Foglight™

Foglight™ for Virtualization, Standard Edition 7.0

Installation and Configuration Guide

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Quest Software World Headquarters
LEGAL Dept
5 Polaris Way
Aliso Viejo, CA 92656
www.quest.com
email: legal@quest.com

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Installation and Configuration Guide
September 2013
Version 7.0

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Introduction to this Guide

The *Installation and Configuration Guide* provides instructions for installing, configuring, and starting Foglight™ for Virtualization, Standard Edition.

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Email	*info@quest.com*
Mail	Quest Software, Inc. World Headquarters 5 Polaris Way Aliso Viejo, CA 92656 USA
Web site	*www.quest.com*

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Installing Foglight for Virtualization, Standard Edition

This chapter instructions for installing and configuring the Foglight for Virtualization, Standard Edition.

Foglight for Virtualization, Standard Edition is delivered as a fully configured virtual machine, which can be installed on one of three platforms: VMware vSphere, Microsoft Hyper-V, or Red Hat Enterprise Virtualization platform. Before beginning installation, review the "System Requirements" on page 7 to ensure that your target system meets the requirements.

Refer to the appropriate section for installation instructions:

- "Installing as a VMware Virtual Machine" on page 10
- "Installing as a Microsoft Hyper-V Virtual Machine" on page 13
- "Installing as a Red Hat Enterprise Virtualization Machine" on page 15

System Requirements

The Foglight for Virtualization, Standard Edition installation guidelines vary depending on how many virtual machines (VMs) are being monitored. The following table outlines the system requirements for installing Foglight for Virtualization, Standard Edition.

Number of VMs	1 to 200	200 to 1000	1000 to 3000
Virtual Machine			
Number of CPUs	4	4	4
Memory Allocation	8 GB	10 GB	12 GB -16 GB
Memory Reservation	8 GB	10 GB	12 GB -16 GB
Allocated Storage	64 GB	64 GB	64 GB
Database Selection			
Internal or External	Either	Either	Either

Number of VMs	1 to 200	200 to 1000	1000 to 3000
External Database Server Average CPU Use Network Storage	 Less than 90% Optional	 Less than 80% Optional	 Less than 80% Not Recommended
VMware vCenter Average CPU Use 5 Minute Interval Statistics Level Minimum Privileges	 Less than 90% 2 or 3 Read Only +Browse Datastore	 Less than 80% 2 or 3 Read Only + Browse Datastore	 Less than 80% 2 Read Only + Browse Datastore
vCenter Database Server Average CPU Use Network Storage	 Less than 90% Optional	 Less than 80% Optional	 Less than 80% Not Recommended

Java Software Requirements:

- Java Version 1.6 or later

VMware Software Requirements:

- VMware Player 1.0.0 or later
- VMware Workstation 5 or later
- VMware ESX Server 3.x or later
- Virtual Center 5.0 or later, or VMware Server 1.03 or later

Hyper-V Software Requirements:

- Systems Center Operations Manager 2007 R2 and Systems Center Virtual Machine Manager 2008 R2

  Or

- Systems Center Operations Manager 2012 and Systems Center Virtual Machine Manager 2012

Red Hat Software Requirements:

- Red Hat Enterprise Virtualization Manager 3.0 or later

Storage Resizing Requirements

The following table outlines the requirements necessary for Optimizer to successfully resize the storage on virtual machines.

Operating System	Version	File System Supported
MS Windows	Windows Vista	NTFS
	Windows Server 2008 “Longhorn” (32/64 bits)	NTFS
	Windows Server 2008 R2	NTFS
	Windows 7 (32/64 bits)	NTFS
	Windows 8	NTFS
	Windows Server 2012 (Std/DC)	NTFS
Linux	Red Hat Enterprise Linux 4.x	ext2 ext3
	Red Hat Enterprise Linux 5.x	ext2 ext3
	Red Hat Enterprise Linux 6.x	ext2 ext3 ext4
	SUSE Linux Enterprise Server 10.x	ext2 ext3
	SUSE Linux Enterprise Server 11.x	ext2 ext3
	openSUSE 10.2	ext2 ext3
	openSUSE 11.x	ext2 ext3 ext4

The following is a list of additional requirements necessary for Optimizer to successfully resize the storage on virtual machines:

- Common requirements:
  - vCenter 5.0 or later

  - Target VM should be powered ON
  - No snapshots
  - VMware tools should be installed and running
  - CD-ROM exists on VM
  - GUID Partition Table (GPT) is not supported
  - Routing is done between appliance and VM
  - No multiple network cards on VM
  - VMs with IDE disks are not supported
  - VMs with iSCSI mapped volumes are not supported
  - VMs with SCSI bus sharing are not supported
- MS Windows requirements:
  - File and Printer Sharing should be enabled
  - The Administrative Shares should be enabled
  - No dynamic disks
  - No partition as a Folder
  - TCP 445 port should be opened
- Linux requirements
  - Grub loader (grub 2 is not supported)
  - No disks in volume group (LVM)
  - SSH enabled

Installing as a VMware Virtual Machine

Installing the VMware virtual machine involves downloading the virtual appliance, and then deploying it to your VMware environment using the VMware Deploy OVF Template option.

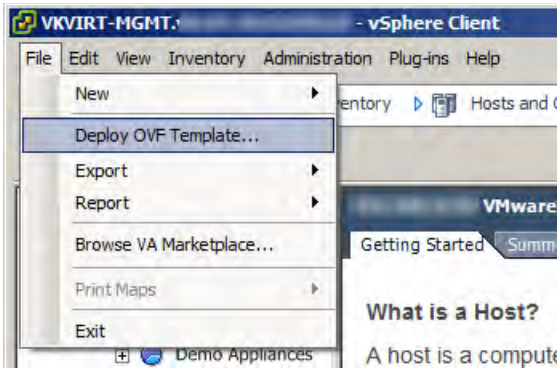
Note This procedure contains instructions for deploying the virtual appliance using the Deploy OVF Template Wizard. For complete information about this wizard and other vSphere Client features, see your vSphere Client documentation.

To download and deploy the Foglight for Virtualization, Standard Edition virtual appliance:

1. Download the VMware version of Foglight for Virtualization, Standard Edition from the following location:

   http://www.quest.com/foglight-for-virtualization-standard-edition/

2. Unzip the compressed (*.zip)* file to a Windows server or workstation. The zipped file contains the OVF file, three VMDK files, the Hyper-V Collector directory, a Read Me file, the end user license agreement, and the user documentation.
3. Open the VMware vSphere Client and click **File > Deploy OVF Template**.



The Deploy OVF wizard appears.

4 Click **Browse** to navigate to the location of the extracted OVF file and select it.

Click **Next**.

5 On the OVF Template Details page, verify the Product and Version number.

Click **Next**.

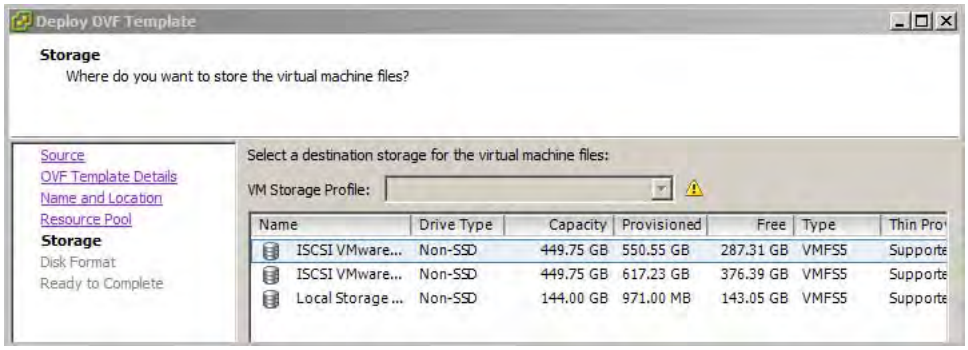
6 On the Name and Location page, type a name for the virtual machine, and select a destination folder.

