you can specify a feature name in the text field. If you manually enter a feature name, the feature will be associated with the vendor daemon that is selected in the **Vendor Daemon** list.
Minimum Feature Version	Minimum feature version that is required for the product. This field accepts a string. This value can be used by the product usage aggregation process to fine-tune the association of feature usage to product usage. Some FlexEnabled (FlexNet-licensed) products specify a minimum version for the feature that is required to satisfy a checkout request. For example, the aggregation process may need to determine whether a checkout of version 1.0 should be included for a particular product. If the product definition requires that the minimum feature version is 2.0, then the version 1.0 checkout will not be grouped as usage for the product.
Feature Licenses Per Product License	Number of feature licenses, expressed as an integer, that are included in a single product license for the product.

5.   Click **Save**.

Deleting Products

Deleting a product from FlexNet Manager for Engineering Applications also deletes the following data:

- All aggregated usage data for the product.

- Removes the product from the set of possible products for all product choices.

- All product licenses for the product.

- All plan (renewal and remix) data for the product.

Task   ***To delete products:***

1. From the **Planner** tab, under **Products**, click **Products**.

2. On the **Products** page, select the check boxes next to the products you want to delete.

3. Click **Delete**, then click **OK** in the confirmation dialog.

Features

Within software products, features are discrete, separately licensable units of functionality. A software product is composed of one or more licensed features. To facilitate product-based usage reporting, you must associate licensed features with software products that are used in your enterprise.

The **Features** page displays a list of the licensed features that have been mapped to products. This feature-to-product mapping facilitates reporting on product usage.

The **Assign Features** page displays a list of unassigned features, which are features that have not been mapped to a product. Using this page, you can assign unassigned features to products.

Assigning Unassigned Features to Products

A feature that is not associated with a product is an unassigned feature. The **Assign Features** page displays a list of unassigned features and enables you to select features for assignment to a particular product.

The list of unassigned features is populated after you import report logs and aggregate the report log data.

Task   **To assign unassigned features to products:**

1.   From the **Planner** tab, under Features, click **Unassigned Features** to display the **Assign Features** page.

2.   Provide information about the product to which you want to assign the features. Required settings are identified by a red asterisk (*).

Setting	Description
Software Producer	Select the name of the software producer who makes the product to which you want to add the features. When you select a software producer, the **Product Name** list is populated with products from the selected software producer. *Note • The software producer name must match the name for the feature in the* **Software Producer** *column (in the list at the bottom of the page).*
Product Name	Select the name of the product to which you want to add the features.
Minimum Feature Version	Minimum feature version that is required for the product. This field accepts a string. This value can be used by the product usage aggregation process to fine-tune the association of feature usage to product usage. Some FlexEnabled (FlexNet-licensed) products specify a minimum version for the feature that is required to satisfy a checkout request. For example, the aggregation process may need to determine whether a checkout of version 1.0 should be included for a particular product. If the product definition requires that the minimum feature version is 2.0, then the version 1.0 checkout will not be grouped as usage for the product.
Feature Licenses Per Product License	Number of feature licenses, expressed as an integer, that are included in a single product license for the product.

3.   From the list of unassigned features, select the check boxes in front of the names of the features that you want to map to the specified product. Selected features must be from a vendor daemon associated with the software producer specified or from a vendor daemon that is not associated with a software producer.

An error message is displayed if you select a feature from a vendor daemon that is associated with a software producer different from the one specified in the top section of the page.

4.   Click **Assign Selected Features**. The selected features are mapped to the product and removed from the unassigned features list.

See Also
Features
Products
Adding Features to Products

Software Producers

In FlexNet Manager for Engineering Applications, a *software producer* is a company that makes software products that use a licensing system to control access to product functionality. The product functionality is defined in the product's features, which are licensed to your enterprise by the *software vendor*—the company that sells software. The licensing terms are defined in a contract.

The software producer may also be the software vendor—that is, the same company may both produce *and* sell its software products to customers.

Each product that you define in FlexNet Manager for Engineering Applications must be associated with an existing software producer.

See Also
Adding Software Producers
Products
Software Vendors

Adding Software Producers

Task   ***To add a software producer:***

1. From the **Planner** tab, under **Software Producers**, click **Add Software Producer**.

2. On the **Add Software Producer** page, specify the software producer settings. Required settings are identified by a red asterisk (*).

Setting	Description
Software Producer Name	Name of the company that makes the software. This value must be unique in the FlexNet Manager for Engineering Applications system.
Primary Product Type	The primary type of software made by this producer—for example, geological, CAD (computer-aided design), or EDA (electronic design automation). This typically matches the **Category** field for a product.
Notes	Optional notes about the software producer. For reference only.

3. Click **Save**.

See Also
Software Producers
Editing Software Producers

Editing Software Producers

Task   **To edit a software producer:**

1.   From the **Planner** tab, under **Software Producers**, click **Software Producers**.

2.   On the **Software Producers** page, click the name of the software producer you want to edit.

3.   On the **View Software Producer** page, click the **Edit Software Producer** link.

4.   On the **Edit Software Producer** page, modify the settings.

5.   Click **Save**.

See Also
Adding Software Producers
Deleting Software Producers

Viewing Software Producer Details

The **View Software Producer** page displays the details for the selected product. From this page, you can:

●   Access the **Edit Software Producer** page.

●   View a list of contacts that have been added for this software producer. (You can also access the A**dd Software Producer Contact** page.)

●   View a list of vendor daemons that are associated with the software producer.

Task   **To view details for a software producer that is already in the FlexNet Manager for Engineering Applications system:**

1.   From the **Planner** tab, under **Software Producers**, click **Software Producers**.

2.   On the **Software Producers** page, click the name of the software producer to display its **View Software Producer** page.

See Also
Editing Software Producers
Adding Software Producer Contacts
Adding Vendor Daemons to Software Producers

Adding Software Producer Contacts

To help you better manage your relationship with software producers, you can define contact information for various personnel within the software producer's company. For example, you might add contact information for the support representatives who service your account.

Note • If you delete a software producer, the contact information for that software producer is also deleted.

Task   **To add a software producer contact:**

1. From the **Planner** tab, under **Software Producers**, click **Software Producers**.

2. Click the name of the software producer for which you want to add contact information. This displays the **View Software Producer** page.

3. In the bottom half of the page, click the **Contacts** tab, then click **Add Software Producer Contact**.

4. On the **Add Producer Contact** page, provide a unique contact name, then complete as many of the remaining settings as you need.

5. Click **Save**.

See Also
Software Producers

Editing Software Producer Contacts

If you delete a software producer, the contact information for that software producer is also deleted.

Task   **To edit a software producer contact:**

1. From the **Planner** tab, under **Software Producers**, click **Software Producers**.

2. Click the name of the software producer for which you want to add contact information. This displays the **View Software Producer** page.

3. In the bottom half of the page, click the **Contacts** tab, then click the name of the contact whose information you want to edit. This displays the **Edit Producer Contact** page.

4. Provide a unique contact name, then complete as many of the remaining settings as you need.

5. Click **Save**.

See Also
Software Producers

Associating Vendor Daemons with Software Producers

The vendor daemon is the process that serves licenses for a particular product's features. A single software producer may have multiple vendor daemons associated with it.

Vendor daemons are automatically added to the FlexNet Manager for Engineering Applications database as needed, when report logs are imported. You associate vendor daemons with software producers to tie the usage of features—served by vendor daemons—to the usage of products, which are created by software producers.

Depending on whether the vendor daemon already exists in the FlexNet Manager for Engineering Applications database, you can:

• Assign an unassigned vendor daemon to a software producer.

● Manually add a vendor daemon to a software producer.

See Also
Assigning Unassigned Vendor Daemons to Software Producers
Adding Vendor Daemons to Software Producers

Assigning Unassigned Vendor Daemons to Software Producers

Using the **Assign Vendor Daemon** page, you can assign unassigned vendor daemons to a software producer.

Vendor daemons are added to the FlexNet Manager for Engineering Applications database when report logs are imported. Vendor daemons in the FlexNet Manager for Engineering Applications database that are not associated with a software producer appear in the unassigned vendor daemons list. If the vendor daemon that you want to associate with the software producer does not appear in the unassigned vendor daemons list, it means that the vendor daemon is not in the FlexNet Manager for Engineering Applications database.

To manually add a vendor daemon to a software producer, use the **Add Vendor Daemon** page.

Task | ***To assign a vendor daemon to a software producer:***

1. From the **Planner** tab, under **Software Producers**, click **Software Producers**.

2. Click the name of the software producer for which you want to add a vendor daemon. This displays the **View Software Producer** page.

3. In the bottom half of the page, click the **Vendor Daemons** tab, then click **Assign Vendor Daemon** to display the **Assign Vendor Daemon** page. This page displays a list of vendor daemons that are in the FlexNet Manager for Engineering Applications database, but have not been associated with a software producer.

4. Select the check boxes in front of the vendor daemons you want to associate with the software producer, then click **Assign to Software Producer**.

5. Click **Save**.

See Also
Software Producers
Adding Vendor Daemons to Software Producers
Deleting Vendor Daemons from Software Producers

Adding Vendor Daemons to Software Producers

Vendor daemons are added to the FlexNet Manager for Engineering Applications database when report logs are imported. Using the Add Vendor Daemon page, you can manually add a vendor daemon to a software producer before it is added to the FlexNet Manager for Engineering Applications database during the import process.

To assign an existing vendor daemon (a vendor daemon that is already in the FlexNet Manager for Engineering Applications database) to a software producer, use the **Assign Vendor Daemon** page.

Task   **To add a vendor daemon to a software producer:**

1. From the **Planner** tab, under **Software Producers**, click **Software Producers**.

2. Click the name of the software producer for which you want to add a vendor daemon. This displays the **View Software Producer** page.

3. In the bottom half of the page, click the **Vendor Daemons** tab, then click **Add Vendor Daemon**.

4. On the **Add Vendor Daemon** page, specify the vendor daemon settings. Required settings are identified by a red asterisk (*).

Setting	Description
Vendor Daemon Name	Name of the vendor daemon that serves features included in the software producer's products.
Display Name	User-friendly name for the vendor daemon.
Licensing System	Specify whether the licensing system used by this vendor daemon is FlexNet or IBM's LUM.

5. Click **Save**.

See Also
Software Producers
Assigning Unassigned Vendor Daemons to Software Producers
Deleting Vendor Daemons from Software Producers

Deleting Vendor Daemons from Software Producers

When you delete a vendor daemon using the **View Software Producer** page, the result depends on whether the vendor daemon has feature usage associated with it.

- If you added the vendor daemon using the **Add Vendor Daemon** page and there was no feature usage associated with the vendor daemon, the vendor daemon is deleted from the FlexNet Manager for Engineering Applications system.

- If you assigned the vendor daemon using the **Assign Vendor Daemon** page, or added the vendor daemon using the **Add Vendor Daemon** page *and* there was some feature usage associated with the vendor daemon, then deleting the vendor daemon puts it into the unassigned vendor daemon pool.

Task   **To delete a vendor daemon from a software producer:**

1. From the **Planner** tab, under **Software Producers**, click **Software Producers**.

2. Click the name of the software producer for which you want to add a vendor daemon. This displays the **View Software Producer** page.

3. Click the **Vendor Daemons** tab to display a list of the vendor daemons associated with this software producer.

4. Select the check boxes in front of the vendor daemons that you want to delete from this software producer, then click **Delete**.

Deleting Software Producers

Deleting a software producer from FlexNet Manager for Engineering Applications also affects the following related data:

- All contact information for personnel associated with the software producer are deleted.

- All products made by the software producer are deleted.

- Vendor daemons used to serve feature licenses to users of products made by the software producer are either disassociated or deleted.

  - If there was feature usage from the vendor daemon, the vendor daemon is disassociated from the software producer.

  - If there was no feature usage for a vendor daemon that was added manually, the vendor daemon is deleted.

Task **To delete software producers:**

1. From the **Planner** tab, under **Software Producers**, click **Software Producers**.

2. Select the check box in front of the software producers you want to delete, click **Delete**, then click **OK** in the confirmation dialog.

Contracts

A contract defines the terms under which you (the enterprise) purchase product licenses from a software vendor (which may be the same company as the software producer). The contract terms include the start and end dates, the fixed and variable costs of the contract, any license restrictions (for example, geographic license restrictions), and the remix rules for the contract, which define the percentage of the contract for which you can reallocate licenses.

The product licenses purchased under a contract are typically grouped together into one or more *contract pools*.

The **Contract Summary** page, available under the **Planner** tab, shows a list of the contracts that have been input to or imported into the FlexNet Manager for Engineering Applications system. From the **Contract Summary** page, you can delete contracts and sort the contracts by column headings.

Adding Contracts

You can add a contract using the FlexNet Manager for Engineering Applications interface or by importing the contract data from the command line.

Task **To add a contract:**

1. From the **Planner** tab, under **Contracts**, click **Contracts**.

2. On the **Contract Summary** page, click **Add Contract**.

3. Provide the contract settings. Required settings are identified in the interface by a red asterisk (*****).

Setting	Description
Contract Name	Provide a unique name for the contract.
Vendor	Specify the software vendor with whom you have negotiated this contract to purchase product licenses. If the software vendor does not appear in the list, type the name of the software vendor in the text box. This adds the software vendor to the FlexNet Manager for Engineering Applications system: The software vendor will appear in both the **Software Vendor** list (under the **Contracts** tab) and on the **Software Vendors** page.
Contract Start Date	Date on which the contract began, specified as *mm/dd/yyyy*.
Contract End Date	Date on which the contract terminates, specified as *mm/dd/yyyy*.
Contract Value	The dollar value of the contract over the life of the contract. For example, you may have a contract with a value of $24 million over three years. In this case, the contract value is $24 million.
Fixed Cost	The cost of the fixed portion of your contract, if it is divided into fixed and variable portions.
Variable Cost	The cost of the variable portion of your contract, if it is divided into fixed and variable portions. For example, after a specified number of licenses, your contract may specify a variable cost for additional licenses.
Annual Maintenance Fee Date	Specified as *mm/dd/yyyy*, the date on which the annual maintenance fee associated with this contract is due to the software vendor.
Payment Amount	Dollar amount of the periodic payment due to the software vendor.
Payment Start Date	Specified as *mm/dd/yyyy*, the date on which the first payment is due to the software vendor.
Payment End Date	Specified as *mm/dd/yyyy*, the date on which the last payment is due to the software vendor.
Payment Interval	Specify how often payment is due to the software vendor. For example, payment may be due quarterly.

4. Click **Save**.

After adding a contract, you can add contract pools and remixes.

See Also
Contracts
Editing Contract Pools
Adding Plans (Renewals/Remixes)

Importing Contract Data from the Command Line

You can import your contract data to FlexNet Manager for Engineering Applications using an XML file. The XML schema (`contracts.xsd`) is located in the FlexNet Manager for Engineering Applications Admin installation directory in the following location: *<fnmea_admin_installdir>*\site\samples. (See the following XML example for more information about the XML structure.)

*Note • To import contract data from the command line, a user must have a role with the **Import Products and Contracts from Command Line** permission.*

Task   ***To import the contract data XML file:***

1. From a Command prompt, change to the FlexNet Manager for Engineering Applications Admin installation directory.

2. Type the following command:

   flexnet importcontracts –u*<user>* –p*<password>* –f*<filename_with_path>* [–s*<server>*]

Important • This command supports only an `https` server connection.

Example: XML Contract File

The following is an example of an XML contract import file.

```
<?xml version="1.0" encoding="UTF-8"?>
<vendor name="Mentor Graphics">
    <contract endDate="2011-12-31" fixedCost="1000000" name="Contract One" notes="contract notes"
    paymentAmount="100000" paymentEndDate="2011-10-01" paymentInterval="4" paymentStartDate="2009-04-
    01" startDate="2009-01-01" variableCost="500000">
        <pool annualFeePercent="30.0" discountPercent="60.0" geography="geo notes" initialValue="23456"
        name="Pool One" notes="pool notes" remixablePercent="100.0" remixesPerYear="4"
        shareable="global" site="Site notes">
            <product listPrice="2345" producerName="Mentor Graphics" productName="Advanced Interconnect
            Op SW" productNumber="206143" productVersion="1">
                <license effectiveDate="2009-01-01" notes="License Comments" poNumber="ponum"
            purchaseReq="purch req" quantity="123"/>
                <license effectiveDate="2009-07-01" quantity="22"/>
            </product>
            <product listPrice="44444" producerName="Mentor Graphics" productName="Advanced Rule Set Op
            SW" productNumber="214756" productVersion="1">
                <license effectiveDate="2009-01-01" quantity="333"/>
            </product>
```

```
        </pool>
        <pool annualFeePercent="25.0" discountPercent="60.0" forProductionUse="false"
        initialValue="234234" licensingModel="timeBased" name="Pool two" remixablePercent="52.564102"
        remixesPerYear="2" shareable="regional">
            <product listPrice="54444" producerName="Mentor Graphics" productName="Boardsim"
            productNumber="Unknown" productVersion="1">
                <license effectiveDate="2009-01-01" expireDate="2009-12-31" quantity="32"/>
            </product>
            <product listPrice="23423" producerName="Mentor Graphics" productName="Board Station
            Designer" productNumber="39986" productVersion="1">
                <license effectiveDate="2009-01-01" expireDate="2009-12-31" quantity="345"/>
            </product>
        </pool>
    </contract>
</vendor>
```

See Also
Contracts
Adding Contracts
Editing Contracts

Viewing Contract Details

The **View Contract** page displays details about the selected contract. From this page, you can:

● Access the **Edit Contract** page.

● Add, edit, and delete the contract pools for this contract.

● Add, edit, and delete remixes for this contract.

Task   ***To view contract details:***

1. From the **Planner** tab, under **Contracts**, click **Contracts**.

2. On the **Contract Summary** page, click the contract name.

See Also
Editing Contracts
Contract Pools
Product Choices

Editing Contracts

Task   ***To edit a contract:***

1. From the **Planner** tab, under **Contracts**, click **Contracts**.

2. On the **Contract Summary** page, click the name of the contract to edit.

3. Click the **Edit Contract** link.

4.   On the **Edit Contract** page, modify the contract settings.

5.   Click **Save**.

See Also
Editing Contract Pools
Adding Plans (Renewals/Remixes)

Deleting Contracts

Deleting a contract also deletes the following information from FlexNet Manager for Engineering Applications:

●   All contract pools associated with the contract.

●   All remixes performed on the contract.

Task   ***To delete a contract:***

1.   From the **Planner** tab, under **Contracts**, click **Contracts**.

2.   On the **Contract Summary** page, select the check box in front of the contracts you want to delete, click **Delete**, then click **OK** in the confirmation dialog.

See Also
Contracts
Editing Contracts

Contract Pools

Contract pools are used to define common license terms for a group of product licenses purchased under a contract. These terms can include geographic and other license usage restrictions, and the remix rules. Contract pools have the same license type and the same remix type. A typical contract will have a remixable contract pool of time-based licenses and a contract pool of non-remixable licenses.

See Also
Adding Contract Pools

Adding Contract Pools

Task   ***To add a contract pool:***

1.   From the **Planner** tab, under **Contracts**, click **Contracts**.

2.   On the **Contract Summary** page, click the name of the contract to which you want to add a contract pool.

3.   From the **Pools** tab, click **Add Contract Pool**.

4. On the **Add Contract Pool** page, specify the contract pool settings. Required settings are identified by a red asterisk (*).

