vCenter Hyperic Installation and Configuration Guide

vCenter Hyperic 5.8

This document supports the version of each product listed and supports all subsequent versions until the document is replaced by a new edition. To check for more recent editions of this document, see http://www.vmware.com/support/pubs.

EN-001318-04

vmware®

You can find the most up-to-date technical documentation on the VMware Web site at:

http://www.vmware.com/support/

The VMware Web site also provides the latest product updates.

If you have comments about this documentation, submit your feedback to:

docfeedback@vmware.com

VMware, Inc.
3401 Hillview Ave.
Palo Alto, CA 94304
www.vmware.com

Contents

vCenter Hyperic Installation and Configuration Guide

The vCenter Hyperic Installation and Configuration Guide provides procedures for installing vCenter Hyperic components, including setting up the vCenter Hyperic database and installing the vCenter Hyperic server and vCenter Hyperic agents.

Intended Audience

This information is intended intended for operations personnel who set up and support the vCenter Hyperic infrastructure.

vCenter Hyperic Supported Configurations and System Requirements

1

These tables describe the supported operating systems for vCenter Hyperic server and vCenter Hyperic agent installations.

It is good practice that host operating systems employ a NTP time synchronization between the vCenter Hyperic server and vCenter Hyperic agent. If you do not use NTP, metrics are displayed according to the server time. To correlate data on the server with an agent that is not synchronized, you must calculate the time difference.

The supported operating system tables indicate whether the supported configuration is for production or development. Production support means you can run your production application on the platform.

The developer support designation indicates those products that are "known to work" and for which VMware will provide best-effort support to resolving reported issues. Developer Support certifications are not supported for use in production.

Supported Operating Systems for the vCenter Hyperic Server

The following table provides data about the operating systems that are supported for use with vCenter Hyperic.

Table 1-1. Supported Operating Systems for the vCenter Hyperic Server

Operating System	Processor Architecture	JVM	Production/Developer Support	Scaling Considerations
Pre-deployed virtual appliance (vAPP)	x86_64	Oracle Java SE 6	Production	Best configuration for environments with greater than 1000 managed platforms.
RedHat Enterprise Linux (RHEL) 5, or CentOS 5.x	x86_64	Oracle Java SE 6	Production	
RedHat Enterprise Linux (RHEL) 6	x86_64	Oracle Java SE 6	Production	For medium scale environments
SuSE Enterprise Linux (SLES) 11	x86_64	Oracle Java SE 6	Production	For medium scale environments
Microsoft Windows Server 2008	x86_64	Oracle Java SE 6	Production	For medium scale environments

On Unix-like platforms, the vCenter Hyperic server requires the `libXp.so.6 X` library to create charts and other graphics in the vCenter Hyperic user interface. The location of this library varies according to version and provider.

Provider	Comment
Enterprise Linux	From RedHat Enterprise Linux 4 and CentOS 4, `libXp.so.6` is in the `xorg-x11-deprecated-libs` RPM.
Debian	Install the `libxp6`, `libxt6`, `libxtst6`, and `libx11-6` packages.
Fedora Core 5	From Fedora Core 5, the `libXp.so` library has been separated to its own package. Install the `libXp` RPM.
Other distributions	The required libraries can be found in either the `XFree86-libs` or the `xorg-x11-libs` package.

Supported Operating Systems for the vCenter Hyperic Agent

These configurations are supported for the agent in both development and production environments.

Table 1-2. Supported Operating Systems for the vCenter Hyperic Agent

Operating System	Processor Architecture	JVM	Scaling Considerations
RedHat Enterprise Linux (RHEL) 5	x86_64, x86_32	Oracle Java SE 6	
RedHat Enterprise Linux (RHEL) 6	x86_64, x86_32	Oracle Java SE 6	
SuSE Enterprise Linux (SLES) 11	x86_64	Oracle Java SE 6	
Microsoft Windows Server 2003	x86_64, x86_32	Oracle Java SE 6	
Microsoft Windows Server 2008 R2	x86_64, x86_32	Oracle Java SE 6	
Solaris 10, or higher	x86_64, x86_32	Oracle Java SE 6	
HP-UX 11.11, or higher	PA-Risc	Oracle Java SE 6	
AIX 6.1, 7.1		IBM Java SE 6	
Ubuntu 10.11	x86_64, x86_32	Oracle Java SE 6	For development environments only.

Host Machine Requirements

The following table lists the host system requirements for the vCenter Hyperic server and the vCenter Hyperic database, and assumes that the database runs on a different host than the vCenter Hyperic server.

- vCenter Hyperic supports only one vCenter Hyperic server on a host. The host must have a static IP address for server communications.
- vCenter Hyperic supports only one vCenter Hyperic agent on a host.
- To manage more than 100 platforms, you must run the vCenter Hyperic database on a dedicated host, not that on which the vCenter Hyperic server runs.

In the Host Machine Requirements table,

- "Medium" is 50 to 500 managed platforms, or 5000-30000 managed resources.
- "Large" is 500 to 2,000 managed platforms, or greater than 30,000 managed resources.

Table 1-3. Minimum Host Machine Requirements

Resource	vCenter Hyperic Server	Required vCenter Hyperic Database
Processor	Medium: 4 or more server class CPUs, 2GHz Large: 6 or more server class CPUs, 2GHz	Medium: 4 or more server class CPUs, 2GHz Large: 6 or more server class CPUs, 2GHz
Memory	Medium: 8GB Large: 12GB	Medium: 6GB Large: 16GB
Free Disk Space	20GB	Medium: 50GB Large: 500GB

Databases Supported for vCenter Hyperic Server

The vCenter Hyperic database supports PostgreSQL or vPostgreSQL 9.1.x.

The vCenter Hyperic Server vApp includes a virtual machine with a vPostgreSQL database. The database that is installed when you run the vCenter Hyperic installer in default mode is PostgreSQL.

Supported Browsers

Hyperic supports the following browsers. Firefox is recommended.

The Skype plugin for Firefox causes unexpected behavior in the Hyperic user interface. Disable the plugin to work around this problem.

Table 1-4. Supported Browsers

Browser	Version
Firefox	11, 12
Internet Safari	7, 8, 9
Safari	5.0, 5.1
Chrome	21

Agent Server Compatibility Requirements

The vCenter Hyperic agents that report to the vCenter Hyperic server must be the same version as the server, or an earlier version than the server.

Installing and Configuring vCenter Hyperic 2

This chapter includes the following topics:

Selecting a vCenter Hyperic Installation Package

You can download vCenter Hyperic in a variety of packages. The format that you select depends on the operating system on which it will be installed, whether configuration will be automated or customized, and so on.

vCenter Hyperic installers can be downloaded from the VMware download page at http://downloads.vmware.com/. On the download page, under Application Management select **VMware vFabric Hyperic**.

The installation packages are described below. JREs are included in some packages and not others. To determine if you need to configure the location of your JRE,see "Configuring JRE Locations for vCenter Hyperic Components," on page 13.

vCenter Hyperic vApp A virtual appliance (vApp) is one or more virtual machine image files (.ovf), each with a preconfigured operating system environment and application. The vCenter Hyperic vApp contains two virtual machine images, one for the vCenter Hyperic server and one for the vCenter Hyperic database. Deploying the vCenter Hyperic vApp provides a simplified deployment in which the components are already configured to work, and to work with each other.

