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# Chapter 1: Installing the Govern Scheduler Application and Services

## Overview

This chapter describes the installation and configuration of the Govern Scheduler application and services. It includes the following sections:

### **Getting Started**

- Govern Scheduler Components on page 3
- Network Configuration Options on page 3
- Prerequisites on page 4
- Verifying and Configuring Microsoft.NET Framework 4.5 Installation on page 5

### **Installing the Services and Software**

- Defining the System Registry Settings on page 7
- Installing the Scheduler Service on page 9
- Installing the Govern Scheduler Application on page 14
- Setting Security for the Govern Scheduler on page 15

### **Uninstalling or Reinstalling the Govern Scheduler**

- Uninstalling the Govern Scheduler Application on page 17
- Reinstalling the Govern Scheduler on page 18

### **Troubleshooting the Installation**

- Verifying the Installation of the Service on page 19
- Verifying Firewall Settings on page 20

# Getting Started

## Overview

Before installing the services and software for the Govern Scheduler, read the information in this section. It provides details on the following:

- Govern Scheduler Components on page 3
- Network Configuration Options on page 3
- Prerequisites on page 4

## Govern Scheduler Components

The Govern Scheduler has the following components:

- **Scheduler Service:** The Scheduler Service handles the scheduling of the batch processes. It generates error messages for failed processes if required. If Worker Services are not installed, the Scheduler Service performs the computations of all scheduled services.
- **Govern Scheduler Application:** The Govern Scheduler application is used for monitoring scheduled batch processes. It displays the progress of the processes as they run and maintains logs on the processes that have already run. You can modify or delete batch process schedules from this application, as well as from GNA, as long as you have the required permissions.

## Network Configuration Options

The best configuration depends on the size of your organization and the number and size of the batch processes you are running. The Govern Scheduler application can be installed on any computer that can connect to the server where the Scheduler Service is installed. You can install several applications on several computers; so that several users can monitor the batch processes.

It is recommended to install one version of the application on the server where the Scheduler Service is installed. The Services on this Server tab provides status information on the Scheduler Service or Services running on the same computer as the Govern Scheduler application. *See Services on this Server Tab Quick Tour on page 69.*

**Note:** You can install multiple Scheduler Services on the same server. However, all the services on the server use the same dlls and when you update the dlls, you would need to stop all the services at the same time. When the Scheduler Service is stopped, the scheduled batch processes do not run. Therefore, it is recommended to install a separate Scheduler Service for each deployment and install them on separate servers.

## Prerequisites

This section lists the required files and third-party prerequisites under the following headings:

- Prerequisites for the Scheduler Service on page 4
- Prerequisites for the Govern Scheduler Application on page 4.

### Prerequisites for the Scheduler Service

The Scheduler Services require the following Govern and third-party software:

**Govern Files:** Verify that you have access to the following Govern file:

- `BatchSchedulerServiceInstaller.msi`

**Third-Party Software:** Verify that the following third-party software is installed on all servers where you are installing the Scheduler Service.

- Microsoft.NET Framework 4.5 Full profile
- Crystal Reports Engine
- Oracle Client if you are using an Oracle Database

### Prerequisites for the Govern Scheduler Application

**Third-Party Software:** Verify that the following third-party software is installed on all computers where you are installing the Govern Scheduler application.

- Oracle Client if you are using an Oracle Database
- Microsoft.NET Framework 4.5 Full profile

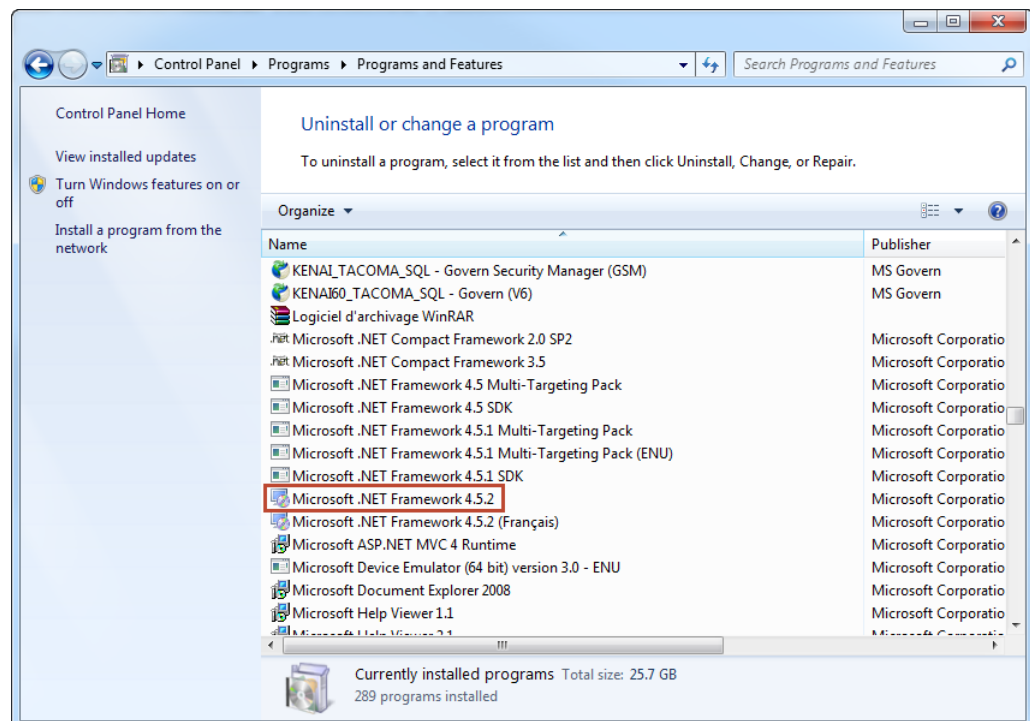
## Govern Scheduler

### Verifying and Configuring Microsoft.NET Framework 4.5 Installation

Microsoft.NET Framework 4.5, or higher, is required for the Govern Scheduler application and services.