Click **Next**.

7 On the Resource Pool page, select a location within the infrastructure hierarchy.

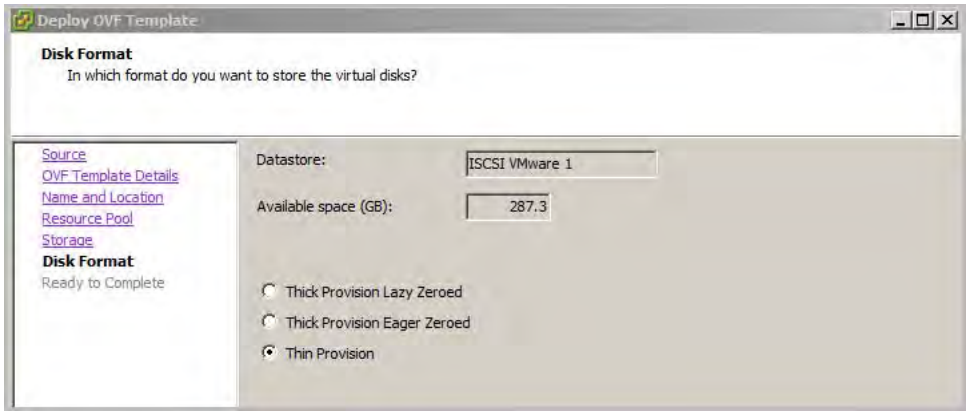
Click **Next**.

8 On the Storage page, select the datastore that the VM will reside within.



Click **Next**.

9 On the Disk Format page, select the type of datastore provisioning.



Click **Next**.

10 Review the deployment settings and click **Finish**.

Powering On and Initializing the Virtual Machine

After installing the OVF, you must power on, and initialize the virtual machine.

Open vCenter, select the Foglight for Virtualization, Standard Edition virtual machine you just installed, and click **Power on the virtual machine**.

Once the appliance is started, it initializes the operating system, and starts Foglight for Virtualization, Standard Edition. The DHCP server automatically obtains the IP address. By default, `Pool.ntp.org` is used as the Network Time Protocol (NTP) server. These options can be changed after Foglight for Virtualization, Standard Edition has started successfully.

Wait until the IP address of Foglight for Virtualization, Standard Edition appears in the vCenter Summary tab. After the IP address appears, it will take several more minutes to start the application server. Once that is completed, you can access Foglight for Virtualization, Standard Edition using the IP address and a standard Web browser.

If there is no DHCP server available, you must manually enter the IP address before proceeding with the configuration steps below. Open a console window and respond to the questions about the IP address and the network time server.

Setting a Static IP Address or Changing the Network Time Server

1 Open a VI Client console window and log in as `root`, with `password` for the password.

2 Change the directory to: `/usr/local/vkernel/scripts`.

3 Run the `changeIp.sh` script. Follow the prompts to set the desired IP address and network time server.

Once that is completed, you can access Foglight for Virtualization, Standard Edition using the IP address and a standard Web browser.

Installing as a Microsoft Hyper-V Virtual Machine

Foglight for Virtualization, Standard Edition is delivered as a fully configured Hyper-V virtual machine that can be installed directly using the Microsoft Hyper-V Manager.

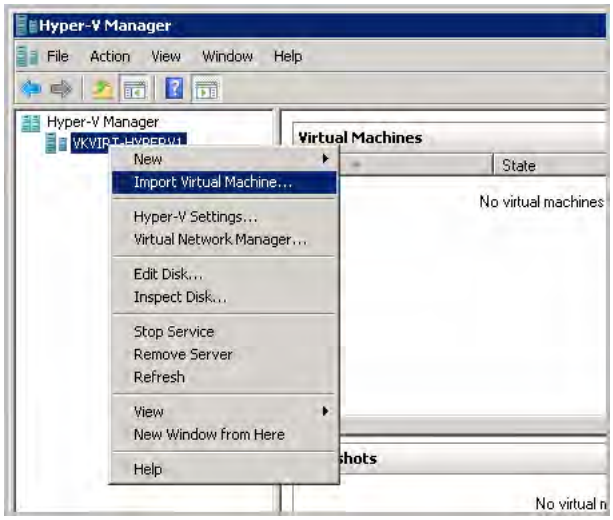
To download and install Foglight for Virtualization, Standard Edition:

1. Download the Microsoft Hyper-V version of Foglight for Virtualization, Standard Edition from the following location:

   http://www.quest.com/foglight-for-virtualization-standard-edition/

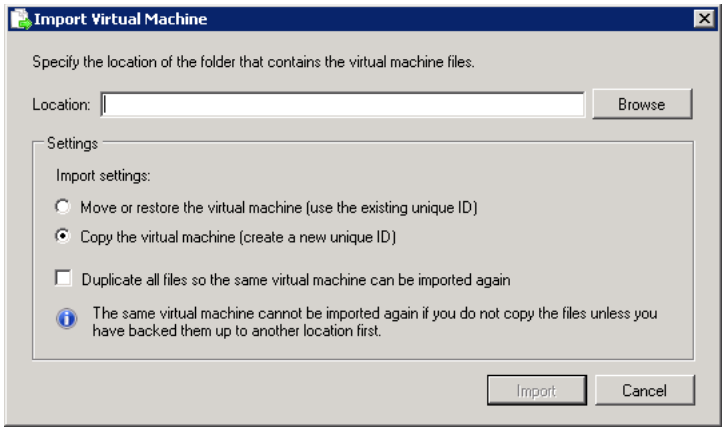
2. Unzip the compressed file (*.zip)* to a Windows server or workstation. The zipped file contains the required VHD directories, the Hyper-V Collector directory, a Read Me file, the end user license agreement, and the user documentation.

3. Open the Microsoft Hyper-V Manager, right-click on the desired Hyper-V host and select **Import Virtual Machine**. Refer to the Microsoft documentation for more information on running the Hyper-V Manager.



   The Import Virtual Machine dialog appears.

4. Select **Copy the virtual machine (create a new unique ID).**



5 Click **Browse** to browse to and select the location of the extracted VHD directories.

6 In the Import Virtual Machine dialog box, click **Import**.

The virtual machine is imported and appears in the list of virtual machines for the host.

7 Right-click the Foglight for Virtualization, Standard Edition virtual machine and select **Settings**.

8 In the left pane, select the Network Adapter.

9 In the right pane, specify the appropriate network adapter configuration information.

10 Click **OK**.

Powering On and Initializing the Virtual Machine

Open the Hyper-V Manager, select the Foglight for Virtualization, Standard Edition virtual machine you just installed and click **Start**.

Once the appliance is started, it initializes the operating system and starts Foglight for Virtualization, Standard Edition. The IP address is obtained from the DHCP server automatically. By default, `Pool.ntp.org` is used as the Network Time Protocol (NTP) server. These options can be changed after Foglight for Virtualization, Standard Edition has started successfully.

Once the virtual machine is running, right-click on the Foglight for Virtualization, Standard Edition virtual machine and click **Connect**.

