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Flexera

FlexNet Manager for Engineering Applications 2020 R1

Installation Guide

Legal Information

Book Name:	FlexNet Manager for Engineering Applications 2020 R1 Installation Guide
Part Number:	FNM-2020R1-IG01
Product Release Date:	August 2020
Document Release Date:	August 2020

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1

Introduction and Overview

FlexNet Manager for Engineering Applications is a web-based tool that enables enterprises to centrally manage their license servers, licenses, and license-usage data throughout the organization. FlexNet Manager for Engineering Applications communicates with a FlexNet license server using a FlexNet Agent that is installed on each license-server machine. In most cases, one FlexNet Manager for Engineering Applications installation can serve an entire organization.

Application Components

FlexNet Manager for Engineering Applications comprises multiple components that are installed on-premises at your enterprise:

- FlexNet Manager for Engineering Applications core modules—Admin and Reporting
- Flexera Analytics—Advanced reporting capabilities
- FlexNet Agent—Administers license servers and communicates with FlexNet Manager for Engineering Applications

For system requirements for FlexNet Manager for Engineering Applications components, see the *FlexNet Manager for Engineering Applications 2020 R1 Release Notes* and the *FlexNet Agent 5.6 Release Notes*. Both of these documents are available from the Flexera Product and License Center:

<https://flexerasoftware.flexnetoperations.com>.

FlexNet Manager for Engineering Applications Core Modules: Admin and Reporting

FlexNet Manager for Engineering Applications 2020 R1 consists of two separately installable modules:

- **Admin**—Provides the capability to manage license servers and vendor daemons.
- **Reporting**—Provides usage-reporting functionality.

FlexNet Manager for Engineering Applications communicates with one or more FlexNet Agents that are installed on-premises at your organization.

Flexera Analytics 2020 R1

In addition to the Admin and Reporting modules, FlexNet Manager for Engineering Applications provides the separately installable Flexera Analytics. Flexera Analytics is powered by the Cognos Reporting Engine, and can be used to create, generate, and distribute dynamic reports.

More information is available in the *Flexera Analytics Guide*.



Important • *FlexNet Manager for Engineering Applications Foundation Edition does not include Flexera Analytics.*

FlexNet Agent 5.6

A single FlexNet Agent resides on each license-server machine. The FlexNet Agent provides remote, secure administration of one or more license servers on that machine on behalf of FlexNet Manager for Engineering Applications. FlexNet Manager for Engineering Applications interacts with each license server using the FlexNet Agent.

See the *FlexNet Manager for Engineering Applications 2020 R1 Release Notes* for information about the supported FlexNet Agent versions.

Architecture and Recommended Deployment

The following figure shows how the FlexNet Manager for Engineering Applications components interact with one another. Flexera recommends that you use physically separate server machines—one for each of the FlexNet Manager for Engineering Applications core components (Admin and Reporting), as shown in Figure 1-1.

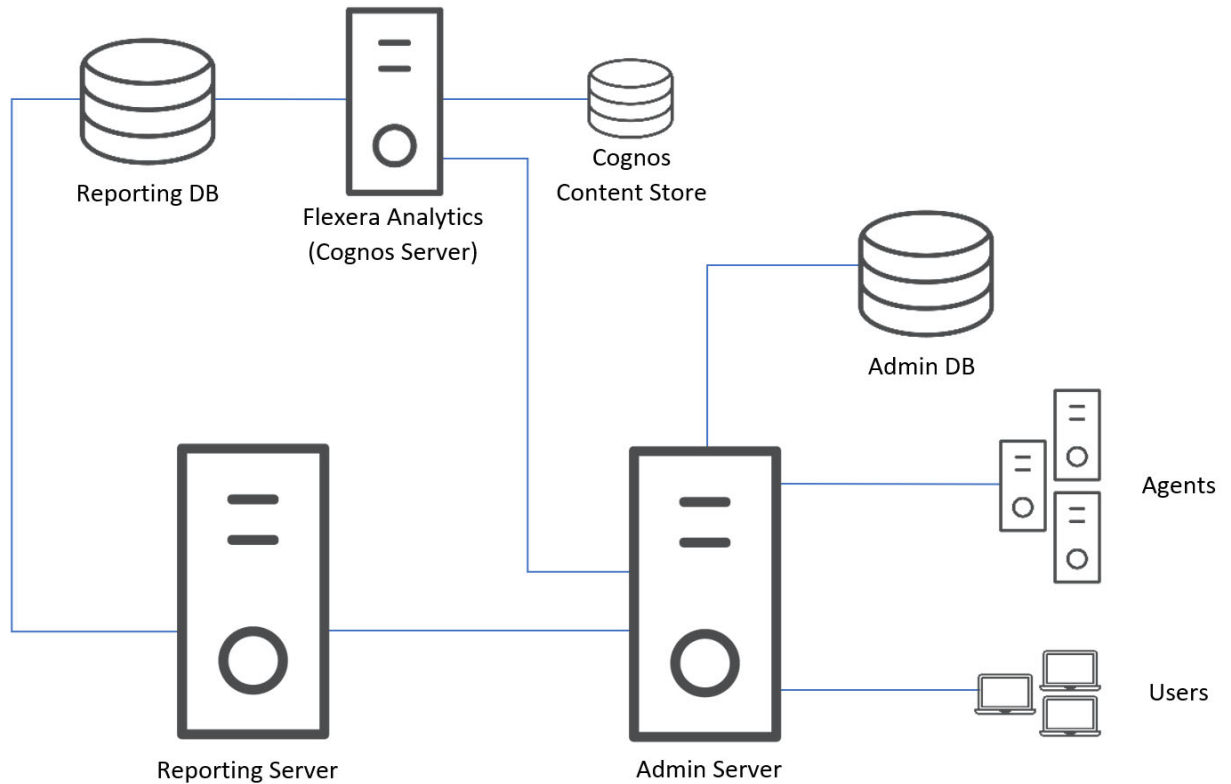


Figure 1-1: Recommended deployment design, using separate server machines for FlexNet Manager for Engineering Applications Reporting and Admin.

Installation Guide Outline

This installation guide provides information to assist you in installing, configuring, and running *FlexNet Manager for Engineering Applications 2020 R1* at your enterprise.

- [Chapter 2, Before Installing FlexNet Manager for Engineering Applications](#), discusses the application's architecture and deployment, and describes installation prerequisites.
- [Chapter 3, Installing FlexNet Manager for Engineering Applications](#), provides instructions for installing the Admin and Reporting servers, and for creating the required database.
- [Chapter 4, Upgrading to FlexNet Manager for Engineering Applications 2020 R1](#) provides instructions for upgrading from a previous version.
- [Chapter 5, Installing, Upgrading To, and Configuring Flexera Analytics 2020 R1](#), provides instructions for installing Flexera Analytics.
- [Chapter 6, Testing the FlexNet Manager for Engineering Applications Installation](#), provides instructions to test the interaction of FlexNet Manager for Engineering Applications with the database server and the FlexNet Agent.
- [Chapter 7, Configuring FlexNet Manager for Engineering Applications](#), provides instructions for configuring the behavior of application components after installation.
- [Chapter 9, Uninstalling FlexNet Manager for Engineering Applications Components](#), describes how to uninstall the Admin and Report modules, and how to uninstall Flexera Analytics.

- Chapter 8, *Configuring Database Servers for FlexNet Manager for Engineering Applications*, provides guidelines for configuring a supported database server for use with FlexNet Manager for Engineering Applications.

Intended Audience

This guide is for enterprise system administrators, database administrators, and/or license administrators of FlexEnabled software applications who are responsible for installing and configuring FlexNet Manager for Engineering Applications and FlexNet Agents.

Additional Documentation


In addition to this installation guide, Flexera provides a number of documentation resources to assist you in installing and configuring FlexNet Agents, licensing concepts, and working with FlexNet Manager for Engineering Applications to monitor and manage license usage throughout your enterprise.

PDF Documentation

The following PDF documents are available from the Flexera Software Product and License Center (<http://flexerasoftware.flexnetoperations.com>).

- FlexNet Manager for Engineering Applications **Release Notes**: Provides information regarding platforms and databases supported, issues fixed, and enhancements.
- **FlexNet Agent Installation Guide**: Provides installation and configuration information for initial and upgrade FlexNet Agent installations.
- **FlexNet Agent Release Notes**: Provides system requirements, and information about resolved issues and enhancements.
- FlexNet Manager for Engineering Applications **Concepts Guide**: Provides conceptual information about the tasks that can be accomplished using FlexNet Manager for Engineering Applications.
- FlexNet Manager for Engineering Applications **Reporting Guide**: Provides information about generating FlexNet Manager for Engineering Applications Classic reports, use of the Flexera Analytics, and use of the command-line reporting interface.
- **Flexera Analytics Guide**: Describes the data model and the predefined reports that are available using Flexera Analytics.
- **FlexNet Publisher License Administration Guide**: For details related to FlexNet licensing component configuration and operation. This guide describes the setup and administration of a FlexNet licensing system, including starting and stopping license servers, setting up an options file, enabling report logging, and using FlexNet license administration tools. (This guide is part of the FlexNet Publisher documentation set.)

Online Help Library

 From the product's user interface (UI), you can access the online *FlexNet Manager for Engineering Applications 2020 R1 Help Library*, which provides context-sensitive help. To access the online Help, click the question-mark icon, located in the upper-right corner of each UI page (on the blue navigation bar).

2

Before Installing FlexNet Manager for Engineering Applications

Before you install FlexNet Manager for Engineering Applications, you must first complete the following steps. Details are provided later in this chapter and in [Chapter 8, Configuring Database Servers for FlexNet Manager for Engineering Applications](#).

Documentation is available for download from the **Flexera Product and License Center** (<http://flexerasoftware.flexnetoperations.com>).

Installation Prerequisites

Before running any of the product installers, read through this list and ensure that you have completed all of the prerequisites.

1. To learn about system requirements (for the application, and the supported databases), read the *FlexNet Manager for Engineering Applications 2020 R1 Release Notes*.
 - a. Ensure that your server hardware meets the requirements specified in the release notes.
 - b. Ensure that your server operating system and database versions meet the requirements specified in the release notes.
2. Review this installation guide, specifically the following sections:
 - [Architecture and Recommended Deployment](#), in [Chapter 1, Introduction and Overview](#)
 - [Installation Task Checklist](#), later in this chapter
 - [Chapter 3, Installing FlexNet Manager for Engineering Applications](#) or [Chapter 4, Upgrading to FlexNet Manager for Engineering Applications 2020 R1](#) (depending on the installation type).
 - Section of [Chapter 8, Configuring Database Servers for FlexNet Manager for Engineering Applications](#) that covers the [database](#) that you will use with FlexNet Manager for Engineering Applications Admin/Reporting
3. Save the license file that you received from Flexera. **Note the location of the license file because you will need it during the installation.**

4. Download the platform-specific FlexNet Manager for Engineering Applications Admin and Reporting installers from the **Flexera Community**:
 - a. Go to <https://community.flexera.com>.
 - b. Log in.
 - c. Select your product (for example, FlexNet Manager).
 - d. Under **Product Resources**, select **Download Products and Licenses**.
 - e. Click the **Let's Go** button under **FlexNet Manager for Engineering Applications 2016 R2 (15.7) and Later**.
 - f. Under **Your Downloads**, select **FlexNet Manager for Engineering Applications**.
 - g. Click on the current product release: FlexNet Manager for Engineering Applications 2020 R1.
5. If necessary, create operating-system user accounts. See the section, [User Account Requirements \(for Installing and Using FlexNet Manager for Engineering Applications\)](#), for more information.
6. Install and/or configure the supported [database](#) components, and ensure that you have the appropriate access permissions. See the section, [Configuring Oracle](#), in [Chapter 8, Configuring Database Servers for FlexNet Manager for Engineering Applications](#), for information.



Important • If you are using Oracle, you must create tablespaces for both the Admin and the Reporting databases prior to installing FlexNet Manager for Engineering Applications.

Installation Task Checklist

The installation process requires that various components be installed and configured. [Table 2-1](#) lists the installation tasks and the role, permission, and/or expertise required to carry out the tasks.

Table 2-1 • Installation task checklist

Installation task	Required role, permissions, or expertise
Identify the machines on which to install the database and FlexNet Manager for Engineering Applications components. See the <i>FlexNet Manager for Engineering Applications 2020 R1 Release Notes</i> for complete system requirements.	System administrator and/or FlexNet license administrator who understands the system requirements.
First save the license file, and then download the FlexNet Manager for Engineering Applications Admin and Reporting installers. See Chapter 2, Before Installing FlexNet Manager for Engineering Applications .	System administrator and/or FlexNet license administrator

Table 2-1 • Installation task checklist

Installation task	Required role, permissions, or expertise
<p>Create or select operating system user accounts for users who start the database server (who may be the users that start its Windows service), start the FlexNet Manager for Engineering Applications Admin and Reporting installers, and start the Flexera Analytics installer.</p> <p>See the section, User Account Requirements (for Installing and Using FlexNet Manager for Engineering Applications), in this chapter.</p>	System administrator or user who can create or modify operating system user accounts
<p>Configure a database server using the guidelines described in Chapter 8, Configuring Database Servers for FlexNet Manager for Engineering Applications.</p> <p>If you are using Oracle, create tablespaces for the Admin and Reporting databases. See the section, Configuring Oracle, in Chapter 8, Configuring Database Servers for FlexNet Manager for Engineering Applications, for information.</p>	Database administrator
<p>Install the application components:</p> <ul style="list-style-type: none"> ● FlexNet Manager for Engineering Applications Admin ● FlexNet Manager for Engineering Applications Reporting ● Flexera Analytics (optional) <p>See Chapter 3, Installing FlexNet Manager for Engineering Applications. See also Chapter 5, Installing, Upgrading To, and Configuring Flexera Analytics 2020 R1.</p>	System administrator or license administrator who has permission to install in the chosen locations
<p>Deploy FlexNet Agent 5.6 in your enterprise. FlexNet Agent 5.6 remotely administers license servers in your environment.</p> <p>For information on deploying agents, refer to the <i>FlexNet Agent 5.6 Installation Guide</i>.</p>	System administrator
<p>Test license-server management by starting and stopping a license server. To learn how to test stopping and starting a license server, see Chapter 6, Testing the FlexNet Manager for Engineering Applications Installation. Then you can continue to install FlexNet Agents on additional license server machines.</p>	License administrator

Downloading the Installers

The platform-specific installers for the FlexNet Manager for Engineering Applications Admin and Reporting components are available from the Flexera Product and License Center:

<http://flexerasoftware.flexnetoperations.com>.

1. Select or create a directory in which to download the FlexNet Manager for Engineering Applications Admin and Reporting installers. This directory is referred to as `flexnet_download_dir`.
2. From the Flexera Product and License Center, download the .zip file containing the platform-specific FlexNet Manager for Engineering Applications Admin and Reporting installers into `flexnet_download_dir`.
3. If your enterprise is using Flexera Analytics, download the Flexera Analytics 2020 R1 installer and the version-specific package.

Platform-Specific Installer Names

FlexNet Manager for Engineering Applications installers are available from the Flexera Product and License Center: <https://flexerasoftware.flexnetoperations.com>

All of the version 2020 R1 installers are 64-bit installers.

Table 2-2 • Platform-specific version 2020 R1 installer names

Platform	Installer File Name
Microsoft Windows	• Admin: FNMEA_2020_R1_Admin_Installer_x64.exe
	• Reporting: FNMEA_2020_R1_Reporting_Installer_x64.exe
Red Hat Enterprise Linux	• Admin: FNMEA_2020_R1_Admin_Installer_x64.bin
	• Reporting: FNMEA_2020_R1_Reporting_Installer_x64.bin

FlexNet Manager for Engineering Applications Licensing



Important • To install FlexNet Manager for Engineering Applications 2020 R1, you must have a license file that is no older than version 2016 R2. Contact Flexera if you need a new license file.

Using FlexNet Manager for Engineering Applications requires a license. Each discrete piece of application functionality (each *feature*) is licensed using an INCREMENT line in the license file that you receive from Flexera Software.

For example, your FlexNet Manager for Engineering Applications 2020 R1 license file contains INCREMENT lines for both Admin and Reporting functionality (`FLEXnet_Manager.Admin` and `Common.FLEXnet_Manager.Report`), issued for a specified number of unique vendors. (Admin and Reporting control the administrative and the reporting functionality in FlexNet Manager for Engineering Applications, respectively.)

- See the following section, [License File Structure](#), for a more detailed description of the information contained in the license file.

- See the section, [What To Do With the License File You Receive from Flexera](#), for information about how to use the license file you receive.

License File Structure



Important • When installing the FlexNet Manager for Engineering Applications Admin and Reporting servers on different host machines, a second license file is required for the Reporting server with the host set to the <HostName> where FlexNet Manager for Engineering Applications Reporting server will be installed. To obtain a second license file for this purpose, email a request to orders@flexerasoftware.com, and include the appropriate host name. If both the Admin and Reporting server are installed to the same host machine, the license file can be shared.

FlexNet Manager for Engineering Applications is licensed for a number of unique vendor daemons. In the following license certificate lines, FlexNet Manager for Engineering Applications is entitled to manage 30 unique vendors.

```
INCREMENT FLEXnet_Manager.Admin mvsn x.0 date uncounted \  
  VENDOR_STRING=Vendors:30\  
  HOSTID=HOSTNAME=myhost.mycompany.com  
  NOTICE="For use only by MyCompany" ... SIGN="..."
```

- For annual licenses, *date* specifies an expiration date; for perpetual licenses, *date* is set to permanent.
- The license is locked to the machine `myhost.mycompany.com`, which is specified on the `HOSTID` line. FlexNet Manager for Engineering Applications is entitled to run only on the machine specified on this line.
- `SIGN` specifies the authentication signature for the `INCREMENT` line.

See the following section, [What To Do With the License File You Receive from Flexera](#), for information about how to use the license file.

Sample License File

The `INCREMENT` lines contained in your FlexNet Manager for Engineering Applications license file depend upon the set of FlexNet Manager for Engineering Applications functionality that your enterprise has purchased from Flexera.

```
INCREMENT FLEXnet_Manager.Primary  
INCREMENT FLEXnet_Manager.Admin  
INCREMENT FLEXnet_Platform.Primary  
INCREMENT Common.FLEXnet.Report  
INCREMENT FLEXnet.Usage.ServerCoverage  
INCREMENT FLEXnet.Usage.Summary  
INCREMENT FLEXnet.Usage.OverTime  
INCREMENT FLEXnet.Usage.HighWaterMark  
INCREMENT FLEXnet.Usage.Efficiency  
INCREMENT FLEXnet.Usage.SummaryBarchart  
INCREMENT FLEXnet.Usage.Raw  
INCREMENT FLEXnet.Usage.PeakUsage  
INCREMENT FLEXnet.Usage.UniqueUser  
INCREMENT FLEXnet.Report.Online  
INCREMENT FLEXnet.InvestmentPlanner  
INCREMENT FLEXnet.ProductUsageAggregator  
INCREMENT FLEXnet.Report.LUM  
INCREMENT FLEXnet.Report.CommonReportLog  
INCREMENT FlexNet.Role.WebAdministrator
```

```
INCREMENT FlexNet.Role.AnalyticUser
```

What To Do With the License File You Receive from Flexera

When your enterprise purchases a new version of FlexNet Manager for Engineering Applications, it receives an email from Flexera containing the license file that is specific to the FlexNet Manager for Engineering Applications version for which your enterprise is licensed.

License Files for New Installations

For new installations, save the save the license file you received from Flexera. This file must be in a location that is accessible from the machine where you will be installing FlexNet Manager for Engineering Applications.

Note the file location because the FlexNet Manager for Engineering Applications installers (Admin and Reporting) will ask for the license-file location.

License Files for Upgrade Installations

For upgrade installations, do the following before upgrading to a new version of FlexNet Manager for Engineering Applications.



Task

To prepare for an upgrade to a new version:

1. Download the license file and save it locally on a machine that is accessible from where you will install the new software version.
2. If the Admin server is running, stop it by doing the following:
 - a. Open a Command Prompt window, and change to the Admin installation directory.
 - b. Type the command: flexnet stop
3. Delete the old license file by doing the following:
 - a. In a file explorer, navigate to the following location:
`<installation_dir>\config\license`
 - b. Delete the old license file.
4. Import the new license file using the Configurator by doing the following:
 - a. At the command line, type: flexnet site
 - b. In the **License File Path** setting, navigate to the new license file.
5. Repeat [Step 2](#) through [Step 4](#) for the Reporting server.
6. See [Chapter 4, Upgrading to FlexNet Manager for Engineering Applications 2020 R1](#), for complete information about upgrading your software.

User Account Requirements (for Installing and Using FlexNet Manager for Engineering Applications)

This section describes considerations and requirements for the user accounts for individuals who will install/use FlexNet Manager for Engineering Applications.

- The following section, [UNIX User Criteria for Installing and Using FlexNet Manager for Engineering Applications](#), describes UNIX user criteria.
- The section, [Tested Locale Settings on UNIX and Windows](#), describes the locale settings that have been tested for use with FlexNet Manager for Engineering Applications 2020 R1.



Important • The users who start the database server (who may be the users that start its Windows service), create the Admin/Reporting database, and start the Admin/Reporting servers **must all have the same locale settings**.

UNIX User Criteria for Installing and Using FlexNet Manager for Engineering Applications

To install and use FlexNet Manager for Engineering Applications, UNIX users must meet the criteria described in this section.

Installing on a UNIX Host

To install FlexNet Manager for Engineering Applications Admin/Reporting on a UNIX host, the user who runs the installer must meet the following criteria:

- The user is not the root user.
- The user must have write access to both a home directory and to the selected installation directory.

Using on UNIX Systems

On UNIX systems, each FlexNet Manager for Engineering Applications Admin/Reporting user must meet these criteria:

- The user is not the root user.
- The user who starts the Admin/Reporting servers must have a valid DISPLAY environment variable set to a host machine that is running an X server. If you are using an X server to display to a machine different from where Admin/Reporting is running, the display machine must have the required version of Java.

See the *FlexNet Manager for Engineering Applications 2020 R1 Release Notes* for supported platform information.

- If the user does not have a DISPLAY variable set, the installer and Configurator can be run separately in silent/console mode.
- The user who starts the Admin/Reporting servers must have write permissions to the /var/tmp directory.
- The current directory (.) must be in the path of the user who starts Admin/Reporting.

Tested Locale Settings on UNIX and Windows

The users who start the database server (who may be the users that start its Windows service), create the Admin/Reporting database, and start the Admin/Reporting servers **must all have the same locale settings**.

Locale Settings on UNIX

On UNIX, the tested locale setting is **en_US.ISO8859-1**.



Task *To check the locale setting for a user on UNIX:*

1. Log in as the user and type: `locale`
2. To set the locale to the tested setting, type:

```
setenv LC_ALL en_US.ISO8859-1
```

Locale Settings on Microsoft Windows

On Microsoft Windows, the tested code page is the United States code page (437).



Task *To check the active code page for a user on Microsoft Windows:*

1. Open a Command prompt and type: `chcp`
2. To set the code page to the tested setting, type: `chcp 437`

Configuring a Database for FlexNet Manager for Engineering Applications

FlexNet Manager for Engineering Applications Admin and Reporting, and Flexera Analytics require a database to run and to use for reporting functionality.

Before installing FlexNet Manager for Engineering Applications Admin and Reporting, and Flexera Analytics, you must install and configure a supported database management system (DBMS) according to the instructions in this guide. If you are using Oracle, you must create tablespaces for both Admin and Reporting.

- See the *FlexNet Manager for Engineering Applications 2020 R1 Release Notes* for a list of the supported databases for each component.
- See [Chapter 8, Configuring Database Servers for FlexNet Manager for Engineering Applications](#).

Installing FlexNet Manager for Engineering Applications

This chapter describes how to install FlexNet Manager for Engineering Applications for the first time—sometimes referred to as a *fresh installation*. If you are upgrading from an earlier version of FlexNet Manager for Engineering Applications, see [Upgrading to FlexNet Manager for Engineering Applications 2020 R1](#).

There is a separate 64-bit installer for each server component—one for **Admin** and one for **Reporting**—and you install each component separately.



Note • For information on installing FlexNet Report Designer, see [Chapter 5, Installing, Upgrading To, and Configuring Flexera Analytics 2020 R1](#).

Installing FlexNet Manager for Engineering Applications Admin

This section explains how to install the Admin component. If you are upgrading an existing installation, see [Chapter 4, Upgrading to FlexNet Manager for Engineering Applications 2020 R1](#).

Installation Process

The complete installation process consists of multiple steps, each of which is described later in this chapter, or in other chapters in this guide.

1. Review [Chapter 2, Before Installing FlexNet Manager for Engineering Applications](#) for installation prerequisites. Before installing FlexNet Manager for Engineering Applications, you need to:
 - a. Review the product documentation, and ensure that you understand the system requirements outlined in the *FlexNet Manager for Engineering Applications 2020 R1 Release Notes*.
 - b. Save the license file that you received from Flexera. You will need the license-file location during the installation.

- c. Download the Admin and Reporting installers from the **Flexera Product and License Center** (<http://flexerasoftware.flexnetoperations.com>).
- d. If necessary, create operating-system user accounts. See the section, [User Account Requirements \(for Installing and Using FlexNet Manager for Engineering Applications\)](#), in [Chapter 2, Before Installing FlexNet Manager for Engineering Applications](#), for more information.
- e. Install and/or configure the supported database components, and ensure that you have the appropriate access permissions.



Important • To maximize performance, you should install the database component in the same local/geographical location as you install FlexNet Manager for Engineering Applications 2020 R1.

If you are using Oracle, you must create tablespaces for both the Admin and the Reporting databases prior to installing FlexNet Manager for Engineering Applications. See the section, [Configuring Oracle](#), in [Chapter 10, Configuring Database Servers for FlexNet Manager for Engineering Applications](#), for information.

