

# **Flexera Service Gateway 2**

## Installation and Administration Guide

# Legal Information

**Book Name:** Flexera Service Gateway 2 Installation and Administration Guide  
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# Flexera Service Gateway 2 Installation and Administration Guide

Flexera Service Gateway 2 is a component that enables AdminStudio, App Portal, Workflow Manager, and FlexNet Manager Suite / FlexNet Manager Platform to communicate.

Information about installing and using Flexera Service Gateway 2 is presented in the following sections.

**Table 1-1 •** Flexera Service Gateway 2 Installation and Administration Guide

Topic	Content
<b>System Requirements</b>	Lists the system requirements for installing and using Flexera Service Gateway 2.
<b>What's New in Flexera Service Gateway 2</b>	Lists the new features of Flexera Service Gateway 2.
<b>Installing Flexera Service Gateway 2</b>	Explains how to run the Flexera Service Gateway 2 installer.
<b>Configuring and Using Flexera Service Gateway 2</b>	Explains how to configure and use Flexera Service Gateway 2.

# System Requirements

The following table lists the recommended software and hardware configuration for a machine running Flexera Service Gateway 2:

**Table 1-2 • Flexera Service Gateway 2 System Requirements**

Requirement	Description
<b>Operating System</b>	Windows 2008 R2 Server, Windows 2012 Server, or Windows 2016 Server
<b>Processor</b>	2 GHz Multicore processor
<b>RAM</b>	8 GB
<b>Microsoft .NET Framework</b>	4.6.1
<b>Disk Space</b>	250 MB
<b>Ports to Open in Firewall</b>	Clients access Flexera Service Gateway 2 on ports 9443 and 8280 by default.
<b>User Account Permissions</b>	User running the Flexera Service Gateway 2 installer needs local Admin permissions.
<b>Protocol</b>	Flexera Service Gateway 2 uses a Windows Communication Foundation (WCF) service, and by default it runs on https protocol.

# What's New in Flexera Service Gateway 2

Flexera Service Gateway 2 includes the following new features and enhancements.

- [Security Enhancements](#)
- [New User Interface for Host Service](#)
- [New FsgService Task](#)
- [Issues Logged in Windows Event Viewer](#)
- [Installer Installs .NET Framework 4.6.1](#)
- [Import Tool Can Import Registered Service Data from Same System](#)

## Security Enhancements

Flexera Service Gateway 2 implements TLS (Transport Security Layer) to address a known issue in OpenSSL. For more details, see [CVE-2014-3566](#) for more details.

## New User Interface for Host Service

Flexera Service Gateway 2 includes a new user interface for the Host Service, which includes **View Services**, **Refresh Services**, and **FSG EndPoints** buttons which you can use to view and refresh the service and to view the FSG Service endpoints.

## New FsgService Task

A new task, FsgService, is created in Windows Task Scheduler with the **At system startup** trigger option.

- The task will be triggered automatically when a system restarts.
- If the service needs to be stopped or started, it can be done using Windows Task Manager.

## Issues Logged in Windows Event Viewer

Any issue related to creating or running a task will be logged in the Windows Event Viewer.

## Installer Installs .NET Framework 4.6.1

If the target system does not have the required .NET Framework 4.6.1 installed, the Flexera Service Gateway 2 installer installs it.

## Import Tool Can Import Registered Service Data from Same System

The import tool has the capability to import registered service data from the same system with a different port. For more information, see [Importing Data From Existing Flexera Service Gateway Installation](#)

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<http://www.flexerasoftware.com>



# 2

## Installing Flexera Service Gateway 2

This section includes instructions for running the Flexera Service Gateway 2 installer.

If you are installing Flexera Service Gateway 2 on the same server as a previous installation of Flexera Service Gateway, you need to first change the communications port of the existing Flexera Service Gateway installation from 9443 to the next available port, such as 9445, before installing Flexera Service Gateway 2.

If you are not installing Flexera Service Gateway 2 on the same machine as a previous installation of Flexera Service Gateway, you can ignore that section and just perform the steps in [Running the Flexera Service Gateway 2 Installer](#).

- [Changing the Port Number of an Existing Installation of Flexera Service Gateway](#)
- [Running the Flexera Service Gateway 2 Installer](#)

# Changing the Port Number of an Existing Installation of Flexera Service Gateway

If you want to install Flexera Service Gateway 2 on the same server where a previous version of Flexera Service Gateway is already installed, you need to change the communications port of the existing Flexera Service Gateway installation from 9443 to the next available port, such as 9445 or 9446. Flexera Service Gateway 2 will use port 9443.



**Important** • If you are installing Flexera Service Gateway 2 on the same server where a previous version of Flexera Service Gateway is already installed, perform the steps in this section before installing Flexera Service Gateway 2. If you are not installing Flexera Service Gateway 2 on the same server as a previous version of Flexera Service Gateway, you can ignore this section and just perform the steps in [Running the Flexera Service Gateway 2 Installer](#).