1 The console opens. Log in as `root`, with `password` for the password.

2 Run the `ifconfig` command.

3 Access Foglight for Virtualization, Standard Edition using the IP address (`inet addr:`) and a standard Web browser.

If there is no DHCP server available, you must manually enter the IP address before Foglight for Virtualization, Standard Edition will be usable. Respond to the questions about the IP address and the network time server.

Setting a Static IP Address or Changing the Network Time Server

1. Open the Hyper-V Manager and connect to the virtual machine.
2. Log in as `root` with `password` for the password.
3. Change the directory to: `/usr/local/vkernel/scripts`.
4. Run the `changeIp.sh` script. Follow the prompts to set the desired IP address and network time server.

After you complete these steps, you can access Foglight for Virtualization, Standard Edition using the IP address and a standard Web browser.

Installing as a Red Hat Enterprise Virtualization Machine

Foglight for Virtualization, Standard Edition is delivered as a fully configured Red Hat Enterprise Virtualization (RHEV) machine. It is installed directly using the RHEVM.

To download and install Foglight for Virtualization, Standard Edition and the rhevm-image-uploader:

1. Download the Red Hat virtual machine for Foglight for Virtualization, Standard Edition from the following location:

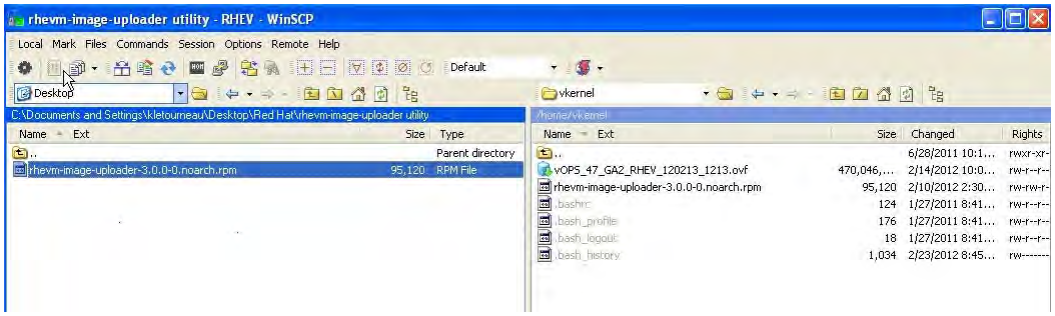
   http://www.quest.com/foglight-for-virtualization-standard-edition/
2. Save the Open Virtualization Format file (*.ovf*) to a Windows server or workstation.
3. Red Hat provides a utility named *rhevm-image-uploader* that allows you to upload and import the appliance into an RHEV system. You must first install the *rhevm-image-uploader*, which can be found on the Red Hat Network, at the following location:

   http://rhn.redhat.com/errata/RHEA-2012-0118.html
4. Downloaded the *rhevm-image-uploader* and transfer it to the RHEVM server using a utility such as *WinSCP*.

   a. Connect to the RHEVM server with an account you have previously created.

   WinSCP opens to your account's home directory.

   b. Drag and drop the *rhevm-image-uploader* into the user directory on the right.



5 After the package has been copied to the RHEVM server, log onto the console as `root`, change to the user directory of the account you used in the previous step, and run the following command:

```
#yum locallinstall rhevm-image-uploader-3.0.0_0000-0.noarch.rpm
```

Substitute the current package number and version in place of `3.0.0_0000-0`.

6 After the utility has been installed, edit the file */etc/rhevm/imageuploader.conf* and set the correct values for `user`, `passwd`, and `rhevm`.

Using Red Hat Enterprise Virtualization Manager Reports

The Red Hat Enterprise Virtualization Manager Reports functionality depends on the presence of the history database, which is installed separately. Both the history database and the Red Hat Enterprise Virtualization Manager Reports are optional components. They are not installed by default when you install the Red Hat Enterprise Virtualization Manager.

Installing Required Packages

Use `yum` to initiate installation of the `rhevm-reports-dwh` package, or the `rhevm-reports` package if you also intend to install Red Hat Enterprise Virtualization Manager Reports. You must run this command as the root user on the system hosting the Red Hat Enterprise Virtualization Manager.

To install both the data warehouse package and the Red Hat Enterprise Virtualization Manager Reports package, run the following command:

```
# yum install rhevm-reports
```

Confirming Package Installation

The required packages are downloaded. After all the packages have been downloaded they are listed for review. You are prompted to confirm that you want to continue with the installation. Confirm the operation. `Yum` installs the packages. Some further configuration is required before the reports functionality can be used.

Configuring History Database

You need to use the `rhevm-dwh-setup` command to configure the Extract, Transform, and Load (ETL) process, and the database scripts used to create and maintain a working history database.

You must run this command as the root user on the system hosting the Red Hat Enterprise Virtualization Manager.

```
# rhevm-dwh-setup
```

For the history database installation to take effect it is necessary to restart the `jbossas` service. The `rhevm-dwh-setup` command prompts you to confirm whether to stop the JBoss service. Type **yes** and press **Enter**.

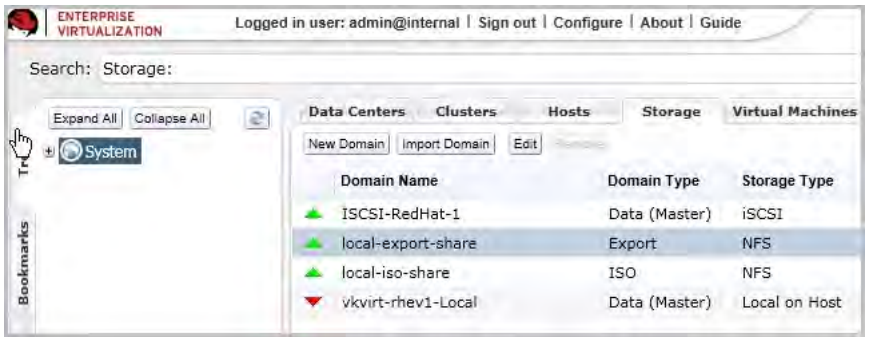
The `jbossas` service is stopped, and the `rhevm_history` database is created and configured. Finally, the `jbossas` service is restarted.

After this process is complete, the Red Hat Enterprise Virtualization Manager is configured to log information to the `rhevm_history` database for reporting purposes. The `rhevm_history` database is required by Foglight for Virtualization, Standard Edition for the collection of performance metrics.

Note The `rhevm-etl` service must be running for this collection to occur.

Selecting the RHEV Export Domain

The next step is to determine which export domain to use. The `rhevm-image-uploader` utility needs the name of an RHEV export domain to upload the appliance to. You can use the RHEVM admin interface to learn which export domains are currently available, or to configure a new one in case no export domain is available yet.



After the utility is installed and configured, and you have identified the export domain, importing the appliance is a three-step process.

To import the appliance:

1. Upload the appliance into the export domain with the `rhevm-image-uploader` utility. From the RHEVM, run the command:

   `#rhevm-image-uploader -e <export domain> --name <name> upload <filename.ovf>`

   where <*export domain*> is the name of the export domain, and <*name*> is the VM that you want to create from this appliance.

2. Create a VM from the appliance in the export domain.
   a. Open the RHEV admin interface and select the **Storage** tab.
   b. Locate and select the export domain from step 1, and click **Import**.
   c. Click **OK** on the confirmation dialog box. The import operation starts and runs in the background.

3. Attach the VM to the *rhevm* network. At minimum, the appliance needs access to the *rhevm* management network.

   The `rhevm-image-uploader` utility does not create any network interfaces. Therefore, you must manually create a network interface and add it to the *rhevm* network.

   a. In the RHEV admin interface, click the **Virtual Machines** tab.

b Locate and select the virtual machine created in step 2.

c Click **Network Interfaces**, then click **New**.

d Use the default values provided and click **OK**.