Setting	Description
Pool Name	Unique name for the contract pool.
Used for	Specify whether the licenses in the contract pool can be used for Production work or only for Testing and Development.
Shareable Type	Specify how widely the licenses in the contract pool can be shared. FlexNet Manager for Engineering Applications does not restrict license usage based on this setting. • **Not Shareable**—The license can be used only on the local network; typically a single site. • **Regionally Shareable**—The license can be shared within a specified region; for example, within a narrow range of time zones, within a country, or on a continent. • **Globally Shareable**—The license can be shared without restriction to location. A vendor may charge more for this type of license.
Licensing Model	Specify the licensing model used for this contract pool. • **Perpetual**—Licenses have no expiration date. This model typically requires an initial payment to purchase the licenses and an annual maintenance fee. • **Time Based**—Licenses have a specified expiration date. This model requires an annual license access fee that includes maintenance for the product.
Discount Percent	For perpetual licensing models only: The percentage reduction in list price for product licenses in the contract pool.
Uplift Percent	For perpetual licensing models only: The percentage increase in discounted price for product licenses in the contract pool.
Annual Maintenance or Access Fee Percent	Percentage of list price paid to the software vendor each year for each product license in the contract pool. This is known as *annual maintenance* for perpetual license models and as an *annual access fee* for time-based license models.
Currency	USD. Contract pool currency is specified in US dollars.
Initial Value	The remix ceiling amount for this contract pool.
Remixable Percent	Percentage of the contract pool's initial value that can be changed during a remix. A value of 0 indicates that this contract pool is not remixable. **Important** • *This value is not applicable for renewals.*
Revisions Per Year	Number of times the contract pool can be remixed each year, expressed as an integer.
Next Plan Date	The date, specified as *mm/dd/yyyy*, on which the contract pool can next be remixed.

Setting	Description
Organization	All product licenses in the contract pool will be distributed to the selected organizational unit. This distribution specification can be used for peak usage and chargeback reporting. See Product Usage Reports for more information about reports that provide investment planning information.
Geography	Geographic area for this contract pool; for example, Midwest.
Site	Site for this contract pool; for example, Chicago or Milwaukee.
Notes	Notes about the contract pool.

5. Click **Save**.

See Also
Contracts
Adding Product Licenses to Contract Pools
Adding Plans (Renewals/Remixes)

Viewing Contract Pool Details

The View Contract Pool page displays details about the selected contract pool. From this page, you can:

- Access the **Edit Contract Pool** page.

- Add, edit, and delete the product licenses that are part of this contract pool.

Task   *To view contract details:*

1. From the **Planner** tab, under **Contracts**, click **Contracts**.

2. On the **Contract Summary** page, click the contract name.

See Also
Contracts
Contract Pools

Editing Contract Pools

Task   *To edit a contract pool:*

1. From the **Planner** tab, under **Contracts**, click **Contracts**.

2. On the **Contract Summary** page, click the name of the contract for which you want to modify a contract pool.

3. From the **Contract Pools** tab, click the name of the contract pool you want to edit. This displays the **View Contract Pool** page.

4. Click **Edit Contract Pool**.

5. Edit the contract pool settings, then click **Save**.

See Also
Contract Pools
Editing Contract Pools
Adding Product Licenses to Contract Pools

Product Licenses

To use licensed software, you purchase product licenses from a software vendor. The contract specifies the terms of the license and indicates how many copies of the product you own. At a particular point in time, the total number of copies is the sum of the quantities of all product licenses that have an effective date on or before the point in time and an expiration date that is either blank—which indicates that the product license is perpetual—or after the point in time.

For reporting and chargeback purposes, a product license can be distributed to different organizational units within your enterprise. For example, if you have a license for 10 copies of Product A, you could distribute six copies to the Broadband division and four copies to the Memory Products division.

In FlexNet Manager for Engineering Applications, you add product licenses to contract pools. After adding the product licenses, you can add license distributions.

See Also
Adding Product Licenses to Contract Pools

Adding Product Licenses to Contract Pools

Task   ***To add product licenses to contract pools:***

1. From the **Planner** tab, under **Contracts**, click **Contracts**.

2. On the **Contract Summary** page, click the contract name for the contract to which you want to add licenses to a contract pool.

3. In the bottom section of the page, click the contract pool to which you want to add licenses.

4. On the **View Contract Pool** page, click **Add Product License**.

5. On the **Add Product License** page, specify the product license settings. Required settings are identified by a red asterisk (*).

Setting	Description
Product	The product being licensed. Select the software producer from the first list, then select the product.
Number of Licenses	Specified as an integer, the number of licenses of this product purchased from the software vendor.
Effective Date	Specified as *mm/dd/yyyy*, the date on which the product licenses can be used. This defaults to the contract start date.

Setting	Description
Expiration Date	Specified as *mm/dd/yyyy*, the date on which the product licenses expire. This setting is displayed only for contract pools that have a time-based licensing model.
Purchase Requisition Number	The requisition number for this license purchase.
Purchase Order Number	The order number for this license purchase.
Pool Annual Fee Percent	Value specified for the contract pool to which you are adding this license. To change this value, modify the Annual Maintenance or Access Fee Percent setting for the contract pool.
Override Annual Fee Percent	Percentage of list price paid to the software vendor each year for this product license. This setting overrides the Annual Maintenance or Access Fee Percent setting for the contract pool.
List Price	The software vendor's list price to purchase a single copy of the product.
Calculated Net Price	The net price for this product license, calculated using the following formula: `List Price * (1 - Discount Percent) * (1 + Uplift Percent)`
Override Net Price	To override the calculated net price, provide an override price.

6. Click **Save**.

See Also
Contracts
Editing Contract Pools

Viewing Product License Details

From the **View Product License** page, you can:

- View details about the product license.

- Access the **Edit Product License** page.

- Add and manage license distributions.

Task   ***To view product license details:***

1. From the **Planner** tab, under **Contracts**, click **Contracts**.

2. On the **Contract Summary** page, click the name of the contract for which you want to view license details. This displays the **View Contract** page.

3. From the **Pools** tab, click the name of the contract pool to display the **View Contract Pool** page.

4. From the **Licenses** tab (at the bottom of the page, click the **View** link for the license to display the **View Product License** page.

Editing Product Licenses

Task   **To edit a product license:**

1. From the **Planner** tab, under **Contracts**, click **Contracts**.

2. On the **Contract Summary** page, click the name of the contract containing the contract pool for which you want to edit the product license.

3. From the **Pools** tab, click the name of the contract pool whose product license you want to edit. This displays the **View Contract Pool** page.

4. From the Licenses tab (at the bottom of the page), click the **View** link for the license to display the **View Product License** page.

5. Click **Edit Product License**.

6. Edit the product license settings, then click **Save**.

Adding License Distributions

You can add a license distribution for a product license, which enables you to capture the number of product licenses that are allocated to your enterprise's various organizational units. For example, if you have a total of 100 licenses for a product, you may want to allocate 30 of them to the Memory Products division and 70 to the Communications division.

License distributions are used primarily for reporting and chargeback purposes; there is no way to restrict product usage.

You can distribute product licenses automatically or manually. Automatic distribution is based on each organizational unit's percentage usage of the product. Using the previous example, if the Communications division is using the product three times as much as the Memory Products division, they would receive 75 product licenses and Memory Products would receive 25 product licenses.

You can use manual distribution if you know the quantities used by your organizational units—if the quantities are known or fixed (and not based on relative usage).

Distributing Product Licenses Automatically

Task **To add an automatic license distribution:**

1. From the **Planner** tab, under **Contracts**, click **Contracts**.

2. On the **Contract Summary** page, click the contract name for the contract to which you want to add license distributions to a contract pool.

3. In the bottom section of the page, click the contract pool to which you want to add a license distribution.

4. Click **View** for the license to which you want to add a distribution.

5. Click Add License Distribution to display the Add License Distribution page.

6. Specify the license distribution settings. Required settings are identified in the interface by a red asterisk (*).

Setting	Description
Type	Select Automatic.
Organizational Structure or Organization	Select the organizational structure or organization to which you want to distribute the licenses.
Org Levels	Expressed as an integer, the number of hierarchical levels within the organizational structure to which licenses will be distributed.
Utilization Start Date	Specified as *mm/dd/yyyy*, the start date of the product untilization period. The product utilization period is the period used to analyze the relative usage of the product by the various organizational structure nodes.
Utilization End Date	Specified as *mm/dd/yyyy*, the end date of the product utilization period. The product utilization period is the period used to analyze the relative usage of the product by the various organizational structure nodes.
Utilization Based on	Select the metric on which product license utilization should be based: ● **Time Used**—The sum of the durations for all product license usage events (checkouts) for the product. ● **Peak Usage**—Maximum of all peak license usages for the product. ● **Used Count**—The sum of product license usage events (checkouts) for the product.
Round to Integer (# of Licenses)	Indicates whether the distribution suggestions should be rounded to the nearest integer.
Distribution Start Date	Specified as *mm/dd/yyyy*, the start date of the distribution. This is the effective start date of the license distributions that result from the automatic license distribution, which is based on the other settings specified in this page.

7. Click **Save**.

Distributing Product Licenses Manually

Task   ***To add a manual license distribution:***

1.   From the **Planner** tab, under **Contracts**, click **Contracts**.

2.   Click the contract name for the contract to which you want to add license distributions to a contract pool.

3.   In the bottom section of the page, click the contract pool to which you want to add a license distribution.

4.   Click **View** for the license to which you want to add a distribution.

5.   Click **Add License Distribution** to display the **Add License Distribution** page.

6.   Specify the license distribution settings. Required settings are identified by a red asterisk (*).

Setting	Description
Type	Select Manual.
Organization	Select the organizational structure to which you want to distribute the licenses.
Number of Licenses	Number of product licenses to distribute.
Distribution Start Date	Specified as *mm/dd/yyyy*, the date on which the distribution will start.

7.   Click **Save**.

Remixing Contract Pools and Planning for Renewals

Remixing is the process of optimizing the money spent on software by adjusting the quantities of product licenses within a set of rules defined by the contract and contract pools. Customers are typically limited to a fixed number of remixes per year over the life of the contract.

Planning takes into account both remixes and renewals. The remix and the renewal-planning process use historical product usage patterns and the limits defined in the contract and pools to forecast the number of licenses your enterprise will require for each of the products purchased under the contract.

A remix or renewal analysis is performed on the product licenses within the same contract pool; any manipulation for a remix between the product licenses that belong to different contract pools of a contract are not permitted.

See Basic Planning Process for Renewals and Remixes for information about the planning process using FlexNet Manager
for Engineering Applications.

See Also
Adding Plans (Renewals/Remixes)

Basic Planning Process for Renewals and Remixes

The basic process for planning remixes and renewals using FlexNet Manager for Engineering Applications is:

1. Add a plan to define the renewal or remix parameters, and select the contract pools to be remixed.

2. Using the **View Plan (Renewal/Remix)** page, specify any additional quantities or buffer percentages for the products
    in the contract pools included in the plan.

3. View the usage trend analysis, as shown by the **Product Peak Usage Trend** report.

4. Override any of the quantities suggested using the **View Plan (Renewal/Remix)** page.

5. Complete the remix.

See Also
Contract Pools
Product Choices
Adding Plans (Renewals/Remixes)

Adding Plans (Renewals/Remixes)

Task   **To add a plan for renewal or remix to a contract:**

1. From the **Planner** tab, under **Contracts**, click **Contracts**.

2. On the **Contract Summary** page, click the name of the contract for which you want to add a remix or renewal plan.
    This displays the **View Contract** page.

3. Click the **Plans (Renewals/Remixes)** tab, then click **Add Plan**.

4. On the **Add Plan (Renewal/Remix)** page, specify the plan settings. Required settings are identified by a red asterisk
    (*).

Setting	Description
Renewal/Remix Plan Name	Unique name for the remix or renewal plan.
Renewal/Remix Plan Effective Date	Specified as *mm/dd/yyyy*, the date on which the results of the remix or renewal plan are to be applied.
Trend Data Start Date	Specified as *mm/dd/yyyy*, the date on which to start product usage trend analysis.
Trend Data End Date	Specified as *mm/dd/yyyy*, the date on which to end product usage trend analysis.

Setting	Description
Forecast Date	Forecast product usage trends until the specified date (*mm/dd/yyyy*). The forecast date cannot be earlier than the **Trend Data End Date**.

5. From the list at the bottom of the page, select the contract pools that you want to include in the plan and specify the remixable percent for each of the contract pools that you select.

6. Click **Save**. The **View Plan (Renewal/Remix)** page is displayed, where you can provide additional settings.

See Also
Product Choices

Viewing and Analyzing Plans (Renewals/Remixes)

After you add a remix, you can use the **View Plan (Renewal/Remix)** page to:

- Access the **Edit Plan Settings** page.

- Export the results to a CSV file.

- Provide additional settings and analyze the results.

- View the **Product Peak Usage Trend** report for the plan by clicking the arrow icon in the **Forecast** column.

- Complete the plan for remix or renewal.

Plan Information

The bottom of the page contains the following information:

- **Product**—The product for which this plan information applies.

- **Usage**—The number of peak concurrent users for this product over the specified time period.

- **Days**—The number of days in the specified time period that reached the peak value.

- **Time at Peak**—The total amount of time spent at the peak value during the specified time period.

- **Denials**—The number of denials that occurred during the specified time period while at peak usage.

- **Denial %**—Editable field that enables you to specify the percentage of hours during a specified time period, during which a denial would be acceptable.

- **Effective**—The new peak usage quantity after applying the value specified in the Denial % field (if any). This is used to calculate the Forecast quantity.

- **Current**—The quantity of product licenses in the contract pool, owned as of the Trend Data Start Date.

- **Forecast**—Total quantity of product licenses that are needed as of the Forecast Date. This value is determined by extending the usage trend line from the effective peak usage as of the Trend Data End Date until the Forecast Date.

- **External**—The number of product licenses that are not part of the current contract pool. This will be 0 if the current contract pool is associated with an organizational unit.

- **Additional Qty**—Number of additional product licenses to add to the forecast quantity.

- **Buffer %**—Enables you to specify an additional percentage of product licenses to add to the forecast quantity.

- **Suggested**—The suggested total quantity of the product.

- **Override**—Enables you to override the quantity suggested by trend analysis for this remix.

- **Final**—The number of product licenses required for this remix. If the Override field contains a value, the Final quantity will be the same as the Override quantity. If the Override field is empty, the Final quantity will be the same as the Suggested quantity.

Providing Additional Plan Settings

Task   *To view plan details and provide additional settings:*

1. From the **Planner** tab, under **Contracts**, click **Contracts**.

2. On the **Contract Summary** page, click the name of the contract for which you want to add a plan (renewal/remix). This displays the **View Contract** page.

3. In the bottom section, click the **Plans (Renewals/Remixes)** tab, then click the name of the plan. This displays the **View Plan (Renewal/Remix)** page.

4. Specify the following optional additional settings, available in the bottom section of the page.

Setting	Description
Denial %	The percentage of hours during which a denial would be acceptable during the time period specified by the Trend Start and Trend End dates. This value is used to derive the Effective Peak column value.
Additional Qty	Number of additional product licenses to add to the forecast quantity.
Buffer %	Additional percentage of product licenses to add to the forecast quantity.
Override	Overrides the quantity suggested by trend analysis for this remix.

5. Click **Save and Analyze Changes** to see the results of the plan analysis with the additional settings.

See Also
Product Choices

Editing Plan Settings

Task   *To edit plan settings:*

1. From the **Planner** tab, under **Contracts**, click **Contracts**.

2. On the **Contract Summary** page, click the name of the contract for which you want to add a plan. This displays the **View Contract** page.

3. Click the **Plans (Renewals/Remixes)** tab, then click the name of the plan to display the **View Plan (Renewal/Remix)** page.

4.   Click **Edit Plan Settings**.

5.   Modify the plan settings.

6.   Click **Save**.

See Also
Product Choices

Completing Plans (Renewals/Remixes)

After analyzing the results of the plan, you can finalize the plan.

Task   **To complete a plan for a renewal or remix:**

1.   From the **Planner** tab, under **Contracts**, click **Contracts**.

2.   On the **Contract Summary** page, click the name of the contract for which you want to add a remix. This displays the **View Contract** page.

3.   Click the **Plans (Renewals/Remixes)** tab, then click the name of the plan to display the **View Plan (Renewal/Remix)** page.

4.   Click **Complete Plan**.

5.   Specify the settings requested in the dialog box.

Setting	Description
Next Plan Date	Specified as mm/dd/yyyy, the date on which this contract pool can next be remixed. This date must be later than the plan's effective date.
Create new contract?	Select the check box if you want to create a new contract for the plan. If the check box is not selected, the existing contract is remixed.
	The contract that is created is a copy of the existing contract with the contract name set to the name specified in the "Name of new contract" field, the contract start date set to the effective date of the remix, and the contract end date set to blank. All contract pools being remixed are copied to the new contract.
	In addition, the contract end date for the contract being remixed is set to the effective date of the remix.
Name of new contract	Specify the name for the new contract, if creating a new contract.

6.   Click **Complete Plan**.

Upon completing a plan, the following actions occur:

●   The expiration date for all product licenses in the contract pools included in the plan and the expiration date for all distributions of those licenses are both set to the Effective Date of the plan.

●   If the **Create new contract** check box is selected:

- A new contract is created as a copy of the contract being remixed with the Contract Name set to New Contract Name, the Contract Start Date set to the Effective Date of the plan, and the Contract End Date set to blank. All contract pools of the remixed contract are copied to the new contract.

- The Contract End Date of the contract being remixed is set to the Effective Date of the plan.

- A new product license is created for each product in the contract pools being remixed that has a Suggested Quantity greater than zero. These licenses are copies of the existing licenses with the Effective Date set to the Effective Date

- The Next Plan Date for each contract pool included in the plan is set to the Next Plan Date

See Also
Product Choices

Software Vendors

Software vendors are the organizations that *sell* licensed software to your enterprise. The terms of the license are defined in a contract.

The software vendor may be the same organization as the software producer, which is the organization that *makes* software.

See Also
Adding Software Vendors
Software Producers
Contracts

Adding Software Vendors

Task   ***To add a software vendor:***

1. From the **Planner** tab, under **Software Vendors**, click **Add Software Vendor**.

2. Specify the software vendor settings. Required settings are identified by a red asterisk (*****).

Setting	Description
Name	Unique name for the software vendor.
Category	The primary type of product made by this software vendor.

3. Click **Save**.

See Also
Software Vendors
Editing Software Vendors

Viewing Software Vendor Details

Using the **View Software Vendor** page, you can:

- Access the **Edit Software Vendor** page.

- View a list of contracts from the software vendor.

- Add contact information for the software vendor.

Task   ***To view software vendor details:***

1. Click the Planner tab, then click the Software Vendors subtab.

2. Click the software vendor name link to open the View Software Vendor page.

See Also
Software Vendors
Adding Software Vendors
Editing Software Vendors
Adding Software Vendor Contacts

Editing Software Vendors

Task   ***To edit a software vendor:***

1. From the **Planner** tab, under **Software Vendors**, click **Software Vendors**.

2. Click the software vendor name link to open its **View Software Vendor** page

3. Click the **Edit Software Vendor** link.

4. Edit the software vendor settings, then click **Save**.

See Also
Software Vendors
Adding Software Vendors
Deleting Software Vendors

Deleting Software Vendors

If you delete a software vendor, the contact information for that software vendor is also deleted.

Task   ***To delete software vendors:***

1. From the **Planner** tab, under **Software Vendors**, click **Software Vendors**.

2. Select the check box in front of the software vendors you want to delete, then click **Delete**.

Adding Software Vendor Contacts

To help you better manage your relationship with software vendors, you can define contact information for various personnel within the software vendor's company. For example, you might add contact information for the sales and support representatives who service your account.