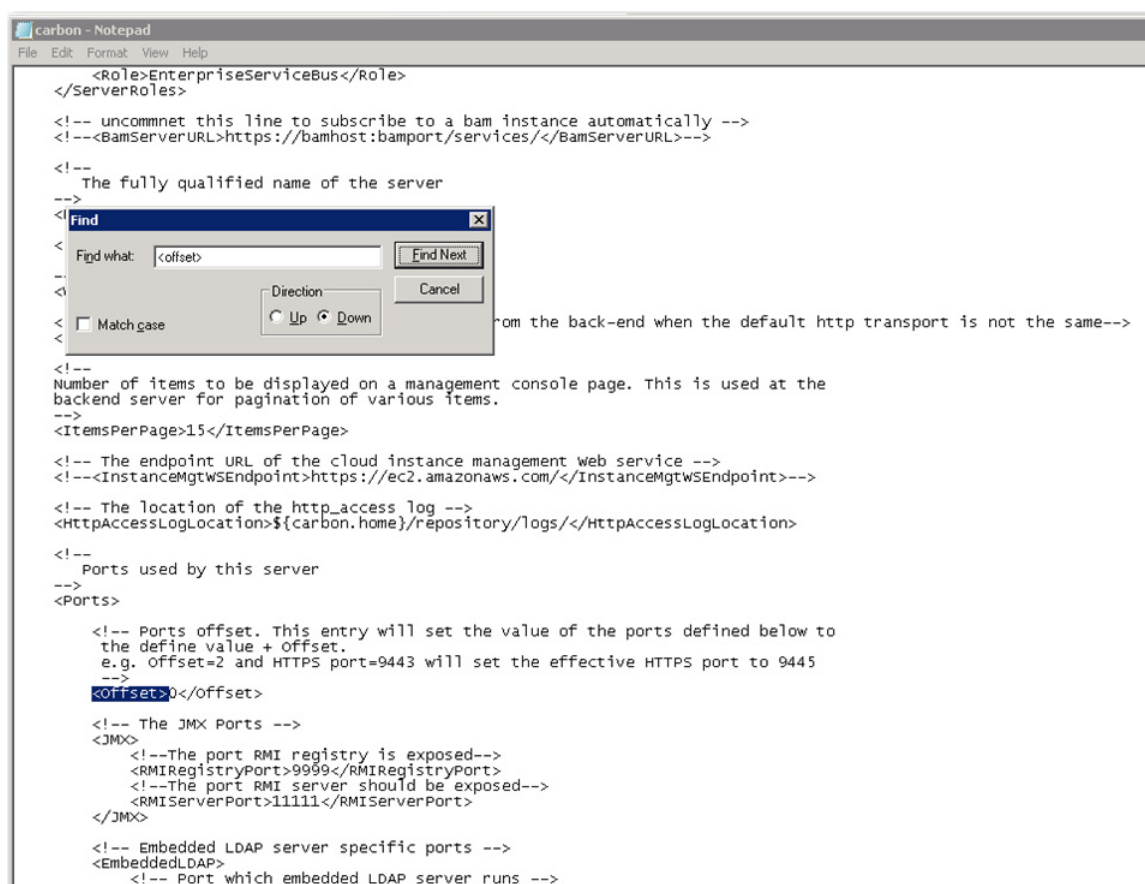
## Task

**To change the port number of an existing installation of Flexera Service Gateway:**

1. Open the installation directory of the previous version of Flexera Service Gateway.
2. Open the following file in a text editor:

[PreviousVersionFlexeraServiceGatewayInstallDirectory]\repository\conf\carbon.xml

3. Locate `<offset>0</offset>` in the carbon.xml file:



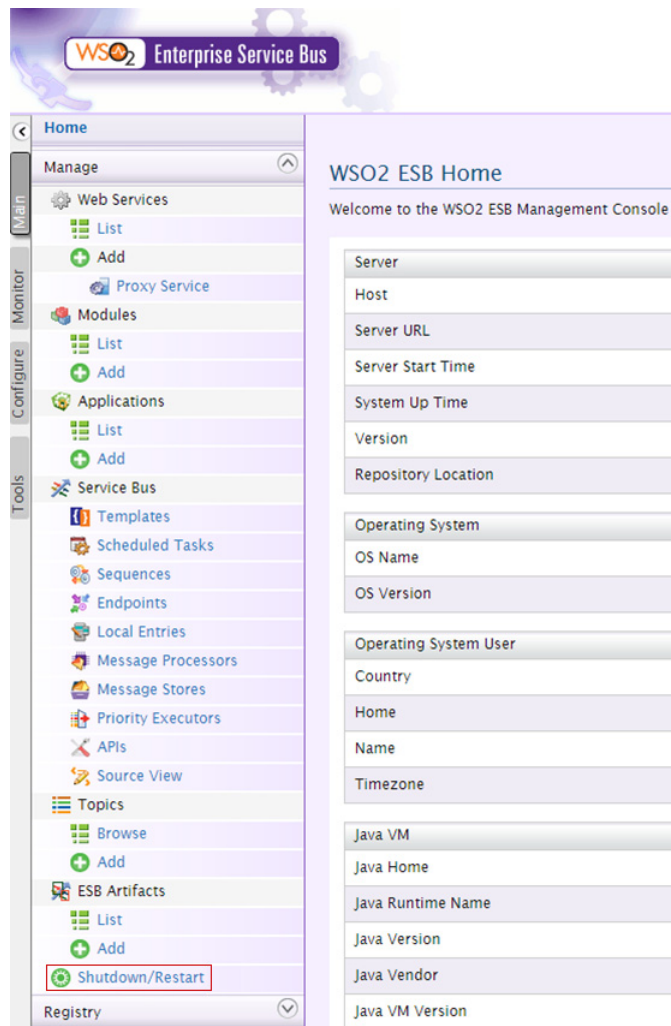
4. Change the <offset> value from 0 to one of the following:
  - If you are changing the port to 9445, change the <offset> value to 2.
  - If you are changing the port to 9446, change the <offset> value to 3.



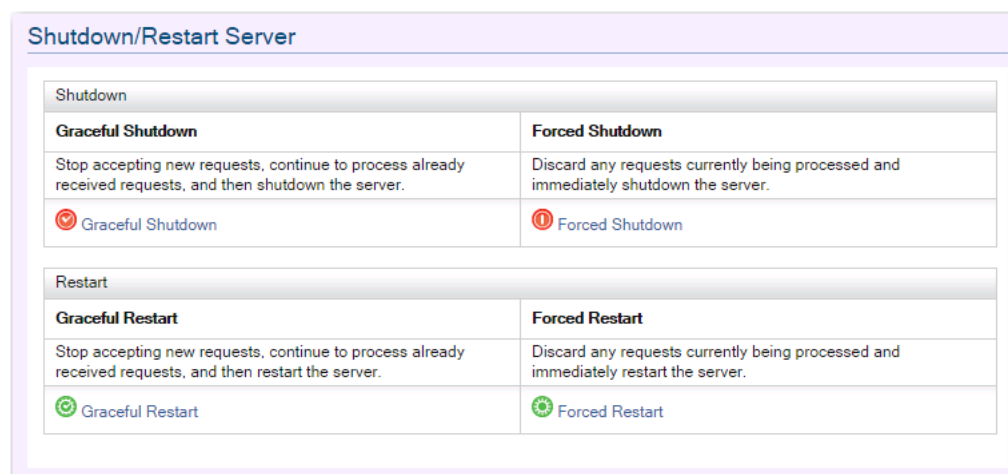
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**Note** • Changing the <offset> value to 2 will move the port to 9445 ( $9443 + 2 = 9445$ ), changing the <offset> value to 3 will move the port to 9446 ( $9443 + 3 = 9446$ ), and so on.