2. Identify the host machines onto which you will install FlexNet Manager for Engineering Applications Admin and the Admin database. System requirements for each of these machines are provided in the *FlexNet Manager for Engineering Applications 2020 R1* Release Notes.
3. Run the Admin installer. There are two ways to run the installer:
 - [Running the Admin Installation Wizard](#)
 - [Installing the Admin Component from the Command Line](#)
4. [Create an empty admin database.](#)
5. Configure the Admin server. After installation, some additional configuration steps may be required. See [Chapter 7, Configuring FlexNet Manager for Engineering Applications](#).
6. Next step: Install the FlexNet Manager for Engineering Applications Reporting server. See the section, [Installing FlexNet Manager for Engineering Applications Reporting](#), for details.

Running the Admin Installation Wizard

You can install the Admin component using the installation wizard if you have a display set. When you run the installation wizard, it automatically runs the Admin Configurator, which is where you specify configuration information.



Task To install the Admin component using the installation wizard:

1. Go to the location where you downloaded the FlexNet Manager for Engineering Applications installer files (flexnet_download_dir), as described in [Chapter 2, Before Installing FlexNet Manager for Engineering Applications](#).

The file name of the Admin installer has the following format:

```
flexnet_manager_admin-<version number>-<platform>.<ext>
```

2. Run the installer. If you are installing on a machine running Microsoft Windows, right-click on the installer and select **Run as Administrator**.

The installer prepares to install the Admin files. It may take a few minutes for the Admin installer window to appear.

3. In the **Welcome** installer panel, verify that you have read the product documentation and click **Next**.
4. In the **Install Folder** panel, specify the directory in which to install the Admin component. The default installation directory depends on the platform, as follows:
 - Windows: C:\Program Files\FLEXnet\manager\admin
 - Red Hat Linux: /opt/FLEXnet/manager/admin

To install in the default location, you may need system privileges. The installation directory you specify here is referred to as *admin_install_directory*. Click **Next**.

5. In the **Pre-Installation Summary** panel, review the installation directory and the space requirements, and then click **Install**. The installer decompresses and installs the Admin files into the installation directory you specified.

After the files are installed, the Admin Configurator window opens. The installer window remains open.



Note • You can also run the Configurator later and/or use the FlexNet Manager for Engineering Applications interface to provide additional configuration information.

6. In the first panel of the Configurator (Step 1), provide the license file location and application settings, then click **Next**. Select the **Show advanced settings** checkbox to display three additional configuration panels.


Setting	Description
License File Path/ License Server Host and Port	<p>The license-rights source.</p> <ul style="list-style-type: none"> • If license rights are not served by a license server, choose License File Path. Specify the location of the license file for FlexNet Manager for Engineering Applications that you received from Flexera and saved. Browse to, or type the location. This license file is copied to: <i><admin_install_directory>/config/license/</i> • If license rights are served by a FlexNet Publisher license server system, choose License Server Host and Port. Specify the host and port from the SERVER line of the license file for FlexNet Manager for Engineering Applications that you received from Flexera.
HTTP Port	<p>The HTTP port on which the Admin server listens. Use the port number for the embedded Web container, or supply a different value.</p> <p>Ensure that this port is open through the firewall on the machine where FlexNet Manager for Engineering Applications Admin is installed, if the machine hosts a firewall.</p> <p>The default value is 8888.</p>
JBoss Management Port	<p>The port used to issue commands to the JBoss server. This is used to stop the server.</p> <p>The default value is 9974.</p>


Setting	Description
Install As Service (Windows only)	<p>If you want FlexNet Manager for Engineering Applications Admin to run as a Windows service, select the check box.</p> <p>If it is installed as a Windows service, you can start and stop FlexNet Manager for Engineering Applications Admin through the Services window available from Start Control Panel Administrative Tools Services.</p> <p>You can re-run the Admin Configurator to configure and install the service later.</p>
Use Local System Account (Windows only)	<p>By default, if you install FlexNet Manager for Engineering Applications Admin as a Windows service, the Local System account will run the service.</p> <p>Clear the Use Local System Account check box to configure another user account to run the service.</p>
Service User Name/ Service User Password/ Service User Domain (Windows)	<p>User, password, and network domain for the user that runs the Windows service that manages FlexNet Manager for Engineering Applications Admin.</p> <p>For this user to be able to start the service, the user must be listed in the security settings of the Log on as service policy in Windows (Control Panel Administrative Tools Local Security Policy Security Settings Local Policies User Rights Assignment).</p> <p>If Local System Account is not used, the service user defaults to the OS user who is running the installer.</p>
Service User Name (UNIX)	<p>User who executes the service script.</p> <p>This defaults to the operating system user who is running the installer.</p>

- Optional: Select the **Show advanced settings** checkbox to show additional settings panels—where you can specify logging threshold, JBoss ports, secure server and client settings, and performance settings.

If you do not select the **Show advanced settings** checkbox, go to [Step 11](#).



- Advanced settings panel** (Step 2 of 6): If you selected **Show advanced settings** in Step 1, you can specify user data directory, logging threshold, virtual machine heap size, and JBoss ports.

Setting	Description
User Data Directory	<p>The directory in which all enterprise-specific data is kept—for example, usage data and reports are stored here.</p> <p>It is recommended that you back up this area on a regular basis and before upgrading to a later version of FlexNet Manager for Engineering Applications.</p> <p> Important • The data directory is shared between both FlexNet Manager for Engineering Applications components—Admin and Reporting. Ensure that this directory is accessible from both the Admin and Reporting servers.</p> <p>By default, this directory is C:\Program Files\FLEXnet\manager\data</p>

Setting	Description
Startup Logging Threshold	The maximum level of detail for the messages written to the FlexNet Manager for Engineering Applications application log file before it starts. Only messages at or below the selected level appear in the log.
Virtual Machine Heap Size	Specify the initial and maximum heap sizes. See Generate Certificate on Reporting server .  Important • If you keep the default settings, ensure that the server has 8 GB of RAM available. If the server does not have the minimum amount of RAM, the Admin server will not start.
JBoss Ports section	
Transaction Recovery Port	The port specified in this setting is available for database-transaction management. The default port is 4722.
Transaction Status Port	The port specified in this setting is available for database-transaction management. The default port is 4742.
JBoss Bind Address	Optional setting to specify the address to which the HA-JNDI server will bind waiting for JNP clients. The default value is the host's default address. This value is useful only for multi-homed computers—for example, if you have multiple network cards in the same machine. The default address is 127.0.0.1.
JBoss Port Offset	You can use the JBoss port offset to execute several application servers on the same machine. For example, you could use port offset to create a vertical cluster, with multiple nodes on the same machine. In the text field, specify the value by which you want to offset (add to) the port number, in order to avoid port conflicts. For example, if you specify 100 here, this will offset the port number specified in the JBoss Management Port field by 100. The default value is 0.

9. **Advanced settings panel** (Step 3 of 6): If you selected **Show advanced settings** in Step 1, you can specify secure server and client settings.


Setting	Description
Secure Server Settings section	

Setting	Description
HTTPS Port	<p>The port on which FlexNet Manager for Engineering Applications Admin listens for HTTPS requests that it serves. The default port is 8444.</p> <p>FlexNet Manager for Engineering Applications Admin is always enabled to accept HTTPS requests, but some additional settings must be configured before using SSL. See Configuring FlexNet Manager for Engineering Applications Admin for Secure Socket Layer for information about configuring SSL for the Tomcat Web container used by JBoss.</p> <p>The URL to connect to the FlexNet Manager for Engineering Applications application with HTTPS is <code>https://host:port/flexnet</code>, where <code>port</code> is the HTTPS port number. Note that HTTPS requests can be handled by a full-featured web server instead of by FlexNet Manager for Engineering Applications Admin itself.</p>
SSL Keystore Location	<p>The name and location of the server-side keystore file that contains the key entry for the certificate that FlexNet Manager for Engineering Applications Admin uses to provide SSL connections to its clients (for example, browsers or activation utilities).</p> <p>Use the default location only if you are using the bundled keystore for testing. Otherwise, point to a location of a keystore outside the FlexNet Manager for Engineering Applications Admin installation.</p>  <p>Note • If you are using the bundled keystore, you need to note this setting in order to enable the flexnet stop command (which stops the FlexNet Manager for Engineering Applications server).</p>
SSL Keystore Password	<p>The password used to secure the keystore that contains the certificate used for authenticating the SSL server to the SSL client. The same password is used to secure the certificate key.</p> <p>Provide confirmation for the password.</p> <p>The default password value is <i>flexnet</i>.</p>
Secure Client Settings section	
SSL Truststore Location	<p>The name and location of the client-side truststore file that contains the trusted certificate entry for a remote SSL server (for example, an LDAP server).</p> <p>Use the default location only if you are using the bundled truststore. Otherwise, point to a location of a truststore outside the FlexNet Manager for Engineering Applications Admin installation.</p>  <p>Important • Note the SSL truststore location. You will need this to enable the flexnet stop command (which stops the FlexNet Manager for Engineering Applications server).</p>
SSL Truststore Password	<p>The password used to secure the truststore. The same password is used to secure the certificate key.</p> <p>The default password value is <i>changeit</i>.</p>


10. **Advanced settings panel** (Step 4 of 6): If you selected **Show advanced settings** in Step 1, you can specify an AJP port and performance settings.

Setting	Description
AJP Port	The port on which the AJP connector listens. The AJP connector is used to integrate FlexNet Manager for Engineering Applications with a full-function proxy (such as Apache or IIS) server for security or load balancing. The default port is 8010.
Performance Settings section	
Database Connection Pool Size	Size of the database connection pool. Ensure that your database is capable of creating the specified number of connections. The default value is 300. A minimum size of 25 is recommended.
Number of Scheduler Threads	The number of threads allocated for the scheduler. A minimum setting of 30 is recommended. The default value is 30.
Database Transaction Timeout (seconds)	The number of seconds that the database transaction will run before timeout. A minimum timeout of 3600 seconds is recommended. The default value is 3600.


11. In the database-server panel, specify configuration settings for the database that you will use with FlexNet Manager for Engineering Applications Admin.

Setting	Description
Database Server section	
Database Type	The database server you will be using with FlexNet Manager for Engineering Applications Admin. The menu displays the supported database types. For a list of the supported database versions, see the <i>FlexNet Manager for Engineering Applications 2020 R1 Release Notes</i> .  Note • Settings in the FlexNet Database section of this panel depend on the database type selected.
JDBC Driver	The JDBC driver for the selected database. (This is typically bundled with the database.)
Database Server Host	The machine on which the database server is running. The default host is localhost. Replace localhost with the host name of the machine that hosts the database. A fully qualified host name is not required.

Setting	Description
Database Server Port	<p>The port on which your database server runs. Use the default value for your database server, if you did not change the database-server port number when the database server was installed.</p> <p>Default port numbers for supported database types:</p> <ul style="list-style-type: none"> ● Microsoft SQL Server: 1433 ● Oracle: 1521 ● PostgreSQL: 5432
FlexNet Database section (Microsoft SQL Server)	
Database Name	<p>For SQL Server, the name of the database to create which will contain the tables used by FlexNet Manager for Engineering Applications Admin.</p> <p>The default database name is f1exnet.</p>
FlexNet DB User	<p>The user that FlexNet Manager for Engineering Applications Admin application uses to connect to the database.</p> <p>The default FlexNet DB user is f1exnet.</p> <p>After you finish the Admin installation, you will create the empty Admin database for use with FlexNet Manager for Engineering Applications. Doing this (running the command <code>f1exnet loaddb</code>) automatically creates the FlexNet DB user.</p>
FlexNet DB Password	<p>The password to be assigned to the FlexNet DB User. The default password is F1exnet0.</p> <p>It is recommended that this password be changed to comply with your organization's password policies.</p> <p>See Configuring Database Servers for FlexNet Manager for Engineering Applications</p>
FlexNet Database section (PostgreSQL Server)	
Database Name	<p>For PostgreSQL Server, the name of the database to create which will contain the tables used by FlexNet Manager for Engineering Applications Admin.</p> <p>The default database name is f1exnet.</p>
FlexNet DB User	<p>The user that FlexNet Manager for Engineering Applications Admin application uses to connect to the database.</p> <p>The default FlexNet DB user is f1exnet.</p> <p>After you finish the Admin installation, you will create the empty Admin database for use with FlexNet Manager for Engineering Applications. Doing this (running the command <code>f1exnet loaddb</code>) automatically creates the FlexNet DB user.</p>

Setting	Description
FlexNet DB Password	<p>The password to be assigned to the FlexNet DB User. The default password is Flexnet0.</p> <p>It is recommended that this password be changed to comply with your organization's password policies.</p> <p>See Configuring Database Servers for FlexNet Manager for Engineering Applications</p>
FlexNet Database section (Oracle)	
Database Service Name	Specify the fully qualified Oracle global database name.
Tablespace	<p>Name of the tablespace that will contain FlexNet Manager for Engineering Applications Admin.</p> <p></p> <p>Important • The Oracle tablespace must be created manually before you create the empty Admin database that FlexNet Manager for Engineering Applications Admin requires. See the section, Configuring Oracle, in Configuring Database Servers for FlexNet Manager for Engineering Applications.</p>
FlexNet DB User	<p>The user that FlexNet Manager for Engineering Applications Admin application uses to connect to the database.</p> <p>The default FlexNet DB user is flexnet.</p> <p>After you finish the Admin installation, you will create the empty Admin database for use with FlexNet Manager for Engineering Applications. Doing this (running the command flexnet loaddb) automatically creates the FlexNet DB user.</p>
FlexNet DB Password	<p>The password to be assigned to the FlexNet DB User. The default password is Flexnet0.</p> <p>It is recommended that this password be changed to comply with your organization's password policies.</p> <p>See Configuring Database Servers for FlexNet Manager for Engineering Applications</p>

- In the reporting server panel, specify information about the FlexNet Manager for Engineering Applications Reporting server.

Setting	Description
Reporting Server Name	<p>Specify the fully qualified name of the host machine where FlexNet Manager for Engineering Applications Reporting is installed.</p> <p></p> <p>Important • It is recommended that you install the Reporting and Admin components to separate host machines.</p>

Setting	Description
Reporting Server HTTPS Port	Specify the HTTPS port for the FlexNet Manager for Engineering Applications Reporting server. By default, the communication between the Admin and Reporting servers is via SSL. The default port number is 8453.

- When you have finished specifying configuration information, click Finish.

The configuration information is processed, and the new settings are merged into the site directory, which is the directory from which FlexNet Manager for Engineering Applications Admin runs. This process may take several seconds.

- After the configuration information is processed, the final installer window is displayed. Click **Done** to close the installer.
- After installation, you need to create the Admin database. See the section, [Creating an Empty Admin Database](#), for instructions.

Installing the Admin Component from the Command Line

You can install FlexNet Manager for Engineering Applications Admin from the command line. When installing from the command line, you must run the installer and the Configurator separately.



Task

To install the Admin component from the command line:

- Open a Command Prompt window, and run the installer, using the following command:
 - On Microsoft Windows:


```
flexnet_manager_admin-<version number>-<platform>.<ext> -i console
```
 - On UNIX:


```
flexnet_manager_admin-<version number>-<platform>.<ext> -i silent
```
- After the installation finishes, in the Command Prompt window, change to the directory *admin_install_directory*. (Recall that this is the installation directory that you specified when running the installation.)
- To start the Admin Configurator, type the following command:


```
flexnet site
```

The Configurator detects whether the display is set, and if it is not set, the Configurator runs in console mode.
- See the [installation wizard instructions](#) for information about the installation and configuration settings.
- After installation, you need to create the Admin database. See the section, [Creating an Empty Admin Database](#), for instructions.

Creating an Empty Admin Database

After installing FlexNet Manager for Engineering Applications Admin for the first time, you must create a FlexNet Manager for Engineering Applications Admin database. For this procedure, you need the user name and password of an administrative user in the DBMS who has privileges to create a database. Parameters that you supplied using the Admin Configurator are also used.



Important • The scripts that create the Admin database and its tables will create a completely new database. As a result, any data in an existing database of the same name will be lost when you run the scripts.



Task

To create the Admin database:

1. If FlexNet Manager for Engineering Applications Admin is running, stop the server. It cannot be running when you run the command (lloadb) to create the database.

You can stop FlexNet Manager for Engineering Applications Admin from the command line (see the section, [Stopping the Admin Server from the Command Line](#) on page 32) or, if you configured the Admin server to run as a Windows service, you can stop the service from the Windows Services pane.

2. Start the database server if it is not already running. Refer to documentation provided by the database server vendor for information about starting and configuring the database.



Note • Ensure that the user who starts the database server has the same locale as the user who creates the database. See the section, [User Account Requirements \(for Installing and Using FlexNet Manager for Engineering Applications\)](#), in [Before Installing FlexNet Manager for Engineering Applications](#).

3. If you are using an Oracle database, a tablespace of the name specified during installation in the Admin Configurator must be created before proceeding to the next step. See the section, [Configuring Oracle](#), in [Configuring Database Servers for FlexNet Manager for Engineering Applications](#) for guidelines.
4. At the command line, change to the `admin_install_directory` and run the following command:

```
flexnet lloadb
```

5. To create the FlexNet database and to add the FlexNet database user, you must initially connect to the DBMS as a database administrator. When prompted, enter the name and password of the database administrative user. Depending on the database, the sa (MS SQL Server), system (Oracle) or postgres (PostgreSQL) user account will be required to run `flexnet lloadb`.

The script drops the database (if it exists), creates the database, creates tables, adds the FlexNet database user, adds a FlexNet Manager for Engineering Applications Admin user, and adds configuration data.

When the FlexNet database is created, the following FlexNet Manager for Engineering Applications Admin user is created automatically and assigned the system administrator role:

- User Name: admin
- Password: admin

Running the Admin Server from the Command Line

In production, FlexNet Manager for Engineering Applications Admin is started using a service script on UNIX or as a Windows service (see [Running Admin as a Service](#)). However, to check whether you can run and sign in to FlexNet Manager for Engineering Applications Admin, temporarily start it manually using the startup script.

Starting the Admin Server from the Command Line



Task *To start the Admin server from the command line:*

1. Ensure that the database server is running and that you have [created the flexnet database](#).
2. Open a Command prompt, and change to the FlexNet Manager for Engineering Applications Admin installation directory.
3. Type the command:

```
flexnet start
```

A series of log messages is displayed in the command window, ending with the time in which the server started (Started in *NNs:nnms*).

Stopping the Admin Server from the Command Line



Important • Do not stop FlexNet Manager for Engineering Applications Admin from a Command Prompt using Ctrl+C. This leaves the server in an inconsistent state.

Note • If you are using the bundled keystore, you need to [enable the flexnet stop command](#) before attempting to stop the server from the command line.

Task *To stop the Admin server from the command line:*

1. Open a Command Prompt and change to the FlexNet Manager for Engineering Applications Admin installation directory.



Note • If you started FlexNet Manager for Engineering Applications Admin from an already-open Command Prompt window, open a new Command Prompt window to stop it.

2. Type the command:

```
flexnet stop
```




Note • On some Microsoft Windows machines the **flexnet stop** command may fail with an exception. The fix is to install Microsoft Visual C++ 2008 SP1 Redistributable Package (x64), which is available from the Microsoft website: <https://www.microsoft.com/en-us/download/details.aspx?id=2092>.

Running Admin as a Service

In production, FlexNet Manager for Engineering Applications Admin is started using a service script on UNIX or as a Windows service. Logging information is written to the location `admin_install_directory`.

Installing the UNIX Service Script

If you are running on UNIX, you can start FlexNet Manager for Engineering Applications Admin with the service script, `flexnet-service`. You configured the service script during the FlexNet Manager for Engineering Applications Admin installation.



Task *To start Admin using UNIX service script:*

1. Copy the service script `admin_install_directory/site/bin/flexnet-service` to an appropriate boot script directory such that it can be executed by root at startup time, for example, the `/etc/init.d` directory.
2. Run FlexNet Manager for Engineering Applications Admin by typing `flexnet-service start`.

Running as a Windows Service

FlexNet Manager for Engineering Applications Admin can run as a Windows service. The service is named FlexNet Manager for Engineering Applications Admin and it is run as the user you specified in the Admin Configurator. If you chose to install FlexNet Manager for Engineering Applications Admin as a Windows service, start the service through the Windows Administrative Tools.

If you did not opt to install Admin as a service during its installation, you can configure it to run as a service at any time by running the Admin Configurator to configure the service.



Task *To configure the Admin component to run as a Windows service:*

1. Open a Command Prompt window and navigate to the FlexNet Manager for Engineering Applications installation directory.
2. To stop FlexNet Manager for Engineering Applications Admin, type the command:
`flexnet stop`
3. To launch the Configurator, type the command:
`flexnet site`
4. Select **Install as Service** and configure the service user.
5. Click **Finish** in the Configurator. The site directory is re-created and the service is installed.

6. Go to **System Properties > Advanced > Environment Variables...**
7. Enter a new system variable for **JAVA_HOME**, and set the (default) value to:
C:\Program Files\FLEXnet\Manager\admin\jvm (or whatever your actual installation location is).

Because this method of installing as a Windows service is recorded in the settings in the Admin Configurator, if `flexnet site make` is run, the Windows service remains installed.

Managing the Admin Service



Use the command `flexnet service` to manage the FlexNet Manager for Engineering Applications Admin service.

Syntax

```
flexnet service <option>
```

where <option> is one of parameters described in the following table.

Table 3-1 • flexnet service Parameters

Parameter	Description
reinstall	Uninstalls and then reinstalls the service with the user configured in the Admin Configurator. Ensure that the user running the service is configured correctly before running this command. If no option is specified, the Local System user is the default.
install	Installs the service with the user configured in the Admin Configurator. Make sure that the user running the service is configured correctly before running this command (the Local System user is the default). If the service is already installed, a message is returned. Because this method of installing the Windows service bypasses the Install as Service setting in the Admin Configurator, if <code>flexnet site make</code> is run, the Windows service is uninstalled.
	 Note • If using Windows 2008, see Installing and Uninstalling from the Command Line on Windows for information on opening the Command Prompt with Administrator privileges.
uninstall	Uninstalls the installed service.
	 Note • If using Windows, see the section, Installing and Uninstalling from the Command Line on Windows , for information on opening the Command Prompt with Administrator privileges.
start	Starts the installed service.
stop	Stops the installed service.

Installing and Uninstalling from the Command Line on Windows

Due to Windows security features, even if a user was configured with Administrator privileges, command windows opened by that user do not have Administrator privileges. As a result, running any command that requires registering a Windows service will fail.



Task *To install or uninstall the FlexNet Manager for Engineering Applications Windows service on Windows:*

1. Click Start.
2. Right-click Command Prompt.
3. Select Run as administrator. The command window will open with Administrator privileges.
4. Run `flexnet service install` or `flexnet service uninstall`.

Stopping the Service

UNIX Platforms

If you started FlexNet Manager for Engineering Applications Admin with the UNIX service script, stop it with the service script `flexnet-service stop`.

Windows Platforms

If you started FlexNet Manager for Engineering Applications Admin as a Windows service, stop the service using the Windows Administrative Tools.

Signing In to FlexNet Manager for Engineering Applications (Admin)



Task *To access the FlexNet Manager for Engineering Applications Admin interface:*

1. Open a Web browser on the machine on which FlexNet Manager for Engineering Applications Admin is running.
2. Type one of the following URLs—
 - `http://<IP_address/host_name>:<port_number>/flexnet`
 - `http://<IP_address/host_name>:<port_number>/flexnet/logon.do`—where `<port_number>` is the port number you assigned FlexNet Manager for Engineering Applications Admin during installation. By default, this is 8888.
3. Sign in to the interface using the user name `admin` and password `admin`. Click **Login**.
4. After you have made all necessary configuration settings, sign out of FlexNet Manager for Engineering Applications Admin by clicking **Log out** (available from the user menu) in the upper-right corner of the page.

FlexNet Manager for Engineering Applications Admin Directory Structure

The following table shows the FlexNet Manager for Engineering Applications Admin directory structure.

Table 3-2 • FlexNet Manager for Engineering Applications Admin Directory Structure

Directory	Description
admin_install_directory	Directory, specified during installation, in which FlexNet Manager for Engineering Applications Admin was installed. Contains flexnet script.
config	Contains the site.properties file, a license directory into which the FlexNet Manager for Engineering Applications Admin license is copied and a driver directory into which a non-bundled JDBC driver is copied during installation.
custom	Contains customized versions of files in a directory structure that mimics the structure of the site directory. When FlexNet Manager for Engineering Applications Admin starts, the files from this directory are copied into the site directory, augmenting or replacing existing files. This directory and its subdirectories must be created as needed.
data	Contains enterprise data. This directory is preserved when FlexNet Manager for Engineering Applications Admin is reconfigured or uninstalled.
orgStructure	Contains the XML organization structure that is imported from the FlexNet Manager for Engineering Applications Admin User Interface.
importcache	Temporary space for report log imports, created when the first report log is imported.
rep	Repository directory that contains folders containing copies of license files, copies of options files, and report logs.
lic	Contains subdirectories with copies of the license files for the license servers managed by FlexNet Manager for Engineering Applications Admin.
opt	Contains subdirectories with copies of the options files for vendor daemons managed by FlexNet Manager for Engineering Applications Admin.
r1	Contains subdirectories with report logs imported into FlexNet Manager for Engineering Applications Admin.
reports	Directory that contains the report output file folder.
output	Contains output files for usage reports generated through FlexNet Manager for Engineering Applications Admin.
jvm	Files for the bundled Java Virtual Machine.

Table 3-2 • FlexNet Manager for Engineering Applications Admin Directory Structure

Directory	Description
logs	Contains all of the log files generated by FlexNet Manager for Engineering Applications Admin.
release	Contains files for individual modules installed with FlexNet Manager for Engineering Applications Admin, before they are configured for your enterprise. Files in the release directory can be used to recover site directory files that have been overwritten by customized files.
site	FlexNet Manager for Engineering Applications Admin runs from this directory. Contains merged and configured versions of the installed Admin files. This directory is re-created from files in the release and config directories when FlexNet Manager for Engineering Applications is reconfigured using the command <code>flexnet site</code> .
uninstaller	Files for the FlexNet Manager for Engineering Applications Admin uninstaller. Run the uninstaller from the directory <code>uninstaller/flexnet</code> .