To verify that it is installed:

1. Launch Windows Control Panel.
2. Open the Programs and Features or Uninstall a Program list.

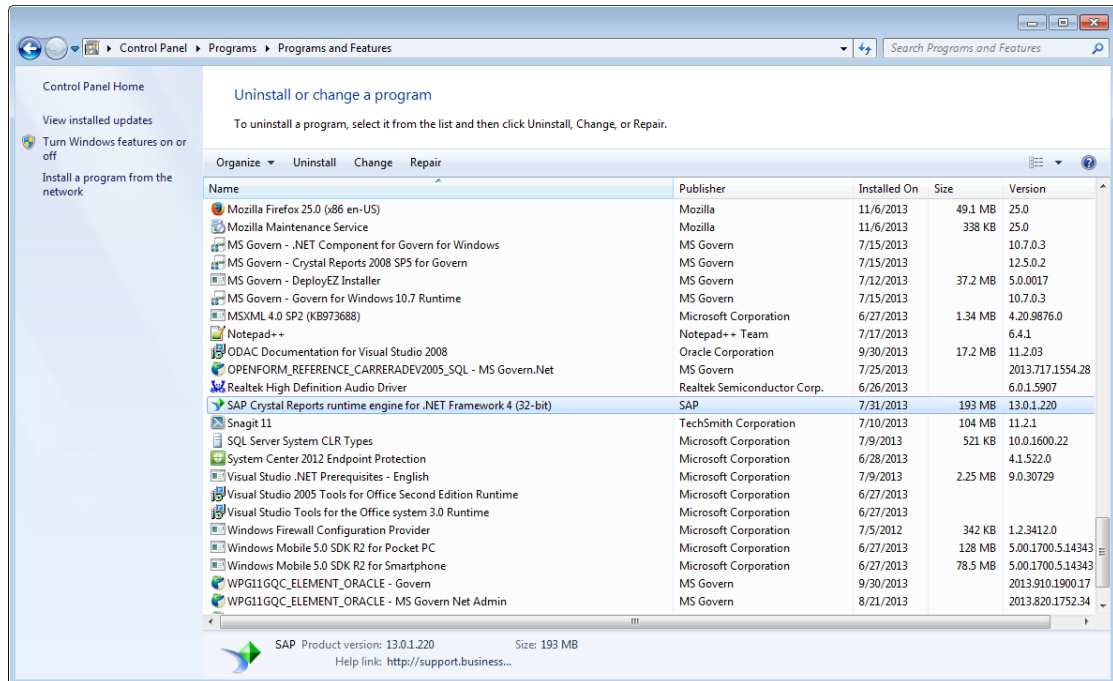


3. Ensure that Microsoft.NET Framework 4.5 is listed.

You can install Framework 4.5 from the following link <http://www.microsoft.com/en-us/download/details.aspx?id=30653>

### Verifying and Configuring Crystal Reports and Oracle Client

Crystal Reports and Oracle Client can be verified using the same procedure.



## Required Information

During the installation and configuration of the Govern Scheduler application and Scheduler Service, you are prompted for the following information:

- **Server Name:** Name of the server where you are installing the Govern Scheduler Service
- **Port Number:** Port for the Scheduler Service: Port 45977 is used in this guide. Typically, this port is not used by other applications.
- **SMTP Settings:** The SMTP server name, port number, default sender, user name, and password are required for the e-mails sent to inform an administrator or other users if an error occurs with the Scheduler Service.
- **Deployment Folder or Folders:** For each deployment, where you are installing the Govern Scheduler Service or application, you need the name of the deployment folder. This is the folder where the configuration file, `GovernNetConfig.xml`, is located.
- **Connection Key or Keys:** For each deployment, you need to know the connection key to the database for the service you are installing.

# Installing the Services and Software

## Overview

This section provides procedures for installing the services and software for the Govern Scheduler. Perform the procedures in the order listed in this section and as described under the following headings:

- Defining the System Registry Settings on page 7
- Installing the Scheduler Service on page 9
- Installing the Govern Scheduler Application on page 14
- Setting Security for the Govern Scheduler on page 15

## Defining the System Registry Settings

### Batch Process Settings

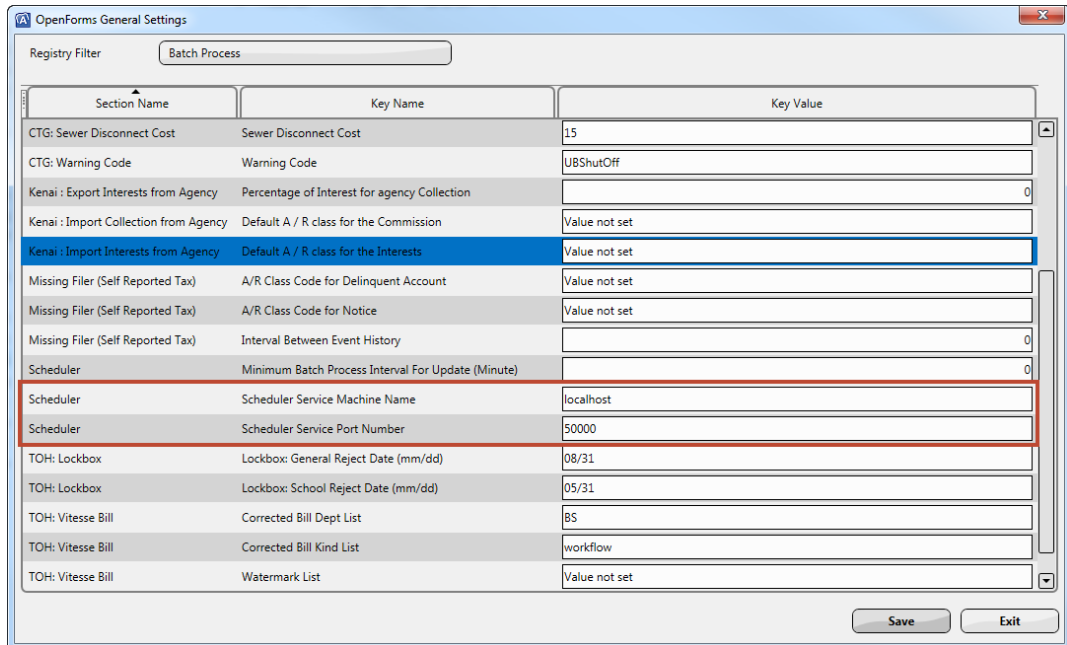
The first step is to update the **Scheduler** keys in the System Registry table, in GNA, with the names of the servers in your deployment.

**Note:** If you have added one or more Appender Services, you need to update the System Registry settings in the GNA application for each deployment.