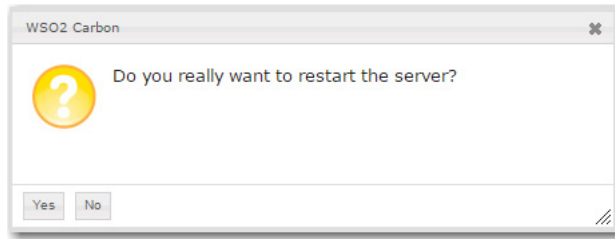
5. Save the carbon.xml file.
6. On the target system, open the following URL in a browser window:  
`https://CURRENT_FSG_SERVER:9443/carbon/admin/index.jsp`
7. You will be prompted to login.
8. Login using the following credentials:
  - **User Name:** admin
  - **Password:** admin
9. In the left navigation bar, click **Shutdown/Restart**.



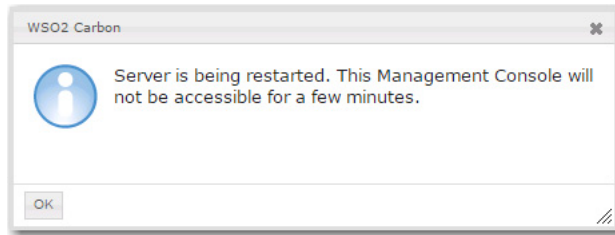
The **Shutdown/Restart Server** screen opens.



10. Click **Forced Restart**. You will be prompted to confirm the restart.



11. Click **Yes**. A notification message will open.



12. Click **OK**.
13. Wait for five minutes while the changes are applied and the server is rebooted.
14. Verify that the changes have been made by opening the new URL (using the new port number) in a browser window:  
`https://CURRENT_FSG_SERVER:NEW_PORT_NUMBER/carbon/admin/index.jsp`
15. If you want to import existing data from the previous version of Flexera Service Gateway to Flexera Service Gateway 2, first perform the steps in [Installing Flexera Service Gateway 2](#), and then perform the steps in [Importing Data From Existing Flexera Service Gateway Installation](#).

# Running the Flexera Service Gateway 2 Installer

To install Flexera Service Gateway 2, perform the following steps.



**Note** • By default, Flexera Service Gateway 2 is installed on the C drive. To install it to an alternate drive, you need to launch the installer using a command line, as described in Step 3 below.



**Note** • The default user name and password to connect to the Flexera Service Gateway 2 server are `admin/admin`. For more information, see [Frequently Asked Questions](#).



## Task

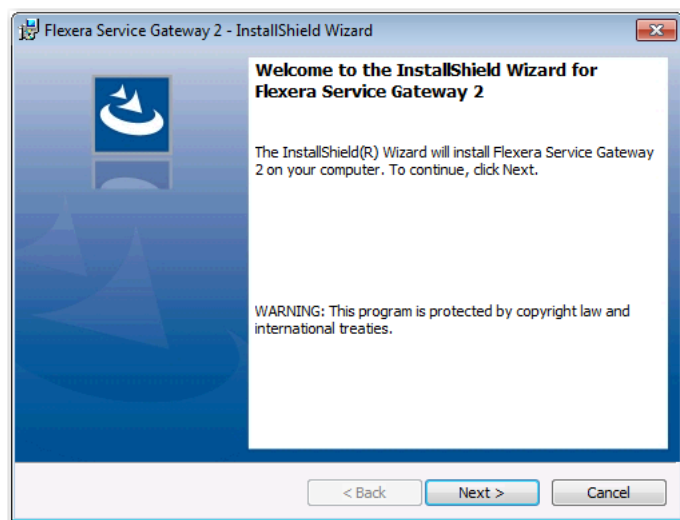
### To install Flexera Service Gateway 2:

1. Make sure that your server meets the requirements listed in [System Requirements](#).
2. Download the Flexera Service Gateway 2 installer from the Flexera Software Product & License Center.
3. Launch the installer in one of the following ways:
  - **To install Flexera Service Gateway 2 to the default directory**, which is your Program Files (x86) directory, double-click the `FlexeraServiceGateway2.exe` file.
  - **To install Flexera Service Gateway 2 to an alternate directory or drive**, use the following command line syntax to launch the installer:

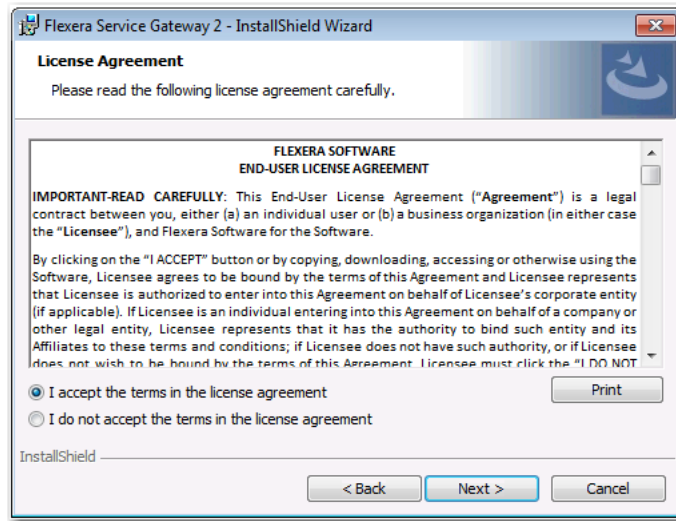
```
FlexeraServiceGateway2.exe /V"INSTALLDIR=E:\MYDIRECTORY"
```

where E:\MYDIRECTORY is the desired installation location.