Note • If you delete a software vendor, the contact information for that software vendor is also deleted.

Task   ***To add a software vendor contact:***

1. From the **Planner** tab, under **Software Vendors**, click **Software Vendors**.

2. Click the name of the software vendor for which you want to add contact information. This displays the **View Software Vendor** page.

3. In the bottom half of the page, click the **Contacts** tab, then click **New Contact** to display the **Add Vendor Contact** page.

4. Provide a unique contact name, then complete as many of the remaining settings as you need.

5. Click **Save**.

Product Choices

Product choices are automatically created by the product usage aggregation process.

The Product Choices page displays a list of all product choices, including the following information for each:

-   **Possible Products**—List of the products that the product usage aggregation process had to choose from when determining product usage. It is a list of products that share the features listed in the Common Features column.

-   **Common Features**—Features that each of the possible products have in common.

-   **Chosen Product**—Name of the software product that the product usage aggregation process chose for the product usage.

-   **Product Choice Override**—Name of the software product that a user chose to override the product chosen by the product usage aggregation process.

Viewing Product Choice Details

On the View Product Choice page, you can see more detailed information about a selected product choice.

Task   ***To view product choice information:***

1.   From the **Planner** tab, under **Product Choices**, click **Product Choices**.

2.   Click the name link for the product choice (in the **Possible Products** column) for which you want to view details. This displays the **View Product Choice** page.

The **View Product Choice** page provides the following information about a product choice.

Table 7-2 • Product Choice Information

Item	Description
Possible Products	Given the set of feature usage, this is a list of the products that might have been used.
Common Features	A list of the features that are common to the products listed.
Chosen Product	The product that FlexNet Manager for Engineering Applications determined was the best match for this set of feature usage.
Reason Chosen	Reason why FlexNet Manager for Engineering Applications determined that the chosen product is the best fit for this set of feature usage.
Chosen Date	Date on which FlexNet Manager for Engineering Applications selected the product as the product choice.
Product Choice Override	Indicates whether someone has overridden the product choice that FlexNet Manager for Engineering Applications has made for this set of feature usage. To change the product choice, click **Edit Product Override** to display the Edit Product Choice page.
Override Date	Date on which the latest product choice override was made.
Notes	Notes about the product choice override. This section will be empty if there was no override.

See Also
Product Choices
Editing (Overriding) Product Choices

Editing (Overriding) Product Choices

You can modify the product choices that FlexNet Manager for Engineering Applications using the Edit Product Choice page. In effect, you override the product choice that FlexNet Manager for Engineering Applications made, as a result of the product resolution process. When you edit a product choice, information about the override is displayed on the View Product Choice page.

Task **To edit product choices:**

1. From the **Planner** tab, under **Product Choices**, click **Product Choices**.

2. Click the name link for the product choice (in the **Possible Products** column) for which you want to view details. This displays the **View Product Choice** page.

3. In the **Product Choice Override** section, click **Edit Product Override**. This displays the **Edit Product Choice** page.

4. From the **Product Choice Override** menu, select the product that you want.

5. Optionally, in the Notes section, provide any relevant notes.

6. Click **Save**.

See Also
Product Choices
Viewing Product Choice Details

Single-Master-Feature Product Mapping

To improve aggregation performance, you can define single-master-feature products, in cases where the product and feature meet specific criteria. You define the product-to-feature mapping—identifying the product's single master feature—using the functionality available beneath the **Planner** tab.

Single-Master-Feature Product Criteria

In order to define single-master-feature products, the product and master feature must meet the following criteria:

- Only one feature (which serves as the "master" feature) can be assigned (mapped) to the product.

- The single, master feature cannot be assigned to more than one product. The product to which it is mapped is the only product to which it can be mapped. (The feature cannot be shared among multiple products.)

- The number of features (parallel running instances) per product license is 1:

  1 product license = 1 running feature instance

As a result of defining single-master-feature products, you can significantly improve the aggregation performance of FlexNet Manager for Engineering Applications. The performance gain is dependent upon the number of single-master-feature products in your environment, but can be up to 50–70 percent for environments with a high percentage of single-master-feature products.

*Important • This functionality does not apply to any features served by the vendor daemon **ibmratl**.*

Defining a Single-Master-Feature Product

To define a single-master-feature product, map the master feature to the product.

Task   ***To define a single-master-feature product:***

1. Create a product (if it does not already exist in FlexNet Manager for Engineering Applications). See Adding Products for information.

2. Add the master feature to the product. See Adding Features to Products for information.

   Important • As noted in the Single-Master-Feature Product Criteria, this product cannot have any other assigned features, and the master feature cannot be assigned to any other products. In addition, one product license = one running feature instance.

   See Also
   Investment Planning
   Products
   Features
   Report Data Aggregation

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Access Rights

Access rights determine which FlexNet Manager for Engineering Applications users are able to view and manage information pertaining to specified entities—license servers and FlexNet Agents—within the license management domain. Using functionality available under the **Access** tab, you can specify the license server sets and FlexNet Agents that a FlexNet Manager for Engineering Applications user can view and manage.

See Also
License Server Access
Agent Access Rights

License Server Access

FlexNet Manager for Engineering Applications enables you to specify access to license servers based on the administrative needs of various users. You can group license servers into license server administrative sets, and then associate those license-server sets with specific FlexNet Manager for Engineering Applications users.

Users have access only to the information that pertains to the license servers in the License Server Administrative Set with which they are associated. For example:

- The information displayed in pages beneath the Summary, Servers, Licenses, and Activity tabs will pertain only to the license servers for which the user has access.

- License server access rights work in conjunction with alert subscription to determine which alerts are displayed when a particular FlexNet Manager for Engineering Applications user is signed in.

You can group one or more license servers in a license server administrative set. There is no limit to the number of license servers in a set.

Universal License Server Admin Set

By default, FlexNet Manager for Engineering Applications creates the **Universal License Server Admin Set**. Users with the **Super Administrator** role are able to view and manage license servers in the Universal License Server Admin Set. When a license server is registered with FlexNet Manager for Engineering Applications, it is automatically added to the Universal License Server Admin Set.

Creating License Server Administrative Sets

Users assigned a role with the **View and Manage License Server Admin Sets** permission can create license server administrative sets and associate users with those sets.

Task   **To create a license server administrative set:**

1. From the **Access** tab, under **Access**, click **Add License Server Admin Set.**

2. In the **Name** field, type a name for the set.

3. In the **License Servers** section, select the license servers that you want to add to the set and click the right arrow to add them to the **Selected license servers** set.

4. In the **Users** section, select the users that you want to associate with the license server administrative set and click the right arrow to add tehm to the **Selected users** set.

5. Click **Save**.

Editing License Server Administrative Sets

Users assigned a role with the **View and Manage License Server Admin Sets** permission can edit license server administrative sets and associate users with those sets.

Task   **To edit a license server administrative set:**

1. From the **Access** tab, under **Access**, click **License Server Admin Set.**

2. On the **License Server Administrative Set** page, click a name link for the license server administrative set that you want to edit. This displays the **Edit License Server Administrative Set** page.

3. In the **Name** field, edit the name for the set if required.

4. In the **License Servers** section, select the license servers that you want to add to the set or remove from the set and click the appropriate arrow.

5. In the **Users** section, select the users that you want to associate with the license server administrative set or for whom you want to remove the association, and click the appropriate arrow.

6. Click **Save**.

Agent Access Rights

Agent access rights provide individual FlexNet Manager for Engineering Applications users with rights to view information and manage specified FlexNet Agents. The **Agent Access Rights Management** page displays a list of the FlexNet Agents that are registered with FlexNet Manager for Engineering Applications and the users who have access rights for each agent.

When a FlexNet Agent starts up and is registered with FlexNet Manager for Engineering Applications, the FlexNet Agent is automatically associated with all FlexNet Manager for Engineering Applications users who have been assigned the Super Administrator role. This means that every user who has the Super Administrator role at the time the FlexNet Agent is registered will have access rights to information about that FlexNet Agent.

Agent access rights work in conjunction with alert subscription to determine which alerts are displayed when a particular FlexNet Manager for Engineering Applications user is signed in.

Managing Agent Access Rights

Users assigned a role with the **View and Manage Agent Access** permission can edit and define agent access rights.

Task   ***To change access rights for a particular FlexNet Agent:***

1. From the **Admin** tab, under **Access Rights**, click **Agent Access**.

2. On the **Agent Access Rights Management** page, click an agent name to display the **Edit Agent Access Rights** page for that agent.

3. Add or remove users by selecting the user name and clicking the appropriate arrow. Users listed in the **Selected Users** box are able to view information about the FlexNet Agent in the FlexNet Manager for Engineering Applications interface.

4. Click **Save**.

9

Alerts

FlexNet Manager for Engineering Applications provides different alert types that can be used to notify users about different events or conditions. For example, you can configure an alert to notify you when a FlexNet Agent or license server is down or not responding.

Pages under the **Alerts** tab enable you to view a summary of alerts, subscribe to alerts, and configure alerts. Depending on the permissions you have been granted through roles, you see the **Alerts** tab with the following links:

- **Inbox**—List of alert messages that have been triggered and not dismissed.

- **Subscription**—Subscribe and unsubscribe to FlexNet Manager for Engineering Applications alerts.

- **Configure Alerts**—Enables you to specify an email template, and to configure the detection and notification interval for an alert.

- **Cleanup Service**—Activate the alert cleanup service and specify the interval at which it will run.

See Also
FlexNet Manager for Engineering Applications Alerts

Alerts Inbox

You can view your existing alerts on the **Alerts Inbox** page and in the **Alerts** table on the Dashboard page.

The **Alerts Inbox** page—available from the **Alerts** tab—displays the alerts for the user who is currently signed in to FlexNet Manager for Engineering Applications. The alerts that appear in this list are dependent upon the signed-in user's alert subscriptions.

The **Alerts Inbox** page provides the following information about each alert:

- **Category**—Relative seriousness of the alert, as set by FlexNet Manager for Engineering Applications (displayed in the column beneath the alert bell icon); whether the alert provides information, a warning, or an error message.

- **Date**—Date and time that the alert message was sent.

- **Message**—Text of the alert message.

- **Action**—Possible actions to perform on the alert message; for example, dismiss.

Some alerts are dismissed automatically when the alert condition is resolved. To manually remove an alert message from the Alerts Inbox page, click its **Dismiss** button.

Users assigned roles with the **View and Subscribe Alerts** permission—and who are subscribed to alerts—are able to view them in their **Alerts Inbox**.

See Also
FlexNet Manager for Engineering Applications Alerts
Alert Subscriptions

Dismissing Alerts

When an alert message is dismissed, its message is removed from the **Alerts Inbox** page and from the Alerts table on the Dashboard page. Some alerts are dismissed automatically when the alert condition is resolved; others must be dismissed manually.

Alerts on events are triggered only one time at the time the event is detected. Therefore, if an alert on an event is dismissed manually, it is not redisplayed. However, if an alert on a condition is dismissed manually, it is displayed again if the alert condition is not corrected before the next time the alert condition is evaluated (based on the **Detection and Notification Interval**).

Dismissed alert items remain in the FlexNet Manager for Engineering Applications database until the alert cleanup service job runs.

Note • Alerts are not automatically dismissed if a user's access rights and/or alert subscriptions change. Users are notified based on their access rights and alert subscriptions at the time that the alert was issued.

Task   ***To dismiss an alert manually:***

1. From the **Alerts** tab, under **Alerts**, click **Inbox**.

2. On the **Alerts Inbox** page, click the check boxes in front of the alerts you want to dismiss, then click the **Dismiss** button.

    Click **Dismiss All Alerts** if you want to dismiss every alert in the list.

    Users assigned a role with the **View and Manage Alert Configurations** permission can dismiss an alert.

See Also
Alerts Inbox
Dashboard
FlexNet Manager for Engineering Applications Alerts
Alert Subscriptions
Alert Scripting

FlexNet Manager for Engineering Applications Alerts

FlexNet Manager for Engineering Applications provides alerts that can be used to notify users about various conditions or events. All available alerts are listed on both the **Subscription** and the **Configure Alerts** pages.

Table 9-1 • FlexNet Manager for Engineering Applications Alerts

Alert	Description	Type
Agent Down	Generated when a FlexNet Agent is down or not responding. This alert is dismissed automatically when the agent restarts. If dismissed manually, the alert is redisplayed if the agent is still down the next time the alert condition is evaluated.	Error
License Server Down	Generated when a license server is down or not responding. This alert is dismissed automatically when the license server restarts. If dismissed manually, the alert is redisplayed if the license server is still down the next time the alert condition is evaluated.	Error
Vendor Daemon Down	Generated when a vendor daemon is down or not responding on an otherwise working license server. This alert is dismissed automatically when the vendor daemon restarts. If dismissed manually, the alert is redisplayed if the vendor daemon is still down the next time the alert condition is checked.	Error
Vendor Daemon Not Licensed	Generated when a vendor daemon is registered for which you do not have a valid FlexNet Manager for Engineering Applications license.	Error
Error Importing a Report Log	Generated when there is an error importing a report log from a license server (manual or scheduled) into FlexNet Manager for Engineering Applications. *Note • You may be asked to manually import or bulkimport a *.zsl file. This is a zipped file, which you can open in Winzip, for example. It contains one manifest file and one report log (*.rl) file. You only need to re-import the *.rl file.*	Error
General Error when Generating a Usage Report	Generated when an error occurs during the generation (manual or scheduled) of a usage report.	Error

Table 9-1 • FlexNet Manager for Engineering Applications Alerts

Alert	Description	Type
Concurrent License Expiring	Family of alerts—Generated when a license expiration date occurs in the next 30, 45, 60, 90, or 120 days. Each of the **Concurrent License Expiring** alerts can be configured to monitor a specified set of features. This alert is dismissed automatically when the expiring license is removed from the license file. If dismissed manually, the alert is redisplayed if the expiring license is still detected the next time the alert condition is evaluated. Licenses expire no more often than once per day, so the interval should be set to at least 1 day.	Warning
Activatable License Expiring	Family of alerts—Generated when a license expiration date occurs in the next 30, 45, 60, 90, or 120 days. Each of the **Activatable License Expiring** alerts can be configured to monitor a specified set of products. This alert is dismissed automatically when the expiring license is removed from the license file. If dismissed manually, the alert is redisplayed if the expiring license is still detected the next time the alert condition is checked. Licenses expire no more often than once per day, so the interval should be set to at least 1 day.	Warning
Concurrent Usage Threshold	Family of alerts—Generated when the number of licenses in use for a feature reaches or exceeds 50, 60, 70, 80, 90, or 100%. Each of the **Concurrent Usage Threshold** alerts can be configured to monitor a specified set of features. This alert is dismissed automatically when the usage drops below the threshold. If dismissed manually, the alert is redisplayed if the usage still exceeds the threshold the next time the alert condition is evaluated. The detection of this alert is based on the results of a license server status check (default interval 5 minutes).	Information
Activatable License Threshold	Family of alerts—Generated when the number of licenses in use for a product reaches or exceeds 50, 60, 70, 80, 90, or 100%. Each of the **Activatable License Threshold** alerts can be configured to monitor a specified set of products. This alert is dismissed automatically when the usage drops below the threshold. If dismissed manually, the alert is redisplayed if the usage still exceeds the threshold the next time the alert condition is evaluated. The detection of this alert is based on the results of a license server status check (default interval 5 minutes).	Information
Overdraft Activation State Reached	Generated whenever an overdraft license is activated. The detection of this alert is based on the results of a license server status check (default interval 5 minutes).	Information

Table 9-1 • FlexNet Manager for Engineering Applications Alerts

Alert	Description	Type
User Deactivated	Generated when a user has been deactivated because the user has incorrectly attempted to sign in to FlexNet Manager for Engineering Applications too many times. The number of times that a user sign-in can fail within a specified time period before being deactivated is configurable on the **System Configuration | FlexNet Platform Server** page. A FlexNet administrator must reactivate a deactivated user before the user can sign in to FlexNet Manager for Engineering Applications again. This alert is dismissed automatically when the user is reactivated. If the alert is dismissed manually (by clicking the **Dismiss** button), the alert is not redisplayed, even if the user has not been reactivated.	Information
Error of Specified Type when Generating a Usage Report	Appears if there is an error while generating a usage report.	Error
Error of Specified Type when Aggregating Data	Appears when processing data aggregation.	Error
Denial Events in Preceding User-Defined Time Period	Triggered when one or more denial events occurred within the preceding user-defined time period. For example, you may want to see denial events that occurred within the preceding 30 minutes. To specify the time period for denial alert detection, use the Time Period setting on the **System Configuration | Manager** page. By default, the time period is set to 30 minutes. By default, the detection and notification interval is 5 minutes. You can change the interval on **Configure Alert Definition** page. For every detection interval, FlexNet Manager for Engineering Applications will raise an alert if there was any denial event within the past user-defined number of minutes.	Warning

See Also
Alerts Inbox
FlexNet Manager for Engineering Applications Alerts

Configuring Alerts

You can configure alerts that can be used to notify specified users about different types of events or conditions. Alerts are not sent to users, however, unless a user subscribes to the alert. (See Creating or Editing Alert Subscriptions.)

Users assigned a role with the View and Manage Alert Configurations permission can configure the alert definition.

Task   ***To configure an alert definition:***

1. From the **Alerts** tab, under **Alerts**, click **Configure Alerts** to display the **Configure Alerts** page.

2. For the alert that you want to configure, click **Configure**. This displays the **Configure Alert Definition** page.

3. Specify the **Detection and Notification Interval** for FlexNet Manager for Engineering Applications to check for the specific alert event or condition. You can specify a number of seconds, minutes, hours, or days.

4. Set the **Status** to **Active**.

5. Set the **Importance** to **Low/Medium/High** based on the Alert Priority.

6. Provide a **From Address**. This is used when an email is sent as the result of an alert being triggered.

7. Provide a path to a customized email template, if any, for this alert. For more information, see Customizing an Alert Email Template.

8. Click **Save**.

See Also
FlexNet Manager for Engineering Applications Alerts
Customizing an Alert Email Template
Alert Subscriptions

Customizing an Alert Email Template

You can configure an alert handler to send email to a specified email address when an alert is triggered. Each alert type, or alert type family, has a default email template—an XSL file that is used to create email messages. Each alert type uses a single email template path. For example the **Agent Down** alert uses the template **manager.agentDownTemplate.xsl**.

The name of a default email template is usually composed of the:

● Module in which the alert is defined.

● Name or family name of the alert type.

For example, one of the templates is named `manager.licenseExpiringTemplate.xsl`. It is defined in the manager module for the family of License Expiring alerts. If there is no email template that matches the alert type or alert type family, the `genericAlert.xsl` template is used.

Default email templates are located in the ***admin_install_directory***`/site/webapps/flexnet/templates` directory. These email templates can be customized. Before renaming a customized email template, decide whether the customizations will apply to all alert emails that use this template.

Important • *You should be familiar with XSLT before attempting to edit email templates.*

Task   ***To customize an alert email and specify the customized email template for an alert:***

1. Open a Command Prompt window and change to the FlexNet Manager for Engineering Applications installation directory (*admin_install_directory*).

2. Create a directory named **custom** in the *admin_install_directory* using the command `mkdir`, creating the following directory structure in the custom directory to mimic the path to the default email templates:

   `custom/webapps/flexnet/templates`

3. Locate the default email template and copy it to the custom `templates` directory that you just created.

4. Edit the copy of the email template and save the file.

5. Rename the customized file if necessary.

   - If the changes to the email template apply to all email messages that are generated using this template, do not rename the template file. If it is not renamed, it will replace the default template in the `site` directory, but the original will remain intact in the `releases` directory in case it has to be recovered.