To do this, you need to open GNA in the deployment for which the Appender Service is created.

To update the System Registry keys:

1. Launch GNA.
2. Select **System Parameters > General Settings Editor**.
3. Select **Batch Process** from the **Registry Filter** drop-down list.



Section Name	Key Name	Key Value
CTG: Sewer Disconnect Cost	Sewer Disconnect Cost	15
CTG: Warning Code	Warning Code	UBShutOff
Kenai : Export Interests from Agency	Percentage of Interest for agency Collection	0
Kenai : Import Collection from Agency	Default A / R class for the Commission	Value not set
Kenai : Import Interests from Agency	Default A / R class for the Interests	Value not set
Missing Filer (Self Reported Tax)	A/R Class Code for Delinquent Account	Value not set
Missing Filer (Self Reported Tax)	A/R Class Code for Notice	Value not set
Missing Filer (Self Reported Tax)	Interval Between Event History	0
Scheduler	Minimum Batch Process Interval For Update (Minute)	0
Scheduler	Scheduler Service Machine Name	localhost
Scheduler	Scheduler Service Port Number	50000
TOH: Lockbox	Lockbox: General Reject Date (mm/dd)	08/31
TOH: Lockbox	Lockbox: School Reject Date (mm/dd)	05/31
TOH: Vitesse Bill	Corrected Bill Dept List	BS
TOH: Vitesse Bill	Corrected Bill Kind List	workflow
TOH: Vitesse Bill	Watermark List	Value not set

4. Enter the name of the server where the Scheduler service is installed in the **Scheduler Service Machine Name** key name.
5. Enter the port number for the scheduler service.

**Note:** The port number is required for the Scheduler Service. Port 50000 is used as an example on the screen shot because it is not used by another application.

If you are installing multiple Scheduler services, ensure that you assign a different port number to each one.

6. Click **Save**.

## SMTP Settings

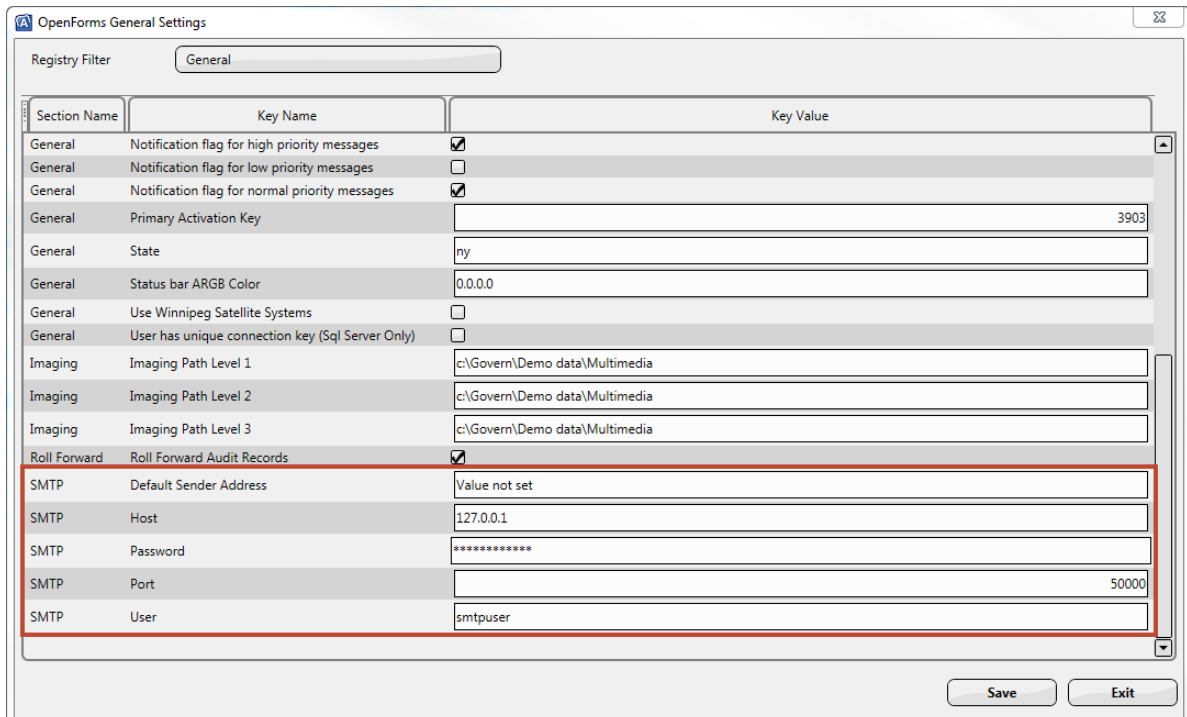
The next step is to define the SMTP settings. E-mails can be sent if the Scheduler Service stops. They can also be configured for each batch process; for example, to notify users that a batch process is complete or to notify administrators that an error occurred.

To define the SMTP parameters:

1. Launch GNA.

## Govern Scheduler

2. Select **System Parameters > General Settings Editor**.
3. Select **General** from the **Registry Filter** drop-down list.



Section Name	Key Name	Key Value
General	Notification flag for high priority messages	<input checked="" type="checkbox"/>
General	Notification flag for low priority messages	<input type="checkbox"/>
General	Notification flag for normal priority messages	<input checked="" type="checkbox"/>
General	Primary Activation Key	3903
General	State	ny
General	Status bar ARGB Color	0.0.0.0
General	Use Winnipeg Satellite Systems	<input type="checkbox"/>
General	User has unique connection key (Sql Server Only)	<input type="checkbox"/>
Imaging	Imaging Path Level 1	c:\Govern\Demo data\Multimedia
Imaging	Imaging Path Level 2	c:\Govern\Demo data\Multimedia
Imaging	Imaging Path Level 3	c:\Govern\Demo data\Multimedia
Roll Forward	Roll Forward Audit Records	<input checked="" type="checkbox"/>
SMTP	Default Sender Address	Value not set
SMTP	Host	127.0.0.1
SMTP	Password	*****
SMTP	Port	50000
SMTP	User	smtpuser

Buttons: Save, Exit

4. Enter the e-mail address of the default sender in the **Default Sender Address** field if required by your organization. This is optional.
5. Enter the SMTP server name in the **Host** field.
6. Enter the default user ID and password for the e-mails.
7. Enter the e-mail port.