Powering On and Initializing the Virtual Machine

Right-click on the Virtual Machine and click **Run**.

Setting a Static IP Address or Changing the Network Time Server

1. Right-click on the VM and select **Console**.
2. Log in as `root` with `password` for the password.
3. Change the directory to: `/usr/local/vkernel/scripts` and run the *changeIp.sh* script. Follow the prompts to set the desired IP address and network time server.

Connecting to the RHEVM Postgres Database Remotely

Remote access to postgres SQL database needs to be configured.

To configure remote access from the console of the RHEVM server:

1. Allow remote host to connect:

   ```
   #vim /var/lib/pgsql/data/pg_hba.conf
   ```

   Add the remote host (or network) and set to `trust` level of access.

   For example: hostallall192.168.16.0/24trust

2. Configure postgres to listen on all addresses:

   ```
   #vim /var/lib/pgsql/data/postgres.conf
   ```

   Edit the `listen_address` value, and remove the preceding `#`:

   ```
   listen_address = '*'
   ```

3. Restart postgres.

   ```
   #service postgresql restart
   ```

Configuring the Foglight for Virtualization, Standard Edition

To begin using Foglight for Virtualization, Standard Edition, open a standard Web browser (Mozilla Firefox or Microsoft Internet Explorer, with Adobe Flash 10 or later, are recommended) and type the IP address of the Foglight for Virtualization, Standard Edition virtual machine.

The page loads and request a username and password. The default username is `foglight` and the default password is `foglight`.

License Agreement

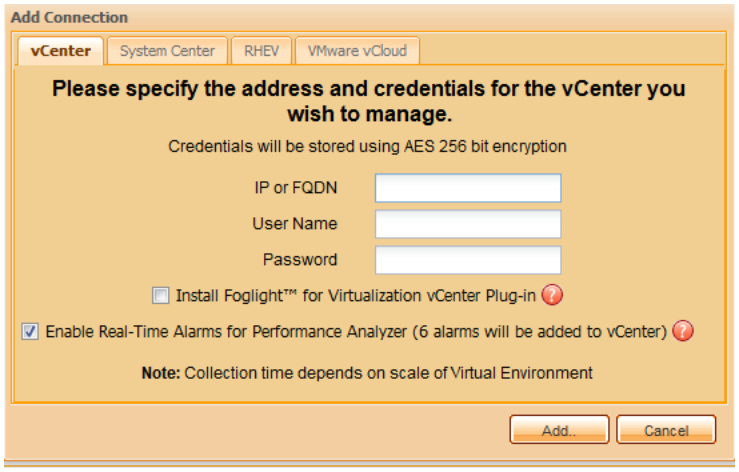
Read the license agreement and then click **Accept Agreement** to proceed.

Connection Management

The environment connection screen appears and the Add Connection dialog box opens. You must have at least one connection to complete the configuration.

VMware Connection

1 On the Add Connection dialog box, click the **vCenter** tab.



2 Type the IP address or FQDN and the credentials for the system.

For vCenter, credentials should have Read-Only, Browse Datastore, and Datastore DeleteFile permissions for the entire environment. If you are using the automated feature for implementing recommendations, the appropriate permissions are required.

The credentials used for the vCenter where the Foglight for Virtualization, Standard Edition appliance is installed must also have Virtual Machine State permissions in order for the appliance to be updated automatically.

3 Foglight for Virtualization, Standard Edition can be accessed and used from within vCenter using a vKernel plug-in. Select the **Install Foglight for Virtualization vCenter Plug-in** check box if you want theFoglight for Virtualization, Standard Edition plug-in installed in vCenter.

Note If the virtual infrastructure client is open during this process, it must be closed and reopened in order for the plug-in to become visible.

4 The Foglight for Virtualization, Standard Edition Performance Analyzer uses vCenter alarms for real-time monitoring of the state of the virtual environment.

Note Six specific vKernel utilization alarms must be installed in vCenter in order to provide the real-time functionality. The vCenter credentials must have Alarm permissions in order to create the alarms. Leave the **Enable Real-Time Alarms for Performance Analyzer** box checked if you want to use the real-time analysis capability of Performance Analyzer. If you leave the box checked, the alarms are installed automatically.

5 After a connection is established, the overall configuration can be completed.

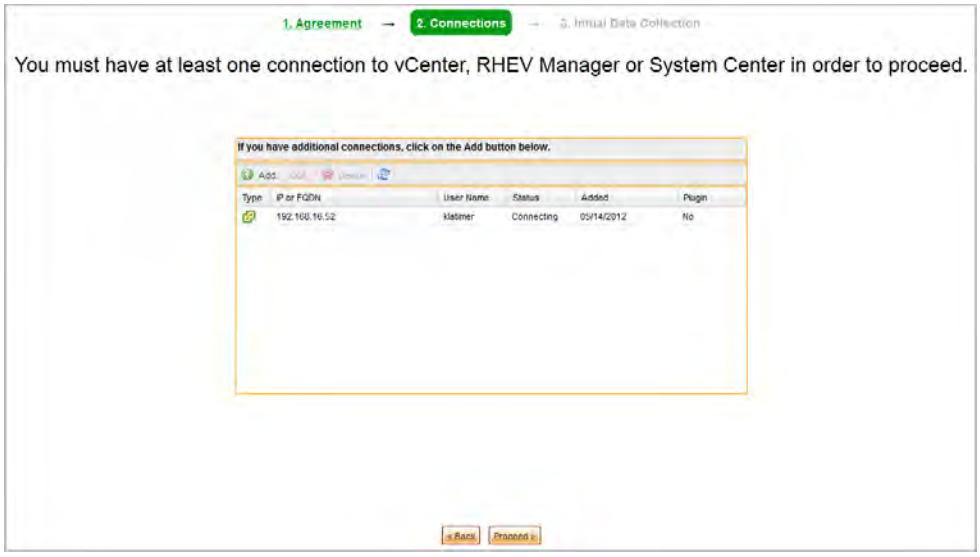
6 Click **Finish Setup**.

Microsoft System Center Connection

1 Select the **System Center** tab on the Add Connection dialog box.

2 To establish the Microsoft Hyper-V connection, the Foglight for Virtualization Hyper-V Collector must be installed, as described in “Installing and Configuring the Foglight for Virtualization Hyper-V Collector” on page 29.

After the Foglight for Virtualization Hyper-V Collector is installed and configured, it appears in the connection list and the overall configuration can be completed.



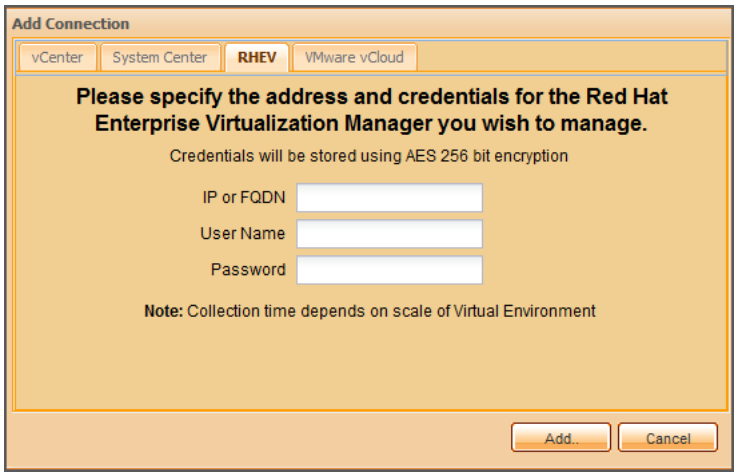
3 Click **Proceed**.