	The vCenter Hyperic vApp is provided as an OVA archive that contains the .ovf descriptor, .mf, and .vmdk files that are necessary to deploy the vCenter Hyperic server and vCenter Hyperic database vApps using vSphere Client. You can also create a vCenter Hyperic vApp in your virtual cloud from a vApp template, using VMware vCloud Director. For installation prerequisites and instructions, see "Install vCenter Hyperic vApp," on page 18.
vCenter Hyperic Installer	The vCenter Hyperic installer is script-based. You can do a quick install that sets up defaults for most vCenter Hyperic server configuration options, or run it in full mode to respond to the configuration dialog yourself. You can also use this installer to install the vCenter Hyperic agent.
RHEL RPMs	RPMs are available. The vCenter Hyperic server RPM is the standard vCenter Hyperic installer, wrapped in an Expect script.

Download vCenter Hyperic

You can download vCenter Hyperic in a variety of packages. The format that you select depends on the operating system on which it will be installed, whether configuration will be automated or customized, and so on.

vCenter Hyperic installers can be downloaded from the VMware download page at http://downloads.vmware.com/. On the download page, under Application Management select **VMware vFabric Hyperic**.

Prerequisites

Review the available download packages to select the one that is most appropriate for your requirements. See "Selecting a vCenter Hyperic Installation Package," on page 11.

Verify that you have the necessary system requirements to install the package that you download. See Chapter 1, "vCenter Hyperic Supported Configurations and System Requirements," on page 7

Procedure

1 On the Download VMware vCenter Hyperic 5.8 page, select the product to download and click **View Download**.

2 Select the installer package file to download and click **Download Manager**.

3 Log in to My VMware.

4 Accept the license agreement.

5 Begin the download process.

   a (Optional) Click the **Download Manager** link to open the Download Manger utility.

   The Download Manger allows you to pause and resume downloads of large file sets, as long as the utility remains running.

   b (Optional) Click **Download Now** and run or save the installer file.

Configuring JRE Locations for vCenter Hyperic Components

Both the vCenter Hyperic server and vCenter Hyperic agents require a JRE. The platform-specific vCenter Hyperic installers include a JRE. Platform-independent vCenter Hyperic installers do not include a JRE.

Depending on your environment and the installation package you use, you might need to define the location of the JRE for the server or your agents. The following table shows when you need to configure the locations of the JRE for your server or agents.

Table 2-1. vCenter Hyperic Installations that Require JRE Location Configuration

Installation Package	JRE Location Configuration Required
Platform-specific server or agent installation on a machine that has its own JRE that you want to use	Location configuration required
Platform-independent server or agent installation	Location configuration required
Agent installation from an RPM	Location configuration required

How the vCenter Hyperic Agent Resolves its JRE

The vCenter Hyperic agent resolves its JRE based on platform type.

On UNIX-like platforms, the vCenter Hyperic agent resolves the JRE to use in the following order:

1 `HQ_JAVA_HOME` environment variable

2 Embedded JRE

3 `JAVA_HOME` environment variable

On Windows platforms, the vCenter Hyperic agent installer is available with or without a JRE.

You must configure the JRE location with the `HQ_JAVA_HOME` system variable if you do a platform-independent agent install on Windows, or a platform-specific install on a Windows machine that already has a JRE that you prefer to use.

On Windows platforms, the vCenter Hyperic agent resolves the JRE to use in the following order:

1 `HQ_JAVA_HOME` environment variable

2 Embedded JRE

You define a system variable from **My Computer > Properties > Advanced > Environment Variables > System Variables > New**.

Set up the vCenter Hyperic Database

Setting the vCenter Hyperic database requires you to complete a number of processes in a specific order, as described here.

You are not required to set up the database if you are deploying the vCenter Hyperic vApp or if you are going to use the embedded PostgreSQL database.

In large environments, set up the vCenter Hyperic database on a dedicated platform.

Prerequisites

Verify that you have the necessary host machine requirements for setting up the database. See Chapter 1, "vCenter Hyperic Supported Configurations and System Requirements," on page 7.

Procedure

1 Install PostgreSQL on page 14

You install PostgreSQL on RHEL 5.

2 Define Data and Log Locations on page 14

Depending on your environment, you might want to select a location other than the default for data files. For example, you might want to store data files on a volume with plenty of space for housekeeping operations.

3 Define PostgreSQL Environment Variables on page 15

As `postgres` user, you can update your `bash` configuration file.

4 Configure PostgreSQL Properties on page 15

You must configure specific properties in the `postgresql.conf` file.

5 Configure PostgreSQL Client Authentication on page 16

PostgreSQL client authentication is defined in the `pg_hba.conf` file, which contains records that specify allowed connection types, users, client IP addresses, and the authentication method.

6 Create a vCenter Hyperic Database User and Database on page 17

You must create an account that the vCenter Hyperic Server will use to connect to the vCenter Hyperic database.

Install PostgreSQL

You install PostgreSQL on RHEL 5.

You must be logged in as `root` to perform the installation.

If database initialization fails, look for error messages in `/var/lib/pgsql/9.1/pgstartup.log`.

Procedure

1 Run `wget http://yum.postgresql.org/9.1/redhat/rhel-5-x86_64/pgdg-redhat91-9.1-5.noarch.rpm` to download a 9.1 PostgreSQL RPM from the PostgreSQL yum repository.

2 Run `yum install pgdg-redhat91-9.1-5.noarch.rpm` to install the RPM.

3 Run `yum install postgresql91-server postgresql91-contrib` to install the PostgreSQL server and `contrib` modules.

4 Run `service postgresql-9.1 initdb` to initialize PostgreSQL.

The `initdb` command creates the directories to contain database information, generates shared catalog tables, and creates the `template1` and `postgres` databases. New databases that you create are based on the `template1` database. The `postgres` database is a default database for use by all users, utilities and third party applications.

What to do next

Define data and log locations. See "Define Data and Log Locations," on page 14.

Define Data and Log Locations

Depending on your environment, you might want to select a location other than the default for data files. For example, you might want to store data files on a volume with plenty of space for housekeeping operations.

In this procedure, you replace `PathToPreferredDisk` with the path to a disk location that has the optimal space and throughput.

Procedure

1 Run `/usr/pgsql-9.1/bin/pg_ctl -D /var/lib/pgsql/9.1/data -l ~/logs/logfile stop -m fast` to stop PostgreSQL.

2 Run `Export $PGDATA PathToPreferredDisk/data` to set the *$PGDATA* environment variable to point to the required location.

3 Run `mkdir -p PathToPreferredDisk` to create a directory on the required volume.

4 Run `mv /var/lib/psql/9.1/data PathToPreferredDisk` to move the data files to the new location.

5 Run `/usr/pgsql-9.1/bin/pg_ctl -D $PGDATA -l $PGDATA/pg_log/logfile start` to restart PostgreSQL.

What to do next

Define the PostgreSQL environment variables. See "Define PostgreSQL Environment Variables," on page 15

Define Data and Log Locations when the I/O Device is Saturated

Depending on your environment, you might select a location other than the default for data files. For example, you might choose to store data files on a volume with plenty of space for housekeeping operations. In the event that your I/O device is saturated, the procedure that you use differs from the usual process.

If you do not have an I/O device that is saturated, use the process described in "Define Data and Log Locations," on page 14.

Procedure

1 Run `/usr/pgsql-9.1/bin/pg_ctl stop -m fast` to stop PostgreSQL.

2 Run `mv PathToPreferredDisk/data/pg_xlog /var/tmp/` to move the logs.

3 Run `ln -s /var/tmp/pg_xlog PathToPreferredDisk/data/pg_xlog` to create a symbolic link to the new location of the `pg_xlog` .

4 Run `/usr/pgsql-9.1/bin/pg_ctl -D $PGDATA -l $PGDATA/pg_log/logfile start` to restart PostgreSQL.

What to do next

Define the PostgreSQL environment variables. See "Define PostgreSQL Environment Variables," on page 15

Define PostgreSQL Environment Variables

As `postgres` user, you can update your `bash` configuration file.