**Note:** The standard port for SMTP is 25.

## Installing the Scheduler Service

**Note:** If you are reinstalling your server, you need to install the Govern Scheduler Service on the new server.

### Prerequisite

- Install Package for the current Govern v6 deployment.

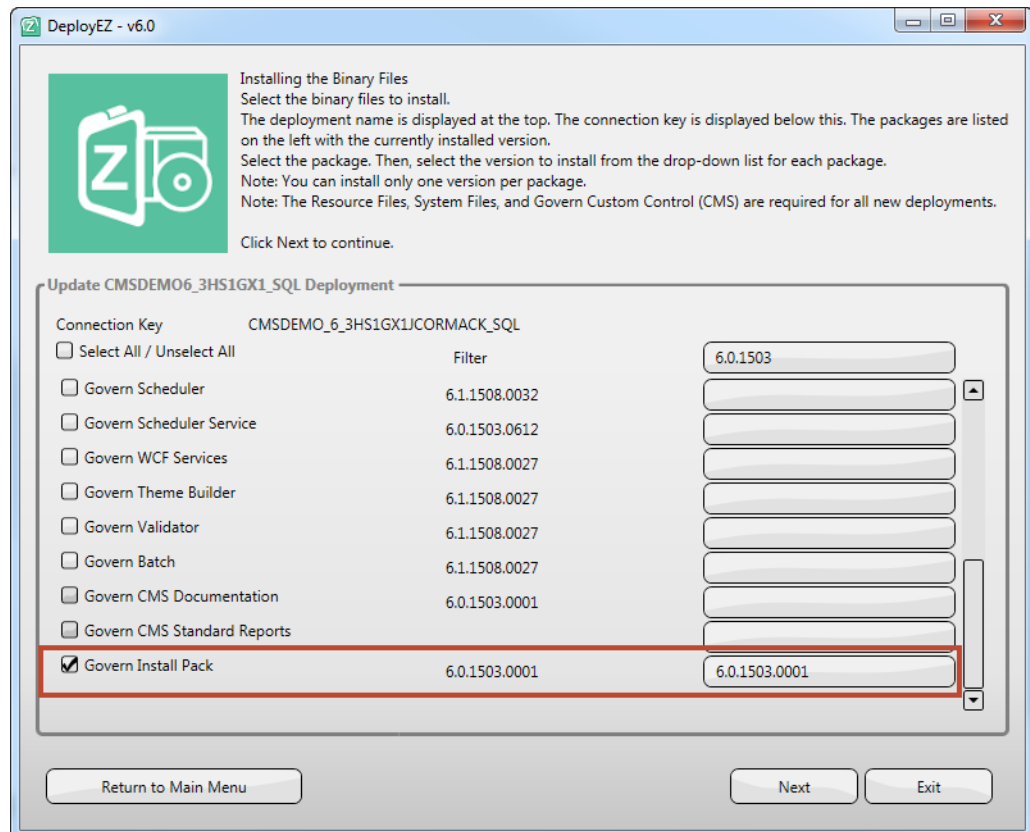


- Access to the server where you are setting up the Govern Scheduler application

### Procedure

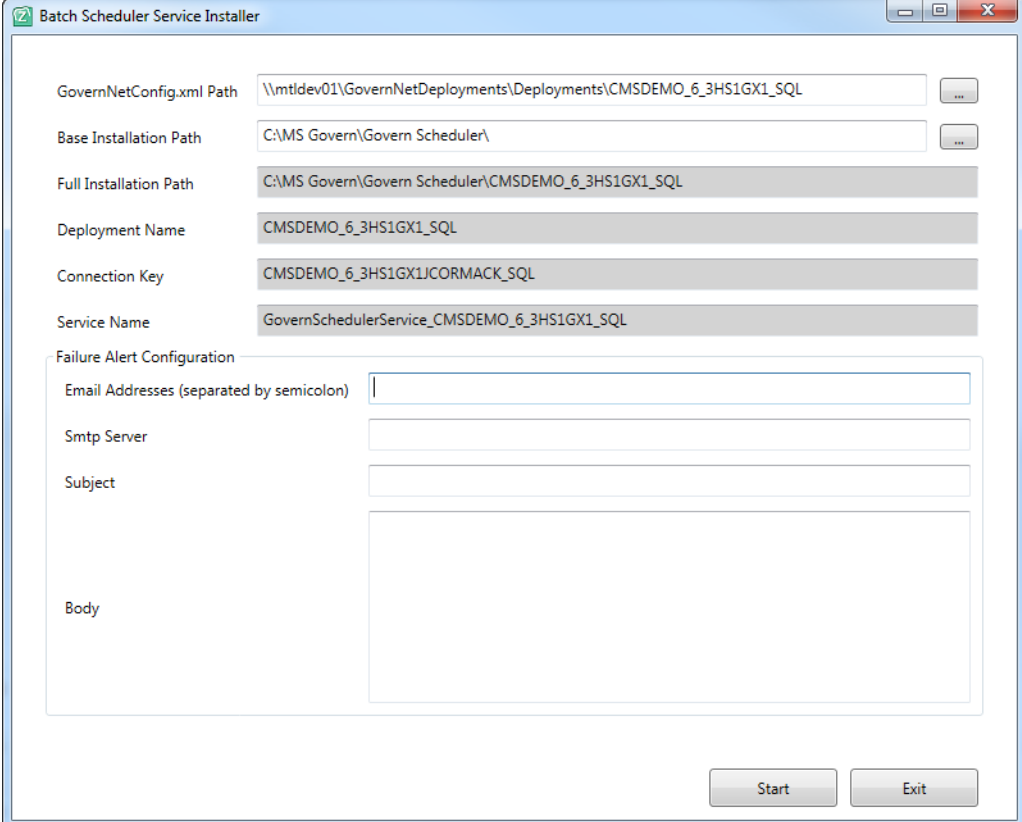
To install the Govern Scheduler Service:

1. Run Deploy EZ, download, import, and install or update the Install Packages for the current deployment.



2. Select **Install Packages > 6.0 > Batch Scheduler Service Setup**.
3. Log in to the server where you are setting up the Govern Scheduler application.
4. Double-click on the **BatchSchedulerServiceSetup.exe** to launch the installer program.