   - If you want to target your edits to the email template used for only one of a family of alerts, rename the email template.

6. Stop FlexNet Manager for Engineering Applications Admin.

   - To stop Admin from the command line, navigate to the Admin installation location, then type the command:
     `flexnet stop`

   - If you configured Admin to run as a Windows service, you can stop the service from the Windows Services pane.

7. To load files from the `custom` directory into the `site` directory, in the *admin_install_directory*, type the command: **`flexnet site make`**

8. Restart FlexNet Manager for Engineering Applications Admin.

   - To start Admin from the command line, navigate to the Admin installation location, then type the command:
     `flexnet start`

   - If you configured Admin to run as a Windows service, you can start the service from the Windows Services pane.

9. From a supported web browser, log in to FlexNet Manager for Engineering Applications Admin.

10. To configure an alert definition to use the customized email template:

    a. From the **Alerts** tab, under **Alerts**, click **Configure Alerts**.

    b. Click **Configure** to display an alert's **Configure Alert Definition** page.

    c. To change the email template, specify the template name in the **Email Template** field.

    d. Click **Save**.

Note • *You must subscribe to an alert in order to see alerts as they are triggered (as configured). See* Alert Subscriptions *for more information.*

Alert Subscriptions

To ensure that you receive only the alerts that are useful to you, you subscribe to individual FlexNet Manager for Engineering Applications alerts. In order to receive an alert, you must subscribe to the alert. When an alert to which you are subscribed is triggered, that alert appears in your Alerts Inbox. You will not see alerts to which you are not subscribed.

Alert subscription works in conjunction with access rights to determine which alerts a FlexNet Manager for Engineering Applications user sees. For example, a user will see alerts only for the FlexNet Agents and license servers for which the user has defined access rights. Access rights override alert subscription rights.

For example, the Concurrent Threshold Alert could be calculated based on the subscriber's access rights:

One company has two sites—Europe and USA.

- In Europe, there are 500 licenses available and 450 were used.

- In USA, there are 1000 licenses available and 400 were used.

If a user has access rights for the license servers in Europe only and he subscribes to the alert (80%), he would receive the alert because the usage is 90% and it exceeds the threshold.

If a user has access rights for the license servers in USA only and he subscribes to the alert (80%), he would not receive the alert because the usage is 40% and it does not exceed the threshold.

If a user has access rights for all license servers in USA and Europe and subscribes to the alert (60%), he would receive the alert because the usage is 63% and it exceeds the threshold.

To see an alert triggered by a specific event, the FlexNet Manager for Engineering Applications user must:

- Subscribe to the alert (for example, Agent Down).

- Have access rights for the object of interest for the event, where this is pertinent. For example, the user must have access rights to a particular FlexNet Agent in order to see the Agent Down alert for that agent.

For example, to see an alert when the FlexNet Agent AcmeCo is down, the FlexNet Manager for Engineering Applications user must be subscribed to the Agent Down alert and must have agent access rights to the AcmeCo agent.

When you unsubscribe to an alert type, the existing Inbox Notification alerts message is not dismissed automatically—the existing alerts (shown in the Alerts Inbox) will remain and the status of alert condition will be not updated.

See Also
Access Rights
Creating or Editing Alert Subscriptions
Subscribing to Product-Based or Feature-Based Alerts
FlexNet Manager for Engineering Applications Alerts
Alerts Inbox

Creating or Editing Alert Subscriptions

The following instructions describe how to subscribe to most FlexNet Manager for Engineering Applications alerts. Product-based alerts or Feature-based alerts—which enable you to select specific products or features—require additional configuration.

Task   ***To subscribe to an alert:***

1. From the **Alerts** tab, under **Alerts**, click **Subscription** to display the **Alert Subscription** page.

2. Click **Subscribe/Edit** for the alert to which you want to subscribe. This displays the **Create/Edit Alert Subscription** page.

3. Select the **Inbox Notification** check box to display alerts in your Alerts Inbox. Inbox Notification is required if Email Notification or Script Execution is enabled.

4. In the **Email Notification** section, set up one or more email notifications for the alert.

    You may want to set up multiple email notifications with different trigger times to escalate alerts to different email recipients if an alert condition is not corrected within a particular amount of time.

Email Notification Setting	Description
State	Select the check box to enable email notification for the alert.
Trigger time	Specify a positive integer or zero in the first field and select an interval from the list. Specifying zero in the field causes the alert to be triggered immediately after the alert trigger occurs.
	The alert date is the time the alert condition began, and the trigger time is the time offset from the alert date when the alert email is triggered, but not necessarily sent. Email with a trigger delay is sent when the alert condition is next checked after the trigger time has passed, if the triggering alert has not been dismissed.
	If an email notification is set with a trigger time delay (for example, 1 hour) less than the detection interval (for example, 1 day), an email could be triggered by an alert condition on Monday, but not be sent until the alert is checked again on Tuesday (if the alert was not dismissed). Therefore, for clarity, set the trigger time delay to be a multiple of the **Detection and Notification Interval**.
	Tip • Set one alert handler/notification to trigger immediately upon detection of the event and set trigger-time delays only on additional email notifications.
Send email to	Email address to which you want to send this alert notification. Specify multiple email addresses in a comma-delimited list.

5. To set up additional email notifications, select the **Show additional email notifications** check box and complete the email notification settings described in the previous table.

6. In the Script Execution section—displayed for License Server Down, Vendor Daemon Down, Concurrent License Expiring, and Concurrent Threshold alerts—specify whether you want to execute a script when this alert is triggered.

7. Click **Save**.

Subscribing to Product-Based or Feature-Based Alerts

FlexNet Manager for Engineering Applications provides several product-based and feature-based alerts. When subscribing to one of these alerts, you can configure the alerts to monitor activity for a specific product or feature.

The information required for this type of alert subscription varies depending on the alert type.

Table 9-2 • Product/Feature-Based Alert Types

Alert Type	Alerts
License Expiration	● Concurrent License Expiring ● Activatable License Expiring
Usage Threshold	● Concurrent Usage Threshold ● Activatable Usage Threshold
Overdraft Activation	Overdraft Activation State Reached

Subscribing to a License Expiration Alert

These instructions pertain to the license expiration alerts—Concurrent License Expiring and Activatable License Expiring.

Task   ***To subscribe to a license expiration alert:***

1. From the **Alerts** tab, under **Alerts**, click **Subscription** to display the **Alert Subscription** page.

2. Click **Subscribe/Edit** for the alert to which you want to subscribe. This displays the **Create/Edit Alert Subscription** page.

3. Select the **Inbox Notification** check box to display alerts in your Alerts Inbox.

4. In the **Email Notification** section, set up between one and three email notifications for the alert.

Email Notification Setting	Description
State	Select the check box to enable email notification for the alert.

Email Notification Setting	Description
Trigger time	Specify a positive integer in the first field and select an interval from the list.
	The alert date is the time the alert condition began, and the trigger time is the time offset from the alert date when the alert email is triggered, but not necessarily sent. Email with a trigger delay is sent when the alert condition is next checked after the trigger time has passed, if the triggering alert has not been dismissed.
	If an email notification is set with a trigger time delay (for example, 1 hour) less than the detection interval (for example, 1 day), an email could be triggered by an alert condition on Monday, but not be sent until the alert is checked again on Tuesday (if the alert was not dismissed). Therefore, for clarity, set the trigger time delay to be a multiple of the Detection and Notification Interval.
	Tip • Set one handler to trigger immediately upon detection of the event and set trigger time delays only on additional email notifications.
Send email to	Email address to which you want to send this alert notification. Specify multiple email addresses in a comma-delimited list.

5. To set up additional email notifications, select the "Select to show additional email notifications" check box and complete the email notification settings described in the previous table.

6. In the Script Execution section—displayed for the Concurrent License Expiring alert—specify whether you want to execute a script when this alert is triggered.

7. Click **Next** to move to the next page of the subscription process.

8. Type the expiration days in the first field. For example, type **10** if you want to be notified when a license is within 10 days of expiration. This number will be used for all products/features that you specify in the following fields. You can modify the expiration days for individual products/features after they are added.

9. From the list on the left, select the vendor daemon for which you want to select products/features. Press the **Ctrl** key to select multiple vendor daemons.

10. Click the arrow button to display the vendor daemon's products/features in the box on the right.

11. From the list of products, select the products for which you want to set the alert, and click **Add**.

12. Repeat steps 8 through 11 to add more products or features with different expiration days.

13. Click **Finish**.

See Also
FlexNet Manager for Engineering Applications Alerts

Subscribing to an Overdraft Activation State Reached Alert

Task   ***To subscribe to an overdraft activation alert:***

1. From the **Alerts** tab, under **Alerts**, click **Subscription** to display the **Alert Subscription** page.

2. Click **Subscribe/Edit** for the alert to which you want to subscribe. This displays the **Create/Edit Alert Subscription** page.

3. Select the **Inbox Notification** check box to display alerts in your Alerts Inbox.

4. In the **Email Notification** section, set up between one and three email notifications for the alert.

Email Notification Setting	Description
State	Select the check box to enable email notification for the alert.
Trigger time	Specify a positive integer in the first field and select an interval from the list. The alert date is the time the alert condition began, and the trigger time is the time offset from the alert date when the alert email is triggered, but not necessarily sent. Email with a trigger delay is sent when the alert condition is next checked after the trigger time has passed, if the triggering alert has not been dismissed. If an email notification is set with a trigger time delay (for example, 1 hour) less than the detection interval (for example, 1 day), an email could be triggered by an alert condition on Monday, but not be sent until the alert is checked again on Tuesday (if the alert was not dismissed). Therefore, for clarity, set the trigger time delay to be a multiple of the Detection and Notification Interval. *Tip • Set one handler to trigger immediately upon detection of the event and set trigger-time delays only on additional email notifications.*
Send email to	Email address to which you want to send this alert notification. Specify multiple email addresses in a comma-delimited list.

5. To set up additional email notifications, select the "Select to show additional email notifications" check box and complete the email notification settings described in the previous table.

6. Click **Next** to move to the next page of the subscription process.

7. From the list on the left, select the vendor daemon for which you want to select products. Press the **Ctrl** key to select multiple vendor daemons.

8. Click the arrow button to display the vendor daemon's products in the box on the right.

9. From the list of products, select the products for which you want to set the alert, and click **Add**.

10. Repeat steps 7 through 9 to add more products.

11. Click **Finish**.

Subscribing to a Usage Threshold Alert

These instructions pertain to the usage-threshold alerts—**Concurrent Usage Threshold** and **Activatable Usage Threshold**.

Task   ***To subscribe to a usage threshold alert:***

1. From the **Alerts** tab, under **Alerts**, click **Subscription** to display the **Alert Subscription** page.

2. Click **Subscribe/Edit** for the alert to which you want to subscribe. This displays the **Create/Edit Alert Subscription** page.

3. Select the **Inbox Notification** check box to display alerts in your Alerts Inbox.

4. In the **Email Notification** section, set up between one and three email notifications for the alert.

Email Notification Setting	Description
State	Select the check box to enable email notification for the alert.
Trigger time	Specify a positive integer in the first field and select an interval (minutes, hours, or days after the alert date, or days before the alert date) from the list.
	The alert date is the time the alert condition began, and the trigger time is the time offset from the alert date when the alert email is triggered, but not necessarily sent. Email with a trigger delay is sent when the alert condition is next checked after the trigger time has passed, if the triggering alert has not been dismissed.
	If an email notification is set with a trigger time delay (for example, 1 hour) less than the detection interval (for example, 1 day), an email could be triggered by an alert condition on Monday, but not be sent until the alert is checked again on Tuesday (if the alert was not dismissed). Therefore, for clarity, set the trigger time delay to be a multiple of the Detection and Notification Interval.
	Tip • It is recommended that you set one handler to trigger immediately upon detection of the event and set trigger-time delays only on additional email notifications.
Send email to	The email address to which you want to send this alert notification. You can specify multiple email addresses in a comma-delimited list.

5. To set up additional email notifications, select the **Show additional email notifications** check box and complete the email notification settings described in the previous table.

6. In the Script Execution section—displayed for the **Concurrent Usage Threshold** alert—specify whether you want to execute a script when this alert is triggered.

7.   Click **Next** to move to the next page of the subscription process.

8.   For the **Activatable Usage Threshold** alert, specify whether you want to include overdraft licenses in the license counts to determine where you are with respect to the threshold.

9.   Indicate whether you want FlexNet Manager for Engineering Applications to calculate the usage separately by product versions or take all versions into account when calculating the usage.

> For example, MyProduct has 2 versions: 1.0 and 2.0.
>
> ● MyProduct 1.0 has 500 licenses, with 300 in use—60% of licenses in use
>
> ● MyProduct 2.0 has 500 licenses, with 400 in use—80% of licenses in use
>
> A FlexNet Manager for Engineering Applications user subscribes to a usage threshold alert for MyProduct and specifies a usage threshold of 75%.
>
> ● If the Threshold Calculation (Separately by product versions) check box is selected, the threshold will be calculated by product versions separately. The user will receive an alert regarding MyProduct 2.0 has exceeded 75% usage.
>
> ● If the Threshold Calculation (Separately by product versions) check box is not selected, the user will not receive the alert, because the threshold for MyProduct (all versions) is 70% (700 in use / 1000 total licenses).

10.   Type the threshold percentage. For example, type **50** if you want to receive an alert when 50% of a particular product's licenses are in use. This number will be used for all products/features that you specify in the following fields. You can modify the expiration days for individual products/features after they are added.

11.   From the list on the left, select the vendor daemon for which you want to select products. Hold down the **Ctrl** key to select multiple vendor daemons.

12.   Click the arrow button to display the vendor daemon's products/features in the box on the right.

13.   From the list of products/features, select the products/features for which you want to set the alert, and click **Add**.

14.   Repeat steps 11 through 13 to add more products or features.

15.   Click **Finish**.

See Also
FlexNet Manager for Engineering Applications Alerts

Alert Scripting

FlexNet Manager for Engineering Applications provides script execution functionality as part of the alert subscription process. You can define a script—using, for example, Perl or Java—that FlexNet Manager for Engineering Applications will call when one of the following events occurs:

● License Server Down

● Vendor Daemon Down

● Concurrent License Expiring

● Concurrent Usage Threshold Reached

The script is launched under the security credentials of the FlexNet Manager for Engineering Applications process (typically root of the machine). It is recommended that you test the command to ensure that the script will run when it is invoked.

The script is executed only if the FlexNet Manager for Engineering Applications user has the Execute Scripts for Alerts permission.

Table 9-3 • Alert Script Execution Settings

Script Execution Setting	Description
State	Select the check box to enable script execution for this alert. This specifies whether the script (whose path is provided in the next field) is invoked.
Execute Command	Specify the path to the script. This path must be accessible to FlexNet Manager for Engineering Applications. There is no validation for the path.
User-Defined Message	This text is appended to the LMADMINAINFO environment variable: `message=user-defined_message&`

See Also
FlexNet Manager for Engineering Applications Alerts
LMADMINAINFO Environment Variable
LMADMINAINFO Examples

LMADMINAINFO Environment Variable

`LMADMINAINFO` is an environment variable set when an alert triggers. You can use it in the program that is run when the alert triggers. It is defined in accordance with the Common Gateway Interface (CGI) format. It is the same format as the `query_string` environment variable defined by an HTTP server.

`LMADMINAINFO` is set to a character string consisting of a series of `name=value` pairs with no spaces or line breaks. All blanks in the string are encoded using the "+" character. All "+" characters are encoded using the "%2B" string.

The following example is formatted with line breaks to make reading easier, but remember not to use any spaces or line breaks in your `LMADMINAINFO`.

```
eventime=Day+Mon+dd,+yyyy+hh:mm:ss&
alarm_name=name&
alarm_type=server_down&
folder=folder&
lmservers=machine_name&
notice=auto_restart_info&
message=user-defined_message&
```

See Also
LMADMINAINFO Examples
Alert Scripting

LMADMINAINFO Examples

The following sections show `LMADMININFO` examples for different alerts (also referred to as alarms).

Vendor Daemon Down

```
eventime=Wed+Aug++8,+2007+16:26:06&alarm_name=vendor_down&alarm_type=vendor_daemon_down&vendor=smoketst
:v10806&folders=v10806,&notice=
Vendor+smoketst+in+folder+v10806+is+down&message=vendor+is+down+message&
```

Sample Notice:

vendorDaemonDown.message = Vendor *<vendor daemon name>* in folder *<license server display name>* is down.

License Server Down

```
eventime=Wed+Aug++8,+2007+16:20:50&alarm_name=server_down&alarm_type=server_down&folder=v10806&lmserver
s=birchlake&notice=Servers+are+down: birchlake in+folder+v10806+is+down&message=&
```

Sample Notice:

licenseServerDown.message = Servers are down: *<machine daemon name>* in folder *<license server display name>* is down.

Concurrent Usage Threshold Exceeded

```
eventime=Wed+Aug+29,+2007+13:55:42&alarm_name=license+limit&alarm_type=%_license_limit_exceeded&feature
=f10&percent_limit=1&percent_used=10&notice=Feature:+f10 Percentage+of+licenses+used:+10
exceeds+set+limit+of+1+percent &message=whoo+hoo&
```

Sample Notice:

concurrentLicenseThreshold.message = Feature: *<feature name>* Percentage of licenses used: *<% used>* exceeds set limit of <threshold percentage> percent.

See Also
FlexNet Manager for Engineering Applications Alerts
LMADMINAINFO Environment Variable
Alert Scripting

Alert Cleanup Service

The alert cleanup service enables you to periodically clean up the FlexNet Manager for Engineering Applications database by deleting dismissed alerts from the database.

Task   ***To enable the alert cleanup service:***

1. From the **Alerts** tab, under **Alerts**, click **Cleanup Service** to display the **Alert Cleanup Service** page.

2. For the **Job Execution Interval** setting, specify how often you want the alert cleanup operation to run. Type a positive integer in the first text box and select an interval from the list.

3. Set the Status to **Active** to enable the service.

4. Click **Save**.

See Also
FlexNet Manager for Engineering Applications Alerts
Dismissing Alerts

10

Administration

Functionality available from the **Admin** tab enables you to manage users and roles, view currently logged-in users, see information about the FlexNet Manager for Engineering Applications application, and configure settings for FlexNet Manager for Engineering Applications components.

Some of the pages under the **Admin** tab enable you to view system information and the database connection, and to configure the behavior of FlexNet Manager for Engineering Applications. Depending on the permissions that have been granted through roles, a user may see the **System Configuration** and **System Information** sections under the **Admin** tab.

Table 10-1 • Functionality available from the Admin tab

Section	Description
Users	Enables you to view, add, and manage users; and to view, add, and manage domains.
Roles	Lists the default (*system*) roles that are provided; enables you to add, modify, and manage non-system roles.
Access Rights	Access rights determine which FlexNet Manager for Engineering Applications users are able to view and manage information pertaining to specific license servers and FlexNet Agents.
System Information	Provides information about the FlexNet Manager for Engineering Applications system, including versions and build numbers, location of the license file, environment and database information, and information about Java VM memory.
	From this tab, you can also view logs for FlexNet Manager for Engineering Applications and the Reporting module.
System Configuration	Enables you to configure the FlexNet Manager for Engineering Applications application and user interface for your enterprise.

See Also
Viewing System Information

User Management

Some of the pages under the **Admin** tab enable you to view and manage users, roles, and domains of users. If domains in addition to the FlexNet domain are configured, groups can also be viewed and managed.

Depending on the permissions you have been granted through roles, you see the **Admin** tab with the following user management sections:

- **Users**: Manage users, groups, and domains for FlexNet Manager for Engineering Applications, and see users who are currently logged in to the application.