Procedure

- Run the command `export PGDATA="/data/pgdata" export PGHOME="PostresqlHome" export PATH="$PGHOME/bin/:$PATH"` where `PostgresqlHome` is the path to the PostgreSQL installation.

What to do next

Configure the PostgreSQL properties. See "Configure PostgreSQL Properties," on page 15.

Configure PostgreSQL Properties

You must configure specific properties in the `postgresql.conf` file.

Procedure

1 Under the `listen_addresses` property, enable database connections on all interfaces on the platform.
`listen_addresses = '*'`

2 Under the `max_connections` property, set the maximum number of connections based on the sizing profile that corresponds to the scale of your environment. Use the following values.

Value	Description
?	Small
?	Medium
500	Large

3 Under the `shared_buffers` and `effective_cache_size` property, assuming the database runs on a dedicated platform, set `shared_buffers` to 70-80% of memory, and `effective_cache_size` to 10-20%, leaving some memory available for the operating system.

For example, given 12GB of memory, `shared_buffers = 8GB` and `effective_cache_size = 2GB`.

4 Under the `checkpoint_segments` property, verify that the value on the sizing profile corresponds to the scale of your environment. Use the following values.

Value	Description
`checkpoint_segments = 3` (default)	Small
`checkpoint_segments = 3` (default)	Medium
`checkpoint_segments = 32` (default)	Large

What to do next

Configure the PostgreSQL client authentication properties. See "Configure PostgreSQL Client Authentication," on page 16.

Configure PostgreSQL Client Authentication

PostgreSQL client authentication is defined in the `pg_hba.conf` file, which contains records that specify allowed connection types, users, client IP addresses, and the authentication method.

For more information about `pg_hba.conf`, see http://www.postgresql.org/docs/9.1/static/auth-pg-hba-conf.html.

Procedure

1 In the `pg_hba.conf` file, locate the line `# TYPE DATABASE USER ADDRESS METHOD`.

2 Immediately below the located line, add `host all all 0.0.0.0/0 password`, aligning these values under the parameter names in the row above.

```
# TYPE DATABASE  USER  ADDRESS    METHOD
  host   all     all  0.0.0.0/0  password
```

You can use the address parameter to limit access to just the vCenter Hyperic server or any clients that need to query the database.

What to do next

Create a vCenter Hyperic database user and database. See "Create a vCenter Hyperic Database User and Database," on page 17.

Create a vCenter Hyperic Database User and Database

You must create an account that the vCenter Hyperic Server will use to connect to the vCenter Hyperic database.

Procedure

1 Change the user to **postgres** and run `# psql` to connect to the database locally.

2 Run `CREATE USER hqadmin WITH ENCRYPTED PASSWORD 'hqadmin'` to create a user named `hqadmin` with `login` and `createdb` privileges.

The `ENCRYPTED` keyword is optional.

3 Run `CREATE DATABASE "HQ" OWNER hqadmin ENCODING 'UTF8'` to create a default database for vCenter Hyperic.

Placing quote marks around the `HQ` string makes the database name uppercase.

What to do next

Install the vCenter Hyperic server. See "Installing and Configuring the vCenter Hyperic Server," on page 17.

Identify PostgreSQL Connection Issues

If the vCenter Hyperic server fails to start, it might be due to problems with the PostgreSQL configuration.

Check the PostgreSQL logs for connection failures or errors.

Procedure

- (Optional) Troubleshoot connection issues using the command `telnet <dbserver hostname> 5432` from the vCenter Hyperic server host.
- (Optional) If network connections to the database fail, troubleshoot the issue in PostgreSQL log files using the `UNIX® tail` command with the `–f` parameter.

  `tail –f` displays the lines at the end of a file, and additional log messages that follow to the terminal. This is useful for watching log files, or any other file that might be appended over time. Failed connection messages are written to the following files:

  - `/var/lib/pgsql/data/pg_log/postgresql–day.log`
  - `/var/lib/pgsql/pgstartup.log`
- (Optional) If thevCenter Hyperic server fails to connect to the PostgreSQL database, determine if there is a firewall issue by turning off the firewall on RHEL or CentOS and running the `/etc/init.d/iptables stop` command as root.

Installing and Configuring the vCenter Hyperic Server

You can install and configure the vCenter Hyperic Server in three different ways. You can use the vCenter Hyperic vApp, you can run the vCenter Hyperic installation script, or you can use a Windows setup wizard.

- Install vCenter Hyperic vApp on page 18

  A virtual appliance (vApp) is one or more virtual machine image files (OVF), each with a preconfigured operating system environment and application. The vCenter Hyperic vApp contains two virtual machine images, one for the vCenter Hyperic server and one for the vCenter Hyperic database.

- Deploy vCenter Hyperic vApp in a Medium or Large Scale Environment on page 20

  Use this procedure when you are deploying vCenter Hyperic vApp in a medium or large scale environment.

- Run the vCenter Hyperic Installer Setup Script on page 21

  You can make a new installation of the vCenter Hyperic server by running an installation script.

- Install vCenter Hyperic Server Using Windows Setup Wizard on page 24

  You can use a Windows setup wizard to install the vCenter Hyperic server.

- Using RPM to Install vCenter Hyperic Server on page 25

  You can use a RedHat Package Manager package to install the vCenter Hyperic server.

- Configure the vCenter Hyperic Server Properties File After Installation on page 28

  If you did not configure the vCenter Hyperic server properties before running the RPM server installer, you are prompted to do so after installation. You cannot use the server until the properties have been specified.

Install vCenter Hyperic vApp

A virtual appliance (vApp) is one or more virtual machine image files (OVF), each with a preconfigured operating system environment and application. The vCenter Hyperic vApp contains two virtual machine images, one for the vCenter Hyperic server and one for the vCenter Hyperic database.

To deploy vCenter Hyperic vApp in a large scale environment, see "Deploy vCenter Hyperic vApp in a Medium or Large Scale Environment," on page 20.

Prerequisites

- vCenter Server must be installed and running.
- vSphere Client must be installed.
- To assign fixed IP addresses to the vCenter Hyperic server and vCenter Hyperic database, which is the recommended best practice, have the list of IP addresses available when running the deployment wizard.
- If you are using an external PostgreSQL database, you must set it up before installing vCenter Hyperic server.
- To configure the vCenter Hyperic server to use a keystore that you manage yourself for SSL communication, rather than Hyperic-generated keystores, set up a JKS format keystore for the vCenter Hyperic server on its host and import the SSL certificate for it. Make a note of the full path to the keystore, and its password. You will supply this information when you run the Hyperic installer (in `-full` mode).

  The vCenter Hyperic server's keystore password and private key password must be the same, otherwise the vCenter Hyperic server's internal Tomcat-based server will be unable to start.
- Verify that the vCenter Hyperic database is available. During installation, the vCenter Hyperic server tests the database connection.

Procedure

1. Log in to vSphere Client as administrator.
2. Select **File > Deploy OVF Template**.

   The Deploy OVF Template wizard opens.

3 Proceed through the pages of the wizard, entering appropriate values. This table lists additional information to assist you to choose specific options.