## Govern Scheduler



The image shows a Windows installer window titled "Batch Scheduler Service Installer". It contains several text input fields and a "Failure Alert Configuration" section. The fields are pre-filled with the following values:

- GovernNetConfig.xml Path: \\mtldev01\GovernNetDeployments\Deployments\CMSDEMO\_6\_3HS1GX1\_SQL
- Base Installation Path: C:\MS Govern\Govern Scheduler\
- Full Installation Path: C:\MS Govern\Govern Scheduler\CMSDEMO\_6\_3HS1GX1\_SQL
- Deployment Name: CMSDEMO\_6\_3HS1GX1\_SQL
- Connection Key: CMSDEMO\_6\_3HS1GX1JCORMACK\_SQL
- Service Name: GovernSchedulerService\CMSDEMO\_6\_3HS1GX1\_SQL

The "Failure Alert Configuration" section includes the following fields:

- Email Addresses (separated by semicolon):
- Smtp Server:
- Subject:
- Body:

At the bottom right, there are "Start" and "Exit" buttons.

5. Enter the path to the `GovernNetConfig.xml` file in the **GovernNetConfig.xml Path** text box.

**Note:** Use the UNC path.

The following parameters are populated automatically:

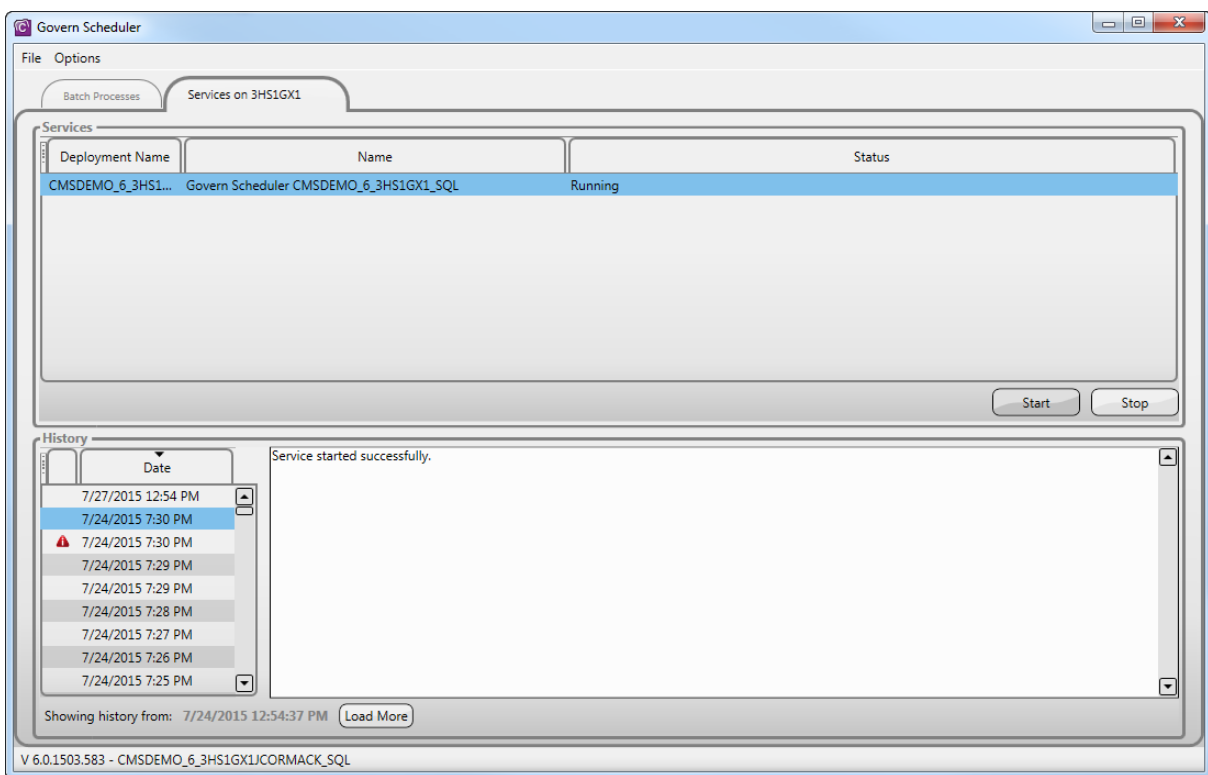
- **Full Installation Path**
- **Deployment Name**
- **Connection Key**
- **Service Name**

Provide one or more e-mail addresses in order to have key users receive e-mail alerts when a program failure occurs. The default message that you enter is sent.

6. Enter the e-mail addresses of one or more recipients for e-mail alerts in the **E-mail Addresses** text box.
7. Enter the name of the SMTP server to be used for sending the e-mails in the **SMTP Server** text box.

8. Enter a title for the default e-mail in the **Subject** text box.
9. Enter a default message in the **Body** text box.

Note that the status of the Scheduler Service or Services can be viewed, at any time, on the Services tab of the Govern Scheduler application. You can also start or stop a service from this tab. See *Starting and Stopping the Services on page 70*.



**Note:** If you are installing multiple Govern Scheduler Services on the same server, each must have a unique port number. However, it is recommended to install only one service per server.