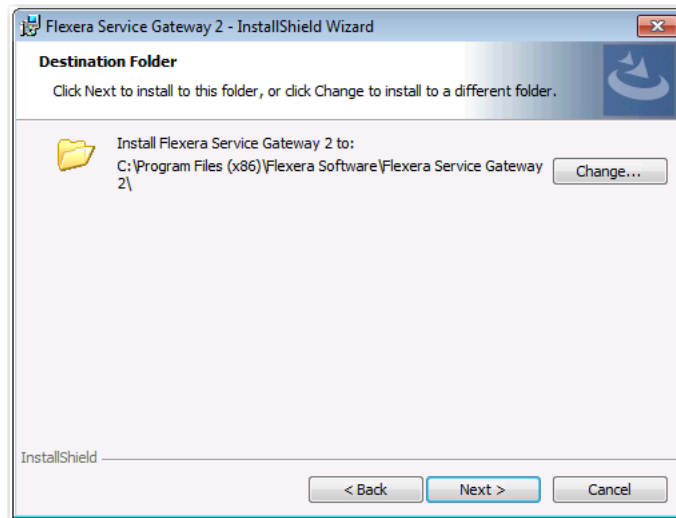
The **Welcome** panel of the Flexera Service Gateway 2 installer opens.



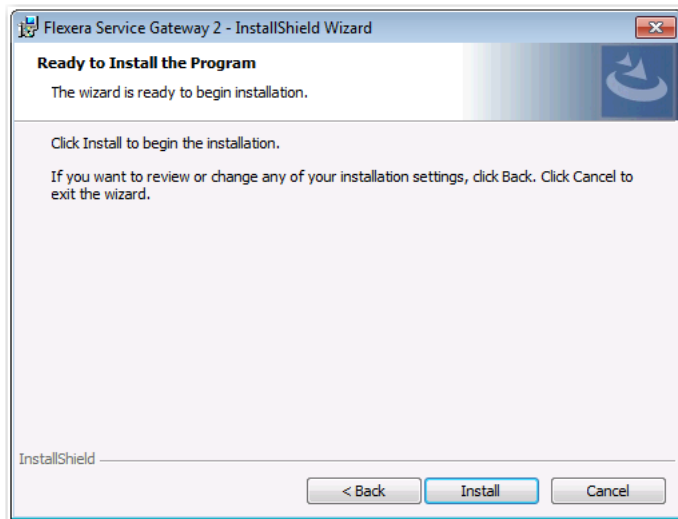
4. Click **Next**. The **License Agreement** panel opens.



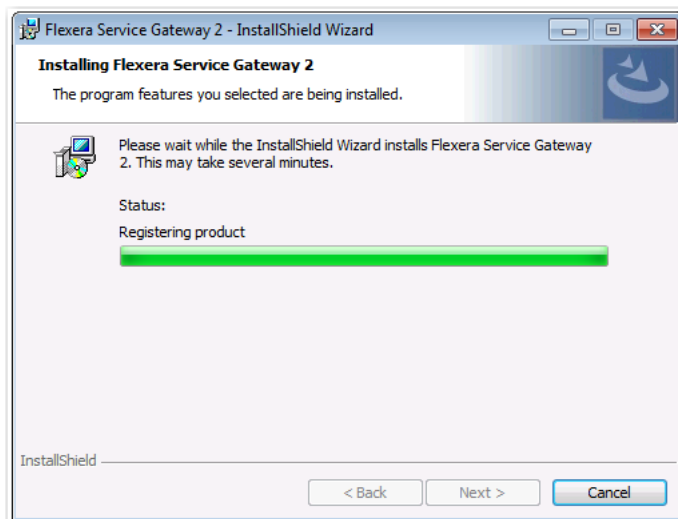
5. Accept the license agreement and click **Next**. The **Destination Folder** panel opens.



6. If you want to install Flexera Service Gateway 2 in the specified directory, click **Next**. If you want to select a different directory, click **Change**, select a new directory, and then click **Next**. The **Ready to Install the Program** panel opens.
7. The **Ready to Install the Program** panel opens.

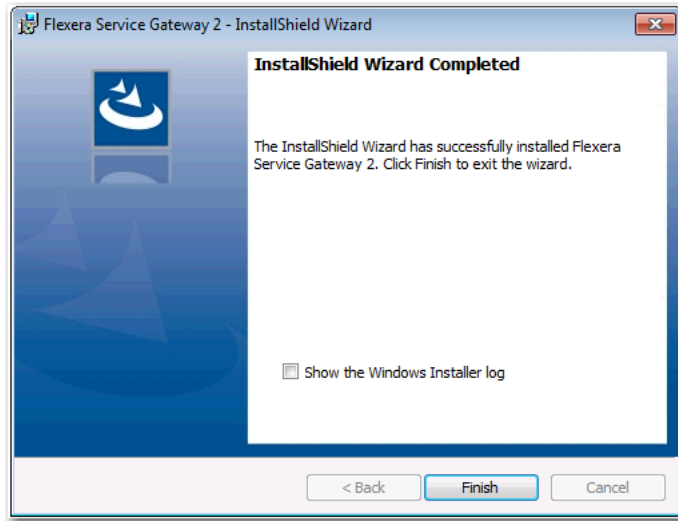


8. Click **Install**. The **Installing Flexera Service Gateway 2** panel opens.



When installation is complete, the **InstallShield Wizard Completed** panel opens.





9. Click **Finish**.
10. Proceed with the steps in [Configuring and Using Flexera Service Gateway 2](#).



# Configuring and Using Flexera Service Gateway 2

This chapter explains how to configure and use Flexera Service Gateway 2, Version 2.0.

- [Flexera Service Gateway 2 Binaries](#)
- [Verifying Flexera Service Gateway 2](#)
- [Importing Data From Existing Flexera Service Gateway Installation](#)
- [Viewing Certificate Binding With Communication Port](#)
- [Troubleshooting](#)

## Flexera Service Gateway 2 Binaries

After Flexera Service Gateway 2 is installed, there are three main binaries located in the installation directory:

**Table 3-1 • Flexera Service Gateway 2 Binary Files**

File	Description
<b>BindCertToPort.exe</b>	Used to create a self-signed certificate for the machine and bind it to Port 9443. Without running this, FlexeraServiceGatewayHost will not get any authorized requests.
<b>FlexeraServiceGatewayHost.exe</b>	This is the service executable itself that enables communication between different Flexera Software products.
<b>FSGImportTool.exe</b>	This tool is used to transfer settings and connection information from older Flexera Service Gateway versions to Flexera Service Gateway 2. See <a href="#">Importing Data From Existing Flexera Service Gateway Installation</a> for more information.