Page	Change
Source	Enter the URL from which to download the Hyperic OVF file, or a disk location accessible from your computer
Name and Location	(Optional) Edit the name and select the folder location within the inventory where the vApp will reside.
Host/Cluster	Select the host or cluster on which to deploy the OVF template.
Disk Format	Select one of the following disk formats to store the virtual machine virtual disks. ■ **Thick Provision Lazy Zeroed** Creates a virtual disk in a default thick format. The space required for the virtual disk is allocated when the virtual disk is created. Data remaining on the physical device is not erased during creation, but is zeroed out on demand at a later time on first write from the virtual machine. Using the default flat virtual disk format does not zero out or eliminate the possibility of recovering deleted files or restoring old data that might be present on this allocated space. You cannot convert a flat disk to a thin disk. ■ **Thick Provision Eager Zeroed** A type of thick virtual disk that supports clustering features such as Fault Tolerance. Space required for the virtual disk is allocated at creation time. In contrast to the flat format, the data remaining on the physical device is zeroed out when the virtual disk is created. It might take much longer to create disks in this format than to create other types of disks. ■ **Thin Provision** Use this format to save storage space. For the thin disk, you provision as much datastore space as the disk would require based on the value that you enter for the disk size. However, the thin disk starts small and at first, uses only as much datastore space as the disk needs for its initial operations. f the thin disk needs more space later, it can grow to its maximum capacity and occupy the entire datastore space provisioned to it. Also, you can manually convert the thin disk into a thick disk.
Network Mapping	Right-click the **Destination Network** column in the infrastructure, to select a network and set up the network mapping.
IP Address Allocation	Select one of the following options. ■ **Fixed** A preferred option for production environments. You are prompted to enter the IP addresses in the Appliance Properties page. ■ **Transient** IP addresses are allocated from a specified range when the appliance is powered on. The IP addresses are released when the appliance is powered off. ■ **DHCP** A DHCP server is used to allocate the IP addresses.

4 Review the values that you have specified in the Ready to Complete page and optionally select **Power on after deployment**to start the server when the deployment process completes.

5 Click **Finish**.

What to do next

1 After successfully installing vCenter Hyperic server, delete `InstallerHome/logs/hq-install.log` and `hq-install.log.verbose`, or the whole the exploded installer. This is necessary to delete sensitive data that is written to the installation log files.

2 Install the vCenter Hyperic license. See "Activating and Configuring Your vCenter Hyperic License," on page 43.

3 Log in to the vCenter Hyperic vApp. See "Log in to the vCenter Hyperic vApp," on page 20.

Log in to the vCenter Hyperic vApp

The vCenter Hyperic vApp comprises two vApp machines, thevCenter Hyperic server and the vCenter Hyperic database. Log in to to both vApps.

Procedure

1 Log in to the vApp machines using **root**.

2 Enter the password that you specified during deployment of the vCenter Hyperic server Administrator account.

What to do next

Start, stop or restart the vCenter Hyperic server.

Deploy vCenter Hyperic vApp in a Medium or Large Scale Environment

Use this procedure when you are deploying vCenter Hyperic vApp in a medium or large scale environment.

Prerequisites

- Verify that you are connected to the vCenter Hyperic server virtual machine using SSH and that the server is stopped.
- Power off the database virtual machine.

Procedure

1 On the **Hardware** tab of the database Virtual Machine Properties dialog box, edit the **Provisioned Size** setting to increase the hard disk size, and click **OK**.

   - Increase the disk size to 200 GB for a medium scale environment.
   - Increase the disk size to 500 GB for a large scale environment.

   The disk size is increased.

2 (Optional) If you are unable to perform step 1 because the setting cannot be edited, complete all the other steps in this procedure.

   a Using SSH, connect to the ESX server on which the database virtual machine is installed.

   b Change the hard disk adapter type from IDE to Isilogic.

   This process changes the virtual IDE disk to a virtual SCSI disk. The procedure is described in the knowledge base at http://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=101.

   c Edit the virtual machine settings to increase the hard disk size.

      - Increase the disk size to 200 GB for a medium scale environment.
      - Increase the disk size to 500 GB for a large scale environment.

   d Power on the database virtual machine.

   e Using SSH, connect to the database virtual machine.

f Run the following commands in the order listed.

Command	Comment
`fdisk /dev/sda`	To run the fixed disk command utility.
`d`	To delete a partition.
`3`	To specify that the third partition is the partition to delete.
`n`	To add a new partition.
`p`	To specify that the partition is a primary partition.
`3`	To specify that the new partition is to be partition 3.

g Press Enter twice to define the first and last sector of the partition.

h Run the following commands in the order listed.

Command	Comment
`a`	To toggle the partition as bootable.
`3`	To specify the partition that is bootable.
`p`	(Optional) To print the partitions and verify is marked as a bootable device.
`w`	To write the table to disk and exit.
`reboot`	To initiate a full reboot of the virtual machine.

i Using SSH, reconnect to the database virtual machine.

j Run the following commands in the order listed.

Command	Comment
`resize2fs /dev/sda3`	To resize the file system.
`df –h`	To verify that the size of the file system is as you specified.

3 Using SSH, connect to the vCenter Hyperic server and start the server.

Run the vCenter Hyperic Installer Setup Script

You can make a new installation of the vCenter Hyperic server by running an installation script.

The `setup.bat` setup script for Windows and `setup.sh` setup script for UNIX-like environments is located in the vCenter Hyperic installation package. You can use the setup script to install the vCenter Hyperic server, the vCenter Hyperic agent, or both.

When you run the setup script, you can supply a qualifier that sets the installation mode:

Qualifier	
-	Run the setup script without a qualifier to perform a quick installation. Selected components will be installed with default values for most configuration options. If you install the vCenter Hyperic server, it will be configured to use its built-in vPostgreSQL database. A quick installation is useful if you are evaluating vCenter Hyperic. With a quick installation, by running the installer without a qualifier or with the `–postgresql`qualifier, the installer does not prompt you for the ports on which the vCenter Hyperic server listens for agent and user interface requests. The default ports are automatically configured. With a quick installation, you cannot specify the location and password for a user-managed server keystore. The vCenter Hyperic server uses a vCenter Hyperic-managed keystore.
`–full`	In full mode, the installer dialog prompts for all setup configuration options. Use this option if you are using an external database, or to configure the vCenter Hyperic server to use an SSL keystore that you manage yourself, rather than using a vCenter Hyperic-generated keystore. For best security and best configurability, run the installer in full mode.
`–upgrade`	Use upgrade mode to upgrade a 5.x vCenter Hyperic server to a later version. If you have an existing vCenter Hyperic server installation, the server configuration and the contents of the existing vCenter Hyperic database are preserved.
`–updateScale`	Use the updateScale option to change the sizing profile for the vCenter Hyperic server.

Run the Installer Script

This vCenter Hyperic installer script uses the `full` qualifier. It can be used to install both the vCenter Hyperic server and the agent.

If you use a different mode, some of the prompts described in this procedure will not appear. Default values will be used instead for most configuration options.

Prerequisites

- If you are using an external PostgreSQL database, you must set it up before installing vCenter Hyperic server.
- To configure the vCenter Hyperic server to use a keystore that you manage yourself for SSL communication, rather than Hyperic-generated keystores, set up a JKS format keystore for the vCenter Hyperic server on its host and import the SSL certificate for it. Make a note of the full path to the keystore, and its password. You will supply this information when you run the Hyperic installer (in `–full` mode).

  The vCenter Hyperic server's keystore password and private key password must be the same, otherwise the vCenter Hyperic server's internal Tomcat-based server will be unable to start.
- Define the server `HQ_JAVA_HOME` location.

  vCenter Hyperic platform-specific server installers include a JRE, platform-independent installers do not. Depending on your environment and the installer you use, you may need to define the location of the JRE to ensure that the server can find the JRE to use. See "Configuring JRE Locations for vCenter Hyperic Components," on page 13.
- Verify that the vCenter Hyperic database is available. During installation, the vCenter Hyperic server tests the database connection.

Procedure

1 Create a directory for the vCenter Hyperic installation.

  On Windows operating systems, the installation dialog assumes your vCenter Hyperic installation directory is `c:\Program Files`.