- **Roles**: Manage roles (sets of permissions) for FlexNet Manager for Engineering Applications.

Default System Administrator User: admin

By default, there is an admin user (System Administrator) that is assigned the **Super Administrator** role. You cannot deactivate the admin user or modify the role assignment.

See Also
Administering Users
Administering Groups
Administering Domains
Administering Roles and Permissions
Browsing Logged-In Users

Administering Users

To log in to FlexNet Manager for Engineering Applications, a user must provide a user name and password. Users can gain access to FlexNet Manager for Engineering Applications by being either:

- A FlexNet Manager for Engineering Applications user, meaning that all or some information for that user, whatever its source, is stored in the FlexNet Manager for Engineering Applications database. User of this type are listed on the **Users** page.

- A user in a configured directory service who is not a FlexNet Manager for Engineering Applications user. Any user in a configured directory service domain can log in to FlexNet Manager for Engineering Applications. However, to perform a task in FlexNet Manager for Engineering Applications, a non–FlexNet Manager for Engineering Applications user must belong to a group that has been granted a role that can perform the task. These users do not appear in the **Users** page.

LDAP

Information for a FlexNet Manager for Engineering Applications user can be imported from an LDAP directory service, if the application has been configured to access a directory service, or the information is manually input into FlexNet Manager for Engineering Applications. Users input manually into the application are users in the FlexNet Manager for Engineering Applications domain. Authentication information for a user in the FlexNet Manager for Engineering Applications domain is stored in the FlexNet Manager for Engineering Applications database. FlexNet Manager for Engineering Applications users imported from a directory service are users in that directory service domain. Authentication information for a user in a directory service domain is maintained in the directory service.

Users can be members of FlexNet Manager for Engineering Applications groups. Groups cannot be input manually through FlexNet Manager for Engineering Applications, but only can be imported from a directory service. Group membership is managed entirely in the directory service.

After logging in, to perform tasks using FlexNet Manager for Engineering Applications, a user must be granted one or more permissions that are defined by the application. Permissions are not assigned to users directly—permissions are grouped into roles and FlexNet Manager for Engineering Applications users or groups are assigned one or more roles.

Some user names are intended to be logins to be shared among multiple users, for example, the admin user. Shared logins do not appear in the Logged-In Users page.

See Also
Administering Roles and Permissions
User Management

Browsing Users

Users (users who have all or some of their user information stored in the FlexNet Manager for Engineering Applications database) are displayed in the **Users** page. A non–FlexNet Manager for Engineering Applications user who can log in to the application only because the user is in a directory service domain does not appear on the Users page.

The **Users** page provides the following information:

● Whether a user is a shared user (shared users are marked with an icon showing several people)

● **User Name**—Login name of the user.

● **Display Name**—Full name of the user.

● **Date Created**—Date the user was created.

● **Date of Last Login**—Date of last login by the user; this date is not recorded for shared users

● **Status**—Whether the user is active or inactive.

Task   ***To browse users:***

From the **Admin** tab, under **Users**, click **Show Users** to display the **Users** page.

Users assigned roles with the **View Users or View and Manage Users** permission can browse users.

See Also
Administering Users
User Management

Adding Users

A user who has all or some user information, whatever its source, stored in the FlexNet Manager for Engineering Applications database is a FlexNet Manager for Engineering Applications user. FlexNet Manager for Engineering Applications users appear in the Users page.

Information for a FlexNet Manager for Engineering Applications user can be typed manually into FlexNet Manager for Engineering Applications or imported from an LDAP directory service, if access to a directory service is configured. Users entered manually into FlexNet Manager for Engineering Applications are users in the FlexNet Manager for Engineering Applications domain. If no domain is shown, the user is in the FlexNet Manager for Engineering Applications domain. Authentication information for a user in the FlexNet Manager for Engineering Applications domain is stored in the FlexNet Manager for Engineering Applications database. FlexNet Manager for Engineering Applications users imported from a directory service are users in that directory service domain. Authentication information for a user in a directory service domain is stored in the directory service.

To perform tasks using FlexNet Manager for Engineering Applications, a user needs one or more permissions that are defined by FlexNet Manager for Engineering Applications. Permissions are not assigned to users directly; permissions are grouped into roles and FlexNet Manager for Engineering Applications users are assigned one or more roles.

Users assigned a role with the View and Manage Users permission can view, add, and edit users.

Task   ***To add a user to the FlexNet Manager for Engineering Applications domain:***

1. From the **Admin** tab, under **Users**, click **Create User**.

2. If domains other than the FlexNet Manager for Engineering Applications domain are configured, select the FlexNet domain. If no domain is shown, the user is in the FlexNet Manager for Engineering Applications domain. Click **Next**.

3. In the User Details page, provide (at minimum) the required information.

   • Enter the User Name (required). This becomes the user's name for signing in to FlexNet Manager for Engineering Applications.

   • Enter the First Name and Last Name of the user (required).

   • Enter the Email Address of the user (required). If this is a shared user, specify the email address of a FlexNet application administrator in this field.

   • Enter the user's Phone Number and Fax Number (optional).

   • Enter the user's address information.

   • Select the user's preferred Time Zone. This time zone setting is used when displaying a date or time to the user.

   • Leave the Status of the new user Active.

   • If this user name is intended to be shared among multiple users, select the Shared Login check box.

   • Assign at least one role to the user.

4. Click **Finish**. When the new non-shared user in the FlexNet Manager for Engineering Applications domain is saved, an email containing a system-generated password and login instructions is sent to the user's email address. The first time the user logs in, he logs in with the system-generated password, then is immediately prompted to change his password. After his password is successfully changed, the user is logged in.

   When a new shared user in the FlexNet Manager for Engineering Applications domain is saved, the email containing a system-generated password is sent to a FlexNet Manager for Engineering Applications administrator (if you specified the administrator's email address). The administrator should log in to FlexNet Manager for Engineering Applications with the system-generated password, then change the password and keep a record of it. The administrator must send this new password to all users of the shared login.

Task   **To add a user from a directory service domain:**

1. From the **Admin** tab, under **Users**, click **Create User** to display the **Add User** page.

2. Select one of the directory service domains that contains the information to authenticate this user. Click **Next**.

3. Search for and select one or more users to import from the directory service. Select multiple users only if you plan to assign them all the same roles. Only a small amount of user information will be imported from the directory service to the FlexNet Manager for Engineering Applications database; user authentication is done by contacting the directory service. Click **Next**.

4. The user to be imported is displayed. Leave the Status of the new user **Active**. Assign at least one role to the user.

5. Click **Finish**.

    When the new user is saved, they can log in to FlexNet Manager for Engineering Applications using the user name and password stored in the directory service.

6. Verify in the Users page that the user was added.

See Also
Administering Users
Roles
User Management

Editing Users

Users assigned a role with the View and Manage Users permission can view, add, and edit users. The **Edit User** page displays the date the user was created and the date on which the user last logged in (if a non-shared user) and is also used to reset the user's password.

You can also delete a user from the Edit User page by clicking the **Delete** button.

Task   **To edit an existing user:**

1. From the **Admin** tab, under **Users**, click **Show Users** to display the **Users** page.

2. In the Users table, click a user name to view the **Edit User** page.

3. Edit the values of any of the editable fields. At least one role must be assigned.

4. Click **Save**.

See Also
Administering Users

Deleting Users

You can delete a user using the Edit User page. You cannot delete the default admin user (System Administrator).

Task   **To delete a user:**

1.   From the **Admin** tab, under **Users**, click **Show Users** to display the **Users** page.

2.   In the Users table, click the user name link for the user you want to delete. This displays the Edit User page.

3.   Click **Delete**.

See Also
Administering Users

Resetting User Passwords

Using the Edit User page, you can reset a user's password.

Task   **To reset a user's password:**

Open the user's record in the Edit User page and click the **Reset Password** button (located at the bottom of the view).

●   If the user is not shared, an email is sent to the user with a new system-generated password. The user logs in with the new password and is immediately prompted to change his password.

●   If the user is shared, the email containing a system-generated password is sent to a FlexNet Manager for Engineering Applications administrator (if you specified the administrator's email address when the user was created). The administrator should log in to FlexNet Manager for Engineering Applications with the system-generated password, then change the password and keep a record of it. The administrator must send this new password to all users of the shared login.

Deactivating and Reactivating Users

User status is displayed in the Users page. Any FlexNet Manager for Engineering Applications user can be deactivated manually and a user in the FlexNet Manager for Engineering Applications domain can be deactivated automatically; a FlexNet Manager for Engineering Applications user can be reactivated only manually.

Users assigned a role with the View and Manage Users permission can deactivate and reactivate users manually.

Task   **To deactivate a user manually:**

1.   From the **Admin** tab, under **Users**, click **Show Users** to display the **Users** page.

2.   In the Users table, click a user name to access the Edit User page.

3.   From the **Status** list, select **Inactive**.

4.   Click **Save**.

A non-shared user in the FlexNet Manager for Engineering Applications domain is deactivated automatically if the user tries to log in incorrectly more consecutive times than allowed. The default number of consecutive failed authentications is three; this number can be configured in the FlexNet Platform Server configuration. When a user is deactivated in this manner, the User Deactivated alert is triggered (if it is configured by FlexNet Manager for Engineering Applications).

If a FlexNet Manager for Engineering Applications user has been deactivated, the user must be reactivated manually.

Task   **To reactivate a user:**

1. From the **Admin** tab, under **Users**, click **Show Users** to display the **Users** page.

2. In the **Users** table, click a user name to view the Edit User page.

3. From the **Status** list, select **Active**.

4. Click **Save**.

A reactivated user receives an email stating that they have been reactivated. Reactivation does not affect a user's password. If the reactivated user is shared, an administrator will receive the email stating that the user has been reactivated.

See Also
Administering Users
Deactivating and Reactivating Users
Roles
User Management
Configuring the FlexNet Platform Server

Administering Groups

If a directory service domain is configured in FlexNet Manager for Engineering Applications, groups can be imported from the directory service and assigned roles. Users in an imported group can perform tasks allowed by the group's roles.

Membership in a group is managed entirely through a directory service; therefore, a user added manually using FlexNet Manager for Engineering Applications cannot be made a member of a group. Groups cannot be added manually using the FlexNet Manager for Engineering Applications interface.

See Also
Administering Roles and Permissions
User Management

Browsing Groups

If a directory service domain is configured in FlexNet Manager for Engineering Applications, groups are displayed in FlexNet Manager for Engineering Applications.

Users assigned roles with the View Users or View and Manage Users permission can browse groups.

Task   **To browse existing groups:**

1. From the **Admin** tab, under **Users**, click **Show Groups** to display the **Groups** page.

2. In the **Groups** page, you can view the following information:

    • **Group Name**—Directory service name of the group.

- **Domain**—If domains in addition to the FlexNet Manager for Engineering Applications domain are configured, the name of the domain that contains information to authenticate a user is displayed. If no domain is shown, the user is in the FlexNet Manager for Engineering Applications domain.

- **Status**—Indicates whether the group is active or inactive.

See Also
Administering Groups
User Management

Adding Groups

If a directory service domain is configured in FlexNet Manager for Engineering Applications, groups can be imported from the directory service and assigned roles. Membership in a group is managed entirely through a directory service, therefore, a user entered manually through FlexNet Manager for Engineering Applications cannot be made a member of a group. Groups cannot be created manually through FlexNet Manager for Engineering Applications.

A user who has permissions in FlexNet Manager for Engineering Applications only because he is a member of a FlexNet Manager for Engineering Applications group does not appear in the Users view.

Users assigned a role with the View and Manage Users permission can view, add, and edit FlexNet Manager for Engineering Applications groups.

Task   **To import a group from a directory service:**

1. From the **Admin** tab, under **Users**, click **Show Groups** to display the **Groups** page.

2. Click the **Add Group** button above the Groups table.

3. From the choice list, select the domain that contains the group to add. Click **Next**.

4. Search for and select one or more groups to import from the directory service. Select multiple groups only if you plan to assign them all the same roles. Only a small amount of group information will be imported from the directory service to the FlexNet Manager for Engineering Applications database; authentication of a user in the group is done by contacting the directory service. Click **Next**.

5. The group to be imported is displayed. Leave the Status of the new group Active. Assign at least one role to the group.

6. Click **Finish**. When the new group is saved, a user in that group has access in FlexNet Manager for Engineering Applications conferred by the group's roles.

7. Verify in the Groups page that the group was added.

See Also
Administering Groups
Roles
User Management

Editing Groups

If a directory service domain is configured in FlexNet Manager for Engineering Applications, groups can be imported from the directory service and assigned roles. Membership in a group is managed entirely through a directory service, therefore, a user entered manually through FlexNet Manager for Engineering Applications cannot be made a member of a group.

Users assigned a role with the View and Manage Users permission can view, add, and edit groups.

Task   ***To edit an existing group:***

1. From the **Admin** tab, under **Users**, click **Show Groups** to display the **Groups** page.

2. In the Groups table, click a group name to view the Edit Group page.

3. Edit the values of any of the editable fields. Group name is never editable; others may not be. At least one role must be assigned.

4. Click **Save**.

See Also
Administering Groups
Roles
User Management

Administering Domains

User information is obtained from one or more domains in which it is stored. FlexNet Manager for Engineering Applications users entered manually into the application are users in the FlexNet Manager for Engineering Applications domain. Authentication information for a user in the FlexNet Manager for Engineering Applications domain is stored in the FlexNet Manager for Engineering Applications database.

Because FlexNet Manager for Engineering Applications is configured to support LDAP, information for a FlexNet Manager for Engineering Applications user or group of users can be imported from the directory service. Only enough information from the directory service is imported to enable FlexNet Manager for Engineering Applications to contact the service; authentication information for individual users in a directory service domain is maintained in the directory service.

Any user in a configured directory service domain can log in to FlexNet Manager for Engineering Applications. However, to perform any tasks in FlexNet Manager for Engineering Applications, a directory service user must be imported as a FlexNet Manager for Engineering Applications user or be a member of an imported group and be assigned at least one role.

See Also
Administering Users
Administering Groups
User Management

Browsing Domains

The Domains page displays the following information:

● **Name**: Directory service name.

● **Host**: Name of the machine that hosts the directory service.

- **Status**: Whether the domain is active or inactive.

Only FlexNet Manager for Engineering Applications users who are assigned roles with the View Domains or View and Manage Domains permission can browse domains.

Task **To view existing domains:**

From the **Admin** tab, under **User**, click **Show Domains**.

See Also
Administering Domains
User Management

Adding Domains

If a directory service domain is configured in FlexNet Manager for Engineering Applications, users and user groups can be imported from the directory service and assigned roles.

Users assigned a role with the View and Manage Domains permission can view, add, and edit domains.

Task **To configure access to a directory service:**

1. From the **Admin** tab, under **User**, click **Show Domains**.

2. Click **Add Domain**.

3. On the **Add Domain** page, provide values for the required domain settings. Defaults may be defined based on the type of directory service. Required settings are identified by a red asterisk (*).

Setting	Description
Name	Name that uniquely identifies the domain. The name for the domain that contains users added manually to FlexNet Manager for Engineering Applications is FLEXnet. Additional domains that are added are directory service domains.
Protocol	The protocol used to access the directory service. LDAP and LDAPS protocols are supported. If LDAPS is selected, see the *FlexNet Manager for Engineering Applications Installation Guide* for instructions to configure secure (SSL) client settings.
Host	Name of the host machine on which the directory service runs.
Port	Port on the host machine on which the directory service listens for requests. The default ports are: • LDAP port: 389 • LDAPS port: 636.
Domain Login	The user name which is used when binding to the active directory domain to perform domain operations.
Domain Password	The password used when binding to the active directory domain to perform domain operations.

Setting	Description
Base Distinguished Name	The location in the directory service data at which to start searching for authentication information.
User Search Filter	The directory service filter condition that is used to identify entries of type user.
Authentication Filter	The directory service filter condition that is used to identify a user during the authentication process.
UserId Attribute	The directory service attribute that contains the userId value. When a user is created from directory service, this attribute is used to get the userId value and stored as user name.
Group Name Attribute	The directory service attribute of a user that contains the groups to which that user belongs.
Display Name Attribute	The directory service attribute that contains the display name of a user.
Display Detail Attribute	The directory service attribute that contains a user's display detail. The value of this property is displayed in the Add User page when you create a user from a directory service. If not defined, the default value is the User Distinguished Name in the directory service.
Organization Unit Attribute	The name of the attribute in the directory service that stores the user's organization. The value specified in the directory service for this property must be the same as that defined by the Organization Identifier in FlexNet Manager for Engineering Applications.
Email Attribute	The name of the attribute in the directory service that stores the user's email. If this is not defined, the user email will not be populated.
Locale Attribute	The name of the attribute in the directory service that stores the user's locale. The locale ID value specified by this property in the directory service must use the format `<Language code>_<country code>`. For example, the locale ID *en_GB* is for Great Britain English, while *en_US* is used for United States English.
Time Zone Attribute	The name of the attribute in the directory service that stores the time zone defined for that user. The value specified by this property in the directory service must take one of the following formats (these are supported by Java): ● Time Zone ID, such as America/Dawson or America/Los_Angeles ● GMT standard format: GMT <+|-> <Hours>:<Minutes> GMT <+|-> <Hours><Minutes> GMT <+|-> <Hours> Hours is represented as either single-digit or double-digit. Minutes is represented as double-digit. A digit is either 0 1 2 3 4 5 6 7 8 or 9. Example: GMT +05:30 or GMT +0500 or GMT +5

Setting	Description
Group Search Filter	The directory service filter condition that is used to identify entries of type group. The syntax (include parentheses) is (`attribute_name=value`), where value is the value of the directory service attribute when the object is a group.
Display Name Attribute	The directory service attribute that contains the display name of a group.
Display Detail Attribute	The directory service attribute that contains a group's display detail. The value of this property is displayed in the Add Group page when you create a group from a directory service. If not defined, the default value is the Group Distinguished Name in the directory service.
Returned Page Size	If a positive number is specified, FlexNet Manager for Engineering Applications tries to use paging when searching for directory service entries. Paging means that the directory service returns no more than the specified number of entries at a time instead of all entries in one batch. Set this value to a number less than or equal to the *page size limit* imposed by the directory service. Not all directory services support paging; if your directory service does not, set the page size to 0.
Status	An active domain can be used to import or authenticate a user; an inactive domain cannot. Leave the status of a new domain **Active**.

4. Click **Save**.

5. After the new directory service domain is saved, the user needs to be added through FlexNet Manager for Engineering Applications first, and assigned a role. To enable users who are maintained in that directory service to perform tasks in FlexNet Manager for Engineering Applications, users and groups can be imported into FlexNet Manager for Engineering Applications and granted roles.

6. Verify in the Domains page that the domain was added.

See Also
Administering Domains
User Management

Editing Domains

Users assigned a role with the View and Manage Domains permission can view, add, and edit domains.

Task   ***To edit an existing domain:***

1. From the **Admin** tab, under **User**, click **Show Domains**.

2. In the Domains table, click a name to view the Edit Domain page.

3. Edit the values of any of the editable fields. The domain name is never editable; others may not be. See Adding Domains for field descriptions.

4. Click **Save**.

Administering Roles and Permissions

Roles are sets of permissions that enable users to access functionality and carry out tasks in FlexNet Manager for Engineering Applications. Permissions are defined by FlexNet Manager for Engineering Applications to govern user access. To perform a task using FlexNet Manager for Engineering Applications, a user needs one or more of these permissions.