## Verifying Flexera Service Gateway 2

After installing Flexera Service Gateway 2, as described in [Installing Flexera Service Gateway 2](#), proceed with the steps in this section to verify that it is working properly.

- [Reviewing the FSGService Task in Windows Task Scheduler](#)
- [Viewing Startup Error Information](#)
- [Opening the Flexera Service Gateway 2 Host Interface](#)

## Reviewing the FSGService Task in Windows Task Scheduler

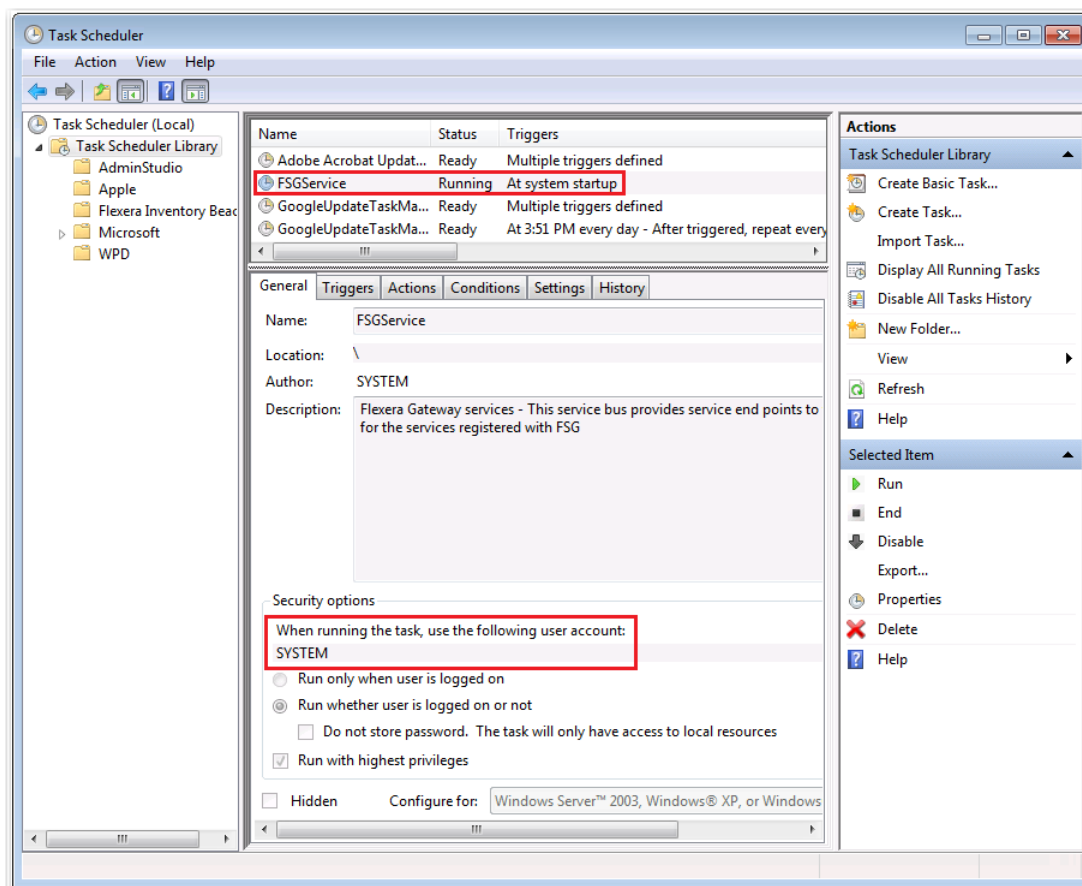
To review that the **FSGService** task is configured properly in Windows Task Scheduler, perform the following steps.



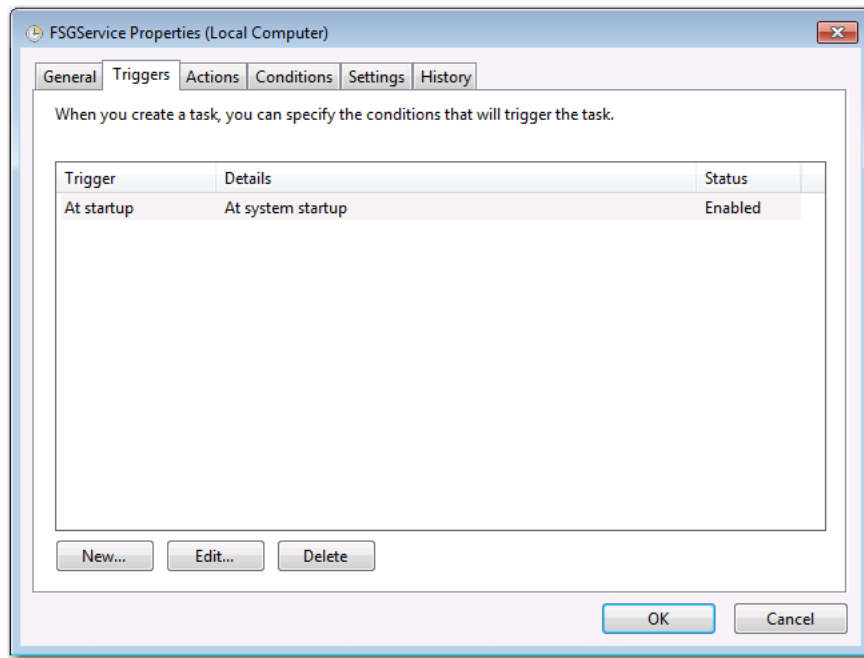
### Task

#### To configure Flexera Service Gateway 2:

1. On the server where Flexera Service Gateway 2 is installed, open the Windows Task Scheduler. The Windows Task Scheduler console opens. A task named **FSGService** should be listed, have a **Status** of **Running**, and should be running under the **SYSTEM** account.



2. To confirm that this task is set to trigger the service whenever the system is restarted, right-click on **FSGService** in the list and select **Properties**. The **FSGService Properties** dialog box opens.
3. Open the **Triggers** tab.



4. Confirm that **At startup** is listed in the **Trigger** column. This setting will cause the action to be triggered whenever the system is restarted.

## Viewing Startup Error Information

Any error information that occurs during the start of Flexera Service Gateway 2 will be logged in the Windows Event Viewer registry.