  On UNIX-like operating systems, the installation dialog assumes your vCenter Hyperic installation directory is `/home/hyperic`.

2 Unpack the tarball or ZIP archive.

Operating System	Description and Command
UNIX-like OS	Use GNU Tar to unpack vCenter Hyperic tarballs. `tar zxvf hyperic-hq-installer-4.x.y-xxx.tgz`
Windows OS	You must run the installer on a local drive.

3 Open a command shell where `mode` is one of the values in the table.

Operating System	Description and Command
UNIX-like OS	`PathToInstaller/setup.sh -full`
Windows OS	`PathToInstaller\setup.bat -full`

with the exception of upgrade .

4 Accept the VMware License agreement.

5 Follow the installer prompts, taking note of the following comments.

Prompt	Comment
Choose which software to install 1: Hyperic HQ Server 2: Hyperic HQ Agent	To install both the server and the agent, type **`1,2`**
HQ server installation path [default '.....']:	The account that you are running under must have write access the directory location.
Would you like us to use your own java keystore? [default '2'] 1: Yes 2: No	Type **1** to configure theserver to use a certificate you manage, rather than generate its own. If you accept the default 2, a default keystore will be generated at `ServerHome/conf/hyperic.keystore` with the password `hyperic`.
Enter the base URL for the Hyperic server's web-based GUI [default...]	This value is used in alert notification emails. The value can be changed on the Administration page in the vCenter Hyperic portal.
Enter the fully qualified domain name of the SMTP server that Hyperic will use to send email messages [default FQDN.local]	If the installer does not find a local SMTP server, and you do not specify one, Hyperic cannot send alert notifications
What is the installation profile? default '1':]	If you are using the embedded PostgreSQL database, rather than an external database (required for production environments), select the `small` sizing profile.
Override the JDBC connection URL for the PostgreSQL database [default 'jdbc:postgresql://localhost:5432/HQ?protocolVersion=2']:	Correct the URL, if necessary.
Would you like to use an auto generated encryption key to encrypt the database password? [default '1']	If you accept the default, the installer will generate a key for encrypting the database password. Type **2** to supply the string yourself and, when prompted, type a string of at least 8 characters.
If the installer detects a database from a previous Hyperic installation, it will prompt you to: **1: Upgrade the HQ server database** **2: Overwrite the HQ server database**	Type **1** to preserve your existing vCenter Hyperic data. You also need to migrate your server and database to the new version. Type **2** to erase all of the data in your vCenter Hyperic database.

6 Exit the installer.

The installer indicates that the installation was successful.The URL for the vCenter Hyperic portal and the default username and password appear.

What to do next

- After successfully installing vCenter Hyperic server, delete `InstallerHome/logs/hq-install.log` and `hq-install.log.verbose`, or the whole the exploded installer. This is necessary to delete sensitive data that is written to the installation log files.
- Integrate vCenter Hyperic with your existing enterprise directory. The vCenter Hyperic server does not include a strength-of-password policy, or a lockout policy for failed login attempts.
- Install the vCenter Hypericlicense. See GUID-2A68D03E-BBE3-465F-9711-13786819998D#GUID-2A68D03E-BBE3-465F-9711-13786819998D.

Install vCenter Hyperic Server Using Windows Setup Wizard

You can use a Windows setup wizard to install the vCenter Hyperic server.

Prerequisites

- Verify that any exisitng vCenter Hyperic Windows service is removed. See "Remove an Existing vCenter Hyperic Windows Service," on page 25.
- If you are using an external PostgreSQL database, you must set it up before installing vCenter Hyperic server.
- To configure the vCenter Hyperic server to use a keystore that you manage yourself for SSL communication, rather than Hyperic-generated keystores, set up a JKS format keystore for the vCenter Hyperic server on its host and import the SSL certificate for it. Make a note of the full path to the keystore, and its password. You will supply this information when you run the Hyperic installer (in `-full` mode).

  The vCenter Hyperic server's keystore password and private key password must be the same, otherwise the vCenter Hyperic server's internal Tomcat-based server will be unable to start.
- Define the server `HQ_JAVA_HOME` location.

  vCenter Hyperic platform-specific server installers include a JRE, platform-independent installers do not. Depending on your environment and the installer you use, you may need to define the location of the JRE to ensure that the server can find the JRE to use. See "Configuring JRE Locations for vCenter Hyperic Components," on page 13.
- Verify that the vCenter Hyperic database is available. During installation, the vCenter Hyperic server tests the database connection.

Procedure

1. In Windows Explorer, double-click the `vFabric-hyperic-hqee-server-5.x.x.exe` file.
2. Follow the prompts in the wizard.
3. Click **Finish** to complete the installation.

What to do next

1. After successfully installing vCenter Hyperic server, delete `InstallerHome/logs/hq-install.log` and `hq-install.log.verbose`, or the whole the exploded installer. This is necessary to delete sensitive data that is written to the installation log files.
2. Start the vCenter Hyperic server.

Remove an Existing vCenter Hyperic Windows Service

Before you can install a new version of vCenter Hyperic server using the Windows setup wizard, you must remove any existing Windows vCenter Hypericservice.

Prerequisites

Stop the vCenter Hyperic server by running `hq-server.bat stop`.

Procedure

- Remove the Windows service for the previous instance by running `hq-server.bat remove`.

The service is removed.

What to do next

Install vCenter Hyperic server using the Windows setup wizard. See "Install vCenter Hyperic Server Using Windows Setup Wizard," on page 24.

Using RPM to Install vCenter Hyperic Server

You can use a RedHat Package Manager package to install the vCenter Hyperic server.

Configure the vCenter Hyperic Server Properties File Before RPM Server Installation

It is good practice to configure the vCenter Hypericserver properties before you install the server using the RedHat Package Manage package.

The directory and file name in this procedure must be exactly as specified for the RPM installer to work correctly.

The vCenter Hyperic server installation settings are listed in "vCenter Hyperic Server Properties for RPM Installation," on page 26.

Procedure

1. Running as `root`, or using `sudo`, run `mkdir -p etc/vmware/vcenter/hyperic` to create a directory for the properties file.
2. Specify the server installation settings in a file named `vcenter_hyperic_server.properties`.
3. Save your changes.

What to do next

Install the vCenter Hyperic server RPM. See, "Install the vCenter Hyperic Server RPM," on page 25.

Install the vCenter Hyperic Server RPM

You can install vCenter Hyperic server from a RedHat Package Manager package.

By default, the installer configures the vCenter Hyperic server using a default properties file. You can create a customized properties file if you prefer. See "Configure the vCenter Hyperic Server Properties File Before RPM Server Installation," on page 25.

Prerequisites

Before you run the installer, verify that the following prerequisites have been satisfied.

- The database has been configured. See "Set up the vCenter Hyperic Database," on page 13.

- SSL has been configured. See "Configuring SSL Options," on page 38.
- Verify that your SMTP server is listening on port 25 on the vCenter Hyperic server host.

Procedure

1 On the platform on which the vCenter Hyperic server is being installed, run `yum install vfabric-hyperic-server`.

`yum` resolves dependencies and displays the packages to install.

2 (Optional) If this is the first time that you have installed a vCenter Hyperic component on the virtual machine, accept the end user license agreement when prompted.

3 Type **y** at the prompt to start the installation.

What to do next

1 If you are prompted to do so, configure the vCenter Hyperic server properties. See "Configure the vCenter Hyperic Server Properties File After Installation," on page 28.