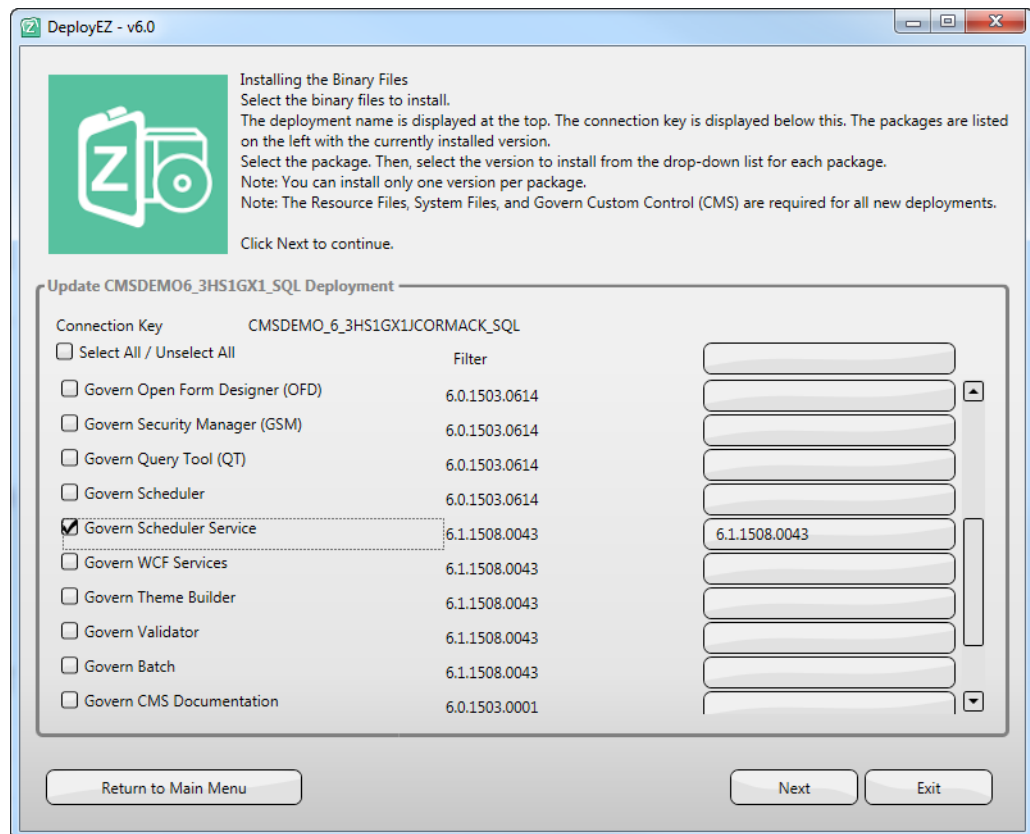
Port numbers between 46000 and 49000 can be employed, if they are not in use by another application or service. The following link from the Internet Assigned Numbers Authority (iana) can be consulted:  
<https://www.iana.org/assignments/service-names-port-numbers/service-names-port-numbers.txt>

## Govern Scheduler

# Updating the Govern Scheduler Service

To update the Govern Scheduler Service:

1. Run Deploy EZ for the current deployment.



2. Select the Scheduler Service.

*Refer to the Govern Deploy EZ documentation for details.*

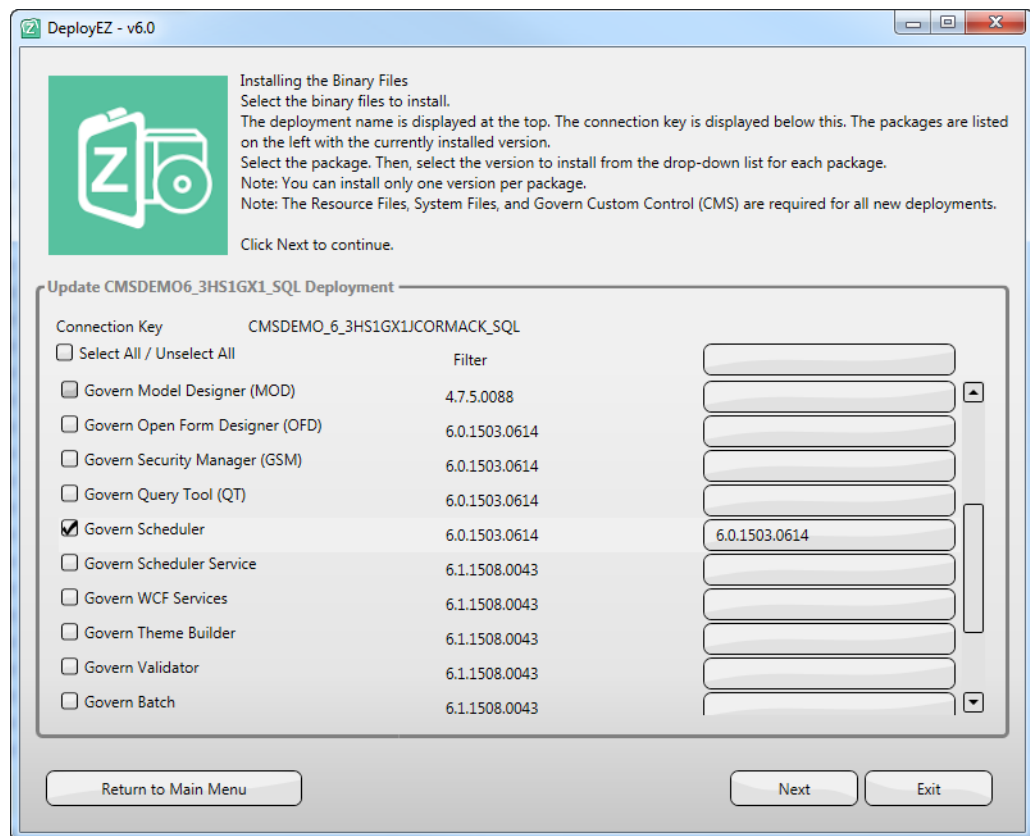
### Installing the Govern Scheduler Application

The Govern Scheduler application is installed, as all other Govern OpenForms applications, through Deploy EZ.

**Note:** You can install the Govern Scheduler application before or after installing the Scheduler Service. Similarly, you can uninstall one without uninstalling the other. There is no dependency.