The following image of the Windows Event Viewer shows an event registered when the service was triggered and running. This event logs service information into the event registry. Similarly, errors will also be logged into event viewer under the source column as **AdminStudio Enterprise Server**.

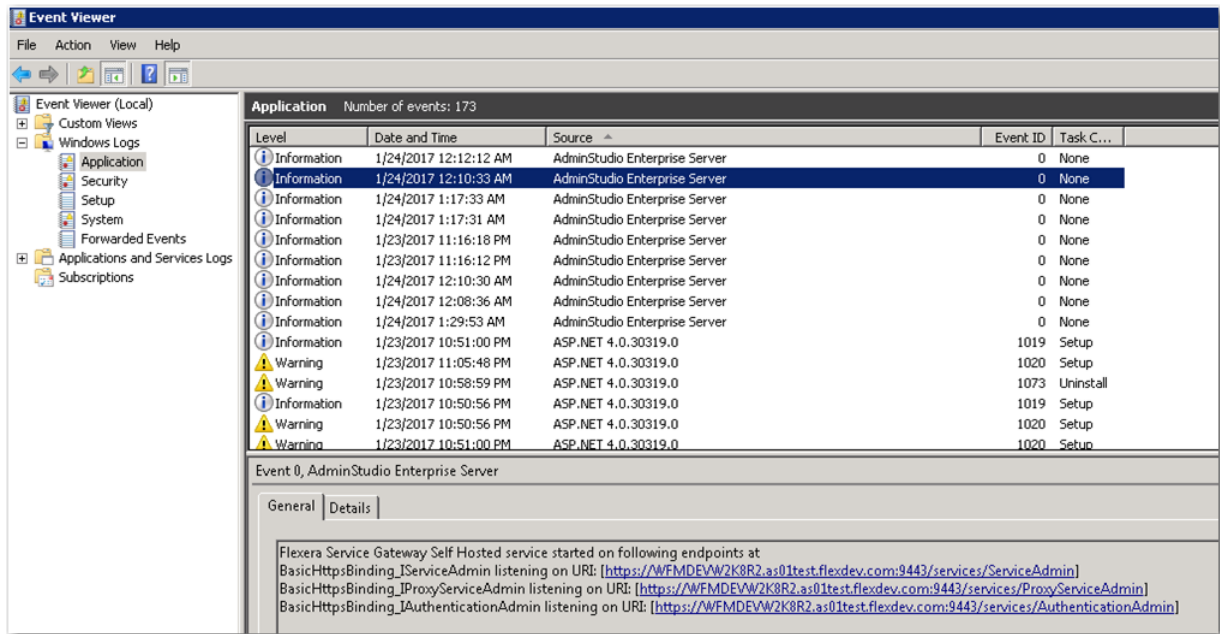


Figure 3-1: Windows Event Viewer

## Opening the Flexera Service Gateway 2 Host Interface

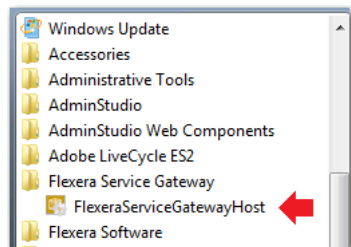
You can open the Flexera Service Gateway 2 Host interface to monitor the service.



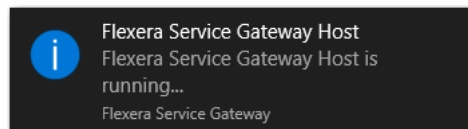
### Task

**To open the Flexera Service Gateway 2 Host interface:**

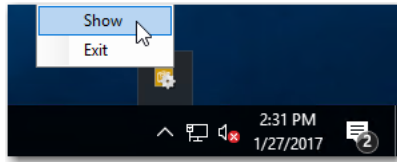
1. On the Windows Start menu, select **Flexera Service Gateway > FlexeraServiceGatewayHost**.



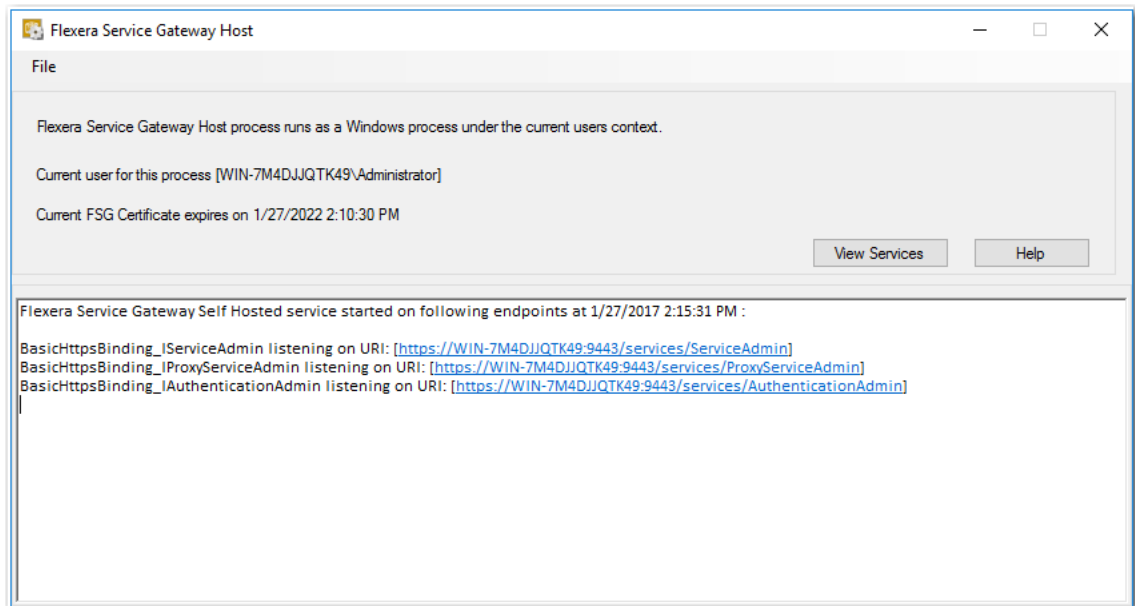
A message will appear stating that the Flexera Service Gateway Host is running.