Stopping the Admin Server

The way in which you stop the Admin server depends upon the platform on which it is running.

UNIX Platforms

If you started the Admin server using the UNIX service script, stop it using the service script:

```
flexnet-service stop
```

Windows Platforms

- If you started Admin as a Windows service, stop the Admin service through Administrative Tools.
- If you started Admin from the command line, open a different Command prompt from that used to start it, change to the `admin_install_directory` and type the command: `flexnet stop`



Note • On some Microsoft Windows machines the `flexnet stop` command may fail with an exception. The fix is to install Microsoft Visual C++ 2008 SP1 Redistributable Package (x64), which is available from the Microsoft website: <https://www.microsoft.com/en-us/download/details.aspx?id=2092>.

Installing FlexNet Manager for Engineering Applications Reporting

This section explains how to install the Reporting component for new Flexera customers. If you are upgrading an existing installation of FlexNet Manager for Cloud Infrastructure FlexNet Manager for Engineering Applications, see [Chapter 4, Upgrading to FlexNet Manager for Engineering Applications 2020 R1](#).

If you are installing FlexNet Report Designer, install FlexNet Manager for Engineering Applications Reporting as described in this chapter, and then see [Chapter 5, Installing, Upgrading To, and Configuring Flexera Analytics 2020 R1](#).

Installation Process

The complete process of installation is a multi-stage process, and consists of the following steps. Each of these steps is detailed in subsequent sections in this chapter.

Before performing the installation, review [Chapter 2, Before Installing FlexNet Manager for Engineering Applications](#).

1. Identify the hosts on which you will install the FlexNet Manager for Engineering Applications Reporting component and the FlexNet Manager for Engineering Applications Reporting database.

See the *FlexNet Manager for Engineering Applications 2020 R1* Release Notes for system requirements.

2. Run the FlexNet Manager for Engineering Applications Reporting installer.
3. Create an empty FlexNet Manager for Engineering Applications Reporting database.



Note • If you are using Oracle, you need to create a tablespace for the Reporting database. See the section, [Configuring Oracle](#), in [Chapter 8, Configuring Database Servers for FlexNet Manager for Engineering Applications](#).

4. Configure the Reporting component. After installation, some additional configuration steps may be required. See [Chapter 7, Configuring FlexNet Manager for Engineering Applications](#).

Running the Reporting Installation Wizard

You can install the Reporting component using the installation wizard if you have a display set. When the installation wizard is run, it automatically runs the Reporting Configurator, which is where you specify configuration information.



Task

To install the Reporting component using the installation wizard:

1. Go to the location where you downloaded the FlexNet Manager for Engineering Applications installer files (flexnet_download_dir), as described in [Chapter 2, Before Installing FlexNet Manager for Engineering Applications](#). The file name of the Reporting installer has the following format:
`flexnet_manager_reporting-<version number>-<platform>.<ext>`
2. Run the installer. If you are installing on a machine running Microsoft Windows, right-click on the installer and select **Run as Administrator**.

The installer prepares to install the Reporting files. It may take a few minutes for the Reporting installer window to appear.

3. In the **Welcome** panel, verify that you have read the product documentation and click **Next**.
4. In the **Install Folder** panel, specify the directory in which to install the Reporting component, then click **Next**. The default installation directory depends on the platform, as follows:
 - Windows: C:\Program Files\FLEXnet\manager\reporting
 - Red Hat Linux: /opt/FLEXnet/manager/reporting

To install in the default location, you may need system privileges. The installation directory you specify is referred to as *reporting_install_directory*.

5. In the **Pre-Installation Summary** panel, review the installation directory and the space requirements, and then click **Install**. The installer decompresses and installs the Reporting files into the installation directory you specified.

After the files are installed, the Reporting Configurator window opens. The installer window remains open.



Note • You can also run the Configurator later and/or use the FlexNet Manager for Engineering Applications interface to provide additional configuration information.

6. In the first panel of the Configurator (Step 1), provide the license file location and application settings, then click **Next**. Select the **Show advanced settings** checkbox to display three additional configuration panels.


Setting	Description
License File Path/ License Server Host and Port	<p>The license-rights source.</p> <ul style="list-style-type: none"> • If license rights are not served by a license server, choose License File Path. Specify the location of the license file for FlexNet Manager for Engineering Applications that you received from Flexera and saved. Browse to, or type the location. This license file is copied to: <i><admin_install_directory>/config/license/</i> • If license rights are served by a FlexNet Publisher license server system, choose License Server Host and Port. Specify the host and port from the SERVER line of the license file for FlexNet Manager for Engineering Applications that you received from Flexera.
HTTP Port	<p>The HTTP port on which the Reporting server listens. Use the port number for the embedded Web container, or supply a different value.</p> <p>Ensure that this port is open through the firewall on the machine where FlexNet Manager for Engineering Applications Reporting is installed, if the machine hosts a firewall.</p> <p>The default value is 8899.</p>
JBoss Management Port	<p>The port used to issue commands to the JBoss server. This is used to stop the server.</p> <p>The default value is 9984.</p>


Setting	Description
Install As Service (Windows only)	<p>If you want FlexNet Manager for Engineering Applications Reporting to run as a Windows service, select the checkbox.</p> <p>If it is installed as a Windows service, you can start and stop FlexNet Manager for Engineering Applications Reporting through the Services window available from Start Control Panel Administrative Tools Services.</p> <p>You can re-run the Reporting Configurator to configure and install the service later.</p>
Use Local System Account (Windows only)	<p>By default, if you install FlexNet Manager for Engineering Applications Reporting as a Windows service, the Local System account will run the service.</p> <p>Clear the Use Local System Account check box to configure another user account to run the service.</p>
Service User Name/ Service User Password/ Service User Domain (Windows)	<p>User, password, and network domain for the user that runs the Windows service that manages FlexNet Manager for Engineering Applications Reporting.</p> <p>For this user to be able to start the service, the user must be listed in the security settings of the Log on as service policy in Windows (Control Panel Administrative Tools Local Security Policy Security Settings Local Policies User Rights Assignment).</p> <p>If Local System Account is not used, the service user defaults to the OS user who is running the installer.</p>
Service User Name (UNIX)	<p>User who executes the service script.</p> <p>This defaults to the operating system user who is running the installer.</p>

- Optional: Select the **Show advanced settings** checkbox to show additional settings panels—where you can specify logging threshold, JBoss ports, secure server and client settings, and performance settings.

If you do not select the **Show advanced settings** checkbox, go to [Step 11](#).



- Advanced settings panel** (Step 2 of 6): If you selected **Show advanced settings** in Step 1, you can specify user data directory, logging threshold, virtual machine heap size, and JBoss ports.

Setting	Description
User Data Directory	<p>The directory in which all enterprise-specific data is kept—for example, usage data and reports are stored here.</p> <p>It is recommended that you back up this area on a regular basis and before upgrading to a later version of FlexNet Manager for Engineering Applications.</p> <p></p> <p>Important • The data directory is shared between both FlexNet Manager for Engineering Applications components—Admin and Reporting. Ensure that this directory is accessible from both the Admin and Reporting servers.</p> <p>By default, this directory is C:\Program Files\FLEXnet\manager\data</p>

Setting	Description
Startup Logging Threshold	The maximum level of detail for the messages written to the FlexNet application log file before FlexNet Manager for Engineering Applications Reporting starts. Only messages at or below the selected level appear in the log.
Virtual Machine Heap Size	Specify the initial and maximum heap sizes. See Generate Certificate on Reporting server .  Important • If you keep the default settings, ensure that the server has 8 GB of RAM available. If the server does not have the minimum amount of RAM, the Reporting server will not start.
JBoss Ports section	
Transaction Recovery Port	The port specified in this setting is available for database-transaction management. The default port is 4722.
Transaction Status Port	The port specified in this setting is available for database-transaction management. The default port is 4742.
JBoss Bind Address	Optional setting to specify the address to which the HA-JNDI server will bind waiting for JNP clients. The default value is the host's default address. This value is useful only for multi-homed computers—for example, if you have multiple network cards in the same machine. The default address is 127.0.0.1.
JBoss Port Offset	You can use the JBoss port offset to execute several application servers on the same machine. For example, you could use port offset to create a vertical cluster, with multiple nodes on the same machine. In the text field, specify the value by which you want to offset (add to) the port number, in order to avoid port conflicts. For example, if you specify 100 here, this will offset the port number specified in the JBoss Management Port field by 100. The default value is 0.

9. **Advanced settings panel** (Step 3 of 6): If you selected **Show advanced settings** in Step 1, you can specify secure server and client settings.

Setting	Description
Secure Server Settings section	


Setting	Description
HTTPS Port	<p>The port on which FlexNet Manager for Engineering Applications Reporting listens for HTTPS requests that it serves. The default port is 8454.</p> <p>FlexNet Manager for Engineering Applications Reporting is always enabled to accept HTTPS requests, but some additional settings must be configured before using SSL. See Configuring FlexNet Manager for Engineering Applications Admin for Secure Socket Layer for information about configuring SSL for the Tomcat Web container used by JBoss.</p> <p>The URL to connect to the FlexNet Manager for Engineering Applications application with HTTPS is <code>https://host:port/flexnet</code>, where <code>port</code> is the HTTPS port number. Note that HTTPS requests can be handled by a full-featured web server instead of by FlexNet Manager for Engineering Applications itself.</p>
SSL Keystore Location	<p>The name and location of the server-side keystore file that contains the key entry for the certificate that FlexNet Manager for Engineering Applications Reporting uses to provide SSL connections to its clients (for example, browsers or activation utilities).</p> <p>Use the default location only if you are using the bundled or another keystore for testing. Otherwise, point to a location of a keystore outside the FlexNet Manager for Engineering Applications Reporting installation.</p>  <p>Note • If you are using the bundled keystore, you need to note this setting in order to enable the flexnet stop command (which stops the FlexNet Manager for Engineering Applications server).</p>
SSL Keystore Password	<p>The password used to secure the keystore that contains the certificate used for authenticating the SSL server to the SSL client. The same password is used to secure the certificate key.</p> <p>Provide confirmation for the password.</p> <p>The default password value is <code>flexnet</code>.</p>
Secure Client Settings section	
SSL Truststore Location	<p>The name and location of the client-side truststore file that contains the trusted certificate entry for a remote SSL server (for example, an LDAP server).</p> <p>Use the default location only if you are using the bundled truststore. Otherwise, point to a location of a truststore outside the FlexNet Manager for Engineering Applications Reporting installation.</p>  <p>Note • If you are using the bundled keystore, you need to note this setting in order to enable the flexnet stop command (which stops the FlexNet Manager for Engineering Applications server).</p>


Setting	Description
SSL Truststore Password	The password used to secure the truststore. The same password is used to secure the certificate key. The default password value is <i>changeit</i> .

10. **Advanced settings panel** (Step 4 of 6): If you selected **Show advanced settings** in Step 1, you can specify an AJP port and performance settings.

Setting	Description
AJP Port	The port on which the AJP connector listens. The AJP connector is used to integrate FlexNet Manager for Engineering Applications with a full-function proxy (such as Apache or IIS) server for security or load balancing. The default port is 8018.
Performance Settings section	
Database Connection Pool Size	Size of the database connection pool. Ensure that your database is capable of creating the specified number of connections. The default value is 300. A minimum size of 25 is recommended.
Number of Scheduler Threads	The number of threads allocated for the scheduler. A minimum setting of 30 is recommended. The default value is 30.
Database Transaction Timeout (seconds)	The number of seconds that the database transaction will run before timeout. A minimum timeout of 3600 seconds is recommended. The default value is 3600.


11. In the database-server panel, specify configuration settings for the database that you will use with FlexNet Manager for Engineering Applications Admin.

Setting	Description
Database Server section	
Database Type	The database server you will be using with FlexNet Manager for Engineering Applications Reporting. The menu displays the supported database types. For a list of the supported database versions, see the <i>FlexNet Manager for Engineering Applications 2020 R1 Release Notes</i> . 
Note • Settings in the FlexNet Database section of this panel depend on the database type selected.	
JDBC Driver	The JDBC driver for the selected database. (This is typically bundled with the database.)

Setting	Description
Database Server Host	<p>The machine on which the database server is running.</p> <p>The default host is localhost. Replace localhost with the host name of the machine that hosts the database. A fully qualified host name is not required.</p>
Database Server Port	<p>The port on which your database server runs. Use the default value for your database server, if you did not change the database-server port number when the database server was installed.</p> <p>Default port numbers for supported database types:</p> <ul style="list-style-type: none"> • Microsoft SQL Server: 1433 • Oracle: 1521
FlexNet Database section (Microsoft SQL Server)	
Database Name	<p>For SQL Server, the name of the database to create which will contain the tables used by FlexNet Manager for Engineering Applications Reporting.</p> <p>The default database name is flexnetreporting.</p>
FlexNet DB User	<p>The user that FlexNet Manager for Engineering Applications Reporting application uses to connect to the database.</p> <p>The default FlexNet DB user is flexnetreporting.</p> <p>After you finish the Reporting installation, you will create the empty Reporting database for use with FlexNet Manager for Engineering Applications. Doing this (running the command flexnet loaddb) automatically creates the FlexNet DB user.</p>
FlexNet DB Password	<p>The password to be assigned to the FlexNet DB User. The default password is Flexnet0.</p> <p>It is recommended that this password be changed to comply with your organization's password policies.</p> <p>See Chapter 8, Configuring Database Servers for FlexNet Manager for Engineering Applications</p>
FlexNet Database section (Oracle)	
Database Service Name	Specify the fully qualified Oracle global database name.
Tablespace	<p>Name of the tablespace that will contain FlexNet Manager for Engineering Applications Reporting.</p> <p></p> <p>Important • The Oracle tablespace must be created manually before you create the empty Reporting database that FlexNet Manager for Engineering Applications Reporting requires. See the section, Configuring Oracle, in Chapter 8, Configuring Database Servers for FlexNet Manager for Engineering Applications.</p>

Setting	Description
FlexNet DB User	<p>The user that FlexNet Manager for Engineering Applications Reporting application uses to connect to the database.</p> <p>The default FlexNet DB user is flexnetreporting.</p> <p>After you finish the Reporting installation, you will create the empty Reporting database for use with FlexNet Manager for Engineering Applications. Doing this (running the command flexnet loaddb) automatically creates the FlexNet DB user.</p>
FlexNet DB Password	<p>The password to be assigned to the FlexNet DB User. The default password is Flexnet0.</p> <p>It is recommended that this password be changed to comply with your organization's password policies.</p> <p>See Chapter 8, Configuring Database Servers for FlexNet Manager for Engineering Applications</p>

- In the reporting server panel, specify information about the FlexNet Manager for Engineering Applications Admin server.

Setting	Description
Admin Server Name	<p>Specify the fully qualified name of the host machine where FlexNet Manager for Engineering Applications Admin is installed.</p> <p></p> <p>Important • It is recommended that you install the Reporting and Admin components to separate host machines.</p>
Admin Server HTTPS Port	<p>Specify the HTTPS port for the FlexNet Manager for Engineering Applications Admin server.</p> <p>By default, the communication between the Admin and Reporting servers is via SSL.</p> <p>The default port number is 8443.</p>

- After you have finished entering configuration information, click **Finish**. The configuration information is processed and the new settings are merged into the site directory. This may take several seconds.
- After the configuration information is processed, the final installer window opens. Click **Done** to close the installer window.
- After installation, you need to create the Reporting database. See the section, [Creating an Empty Reporting Database](#), for instructions.

Installing the Reporting Component from the Command Line

You can install FlexNet Manager for Engineering Applications Reporting from the command line. When installing from the command line, you must run the installer and the Reporting Configurator—which provides configuration settings—separately.

**Task** *To install the Reporting component from the command line:*

1. Open a Command Prompt window and run the installer, using the following command:

- On Microsoft Windows:

```
flexnet_manager_admin-<version number>-<platform>.<ext> -i console
```

- On UNIX:

```
flexnet_manager_admin-<version number>-<platform>.<ext> -i silent
```

2. After the installation finishes, change to the directory *reporting_install_directory*. (This is the installation directory that you specified when running the Reporting installation wizard.)

3. To start the Reporting Configurator, type the following command:

```
flexnet site
```

The Configurator detects whether the display is set, and if it is not set, the Configurator runs in console mode.

4. See the [installation wizard instructions](#) for information about the questions you are asked during configuration.
5. After installation, you need to create the Reporting database. See the section, [Creating an Empty Reporting Database](#), for instructions.

Creating an Empty Reporting Database

After installing FlexNet Manager for Engineering Applications Reporting for the first time, you must create a FlexNet Manager for Engineering Applications Reporting database. For this procedure you need the user name and password of an administrative user in the DBMS who has privileges to create a database. Additionally, parameters that you supplied through the Reporting Configurator are used.



Important • The scripts that create the flexnetreporting database and its tables will create a completely new database. As a result, any data in an existing database of the same name will be lost when you run the scripts.

**Task** *To create the Reporting database:*

1. If FlexNet Manager for Engineering Applications Reporting is running, stop it. It cannot be running when you run the command (loaddb) to create the database.
 - To stop Reporting from the command line, navigate to the Reporting installation location, then type the command: `flexnet stop`
 - If you configured Reporting to run as a Windows service, you can stop the service from the Windows Services pane.
2. Start the database server if it is not already running. Refer to documentation provided by the database server vendor. Ensure that the user who starts the database server has the same locale as the user who creates the database (see [User Account Requirements \(for Installing and Using FlexNet Manager for Engineering Applications\)](#)).

3. If you are using an Oracle database, a tablespace of the name specified during installation in the Reporting Configurator must be created before proceeding to the next step. See [Configuring Oracle in Chapter 8, Configuring Database Servers for FlexNet Manager for Engineering Applications](#) for guidelines.
4. At the command line, change to the directory `reporting_install_directory` and run the following command:

```
flexnet loaddb
```
5. Specify whether you want to partition the usage-related tables by typing **yes** or **no**. (Before specifying that you want to use database partitioning, verify that the database version your enterprise is using supports partitioning.)



Important • If you type **yes** here, the usage-related tables will be partitioned. To partition the remaining data warehouse tables, you must run the database-specific partitioning script as specified in the section, [Partitioning the Remaining Database Tables \(Data Warehouse Tables\)](#). The FlexNet Manager for Engineering Applications server will not start if some tables are partitioned, while other tables are not.

6. To create the `flexnetreporting` database and to add the `flexnetreporting` database user, you must initially connect to the DBMS as a database administrator.
7. When prompted, enter the name and password of the database administrative user. Depending on the database, `sa` (MS SQL Server) or `system` (Oracle) user account will be required to run `flexnet loaddb`.
8. If you want to use partitioned tables, follow the process outlined in the following section, [Partitioning the Remaining Database Tables \(Data Warehouse Tables\)](#).

The database-creation script drops the database (if it exists), creates the database, creates tables, adds the `flexnetreporting` DB user, adds a FlexNet Manager for Engineering Applications user, and adds configuration data.

When the FlexNet database is created, the following FlexNet Manager for Engineering Applications Reporting user is created automatically and assigned the system administrator role:

- User Name: `admin`
- Password: `admin`

Partitioning the Remaining Database Tables (Data Warehouse Tables)

Flexera provides two database-specific scripts that partition the database tables for the FlexNet Manager for Engineering Applications Reporting server. You can run the partitioning script regardless of whether you chose to partition the usage-related tables during installation/upgrade.

- If you chose to create table partitions for the Reporting server database at installation or upgrade time, you *must* run the database-specific partitioning script provided by Flexera to partition the data warehouse tables. The FlexNet Manager for Engineering Applications server will not start if some tables are partitioned, while other tables are not.
- If you did *not* choose to create table partitions at installation or upgrade time, you can partition the database tables at any time by running the script. Running the partitioning script will partition both the usage-related tables and the data warehouse tables.

The partitioning script may take 12–18 hours to process up to one billion usage events in the database. A multi-CPU database server may show CPU usage between 30 and 40 percent. It is recommended that you increase the database space by 100 percent before running the partition-creation script.

Follow the instructions in the section that applies to the database type your enterprise uses. See the subsection, [Partitioned Tables](#), for a list of the database tables that are partitioned as a result of running the partition-creation script.

Creating Table Partitions for a Microsoft SQL Server Database

To create table partitions for a Microsoft SQL Server database, follow the instructions in this section.



Task To run the partition-creation script:

1. Stop the FlexNet Manager for Engineering Applications Admin and Reporting servers, if they are running.
2. Open the script file, located at the following location:
`<reporting_install_directory>/site/samples/db/PartitionNonPartitionedTableSQLFinal.sql`
3. Connect to the FlexNet Manager for Engineering Applications Reporting database in Microsoft SQL Management studio, then copy and paste the contents of the script into the SQL query window.
4. Execute the complete script.
5. Review the output to check for any errors.
6. Start the FlexNet Manager for Engineering Applications Reporting and Admin servers.

Creating Table Partitions for an Oracle Database

To create table partitions for an Oracle database, follow the instructions in this section.



Task To run the partition-creation script:

1. Stop the FlexNet Manager for Engineering Applications Admin and Reporting servers, if they are running.
2. Open the script file, located at the following location:
`<reporting_install_directory>/site/samples/db/PartitionNonPartitionedTableOracleFinal.sql`
3. Assign the “dba” role to the FlexNet Manager for Engineering Applications Reporting database user. This role can be removed after the script has been executed.
4. Connect to the FlexNet Manager for Engineering Applications Reporting database using SQL*Plus or SQL Developer, then copy and paste the contents of the script into the SQL client.
5. Execute the complete script.
6. Review the output to check for any errors.
7. Start the FlexNet Manager for Engineering Applications Reporting and Admin servers.

Partitioned Tables

The following tables are partitioned, as a result of running the partition-creation script for the FlexNet Manager for Engineering Applications Reporting database:


```
RPT_USAGE_LIC_EVENT_153  
RPT_USAGE_LIC_DEVENT_153  
RPT_USAGE_NOLIC_EVENT_153  
RPTDW_DAILY_AVAILABILITY  
RPTDW_DAILY_MEASURE_LEAF  
RPTDW_DAILY_TIER_MEASURE  
RPTDW_DAILY_PRODUCT_MEASURE  
RPTDW_DAILY_PRODUCT_AVAIL  
RPTDW_DAILY_PRODFEAT_MEASURE  
RPTDW_DAILY_MEASURE_ORG  
RPTDW_PRODUCT_MEASURE_ORG  
RPTDW_PRODFEAT_MEASURE_ORG  
RPTDW_MEASURE_PRODUCT_AVAIL  
RPTDW_MEASURE_AVAILABILITY  
RPTDW_HOURLY_MEASURE_ORG  
RPTDW_HOURLY_TIER_MEASURE  
RPTDW_HOURLY_MEASURE_LEAF  
RPTDW_CPB_HOURLY_MEASURE  
RPTDW_CPB_DAILY_MEASURE
```

Running Reporting from the Command Line

In production, FlexNet Manager for Engineering Applications Reporting is started using a service script on UNIX or as a Windows service (see [Running Reporting As a Service](#)). You can also start and stop FlexNet Manager for Engineering Applications Reporting from the command line.

Starting the Reporting Server from the Command Line



Task *To start the Reporting server from the command line:*

1. Ensure that the database server is running and that you have [created the flexnetreporting database](#).
2. Open a Command prompt, and change to the FlexNet Manager for Engineering Applications Reporting installation directory.
3. Type the command:

```
flexnet start
```

A series of log messages is displayed in the command window, ending with the time in which the server started (Started in *NNs:nnms*).

Stopping the Reporting Server from the Command Line



Important • Do not stop FlexNet Manager for Engineering Applications Reporting from a Command Prompt using Ctrl+C. This leaves the server in an inconsistent state.



Note • If you are using the bundled keystore, you need to *enable the flexnet stop command* before attempting to stop the server from the command line.



Task To stop the Reporting server from the command line:

1. Open a Command Prompt and change to the FlexNet Manager for Engineering Applications Reporting installation directory.



Note • If you started FlexNet Manager for Engineering Applications Reporting from an already open Command Prompt window, open a new Command Prompt window to stop it.

2. Type the command:

```
flexnet stop
```



Note • On some Microsoft Windows machines the **flexnet stop** command may fail with an exception. The fix is to install Microsoft Visual C++ 2008 SP1 Redistributable Package (x64), which is available from the Microsoft website: <https://www.microsoft.com/en-us/download/details.aspx?id=2092>.

Running Reporting As a Service

In production, FlexNet Manager for Engineering Applications Reporting is started using a service script on UNIX, or as a Windows service. Logging information is written to the location `reporting_install_directory`.

Installing the UNIX Service Script

If you are running on UNIX, you can start FlexNet Manager for Engineering Applications Reporting using the service script, `flexnet-service`, after it has been renamed to `flexnet_reporting-service`. You configured the service script during the FlexNet Manager for Engineering Applications Reporting installation.



Task To start Reporting using the UNIX service script:

1. Copy the service script `reporting_install_directory/site/bin/flexnet-service` to an appropriate boot script directory such that it can be executed by root at startup time, for example, the `/etc/init.d` directory.
2. Rename the script to `<flexnet_reporting-service>`. You can rename the script to whatever name you want to use, as long as it is not `flexnet-service`.



Important • If the service script is not renamed, running it as `flexnet-service` will overwrite the script used for FlexNet Manager for Engineering Applications Admin.

3. Run FlexNet Manager for Engineering Applications Reporting by typing `flexnet_reporting-service start`.

Running as a Windows Service

FlexNet Manager for Engineering Applications Reporting can run as a Windows service. The service is named FlexNet Manager for Engineering Applications Reporting and it is run as the user you specified in the Reporting Configurator. If you chose to install FlexNet Manager for Engineering Applications Reporting as a Windows service, start the service using the Windows Administrative Tools.

If you did not choose to install Reporting as a service during its installation, you can configure it to run as a service at any time by re-running the Reporting Configurator to configure and install the service.