The appliance collects all the required virtual environment information. Depending on the size of the virtual environment, this can take anywhere from fifteen minutes to several hours.

RHEV Connection

1 On the Add Connection dialog box, click the **RHEV** tab.

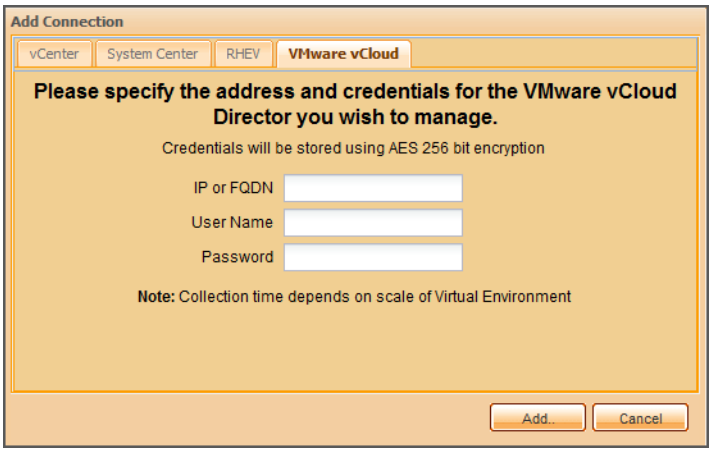
2 Configure the Red Hat connection with the IP address or FQDN of the RHEVM server. Provide the credentials for an account with SuperUser rights to the RHEVM application.



3 Click **Add**.

VMware vCloud Connection

1 On the Add Connection dialog box, click the **VMware vCloud** tab.



2 Type the IP address or FQDN and the credentials for the system.

For VMware vCloud, credentials should have Read-Only and Browse Datastore permissions for the entire environment. If you are using the automated feature for implementing recommendations, the appropriate permissions are required.

The credentials used for the VMware vCloud where the Foglight for Virtualization, Standard Edition appliance is installed must also have Virtual Machine State permissions in order for the appliance to be updated automatically.

3 Foglight for Virtualization, Standard Edition can be accessed and used from within VMware vCloud using a vKernel plug-in. Select the **Install Foglight for Virtualization vCenter Plug-in** check box if you want the vKernel plug-in installed in VMware vCloud.

Note If the virtual infrastructure client is open during this process, it must be closed and reopened in order for the vKernel plug-in to become visible.

4 The Foglight for Virtualization, Standard Edition Performance Analyzer uses vCloud alarms for real-time monitoring of the state of the virtual environment.

Note Six specific vKernel utilization alarms must be installed in vCloud in order to provide the real-time functionality. The vCenter credentials must have Alarm permissions in order to create the alarms. Leave the **Enable Real-Time Alarms for Performance Analyzer** box checked if you want to use the real-time analysis capability of Performance Analyzer. If you leave the box checked, the alarms are installed automatically.

5 After a connection is established, the overall configuration can be completed.

6 Click **Finish Setup**.

Initial Data Collection

After the appliance is configured, it collects all of the required virtual environment information. Click **OK** to continue.

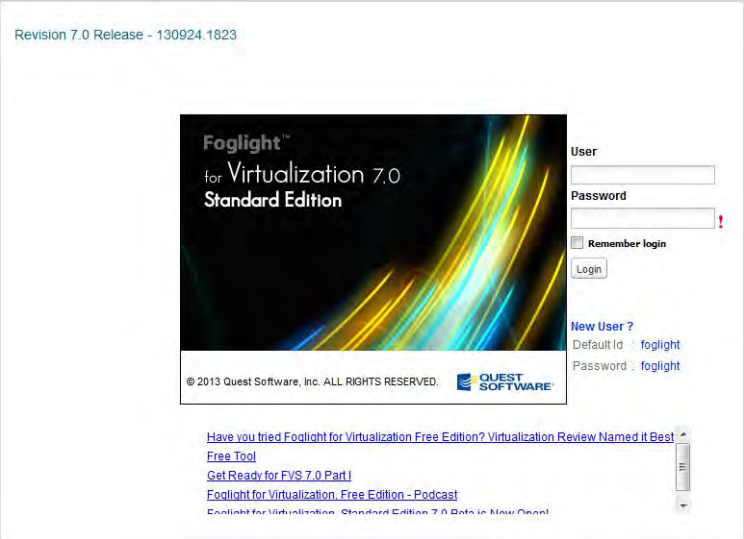
After the databases have been initialized, you are prompted to login to Foglight for Virtualization, Standard Edition.

Logging in to Foglight for Virtualization, Standard Edition

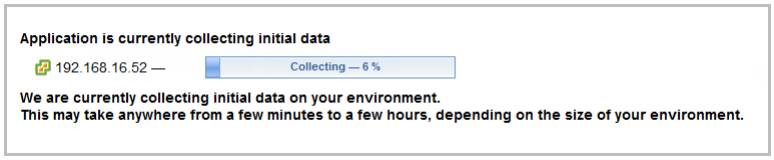
This section describes how to log in to Foglight for Virtualization, Standard Edition.

To log in to Foglight for Virtualization, Standard Edition:

1. Open a standard Web browser (for example, Mozilla Firefox, Microsoft Internet Explorer, or Chrome with Adobe Flash 10 or later).
2. Navigate to the IP address of the Foglight for Virtualization, Standard Edition virtual machine.
3. Enter your username and password in the LOG IN page. The default username is `foglight` and the default password is `foglight`.



If the appliance has recently been configured, it may still be collecting the required virtual environment information. Depending on the size of the virtual environment, this can take anywhere from fifteen minutes to several hours.



After the initial collection is complete, a Welcome dialog box appears.

4 Click **OK**.

The Get Started dashboard appears. This dashboard is the default view that you see when you log in to Foglight for Virtualization, Standard Edition. For more information on the Get Started dashboard and the other dashboards that are available, see the *Foglight for Virtualization, Standard Edition User Guide*.

Managing Licenses

When you click any top level tab other than Dashboard, the **Request a License** dialog box opens and prompts you to license the module you are trying to access.

Note A 30-day free trial of the complete Foglight for Virtualization, Standard Edition is available.

Select either **Trial License** or **Purchased License** and click **Next**.

For more information, see either Activating a Trial License or Activating a Purchased License.

Activating a Trial License

After the initial configuration, when you click any top level tab other than Dashboard, the Request a License dialog box opens and prompts you to license the module you are trying to access.

Note Internet access is required to complete this procedure.

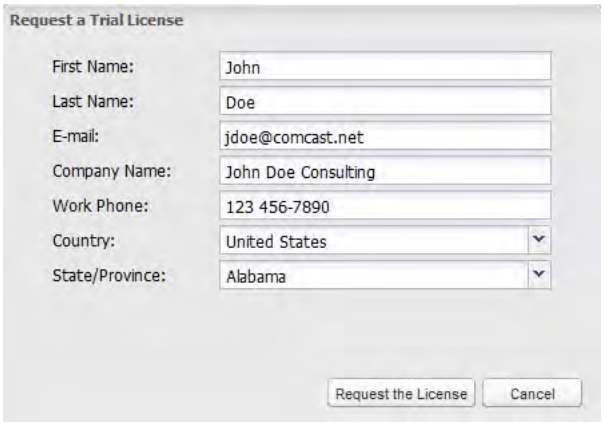
To activate a trial license:

1. Click a top level tab other than Dashboard.

   The Request a License dialog box opens.