Permissions are not assigned to users directly: Permissions are grouped into roles and FlexNet Manager for Engineering Applications users are assigned one or more roles. Roles are either system-defined or user-defined. System-defined roles cannot be edited by any users.

A *role* is defined on a context, or source of data for FlexNet Manager for Engineering Applications. The default data source is the FlexNet Manager for Engineering Applications database.

Roles

Roles are defined by the permissions assigned to them. By default, the following system-defined roles are available in FlexNet Manager for Engineering Applications. These system-defined roles cannot be edited. You can create additional roles using the Add Role page.

Table 10-2 • Default FlexNet Manager for Engineering Applications Roles

Role	Description
Super Administrator	Users assigned the Super Administrator role have all permissions available in FlexNet Manager for Engineering Applications.
Data Warehouse Administrator	Users assigned the Data Warehouse Administrator role have the following Data Warehouse permissions: • Import Org Structures from Command Line • Run and Cancel Aggregation • View Org Structures • View and Manage Org Structures • Manage Usage Data Maintenance

Table 10-2 • Default FlexNet Manager for Engineering Applications Roles

Role	Description
Investment Planner Administrator	Users assigned the Investment Planner Administrator role have the following permissions: • View and Manage Investment Planner • Import Products and Contracts from command line
License Administrator	Users assigned the License Administrator role have the following permissions: • View and Subscribe Alerts • View and Manage Alert Configurations • Manage Licenses • Manage Options for Vendor Daemons permissions.
License Server Administrator	Users assigned the License Server Administrator role have all of the License Server Management permissions: • View and Subscribe Alerts • View and Manage Alert Configurations • Manage License Servers • Manage Vendor Daemons • Manage Licenses • Manage Licenses in Use • Manage Options for Vendor Daemons • Manage Agents • View and Manage Not Recognizable License Servers and Vendor Daemons

Table 10-2 • Default FlexNet Manager for Engineering Applications Roles

Role	Description
Report Operator	This role enables the user to work with all facets of Classic Reporting functionality in FlexNet Manager for Engineering Applications.
	Users assigned the Report Operator role have the following permissions:
	• Bulk Import Report Logs
	• Migrate Report Logs
	• View Report Configurations
	• View/Add/Edit/Copy/Import/delete Report Configurations
	• View Reports
	• Run/Schedule/Cancel Reports
	• View Report Logs
	• View and Manage Report Logs
	• View Report Log Definitions
	• View and Manage Report Log Definitions

Browsing Roles

A role is defined on a context, or source of data for FlexNet Manager for Engineering Applications. Roles for FlexNet Manager for Engineering Applications that are defined for the user's context are displayed on the Roles page. Users assigned a role with the View Roles or View and Manage Roles permission can browse roles in their own context.

The Roles page displays the following information:

- **Role Name**

- **Status**—Whether the role is active or inactive, and whether it is a system-defined role.

- **Mapped Users**—Click the users link to view a list of users assigned this role.

Task   **To browse existing roles:**

From the **Admin** tab, under **Roles**, click **Roles**.

See Also
Permissions
Roles
User Management

Browsing Users with a Specific Role

You can browse all of the users who have been assigned a particular role. Users assigned a role with the View Users and View Roles permissions can browse users with a particular role.

Task   ***To browse users who have been a assigned a particular role:***

1. From the **Admin** tab, under **Roles**, click **Roles**.

2. To see the users with a specific role, click the # of Users link for that role.

3. In the Users for Role page, you can view the following information:

    ● Whether a user is a shared user (shared users are marked with an icon showing several people)

    ● **User Name**—Login name of the user

    ● **Display Name**—Full name of the user

    ● **Date Created**—Date on which the user was created

    ● **Date of Last Login**—Date of last login by the user; this date is not recorded for shared users

    ● **Status**—Whether the user is active or inactive

See Also
Roles
User Management

Adding Roles

To perform tasks using FlexNet Manager for Engineering Applications, a user needs appropriate permissions that are defined in FlexNet Manager for Engineering Applications. Permissions are not assigned to users directly: Permissions are grouped into roles and FlexNet Manager for Engineering Applications users are assigned one or more roles.

Roles are either system-defined or user-defined. System-defined roles cannot be edited by any users; users assigned a role with the "View and Manage Roles" permission can view, add, and edit user-defined roles in their own context.

Task   ***To add a user-defined role:***

1. From the **Admin** tab, under **Roles**, click **Create Role**.

2. In the Add Role page:

    a. Enter the Name of the role, for example, User Management Administrator. A role is usually given the name of a type of user.

    b. If more than one data source is configured, select the Context in which this role can act.

    c. Enter the Description of the role.

    d. Leave the Status of the role Active.

    e. Assign at least one permission to the role.

3.   Click **Save**.

4.   Verify in the Roles page that the role was added.

See Also
Permissions
User Management

Editing Roles

Roles are either system-defined or user-defined. A system-defined role, Super Administrator, includes all permissions. System-defined roles cannot be edited; users assigned a role with the View and Manage Roles permission can view, add, and edit user-defined roles in their own context.

Task   ***To edit an existing role:***

1.   From the **Admin** tab, under **Roles**, click **Roles**.

2.   In the Roles table, click a role name to open the Edit Role page.

3.   Edit the values of any of the editable fields. At least one permission must be assigned to a role.

4.   Click **Save**.

See Also
Administering Roles and Permissions
User Management

Deactivating and Reactivating Roles

A role can be deactivated or reactivated manually. Users assigned a role with the View and Manage Roles permission can deactivate and reactivate roles in their own context.

Task   ***To deactivate or activate an existing role:***

1.   From the **Admin** tab, under **Roles**, click **Roles**.

2.   In the Roles table, click a role name to display the Edit Role page.

3.   Set the Status option to Inactive or Active.

4.   Click **Save**.

See Also
Editing Roles

Permissions

A permission specifies a discrete function that a user is able to perform in FlexNet Manager for Engineering Applications. Permissions are grouped into roles, and roles are assigned to users. All of the permissions associated with a particular role are available to the users to which the role is assigned.

To automatically select all of the permissions when defining a role, select the **Select All Permissions** check box; otherwise, select permissions from the available permissions groups:

- Alert Management Permissions
- System Administration Permissions
- Classic Reporting Permissions
- Browsing Logged-In Users
- User Management Permissions
- License Server Management Permissions
- Investment Planner Permissions

Alert Management Permissions

FlexNet Manager for Engineering Applications enables you to implement alerts. The following table describes the permissions that pertain to working with alerts.

Table 10-3 • Alert Management Permissions

Permission	Description
View and Subscribe Alerts	View alerts, subscribe and unsubscribe to alerts, and edit alert subscriptions. Able to access all functionality on the Inbox and Subscription pages of the Alerts tab.
View and Manage Alert Configurations	Configure alerts. Access to all functionality of the Configure Alerts and Cleanup Service subtabs of the Alerts tab.
Execute Scripts for Alerts	Permission to execute custom alert scripts when the alert condition is detected.

See Also
Permissions

System Administration Permissions

System Administration permissions are assigned to users who need to view system information, and/or view and manage system configuration information.

Table 10-4 • System Administration Permissions

Permission	Description
View System Information	View system information displayed in the System Information page.
View and Manage Configurations	Configure the database connection and the behavior of FlexNet Manager for Engineering Applications. Access to all functionality of the System Configuration page.

See Also
Permissions

Classic Reporting Permissions

The Classic Reporting permissions enable users to work with Classic Reporting functionality—including report logs, report configurations, and common report log definitions.

Table 10-5 • Reporting Permissions

Permission	Description
Bulk Import Report Logs	Enables a user to import multiple report logs from the command line using the command `flexnet bulkimport`.
Migrate Report Logs	Enables a user to use the `flexnet migratelogs` command to migrate existing report logs whose data you want to add to the FlexNet Manager for Engineering Applications reporting database. For more information, see the "Migrating Report Log Data" section of Chapter 5, "Upgrading FlexNet Manager for Engineering Applications" in the *FlexNet Manager for Engineering Applications Installation Guide*.
View Report Configurations	View information displayed on the Report Configurations page.
View/Add/Edit/Copy/ Import/delete Report Configurations	In addition to viewing information displayed on the Report Configurations page, a user with this permission can import, add, edit, copy and delete report configurations.
View Reports	View and download reports displayed in the Report Inbox.
Run/Schedule/Cancel Reports	In addition to viewing and downloading reports from the Report Inbox, a user with this permission can run and schedule reports from the Report Configurations page, and can cancel reports from the Report Inbox page.
View Report Logs	View information displayed on the Report Logs page.

Table 10-5 • Reporting Permissions

Permission	Description
View and Manage Report Logs	In addition to viewing information displayed on the Report Logs page, a user with this permission can import and delete report logs.
View Report Log Definitions	View information displayed on the Report Log Definitions page.
View and Manage Report Log Definitions	In addition to viewing information displayed on the Report Log Definitions page, a user with this permission can add, edit, and delete report log definitions.

See Also
Permissions

Data Warehouse Permissions

Data Warehouse permissions enable users to perform tasks related to the data warehouse. The data warehouse is the set of database tables from which Flexera Analytics (Cognos) reports are built.

Table 10-6 • Data Warehouse Permissions

Permission	Description
Import Org Structures from Command Line	Import organizational structure definition (XML) files from the command line.
Run and Cancel Aggregation	Schedule, run, and cancel data aggregation.
View Org Structures	View organizational structure information displayed in the FlexNet Manager for Engineering Applications interface. User-interface controls related to adding and editing organizational structures are disabled for users who have this permission, but not the View and Manage Org Structures permission.
View and Manage Org Structures	View, add, and edit organizational structures and related information using the functionality available from the Org Structures tab.
Manage Usage Data Maintenance	Access functionality available from the Usage Data Maintenance tab. The Usage Data Maintenance tab is not visible to users who do not have this permission.

See Also
Permissions

User Management Permissions

With User Management permissions, a user can view and manage users, view and manage roles, see who is logged in to FlexNet Manager for Engineering Applications, and view and manage domains.

Table 10-7 • User Management Permissions

Permission	Description
View Users	View the list of users and view a user in read-only mode.
	If a directory service domain is configured, this permission also enables a user to view the list of groups and view a group in read-only mode.
View and Manage Users	View, add, and edit users. Reset a user's password.
	If a directory service domain is configured, this permission also enables a user to view, add, and edit groups.
View Roles	View the list of users and view the definition of a role in read-only mode.
View and Manage Roles	View, add, and edit roles. Access to all functionality of the Roles section of the Admin tab.
View Logged-in Users	View the users logged in to FlexNet Manager for Engineering Applications displayed in the Logged-In Users page (Admin | Logged-In Users).
View Domains	View the list of domains and view a domain in read-only mode.
View and Manage Domains	View, add, and edit domains.
Assign Cognos Roles	Enables the user to assign Cognos roles to FlexNet Manager for Engineering Applications users.
	Only users who have this permission will be able to view the **Cognos Roles** page (available under the **Reporting** tab, in the **Flexera Analytics** section).

See Also
Permissions

License Server Management Permissions

All FlexNet Manager for Engineering Applications users can view information on any page of the interface, update the status of license servers, and configure and generate usage reports. However, permissions govern whether a user can manage and configure license servers and vendor daemons, edit license files, edit options files, and free licenses that are in use.

Table 10-8 • License Server Management permissions

Permission	Description
Manage License Servers	Enables a user to modify settings for all license manager daemons, as well as start and stop license servers using FlexNet Manager for Engineering Applications. This permission does not enable a user to modify settings for vendor daemons.
Manage Vendor Daemons	Enables a user to modify settings for all vendor daemons, as well as start and stop vendor daemons through FlexNet Manager for Engineering Applications. This permission does not enable a user to modify settings for license manager daemons or start and stop license servers.
Manage Licenses	Enables a user to add license certificates to an existing license file or remove inactive licenses using FlexNet Manager for Engineering Applications.
Manage Licenses in Use	Enables a user to free licenses through FlexNet Manager for Engineering Applications, if the license server has been configured to allow licenses to be freed.
Manage Options for Vendor Daemons	Enables a user to add and remove options from existing options files through FlexNet Manager for Engineering Applications for all vendor daemons.
Manage Agents	Enables a user to remove a FlexNet Agent from FlexNet Manager for Engineering Applications management using the Agent Summary page.
View Not Recognizable License Servers and Vendor Daemons	Without this permission, users cannot view the Not Recognizable subtab under the Servers tab.
View and Manage Not Recognizable License Servers and Vendor Daemons	Enables users to use the functionality available from the Not Recognizable subtab under the Servers tab. In addition, the user can remove license servers and vendor daemons that are no longer recognized by FlexNet Manager for Engineering Applications.
View and Manage License Server Admin Sets	Enables a user to view, add, edit, and remove license server administrative sets.
View and Manage Agent Access Rights	Enables a user to edit agent access rights using the Edit Agent Access Rights page.
View LUM Servers	View the LUM Servers page, which lists all of the LUM servers in your environment.

Table 10-8 • License Server Management permissions

Permission	Description
View and Manage LUM Servers	View the LUM Servers page, and add LUM servers using the New LUM Server button.
View and Manage Third-Party License Servers	Create, view, and manage third-party licensing templates, and third-party license servers.

See Also
Permissions

Investment Planner Permissions

Investment Planner permissions enable users with to work with the Investment Planning functionality available in FlexNet Manager for Engineering Applications. These permissions are also used to enable use of Tiers functionality (which is used for Autodesk).

Table 10-9 • Investment Planner Permissions

Permission	Description
View and Manage Investment Planner	View and work with all of the investment planning functionality available from the Planner tab.
	This permission also enables a user to manage tiers from the FlexNet Manager for Engineering Applications user interface.
Import Products and Contracts from Command Line	Import product definitions and contract information from the command line.
	This permission also enables a user to import tiers from the command line.

See Also
Permissions
Administering Roles and Permissions
User Management

Browsing Logged-In Users

Users assigned a role with the View Logged-In Users permission can view a summary of users logged in to FlexNet Manager for Engineering Applications. Shared users do not appear on this page.

In the Logged-In Users page, you can view the following information:

● **User Name**: Login name of the user

● **Display Name**: Full name of user

● **Date Created**: Date on which the user was created

- **Date of Last Login**: Date of the most recent login by the user

Task   ***To view a summary of logged-in users:***

From the **Admin** tab, under **Users**, click **Logged-In Users**.

See Also
User Management

Changing Your Password

The Change Password page is displayed when you enter a user name and a system-generated password when logging in to FlexNet Manager for Engineering Applications. Use this page to change the system-assigned password.

Task   ***To change your password:***

1. Enter your old password, the system-generated password that you entered when you logged in.

2. Enter and confirm a new password of your choice.

3. Enter a secret question and its answer in case you forget your password. For security, enter a question whose answer would be hard to guess.

   You can change your password or add a secret question and answer at a later time by editing your user profile.

4. Click **Continue** to complete the login process.

See Also
If a User Forgets a Password

If a User Forgets a Password

If a user forgets their password and they have specified a secret question and its answer:

1. On the FlexNet Manager for Engineering Applications login page, click the **Forgot your password?** link.

2. On the Forgot Password page, enter the FlexNet Manager for Engineering Applications user name and email address. Click **Continue**.

   The email address is verified against the email address associated with the user name.

3. If the user specified a secret question and answer, they are prompted to enter the answer. Click **Continue**.

An email containing another system-generated password is sent to the user's email address. When the user logs in with that password, they are prompted to change the password.

Note • *If you did not specify a secret question and answer, you must contact your* FlexNet Manager for Engineering Applications *administrator. The administrator may have to send you a new system-generated password.*

Editing Your User Profile

If you are not a shared user, you can edit your user profile using the Edit Profile page. A shared user can only view the profile.

Task   ***To view your profile or edit your profile:***

1.   Click the **Profile** button.

2.   Edit any of the following fields:

- First Name and Last Name

- Email Address

- Secret Question and Secret Answer

- Phone Number and Fax Number

- Address, consisting of Street, City, State/Province, Zip/Postal Code, Country

- Time Zone

     The Organization of the user and whether the user name is a Shared Login cannot be edited through the user profile.

3.   To change your password, enter the old password, then enter and confirm the new password. No email message is sent reminding you of your new password. The next time you log in, enter your new password.

4.   Click **Save**.

The list of roles assigned to you is not displayed in the Edit Profile page. To see the roles that are assigned to a particular user, open the **Edit User** page for a particular user.

Access Rights

Access rights determine which FlexNet Manager for Engineering Applications users are able to view and manage information pertaining to specified entities—license servers and FlexNet Agents—within the license management domain. Using functionality available under the **Access** tab, you can specify the license server sets and FlexNet Agents that a FlexNet Manager for Engineering Applications user can view and manage.

License Server Access

FlexNet Manager for Engineering Applications enables you to specify access to license servers based on the administrative needs of various users. You can group license servers into license server administrative sets, and then associate those license-server sets with specific FlexNet Manager for Engineering Applications users.

Users have access only to the information that pertains to the license servers in the License Server Administrative Set with which they are associated. For example:

- The information displayed in pages beneath the Summary, Servers, Licenses, and Activity tabs will pertain only to the license servers for which the user has access.

- License server access rights work in conjunction with alert subscription to determine which alerts are displayed when a particular FlexNet Manager for Engineering Applications user is signed in.

You can group one or more license servers in a license server administrative set. There is no limit to the number of license servers in a set.

Universal License Server Admin Set

By default, FlexNet Manager for Engineering Applications creates the **Universal License Server Admin Set**. Users with the **Super Administrator** role are able to view and manage license servers in the Universal License Server Admin Set. When a license server is registered with FlexNet Manager for Engineering Applications, it is automatically added to the Universal License Server Admin Set.

See Also
Access Rights
Creating License Server Administrative Sets
Editing License Server Administrative Sets

Creating License Server Administrative Sets

Users assigned a role with the **View and Manage License Server Admin Sets** permission can create license server administrative sets and associate users with those sets.

Task   ***To create a license server administrative set:***

1. From the **Admin** tab, under **Access Rights**, click **Add License Server Admin Set** to display the **Add License Server Administrative Set** page.

2. In the **Name** field, type a name for the license server administrative set.

3. In the **License Servers** section, select the license servers that you want to add to the set and click the right arrow to add them to the **Selected license servers** set.

4. In the **Users** section, select the users that you want to associate with the license server administrative set and click the right arrow to add them to the **Selected users** set.

5. Click **Save**.

See Also
Access Rights
License Server Access
Editing License Server Administrative Sets

Editing License Server Administrative Sets

Users assigned a role with the **View and Manage License Server Admin Sets** permission can edit license server administrative sets and associate users with those sets.

Task   **To edit a license server administrative set:**

1.   From the **Admin** tab, under **Access Rights**, click **License Server Admin Sets** to display the **License Server Administrative Sets** page.

2.   Click a name link for the license server administrative set that you want to edit. This displays the **Edit License Server Administrative Set** page.

3.   In the **Name** field, edit the name for the set if required.

4.   In the **License Servers** section, select the license servers that you want to add to the set or remove from the set and click the appropriate arrow.

5.   In the **Users** section, select the users that you want to associate with the license server administrative set or for whom you want to remove the association, and click the appropriate arrow.

6.   Click **Save**.

See Also
Access Rights
License Server Access
Creating License Server Administrative Sets

Agent Access Rights

Agent access rights provide individual FlexNet Manager for Engineering Applications users with rights to view information and manage specified FlexNet Agents. The **Agent Access Rights Management** page displays a list of the FlexNet Agents that are registered with FlexNet Manager for Engineering Applications and the users who have access rights for each agent.