Task To configure to run as a Windows service:

1. Stop FlexNet Manager for Engineering Applications Reporting:
 - a. Open a Command prompt and change to the FlexNet Manager for Engineering Applications Reporting installation directory.
 - b. Type the command:

```
flexnet stop
```
2. To start the Configurator, from the same directory, type `flexnet site`.
3. Select **Install as Service** and configure the service user.
4. Click **Finish**. The `site` directory is re-created and the service is installed.
5. Go to **System Properties > Advanced > Environment Variables...**
6. Enter a new system variable for **JAVA_HOME**, and set the (default) value to:
C:\Program Files\FLEXnet\Manager\reporting\jvm (or whatever your actual installation locations is).

Because this method of installing the Windows service is recorded in the settings in the FlexNet Manager for Engineering Applications Reporting Configurator, if `flexnet site make` is run, the Windows service remains installed.

Managing the Service

Manage the FlexNet Manager for Engineering Applications Reporting service using the command `flexnet service`.

Syntax



```
flexnet service <option>
```

where <option> is one of the parameters described in the following table.

Table 3-3 • `flexnet service` Parameters

Parameter	Description
<code>reinstall</code>	Uninstalls and installs the installed service with the user configured in the Reporting Configurator. Ensure that the user running the service is configured correctly before running this command. If no option is specified, the Local System user is the default.

Table 3-3 • flexnet service Parameters

Parameter	Description
install	<p>Installs the service with the user configured in the Reporting Configurator. Make sure that the user running the service is configured correctly before running this command (the Local System user is the default). If the service is already installed, a message is returned.</p> <p>Because this method of installing the Windows service bypasses the Install as Service setting in the Reporting Configurator, if <code>flexnet site make</code> is run, the Windows service is uninstalled.</p>  <p>Note • Note that because of Windows 2008 security features, even if a user was configured with Administrator privileges, command windows opened by that user do not also have Administrator privileges. As a result, running any command that requires registering a Windows service will fail.</p> <p>For Windows 2008, to install the Reporting Windows service, do the following:</p> <ol style="list-style-type: none"> 1. Click Start. 2. Right-click Command Prompt. 3. Select Run as administrator. The command window will open with Administrator privileges. You can now run <code>flexnet service install</code>.
uninstall	<p>Uninstalls the installed service.</p>  <p>Note • For Windows 2008, see the above note under the install option.</p>
start	Starts the installed service.
stop	Stops the installed service.

Stopping the Service

UNIX Platforms

If you started FlexNet Manager for Engineering Applications Reporting with the UNIX service script, stop it with the following service script (using whatever name you gave the script in [Step 2](#) of the task for [starting Reporting using the UNIX service script](#)):

```
<flexnet_reporting-service> stop
```

Windows Platforms

If you started FlexNet Manager for Engineering Applications Reporting as a Windows service, stop the service through the Windows Administrative Tools.

Signing In to Reporting

Functionality provided by FlexNet Manager for Engineering Applications Reporting can be accessed using the FlexNet Manager for Engineering Applications Admin web interface.

Follow the instructions to sign in to FlexNet Manager for Engineering Applications Admin in [Signing In to FlexNet Manager for Engineering Applications \(Admin\)](#), then click the **Reporting** tab.

FlexNet Manager for Engineering Applications Reporting Directory Structure

The following table lists the FlexNet Manager for Engineering Applications Reporting directory structure:

Table 3-4 • FlexNet Manager for Engineering Applications Reporting directory structure

Directory	Description
reporting_install_directory	Directory, specified during installation, in which FlexNet Manager for Engineering Applications Reporting was installed. Contains flexnet script.
config	Contains the <code>site.properties</code> file, a <code>license</code> directory into which the FlexNet Manager for Engineering Applications Reporting license is copied and a <code>driver</code> directory into which a non-bundled JDBC driver is copied during installation.
custom	Contains customized versions of files in a directory structure that mimics the structure of the <code>site</code> directory. When FlexNet Manager for Engineering Applications Reporting starts, the files from this directory are copied into the <code>site</code> directory, augmenting or replacing existing files. This directory and its subdirectories must be created as needed.
data	Contains enterprise data. This directory is preserved when FlexNet Manager for Engineering Applications Reporting is reconfigured or uninstalled.
importcache	Temporary space for report log imports, created when the first report log is imported.
rep	
lic	Contains subdirectories with copies of the license files for the license servers managed by FlexNet Manager for Engineering Applications Reporting.
opt	Contains subdirectories with copies of the options files for vendor daemons managed by FlexNet Manager for Engineering Applications Reporting.
r1	Contains subdirectories with report logs imported into FlexNet Manager for Engineering Applications Reporting.
reports	

Table 3-4 • FlexNet Manager for Engineering Applications Reporting directory structure

Directory	Description
output	Contains output files for usage reports generated through FlexNet Manager for Engineering Applications Reporting.
jvm	Files for the bundled Java Virtual Machine.
logs	Contains all of the log files generated by FlexNet Manager for Engineering Applications Reporting.
release	Contains files for individual modules installed with FlexNet Manager for Engineering Applications Reporting, before they are configured for running at your enterprise. Files in the release directory can be used to recover site directory files that have been overwritten by customized files.
site	FlexNet Manager for Engineering Applications Reporting runs from this directory. Contains merged and configured versions of the installed FlexNet Manager for Engineering Applications Reporting files. This directory is re-created from files in the release and config directories when FlexNet Manager for Engineering Applications Reporting is reconfigured using the <code>flexnet site</code> command.
uninstaller	Files for the FlexNet Manager for Engineering Applications Reporting uninstaller—Run the uninstaller from the <code>uninstaller/flexnet</code> directory.

Stopping the Reporting Server

The way in which you stop the Reporting server depends upon the platform on which it is running.

UNIX Platforms

If you started the Reporting server with the UNIX service script, stop it with the following service script (using whatever name you gave the script in [Step 2](#) of the task for [starting Reporting using the UNIX service script](#)):

```
<flexnet_reporting-service> stop
```

Windows Platforms

- If you started Reporting as a Windows service, stop the service through Administrative Tools.
- If you started it from the command line, open a different Command prompt from that used to start it, change to the `reporting_install_directory`, and type the command: **flexnet stop**



Note • On some Microsoft Windows machines the **flexnet stop** command may fail with an exception. The fix is to install Microsoft Visual C++ 2008 SP1 Redistributable Package (x64), which is available from the Microsoft website: <https://www.microsoft.com/en-us/download/details.aspx?id=2092>.

Logging In to FlexNet Manager for Engineering Applications



Task To log in to FlexNet Manager for Engineering Applications:

1. Open a supported Web browser.
2. Type the following URL—
`http://manager_host:8888`
—where *manager_host* is the name of the machine on which FlexNet Manager for Engineering Applications Admin is installed and *port* is the Admin port number. By default, the port number is *8888*.
3. Log in to FlexNet Manager for Engineering Applications with the user name `admin` and password `admin`. Click the **Login** button.

flexnet stop Command

The `flexnet stop` command stops the server, if the server is running. If the server isn't running, the `flexnet stop` command has no effect.

To ensure that the command `flexnet stop` works properly, you may need to configure a couple of items.

- If you encounter a warning such as “Unable to connect due to unrecognized server certificate” this could be due to incorrectly setting up the certificate with the Truststore. To confirm your configuration of this please review [Verifying a Certificate](#) on page 117.

Next Steps

After you have installed FlexNet Manager for Engineering Applications Admin and Reporting:

- Install FlexNet Report Designer, if your organization will be using it. See [Chapter 5, Installing, Upgrading To, and Configuring Flexera Analytics 2020 R1](#).
- Install all required FlexNet Agents, then test your configuration. See [Chapter 6, Testing the FlexNet Manager for Engineering Applications Installation](#) for details. See the *FlexNet Agent Installation Guide* for information on installing and deploying FlexNet Agents.

4

Upgrading to FlexNet Manager for Engineering Applications 2020 R1

You can upgrade to FlexNet Manager for Engineering Applications 2020 R1 from FlexNet Manager for Engineering Applications 15.3 or later.

To determine which version your enterprise is currently using, see the **System Information** page in the FlexNet Manager for Engineering Applications user interface, available from the **Admin** tab. Look for the Manager and Reporting module versions.

For assistance with upgrading from a version of FlexNet Manager for Engineering Applications that is earlier than version 15.3, contact Flexera Software Support.

Upgrade Steps

Upgrading FlexNet Manager for Engineering Applications requires the following steps:

- [Upgrading FlexNet Agent](#)
- [Upgrading FlexNet Manager for Engineering Applications Admin](#)
- [Upgrading the FlexNet Manager for Engineering Applications Admin Database Schema](#)
- [Upgrading FlexNet Manager for Engineering Applications Reporting](#)
- [Upgrading the FlexNet Manager for Engineering Applications Reporting Database Schema](#)

Upgrading FlexNet Agent

Flexnet Agent 4.x is not supported in FlexNet Manager for Engineering Applications 2020 R1.

Therefore, we recommend that you migrate your existing FlexNet Agents to FlexNet Agent 5.6 before upgrading to FlexNet Manager for Engineering Applications 2020 R1. For instructions on how to do this, refer to *Chapter 6, Upgrading to FlexNet Agent 5.6*, in the **FlexNet Agent v5.6 Installation Guide**.



Note • Failure to perform the FlexNet Agent migration first will result in a loss of communication between the Manager component and the FlexNet Agent. From that point, migrating to FlexNet Agent 5.6 will restore communications and functionality.

Upgrading FlexNet Manager for Engineering Applications Admin

You must uninstall the previous version of FlexNet Manager for Engineering Applications Admin before installing FlexNet Manager for Engineering Applications 2020 R1 Admin. Read through the entire set of instructions before beginning the upgrade installation process.



Task

To upgrade from FlexNet Manager for Engineering Applications Admin:

1. Ensure that you have your upgrade license file in place. See the section, [License Files for Upgrade Installations](#), in [Chapter 2, Before Installing FlexNet Manager for Engineering Applications](#).
2. Stop the earlier version of FlexNet Manager for Engineering Applications Admin. To do this:
 - a. Open a Command Prompt window, and navigate to the installation directory for FlexNet Manager for Engineering Applications Admin.
 - b. Type the command:

```
flexnet stop
```
3. Uninstall the earlier version of FlexNet Manager for Engineering Applications Admin using the instructions in the section, [Uninstalling the Admin Component](#), in [Chapter 9, Uninstalling FlexNet Manager for Engineering Applications Components](#).



Important • After the uninstaller finishes, do not delete the config, data, or logs directories from the FlexNet Manager for Engineering Applications Admin installation directory. These directories are required for the upgrade process to be successful.

4. Install FlexNet Manager for Engineering Applications 2020 R1 Admin to the same location where the earlier version of FlexNet Manager for Engineering Applications Admin was installed. See the section, [Installing FlexNet Manager for Engineering Applications Admin](#) in [Chapter 3, Installing FlexNet Manager for Engineering Applications](#).

During the installation, the following configurations must be specified for the upgrade to succeed.

- The DATA repository path needs to be the absolute path to the new location where DATA repository is moved.
- The FlexNet Manager for Engineering Applications 2020 R1 Admin database needs to point to the previous FlexNet Manager for Engineering Applications Admin database. Ensure that the following database parameters are exactly the same as those used for the previous Admin database:
 - **Oracle**—Database Service Name, Tablespace, Database User Name, Database User Password.
 - **Microsoft SQL Server**—Database, Database User Name, Database User Password.

Because you retained the `config`, `data`, and `logs` directories, the FlexNet Manager for Engineering Applications 2020 R1 Admin installation will have the same configuration settings as the earlier FlexNet Manager for Engineering Applications Admin installation.

5. Upgrade the FlexNet Manager for Engineering Applications Admin database using the instructions in the following section, [Upgrading the FlexNet Manager for Engineering Applications Admin Database Schema](#).
6. Start FlexNet Manager for Engineering Applications 2020 R1 Admin.
7. After upgrading, you need to reconfigure SSL. See [Configuring FlexNet Manager for Engineering Applications Admin for Secure Socket Layer](#) in [Chapter 7, Configuring FlexNet Manager for Engineering Applications](#).

Upgrading the FlexNet Manager for Engineering Applications Admin Database Schema

Part of the upgrade process includes upgrading the database schema used with FlexNet Manager for Engineering Applications. After installing FlexNet Manager for Engineering Applications Admin software and before starting it, you must upgrade the database schema to the new version. The schema upgrade is performed as the database user you supplied through the Admin Configurator.

The database upgrade script assumes that you are upgrading from an existing version 15.x, 14.x, or 12, to version 2020 R1 database. As a precaution, it is recommended that you back up the database before upgrading the database. The data in the database will be preserved and transformed if necessary.



Task *To upgrade the FlexNet Manager for Engineering Applications database:*

1. Start the database server, if it is not already running.
2. At the command line, change to the `admin_install_directory` and make sure that FlexNet Manager for Engineering Applications Admin is stopped. Also, make sure no database tables are being accessed.
3. Type `f1exnet upgradedb`. This command upgrades the FlexNet database schema, asks whether you want to use database partitioning for usage-related tables, and then migrates existing data and new configuration information to the new schema.

If there are any errors during the upgrade, they are written to the console. A log containing a record of the entire upgrade process is created at the following location:

```
<admin_install_directory>/logs/upgradedb.log
```

Upgrading FlexNet Manager for Engineering Applications Reporting

You must uninstall the previous version of FlexNet Manager for Engineering Applications Reporting before installing FlexNet Manager for Engineering Applications 2020 R1 Reporting. Read through the entire set of instructions before beginning the upgrade process.

**Task****To upgrade FlexNet Manager for Engineering Applications Reporting:**

1. Ensure that you have your upgrade license file in place. See the section, [License Files for Upgrade Installations](#), in [Chapter 2, Before Installing FlexNet Manager for Engineering Applications](#).
2. Stop the earlier version of FlexNet Manager for Engineering Applications Reporting.
3. Uninstall the earlier version of FlexNet Manager for Engineering Applications Reporting using the instructions in the section, [Uninstalling the Reporting Component in Chapter 9, Uninstalling FlexNet Manager for Engineering Applications Components](#).



Important • After the uninstaller finishes, do not delete the config, data, or logs directories from the Reporting installation directory. These directories are required for the upgrade process to be successful.

4. Install FlexNet Manager for Engineering Applications 2020 R1 Reporting to the same location where the earlier version of FlexNet Manager for Engineering Applications Reporting was installed. See the section, [“Installing FlexNet Manager for Engineering Applications Reporting,”](#) in [Chapter 3, “Installing FlexNet Manager for Engineering Applications.”](#)

During the installation, the following configurations must be specified for the upgrade to succeed.

- The DATA repository path needs to be the absolute path to the new location where DATA repository is moved.
- The FlexNet Manager for Engineering Applications 2020 R1 Reporting database needs to point to the previous FlexNet Manager for Engineering Applications Reporting database. Ensure that the following database parameters are exactly the same as those used for the previous FlexNet Manager for Engineering Applications Reporting database:
 - **Oracle**—Database Service Name, Tablespace, Database User Name, Database User Password.
 - **Microsoft SQL Server**—Database, Database User Name, Database User Password.

Because you retained the config, data, and logs directories, the FlexNet Manager for Engineering Applications 2020 R1 Reporting installation will have the same configuration settings as earlier FlexNet Manager for Engineering Applications Reporting installation.

5. Upgrade the FlexNet Manager for Engineering Applications Reporting database using the instructions in the following section, [Upgrading the FlexNet Manager for Engineering Applications Reporting Database Schema](#)
6. Start FlexNet Manager for Engineering Applications 2020 R1 Reporting.

Upgrading the FlexNet Manager for Engineering Applications Reporting Database Schema

Part of the upgrade process includes upgrading the database schema used with FlexNet Manager for Engineering Applications. After installing FlexNet Manager for Engineering Applications Reporting software and before starting it, you must upgrade the database schema to the new version.

The schema upgrade is performed as the database user you supplied through the FlexNet Manager for Engineering Applications Reporting Configurator. The database upgrade script assumes that you are upgrading from an existing version 15.3 or later to version 2020 R1 database.

It is strongly recommended that you back up the database before upgrading the database. The data in the database will be preserved and transformed if necessary.



Important • If you recently upgraded from FlexNet Manager for Engineering Applications 15.3, 15.4, or 15.5 and have not completed the required data-model upgrade and data migration, you **must finish this process before upgrading** to FlexNet Manager for Engineering Applications 2020 R1. Refer to the version-appropriate Installation Guide for more information.



Task

To upgrade the FlexNet Manager for Engineering Applications Reporting database:

1. Start the database server, if it is not already running.
2. At the command line, change to the directory `reporting_install_directory` and ensure the following:
 - FlexNet Manager for Engineering Applications Reporting is stopped.
 - No database tables are being accessed.

3. Type `flexnet upgradedb`.

This command upgrades the FlexNet database schema, and then migrates existing data and new configuration information to the new schema.

4. Specify whether you want to partition the usage-related tables by typing **yes** or **no**. (Before specifying that you want to use database partitioning, verify that the database version your enterprise is using supports partitioning.)



Note • The database tables for the Reporting server can be partitioned at any time. See the section, “[Partitioning the Remaining Database Tables \(Data Warehouse Tables\)](#),” for information.

5. If you want to use partitioned tables, follow the process outlined in the following section, [Partitioning the Remaining Database Tables \(Data Warehouse Tables\)](#).

If there are any errors during the upgrade, they are written to the console. A log containing a record of the entire upgrade process is created at: `<reporting_install_directory>/logs/upgradedb.log`.

Updating Scripts That Use flexnet Admin Server Commands

FlexNet Manager for Engineering Applications 2020 R1 supports only https protocol for use with flexnet admin server commands (for example, `bulkimport`, `importoptionsfile`, `importorgstructure`, and so on). If you have scripts that refer to these commands and that use the `-s` parameter (to specify the URL for the FlexNet Manager for Engineering Applications server), you will need to update your scripts to refer to an https connection (rather than an http connection).

For all of these commands, use of the `-s` parameter is optional. If it is not specified, the default server URL is assumed to be:

`https://127.0.0.1:<admin server port number>/flexnet`

Next Steps

After you have installed FlexNet Manager for Engineering Applications Admin and FlexNet Manager for Engineering Applications Reporting and verified that you can sign in, configure FlexNet Manager for Engineering Applications using the information in the section [Configuring FlexNet Manager for Engineering Applications Behavior After Installation](#) in [Chapter 7, Configuring FlexNet Manager for Engineering Applications](#).

5

Installing, Upgrading To, and Configuring Flexera Analytics 2020 R1

In this section, instructions are provided for how to upgrade to and configure Flexera Analytics:

- [Considerations](#)
- [Installing Flexera Analytics](#)
- [Upgrading to Flexera Analytics](#)
- [Configuring Flexera Analytics](#)

Considerations

Before installing Flexera Analytics, review the following information:

- [General](#)
- [Time Zone](#)
- [Linux](#)
- [Windows](#)
-

General



Important • Flexera Analytics 2020 R1 is compatible only with FlexNet Manager for Engineering Applications 2020 R1.

Flexera Analytics 2020 R1 replaces FlexNet Report Designer.

FlexNet Manager for Engineering Applications Foundation Edition does not include Flexera Analytics. Flexera Analytics 2020 R1, which is powered by the Cognos Reporting Engine, provides functionality that enables you to quickly modify out-of-the-box reports and to create customized reports. This chapter outlines the procedure for installing, upgrading to, and configuring the Flexera Analytics 2020 R1 components.

- If you are installing Flexera Analytics for the first time, refer to the [Installing Flexera Analytics](#) section below.
- If you are upgrading from a previous version of Flexera Analytics, refer to the [Upgrading to Flexera Analytics](#) section below.



Note • See the *FlexNet Manager for Engineering Applications 2020 R1 Release Notes for the supported platforms and database versions*.

Time Zone

Flexera Analytics provides an Operational Dashboard for FlexNet Manager for Engineering Applications, which enables you to view usage data from both FlexNet and LUM license servers. Because Flexera Analytics's Operational Dashboard functionality 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 FlexNet Manager for Engineering Applications Reporting database server and the Flexera Analytics (Cognos) server are in the same time zone.

It is also recommended that both of the FlexNet Manager for Engineering Applications servers (Admin and Reporting) be in the same time zone.

Linux

Installing Flexera Analytics on Linux requires the additional step of creating an Oracle database to act as the content store.

Windows

Installing Flexera Analytics on Windows requires the additional step of creating either an Oracle database or a Microsoft SQL Server database to act as the content store.

Installing Flexera Analytics

The process for installing Flexera Analytics is outlined below. Before installing, read [Chapter 2, Before Installing FlexNet Manager for Engineering Applications](#).

Installing on Linux

The following tables provides an overview of how to install Flexera Analytics on Linux.

Table 5-1 • Overview of Installing Flexera Analytics on Linux








Icon	Description
	1. Download the FNMEA_Flexera_Analytics_2020_R1_x64_Linux.zip file.

Table 5-1 • Overview of Installing Flexera Analytics on Linux

Icon	Description
	2. Create content store.
	3. Edit config.properties file.
	4. Run install.sh script.
	Flexera Analytics is successfully installed.
	5. Start the Cognos service.
	6. Configure FlexNet Manager for Engineering Applications to work with Flexera Analytics.

Installation Steps

To install Flexera Analytics on Linux, perform the following tasks:

- [Download the FNMEA_Flexera_Analytics_2020_R1_x64_Linux.zip File](#)
- [Create the Content Store Database](#)
- [Edit the config.properties File](#)
- [Run the install.sh Script](#)

Download the FNMEA_Flexera_Analytics_2020_R1_x64_Linux.zip File

To download the Linux ZIP file, perform the following steps.



Task

To download the FNMEA_Flexera_Analytics_2020_R1_x64_Linux.zip file:

1. Go to the Flexera Customer Community site: <https://flexeracommunity.force.com/customer>.
2. Download the FNMEA_Flexera_Analytics_2020_R1_x64_Linux.zip file.
3. Extract the contents to a useful location on your server.

Create the Content Store Database

The Content Store is a database used by Flexera Analytics to store information about reporting models, folders, reports, and saved results.

On Linux, only an Oracle content store is supported.

Create an Oracle Content Store (12c Release 1)



Task

To create an Oracle Content Store:

1. Download the Oracle database client software (12c Release 1, **64-bit**) from the Oracle website to the same machine as Cognos is installed.
2. Create a database (on your nominated data center server) with the following settings:
 - Database character set: AL32UTF8
 - National character set: AL16UTF16



Note • Flexera Analytics will not work if the Oracle database is not created with these settings.

3. Create a user account that will be used to access the database and use an appropriate user name. (For example, `csuser`.) Ensure that the account has permission to do the following:
 - Connect to the database.
 - Create, alter, and drop tables, triggers, views, procedures, and sequence.
 - Insert, update, and delete data in the database tables.
4. Create a tablespace where the Content Store schema will be created. The tablespace should be at least 150 MB in size. For example, in SQL*Plus, the command would be:

```
create tablespace CONTENTSTORE datafile 'path/contentstore.dbf' size 150M autoextend on;
```
5. Run `netca` and create a local net service name which connects to the service of the Oracle server.
6. From the command line, enter the following commands:
 - Set `LD_LIBRARY_PATH = cognos_installed_location/bin:$ORACLE_HOME/lib`
 - Set `TNS_ADMIN=$ORACLE_HOME/network/bin`.

Edit the config.properties File

Make the following changes in the config.properties file to suit your environment.

Table 5-2 • config.properties File Changes

Parameter	Default value	Description
InstallationPath	/opt/flexera/fnmea/analytics	The location on the file system where Flexera Analytics is installed
FNMEAServerURI	http://localhost:8888	The address of the FNMEA admin server
EmailSmtpServerAddress	mailserver	The SMTP mail server address
EmailSmtpServerPort	25	The port to be used to connect to the SMTP server
EmailSmtpUsername	username	Username to be used when logging on to SMTP server to send emails. Leave blank if no authentication is required
EmailSmtpPassword	password	Password for the user to be used when logging on to SMTP server to send emails. Leave blank if no authentication is required, or if this file is not secure (can be securely configured manually later on)
EmailSslEncryptionEnabled	false	Specifies whether mail server connection should use SSL encryption. Use this property to enable SSL encryption for mail server connection
EmailDefaultSender	notifications@yourserver.com	Specifies the email address of the 'sender' of outgoing messages. Use a valid email address.
DbServerAddress	127.0.0.1	The database server address
DbServerPort	1521	The database server port
DbUsername	cognos	The username to use to log onto the database
DbPassword	cspassword	The password to use to log onto the database
DbIdentifier	oracleid (Oracle) contentstoredb (SQL Server)	Identifier specific information about connecting to the database For Oracle: The database system ID to be used for the content store For SQL Server: The database name to be used for the content store



Note • Format rules for slashes and spaces in the `config.properties` file:

- The `\` character is used as an escape character. To use `\` in a value, it must be escaped. For example:
`InstallationPath=C:\\Program Files\\Flexera\\fnmea\\analytics`
- Trailing space is considered to be significant, and will be included as part of the value
- Leading space is not considered to be significant, and will be ignored by default. To intentionally include leading space, you can escape it with `\`. For example:
`DbPassword=\\ cpassword`

Run the `install.sh` Script

To run the `install.sh` script, perform the following steps.



Task

To run the `install.sh` script:

1. In the command line, run the `install.sh` script.

The following parameters are available.

Parameter	Description
<code>-c</code> <code>-CheckInputOnly</code>	Check the input file only
<code>-g</code> <code>-GeneratePropertiesOnly</code>	Check input, and generate output file only
<code>-h</code> <code>-Help</code>	Print help
<code>-i</code> <code>-InputFile FILE</code>	Specify the input configuration file. Default value: <code>config.properties</code>
<code>-o</code> <code>-OutputFile FILE</code>	Specify the output response file. Default value: <code>response.properties</code>
<code>-r</code> <code>-RunConfig</code>	Only run the configuration step of the installation, and skip copying installer files to the installation location. Useful if the configuration failed and the cause of the failure has been addressed, or if there are updated values in <code>config.properties</code> that need to be applied. Incompatible with options <code>-g</code> and <code>-o FILE</code> , as they are irrelevant when running configuration only.