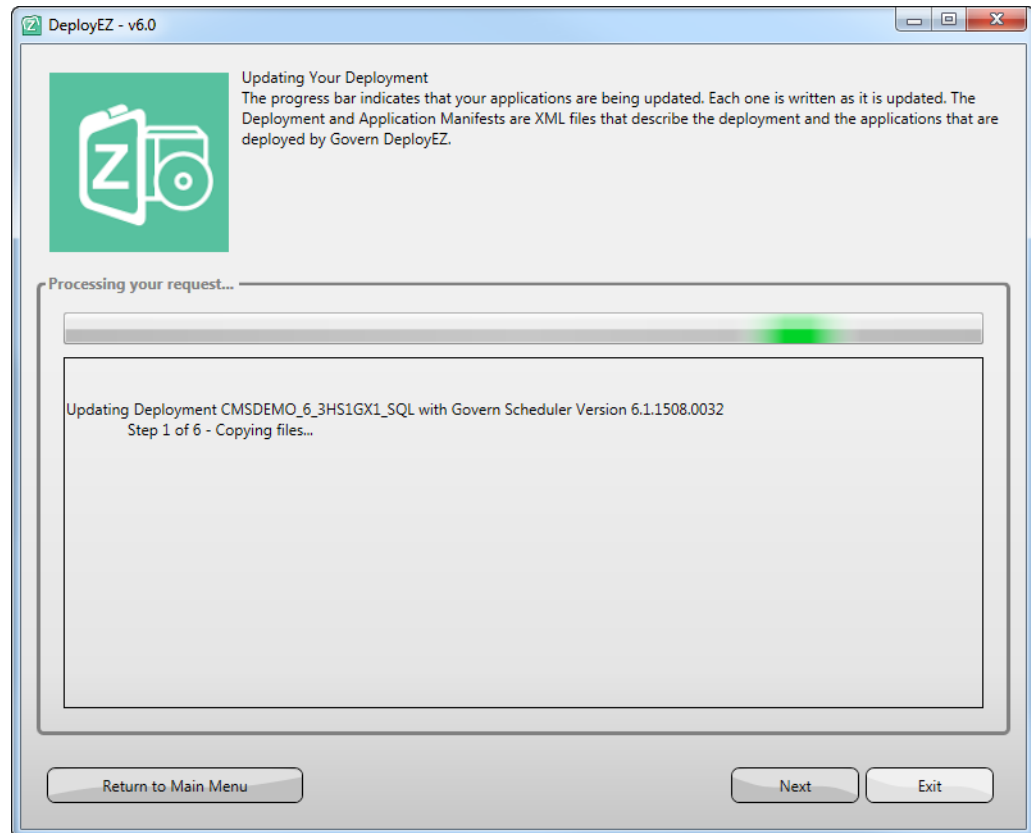
To install the Govern Scheduler application:

1. Run Deploy EZ for the current deployment and select **Govern Scheduler**.



## Govern Scheduler

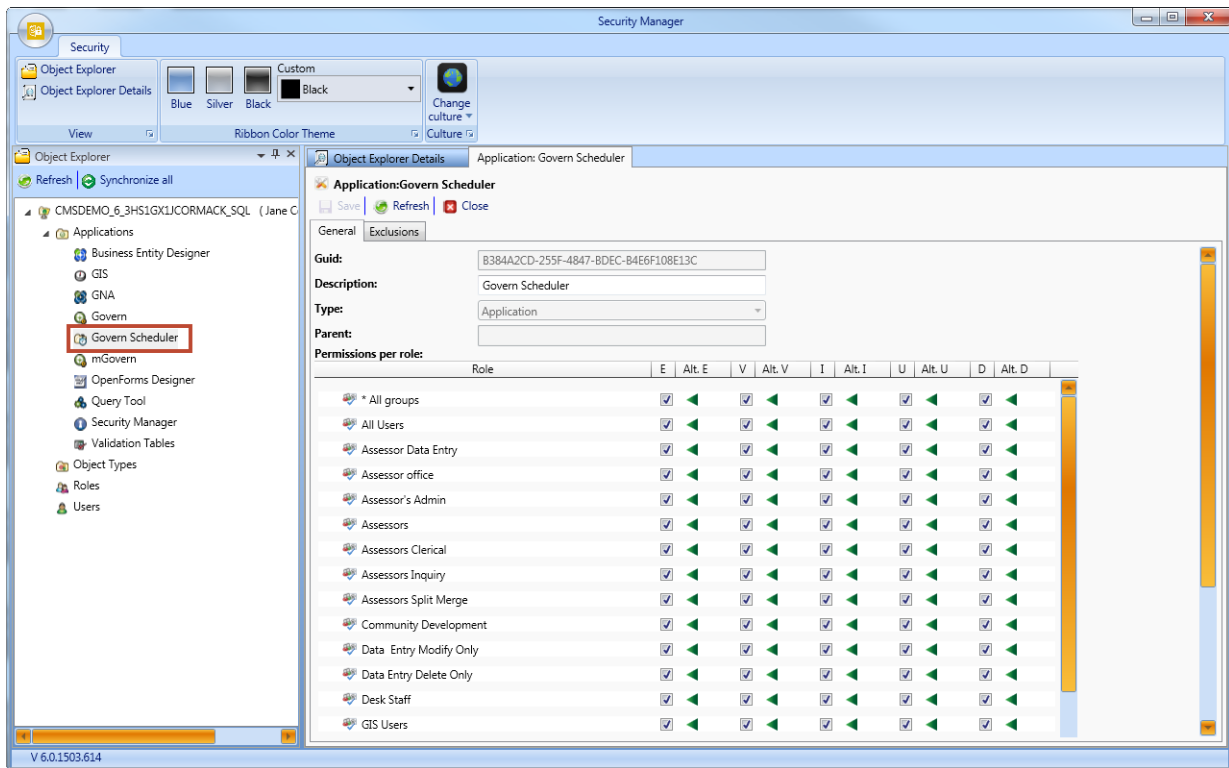
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*For further details on creating new deployments and managing existing ones, refer to the Govern Deploy EZ guide.*

## Setting Security for the Govern Scheduler

Once the Govern Scheduler is installed, you can set the security rights for it. To do this, launch the Govern Security Manager (GSM) and expand the **Applications** menu.



Right-click on the **Govern Scheduler** and select **Edit**. For further details on setting security rights, refer to the *Govern Security Manager (GSM) guide*.