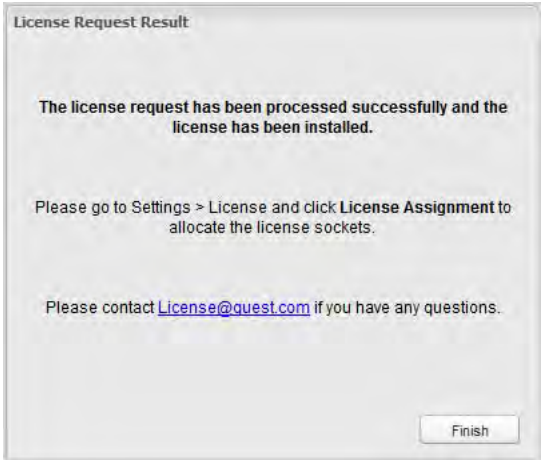
2. Select **Trial License** and click **Next**.

   The Request a Trial License dialog box opens.



3. Type the required information, and click **Request the License**.

   Your trial license is processed and installed immediately.



4. Click **Finish** to begin using Foglight for Virtualization, Standard Edition.

To allocate socket licenses, see “Allocating Socket Licenses” on page 27.

Activating a Purchased License

After the initial configuration, when you click any top level tab other than Dashboard, the Request a License dialog box opens and prompts you to license the module you are trying to access.

Note Internet access is required to complete this procedure.

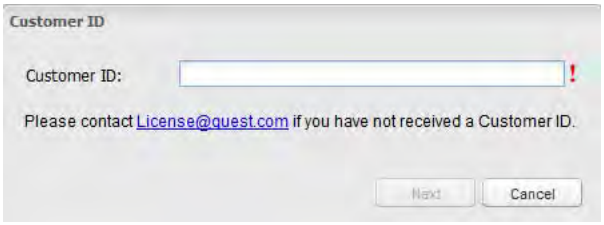
To activate a purchased license:

1. Click a top level tab other than Dashboard.

   The Request a License dialog box opens.

2. Select **Purchased License** and click **Next**.

   The Customer ID dialog box opens.



3. Type the customer ID in the box and click **Next**.

   The License Socket Count dialog box opens.

4. Review the information provided. If necessary, adjust the value in the **Total Sockets Required for This Server** box.

   For example, if you have purchased 300 sockets, but the server you are installing the license on only requires 150 sockets, type `150` in the box.

5. Click **Request the License** to submit the licensing request.

   A message box opens while the request is processed, then the results of the license request are displayed.

6. Click **Finish**.

To allocate socket licenses, see “Allocating Socket Licenses” on page 27.

Activating a Purchased License after Installing a Trial License

Alternately, if you have been using a trial license and want to add a purchased license, you can do so from the **Settings** > **License** tab.

Note Internet access is required to complete this procedure.

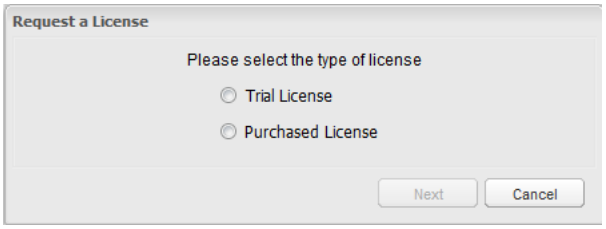
To install a purchased license:

1 Click the Configure Gear icon at the top-right corner of the browser interface to access the settings.

2 Click the **License** tab.

3 Click **Change a License**.

The Request a License dialog box opens.



4 Follow step 2 through step 6 of the procedure "To activate a purchased license:" on page 26.

Allocating Socket Licenses

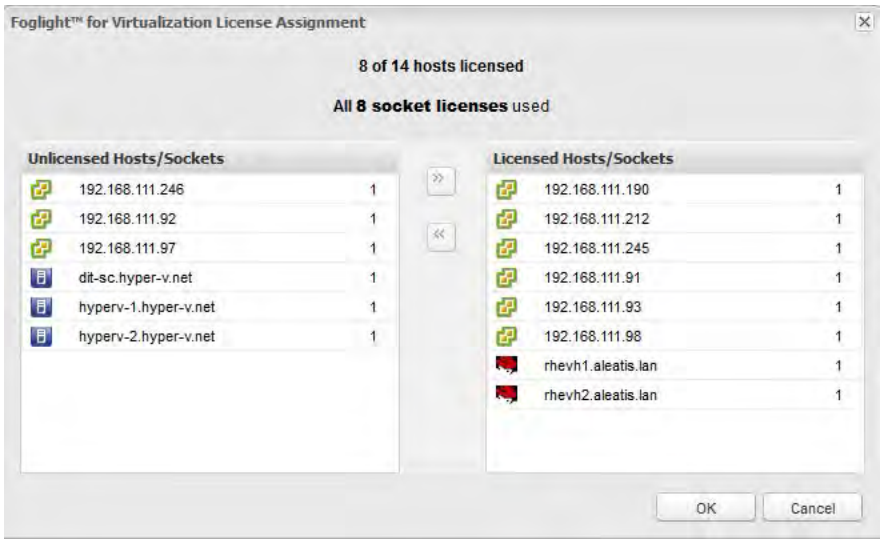
To allocate the license sockets:

1 Click the Configure Gear icon at the top-right corner of the browser interface to access the settings.

2 Click the **License** tab.

3 Click **License Assignment**.

The Foglight for Virtualization License Assignment dialog box opens.



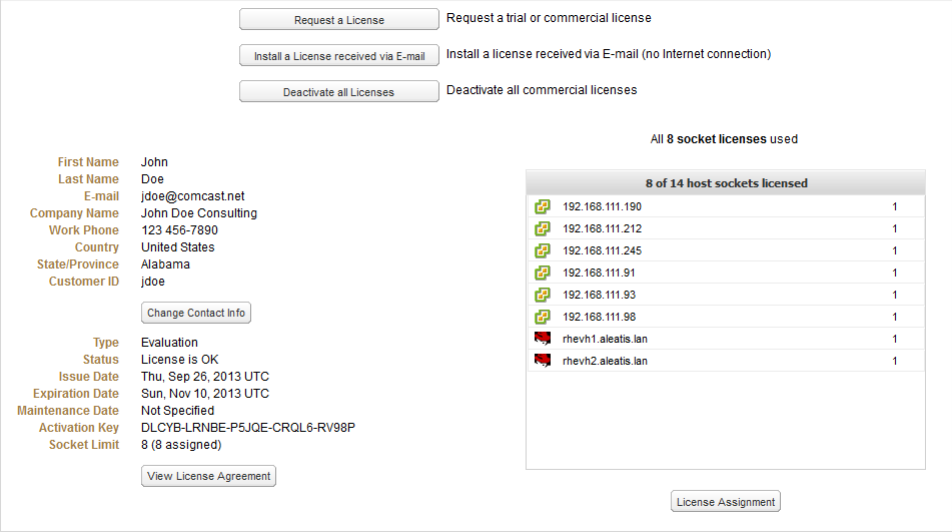
4 Select the host or socket from the Unlicensed Hosts/Sockets list on the left.

5 Click the right arrow » to move them to the Licensed Hosts/Sockets list on the right.

Note The text that indicates the number of host and socket licenses used updates automatically.

6 When finished, click **OK**.

The License tab updates to display the licensed hosts and sockets.