Parameter	Description
-v	Enable verbose mode
-Verbose	

Post-Installation Steps

After installing Flexera Analytics

Starting the Cognos service



Task *To start the Cognos service*

1. Open a shell window.
2. Run `cogconfig.sh -s`.

Configure FlexNet Manager for Engineering Applications to work with Flexera Analytics

After the installation is complete, perform these steps using the FlexNet Manager for Engineering Applications user interface.



Task *To perform post-installation configuration for Flexera Analytics:*

1. From a supported web browser, launch FlexNet Manager for Engineering Applications.
2. Under the **Admin** tab, under **System Configuration**, click **Reporting**.
3. To configure the Flexera Analytics, provide values for the following settings.

Setting	Description
Cognos Server Host	Specify the protocol (http or https) and the fully qualified name of the host on which the Cognos server (Flexera Analytics) is running. <ul style="list-style-type: none"> • If you configured your web server to use SSL, specify the protocol here as https. • If you do not specify a protocol, the protocol defaults to http. For example, if you provide a Cognos Server Host value <i>hostname</i>, this setting defaults to <i>http://hostname</i>.
Cognos Server Port	The port of the web server where Flexera Analytics 2020 R1 (Cognos) is running. The default port is 9300.
Cognos Web Services	The port at which the Cognos Web services communicate. The default port is 9300.

4. Click **Save**.

5. Assign the Web Administrator a Cognos role by doing the following:
 - a. Under **Reporting**, click **Cognos Roles**. Then click **Assign Cognos Roles**.
 - b. Under **Web Administrator**, select the **admin (System Administrator)** user from **All FNM-EA Users**.
 - c. Click the right arrow button to move this user to **Users Assigned to this Role**.
 - d. Scroll down, and click **Save Cognos Role Assignments**.
6. Under **Reporting**, under **Flexera Analytics**, click **Cognos Administration**.
7. Copy the package into the <Cognos install dir>\deployment folder.
8. Click **Import Package** to link the Reporting database with the Flexera Analytics database.
9. Under **Reporting**, under **Usage Data Maintenance**, click **Periodic Aggregation**.
10. Specify the interval and start time for data aggregation.
 - Select the data aggregation interval based on your database size. For medium to large databases, once daily is optimal.
 - Enter the time in *hh:mm* format.
For better performance, data aggregation should be performed during non-peak times for the FlexNet Manager for Engineering Applications Reporting Server.
11. Click **Save**.

Installing on Windows



1. Download the `FNMEA_Flexera_Analytics_2020_R1_x64_Windows.zip` file.



2. Create content store.



3. Edit `config.properties` file.



4. Run `install.ps1` script.



Flexera Analytics is successfully installed.



5. Start the Cognos service.



6. Configure FlexNet Manager for Engineering Applications to work with Flexera Analytics.

Installation steps

Download the `FNMEA_Flexera_Analytics_2020_R1_x64_Windows.zip` file



Task

To download the `FNMEA_Flexera_Analytics_2020_R1_x64_Windows.zip` file:

1. Go to the Flexera Customer Community site: <https://flexeracommunity.force.com/customer>.
2. Download the `FNMEA_Flexera_Analytics_2020_R1_x64_Windows.zip` file.
3. Extract the contents to a useful location on your server.

Create the content store database

The Content Store is a database used by Flexera Analytics server to store information about reporting models, folders, reports, and saved results.

On Windows, Oracle or Microsoft SQL Server content stores are supported.

Create an Oracle Content Store (12c Release 2)



Task

To create an Oracle Content Store:

1. Download the Oracle database client software (12c Release 2, **32-bit**) from the Oracle website to the same machine as Cognos is installed.
2. Create a database (on your nominated data center server) with the following settings:
 - Database character set: AL32UTF8
 - National character set: AL16UTF16



Note • Flexera Analytics will not work if the Oracle database is not created with these settings.

3. Create a user account that will be used to access the database and use an appropriate user name. (For example, csuser.) Ensure that the account has permission to do the following:
 - Connect to the database.
 - Create, alter, and drop tables, triggers, views, procedures, and sequence.
 - Insert, update, and delete data in the database tables.
4. Create a tablespace where the Content Store schema will be created. The tablespace should be at least 150 MB in size. For example, in SQL*Plus, the command would be:

```
create tablespace CONTENTSTORE datafile 'path/contentstore.dbf' size 150M autoextend on;
```
5. Run netca and create a local net service name which connects to the service of the Oracle server.
6. From the command line, enter the following commands:
 - Set `PATH=cognos_installed_location/bin:$ORACLE_HOME/lib:$PATH`
 - Set `TNS_ADMIN=$ORACLE_HOME/network/bin`.

Create a Microsoft SQL Server Content Store



Task

To create a Microsoft SQL Server Content Store:

1. Ensure that your installation of Microsoft SQL Server is configured as follows:
 - **UTF-8 or UTF-16 encoding is used**—For information about character sets, encoding, and collation, see the Microsoft SQL documentation.

- **The collation sequence is case insensitive**—In a custom installation, you choose a collation, which includes character sets and sort order, during the SQL Server setup. In a Typical installation, the installation uses the locale identified by the installation program for the collation. This setting cannot be changed later.
 - **The TCP/IP protocol is enabled**—This protocol is required by Cognos to access data.
2. Select mixed authentication (Windows and SQL Server) instead of Windows-only authentication.
 3. Create the database and name it appropriately (for example, contentstore).
 4. Create the user account that will be used to access the database:
 - a. Open Microsoft SQL Server Management Studio.
 - b. Under **Security**, right-click **Logins** and select **New Login**.
 - c. Specify a login name.
 - d. Select **SQL Server authentication** and specify the **Password**.
 - e. Clear **Enforce password policy**. This clears all three check boxes.
 - f. Click **OK**.
 5. Create a schema:
 - a. Under **Databases**, expand the database that you created above.
 - b. Under **contentstore**, expand **Security**.
 - c. Right-click **Schemas** and select **New Schema**.
 - d. Specify the **Schema name** and click **OK**.
 6. Configure the database user:
 - a. Under **Databases** | **<Database Name>** | **Security**, right-click **Users** and select **New User**.
 - b. Specify the **User name**.
 - c. For **Login name**, browse and select the login that you created in step 4.
 - d. For **Default schema**, browse and select the schema that you created in step 5.
 - e. In the **Owned Schemas** list, select the same schema as **Default schema**.
 - f. In the **Role Members** list, select **db_datareader**, **db_datawriter**, and **db_ddladmin**.
 7. Click **OK**.

Edit the config.properties file

Make the following changes in the config.properties file to suit your environment.

Table 5-3 • config.properties File

Parameter	Default value	Description
InstallationPath	C:\Program Files\Flexera\fnmea\analytics	The location on the file system where Flexera Analytics is installed

Table 5-3 • config.properties File

Parameter	Default value	Description
FNMEAServerURI	http://localhost:8888	The address of the FNMEA admin server
EmailSmtpServerAddress	mailserver	The SMTP mail server address
EmailSmtpServerPort	25	The port to be used to connect to the SMTP server
EmailSmtpUsername	username	Username to be used when logging on to SMTP server to send emails. Leave blank if no authentication is required
EmailSmtpPassword	password	Password for the user to be used when logging on to SMTP server to send emails. Leave blank if no authentication is required, or if this file is not secure (can be securely configured manually later on)
EmailSslEncryptionEnabled	false	Specifies whether mail server connection should use SSL encryption. Use this property to enable SSL encryption for mail server connection
EmailDefaultSender	notifications@yourserver.com	Specifies the email address of the 'sender' of outgoing messages. Use a valid email address.
DbServerAddress	127.0.0.1	The database server address
DbServerPort	1521	The database server port
DbUsername	cognos	The username to use to log onto the database
DbPassword	cspassword	The password to use to log onto the database
DbIdentifier	oracleid (Oracle) contentstoredb (SQL Server)	Identifier specific information about connecting to the database For Oracle: The database system ID to be used for the content store For SQL Server: The database name to be used for the content store



Note • Format rules for slashes and spaces in the config.properties file:

- The `\` character is used as an escape character. To use `\` in a value, it must be escaped. For example
`InstallationPath=C:\\Program Files\\Flexera\\fnmea\\analytics`
- Trailing space is considered to be significant, and will be included as part of the value
- Leading space is not considered to be significant, and will be ignored by default. To intentionally include leading space, you can escape it with `\`. For example:
`DbPassword= \ cpassword`

Run the install.ps1 script

In Windows Powershell, run the `install.ps1` script with Administrator permissions.

The following parameters are available:

Parameter	Description
<code>-c</code> <code>-CheckInputOnly</code>	Check the input file only
<code>-g</code> <code>-GeneratePropertiesOnly</code>	Check input, and generate output file only
<code>-h</code> <code>-Help</code>	Print help
<code>-i</code> <code>-InputFile FILE</code>	Specify the input configuration file. Default value: <code>config.properties</code>
<code>-o</code> <code>-OutputFile FILE</code>	Specify the output response file. Default value: <code>response.properties</code>
<code>-r</code> <code>-RunConfig</code>	Only run the configuration step of the installation, and skip copying files to the installation location. Useful if the configuration failed and the cause of the failure has been addressed, or if there are updated values in <code>config.properties</code> that need to be applied. Incompatible with options <code>-g</code> and <code>-o FILE</code> , as they are irrelevant when running configuration only.
<code>-v</code> <code>-Verbose</code>	Enable verbose mode

Post-installation steps

Start the Cognos service



Task *To start the Cognos service*

1. Open a Powershell window.
2. Navigate to <install dir>/bin64.
3. Run cogconfig.bat -s.

Configure FlexNet Manager for Engineering Applications to work with Flexera Analytics

After the installation is complete, perform these steps using the FlexNet Manager for Engineering Applications user interface.



Task *To perform post-installation configuration for Flexera Analytics:*

1. From a supported web browser, launch FlexNet Manager for Engineering Applications.
2. Under the **Admin** tab, under **System Configuration**, click **Reporting**.
3. To configure the Flexera Analytics, provide values for the following settings.

Setting	Description
Cognos Server Host	Specify the protocol (http or https) and the fully qualified name of the host on which the Cognos server (Flexera Analytics) is running. <ul style="list-style-type: none">• If you configured your web server to use SSL, specify the protocol here as https.• If you do not specify a protocol, the protocol defaults to http. For example, if you provide a Cognos Server Host value <i>hostname</i>, this setting defaults to <i>http://hostname</i>.
Cognos Server Port	The port of the web server where Flexera Analytics 2020 R1 (Cognos) is running. The default port is 9300.
Cognos Web Services	The port at which the Cognos Web services communicate. The default port is 9300.

4. Click **Save**.
5. Assign the Web Administrator a Cognos role by doing the following:
 - a. Under **Reporting**, click **Cognos Roles**. Then click **Assign Cognos Roles**.
 - b. Under **Web Administrator**, select the **admin (System Administrator)** user from **All FNM-EA Users**.
 - c. Click the right arrow button to move this user to **Users Assigned to this Role**.

- d. Scroll down, and click **Save Cognos Role Assignments**.
6. Under **Reporting**, under **Flexera Analytics**, click **Cognos Administration**.
7. Copy the package into the <Cognos install dir>\deployment folder.
8. Click **Import Package** to link the Reporting database with the Flexera Analytics database.
9. Under **Reporting**, under **Usage Data Maintenance**, click **Periodic Aggregation**.
10. Specify the interval and start time for data aggregation.
 - Select the data aggregation interval based on your database size. For medium to large databases, once daily is optimal.
 - Enter the time in *hh:mm* format.
For better performance, data aggregation should be performed during non-peak times for the FlexNet Manager for Engineering Applications Reporting Server.
11. Click **Save**.

Upgrading to Flexera Analytics

Upgrading to Flexera Analytics from a version of FlexNet Report Designer is outlined below.



Tip • If any proxies or webservers are running from a previous installation of FlexNet Report Designer (for example IIS or Apache) you should remove or reconfigure them. They can potentially interfere with starting Flexera Analytics because they would already be using the required port.

Upgrading on Linux



1. Stop the Cognos service.



2. Download the FNMEA_Flexera_Analytics_2020_R1_x64_Linux.zip file.



3. Edit config.properties file.



4. Run install.sh script.



Flexera Analytics is successfully installed.



5. Start the Cognos service.



6. Configure FlexNet Manager for Engineering Applications to work with Flexera Analytics.

7. Uninstall the old Cognos instance (optional).

Upgrading steps

Download the FNMEA_Flexera_Analytics_2020_R1_x64_Linux.zip file



Task

To download the FNMEA_Flexera_Analytics_2020_R1_x64_Linux.zip file:

1. Go to the Flexera Product and License Center: <https://flexerasoftware.flexnetoperations.com>.
2. Download the FNMEA_Flexera_Analytics_2020_R1_x64_Linux.zip file.
3. Extract the contents to a useful location on your hard drive.

Edit the config.properties File

Make the following changes in the config.properties file to suit your environment.

Table 5-4: config.properties File Components

Parameter	Default value	Description
InstallationPath	/opt/flexera/fnmea/analytics	The location on the file system where Flexera Analytics is installed
FNMEAServerURI	http://localhost:8888	The address of the FNMEA admin server
EmailSmtpServerAddress	mailserver	The SMTP mail server address
EmailSmtpServerPort	25	The port to be used to connect to the SMTP server
EmailSmtpUsername	username	Username to be used when logging on to SMTP server to send emails. Leave blank if no authentication is required
EmailSmtpPassword	password	Password for the user to be used when logging on to SMTP server to send emails. Leave blank if no authentication is required, or if this file is not secure (can be securely configured manually later on)
EmailSslEncryptionEnabled	false	Specifies whether mail server connection should use SSL encryption. Use this property to enable SSL encryption for mail server connection
EmailDefaultSender	notifications@yourserver.com	Specifies the email address of the 'sender' of outgoing messages. Use a valid email address.
DbServerAddress	127.0.0.1	The database server address
DbServerPort	1521	The database server port
DbUsername	cognos	The username to use to log onto the database
DbPassword	cspassword	The password to use to log onto the database

Table 5-4: config.properties File Components

Parameter	Default value	Description
DbIdentifier	oracleid (Oracle) contentstoredb (SQL Server)	Identifier specific information about connecting to the database For Oracle: The database system ID to be used for the content store For SQL Server: The database name to be used for the content store

Run the install.sh Script

In the command line, run the install.sh script.

The following parameters are available.

Table 5-5: install.sh script parameter

Parameter	Description
-c -CheckInputOnly	Check the input file only
-g -GeneratePropertiesOnly	Check input, and generate output file only
-h -Help	Print help
-i -InputFile FILE	Specify the input configuration file. Default value: config.properties
-o -OutputFile FILE	Specify the output response file. Default value: response.properties
-r -RunConfig	Only run the configuration step of the installation, and skip copying files to the installation location. Useful if the configuration failed and the cause of the failure has been addressed, or if there are updated values in config.properties that need to be applied. Incompatible with options -g and -o FILE, as they are irrelevant when running configuration only.

Table 5-5: install.sh script parameter

Parameter	Description
-v	Enable verbose mode
-Verbose	

Post-upgrading steps

Following are the post upgrading steps

- Starting the Cognos service
- Configure FlexNet Manager for Engineering Applications to work with Flexera Analytics

Start the Cognos service



Task To start the Cognos service

1. Open a shell window.
2. Run `cogconfig.sh -s`.

Configure FlexNet Manager for Engineering Applications to work with Flexera Analytics

After the installation is complete, perform these steps using the FlexNet Manager for Engineering Applications user interface.



Task To perform post-installation configuration for Flexera Analytics:

1. From a supported web browser, launch FlexNet Manager for Engineering Applications.
2. Under the **Admin** tab, under **System Configuration**, click **Reporting**.
3. To configure the Flexera Analytics, provide values for the following settings.

Table 5-6: Flexera Analytics Settings details

Setting	Description
Cognos Server Host	Specify the protocol (http or https) and the fully qualified name of the host on which the Cognos server (Flexera Analytics) is running. <ul style="list-style-type: none"> • If you configured your web server to use SSL, specify the protocol here as https. • If you do not specify a protocol, the protocol defaults to http. For example, if you provide a Cognos Server Host value <i>hostname</i>, this setting defaults to <code>http://hostname</code>.

Table 5-6: Flexera Analytics Settings details

Setting	Description
Cognos Server Port	The port of the web server where Flexera Analytics 2020 R1 (Cognos) is running. The default port is 9300.
Cognos Web Services	The port at which the Cognos Web services communicate. The default port is 9300.

4. Click **Save**.
5. Assign the Web Administrator a Cognos role by doing the following:
 - a. Under **Reporting**, click **Cognos Roles**. Then click **Assign Cognos Roles**.
 - b. Under **Web Administrator**, select the **admin (System Administrator)** user from **All FNM-EA Users**.
 - c. Click the right arrow button to move this user to **Users Assigned to this Role**.
 - d. Scroll down, and click **Save Cognos Role Assignments**.
6. Under **Reporting**, under **Flexera Analytics**, click **Cognos Administration**.
7. Copy the package into the <Cognos install dir>\deployment folder.
8. Click **Import Package** to link the Reporting database with the Flexera Analytics database.
9. Under **Reporting**, under **Usage Data Maintenance**, click **Periodic Aggregation**.
10. Specify the interval and start time for data aggregation.
 - Select the data aggregation interval based on your database size. For medium to large databases, once daily is optimal.
 - Enter the time in *hh:mm* format.
For better performance, data aggregation should be performed during non-peak times for the FlexNet Manager for Engineering Applications Reporting Server.
11. Click **Save**.

Upgrading on Windows



1. Stop the Cognos service.



2. Download the FNMEA_Flexera_Analytics_2020_R1_x64_Windows.zip file.



3. Edit config.properties file.



4. Run install.ps1 script.



Flexera Analytics is successfully installed.



5. Start the Cognos service.



6. Configure FlexNet Manager for Engineering Applications to work with Flexera Analytics.

7. Uninstall the old Cognos instance.

Upgrading steps

Following are the Upgrading Step for Flexera Analytics

- [Download the FNMEA_Flexera_Analytics_2020_R1_x64_Windows.zip file](#)
- [Edit the config.properties File](#)
- [Run the install.ps1 Script](#)

Download the FNMEA_Flexera_Analytics_2020_R1_x64_Windows.zip file



Task

To download the FNMEA_Flexera_Analytics_2020_R1_x64_Windows.zip file:

1. Go to the Flexera Product and License Center: <https://flexerasoftware.flexnetoperations.com>.
2. Download the FNMEA_Flexera_Analytics_2020_R1_x64_Windows.zip file.

3. Extract the contents to a useful location on your hard drive.

Edit the config.properties File

Make the following changes in the config.properties file to suit your environment.

Table 5-7: config.properties File Parameter

Parameter	Default value	Description
InstallationPath	C:\Program Files\Flexera\fnmea\analytics	The location on the file system where Flexera Analytics is installed
FNMEAServerURI	http://localhost:8888	The address of the FNMEA admin server
EmailSmtpServerAddress	mailserver	The SMTP mail server address
EmailSmtpServerPort	25	The port to be used to connect to the SMTP server
EmailSmtpUsername	username	Username to be used when logging on to SMTP server to send emails. Leave blank if no authentication is required
EmailSmtpPassword	password	Password for the user to be used when logging on to SMTP server to send emails. Leave blank if no authentication is required, or if this file is not secure (can be securely configured manually later on)
EmailSslEncryptionEnabled	false	Specifies whether mail server connection should use SSL encryption. Use this property to enable SSL encryption for mail server connection
EmailDefaultSender	notifications@yourserver.com	Specifies the email address of the 'sender' of outgoing messages. Use a valid email address.
DbServerAddress	127.0.0.1	The database server address
DbServerPort	1521	The database server port
DbUsername	cognos	The username to use to log onto the database
DbPassword	cspassword	The password to use to log onto the database

Table 5-7: config.properties File Parameter

Parameter	Default value	Description
DbIdentifier	oracleid (Oracle) contentstoredb (SQL Server)	Identifier specific information about connecting to the database For Oracle: The database system ID to be used for the content store For SQL Server: The database name to be used for the content store

Run the install.ps1 Script

In Windows Powershell, run the install.ps1 script with Administrator permissions.

The following parameters are available:

Table 5-8: intall.ps1 Script Parameteres

Parameter	Description
-c -CheckInputOnly	Check the input file only
-g -GeneratePropertiesOnly	Check input, and generate output file only
-h -Help	Print help
-i -InputFile FILE	Specify the input configuration file. Default value: config.properties
-o -OutputFile FILE	Specify the output response file. Default value: response.properties
-r -RunConfig	Only run the configuration step of the installation, and skip copying files to the installation location. Useful if the configuration failed and the cause of the failure has been addressed, or if there are updated values in config.properties that need to be applied. Incompatible with options -g and -o FILE, as they are irrelevant when running configuration only.

Table 5-8: intall.ps1 Script Parameters

Parameter	Description
-v	Enable verbose mode
-Verbose	

Post-upgrading steps

Start the Cognos service



Task *To start the Cognos service*

1. Open a Powershell window.
2. Navigate to <install dir>/bin64.
3. Run cogconfig.bat -s.

Configure FlexNet Manager for Engineering Applications to work with Flexera Analytics

After the installation is complete, perform these steps using the FlexNet Manager for Engineering Applications user interface.



Task *To perform post-installation configuration for Flexera Analytics:*

1. From a supported web browser, launch FlexNet Manager for Engineering Applications.
2. Under the **Admin** tab, under **System Configuration**, click **Reporting**.
3. To configure the Flexera Analytics, provide values for the following settings.

Table 5-9: FNMEA Flexera Analytics Settings

Setting	Description
Cognos Server Host	Specify the protocol (http or https) and the fully qualified name of the host on which the Cognos server (Flexera Analytics) is running. <ul style="list-style-type: none"> • If you configured your web server to use SSL, specify the protocol here as https. • If you do not specify a protocol, the protocol defaults to http. For example, if you provide a Cognos Server Host value <i>hostname</i>, this setting defaults to <i>http://hostname</i>.
Cognos Server Port	The port of the web server where Flexera Analytics 2020 R1 (Cognos) is running. The default port is 9300.

Table 5-9: FNMEA Flexera Analytics Settings

Setting	Description
Cognos Web Services	The port at which the Cognos Web services communicate. The default port is 9300.

4. Click **Save**.
5. Assign the Web Administrator a Cognos role by doing the following:
 - a. Under **Reporting**, click **Cognos Roles**. Then click **Assign Cognos Roles**.
 - b. Under **Web Administrator**, select the **admin (System Administrator)** user from **All FNM-EA Users**.
 - c. Click the right arrow button to move this user to **Users Assigned to this Role**.
 - d. Scroll down, and click **Save Cognos Role Assignments**.
6. Copy the FlexNetManagerSuite.zip package into the <Cognos install dir>\deployment folder.
7. Under **Reporting**, under **Flexera Analytics**, click **Cognos Administration**.
8. Click **Import Package**.
9. Under **Reporting**, under **Usage Data Maintenance**, click **Periodic Aggregation**.
10. Specify the interval and start time for data aggregation.
 - Select the data aggregation interval based on your database size. For medium to large databases, once daily is optimal.
 - Enter the time in *hh:mm* format. , data aggregation should be performed during non-peak times for the FlexNet Manager for Engineering Applications Reporting Server.
11. Click **Save**.

Configuring Flexera Analytics

Most configuration for Flexera Analytics is handled in the config.properties file, but there are additional configuration possibilities as well (outlined at the end of this section).

Configuring on Linux



1. Stop the Cognos service.



2. Edit config.properties file.



3. Run install.sh script.



Flexera Analytics is successfully configured.



4. Start the Cognos service.

Configuration steps

Stop the Cognos service



Task To stop the Cognos service

1. Open a shell window.
2. Run `cogconfig.sh -stop`.

Edit the config.properties File

Make the following changes in the `config.properties` file to suit your environment.

Table 5-10: `config.properties` File Parameters

Parameter	Default value	Description
InstallationPath	<code>/opt/flexera/fnmea/analytics</code>	The location on the file system where Flexera Analytics is installed
FNMEAServerURI	<code>http://localhost:8888</code>	The address of the FNMEA admin server
EmailSmtpServerAddress	<code>mailserver</code>	The SMTP mail server address

Table 5-10: config.properties File Parameters

Parameter	Default value	Description
EmailSmtpServerPort	25	The port to be used to connect to the SMTP server
EmailSmtpUsername	username	Username to be used when logging on to SMTP server to send emails. Leave blank if no authentication is required
EmailSmtpPassword	password	Password for the user to be used when logging on to SMTP server to send emails. Leave blank if no authentication is required, or if this file is not secure (can be securely configured manually later on)
EmailSslEncryptionEnabled	false	Specifies whether mail server connection should use SSL encryption. Use this property to enable SSL encryption for mail server connection
EmailDefaultSender	notifications@yourserver.com	Specifies the email address of the 'sender' of outgoing messages. Use a valid email address.
DbServerAddress	127.0.0.1	The database server address
DbServerPort	1521	The database server port
DbUsername	cognos	The username to use to log onto the database
DbPassword	cspassword	The password to use to log onto the database
DbIdentifier	oracleid (Oracle) contentstoredb (SQL Server)	Identifier specific information about connecting to the database For Oracle: The database system ID to be used for the content store For SQL Server: The database name to be used for the content store

Run the install.sh Script

In the command line, run the install.sh script.

Use the `-r` switch.

Table 5-11: `install.sh` Script parameters

Parameter	Description
<code>-r</code> -RunConfig	Only run the configuration step of the installation, and skip copying files to the installation location. Useful if the configuration failed and the cause of the failure has been addressed, or if there are updated values in <code>config.properties</code> that need to be applied. Incompatible with options <code>-g</code> and <code>-o FILE</code> , as they are irrelevant when running configuration only.

Even though the `-r` switch is the only one needed for configuring, the following options may still be helpful:

Table 5-12: `install.sh` Script parameters

Parameter	Description
<code>-h</code> -Help	Print help
<code>-v</code> -Verbose	Enable verbose mode

Start the Cognos service



Task *To start the Cognos service*

1. Open a shell window.
2. Run `cogconfig.sh -s`.

Configuring on Windows



1. Stop the Cognos service.



2. Edit config.properties file.



3. Run install.ps1 script.



Flexera Analytics is successfully configured.