2 After successfully installing vCenter Hyperic server, delete `InstallerHome/logs/hq-install.log` and `hq-install.log.verbose`, or the whole the exploded installer. This is necessary to delete sensitive data that is written to the installation log files.

vCenter Hyperic Server Properties for RPM Installation

Before installing the vCenter Hyperic server RPM package, you configure the vCenter Hyperic server properties.

This `vfabric_hyperic_server.properties` file lists the properties that can be configured for vCenter Hyperic server prior to installing the RPM package.

```
# Properties file for vFabric Hyperic Server Configuration
#
# This file must be place in /etc/vmware/vfabric/hyperic/ with a name of
# vfabric_hyperic_server.properties to be used by the vfabric-hyperic-server
# rpm for vFabric Hyperic Server configuration.
#
#
# To configure the build-in local Postgresql database uncomment the below
# sections. See below for other database types.
#
################################################################################
# Configuration of local built-in Postgresql database

# Use the local built-in Postgresql database instead of other database types
BUILT_IN_POSTGRESQL=yes

# Do you accept the terms of the agreement?
HQ_ACCEPT_EULA=y

# HQ server installation path
HQ_SERVER_INSTALL_PATH=/opt/vmware/hyperic

# email address that HQ will use as the sender for email messages
HQ_SENDER_EMAIL_ADDRESS=hqadmin@eng.vmware.com

# username for the initial admin user HQ_ADMIN_USER=hqadmin
```

```
# password for the initial admin user HQ_ADMIN_PASSWORD=hqadmin Password must contain at least
six characters.

# email address be for the initial admin user
HQ_ADMIN_EMAIL_ADDRESS=hqadmin@eng.vmware.com

# End of configuration for local built-in Postgresql database
################################################################################


# To configure HQ with a local or remote database other than the built-in
# local instance of Postgresql comment out the above section and uncomment
# the properties in the section below. Supported databases include local or
# remote versions of vPostgresql or Postgresql.
#
################################################################################
# For configuration with local or remote vPostgresql or Postgresql databases

### Do you accept the terms of the agreement?
#HQ_ACCEPT_EULA=y

### HQ server installation path
#HQ_SERVER_INSTALL_PATH=/opt/vmware/hyperic

### email address that HQ will use as the sender for email messages
#HQ_SENDER_EMAIL_ADDRESS=hqadmin@eng.vmware.com

### database type of [PostgreSQL]
#HQ_DB_TYPE=PostgreSQL

### database connection string
#HQ_DB_URL=jdbc:postgresql://localhost:5432/HQ?protocolVersion=2

### username to use to connect to the database
#HQ_DB_USERNAME=hqadmin

### password to use to connect to the database
#HQ_DB_PASSWORD=hqadmin

### username be for the initial admin user
#HQ_ADMIN_USER=hqadmin

### password be for the initial
admin user
#HQ_ADMIN_PASSWORD=hqadmin

### email address be for the initial admin user
#HQ_ADMIN_EMAIL_ADDRESS=hqadmin@eng.vmware.com

### HQ server installation profile [small|medium|large]
#HQ_SERVER_INSTALLATION_PROFILE=medium

# End of configuration
################################################################################
```

Configure the vCenter Hyperic Server Properties File After Installation

If you did not configure the vCenter Hyperic server properties before running the RPM server installer, you are prompted to do so after installation. You cannot use the server until the properties have been specified.

You can find a sample of the `vfabric_hyperic_server.properties` file in "vCenter Hyperic Server Properties for RPM Installation," on page 26. You can copy this file and edit it to complete this procedure.

Do not change installation directory property. The value of `HQ_SERVER_INSTALL_PATH` must remain `/opt/vmware/hyperic`.

Procedure

1 Create a file named `vcenter_hyperic_server.properties`.

2 Configure other settings in the file as required.

You can edit the properties file to configure Hyperic Server to use an external PostgreSQL database. If you do not change the value, the vCenter Hyperic server will use the built in local PostgreSQL database.

3 Save your changes, and copy `vfabric_hyperic_server.properties` to the `/etc/vmware/vcenter/hyperic/` directory.

4 Log in as `root` and in `/opt/hyperic/hyperic-hqee-installer`, run the `setup_from_properties_file.sh` script.

What to do next

Start the vCenter Hyperic server.

Using the vCenter Hyperic vApp Management Console

The vCenter Hyperic vApp provides a web interface for performing common server administration tasks.

The vApp management console is available only when the vApp is powered on. The functions provided by the vApp console can also be performed from a command shell.

- Connect to the vCenter Hyperic vApp Management Console on page 29

  When you log in to the vApp management console, you can view system and network information for the vCenter Hypericserver, and can upgrade the server to a newer version.

- Set the vCenter Hyperic Sever vApp Time Zone on page 29

  You can use the vApp management console to set the time zone to your system time.

- View vCenter Hyperic Server vApp Network Status on page 29

  You can view general network details for the vApp, including information for each network interface on the vApp.

- Manage vCenter Hyperic vApp Network Address Settings on page 29

  You can configure the method by which the vApp management console obtains its IP address.

- Configure vCenter Hyperic vApp Proxy Settings on page 30

  You can configure a proxy server for HTTP communications between the vApp and the internet.

- Reboot or Shutdown the vCenter Hyperic Server on page 30

  You can shutdown or reboot the vCenter Hyperic from the vApp management console.

Connect to the vCenter Hyperic vApp Management Console

When you log in to the vApp management console, you can view system and network information for the vCenter Hypericserver, and can upgrade the server to a newer version.

Prerequisites

You must have `root` admin credentials to log on to the vApp management console.

Procedure

- Log in to the management console using the URL https://*host*:5480, where `host` is the IP address or DNS name of the vCenter Hyperic vApp host.

  You must log on as `root` and supply the password that was defined for the vCenter Hyperic admin account. The default is `hqadmin`.

Set the vCenter Hyperic Sever vApp Time Zone

You can use the vApp management console to set the time zone to your system time.

Prerequisites

You must be connected to the vCenter Hyperic vApp management console. See "Connect to the vCenter Hyperic vApp Management Console," on page 29.

Procedure

1. On the vCenter Hyperic vApp management console, select the **System** tab and click **Time Zone**.
2. Select a time zone from the **System Time Zone** menu.
3. Click **Save Settings**to apply your changes.

   You can click **Cancel Changes** to retain your existing settings.

View vCenter Hyperic Server vApp Network Status

You can view general network details for the vApp, including information for each network interface on the vApp.

Prerequisites

You must be connected to the vCenter Hyperic vApp management console. See "Connect to the vCenter Hyperic vApp Management Console," on page 29.

Procedure

1. On the vCenter Hyperic vApp management console, select the **Network** tab and click **Status**.

   Details of the network status and network interfaces appear.
2. (Optional) Click **Refresh** to update the displayed information.

Manage vCenter Hyperic vApp Network Address Settings

You can configure the method by which the vApp management console obtains its IP address.

Prerequisites

You must be connected to the vCenter Hyperic vApp management console. See "Connect to the vCenter Hyperic vApp Management Console," on page 29.

Procedure

1 On the vCenter Hyperic vApp management console, select the **Network** tab and click **Address**.

2 Use the dropdown menus to select the required network address settings and click **Save Settings**.

You can click **Cancel Changes** to retain your existing settings.

Configure vCenter Hyperic vApp Proxy Settings

You can configure a proxy server for HTTP communications between the vApp and the internet.

Prerequisites

You must be connected to the vCenter Hyperic vApp management console. See "Connect to the vCenter Hyperic vApp Management Console," on page 29.

Procedure

1 On the vCenter Hyperic vApp management console, select the **Network** tab and click **Proxy**.

2 Select the **Use a proxy server** check box.

3 Type appropriate strings in the proxy settings text boxes.

The **HTTP Proxy Server** and **Proxy Port** parameters are mandatory.