When a FlexNet Agent starts up and is registered with FlexNet Manager for Engineering Applications, the FlexNet Agent is automatically associated with all FlexNet Manager for Engineering Applications users who have been assigned the Super Administrator role. This means that every user who has the Super Administrator role at the time the FlexNet Agent is registered will have access rights to information about that FlexNet Agent.

Agent access rights work in conjunction with alert subscription to determine which alerts are displayed when a particular FlexNet Manager for Engineering Applications user is signed in.

See Also
Access Rights
Editing Agent Access Rights
Alert Subscriptions

Editing Agent Access Rights

Users assigned a role with the **View and Manage Agent Access** permission can edit and define agent access rights.

Task   ***To change access rights for a particular FlexNet Agent:***

1.   From the **Admin** tab, under **Access Rights**, click **Agent Access**.

2.   On the **Agent Access Rights Management** page, click an agent name to display the **Edit Agent Access Rights** page for that agent.

3.   Add or remove users by selecting the user name and clicking the appropriate arrow. Users listed in the **Selected Users** box are able to view information about the FlexNet Agent in the FlexNet Manager for Engineering Applications interface.

4.   Click **Save**.

See Also
Access Rights
Agent Access Rights

System Configuration

A user must have the View and Manage Configurations permission to view the **System Configuration** settings under the **Admin** tab, and to modify configuration settings for FlexNet Manager for Engineering Applications and the FlexNet Platform Server.

Task   ***To view and modify FlexNet Manager for Engineering Applications configuration settings:***

1.   From the **Admin** tab, under **System Configuration,** click the link for the configuration settings you want to change, or click **Show All** to see all of the FlexNet Manager for Engineering Applications configuration settings.

2.   Make your configuration changes.

3.   Click **Save**.

The following table describes the configuration pages available beneath the **Admin** tab, under the **System Configuration** heading.

Table 10-10 • System Configuration pages

Page	Description
FlexNet Platform Server	Contains the settings for configuring the FlexNet Manager for Engineering Applications Admin server.
Reporting	Configuration settings related to the reporting engine and reporting functionality.
Planner	Configuration for Investment Planner functionality (available under the Planner tab).
LUM	Settings that enable the display of LUM-specific functionality in the FlexNet Manager for Engineering Applications user interface.

Table 10-10 • System Configuration pages

Page	Description
User Interface	Configuration settings related to how items are displayed in the user interface.
Validators	Validators settings enable you to configure validation settings, including password requirements.
Manager	Settings that are specific to how information is displayed and which functionality is supported. This page also contains settings to enable connection to FlexNet Manager Platform.
Import	Enables you to import all FlexNet Manager for Engineering Applications settings, using a .zip file.
Export	Enables you to export all FlexNet Manager for Engineering Applications settings to a .zip file.

📄

Note • *Some settings, including the connection of the application to a database, are configurable using the FlexNet Configurator, but not through the user interface. See the FlexNet Manager for Engineering Applications Installation Guide for instructions to use the FlexNet Configurator.*

See Also
System Information

Configuring the FlexNet Platform Server

The **FlexNet Platform Server** page contains settings to configure the FlexNet Manager for Engineering Applications Admin server.

A user must be assigned a role with the View and Manage Configurations permission to modify configuration settings for the FlexNet Platform Server through the FlexNet Manager for Engineering Applications interface.

📄

Important • *Before changing any configuration settings in* FlexNet Manager for Engineering Applications, *export the working configuration settings. If there are any issues with the new settings, you have a backup of working settings to restore.*

Task　　**To change FlexNet Platform Server configuration settings:**

1.　From the **Admin** tab, under **System Configuration,** click **FlexNet Platform Server** to open the configuration page for the FlexNet Platform Server.

2.　Change the values of the settings as needed. If a default value exists, it is listed as the first choice. Required settings are identified in the interface by a red asterisk (*).

Setting	Possible Values	Description
Outbound Mail Server Host	mail or specify	The name of the machine that hosts the mail server for mail sent from FlexNet Manager for Engineering Applications.
Outbound Mail Security	None or SSL	Type of security set for mail sent from FlexNet Manager for Engineering Applications.
Outbound Mail Server Port	0 or specify	The port on which the outbound mail server runs. Set to 0 to use the default port determined by security: SMTP/None: 25 SMTP/SSL: 587
Outbound Mail Logging Detail	Brief or Verbose	Detail about outbound mail written to the FlexNet Manager for Engineering Applications log.
Outbound Mail Account		Mail account to use for mail sent from FlexNet Manager for Engineering Applications; typically left blank. Value is required only if the outbound mail server requires account authentication.
Outbound Mail Password (Confirm)		Password to use for Outbound Mail Account.
From-Address for Outbound Mail	flexnet-server or specify	Email sent from FlexNet Manager for Engineering Applications is sent from this email address.
FlexNet Application Logging Threshold	Informational Messages, Warnings, Errors, Debug Messages	The maximum level of detail for the messages written to the FlexNet Manager for Engineering Applications log file. Only messages at or below the selected level of detail will appear in the log.
FlexNet Application Performance Logging	Selected or cleared	Select to enable performance logging in the application.
Session Timeout	30 or specify	If a user has been inactive for the specified amount of time (minutes), the user must log in to FlexNet Manager for Engineering Applications again.
Consecutive Failed Authentications	3 or specify	Number of consecutive failed attempts to log in before a non-shared user is deactivated. These attempts are counted over the Time Period for Failed Authorizations.

Setting	Possible Values	Description
Time Period for Failed Authorizations	1440 or specify	Amount of time (minutes) during which Consecutive Failed Authentications are allowed before a non-shared user is deactivated.

3. Click **Save Configurations**.

See Also
Configuring Validators
Configuring the User Interface
Exporting Configurations
Importing Configurations

Configuring the Reporting Service

In the **System Configuration | Reporting** page, you can specify settings that affect how much memory and stack size are allocated to the FlexNet Manager for Engineering Applications reporting engine, and how the reporting engine handles report jobs.

You must have the View and Manage Configurations permission to modify reporting service configuration settings.

Important • Before changing any configuration settings, it is recommended that you export the working configuration settings. If there is a problem with the new settings, you have a backup of working settings to restore.

Task **To change reporting service configuration settings:**

1. From the **Admin** tab, under **System Configuration,** click **Reporting** to open the configuration view for the reporting service.

2. Change the values of any of the reporting configuration settings. All of the fields are required and must contain a value.

Setting	Default Value	Description
Gap Threshold	5	Minimum number of minutes that a license server must be down (not running) for a gap in service to be recorded.

Setting	Default Value	Description
Concurrent Imports	3	The maximum number of report logs that can be imported concurrently. Specify any number greater than 0. Report log imports can be initiated simultaneously in a variety of ways: ● Importing a report log from the Report Logs page ● Using the flexnet bulkimport command ● Automatically by the scheduled job that rotates report logs on the vendor daemons. Every time an import process runs, it uses system resources like memory. Because of this, it is important to limit the number of imports that run at the same time. Although there is no simple formula to determine how much memory a single report log import consumes, large log files will typically use more memory, as will report logs with many long-running check-outs. This setting ensures that no more than the configured number of report logs are imported concurrently. If more than the specified number of report log import processes are triggered, the overflow jobs are queued and are run after a currently running job completes (successfully or otherwise). *Note •* *If you change the value for this setting, you must restart the server for the new value to take effect.*
Concurrent Reports	10	The number of report jobs that can be running in parallel at a given time. If a report job cannot be run because too many other reports are running simultaneously, the report is rescheduled to run again within 90 seconds. It is recommended that the value in this field be set to the number of CPUs on the FlexNet Manager for Engineering Applications machine.
Number of Concurrent Reports Retries	30	The number of times that the system will keep retrying. The reporting engine retries to run a report job if the reporting engine postpones execution because it is running the maximum number of concurrent reports. The reporting engine retries running a report job approximately one minute after a postponement and every two minutes for subsequent retries. When the number of retries is exceeded, the report will appear in the Reports Inbox page with its status set to Canceled. In the Reports Inbox page, you can click the **View Log** button to see the report log, which provides information about why the report was canceled.

Setting	Default Value	Description
Report Database Loader Batch Size	10000	As log files are imported to the database, records are committed in batches to improve performance. The optimal batch size may vary, depending on your database configuration.
Store unsupported events in the database	(selected)	Report log files can include a variety of unsupported events, due to licenses expiring or other reasons. Most reports do not rely on these events being present. Storing these events will consume extra space in your database, but will provide a more complete picture of the contents of each log file.
Store regular denial events in the database	(not selected)	Report log files can include many regular denial events. Most reports do not rely on these events being present. Storing all of the regular denial events will consume additional space in your database, but will provide a more complete picture of the contents of each log file. *Note • Regular denial events for vendor daemons version 9.2 or earlier will always be imported, regardless of this setting. This is because these report logs do not contain ultimate denial events.*
Treat User Names as Case Sensitive	(selected)	Reports may have different results, depending on whether user names are case sensitive.
Aggregation denial folding interval	10	Time interval (in seconds) in which the aggregation process should consider identical denials to be part of the same denial event.
Aggregation segment size	7	The number of days of usage data the aggregation process can consider at one time. A larger number will increase the load on the database.
Earliest Date in Data Warehouse	(none)	Specify the date (using the format *YYYY-MM-DD*) to reduce the size of the data warehouse and the time the aggregation process takes. When a date is provided for this setting, the aggregation will be limited to consider only usage data that occurs after the specified date. Time periods specified in the Incremental Aggregation page override this setting.

Setting	Default Value	Description
Project Parsing Regular Expression		**Note •** *This field is for use primarily by Platform Computing customers.* If your Project Name field contains data in addition to the project name, you can use this field to specify which part of the Project Name string you want FlexNet Manager for Engineering Applications to consider when usage data is aggregated. Specify a regular expression in this field to indicate that aggregation should select substrings from the project name strings. FlexNet Manager for Engineering Applications will use the regular expression to parse the project name string as described, which results in fewer projects being shown for the aggregated usage data. If this field is blank, FlexNet Manager for Engineering Applications does not parse the Project Name string.
Product Aggregation	(not selected)	Select this check box to enable product aggregation. This option must be selected to enable product-based reporting. In addition, you must add products to FlexNet Manager for Engineering Applications and map features to products. **Note •** *If your organization uses Investment Planning functionality (available under the Planner tab in the user interface), you must select this option to enable reporting on the products you have defined.*
IBM Product Aggregation	(not selected)	Select this check box to enable product-based reporting for IBM feature usage. See the topic, Reporting on IBM Rational Products: Mapping Features to Products, for information on how FlexNet Manager for Engineering Applications maps feature usage to product usage for IBM Rational products. **Note •** *This setting is relevant only for organizations that use features served by the vendor daemon ibmratl.*
Tier-Based Reporting	(not selected)	Select this check box to enable tier-based reporting functionality and display the Tiers tab on the FlexNet Manager for Engineering Applications user interface. In addition, the user signed in to FlexNet Manager for Engineering Applications must have a role containing the View and Manage Investment Planner permission and/or the Import Products and Contracts from Command Line permission.

Setting	Default Value	Description
Token-Based Reporting	(not selected)	Select this check box to enable token-based reporting functionality.
Cognos server host		Fully qualified name of the host on which Cognos server (Flexera Analytics) is running.
		This can be http or https. If you do not specify a protocol, this setting defaults to http://. For example, if you provide a **Cognos server host** value *hostname*, the setting defaults to http://*hostname*.
Cognos server port	8889	Port number of the Cognos server
Cognos web services port	9300	The port number of Cognos web services
Cognos Token Lifetime	60	"Cognos Token Lifetime", which determines how long the token that FNMEA creates for Cognos to authenticate will live for.
		The setting has a minimum value of 60, a Default value of 60, and a maximum value of 315,360,000.
Reporting Database Clean up	selected	Routine usage data cleanup for the deleted report logs on the Reporting database. Clear the check box if the data cleanup is not required.
Default Currency	USD	The default currency used in FlexNet Manager for Engineering Applications.
Report Log Cleanup Script		Specify a fully qualified path to a script that can be run during report log cleanup.
		By default, report logs are deleted during the report log cleanup operation. Using a script, you can instruct FlexNet Manager for Engineering Applications to do something with the list of report logs—for example, you could specify that report log files be archived in a particular location.

3. Click **Save Configurations**.

See Also
Configuring the FlexNet Platform Server
Configuring the User Interface
Exporting Configurations
Importing Configurations

Configuring Investment Planner

The **System Configuration: Planner** page enables you to configure functionality that is relevant to the use of Investment Planner (functionality that is available beneath the Planner tab).

Task   **To specify Investment Planner configuration settings:**

1. From the **Admin** tab, under **System Configuration,** click **Planner**.

2. For the **Default product utilization...** setting, select which utilization calculation you want to use to determine how to distribute product licenses for a contract pool.

Option	Description
Time used	Sum of durations of all product license used events (checkouts) for a product.
Used count	Sum of product license used events (checkouts) for a product.
Peak usage	Maximum of all usage peaks for a product.

3. Click **Save**.

See Also
Investment Planning
Investment Planner Permissions

LUM Configuration

To specify whether you want the LUM Servers and the LUM Concurrent Usage tabs to be displayed (beneath the Servers and the Activity tabs, respectively), you provide settings in the LUM Configuration page. These settings also identify the path to the i4blt (which FlexNet Manager for Engineering Applications uses to communicate with your enterprise's LUM servers) and specify the date and time format that is used in LUM report logs.

Task   **To specify LUM configuration settings:**

1. From the **Admin** tab, under **System Configuration,** click **LUM**.

2. Specify the LUM settings:

   - **Enable LUM**—Select to display the LUM Servers subtab (beneath the Servers tab) and the LUM Concurrent subtab (beneath the Activity tab).

   - **Location of Basic License Tool (i4blt)**—Type the complete path to the i4blt location. FlexNet Manager for Engineering Applications uses this utility (which is provided by IBM) to communicate with LUM servers. For example:

     - On Windows, the path would be similar to `c:\ifor\win\bin\i4blt.exe`

     - On Unix, the path would be similar to `/usr/opt/ifor/bin/i4blt`

   - **LUM Date/Time format**—Specify the date and time format in which LUM usage events are recorded in LUM report logs. Specify the format of the date and time using Java date and time patterns. (For information, see https://docs.oracle.com/javase/7/docs/api/java/text/SimpleDateFormat.html.) FlexNet Manager for Engineering Applications reports on the time in the LUM report logs as the local time of the Admin server.

     For example:

- If the date/time format in your enterprise's LUM system is similar to 06/30/2011 15:33:11, specify the following in the field: `MM/dd/yyyy HH:mm:ss`

- If the date/time format in your enterprise's LUM system is similar to Jun 30 2011 03:33:22 PM, specify the following in the field: `MMM dd yyyy HH:mm:ss a` (where **a** represents AM or PM)

3. Click **Save**.

See Also
System Configuration

See Also
System Configuration

Configuring the User Interface

A user must be assigned a role with the View and Manage Configurations permission to modify configuration settings for the user interface through FlexNet Manager for Engineering Applications.

Important • *Before changing any configuration settings, it is recommended that you export the working configuration settings. If there is a problem with the new settings, you can restore the previous settings.*

Task   ***To change user interface configuration settings:***

1.   From the **Admin** tab, under **System Configuration,** click **User Interface** link to open the configuration page for the user interface.

2.   Change the value of the setting you want to modify. Required settings are identified with a red asterisk (*****).

Setting	Default	Description
Records Per Page	50	Number of records displayed on a page that implements pagination (for example, the **Users** page implements pagination; **Roles** and **Alert Types** do not).
Log Lines Per Page	200	Number of log lines displayed on a page.
Organizations in the Drop Down	10	The maximum number of organizations to display in the organization list. If there are more organizations, a link is displayed that allows for the organization to be set.
Display Organization Hierarchy Support	(selected)	Select the check box to display the user interface and interactions related to organization hierarchies. If selected, then an organization's parent can be set and this information will appear in the user interface.
Alert Dismissal URL		URL for creating an alert dismissal link that is generated as a part of the alert email notification. The syntax of the URL is `protocol://hostname:port` where protocol, hostname, and port represent the FlexNet Manager for Engineering Applications server or the gateway (proxy).

3.   Click the **Save Configurations** button to save changes.

See Also
Configuring the FlexNet Platform Server
Configuring Validators
Exporting Configurations
Importing Configurations

Configuring Validators

A user must be assigned a role with the View and Manage Configurations permission to modify configuration settings for configuring validators through the web interface.

Important • *Before changing any configuration settings, it is recommended that you export the working configuration settings. If there is a problem with the new settings, you have a backup of working settings to restore.*

Task   ***To change validators configuration settings:***

1.   From the **Admin** tab, under **System Configuration,** click **Validators** to open the configuration page for validators.

2.   Change the values of the settings, as necessary. Required settings are identified in the interface with a red asterisk (*).

Setting	Default Value	Description
FlexNet User Name Validator	`com.flexnet.platform.services.` `userManagement.FLEXnetUserIdValidator`	Default implementation class for user name validation.
User Name Length	4	Minimum number of characters required for a user ID by default implementation.
FlexNet User Password Validator	`com.flexnet.platform.services.` `userManagement.FLEXnetUserPasswordValidator`	Default implementation class for user password validation.
User Password Length	4	Minimum length of characters required for a user password by default implementation.
User Password Requires Uppercase Character		Enables the requirement that the user password contain an uppercase character.
User Password Requires Numeric Character		Enables the requirement that a user password contain a number.
Web Service Request Validation Enabled	selected	Enables the validation of incoming requests to all web services. Requests to the User Administration web services are always validated, regardless of this setting.

3.   Click **Save Configurations**.

Configuring FlexNet Manager for Engineering Applications

The System Configuration | Manager settings enable you to specify settings that are specific to how data is displayed in FlexNet Manager for Engineering Applications. In addition, the FNMP settings enable you to set up communication with FlexNet Manager Platform.

Task   *To change FlexNet Manager for Engineering Applications configuration settings:*

1. From the **Admin** tab, under **System Configuration,** click **Manager**.

2. View or change the values of the following settings. Required settings are identified by a red asterisk (*****) and settings that require a restart are identified by the restart symbol   ⟳ .

| Setting	Default	Description
Summary Table Size	10	Maximum number of lines displayed in each table on the Status Summary page.
Refresh Interval on the Summary page	60	The interval at which the information on the Status Summary page is refreshed, specified in seconds.
Enable support for third-party license servers	(not selected)	Enables support for license servers other than FlexNet Publisher and IBM LUM. This support includes: ● License server management ● Licensing template creation—to provide definition for the license server's commands and options. When this option is selected, two additional tabs are displayed beneath the Servers tab—Third-Party License Servers and Third-Party Licensing Templates. 📄 *Note • Use of this functionality requires the engagement of Flexera Software's Professional Services.*
Time Period (in minutes) for denial alert detection	30	The time period (specified in number of minutes) for denial alert detection. This value is used in conjunction with the Denial Events in Preceding User-Defined Time Period alert, which triggers an alert when a denial event occurs within the preceding user-defined time period.
FNMP Server Protocol		Protocol used to communicate with the FlexNet Manager Platform server. This will typically be either http or https.
FNMP Host Name		Host name of the FlexNet Manager Platform server. This is the server that receives compliance and usage information from FlexNet Manager for Engineering Applications.
FNMP Host Port		Port number of the FlexNet Manager Platform server. If no port number is specified, the default port will be used, depending on what is entered in the FNMP Server Protocol field: 80 for http, 443 for https.
FNMP User Name		User name to access the FlexNet Manager Platform server.