4. Start the Cognos service.

Configuration steps

Stop the Cognos service



Task *To stop the Cognos service*

1. Open a Powershell window.
2. Navigate to <install dir>/bin64.
3. Run cogconfig.bat -stop.

Edit the config.properties File

Make the following changes in the config.properties file to suit your environment..

Table 5-13: config.properties File Parameter

Parameter	Default value	Description
InstallationPath	C:\Program Files\Flexera\fnmea\analytics	The location on the file system where Flexera Analytics is installed
FNMEAServerURI	http://localhost:8888	The address of the FNMEA admin server

Table 5-13: config.properties File Parameter

Parameter	Default value	Description
EmailSmtpServerAddress	mailserver	The SMTP mail server address
EmailSmtpServerPort	25	The port to be used to connect to the SMTP server
EmailSmtpUsername	username	Username to be used when logging on to SMTP server to send emails. Leave blank if no authentication is required
EmailSmtpPassword	password	Password for the user to be used when logging on to SMTP server to send emails. Leave blank if no authentication is required, or if this file is not secure (can be securely configured manually later on)
EmailSslEncryptionEnabled	false	Specifies whether mail server connection should use SSL encryption. Use this property to enable SSL encryption for mail server connection
EmailDefaultSender	notifications@yourserver.com	Specifies the email address of the 'sender' of outgoing messages. Use a valid email address.
DbServerAddress	127.0.0.1	The database server address
DbServerPort	1521	The database server port
DbUsername	cognos	The username to use to log onto the database
DbPassword	cspassword	The password to use to log onto the database
DbIdentifier	oracleid (Oracle) contentstoredb (SQL Server)	Identifier specific information about connecting to the database For Oracle: The database system ID to be used for the content store For SQL Server: The database name to be used for the content store

Run the install.ps1 Script

In Windows Powershell, run the install.ps1 script with Administrator permissions.

Use the `-r` switch.

Table 5-14: `install.ps1` script parameters

Parameter	Description
<code>-r</code> <code>-RunConfig</code>	Only run the configuration step of the installation, and skip copying files to the installation location. Useful if the configuration failed and the cause of the failure has been addressed, or if there are updated values in <code>config.properties</code> that need to be applied. Incompatible with options <code>-g</code> and <code>-o FILE</code> , as they are irrelevant when running configuration only.

Even though the `-r` switch is the only one needed for configuring, the following options may still be helpful:

Table 5-15: `install.ps1` script parameters

Parameter	Description
<code>-h</code> <code>-Help</code>	Print help
<code>-v</code> <code>-Verbose</code>	Enable verbose mode

Start the Cognos service



Task

To start the Cognos service

1. Open a Powershell window.
2. Navigate to `<install dir>/bin64`.
3. Run `cogconfig.bat -s`.

Additional configuration steps

Below are the additional configuration step to be followed

- [Configuring SSL/HTTPS Communication Between Flexera Analytics and FlexNet Manager](#)
- [Using Flexera Analytics with Oracle](#)

Configuring SSL/HTTPS Communication Between Flexera Analytics and FlexNet Manager

FlexNet Manager for Engineering Applications 2020 R1 supports HTTPS between the Flexera Analytics 2020 R1 (Cognos) server and the FlexNet Manager Admin and Reporting servers.

This section describes how to set up the HTTPS configuration on the FlexNet Manager for Engineering Applications and the Flexera Analytics servers.

FlexNet Manager for Engineering Applications to Flexera Analytics

FlexNet Manager for Engineering Applications will initiate a connection to Flexera Analytics in order to configure user permissions, import the package for Cognos Reporting, or to configure datasources. Follow the steps below to ensure that these actions take place using HTTPS.



Task *To set up the HTTPS/SSL connection from FlexNet Manager for Engineering Applications to Flexera Analytics*

1. Open the Cognos Configuration tool by doing the following:
 - a. Navigate to the Flexera Analytics installation directory

```
<flexera_analytics_installation_dir>\bin64
```
 - b. On Linux, right-click on the file `cogconfig.sh` and select **Run as administrator**.
On Windows, right-click on the file `cogconfig.bat` and select **Run as administrator**.
2. Shut down the Cognos server by doing the following:

In the Cognos Configuration tool, from the **Actions** menu, select **Stop**.
3. In the Cognos Configuration tool, do the following:
 - a. From the Explorer pane (on the left), click **Environment**.
 - b. Modify the web protocol to **https**, for the following **Environment - Group Properties**:
 - Gateway URI
 - External dispatcher URI
 - Internal dispatcher URI
 - Dispatcher URI for external applications
 - Content Manager URIs
4. Extract the Cognos CA certificate from the Flexera Analytics installation directory. To do this:
 - a. Open a Command Prompt window, and change to the Flexera Analytics installation directory:

```
cd <installation_dir>\bin
```
 - b. Execute the script `ThirdPartyCertificateTool` to extract the certificate from the Cognos's keystore, by running the following command:

```
ThirdPartyCertificateTool.bat -E -T -r cacert.cer -p NoPasswordSet
```

The value for password is defined in the Cognos Configuration for 'Certificate Authority key store password'. If you have not changed this value, the default is NoPassWordSet.

5. From the command line, copy the generated file, cacert.cer to the JVM security folder where FlexNet Manager for Engineering Applications Reporting was installed, using the following command:


```
copy cacert.cer <installation_dir>\reporting\jvm\lib\security
```
6. Navigate to the JVM security folder where FlexNet Manager for Engineering Applications Reporting was installed:


```
cd <installation_dir>\reporting\jvm\lib\security
```
7. Run the keytool program to add the generated file cacert.cer to the cacerts truststore, by doing the following:
 - a. Navigate to this location:


```
<installation_dir>\reporting\jvm\bin
```
 - b. Run the following command:


```
keytool -import -trustcacerts -file cacert.cer -alias cognos -keystore cacerts
```
 - c. When prompted by keytool, type the password: changeit

This adds the Cognos certificate into the cacerts truststore file.
8. Verify that the Cognos certificate has been added into the truststore file by running the following command:


```
keytool -list -v -keystore cacerts -alias cognos
```

This command returns a valid certificate from Cognos.
9. At the command line, change to the location to which the FlexNet Manager for Engineering Applications Reporting server was installed.
10. Type the following command to open the Configurator:


```
flexnet site
```
11. Click **Next** to move through the Configurator until you reach the page with **Secure Client Settings**. Ensure the value in the SSL Truststore Location setting is the default installation value:


```
<installation_dir>\reporting\jvm\lib\security\cacerts
```
12. Start the Reporting and Admin servers by changing to their installation directories and typing the following command for each:


```
flexnet start
```

Flexera Analytics to FlexNet Manager for Engineering Applications

Flexera Analytics will initiate a connection to FNMEA primarily to authenticate against the users and roles as defined in FNMEA. Follow the steps below to ensure that this action take place using HTTPS.



Task *To set up the HTTPS/SSL connection from Flexera Analytics to FlexNet Manager for Engineering Applications*

1. Edit the file flexnet.properties by doing the following:
 - a. Navigate to the Flexera Analytics installation directory.

```
<installation_dir>\bin64\configuration
```

- b. Open the file `flexnet.properties` in a text editor.
- c. Edit the value for the attribute `server.host` to point to the URL and the HTTPS port number of the Admin server.
For example:

```
server.host=https://<IP_address/host_name>:8443
```

2. Create a keystore containing the certificate that the admin server will use. This can be done with the command:

```
keytool.exe -keystore keystore -import -file c:\cert.crt
```

where:

- "keytool.exe" is the keytool program under Cognos's `jvm\bin` folder
- "cert.crt" is the certificate used by the admin server
- "keystore" is a keystore file called `keystore` in Cognos's `bin64` folder.

This will create a file called "keystore", containing the certificate needed to connect to the administration server. This will be created in the `bin64` directory under the location where Flexera Analytics is installed.

3. Go to the Cognos Configuration tool and click the **Start** button to bring up the Cognos Server.

After the Flexera Analytics (Cognos) server is started, the Authenticator is now communicating with the FlexNet Manager for Engineering Applications Admin via SSL.

Using Flexera Analytics with Oracle

Using Flexera Analytics with Oracle requires installation of the Oracle client and configuration of the file `tnsnames.ora`.



Task

To use Flexera Analytics with Oracle:

1. Install the Oracle Instant Client on the Flexera Analytics machine. For installation instructions that are specific to using the client with Flexera Analytics, see the section, [Installing and Configuring the Oracle Client](#), in Chapter 8, [Configuring Database Servers](#).
2. Verify that the `net service` name is configured in the file `tnsnames.ora` in the directory where the Oracle client was installed (`./oracle/product/12.1.0/client_1/NETWORK/ADMIN`). There should be an entry in `tnsnames.ora` that reflects the connection to the Reporting database. For example, the following entry has the `net service` name of `ORCL_MACH1` with the database host name `MACH1`, port number `1521` and the Service Name (SID) `ORCL`:

```
ORCL_MACH1 =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(HOST = MACH1)(PORT = 1521))
    )
    (CONNECT_DATA =
      (SID = ORCL)
      (SERVER = DEDICATED))
  )
```

3. Ensure that FlexNet Manager for Engineering Applications Reporting and Flexera Analytics are both on the network and can access each other.

4. Check that you have the Flexera Analytics license. Verify that your FlexNet Manager for Engineering Applications license file contains the FLEXnet .Report .Online feature.

6

Testing the FlexNet Manager for Engineering Applications Installation

To test that you can manage a license server using FlexNet Manager for Engineering Applications Admin, start your FlexNet components (Admin, Reporting, and Flexera Analytics) using the startup scripts, boot scripts, or as Windows services in the following order:

1. **Database server**—If the database server is not already running, refer to the instructions from the database vendor to start the database server.
2. FlexNet Manager for Engineering Applications **Reporting**—For instructions on starting FlexNet Manager for Engineering Applications Reporting, see [Running Reporting As a Service](#)
3. FlexNet Manager for Engineering Applications **Admin**—For instructions on starting FlexNet Manager for Engineering Applications Admin, see [Running Admin as a Service](#)
4. **Flexera Analytics**—For instructions on starting Flexera Analytics, see [Starting the Cognos service](#)
5. **FlexNet Agent on a license server machine**—For instructions on starting a FlexNet Agent, see the *FlexNet Agent Installation Guide* for the agent version you have deployed

To check that you can start the license server using FlexNet Manager for Engineering Applications Admin, verify that the license server that was specified during the installation of the FlexNet Agent is not running.

Starting the License Server



Task

To start the specified license server:

1. Click the display name of the license server. The **Configure and Manage License Server** page appears and displays the license server information you specified when you installed the FlexNet Agent, or displays default settings.
2. By default, status and usage information for a license server is sent every five minutes. If performance is an issue, a longer refresh interval can be set for a license server by clicking **License Server Scheduling** and increasing the **Refresh License Server Status** interval. To display the refreshed status information, the web browser display must be refreshed.

3. During the FlexNet Agent installation, you specified the location of a debug log file for this license server. This location is where a debug log file would be written if `lmadmin` or `lmgrd` is started with debug logging enabled. Therefore, before starting the license server through FlexNet Manager for Engineering Applications Admin, make sure that debug logging is enabled for this license server (it is by default) and click **Save**.
4. Review all the configuration information for this license server. If you chose to install a license server that runs as a Windows service or from a boot script, now is the time to enter and save startup parameters to exactly match the service or script parameters.
5. Click a vendor daemon name on the **Configure and Manage License Server** page. The **Configure and Manage Vendor Daemon** page is displayed.

Assigning a vendor daemon group provides a way to group different vendor daemons on a page. The vendor daemon group defaults to the vendor daemon name, but can be changed or removed.

If you wanted to enable report logging for this vendor daemon, before installing the FlexNet Agent, you should have set up an options file for the vendor daemon that specifies the full path to a report log file. FlexNet Manager for Engineering Applications reads the options file and displays the report log file name. Note that you can schedule the rotation of report logs through FlexNet Manager for Engineering Applications Admin.

Review the rest of the configuration information for the vendor daemon.

6. Click the license server display name to return to the **Configure and Manage License Server** page. When you are ready to start the license server, click **Start**. A message is displayed to notify you that the start command is being processed.
7. Click the **Summary** tab after a few seconds. The status of both `lmgrd` and the vendor daemons should be up. If not, refresh the Web browser display after a few more seconds.

If the license server does not start:

- Verify that the license server runs with the same startup parameters from the command line, as a Windows service, or from a boot script, outside FlexNet Manager for Engineering Applications Admin.
- Check the files `f1exnet.log` and `f1exnetagent.log`, and read the section, [Troubleshooting FlexNet Agents](#) in this chapter. You can also view these log files from the FlexNet Manager for Engineering Applications user interface.

Stopping the License Server



Task

To stop the specified license server:

1. In the **Summary** page, click the display name of the license server. The **Configure and Manage License Server** page is displayed.
2. Click the **Stop** button. Confirm that you want to stop the license server. A message is displayed to notify you that the stop command is being processed.
3. Click the **Summary** tab after a few seconds. The status of both `lmgrd` and the vendor daemons should be down.

Troubleshooting FlexNet Agents

Check both the FlexNet Manager for Engineering Applications and FlexNet Agent logs when there are problems with the FlexNet Agent.

A FlexNet Agent may not start if:

- More than one license file managed by the agent contains a SERVER line with the same port number.
- The options file path specified in a license file is incorrect. License files must contain fully qualified paths to options files and vendor daemon executables.
- A license file location specified for one of the FlexNet Agent's license servers is incorrect.

If FlexNet Manager for Engineering Applications Admin and a FlexNet Agent are running, but cannot contact each other, there may be connectivity problems.

A FlexNet Agent may not report the correct license server status, or not start and stop license servers if:

- The FlexNet Agent is down.
- More than one `lmgrd` managed by the FlexNet Agent is configured to run on an unspecified port in the default port range.
- The FlexNet Agent attempts to register a license server whose license file has an invalid number of SERVER lines. The registration of the license server will fail in FlexNet Manager for Engineering Applications. Any subsequent registration requests for vendor daemons on this (unregistered) license server will also fail in FlexNet Manager for Engineering Applications and an ERROR will be logged in the FlexNet Agent log. However, FlexNet Agent registration will continue.
- A license server name in a FlexNet Agent's `config.xml` file is a duplicate of a license server name already registered by another FlexNet Agent with FlexNet Manager for Engineering Applications. This license server will not be registered (because doing so would result in a duplicate license server name in FlexNet Manager for Engineering Applications). None of the vendor daemons under this duplicate license server will be registered either. An ERROR log message is written to both the FlexNet Manager for Engineering Applications Admin's log and the FlexNet Agent's log. Registration of other (non-duplicate) license servers on the agent will proceed.

If an existing FlexNet Agent is shut down and its host and port reused by another FlexNet Agent, the first agent will appear with a status of down in the FlexNet Manager for Engineering Applications user interface until it is removed using the **Remove** button on the **Agent Summary** page (in the FlexNet Manager for Engineering Applications user interface). If the first agent is started, it will have a port conflict with the second FlexNet Agent. If the second agent is stopped before the first agent is re-started, the second agent will appear with a status of down in the FlexNet Manager for Engineering Applications user interface until it is removed.

7

Configuring FlexNet Manager for Engineering Applications

This chapter contains instructions and guidelines for configuring FlexNet Manager for Engineering Applications components.

- [Configuring FlexNet Manager for Engineering Applications Behavior After Installation](#) provides instructions for configuring FlexNet Manager for Engineering Applications after installation, both using the Web interface and the Admin/Reporting Configurator. The Configurators are especially useful to point to a different database after an installation.
- [Exporting Configuration Settings](#) describes how to export configuration settings to keep as backup.
- [Importing Configuration Settings](#) describes how to import configuration settings from an exported configuration zip file.
- [Access Rights for FlexNet Manager for Engineering Applications Users](#) describes how to set access rights for the License Server and Agent, and how to create and edit license server administrative sets.
- [Configuring FlexNet Manager for Engineering Applications for LDAP](#) introduces support for obtaining user information from one or more domains.
- [Configuring FlexNet Manager for Engineering Applications Admin for Secure Socket Layer](#) describes how to set up the FlexNet Manager for Engineering Applications to use secure socket layers.
- [Generate Certificate on Reporting server](#) describes how to change the initial and maximum Java heap size.
- [Customizing an Alert Email Template](#) gives instructions for creating and specifying a customized alert email template.
- [Specifying Locales](#) deals with customizing the display of dates and times for users in different locales.
- [Customizing the Date and Time Format](#) describes how date and time formats can be set for each installation of FlexNet Manager for Engineering Applications.
- [FlexNet Log Files](#) describes the log files available for FlexNet Manager for Engineering Applications Admin and Reporting.
- The sections, [Using FlexNet Manager for Engineering Applications to Report on IBM LUM Usage](#), and [Using FlexNet Manager for Engineering Applications to Report on DSLS Usage](#), provide information on enabling FlexNet Manager for Engineering Applications to report on IBM LUM and DSLS usage, respectively.

- The section, [PostgreSQL ODBC Driver for Cognos](#), provides information on PostgreSQL ODBC Driver requirement for Cognos.

Configuring FlexNet Manager for Engineering Applications Behavior After Installation

During the FlexNet Manager for Engineering Applications Admin and Reporting installation processes, you specified some of the application’s behavior. After installation, you can change these settings and/or specify some additional settings that govern the behavior of FlexNet Manager for Engineering Applications Admin/Reporting. Changing some settings requires that FlexNet Manager for Engineering Applications Admin/Reporting be restarted for them to take effect.

- **Configuring** FlexNet Manager for Engineering Applications **Admin Behavior**—Admin settings can be configured through its web interface, or through the configurator.
- **Configuring** FlexNet Manager for Engineering Applications **Reporting Behavior**—Reporting settings can be configured only through the configurator.
- **FlexNet Platform Server**—The FlexNet Platform Server controls the Admin configuration, including email and logging settings, and session timeout. You can modify these settings in the FlexNet Manager for Engineering Applications user interface (using the **System Configuration | FlexNet Platform Server** page).
- **FlexNet database connection**—The connection between FlexNet Manager for Engineering Applications Admin/Reporting and the corresponding database server is configured using the Admin and Reporting configurators. Changing these settings is rarely necessary after installation.

Modifying Settings Using the Admin User Interface

The recommended way to change some of the behavior of FlexNet Manager for Engineering Applications Admin is by using the application’s web interface. The configuration settings are available under the **Admin** tab, under the **System Configuration** section.

Refer to the inline descriptions (on the UI page) and to the online help for information specific to the configuration pages and settings.



Task *To access the System Configuration pages:*

1. Start FlexNet Manager for Engineering Applications Admin.
2. Open a supported web browser and sign into FlexNet Manager for Engineering Applications.
3. From the **Admin** tab, under **System Configuration**, click the link that corresponds to the settings that you want to change, or click **Show All** to see all of the configuration settings on one page.

System Configuration Page	Configuration Settings
FlexNet Platform Server	Contains settings for email server and security, application logging, and settings for session timeout and login-attempt limits.
Reporting	Settings for the FlexNet Manager for Engineering Applications Reporting service.

System Configuration Page	Configuration Settings
Planner	Settings for Investment Planner functionality.
LUM	Settings for support of IBM LUM license-usage reporting.
User Interface	Settings to configure the display of items in the application's user interface (for example, the number of records/rows in a page).
Validators	Settings related to validating user-name and password input.
Manager	Settings for various items in FlexNet Manager for Engineering Applications, including support for third-party license servers, time period for denial-alert detection, and Dashboard page settings.

- To change the behavior of the FlexNet Platform Server, select **Admin | System Configuration | FlexNet Platform Server**.
- To change the behavior of the rest of FlexNet Manager for Engineering Applications Admin, select **Admin | System Configuration**, and one of the other categories. The FlexNet Manager for Engineering Applications Online Help provides instructions. Note that FlexNet Manager for Engineering Applications Admin must be restarted for some changes to take effect.

Modifying Settings Using the Admin Configurator

The minimum number of settings that are required to run FlexNet Manager for Engineering Applications Admin are accessible through the Admin Configurator that appears during the Admin component installation. You can run the Admin Configurator after installation to configure the FlexNet Manager for Engineering Applications Admin application when it is not running.



Task

To use the Admin Configurator to change FlexNet Manager for Engineering Applications Admin settings:

1. 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.
2. Open a Command Prompt window (if not already open) and change to `admin_install_directory`.
3. Type `flexnet site` to launch the Admin Configurator.
4. Change the settings.
5. Click **Save** to save the settings to the file `admin_install_directory/config/site.properties`. The Admin Configurator closes and the new settings are merged into a recreated `site` directory.
6. 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.

Configuring the Connection to a New Admin Database

You must use the Admin Configurator to configure FlexNet Manager for Engineering Applications Admin's connection to a new database.



Task *To configure the connection to a new database:*

1. Make a backup copy of the file `admin_install_directory/config/site.properties`.
2. Install and configure the new database management system.
3. Note the location of the supported JDBC driver for the database, or verify that it is bundled in the FlexNet Manager for Engineering Applications Admin installation (see [Chapter 3, Installing FlexNet Manager for Engineering Applications](#)).
4. 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.
5. Open a Command Prompt window and change to `admin_install_directory`.
6. Type `flexnet site` to launch the Admin Configurator.
7. Change the settings to match the new database. For field descriptions, see the section on the Admin Configurator settings in [Chapter 3, Installing FlexNet Manager for Engineering Applications](#).
8. Click **Save** to save the settings to the file `admin_install_directory/config/site.properties`. The Admin Configurator closes and the new settings are merged into a recreated `site` directory.
9. Make sure the new database server is running.
 - If you want to create a new, empty database, load the database (see [Creating an Empty Admin Database](#)).
 - If you configured an existing, non-empty database on a remote machine, make sure that a FlexNet DB User who can connect to the database exists in the DBMS.
10. 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.
11. Open a browser to the FlexNet Manager for Engineering Applications Admin login page.

If there are problems connecting to the new database and you want to reconnect to the old database, copy the old `site.properties` file back in place, re-run the Admin Configurator, and save the old settings.

Modifying Settings Using the Reporting Configurator

The minimum number of settings that are required to run FlexNet Manager for Engineering Applications Reporting are accessible through the Reporting Configurator that appears during the Reporting installation. You can run the Reporting Configurator after installation to configure the FlexNet Manager for Engineering Applications Reporting application when it is not running.



Task *To use the Reporting Configurator to change FlexNet Manager for Engineering Applications Reporting settings:*

1. Stop FlexNet Manager for Engineering Applications Reporting.
 - To stop Reporting from the command line, navigate to the Reporting installation location, then type the command: `flexnet stop`
 - If you configured Reporting to run as a Windows service, you can stop the service from the Windows Services pane.
2. Open a Command Prompt window (if not already open) and change to *reporting_install_directory*.
3. Type the command: **flexnet site**
The Reporting Configurator window appears.
4. Modify the settings you want to change.
5. Click **Save** to save the settings to *reporting_install_directory/config/site.properties*. The Reporting Configurator closes and the new settings are merged into a recreated site directory.
6. Restart FlexNet Manager for Engineering Applications Reporting.
 - To start Reporting from the command line, navigate to the Admin installation location, then type the command: `flexnet start`
 - If you configured Reporting to run as a Windows service, you can start the service from the Windows Services pane.

Configuring the Connection to a New Reporting Database

You must use the Reporting Configurator to configure FlexNet Manager for Engineering Applications Reporting's connection to a new database.



Task *To configure the connection to a new database:*

1. Make a backup copy of *reporting_install_directory/config/site.properties*.
2. Install and configure the new database management system.
3. Note the location of the supported JDBC driver for the database, or verify that it is bundled in the FlexNet Manager for Engineering Applications Reporting installation (see [Running the Reporting Installation Wizard](#)).
4. Stop FlexNet Manager for Engineering Applications Reporting.
 - To stop Reporting from the command line, navigate to the Reporting installation location, then type the command: `flexnet stop`
 - If you configured Reporting to run as a Windows service, you can stop the service from the Windows Services pane.
5. Open a Command Prompt window (if not already open), and change to *reporting_install_directory*.
6. Type the command: **flexnet site**

The Reporting Configurator window appears.

7. Change the settings to match the new database. For field descriptions, see the Reporting Configurator settings in the section, [Running the Reporting Installation Wizard](#), in [Chapter 3, Installing FlexNet Manager for Engineering Applications](#).
8. Click **Save** to save the settings to `reporting_install_directory/config/site.properties`. The Reporting Configurator closes and the new settings are merged into a recreated site directory.
9. Make sure the new database server is running.
 - If you want to create a new, empty database, load the database (see [Creating an Empty Reporting Database](#), in [Chapter 3, Installing FlexNet Manager for Engineering Applications](#)).
 - If you configured an existing, non-empty database on a remote machine, make sure that a FlexNet Manager for Engineering Applications Reporting DB User who can connect to the database exists in the DBMS.
10. Restart FlexNet Manager for Engineering Applications Reporting.
 - To start Reporting from the command line, navigate to the Reporting installation location, then type the command: `flexnet start`
 - If you configured Reporting to run as a Windows service, you can start the service from the Windows Services pane.

If there are problems connecting to the new database and you want to reconnect to the old database, copy the old `site.properties` file back in place, re-run the Reporting Configurator, and save the old settings.

Exporting Configuration Settings

The configuration export utility backs up the FlexNet Manager for Engineering Applications Admin/Reporting configuration settings that are displayed and available in the web application. Configurations are exported to a .zip file that contains FlexNet Platform Server, user interface, and application-specific settings in separate XML files. The configuration import utility uses the .zip file to restore all configuration settings.

Before changing any configuration settings in a working FlexNet Manager for Engineering Applications Admin/Reporting installation, you may want to export configuration settings. Therefore, if there is a problem with the new settings, you have a backup of working settings to restore.

This section provides instructions for exporting configuration settings, both through the FlexNet Manager for Engineering Applications Admin interface and from the command line (FlexNet Manager for Engineering Applications Admin or Reporting).