4 Click **Save Settings**to apply your changes.

You can click **Cancel Changes** to retain your existing settings.

Reboot or Shutdown the vCenter Hyperic Server

You can shutdown or reboot the vCenter Hyperic from the vApp management console.

Prerequisites

You must be connected to the vCenter Hyperic vApp management console. See "Connect to the vCenter Hyperic vApp Management Console," on page 29.

Procedure

1 On the vCenter Hyperic vApp management console, select the **System** tab and click **Information**.

2 Click **Reboot** or **Shutdown**, according to your requirements.

Install and Configure the vCenter Hyperic Agent

You must perform several tasks to install the vCenter Hyperic agent.

The tasks must be performed in this order.

Procedure

1 Prepare to Install the vCenter Hyperic Agent on page 31

Before you can install the vCenter Hyperic agent, you must perform preparatory tasks.

2 Select a vCenter Hyperic Agent Installer Package on page 31

You can download the vCenter Hyperic agent in a variety of packages.

3 Configure the vCenter Hyperic Agent to Server Communications Properties on page 33

You can define the properties that enable the vCenter Hyperic agent and vCenter Hyperic server to communicate with each other, and other agent behaviors, in `agent.properties` file of an agent, prior to first agent startup. There are a number of steps required to complete the configuration.

4 (Optional) Configure Unidirectional Communication on page 35

You can configure the vCenter Hyperic agent to initiate all communications with the server. You configure unidirectional communications at first startup. Unidirectional communications are always via SSL.

5 (Optional) Configure a vCenter Hyperic Agent Keystore on page 36

You can configure your own keystore for the vCenter Hyperic agent to use, instead of having the agent generate and use a self-signed certificate for SSL communication with the vCenter Hyperic server.

6 (Optional) Configure the vCenter Hyperic Agent Using the Configuration Dialog on page 37

The agent configuration dialog appears in the shell when you launch a vCenter Hyperic agent that lacks the configuration values that specify the location of the vCenter Hyperic server. The dialog queries for the address and port of the vCenter Hyperic server, and other connection-related data.

Prepare to Install the vCenter Hyperic Agent

Before you can install the vCenter Hyperic agent, you must perform preparatory tasks.

Prerequisites

- To configure the vCenter Hyperic agent to use a keystore that you manage yourself for SSL communication, rather than a vCenter Hyperic-generated keystore, set up a JKS format keystore for the vCenter Hyperic agent on its host and import its SSL certificate. Make a note of the full path to the keystore, and its password. You configure this data in the agent's `agent.properties` file.

  The agent keystore password and the private key password must be the same.

- Define the agent `HQ_JAVA_HOME` location.

  vCenter Hyperic platform-specific server installers include JRE 1.7.40, platform-independent installers do not. Depending on your environment and the installer you use, you may need to define the location of the JRE to ensure that the agent can find the JRE to use. See “Configuring JRE Locations for vCenter Hyperic Components,” on page 13.

- Verify if you need to open a firewall.

  If a firewall is blocking incoming traffic to a platform on which you are installing vCenter Hyperic agents, you must open the agent listen port (by default, 2144 for plaintext or 2443 for SSL) so that the agent will accept connections from the vCenter Hyperic server.

  In Windows environments, you must open the agent listen port. The default behavior for a firewall built into Windows is to block remote connections.

Select a vCenter Hyperic Agent Installer Package

You can download the vCenter Hyperic agent in a variety of packages.

You can select how to install the vCenter Hyperic agent from one of the following agent installer package options.

Prerequisites

Verify that all the prerequisites described in “Prepare to Install the vCenter Hyperic Agent,” on page 31 are satisfied.

- Install a vCenter Hyperic Agent-Only Package on page 32

  You can install the vCenter Hyperic agent from an agent-only tarball archive for non-Windows systems, or from a ZIP archive for Windows systems.

- Run the vCenter Hyperic Installer on page 32

  You can install the vCenter Hyperic agent using the vCenter Hyperic installer.

- Install the vCenter Hyperic Agent RPM on page 32

  You can install vCenter Hyperic agent from a RedHat Package Manager (RPM) package. The agent in the package does not include a JRE.

Install a vCenter Hyperic Agent-Only Package

You can install the vCenter Hyperic agent from an agent-only tarball archive for non-Windows systems, or from a ZIP archive for Windows systems.

Agent-only archives are useful when you roll out agents to a large number of platforms with varying operating systems and architectures. Agent archives are available for Windows and UNIX-like environments, with and without built-in JREs.

If you have multiple agents to install, see"Install Multiple vCenter Hyperic Agents Simultaneously," on page 40.

This procedure can be used for both tarball and ZIP archives.

Prerequisites

Verify that you have satisfied all the prerequisites listed in "Prepare to Install the vCenter Hyperic Agent," on page 31.

Procedure

1 Create a directory for the vCenter Hyperic installation.

2 Unpack the archive into the agent directory.

  Use GNU Tar to unpack the tarball.

Run the vCenter Hyperic Installer

You can install the vCenter Hyperic agent using the vCenter Hyperic installer.

The installer is used to install both the server and the agent. See "Run the Installer Script," on page 22.

Prerequisites

Verify that you have satisfied all the prerequisites listed in "Prepare to Install the vCenter Hyperic Agent," on page 31.

Install the vCenter Hyperic Agent RPM

You can install vCenter Hyperic agent from a RedHat Package Manager (RPM) package. The agent in the package does not include a JRE.

The RPM performs the following actions:

- Creates the user and group named `hyperic` if they do not exist.
- Sets the home directory of the hyperic user to `/opt/hyperic`.
- Installs the agent files into `/opt/hyperic/hyperic-hqee-agent`.
- Installs an init script to `/etc/init.d/hyperic-hqee-agent`.
- Adds `init` script to `chkconfig` and sets it to `on` for runlevels 2, 3, 4, and 5.

Prerequisites

- Verify that you have satisfied all the prerequisites listed in "Prepare to Install the vCenter Hyperic Agent," on page 31.
- Agent hosts must have the J2RE virtual package installed.

Procedure

1 Use yum to install the agent on the platform that the agent will monitor.

`yum install vfabric-hyperic-agent`.

2 Install a JDK or JRE on the platform if you have not already done so.

3 Log on as `root` and edit the `/etc/init.d/hyperic-hqee-agent` file to set the `HQ_JAVA_HOME` parameter to the home directory of the JDK or JRE that the agent is to use.

What to do next

Configure the vCenter Hyperic agent in the `properties` file. See "Activate Agent to Server Communication Properties," on page 34.

Configure the vCenter Hyperic Agent to Server Communications Properties

You can define the properties that enable the vCenter Hyperic agent and vCenter Hyperic server to communicate with each other, and other agent behaviors, in `agent.properties` file of an agent, prior to first agent startup. There are a number of steps required to complete the configuration.

Certain agent properties can also be defined after the initial start up, however you must always configure properties to control the following behaviors before initial start up:

- When the agent must use an SSL keystore that you manage, rather than the vCenter Hyperic-generated keystore.
- When the agent must manage VMware vSphere components.
- When the agent must connect to the vCenter Hyperic server via a proxy server.

If you are deploying many agents, you should also consider configuring the agent in its properties file to streamline the process.

Prerequisites

The vCenter Hyperic server must be running.

What to do next

Start the vCenter Hyperic agent.

Open the Agent Properties File

Each time that you install a new vCenter Hyperic agent, you need to configure the `agent.properties` file that contains data controlling agent to server communication. If the agent does not have a properties file, you can create a new one.

A vCenter Hyperic agent looks for its properties file in two locations, in this order:

1 `HqUserHome/.hq`

If this directory exists and contains `agent.properties`, the vCenter Hyperic agent uses the property values defined there.