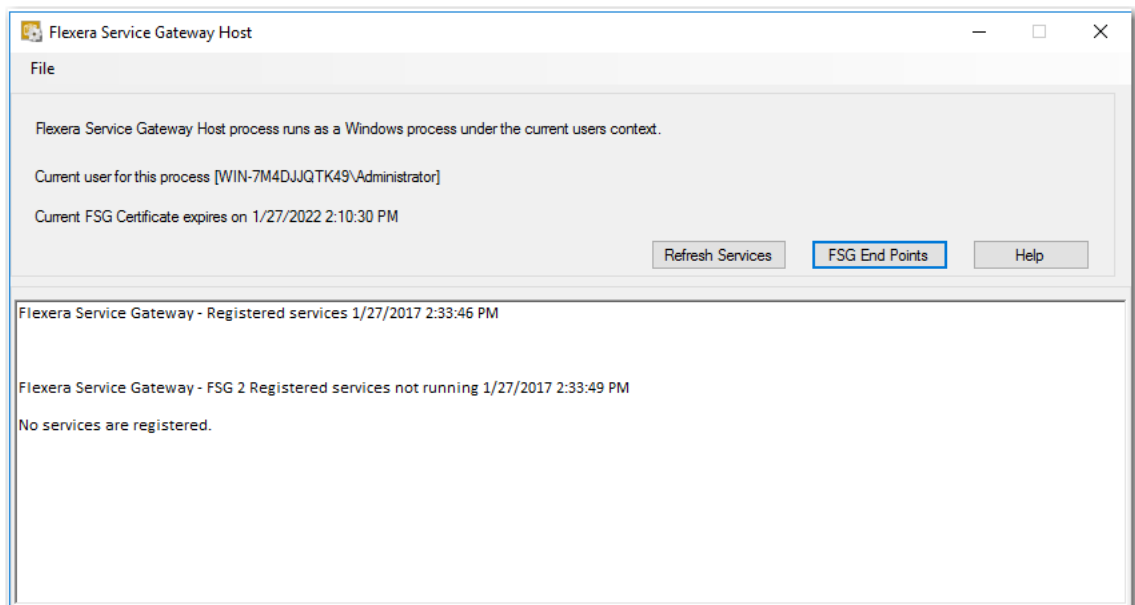
2. Locate the Flexera Service Gateway icon in the notification area of the Windows task bar, right-click on it, and select **Show**.



The Flexera Service Gateway Host dialog box opens. Note that the expiration date of the FSG Certificate is listed (which is the installation date plus five years).



3. Click **View Services**. Services registered with Flexera Service Gateway will be listed. Initially, no records will be shown.



Flexera Service Gateway 2 is now available for connection and registration to the clients. For new registrations, the client system can be connected now and registered with Flexera Service Gateway 2.

# Connecting Applications to Flexera Service Gateway 2

To connect Flexera Software applications to Flexera Service Gateway 2, open each application and enter the name of the server where Flexera Service Gateway 2 is installed. For instructions, see:

- [Connecting FlexNet Manager Suite On Premises to the Flexera Service Gateway](#)
- [Connecting App Portal to the Flexera Service Gateway](#)
- [Connecting AdminStudio to the Flexera Service Gateway](#)
- [Connecting Workflow Manager to the Flexera Service Gateway](#)

## Importing Data From Existing Flexera Service Gateway Installation

To import registered services from an existing installation of Flexera Service Gateway to Flexera Service Gateway 2, you can use the FSGImportTool.exe tool that is installed with the product.



### Task

#### *To import data from existing version of Flexera Service Gateway:*

1. Open the Flexera Service Gateway 2 installation directory and locate the FSGImportTool.exe file.
2. Double-click the FSGImportTool.exe to launch it. The **FSG Import Tool** opens.

The screenshot shows the 'FSG Import Tool' window. It contains two main sections: 'Source FSG' and 'Target FSG'. The 'Source FSG' section has three input fields: 'Source FSG URI' (empty), 'Source FSG Admin Name' (empty), and 'Source FSG Admin Password' (empty). The 'Target FSG' section has three input fields: 'Target FSG URI' (containing 'WIN-7M4DJQTK49'), 'Target FSG Admin Name' (containing 'admin'), and 'Target FSG Admin Password' (masked with dots). At the bottom right, there are two buttons: 'Transfer Settings' and 'Exit'.

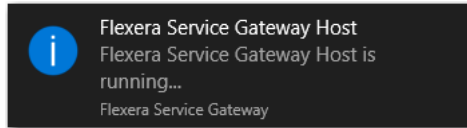
In the **Source FSG** section, you specify from where you want to import the registered service information. In the **Target FSG** section, you specify the location of the Flexera Service Gateway 2 service. Both are the same server and communicate over different ports.

3. Copy the value from the **Target FSG URI** field to the **Source FSG URI** field.
4. Enter admin in the **Source FSG Admin Name** field.
5. Enter admin in **Source FSG Admin Password** field.
6. Click **Transfer Settings**. A warning message is displayed stating that existing data will be overwritten and prompting you to confirm the transfer.



7. Click **OK**. A **Transfer Operation completed** message is displayed.
8. Click **OK** to close the message and click **Exit** to exit the **FSG Import Tool**.
9. To verify that the data has been successfully imported, launch the Flexera Service Gateway Host interface by opening the Windows Start menu, and selecting **Flexera Service Gateway > FlexeraServiceGatewayHost**.

A message will appear stating that the Flexera Service Gateway Host is running.