Exporting Admin Configuration Settings from the Web UI



Task *To export FlexNet Manager for Engineering Applications Admin configuration settings through the web UI:*

1. Start 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.
- 2. Open a supported web browser and sign in to FlexNet Manager for Engineering Applications.
- 3. From the **Admin** tab, under **System Configuration**, click **Export** to open the **Export Configuration** page.
- 4. Click **Export** to export all configuration settings to a zip file.
- 5. Select to save the file to disk and click **OK** or **Save**.
- 6. Specify the location and file name for the file. By default, the configuration settings are saved to a file called `flexnet_configurations.zip`. It is recommended to save it to a safe location *outside* the `admin_install_directory` location.
- 7. Click **Save**.

Exporting Admin Configuration Settings from the Command Line



Task *To export FlexNet Manager for Engineering Applications Admin configuration settings from the command line:*

1. Open a Command Prompt window and change to the `admin_install_directory`.
2. Type the command: `flexnet config export`.

Configuration settings are saved to a zip file, `admin_install_directory/config/flexnet_configurations.zip`. You may want to copy this file to another location, but the configuration import utility will prompt for the .zip file in the same location in which the configuration export utility created it.

Exporting Reporting Configuration Settings from the Command Line



Task *To export FlexNet Manager for Engineering Applications Reporting configuration settings from the command line:*

1. Open a Command Prompt window and change to the location `reporting_install_directory`.
2. Type the command: `flexnet config export`.

Configuration settings are saved to a zip file, `reporting_install_directory/config/flexnet_configurations.zip`. You may want to copy this file to another location, but the configuration import utility will prompt for the zip file in the same location in which the configuration export utility created it.

Importing Configuration Settings

The configuration import utility uses the .zip file created by the configuration export utility to restore all configuration settings.

This section provides instructions for importing configuration settings, both through the FlexNet Manager for Engineering Applications Admin interface and from the command line (FlexNet Manager for Engineering Applications Admin or Reporting).



Note • Before importing configuration settings into a working installation, [export the current settings](#).

Importing Admin Configuration Settings from the Web UI



Task *To import configuration settings through the FlexNet Manager for Engineering Applications Admin web UI:*

1. Start 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.
2. Open a supported web browser and sign in to FlexNet Manager for Engineering Applications.
3. From the **Admin** tab, under **System Configuration**, click **Import** to open the **Import Configuration** page.
4. Browse to the .zip file that contains the configuration settings to restore.
5. Click **Import** to import all configuration settings from the specified .zip file.
6. Restart FlexNet Manager for Engineering Applications Admin to make sure that all setting changes take effect.
 - 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.

Importing Admin Configuration Settings from the Command Line



Task *To import Admin configuration settings from the command line:*

1. Verify that the .zip file from which you want to restore configuration settings is located at **admin_install_directory/config/flexnet_configurations.zip**.
2. Open a Command Prompt window, and change to **admin_install_directory**.
3. Type the command: **flexnet config import**. Configuration settings are imported from the zip file.
4. Restart FlexNet Manager for Engineering Applications Admin to make sure that all setting changes take effect.
 - 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.

Importing Reporting Configuration Settings from the Command Line



Task *To import configuration settings from the command line:*

1. Verify that the zip file from which you want to restore configuration settings is located at **reporting_install_directory/config/flexnet_configurations.zip**.
2. Change to **reporting_install_directory**.
3. Type **flexnet config import**. Configuration settings are imported from the zip file.
4. Restart FlexNet Manager for Engineering Applications Reporting.
 - To start Reporting from the command line, navigate to the Reporting installation location, then type the command: **flexnet start**
 - If you configured Reporting to run as a Windows service, you can start the service from the Windows Services pane.

Access Rights for FlexNet Manager for Engineering Applications Users

Access rights determine which FlexNet Manager for Engineering Applications Admin users are able to view and manage information pertaining to specified entities within the license management domain. This enables you to define the license server sets and the FlexNet Agents which a particular FlexNet Manager for Engineering Applications Admin user can view and manage.



Important • By default, only the Super Administrator will be part of the access set when you perform a fresh (new) installation. You, therefore, need to add license server admin sets and assign users to them to allow them to see license server information. See the following sections and topics in the FlexNet Manager for Engineering Applications Online Help Library for more information.

License Server Administrative Access

FlexNet Manager for Engineering Applications Admin enables you to specify access to license servers based on the administrative needs of various users. You group license servers into license server administrative sets, then associate those sets with FlexNet Manager for Engineering Applications Admin 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 using the Dashboard, 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 Admin user is signed in.

You can group one or many 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 Admin creates the Universal License Server Admin Set, which can be administered by users who have the Super Administrator role. When a license server is registered with FlexNet Manager for Engineering Applications Admin, 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. Start 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.
2. Open a supported web browser and sign in to FlexNet Manager for Engineering Applications.
3. From the **Admin** tab, under **Access Rights**, click **Add License Server Admin Set** to open the **Add License Server Administrative Set** page.
4. In the Name field, type a name for the set.
5. In the **License Servers** section, select the license servers that you want to add to the set and click the appropriate arrow.
6. In the **Users** section, select the users that you want to associate with the license server administrative set and click the appropriate arrow.
7. Click Save.

Agent Access Rights

Agent access rights provide individual FlexNet Manager for Engineering Applications Admin users with rights to view information and manage specified FlexNet Agents. The Agent Access Rights Management page enables you to see a list of the FlexNet Agents that are registered with FlexNet Manager for Engineering Applications and the FlexNet Manager for Engineering Applications users who have access rights for each agent.

When a FlexNet Agent starts up and is registered with FlexNet Manager for Engineering Applications Admin, 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 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 into the web application.

Editing Agent Access Rights

Users assigned a role with the **View and Manage Agent Access Rights** permission can edit and define agent access rights.



Task

To change access rights for a particular FlexNet Agent:

1. Start 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.
2. Open a supported web browser and sign in to FlexNet Manager for Engineering Applications.
3. From the **Admin** tab, under **Access Rights**, click **Agent Access** to open the **Agent Access Rights Management** page.
4. Click a FlexNet Agent *name* link to display the **Edit Agent Access Rights** page.
5. Add or remove users by selecting the user name and clicking the appropriate arrow. Users listed in the **Selected Users** box (on the right) are able to view information about the FlexNet Agent using the FlexNet Manager for Engineering Applications web interface.
6. Click Save.

Configuring FlexNet Manager for Engineering Applications for LDAP

User information can be entered manually into FlexNet Manager for Engineering Applications or can be imported from a directory service. Only enough information from the directory service is imported to allow FlexNet Manager for Engineering Applications to contact the service; authentication information for a user in a directory service domain is maintained in the directory service.

To configure LDAP support, from the **Admin** tab, under **Users**, click **Show Domains**. Details are provided in the online FlexNet Manager for Engineering Applications *Online Help Library*.

Configuring FlexNet Manager for Engineering Applications Admin for Secure Socket Layer

Secure Socket Layer (SSL) enables Web servers and Web clients to communicate over a secured connection using the HTTPS protocol where both the server and the client encrypt data before sending it. If you choose not to have a full-featured Web server handle HTTPS requests for FlexNet Manager for Engineering Applications Admin, FlexNet Manager for Engineering Applications Admin itself can act as an SSL server to Web browsers or Web service client applications. FlexNet

Manager for Engineering Applications Admin can also act as an SSL client to a remote server, such as an LDAP server. HTTPS is always enabled in FlexNet Manager for Engineering Applications Admin, but the secure server keystore and the secure client truststore may need to be configured.

Configuring Server-Side Secure Socket Layer

When a web browser or web service client connects directly to the FlexNet Manager for Engineering Applications Manager using HTTPS, an encrypted communication channel is used.

Certificates can be self-signed for testing purposes and are called Test Certificates while Trusted Certificates are issued by a recognized Certificate Authority (CA).

Keytool is a command-line utility provided in the Java Virtual Machine (JVM). To use keytool, you will need to use the JVM provided with FlexNet Manager for Engineering Applications.

The following steps are briefly described in this section:

- [Generating a Test Certificate](#)
- [Configuring a new certificate with the 'flexnet site' command](#)
- [Testing that the HTTPS connection to FlexNet Manager for Engineering Applications Admin works](#) (testing the SSL listener)
- [Obtaining a Trusted Certificate](#)
- [Configuring Client-Side Secure Socket Layer](#) (meaning the trusted certificate)

Certificate Best Practice

Provided with FlexNet Manager for Engineering Applications is a 'Dummy Cert' certificate useful for testing the SSL connection between the server (Admin or Reporting) and the agent, user's browser or other server. This 'Dummy Cert' is useful for a proof-of-concept, or otherwise testing the functionality of SSL between various components.

However, the certificate should not be trusted for secure communications.

Best practice is to use a Trusted Certificate signed by a known and trusted Certificate Authority (CA). This could be your own organization or a known third party Certificate Authority.

Please refer to the heading [Obtaining a Trusted Certificate](#) on page 118 for more information about how you can apply for and obtain a Trusted Certificate.

Generating a Test Certificate

A keystore containing a public/private key pair and an expiring, self-signed SSL Certificate for testing is shipped with the product. If the certificate in the shipped keystore has expired, or you wish to create your own test certificate, another key pair can be generated using keytool. The testing SSL Certificate allows you to test that the HTTPS listener can run, but the testing certificate is also self-signed and is not trusted by the browser. It should not be used for anything but testing SSL/TLS.

The following instructions allow you to generate a simple key pair that is valid (by default) for three months.



Task

To generate a test certificate from scratch:

1. Install or locate a Java JVM. Verify that the keytool utility is accessible at the command line.
2. Change directory to a directory outside of the application where you wish to put the new keystore file.
3. Generate a simple key pair and non-trusted certificate into a keystore file in the current directory named keystore by typing the following:

```
keytool -keystore keystore -alias tomcat -genkey -keyalg RSA
```

You are prompted to provide answers to several questions for the certificate. Press the **Enter** key to submit each of your answers. Note the password that you enter. In the next section, [Configuring a new certificate with the 'flexnet site' command](#), you will enter these passwords into the FlexNet Manager for Engineering Applications Admin Configurator.



Tip • If you answer these questions accurately for the test certificate, the certificate that you generate can be used as the basis of your trusted certificate that you obtain from a certificate authority.

Table 7-1 • Certificate Questions

Question	Description
Enter keystore password:	Password for the keystore. The default SSL keystore password for FlexNet Manager for Engineering Applications Admin is flexnet. The password is displayed in plain text.
What is your first and last name?	Fully qualified domain name of the machine on which FlexNet Manager for Engineering Applications Admin is installed.
What is the name of your organizational unit?	Name of your division or group in your company.
What is the name of your organization?	Your company name.
What is the name of your City or Locality?	City name.
What is the name of your State or Province?	State or province name.
What is the two-letter country code for this unit?	Two-letter code for your country.
Is entry correct?	Verify that the entries you provided are correct. Type yes or no.
Enter key password for <tomcat> (RETURN if same as keystore password):	Press Enter to use the same password for the Tomcat SSL key as the keystore uses. You must use the same password.

Configuring a new certificate with the 'flexnet site' command

Replacing the keystore



Task *To configure FlexNet Manager for Engineering Applications Admin with the test certificate you just generated:*

1. Stop FlexNet Manager for Engineering Applications Admin and Reporting.
2. Backup the currently used keystore file found in the release folder: <fnmea_install_dir>/release/platform/bin to a location outside of the <fnmea_install_dir> and rename it.



Tip • A good strategy is to use today's date, for example `keystore_20200128`.

3. Copy the new keystore file that you wish to use, also called keystore, into the default keystore location in the releases folder <fnmea_install_dir>/release/platform/bin.

Configuring the location of the keystore



Task *To configure the location of the keystore*

1. Stop FlexNet Manager for Engineering Applications Admin and Reporting.
2. To reconfigure FlexNet Manager for Engineering Applications Admin to use this new test keystore:
 - a. Open a Command Prompt window and change to the `admin_install_directory`.
 - b. Type the command: `flexnet site`. The Admin Configurator appears.
 - c. On the first pane of the Configurator, select the **Show Advanced Settings** check box, and then click Next twice to advance to the third pane. Edit the settings:
 - If you want the port to be something other than 8443, change the **HTTPS Port**.
 - Modify the **SSL Keystore Location** setting to match the location of the test keystore.
 - In the **SSL Keystore Password** field, enter and confirm the keystore password for the certificate. The default password for the bundled keystore is `flexnet`.
 - d. Click **Next** through to the last pane, and then click **Finish**. When the Configurator window closes, the `site` directory is re-created to reflect the new configuration settings.
3. Start FlexNet Manager for Engineering Applications Admin and Reporting.
 - a. To start Admin from the command line, navigate to the Admin installation location, then type the command:
`flexnet start`

Updating the keystore file

If you already have other key pairs/certificates added to your keystore you will want to update the keystore according to the steps below.



Tip • To list entries currently in your keystore you can use the `keytool -list` option:

```
keytool -list -keystore keystore
```



Note • The entry with alias 'tomcat' is the default certificate / key pair shipped with the application. It is also the alias used by the application when looking for a certificate.



Task

To update the keystore file

1. Stop FlexNet Manager for Engineering Applications Admin and Reporting.
2. If you need to change the location of the keystore, refer to step 2 in [Configuring the location of the keystore](#) on page 116.
3. Backup the currently used keystore file to a location outside of the <fnmea_install_dir> and rename it.



Tip • A good strategy is to use today's date, for example `keystore_20200828`.

4. Remove the existing 'tomcat' certificate and key pair entry using:

```
keytool -delete -keystore keystore -alias tomcat
```

5. Generate a new test certificate using:

```
keytool -keystore keystore -alias tomcat -genkey -keyalg RSA
```



Note • If you already have an entry for the 'tomcat' alias in the keystore, the `keytool` will return an error. you must first remove the certificate and public/private key pair.

If you configured Admin to run as a Windows service, you can start the service from the Windows Services pane.

Verifying a Certificate

The previous steps configure FlexNet Manager for Engineering Applications Admin to accept HTTPS requests. You must now verify that you can log in to FlexNet Manager for Engineering Applications Admin using HTTPS.



Task

To verify a certificate:

1. Because you generated your certificate yourself, import the trusted certificate (exported from the keystore) into a browser or Web service client implementation. In Internet Explorer, select **Tools | Internet Options | Content | Certificates**. In Firefox, select **Edit | Preferences | Advanced | Security | View Certificates | Web Sites**.
2. Browse to the URL `https://<hostname>:<port number>/flexnet`, where:
 - a. `<hostname>` is the fully qualified domain name for *the host* that you specified when you generated the keystore.
 - b. `<port number>` is the HTTPS port number you configure.
3. The login page for FlexNet Manager for Engineering Applications Admin is displayed.
4. If you have received a trusted certificate from a known certificate authority, the certificate does not have to be imported into a browser or Web service client implementation. With a browser, connect to `https://<host>:<port number>/flexnet` to verify that the certificate is trusted, where `<host>` is the fully qualified domain name of the machine on which FlexNet Manager for Engineering Applications Admin is running, and `<port number>` is the port number specified when the certificate was generated. You can now log in to FlexNet Manager for Engineering Applications Admin.

Obtaining a Trusted Certificate

For optimal security, if users are connecting to FlexNet Manager for Engineering Applications Admin from outside your organization, you should obtain a trusted certificate from a certificate authority. A list of certificate authorities can be found in [SSL Configuration HOW-TO \(http://tomcat.apache.org/tomcat-5.5-doc/ssl-howto.html\)](http://tomcat.apache.org/tomcat-5.5-doc/ssl-howto.html). Each certificate authority has its own instructions, but all require that you submit a certificate signing request (CSR) that you can generate from the test keystore using the `keytool` utility.



Task

To obtain a trusted certificate:

1. First, consult your own IT department for a trusted certificate.

Sometimes an organization will create and issue their own certificates so it's always good to check there first.

If your IT department cannot provide you with an internally created trusted certificate, proceed to the next step.
2. Generate a CSR in a file named `p.csr` for a key pair and certificate already in a keystore called `keystore` in the current directory by typing the following text:

```
keytool -certreq -keyalg RSA -alias tomcat -file tomcat.csr  
-keystore keystore
```

3. Submit this CSR as instructed by the certificate authority you chose.
4. After you receive a trusted certificate from the certificate authority, load the certificate authority's chain (or root) certificate (in a file named `root.crt`) into the keystore used to generate the CSR. If the certificate is in a format understood by the `keytool` utility, type:

```
keytool -keystore <keystore> -import -alias root -file <root.crt> -trustcacerts
```

If it is not in a format understood by the `keytool` utility, see [SSL Configuration HOW-TO](#) or documentation from the certificate authority.

5. After the root certificate has been loaded, load the new certificate (in a file named *newcrt*) into the keystore used to generate the CSR. If the certificate is in a format understood by the `keytool` utility, type:

```
keytool -keystore <keystore> -import -alias tomcat -file <newcrt> -trustcacerts
```

If it is not in a format understood by the `keytool` utility, see [SSL Configuration HOW-TO](#) or documentation from the certificate authority.

Configuring Client-Side Secure Socket Layer

FlexNet Manager for Engineering Applications Admin can also be a client on an SSL connection to a remote server, such as an LDAP server. When FlexNet Manager for Engineering Applications Admin connects to an SSL server as a client, FlexNet Manager for Engineering Applications Admin receives a certificate of authentication from the SSL server. FlexNet Manager for Engineering Applications Admin then checks the certificate against the set of certificates in its truststore to see if it is trusted. The default truststore is located in the JVM bundled with FlexNet Manager for Engineering Applications Admin at ***admin_install_directory***/*jvm/lib/security/cacerts*.

If the SSL server's certificate cannot be validated with the certificates in the default truststore, the SSL server's certificate must be added to the FlexNet Manager for Engineering Applications Admin truststore before the connection can be established.

Importing a Secure Socket Layer Server's Certificate into the Truststore

This step is needed only if the SSL server's certificate cannot be validated with certificates already in the default truststore.



Task *To import an SSL server's certificate into the FlexNet Manager for Engineering Applications Admin truststore:*

1. Obtain a certificate from the SSL server administrator. Its file name will be *servcrt* in the rest of these instructions.
2. Copy the default truststore from *admin_install_directory/jvm/lib/security/cacerts* to a location accessible from, but outside, the FlexNet Manager for Engineering Applications Admin installation. Its file name will be *<truststore>* in the rest of these instructions.
3. Install or locate the Java JVM. Verify that the `keytool` utility is accessible at the command line in the new truststore location.
4. Load the SSL server certificate into the new truststore location. If the certificate is in a format parsable by the `keytool` utility, type the following:

```
keytool -keystore <truststore> -import -alias mykey -file servcrt -trustcacerts
```

If the certificate is not in a format parsable by the `keytool` utility, consult the documentation from the SSL server administrator.

Configuring the Truststore

Locating the Flexera Dummy Certificate



Important • This section applies only if you are using the dummy certificate supplied by FlexNet Manager for Engineering Applications.

To enable the command `flexnet stop` (to stop FlexNet Manager for Engineering Applications) to work properly, you must instruct the client `jboss-cli.bat` where and how to find the Flexera self-signed “dummy” certificate from its truststore.

You will need the values for the **SSL Keystore Location** and the **SSL Truststore Location** settings, from the FlexNet Manager for Engineering Applications Configurator.

Note the following:

- This process must be run for all FlexNet Manager for Engineering Applications installations—Microsoft Windows and Linux.
- You must complete this task for both the Admin and the Reporting servers.



Task *To instruct the client `jboss-cli.bat` where to find the dummy truststore certificate:*

1. Find the values for the SSL Keystore Location and the SSL Truststore Location settings by doing the following:
 - a. Open a Command Prompt window, and navigate to the installation directory for the Admin/Reporting server.
 - b. Launch the FlexNet Manager for Engineering Applications Configurator by typing the command:
`flexnet site`
 - c. Click **Next** to move through the Configurator panels until you come to the **Secure Server Settings** panel, and note the following values:
 - **SSL Keystore Location**—This is the location of the keystore file.
 - **SSL Truststore Location**—This is the location of the truststore file.
 - d. Click **Cancel** to exit the Configurator.

2. Navigate to the file `jboss-cli.xml` (located in `<admin/reporting_install_directory>\site\server\bin`), and open the file in a text editor.

3. At the end of the XML file, find the following section:

```
<ssl>
  <alias>keystoreAlias</alias>
  <trust-store>C:\Program Files\Java\jvm1.8.0_65\jvm\lib\security\cacerts</trust-store>
  <trust-store-password>changeit</trust-store-password>
</ssl>
```

4. Ensure that the value for `<trust-store>` is the same as the value specified for the **SSL Truststore Location** setting in the Configurator. Contact the Flexera Support Team in either of the following cases:
 - The file `jboss-cli.xml` does not contain a `<ssl>` section.

- The <trust-store> value differs from the value specified in the **SSL Truststore Location** setting.
5. Close the `jboss-cli.xml` file. You do not need to make any changes to the file.
 6. Extract the Flexera certificate from the keystore file.
 - a. Navigate to the location where the keystore file is located. (This was the value from the **SSL Keystore Location** setting.)
 - b. Extract the certificate by typing the following command (using the password *flexnet*):

```
keytool -export -alias tomcat -file fnmea.cer -keystore keystore
```

After you run this command, the file `fnmea.cer` is the dummy certificate.
 - c. Copy the file `fnmea.cer` into the folder where the truststore is located, using the following command:

```
copy fnmea.cer <truststore location>
```
 - d. Import the file `fnmea.cer` into the truststore using the following command (using the typical Java JVM installation password *changeit*):

```
keytool -import -trustcacerts -file fnmea.cer -alias tomcat -keystore cacerts
```

This step is necessary if:

- You want to point to a central repository of keystores or truststores maintained by your organization
- You load a new certificate into the default truststore and need to configure its new location



Task

To configure FlexNet Manager for Engineering Applications Admin with a certificate for the SSL server to which you want Admin to connect:

1. 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.
2. To reconfigure FlexNet Manager for Engineering Applications Admin and then re-create the `site` directory:
 - a. Open a Command Prompt window and change to the `admin_install_directory`.
 - b. Type the command: `flexnet site`. The Admin Configurator appears.
 - c. On the first pane of the Configurator, select the **Show Advanced Settings** check box and then click Next twice to advance to the third pane. Edit the settings:
 - Modify the SSL Truststore Location setting to match the location where the truststore containing the SSL server's certificate is located.
 - In the SSL Truststore Password field, enter and confirm the truststore password. By default, the password from the FlexNet Manager for Engineering Applications Admin JVM is *changeit*.
 - d. Click **Next** through to the last pane, and then click **Finish**. When the Configurator window closes, the `site` directory is re-created.
3. After the `site` directory is re-created, 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.

Verifying the Trusted Connection

Now that you have reconfigured FlexNet Manager for Engineering Applications Admin to connect to the SSL server, verify that you can connect to the SSL server using FlexNet Manager for Engineering Applications Admin.

Configuring FlexNet Manger of Engineering Applications Admin and Reporting For SSL Communication

The below steps are on setting up SSL communication between admin and reporting when they are running on different machine ,

- Generate Certificate on Admin server
- Generate Certificate on Reporting server
- Extract Reporting Certificate on Reporting Server
- Extract Admin Certificate on Admin server
- Import Reporting Certificate to Admin Server
- Import Admin Certificate to Reporting Server

Generate Certificate on Admin server



Task

Generate Certificate on Admin server by following the below steps

1. Install or locate a Java JVM. Verify that the `keytool` utility is accessible at the command line.
2. Change directory to a directory outside of the application where you wish to put the new keystore file.
3. Generate a simple key pair and non-trusted certificate into a keystore file in the current directory named `admin` by typing the following:

```
keytool -keystore admin -alias tomcat -genkey -keyalg RSA
```

You are prompted to provide answers to several questions for the certificate. Press the **Enter** key to submit each of your answers.



Tip • If you answer these questions accurately for the test certificate, the certificate that you generate can be used as the basis of your trusted certificate that you obtain from a certificate authority.

Questions	Description
Enter keystore password:	Password for the keystore. The default SSL keystore password for FlexNet Manager for Engineering Applications Admin is flexnet. The password is displayed in plain text.
What is your first and last name?	Fully qualified domain name of the machine on which FlexNet Manager for Engineering Applications Admin is installed.
What is the name of your organizational unit?	Name of your division or group in your company.
What is the name of your organization?	Your company name.
What is the name of your City or Locality?	City name.
What is the name of your State or Province?	State or province name.
What is the two-letter country code for this unit?	Two-letter code for your country.
Is entry correct?	Verify that the entries you provided are correct. Type yes or no.
Enter key password for <tomcat> (RETURN if same as keystore password):	Press Enter to use the same password for the Tomcat SSL key as the keystore uses. You must use the same password.

Generate Certificate on Reporting server

Below is the process to generate certificate on reporting server



Task

Generate Certificate on Reporting server following the below steps

1. Install or locate a Java JVM. Verify that the keytool utility is accessible at the command line.
2. Change directory to a directory outside of the application where you wish to put the new keystore file.
3. Generate a simple key pair and non-trusted certificate into a keystore file in the current directory named reporting by typing the following:

```
keytool -keystore reporting -alias tomcat -genkey -keyalg RSA
```

You are prompted to provide answers to several questions for the certificate. Press the **Enter** key to submit each of your answers.



Tip • If you answer these questions accurately for the test certificate, the certificate that you generate can be used as the basis of your trusted certificate that you obtain from a certificate authority.

Question	Description
Enter keystore password:	Password for the keystore. The default SSL keystore password for FlexNet Manager for Engineering Applications Admin is flexnet. The password is displayed in plain text.
What is your first and last name?	Fully qualified domain name of the machine on which FlexNet Manager for Engineering Applications Reporting is installed.
What is the name of your organizational unit?	Name of your division or group in your company.
What is the name of your organization?	Your company name.
What is the name of your City or Locality?	City name.
What is the name of your State or Province?	State or province name.
What is the two-letter country code for this unit?	Two-letter code for your country.
Is entry correct?	Verify that the entries you provided are correct. Type yes or no.
Enter key password for <tomcat> (RETURN if same as keystore password):	Press Enter to use the same password for the Tomcat SSL key as the keystore uses. You must use the same password.