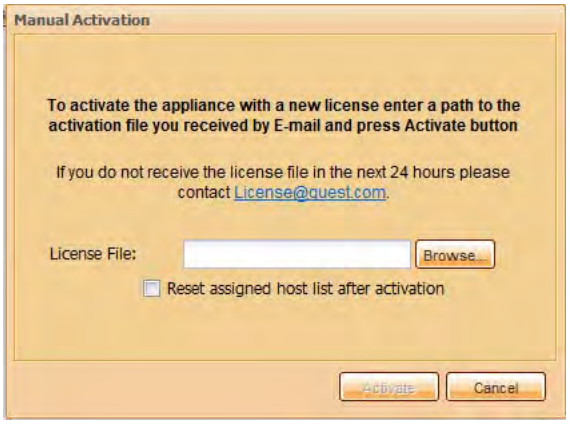
Installing a License Received by E-mail

If you have requested and received a license by e-mail, you can install that license through the **Settings > License** tab.

To install an e-mailed license:

1 On the **Settings > License** tab, click **Install License received via E-mail**.

The Manual Activation dialog box opens.



2 Click **Browse** to navigate to and select the license file you received by e-mail.

Optional — if you want to reset the list of assigned hosts when you import the license, select the **Reset assigned host list after activation** check box.

3 Click **Activate**.

Deactivating All Licenses

To deactivate all commercial licenses that have been installed on the Foglight for Virtualization, Standard Edition appliance, click **Deactivate all Licenses**. A message box opens, prompting you to confirm the action.

Installing and Configuring the Foglight for Virtualization Hyper-V Collector

To install the Foglight for Virtualization Hyper-V Collector:

1 Select the Microsoft Windows server where the Foglight for Virtualization Hyper-V Collector is to be installed.

2 Locate the *.msi* file from the Hyper-V Collector folder extracted from the **Foglight for Virtualization, Standard Edition** executable.

Note Different *.msi* files are available for SCOM 2007 and SCOM 2012.

3 Copy the *.msi* file to the selected server.

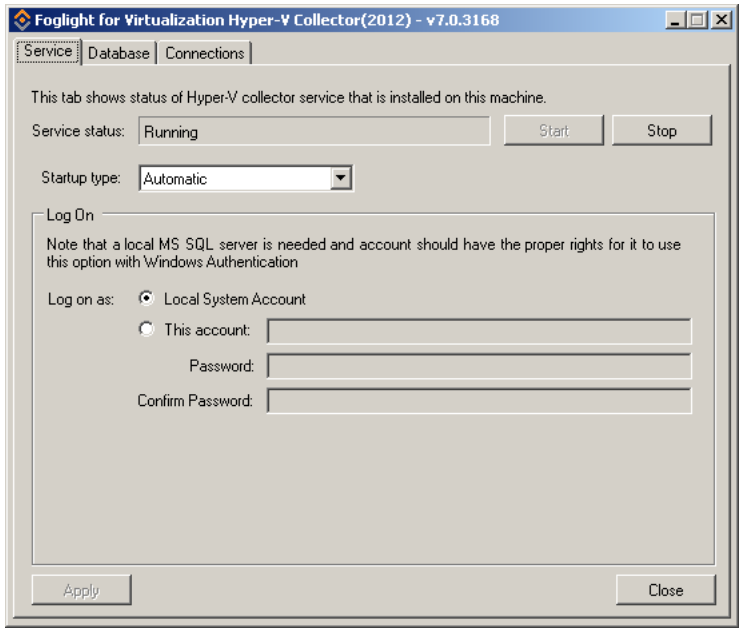
4 Double-click on the *.msi* file to install the Foglight for Virtualization Hyper-V Collector.

5 Follow the instructions provided in the setup wizard to install the Foglight for Virtualization Hyper-V Collector on the selected server.

To configure the Foglight for Virtualization Hyper-V Collector:

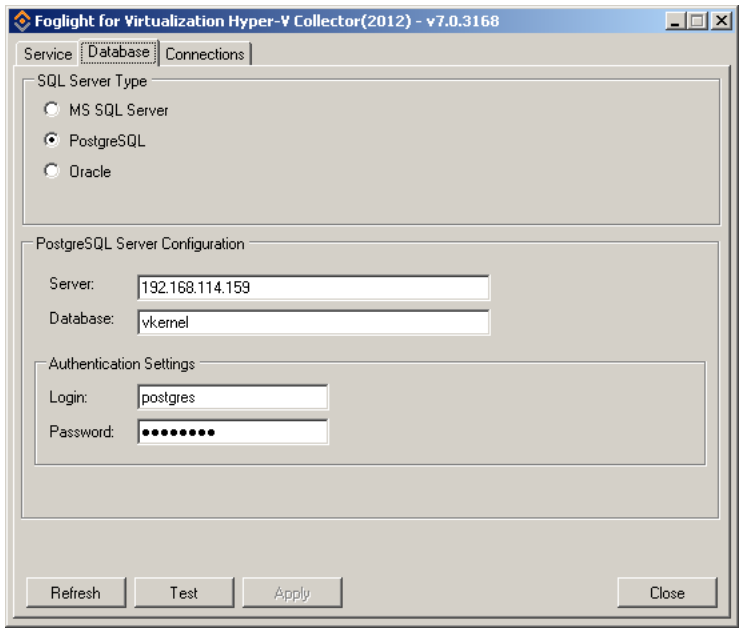
1 After installing the Foglight for Virtualization Hyper-V Collector, navigate to **All Programs > Foglight for Virtualization Hyper-V Collector** and start the collector.

The Foglight for Virtualization Hyper-V Collector dialog box opens, with the Service tab selected.



The Service tab shows the status of the Foglight for Virtualization Resource Monitor and the credentials for the service.

2 Click the **Database** tab.



The Database tab shows the Foglight for Virtualization, Standard Edition database connection information.

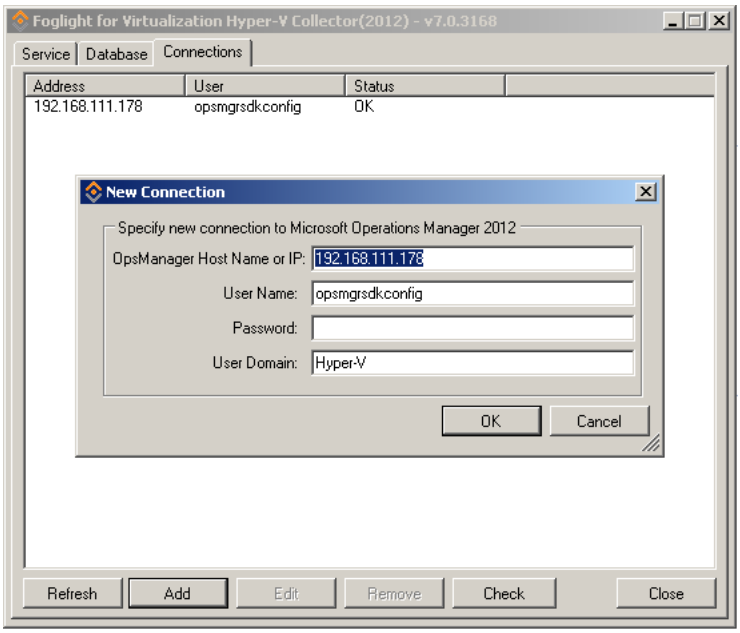
a In the **SQL Server Type** area, select the SQL Server type to be used by the Foglight for Virtualization, Standard Edition. The database can be an embedded PostgreSQL, an external Microsoft SQL, or an Oracle database.

b In the **Server Configuration** area, type the appropriate server information and credentials.