# Uninstalling or Reinstalling the Govern Scheduler

## Overview

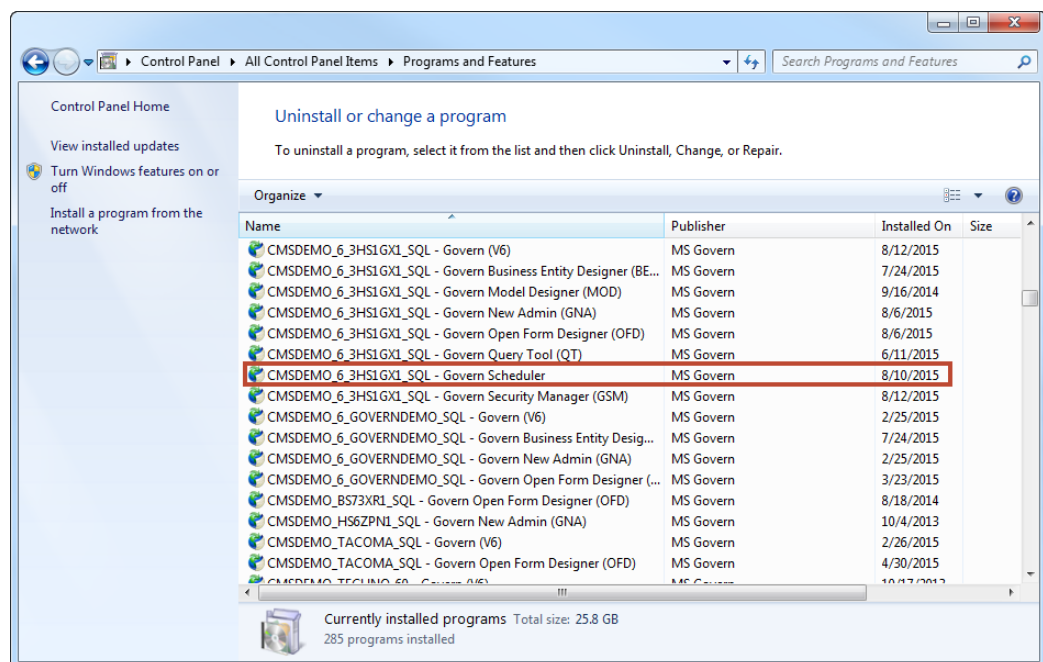
This section provides two procedures:

- Uninstalling the Govern Scheduler Application on page 17
- Reinstalling the Govern Scheduler on page 18

## Uninstalling the Govern Scheduler Application

To uninstall the Govern Scheduler application:

1. Launch Windows Control Panel and open Programs and Features or Uninstall a program.
2. Scroll to the application or service you want to remove.
  - The application is called MS Govern Batch Service Console.
  - The default service is called Govern Scheduler.





3. Right click on the application or service and select **Uninstall**.
4. Follow the instructions on the screen.

## Reinstalling the Govern Scheduler

If you change the server on which the Govern Scheduler application is installed, you need to install both the Govern Scheduler service and the Govern Scheduler application on the new server.

The procedures for reinstalling the application and service are the same as the procedures for installing the application and service for the first time.

# Troubleshooting the Installation

## Overview

For most deployments, the Installation programs configure all the service requirements. However, if problems occur during the installation, run the installers in *basic* mode and review the following procedures:

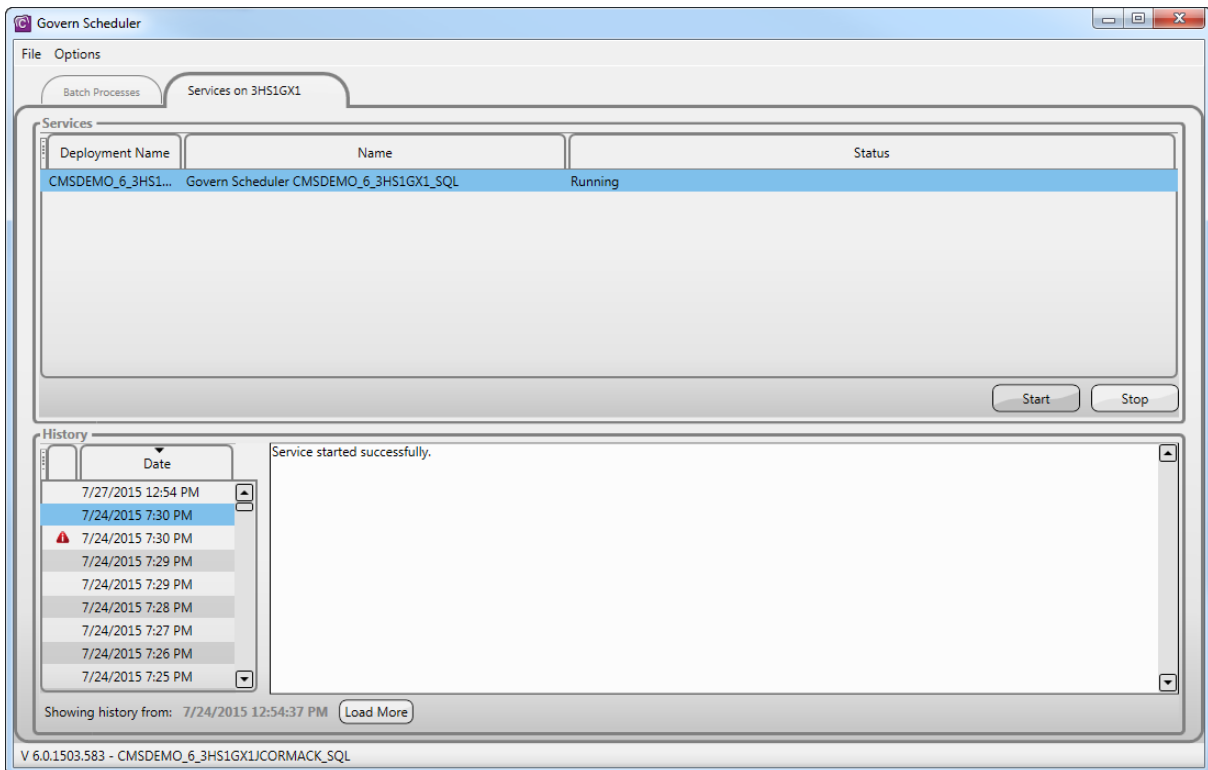
- Verifying the Installation of the Service on page 19
- Verifying Firewall Settings on page 20

## Verifying the Installation of the Service

Once the Govern Scheduler application is installed, the status of the Scheduler service or services installed on the local server can be seen and modified on the interface.

To view the Scheduler Service:

1. Launch the Govern Scheduler.
2. Select the Services tab.



If any updates, such as new batch processes or software enhancements are added for the Govern Scheduler, they are available when you update the deployment. The Scheduler Service automatically performs a search for updates when it starts. If any are available, they are automatically installed.

**Note:** Ensure that no one is running a scheduled batch process when you start or stop the Scheduler Service.

*For further information, see Scheduler Services on page 69.*

## Verifying Firewall Settings

If the server is protected by a firewall, verify that incoming traffic is allowed on the port you are using; i.e., **TCP port 45977** or the port that you entered when you added the address in GNA. See *Defining the System Registry Settings* on page 7.