Extract Reporting Certificate on Reporting Server



Task *Extract Reporting certificate*

1. Install or locate a Java JVM. Verify that the keytool utility is accessible at the command line.
2. Use the below Command to extract the reporting certificate on Reporting Server Machine.

```
keytool -export -alias tomcat -file fnmea_reporting.cer -keystore reporting
```

Extract Admin Certificate on Admin server



Task *Extract Admin Certificate*

1. Install or locate a Java JVM. Verify that the keytool utility is accessible at the command line.
2. Use the below Command to extract the admin certificate on Admin Server Machine

```
keytool -export -alias tomcat -file fnmea_admin.cer -keystore admin
```

Import Reporting Certificate to Admin Server



Task *Importing Reporting certificate*

1. Install or locate a Java JVM. Verify that the keytool utility is accessible at the command line.
2. Use the below command to add Reporting Certificate which was extracted in [Extract Reporting Certificate on Reporting Server](#) into Admin KeyStore on Admin server Machine,

```
keytool -import -trustcacerts -keystore admin -file fnmea_reporting.cer
```

Import Admin Certificate to Reporting Server



Task *Import Admin Certificate*

1. Install or locate a Java JVM. Verify that the keytool utility is accessible at the command line.
2. Use the below command to add Admin Certificate which was extracted in [Extract Admin Certificate on Admin server](#) into Reporting KeyStore on Reporting Server Machine,

```
keytool -import -trustcacerts -keystore reporting -file fnmea_admin.cer
```

Setting the Java Heap Size

By default, FlexNet Manager for Engineering Applications [Admin](#) runs with an initial Java heap size of 8 GB and a maximum Java heap size of 16 GB. FlexNet Manager for Engineering Applications [Reporting](#) runs with an initial Java heap size of 16 GB and a maximum Java heap size of 32 GB.



Important • To ensure that the Admin and Reporting servers start successfully, verify that the servers to which you are installing the components have a minimum of 8 GB and 16 GB of RAM, respectively.

If you have system-performance issues, you may need to increase the Java heap size. To change the Java heap size, launch the Configurator. See [Running the Admin Installation Wizard](#) and [Running the Reporting Installation Wizard](#) for more information.



Note • The maximum Java heap size depends on the machines's total RAM and operating-system limitations.

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. You can have one email template path for each alert type. If you want to change this email template path, see [To modify an alert email template path for each alert:](#)

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 emails that use this template.



Important • You should be familiar with XSLT before attempting to edit email templates.



Task

To customize an alert email:

1. Open a Command Prompt window and change to the `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: from the **Alerts** tab, under **Alerts**, click **Configure Alerts**.
 11. Click Configure to display an alert's **Configure Alert Definition** page.
 12. To change the email template, specify the template name in the **Email Template** field.
 13. Click Save.

**Task****To modify an alert email template path for each alert:**

1. Go to the Alert Subscription page, and subscribe to the alert type and set up 1 to 3 email addresses.
2. In the FlexNet Manager for Engineering Applications Admin interface (as system administrator or someone with the correct permissions), go to **Alerts** | **Configure Alerts** | **Configure** to edit the Configure Alerts Definition page for the alert you are interested in.
3. Modify the information in the email template field.

Specifying Locales

Locale settings are a combination of language and date/time display formats as supported by the Java 2 platform. FlexNet Manager for Engineering Applications ships with the `en_US` locale, which enables FlexNet Manager for Engineering Applications to display dates and times as is customary in the United States.

If you add additional locales, user accounts can be associated with a locale in order to customize the display of dates and times.

For example, if you add the Great Britain locale (`en_GB`), the date November 20, 2010 appears as:

- 11/20/2010 in the `en_US` locale
- 20/11/2010 in the `en_GB` locale

See the section [Adding Locales](#) for more information.

Associating User Accounts with Locales



Task *To associate a user account with a locale:*

1. Log in to FlexNet Manager for Engineering Applications Admin.
2. From the **Admin** tab, under Users, click **Show Users**.
3. Click the name of the user account you want to edit. This displays the **Edit User** page.
4. Select a value from the **Locale** menu.



Note • The *Locale* setting is displayed only if you have more than one locale. See the section [Adding Locales](#) for more information.

5. Click **Save**.

The next time this user logs in to FlexNet Manager for Engineering Applications, dates and times will be displayed using the selected locale.

Adding Locales



Task *To add locales:*

1. Ensure that your locale is supported by the Java 2 platform (See <http://java.sun.com/javase/reference/index.jsp>.)
2. Browse to following folder in the FlexNet Manager for Engineering Applications Admin installation directory:
<admin_install_directory>\site\conf\localization.
3. In the folder, copy the file en_US. (This is an empty file.)
4. Rename the copy of en_US to the locale code of your selected language. For example, to specify Canadian French, rename the copy of en_US to fr_CA.
5. Repeat [Step 3](#) and [Step 4](#) for all of the locales that you want to add.

Customizing the Date and Time Format

Date and time formats can be set for each installation of FlexNet Manager for Engineering Applications, and the formats chosen affect how *all* users view date and time information. FlexNet Manager for Engineering Applications provides four formats for date and time display, configured in the `FLEXnetManagerText.properties` file.

Modifying the default format is considered a customization and requires running the `f1exnet site make` command.

**Task****To customize the date and time formats:**

1. Open the file `admin_install_directory/site/jetty/webapps/flexnet/WEB-INF/classes/FLEXnetManagerText.properties` in a text editor.
2. Locate the following section:

```
#
# date time style values allowed : short,medium,long,full
#
common.format.dateStyle=short
common.format.timeStyle=short
```

The values specified in this section (bold font in the previous snippet) for the properties `dateStyle` and `timeStyle` determine how dates and times are displayed.

3. Depending on your preference, replace the term `short` in this section with `medium`, `long`, or `full`; or leave as it is. If you make no changes to this file, you need not follow the steps below.

The following table describes the format that each value maps to:

Value	Date Format	Time Format
short	<code>mm:dd:yy</code> for example, 08:14:20 for August 14 2020	<code>hh:mm am/pm</code> for example, 3:30 pm
medium	<code>Mth. dd, yyyy</code> for example, Aug 14, 2020	
long	<code>Month dd, yyyy</code> for example, August 14, 2020	<code>hh:mm:ss am/pm</code> for example, 3:30:32 pm
full	<code>Day_of_week, Month dd, yyyy AD</code> for example, Friday, August 14, 2020 AD	<code>hh:mm:ss am/pm timezone</code> for example, 3:30:32 pm PST

All dates are in the order Month, Date, Year. All times are displayed using a 12-hour clock.

4. Save the file to the following location:

```
admin_install_directory/custom/jetty/webapps/flexnet/WEB-INF/classes/
FLEXnetManagerText.properties
```

5. In a Command Prompt window, change to the directory `admin_install_directory`, and type the command:

`flexnet site make`

FlexNet Log Files

FlexNet Manager for Engineering Applications logs are useful sources of debugging information. Both FlexNet Manager for Engineering Applications Admin and FlexNet Manager for Engineering Applications Reporting have individual FlexNet logs that capture system information for the respective servers. Active log files are rotated each day at midnight, by default.

FlexNet Manager for Engineering Applications uses the Apache log4j logging services for all but the request logs; for a detailed description of how to customize the log4j log files, beyond what is found in this chapter, see the [log4j documentation](#).

When FlexNet Manager for Engineering Applications runs, messages are written to a set of four log files:

- FlexNet Manager for Engineering Applications application logs
- Third-party component logs
- JBoss logs
- FlexNet database creation and upgrade logs

FlexNet Manager for Engineering Applications Log File

Messages from FlexNet Manager for Engineering Applications, including some error messages caused by problems in other components, are written to the FlexNet Manager for Engineering Applications application log files. These are the most useful log files and are the first places to look if there are problems starting or running FlexNet Manager for Engineering Applications.

The maximum level of detail for the messages logged in `f1exnet.log` can be specified in two ways:

- Through the FlexNet Manager for Engineering Applications Configurator for messages written before FlexNet Manager for Engineering Applications starts.
- Through the Web application in the FlexNet Application Logging Level field in **Administer Manager | System Configuration | FlexNet Platform Server** for messages written by FlexNet Manager for Engineering Applications after it starts.

Table 7-2 • FlexNet Manager for Engineering Applications Log File Messages

Log Message Detail	Description
Log location	<i>admin_install_directory</i> /logs/flexnet.log <i>reporting_install_directory</i> /logs/flexnet.log
Default logging threshold	INFO
Log type	log4j logging services. The name of the active file does not contain a date component; names of inactive files contain a date component. For example, <code>f1exnet.log.2020_03_31</code> .

Third-Party Component Log File

Messages from the third-party libraries are written to the third-party log files.

Table 7-3 • Log File Messages

Log File Message	Description
Log location	<i>admin_install_directory/logs/3rdparty.log</i> <i>reporting_install_directory/logs/3rdparty.log</i>
Default logging threshold	WARN
Log type	log4j logging services. The name of the active file does not contain a date component; names of inactive files contain a date component. For example, <i>3rdparty.log.2020_03_31</i> .

JBoss Log File

Messages from the Web container are logged in the JBoss log files.

Table 7-4 • Log File Messages

Log File Message	Description
Log location	<i>admin_install_directory/logs/flexnet.log</i> <i>reporting_install_directory/logs/flexnet.log</i>
Default logging threshold	INFO
Log type	log4j logging services. The name of the active file does not contain a date component; names of inactive files contain a date component. For example, <i>server.log.2020_03_31</i> .

Database Creation and Upgrade Log

Commands executed during the creation or upgrade of the FlexNet and FlexNet Reporting databases are logged in the database upgrade log.

Table 7-5 • Log File Messages

Log File Message	Description
Log location	<i>admin_install_directory/logs/upgradedb.log</i> <i>reporting_install_directory/logs/upgradedb.log</i>

Managing flexnet Log Files

The following sections discuss optimal management of FlexNet log files.

Logging Levels

Each message generated by FlexNet Manager for Engineering Applications is designated with a level of severity. [Table 7-6](#) describes logging levels from most to least severe. A log4j log file is configured with a threshold severity level. Messages of levels of severity equal to or more severe than the threshold level are written to the log file.

Table 7-6 • FlexNet Manager for Engineering Applications Logging Levels

Logging Level	Message Description
Error	Message written when a problem is detected and not handled by the application, but application can run. This level is recommended for production systems.
Warn	Message written when a problem is detected and handled by the application.
Info	Informational messages. For example, the application started or a user logged in.
Debug	Messages appropriate to development-oriented debugging.

Log Rotation and File Names

Many FlexNet log4j log files use the `DailyRollingFileAppender` class to automatically roll the log files each day at midnight. When a log file is rolled, a new file is started whose name does not contain a date component. The older log file is renamed to append a date component of the format specified by the appender's `DatePattern` value.

The primary log file is `flexnet.log`, which is backed up whenever it reaches 10 megabytes in size, or if the file date is changed.

Log Management

There is no automated method of deleting old log4j log files. Therefore, you should manually move or delete old log files at regular intervals.

Using FlexNet Manager for Engineering Applications to Report on IBM LUM Usage

If you will be using FlexNet Manager for Engineering Applications to report on usage from IBM LUM license servers, you must install the `i4blt` executable, available from IBM. Contact IBM for information regarding download, platform requirements, and installation instructions.



Important • Installation of the *i4btl* executable may not be supported on all of the platforms supported by FlexNet Manager for Engineering Applications.

Using FlexNet Manager for Engineering Applications to Report on DSLS Usage

If you will be using FlexNet Manager for Engineering Applications to report on usage from Dassault Systems License Server (DSLS) license servers, you must do the following to set up the DSLS third-party license server.



Task

To set up the DSLS license server to report DSLS usage to FlexNet Manager for Engineering Applications:

1. Install FlexNet Manager for Engineering Applications 2020 R1 and FlexNet Agent 5.2.2 or later. (Refer to the version-specific *FlexNet Agent Installation Instructions* for information about installing the FlexNet Agent.)
2. Enable license-usage tracing for the licenses whose usage want to report on. To do this, select the licenses using the License Usage Tracing dialog box, which is available as part of the DSLS License Administration Tool. For more information, refer to the DS License Server Installation and Configuration Guide, available from your DSLS vendor.
3. On the DSLS license server machine, prepare the DSLicSrv command calls:

- a. Locate the DSLicSrv command. (This is typically in the DSLS server directory.) The full path is required.
- b. Verify whether the DSLicSrv command can retrieve current DSLS license usage successfully, by doing the following:

- i. Create a file named `glu.txt` in the following directory:
`<flexnet_agent_installation_dir>\data\<license_server_name>`

The file `glu.txt` should contain the following:

```
connect <server> <port>
<password if required>
glu
```

- ii. Run the following command in the FlexNet Agent installation directory to display usage data.

If you are running this command on a Microsoft Windows system, any path that includes spaces must be enclosed in double quotation marks.

```
<license_server_dir>\DSLicSrv -admin -i data\<license_server_name>\glu.txt
```

For example:

```
"c:\Program Files\dslsLicenseServer1\DSLicSrv" -admin -i "data\dslsLic Srv1\glu.txt"
```

- iii. Verify the output that is displayed in the console. It may look similar to the following:

```
admin>glu
Dassault Systemes V4 (xxx-xxx-xxxx-xxxxxxxxxxxx)
    VPMS410                maxReleaseNumber: 0  type: ConcurrentUser  count: 1  inuse: 0  customerId: xxxxxx
Dassault Systemes V5 (xxx-xxx-xxxx-xxxxxxxxxxxx)
    HD2                    maxReleaseNumber: 0  type: ConcurrentUser  count: 1  inuse: 0  customerId: xxxxxx
```

- c. Verify whether the DSLicSrv command can retrieve the report log (logged server messages) successfully.

- i. Create a file named sl.txt in the following directory:

```
<admin_install_directory>\data\<license_server_name>
```

The file sl.txt should contain the following:

```
connect <server> <port>
<password if required>
gli
sl
```

- ii. Run the following command in the FlexNet Agent installation directory to generate usage data.

If you are running this command on a Microsoft Windows system, any path that includes spaces must be enclosed in double quotation marks.

```
<license_server_dir>\DSLicSrv -admin -i data\<license_server_name>\sl.txt"
```

For example:

```
"c:\Program Files\dsLsLicenseServer1\DSLicSrv" -admin -i "data\dsLsLic Srv1\sl.txt"
```

- iii. Verify the output that is displayed in the console. It may look similar to the following:

```
admin>gli
Status      Editor          Model          Feature          Quantity  StartDate          EndDate ...
active      Dassault Systemes V4 ConcurrentUser VPMS410          1  2013-09-30.00:01.UTC  2013-12-...
superseded Dassault Systemes V5 ConcurrentUser HD2          1  2013-09-30.00:01.UTC  2013-12-...
```

PostgreSQL ODBC Driver for Cognos

In order for Cognos to connect to PostgreSQL as a data source, the 32-bit PostgreSQL ODBC driver must be installed on the Cognos system. The driver can be downloaded from

<https://odbc.postgresql.org/>

Once the driver has been installed, restart the IBM Cognos Service.

Connection Limit

max_connections determines the maximum number of concurrent connections to the database server. The default is typically 100 connections and the connection limit needs to be increased for PostgreSQL.

- Open the postgresql.conf file, and change the configured value for max_connections to at least 1000.
- On Windows, postgresql.conf file can be found under <postgressinstalllocation>\<pgsqlversion>\data\postgresql.conf
- On Linux machine, postgresql.conf file can be found under /var/lib/pgsql/<pgsqlversion>/data/postgresql.conf

Restart the postgres service

Configuring Database Servers for FlexNet Manager for Engineering Applications

This appendix explains how to configure the following database servers for use with FlexNet Manager for Engineering Applications 2020 R1:

- [Configuring Oracle](#)
- [Configuring Microsoft SQL Server](#)
- [Configuring PostgreSQL Server](#)

For information about supported database versions and disk space requirements, see the *FlexNet Manager for Engineering Applications 2020 R1 Release Notes*.

Configuring Oracle

This section assumes that you have already obtained the installer for the supported Oracle database version you want to use.



Note • Running the Oracle database in the ARCHIVELOG mode may result in additional hard-drive space requirements. See the Oracle documentation for more information about ARCHIVELOG mode.

Installing the Oracle Database Server

Follow the Oracle product documentation to install the Oracle DBMS and create a database instance. This manual states only the assumptions and requirements of the Oracle database server installation that allow it to work correctly with FlexNet Manager for Engineering Applications Admin and Reporting, and with Flexera Analytics.

Character Settings

FlexNet Manager for Engineering Applications Admin/Reporting/Flexera Analytics has been tested with a database with the following character settings:

- **Database character set:** AL32UTF8

- **National character set:** AL16UTF16

OPEN_CURSORS Value

The Oracle database initialization parameter value for OPEN_CURSORS should be set to at least 1000. Both of the tablespaces for FlexNet Manager for Engineering Applications (Admin and Reporting) may need, in total, up to 1,000 open cursors. If the Oracle database is being used by other applications, set this value accordingly.

PROCESSES Value

The Oracle database initialization parameter value for PROCESSES should be set to at least 1000.

Administrative User Credentials

Make note of the login name and password of an Oracle administrative user (for example, SYSTEM) because you will need to connect to Oracle as that user to create the database and corresponding database user for FlexNet Manager for Engineering Applications Admin and Reporting, and for FlexNet Report Designer.

Creating a Tablespace for the FlexNet Manager for Engineering Applications Admin Database

Before you run the FlexNet Manager for Engineering Applications Admin installer, you must create a tablespace where the Admin schema will be created. It is recommended that you allocate at least 150 MB for this tablespace. You are prompted for this tablespace name when you install FlexNet Manager for Engineering Applications Admin.

For example, in SQL*Plus, the command would be:

```
create bigfile tablespace FLEXNET datafile 'path/flexnet.dbf' size 150M
autoextend on;
```

Creating a Tablespace for the FlexNet Manager for Engineering Applications Reporting Database

Before you run the FlexNet Manager for Engineering Applications Reporting installer, you must create a tablespace where the Reporting schema will be created. It is recommended that you allocate at least 300 MB for this tablespace. You are prompted for this tablespace name when you install FlexNet Manager for Engineering Applications Reporting.

For example, in SQL*Plus, the command would be:

```
create bigfile tablespace FLEXNETREPORTING datafile 'path/flexnetreporting.dbf' size 300M
autoextend on;
```

Installing and Configuring the Oracle Client

To install the FlexNet Manager for Engineering Applications Reporting Server and the Oracle database (containing the FlexNet Manager for Engineering Applications Reporting database) on different machines on your network, you need to install the Oracle Instant Client on the machine that will host the FlexNet Manager for Engineering Applications Reporting Server. This enables Reporting to connect to the Oracle database.

The version of the Oracle Client should be same as that of the Oracle Database version. For information about the Oracle Client, visit <http://www.oracle.com>.



Note • Note the following:

- The Oracle client version must be the same as the Oracle database version.
- Only the 32-bit Oracle client is supported on 64-bit operating systems.



Task **To configure Oracle to work with FlexNet Manager for Engineering Applications Reporting when installed on different machines:**

1. Install the Oracle Client on the machine on which you will install the FlexNet Manager for Engineering Applications Reporting.
 - a. At the prompt that asks “What type of installation do you want?”, select Administrator.
 - b. Complete the installation.
2. Use the Oracle Net Configuration Assistant to configure Local Net Service Name configuration. This local service should point to the service where the flexnetadmin/flexnetreporting database is running.
3. Select Add and provide details to set up Net Service Name.

Configuring Microsoft SQL Server

This section assumes that you have already obtained a SQL Server installer from Microsoft.

Installing the SQL Server Database Server

Follow Microsoft’s instructions to install SQL Server. (This guide states only the assumptions and requirements of the SQL Server database server installation that allow it to work correctly with FlexNet Manager for Engineering Applications Admin and Reporting.)

In the database installer, accept the default settings, with the following exceptions:

- Select mixed authentication (Windows and SQL Server) instead of Windows-only authentication.
- Enable the TCP/IP network protocol. This is required because network protocols are disabled by default during installation.

Configuring PostgreSQL Server

This section assumes that you have already obtained the installer for the supported PostgreSQL database version you want to use.

Installing the PostgreSQL Server

Follow PostgreSQL Global Development Group instructions to install PostgreSQL Server. (This guide states only the assumptions and requirements of the PostgreSQL Server database installation that allow it to work correctly with FlexNet Manager for Engineering Applications Admin and Reporting.)

Things to be checked before start working on PostgreSQL:

- Need to set PGHOST to the name of database server machine if it is a remote machine.
- Need to set PGPORT if using a non-default port to connect to your PostgreSQL instance.

Uninstalling FlexNet Manager for Engineering Applications Components

Follow the instructions in this chapter to uninstall FlexNet Manager for Engineering Applications Admin, FlexNet Manager for Engineering Applications Reporting, and/or Flexera Analytics.



Important • FlexNet Manager for Engineering Applications Foundation Edition does not include Flexera Analytics.

Uninstalling the Admin Component

Uninstall the Admin module using the platform-specific uninstaller and the process described in this section. Deleting the installation directory alone will not properly uninstall the application.



Task

To uninstall FlexNet Manager for Engineering Applications Admin:

1. Export your Admin configuration. See the section [Exporting Configuration Settings](#) in [Chapter 7, Configuring FlexNet Manager for Engineering Applications](#).
2. Save any custom files to another location.
3. Stop FlexNet Manager for Engineering Applications Admin.
 - If the Admin component was installed to run as a Windows service, the uninstaller also stops and uninstalls the Windows service.
 - If you set up the Admin component to start on boot on UNIX, delete the service script from where you installed it.
4. Close all files and folders in the FlexNet Manager for Engineering Applications installation directory.
5. Run the uninstaller.
 - **UNIX platforms**—Run the product's uninstaller from the FlexNet Manager for Engineering Applications Admin installation directory using the command `f1exnet_uninstall`. The UNIX uninstaller is not interactive.
 - **Windows platforms**—Uninstall by doing one of the following. The Windows uninstaller is interactive.

- Uninstall the Admin component using the **Add or Remove Programs** panel, available from the Control Panel.
- At the command line, run the application's uninstaller from the FlexNet Manager for Engineering Applications Admin installation directory using the command:

```
flexnet uninstall
```

6. The uninstaller removes all files in the installation directory (*admin_install_directory*) except those in the config, custom, data, and logs directories. If you are upgrading to a later version of FlexNet Manager for Engineering Applications, **you need to retain the config, data, and logs directories.**
 - **Upgrading to a later version:** If you are upgrading to a later version of FlexNet Manager for Engineering Applications, delete only the custom directory.



Important • Do not delete the config, data, or logs directories because these directories are required for the upgrade process to be successful.

- **Not upgrading:** If you are simply uninstalling FlexNet Manager for Engineering Applications Admin and are not planning on upgrading to a later version, you can delete the entire FlexNet Manager for Engineering Applications Admin directory if you do not want to retain any of the files contained in the config, custom, data, or logs directories.

Uninstalling the Reporting Component

Uninstall the Reporting module using the platform-specific uninstaller and the process described in this section. Deleting the installation directory alone will not properly uninstall the application.



Task

To uninstall FlexNet Manager for Engineering Applications Reporting:

1. Export your Reporting configuration. See the section [Exporting Configuration Settings in Chapter 7, Configuring FlexNet Manager for Engineering Applications](#).
2. Save any custom files to another location.
3. Stop FlexNet Manager for Engineering Applications Reporting.
 - If the Reporting component was installed to run as a Windows service, the uninstaller also stops and uninstalls the Windows service.
 - If you set up the Reporting component to start on boot on UNIX, delete the service script from where you installed it.
4. Close all files and folders in the FlexNet Manager for Engineering Applications Reporting installation directory.
5. Run the uninstaller.
 - **UNIX platforms**—Run the product's uninstaller in the FlexNet Manager for Engineering Applications Reporting installation directory using the command `flexnet uninstall`. The UNIX uninstaller is not interactive.
 - **Windows platforms**—Uninstall by doing one of the following. The Windows uninstaller is interactive.

- Uninstall FlexNet Manager for Engineering Applications Reporting using the Add or Remove Programs panel, available from the Control Panel.
 - Run the product's uninstaller in the FlexNet Manager for Engineering Applications Reporting installation directory using the command `flexnet uninstall`.
6. The uninstaller removes all files from the FlexNet Manager for Engineering Applications Reporting installation directory, except the files contained in the following directories: `config`, `custom`, `data`, and `logs`. If you are upgrading to a later version of FlexNet Manager for Engineering Applications, **you need to retain the config, data, and logs directories.**
- **Upgrading to a later version:** If you are upgrading to a later version, delete only the `custom` directory.



Important • Do not delete the `config`, `data`, or `logs` directories because these directories are required for the upgrade process to be successful.

- **Not Upgrading:** If you are simply uninstalling FlexNet Manager for Engineering Applications Reporting and are not planning on upgrading to a later version, you can delete the entire FlexNet Manager for Engineering Applications Reporting directory if you do not want to retain any of the files contained in the `config`, `custom`, `data`, or `logs` directories.

Uninstalling Flexera Analytics

Uninstall Flexera Analytics using the uninstaller and the process described in this section. Deleting the installation directory alone will not properly uninstall the application.

Uninstalling Flexera Analytics from Microsoft Windows



Task To uninstall Flexera Analytics from Microsoft Windows:

Run the uninstaller by doing one of the following:

1. Go to the **Add or Remove Programs** panel, available from the Control Panel.
2. Right-click on **IBM Cognos Analytics**.
3. Select **Uninstall/Change**.
4. Follow the steps in the uninstall wizard.

Uninstalling Flexera Analytics from Linux



Task To uninstall Flexera Analytics from Linux:

1. From a terminal window, go to the installation directory for Flexera Analytics.
2. Execute `Uninstall_IBM_Cognos_Analytics`.

3. In the wizard that appears, select **Uninstall Product**, then click **Next**.
4. Follow the steps in the uninstall wizard.

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