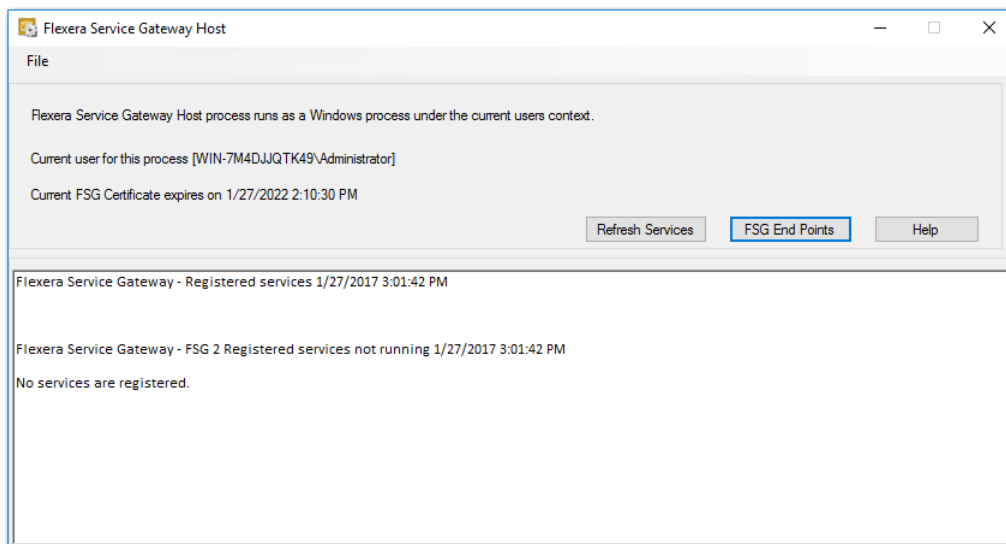


10. Locate the Flexera Service Gateway icon in the notification area of the Windows task bar, right-click on it, and select **Show**.



The Flexera Service Gateway Host interface opens.

11. Click the **View Services** button. All services available with Flexera Service Gateway 2 will be listed (if any).



12. If necessary, continue with the steps in [Connecting Applications to Flexera Service Gateway 2](#).

## Flexera Service Gateway 2 Data File

The settings for Flexera Service Gateway 2 are stored in a local data file called `fsg.db3`, which can be found in the following directory:

[FlexeraServiceGateway2InstallDirectory]/App\_Data

This file is a standalone SQLite file which can be opened using a standard SQLite tool, such as **DB Browser for SQLite** (<http://sqlitebrowser.org>). However, most of the settings are encrypted and cannot be read using such a tool.

The database is portable from one machine to another.

## Viewing Certificate Binding With Communication Port

To check if the Flexera Service Gateway 2 certificate is bound to the port, perform the following steps.



### Task

**To check if the Flexera Service Gateway 2 certificate is bound to the port:**

1. Open the Administrator Command Prompt and run the following command:

```
netsh http show sslcert ipport=0.0.0.0:9443
```

The following is displayed:

```
Administrator: Command Prompt
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.

C:\Windows\system32>netsh http show sslcert ipport=0.0.0.0:9443

SSL Certificate bindings:
-----
IP:port                : 0.0.0.0:9443
Certificate Hash       : 88de83678518b711a59343daf2504fb1278a0bb5
Application ID        : {32d87179-012e-457e-8c33-87218276e736}
Certificate Store Name : <null>
Verify Client Certificate Revocation : Enabled
Verify Revocation Using Cached Client Certificate Only : Disabled
Usage Check           : Enabled
Revocation Freshness Time : 0
URL Retrieval Timeout  : 0
Ctl Identifier         : <null>
Ctl Store Name         : <null>
DS Mapper Usage        : Disabled
Negotiate Client Certificate : Disabled

C:\Windows\system32>_
```

2. If necessary, use the following command to clean up the certificate:

```
netsh http delete sslcert ipport=0.0.0.0:9443
```

## Troubleshooting

This section provides information helpful to troubleshooting Flexera Service Gateway 2.

- [Frequently Asked Questions](#)
- [Troubleshooting Tips](#)
- [Known Issues in Flexera Service Gateway 2](#)

# Frequently Asked Questions

The following is a list of frequently asked questions regarding Flexera Service Gateway 2.

## What is Flexera Service Gateway 2?

Flexera Service Gateway 2 is a fast, lightweight, open source Enterprise Service Bus implementation. It supports message routing, inter-mediation, transformation, logging, load balancing, fail over routing, task scheduling, eventing and much more.

Flexera Service Gateway 2 is a Microsoft .NET-based solution for enabling communication between Flexera Software products. This application stores the communication details of the various products and provides those details to the client products requesting them.

## What are the technologies used underneath Flexera Service Gateway 2?

Flexera Service Gateway 2 was developed using Microsoft .NET Framework 4.6.1 on Windows Communication Foundation (WCF). Currently, the Flexera Service Gateway 2 product is running based on WCF self-hosting with the help of Windows Task Manager.

## What is an Endpoint?

Endpoint is a target or collection of targets that a message can deliver.

## Which Flexera Software products currently register endpoints with Flexera Service Gateway 2?

App Portal, AdminStudio, Workflow Manager, and FlexNet Manager Suite / FlexNet Manager Platform currently register endpoints with Flexera Service Gateway 2.

## What is the database management system used in Flexera Service Gateway 2?

Flexera Service Gateway 2 ships with an embedded SQLite database.

## What is the default user name and password for Flexera Service Gateway 2?

The default user name and password for Flexera Service Gateway 2 are admin/admin. You are not required to use any other user ID or password.

## How do I change the default user name and password for Flexera Service Gateway 2?

You are not able to change the default user name and password for Flexera Service Gateway 2, and you are not able to add and delete users.



---

**Important** • In previous releases of Flexera Service Gateway, you were able to add and delete users, and reset a user's password. In Flexera Service Gateway 2, this functionality is not supported.

# Known Issues in Flexera Service Gateway 2

Flexera Service Gateway 2 has the following known issues:

## AdminStudio and Workflow Manager Products Must Incorporate Updated DLL

The AdminStudio and Workflow Manager products must incorporate the Flexera.Integration.FSG.dll into their installation directory in order for them to communicate with Flexera Service Gateway 2. This .dll file, which can be found in the installation directory of Flexera Service Gateway 2, needs to be copied into the AdminStudio and Workflow Manager installation directories in the locations listed in the following table.

**Table 3-2 •** AdminStudio and Workflow Manager Installation Directory Location for Flexera.Integration.FSG.dll

Application	Installation Directory Location to Copy Flexera.Integration.FSG.dll
AdminStudio	Common
Workflow Manager	Service\Plugins Support\Config wwwroot\bin

## Troubleshooting Tips

When troubleshooting Flexera Service Gateway 2 issues, note the following tips:

- **Review logs in Event Viewer**—Any issues related to task start or stop will be logged in the Event Viewer.
- **Review logs in Log folder**—Flexera Service Gateway 2 errors are logged in the Log folder of the installation directory. Reviewing these log files may be helpful when troubleshooting the service.

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