If you are using the Embedded PostgreSQL database, the Server address should be the address of the Foglight for Virtualization, Standard Edition virtual machine. For the embedded PostgreSQL database, the account and password are `postgres` and `postgres`.

3 Click **Apply**.

4 Click the **Connections** tab.



The Connections tab specifies the connection to the Systems Center Operations Manager (SCOM).

If the connection parameters were specified properly, a new connection appears on the connection list. The data collection starts immediately.

Note After adding a connection, the user is asked to confirm the installation of VKernel management packs on the SCOM.

5 Review the connection information and edit if necessary.

6 To check the connections defined in the list, click **Check**.

The Hyper-V Collector tries to open port 5724 (default interaction port for SCOM servers) for each connection in the list.

If the port cannot be opened for some connections, an error message appears, displaying all “bad” connections. Otherwise, the *Connections to SCOM servers are OK* message appears. Click **OK** to close the dialog box.

7 Click **Close**.

Note In order to successfully connect the Foglight for Virtualization Hyper-V Collector to the SCOM server, you must create the following group/users as the first step of an SCOM installation:

OpsMgrAdmins: Global Group, containing the following users:

- *OpsMgrSDKConfig*: a domain user, must be a local administrator on the server with *OpsMgr* and member of the *OpsMgrAdmins* group.
- *DWDataReader*: a domain user.
- *DWDataWriter*: a domain user.
- *OpsMgrAction*: a domain user, a local administrator on the server with OpsMgr and member of the OpsMgrAdmins group.
- *VMMService*: a domain user, a local administrator on the server with the Virtual Machine Manager (VMM).

The user specified in the Connections tab should be a member of the *OpsMgrAdmins* group.

Upgrading the Foglight for Virtualization Hyper-V Collector

There are two ways in which you can upgrade a Foglight for Virtualization Hyper-V Collector. Choose the method that best suits your needs.

Important It is important to note that both methods involve re-installing the VKernel management packs. This is a key part of the procedure when upgrading the Foglight for Virtualization Hyper-V Collector.

- **Option 1** - Remove the VKernel management packs, create a new connection, and then re-load the packs. For further details, see “Option 1” on page 32.
- **Option 2** - Import the management packs manually. For further details, see “Option 2” on page 33.

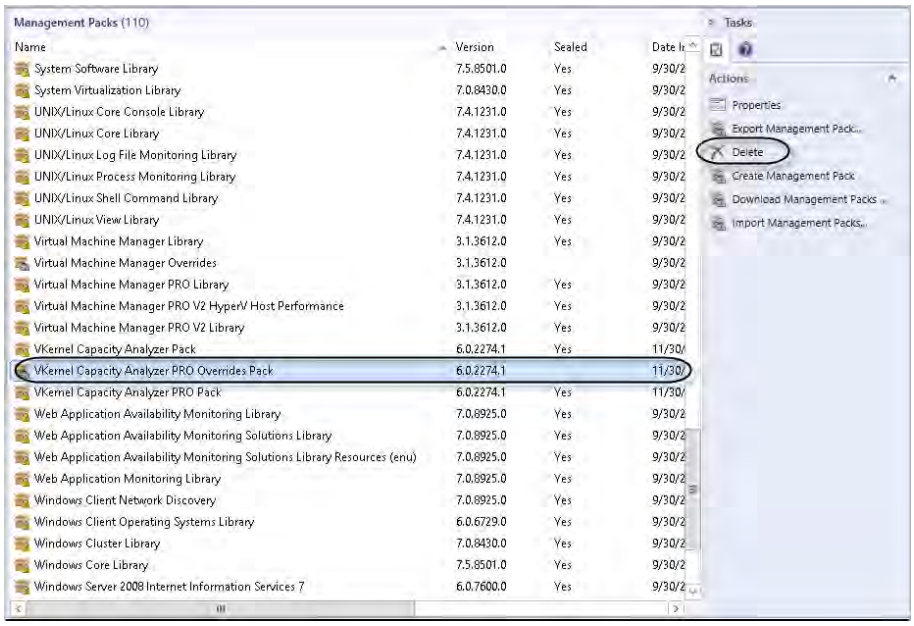
Option 1

1 Open the Systems Centre Operations Manager console and navigate to **Administration** > **Management Packs**.

There are three management packs that you will need to remove:

- VKernel Capacity Analyzer Pack
- VKernel Capacity Analyzer PRO Overrides Pack
- VKernel Capacity Analyzer PRO Pack

2 Highlight **o**ne of the three management packs and click **Delete.**



3 Click **Yes** to confirm the deletion.

4 Repeat step 2 and step 3 for the remaining two management packs.

5 Navigate to **All Programs > Foglight for Virtualization Hyper-V Collector** and start the collector.

The Foglight for Virtualization Hyper-V Collector dialog box opens, with the Service tab selected.

6 Click the **Connections** tab.

7 Click **Add** to establish a new connection to the Systems Center Operations Manager.

You are prompted to install the three missing management packs.

8 Click **Yes** to confirm.

The management packs are imported to the Systems Center Operations Manager.

Option 2

1 Open the Systems Centre Operations Manager console and navigate to **Administration** > **Management Packs**.

2 Under the Tasks pane on the right-hand side, click **Import Management Packs**.

3 From the **Add** drop-down list, select **Add from disk**.

Because you have chosen to import management packs from a disk and not from the catalog, you are prompted to search the catalog for any dependencies the management packs may have.

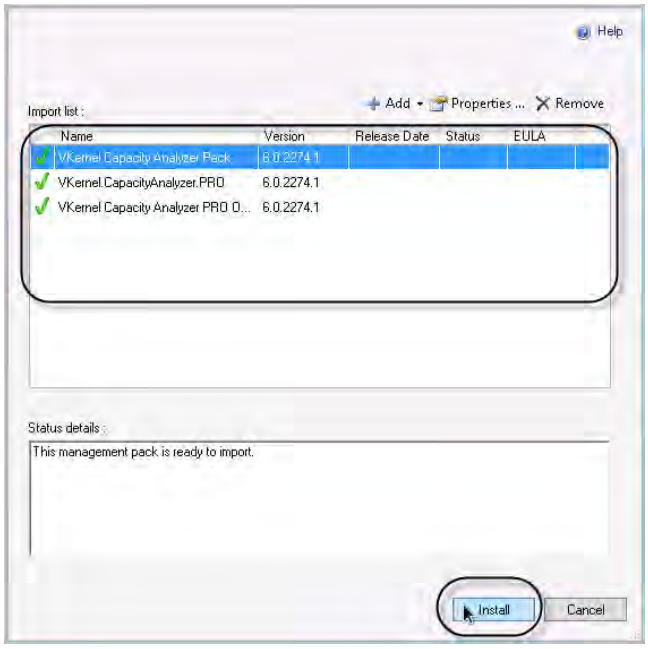
4 Click **No** to not search for dependencies.

5 Select the following three management packs and click **Open**:

- VKernel Capacity Analyzer Pack
- VKernel Capacity Analyzer PRO Overrides Pack
- VKernel Capacity Analyzer PRO Pack

The three management packs are displayed in the Import list.

6 Click **Install**.



System Center Integration

The Foglight for Virtualization Hyper-V Collector is required in order to propagate the Foglight for Virtualization, Standard Edition alarms into the Microsoft System Center Virtual Machine Manager. For more information, see “Installing as a Microsoft Hyper-V Virtual Machine” on page 13.

Next Steps

For information about how to get started with Foglight for Virtualization, Standard Edition, see the *Foglight for Virtualization, Standard Edition User Guide.*

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