Setting	Default	Description
FNMP Password (Confirm)		The password associated with the user name provided in the FNMP User Name field. Type the password in both password fields.
FNMP Update CRON Expression	0 0 2 * * ?	A CRON expression that tells the FlexNet Manager for Engineering Applications Admin server when to send compliance and usage information to the FlexNet Manager Platform server. For information on formatting this expression, see the following section, CRON Expression Formatting. The default setting is daily at 2:00 A.M. (0 0 2 * * ?)

3.   Click **Save Configurations**.

CRON Expression Formatting

For the **FNMP Update CRON Expression** setting, you can specify a CRON expression that tells FlexNet Manager for Engineering Applications when to send information to the FlexNet Manager Platform server.

This is a six-field CRON expression, where the syntax is as shown in the following diagram (using the default setting as the example):
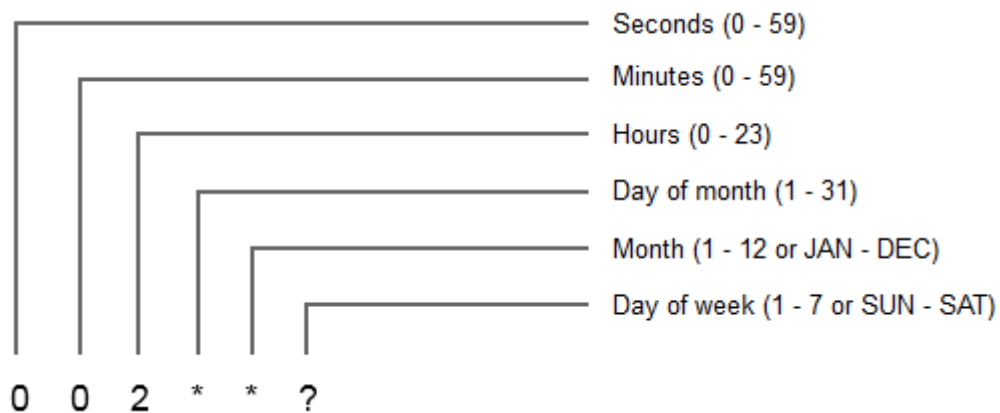
The following table provides more information about the values you can provide in the CRON expression.

Table 10-11 • CRON fields and accepted values

Field	Allowed values	Allowed special characters
Seconds	0–59	, - * /
Minutes	0–59	, - * /
Hours	0–23	, - * /
Day of month	1–31	, - * ? / L W
Month	1–12 or JAN–DEC	, - * /

Table 10-11 • CRON fields and accepted values

Field	Allowed values	Allowed special characters
Day of week	1–7 or SUN–SAT	, - * ? / L #

See Also
Configuring the User Interface
Configuring the Reporting Service
Exporting Configurations
Importing Configurations

Exporting Configurations

The configuration-export utility exports all of the FlexNet Manager for Engineering Applications configuration settings at one time.

Configurations are exported to a `.zip` file that contains database, FlexNet Platform Server, user interface, and FlexNet Manager for Engineering Applications settings in separate XML files. The configuration-import utility uses this `.zip` file to restore all configuration settings when you import a configuration.

A user must be assigned a role with the View and Manage Configurations permission to export configuration settings to a file.

Task   **To export configuration settings:**

1.   From the **Admin** tab, under **System Configuration,** click **Export** to open the **Export Configuration** page.

2.   Click **Export**.

3.   Select to save the file to disk and click **OK** or **Save**.

4.   Specify the location and file name for the `.zip` file. By default, the configuration settings are saved to a file called `flexnet_configurations.zip`.

See Also
Importing Configurations

Importing Configurations

The configuration-import utility uses the `.zip` file created by the configuration-export utility to restore all FlexNet Manager for Engineering Applications configuration settings. (See Exporting Configurations for information.)

A user must be assigned a role with the View and Manage Configurations permission to import configuration settings.

Important • Before importing configuration settings into FlexNet Manager for Engineering Applications, export the working configuration settings (without writing over the .zip file you plan to import). If there is a problem with the imported settings, you have a backup of working settings to restore.

Task   **To import configuration settings:**

1.   From the **Admin** tab, under **System Configuration,** click **Import** to open the **Import Configuration** page.

2.   Specify the `.zip` file that contains the configuration settings to import.

3.   Click **Import**.

4.   When the import is complete, restart the FlexNet Platform Server to make sure that all setting changes take effect.

See Also
Exporting Configurations

System Information

A user can view system information and logs for both FlexNet Manager for Engineering Applications Admin and FlexNet Manager for Engineering Applications Reporting using the pages available from the **System Information** section under the **Admin** tab.

See Also
Viewing System Information
Viewing Reporting System Information
Viewing the FlexNet Application Log
Viewing the FlexNet Report Server Log

Viewing System Information

Users assigned a role with the View System Information permission (see System Administration Permissions) can view Admin system information using the **System Information** page. This page displays the following information:

●   Application-module names, versions, build numbers, and patch levels

●   License status of each module, and license-expiration dates where applicable

●   FlexNet application license source

●   System environment information, including the Java VM release, operating system, and Wildfly servlet container

●   Database configuration details (type, server host, server port, name, and user name)

●   Java VM memory information

Task   **To view admin system information:**

From the **Admin** tab, under **System Information**, click **System Information** to display the **System Information** page.

See Also
Viewing the FlexNet Application Log
Viewing Database-Configuration Information

Viewing Reporting System Information

Users assigned a role with the View System Information permission (see System Administration Permissions) can view reporting system information using the **System Information (FlexNet Reporting Server)** page. This page displays the following information:

- Module names, versions, build numbers, and patch levels

- License status of each module

- FlexNet license source

- Java VM release

- Operating system

- Database configuration details (type, server host, server port, name and user name)

Task   **To view reporting system information:**

Click the **Admin** tab, then click **System Information**, and then click **Reporting System Info** to display the **System Information (FlexNet Reporting Server)** page.

See Also
Viewing the FlexNet Report Server Log
Viewing Database-Configuration Information

Viewing Database-Configuration Information

The connection between the FlexNet Platform Server and the FlexNet Manager for Engineering Applications database is configured using the FlexNet Configurator, not through the FlexNet Manager for Engineering Applications application. However, you can view the database settings using the System Information page.

Task   **To view database-configuration information:**

From the **Admin** tab, under **System Information**:

- Click **System Information** to view database-configuration information for the Admin database.

- Click **Reporting System Information** to view database-configuration information for the Reporting database.

FlexNet Configurator Database Settings

See the *FlexNet Manager for Engineering Applications Installation Guide* for instructions to use the FlexNet Configurator.

Table 10-12 • FlexNet Configurator Settings

Setting	Possible Values	Description
Database Type	Depends on the application	The type of database to which the FlexNet Platform Server connects.

Table 10-12 • FlexNet Configurator Settings

Setting	Possible Values	Description
FlexNet DB URL	Depends on database type	The FlexNet Platform Server connects to the database using this JDBC URL.
FlexNet DB User	`flexnet` or specify	The FlexNet Platform Server connects to the database as this user.

See Also
Configuring the FlexNet Platform Server
Configuring the User Interface
Exporting Configurations
Importing Configurations

Viewing the FlexNet Application Log

The FlexNet log contains useful information for debugging problems with FlexNet Manager for Engineering Applications. Flexera Software Technical Support may ask you to send all or part of the log to help solve any issues you report.

Task   ***To view the contents of the current FlexNet application log:***

1. From the **Admin** tab, under **System Information**, click **FlexNet Application Log** button to open the **View FlexNet Application Log** page.

    •   Click navigation links to see different parts of the log.

    •   Click the **Download** button to download a copy of the current log file.

See Also
Viewing System Information

Viewing the FlexNet Report Server Log

The FlexNet Report Server log contains useful information for debugging problems with FlexNet Manager for Engineering Applications Reporting. Flexera Software Technical Support may ask you to send all or part of the log to help solve any issues you report.

Task   ***To view the contents of the current Reporting FlexNet log:***

From the **Admin** tab, under **System Configuration,** click **Reporting FlexNet Log** button to open the **View FlexNet Report Server Log** page.

•   Click navigation links to see different parts of the log.

•   Click the **Download** button to download a copy of the current log file.

See Also
System Information

11

Using Search in FlexNet Manager for Engineering Applications

FlexNet Manager for Engineering Applications provides search functionality on a number of pages, which enables you to quickly locate a particular piece of information using criteria that you specify. All pages provide a basic search capability; the pages under the **Reporting** tab also include an advanced search capability.

The search scope options—available in the "Search in" list—vary depending on the page.

Task   **To search for information in FlexNet Manager for Engineering Applications pages:**

1. In the **Search for** field, specify the string for which you want to search.

   Note • *The search mechanism supports partial matching. For example, if you specify* **abc** *for a license server, the search will return a list of license servers beginning with the string "abc": abc, abcd, abcde, and so on.*

2. From the **Search in** list, select a scope for your search.

   Note • *If you select a Status as your search scope—for example,* **Status (down)***—you do not need to specify a string in the* **Search for** *field. The search will return a list of all items with the specified status.*

3. Click the search (🔍) button.

See Also
Searching for Report Information

Searching for Report Information

In all of the pages accessible from the **Reporting** tab, you can search for reports using criteria that you specify. You can use the basic search or you can conduct an advanced search, where you can search for an item using a wider variety of search criteria.

📄

Note • *The advanced search functionality uses the* AND *operator, which means that all criteria that you specify must be found in order for the search to return a match.*

Report Configurations page

On the Report Configurations page, you can use a basic search to search for a report by configuration name, description, or report creator.

Task   ***To perform an advanced search:***

1. Click **Advanced Search** to open the **Report Configurations - Advanced Search** page.

2. Specify the search criteria you want to use.

    📄

    Note • *For the **Date Created** or **Date Last Run** date range, you can specify just a start date, just an end date, or both a start date and an end date.*

Report Inbox Page

On the **Report Inbox** page, you can use a basic search to search for a report by configuration name, the user by whom the report was run (Run By), or report status.

Task   ***To perform an advanced search:***

1. Click **Advanced Search** to open the **Report Inbox - Advanced Search** page.

2. Specify the search criteria you want to use.

    📄

    Note • *For the **Run By Date/Time** date range, you can specify just a start date, just an end date, or both a start date and an end date.*

Report Logs Page

On the **Report Logs** page, you can use a basic search to search for a report by vendor daemon or license server host.

Task   ***To perform an advanced search:***

1. Click **Advanced Search** to open the **Report Logs - Advanced Search** page.

2. Specify the search criteria you want to use.

    📄

    Note • *For the **Date/Time Range** setting, you can specify just a start date, just an end date, or both a start date and an end date.*

See Also
Classic Reporting
Using Search in FlexNet Manager for Engineering Applications

12

Glossary

The following table defines many of the terms that are used throughout the FlexNet Manager for Engineering Applications documentation.

Term	Definition
aggregation	The process by which FlexNet Manager for Engineering Applications takes imported report log data and uses it to populate the data warehouse, so the data can be used to generate Flexera Analytics (Cognos) reports.
concurrent license	Entitlement defined as a fixed number of licenses available to be shared among a group of users. Also referred to as network or floating licenses.
contract	A document that defines the terms under which an enterprise purchases product licenses from a software vendor. These terms typically include the contract's start and end dates, the fixed and variable costs, remix rules for the contract, and any license usage restrictions (for example, geographic restrictions).
	Product licenses purchased under a contract are grouped into one or more license pools.
counted license	A license with a non-zero license count. A license server is required to manage a counted license. Counted licenses can either float on a network or be node-locked.
daemon	A process that "serves" clients. Sometimes referred to as a server or service process.
data warehouse	The set of database tables from which FlexNet Reporting (Cognos) reports are built. The data warehouse is populated with report log data through the aggregation process.
debug log file	One or more ASCII text files written by the license server. A debug log file contains status and error messages useful for debugging the license server.
duplicate grouping	Duplicate license requests from the same user, vendor, host or display share one license.

Term	Definition
end user	Your customer to whom the FlexEnabled product is supplied.
end-user license administrator	The staff member or members at the end-user site chartered with installing the FlexEnabled product and administering the license file and server as appropriate. This could be the same person as the actual user of the product.
entitlement	The characteristics that define the legal right to use the feature or product.
feature	A separately licensed unit of functionality in a product. The meaning of a feature depends entirely on how it is used by a product developer. For example, a feature could represent any of the following: • A product consisting of one or more components • A specific version of a product • A part of a product • A piece of data (restricted via the access routines) One feature can be included as a part of many different products.
feature license	A license to use a discrete unit of functionality in a software product. A software vendor delivers feature licenses to the enterprise in one or more license files. Feature licenses are distributed over a network by a vendor daemon running on a license server. Feature licenses are used when an end user accesses licensed parts of a software product.
feature license event	A feature license event records the usage of a feature license by an end user. The license server creates feature license events each time a feature license is used.
feature line	A line in a license file that licenses a particular feature. A feature line begins with one of the keywords FEATURE, INCREMENT, or UPGRADE.
FlexNet Publisher components	The individual parts the vendor delivers to the enterprise that compose the FlexNet Publisher solution.
FlexNet Publisher toolkit	Contains all the necessary components and libraries used by the software publisher to create a FlexEnabled product.
FlexEnabled product	A product, instrumented with calls to the FlexNet Publisher client library, that requests a license.
floating license	A license that can authorize usage of a product by one of a group of users on a network. A license server is required to manage a floating license. Floating licenses can either be counted or uncounted. An uncounted floating license is effectively a site license.

Term	Definition
heartbeats	Periodic messages sent from a FlexEnabled product to a license server to solicit replies that ensure that the license server is still running. Heartbeats can be implemented automatically or called explicitly from a FlexEnabled product. If called explicitly, they are referred to as manual heartbeats.
hostid	A means used to uniquely identify a specific system.
hostid type	The scheme in which the hostid is determined for a particular system architecture.
hybrid organizational structure	A user-based organizational structure that is enabled for hybrid (or multi-dimensional) aggregation—aggregation on both the organization level (for example, geographic) and the license-server level.
leaf node	The end node in an organizational (or other data) structure. A leaf node does not have any child nodes.
license	The legal right to use a feature. FlexNet Publisher can restrict licenses for features by counting the number of licenses already in use for a feature when new requests are made by the FlexNet Publisher product. FlexNet Publisher can also restrict product usage to particular node or user name.
license certificate	One or more feature lines specific to a vendor's FlexEnabled product. This certificate is provided to the end user who incorporates it into a license file.
license file	A license file is a collection of feature licenses. It is a text file specific to an enterprise site containing the license certificates from one or more software publishers and/or vendors. The enterprise installs the license file on a license server.
	This file can contain descriptions of the following, for one or more FlexEnabled products:
	• License server node or nodes
	• Vendor daemon or daemons
	• Licenses
license-file list	A list of license files separated with a colon ":" on UNIX and a semi-colon ";" on Windows. A license-file list can be accepted in most places where a license file is appropriate. When a directory is specified, all files matching `*.lic` in that directory are automatically used, as if specified as a list.
license key	A 12- to 20-character hexadecimal license signature used to authenticate a license. See also signature.
license model	The set of defining characteristics for product entitlement. The fundamental layer of a licensing policy.
license pool	License pools are used to define common license terms for a group of product licenses purchased under a contract. These terms include remix rules and license usage restrictions.

Term	Definition
license server	A license manager daemon (`lmadmin` or `lmgrd`) and one or more vendor daemon processes. License server refers to the processes, not the computer on which they run.
license server machine	A computer system that runs the license server processes. The license server machine hosts all site-specific information regarding licensed feature usage. Multiple license server machines used for three-server redundancy can logically be considered the license server machine. Also known as license server node.
license sharing	Duplicate license requests from the same user, host, or display share one license. See duplicate grouping.
licensing policy	The constraints applied to the legal right to use a feature.
lmadmin	Serves the same function as `lmgrd`, but provides a graphical user interface for managing license servers, viewing license rights status, and viewing enterprise-defined alerts.
lmgrd	The daemon that sends client processes to the correct vendor daemon on the correct machine. The same license manager daemon process can be used by any application from any vendor because this daemon neither authenticates nor dispenses licenses. `lmgrd` processes no user requests on its own, but forwards these requests to a vendor daemon.
network license	Entitlement defined as a fixed number of licenses available to be shared among a group of users across a network. Also referred to as concurrent or floating licenses.
node-locked license	A license that can authorize use of a product to be run on a specific machine based on a unique identifier known as a hostid. Node-locked licenses can be counted or uncounted. Node-locked, uncounted licenses do not require a license server.
options file	A text file implemented for a particular vendor's product by a FlexNet license administrator at an end-user site to customize the behavior of the vendor daemon or to enable or restrict the use of the licenses managed by the vendor daemon at that site.
organizational structure	Hierarchical structures that help you report on how software is being used by user ID, host, or project. Organizational structures provide a set of rules for how to distribute software usage across nodes in your enterprise.
package	A set of independent components to be licensed as a single product. Packages are defined in the license certificate, not in the product; this allows a vendor to change the components of a package until just prior to shipping the license.
package suite	A set of products combined into a package with the restriction that the package components of a single license may not be simultaneously shared.
product	Software that comprises one or more licensed features.
product choice	A product choice captures the results of the product resolution process for each unique set of possible products to choose from.

Term	Definition
product license	Defined in a contract, the product license specifies the quantity purchased, pricing information, and the license start and expiration dates.
product license event	A product license event records the usage of a product license by a user. Product license events are not created directly by the license server; they are created by the product usage aggregation process by combining feature license events.
product resolution	The process of determining which product was used when the feature license events could have come from more that one product.
product usage aggregation	The process of creating product license events by analyzing feature license events. This is how FlexNet Manager for Engineering Applications identifies which products were used.
remix	Remixing is the process of optimizing the money spent on software by adjusting the quantities of Product Licenses within a set of rules defined by the Contract and Pools. Customers are usually limited to a fixed number of remixes per year over the life of the contract. The remix process uses product usage patterns and the limits defined in the contract and pools to forecast the number of licenses required for each of the products purchased under the contract.
report log file	The feature usage data written by a single vendor daemon. Report logs are not human readable; the data is compressed and authenticated for use with FlexNet Manager for Engineering Applications. FlexNet Manager for Engineering Applications uses the data contained in the report log files to produce various usage reports.
roll-up	See aggregation.
served license	A license that requires the management of a license server.
signature	A secure, 12- to 120-character hexadecimal number that authenticates the readable feature line in the license file, ensuring that the license text has not been modified. See also license key.
software producer	A company that makes software products that use a licensing system to control access to various functions (features) of the product. The software producer may also be the software vendor.
software vendor	A company that sells licensed software products. The software vendor may also be the software producer.
suite	See package suite.
supersede	A way of changing characteristics of a license with new ones, thereby making obsolete the earlier ones. For example, a supersede license can be issued to both change the name of a feature and obsolete the older name at the same time. This is more powerful than upgrading.

Term	Definition
tamper resistant licenses	An encryption method employing an industry-recognized asymmetric, public/private key digital signature.
unassigned feature	A feature that is not associated with any products.
uncounted license	A license that does not restrict the number of uses of a feature. Usually node-locked to a machine hostid.
unserved license	A license that does not require the management of a license server.
upgrade	The concept of upgrading the version entitlement for a given license certificate.
vendor	See software vendor.
vendor alias	The alias given to one or more vendor daemon names that symbolically represents the vendor's name from whom the daemons are deployed.
vendor daemon	The server process that dispenses licenses for a particular software publisher's features. The software publisher builds this binary using libraries supplied by Flexera Software.
vendor name	A unique vendor name that is supplied to the software publisher by Flexera Software. This is used as the name of the vendor daemon.
virtual organizational structure	An *ad hoc* user-based organizational structure. You can use virtual organizational structures to combine usage for users that belong to multiple organizational structures— for example, users who are part of a specific department and a specific geographic location.