2 `AgentHome/conf`

This is the default location of `agent.properties`.

If the agent does not find the the properties that it needs to establish communications with the vCenter Hyperic server in either of these locations, it prompts for the property values at initial start up of the agent.

It is good practice to configure the properties in the `agent.properties` file before initial start up of the agent, because some communication actions require this. Also, this is most efficient when deploying many agents.

Procedure

- Make a copy of the `agent.properties` file from the agent installation.

Activate Agent to Server Communication Properties

In the agent.properties file, properties relating to communication between the vCenter Hyperic agent and server are inactive by default. You must activate them.

Procedure

1 In the `agent.properties` file, locate the following section.

```
## Use the following if you'd like to have the agent setup
## automatically from these properties. The values for these
## properties are used to answer the setup questions
##
## If any of these properties are left undefined, the setup
## process will prompt for their values
##
## If the value that should be used is the default when interactive
## setup is done, use the string *default* as the value for the option
```

2 Activate the following properties by removing the hash tag at the beginning of each line.

```
#agent.setup.camIP=localhost
#agent.setup.camPort=7080 #agent.setup.camSSLPort=7443
#agent.setup.camSecure=yes #agent.setup.camLogin=hqadmin
#agent.setup.camPword=hqadmin #agent.setup.agentIP=*default*
#agent.setup.agentPort=*default*
#agent.setup.resetupTokens=no
```

The first time you start the vCenter Hyperic agent, if `agent.setup.camPword` is inactive, and has a plain text value, the agent will encrypt the value.

Specify the vCenter Hyperic Agent Communication Properties

The `agent.properties` file contains properties that you can configure to govern both agent-initiated and server-initiated communication.

The properties described here are the minimum required for agent-server communication.

Procedure

1 Specify the location and credentials the vCenter Hyperic agent must use to contact the vCenter Hyperic server.

Property	Property Definition
`agent.setup.camIP`	Specify the address or hostname of the vCenter Hyperic server.
`agent.setup.camPort`	The default value is the standard plaintext vCenter Hyperic server listen port. If your server is configured for a different listen port, supply the port number.

Property	Property Definition
agent.setup.camSSLPort	The default value is the standard SSL vCenter Hyperic server listen port. If your server is configured for a different listen port, supply the port number.
agent.setup.camSecure	The default value is `yes` (use SSL). SSL configuration is strongly recommended, and is required if you are going to configure the agent for unidirectional communications. Change to `no` if you do not require the agent to use secure communications when contacting the vCenter Hyperic server.
agent.setup.camLogin	Specify the user name the agent should use when connecting to the server. If you change the value from the default value (`hqadmin`), verify that that user account is correctly configured on the vCenter Hyperic server.
agent.setup.camPword	Specify the password the agent should use, together with the user name specified in `agent.setup.camLogin`, when connecting to the server. Verify that the password is the one configured in vCenter Hyperic for the user account.

2 (Optional) Specify the address or hostname and the listen port for the vCenter Hyperic server to use to contact the vCenter Hyperic agent.

If you are creating a standard `agent.properties` file that can be used for all agents, deactivate these properties, but do not change their values.

Property	Property Definition
agent.setup.agentIP	If you leave the default setting - "* default* " - the Hyperic Agent will detect an IP address on the platform and choose it as its listen address.
agent.setup.agentPort	If you leave the default setting - "* default* " - the Hyperic Agent will use the default listen port (2144 for plaintext or 2443 for SSL) as its listen address. If that port is unavailable, the agent will detect a free port and choose it as its listen port.

(Optional) Configure Unidirectional Communication

You can configure the vCenter Hyperic agent to initiate all communications with the server. You configure unidirectional communications at first startup. Unidirectional communications are always via SSL.

As an alternative to this procedure, you can specify unidirectional communications via the agent prompt that appears at startup.

Procedure

1 Stop the agent.

2 Remove the agent's `\data` directory.

Removing the `\data` directory causes the agent, at next startup, to look in its `agent.properties` file for the startup settings it needs to connect to the server. If the properties file doesn't contain the startup settings, it will open a shell to prompt for them.

3 In the `agent.properties` file, set `setagent.setup.unidirectional=yes`, and start the agent.

4 In the user interface, on the Inventory tab of the platform, navigate to **Type & Network Properties** and click **Edit**.

The **Agent Connection** menu shows the currently selected port for bidirectional communications. For example, `10.2.0.213:2144`, where `10.2.0.213` is the IP address of the platform, and `2144` is the bidirectional port number previously used.

5 Expand the menu and select the entry that shows the same IP address, and `–1` as the port number.

For example, `10.2.0.213:–1`.

The agent uses unidirectional communication with the server.

Configure Bidirectional Communication

If you have specified that the vCenter Hyperic agent use unidirectional communication with the vCenter Hyperic server, you can revert the setting so that it uses bidirectional communication.

As an alternative to this procedure, you can specify bidirectional communications via the agent prompt that appears at startup.

Procedure

1 Stop the agent.

2 Remove the agent's `\data` directory.

Removing the `\data` directory causes the agent, at next startup, to look in its `agent.properties` file for the startup settings it needs to connect to the server. If the properties file doesn't contain the startup settings, it will open a shell to prompt for them.

3 In the `agent.properties` file, set `setagent.setup.unidirectional=no`, and start the agent.

4 In the user interface, on the Inventory tab of the platform, navigate to **Type & Network Properties** and click **Edit**.

The **Agent Connection** menu shows the currently selected port for unidirectional communications. For example, `10.2.0.213:-1`, where `10.2.0.213` is the IP address of the platform, and `-1` is the unidirectional port number previously used.

5 Expand the menu and select the entry that shows the same IP address, and `2144` as the port number.

For example, `10.2.0.213:2144`.

If you configured a port number other than the default, select the entry with that port number.

The agent uses bidirectional communication with the server.

(Optional) Configure a vCenter Hyperic Agent Keystore

You can configure your own keystore for the vCenter Hyperic agent to use, instead of having the agent generate and use a self-signed certificate for SSL communication with the vCenter Hyperic server.

Procedure

1 In the `agent.properties` file, activate the `# agent.keystore.path=` and `# agent.keystore.password=` properties.

Define the full path to the keystore with `agent.keystore.path` and the keystore password with `agent.keystore.password`.

2 (Optional) If you configured the agent for unidirectional communication, add `[agent.keystore.alias` to the properties file, and set it to the alias of the primary certificate or private key entry of the keystore's primary certificate.

3 Verify that `agent.setup.acceptUnverifiedCertificate` is `false`.

(Optional) Configure the vCenter Hyperic Agent Using the Configuration Dialog

The agent configuration dialog appears in the shell when you launch a vCenter Hyperic agent that lacks the configuration values that specify the location of the vCenter Hyperic server. The dialog queries for the address and port of the vCenter Hyperic server, and other connection-related data.

The agent configuration dialog is presented in these cases:

- The first time you start an agent, if you have not supplied the properties in `agent.profile`.
- When you start an agent for which saved server connection data is corrupt or has been removed.
- When you run the agent launcher with the setup option, which causes the agent to prompt for new connection property settings.

You can also run the agent launcher to re-run the configuration dialog

Procedure

1 Open a terminal window on the platform where the agent is installed.

2 Navigate to the `AgentHome/bin` directory.

3 Run the agent launcher using the start or setup option:

Platform	Command
UNIX-like	`sh hq-agent.sh start`
Windows	Install the Windows service for the agent, then start `it:sh hq-agent.bat install sh hq-agent.bat start`

4 Respond to the prompts, noting the following as you move through the process.

Prompt	Description
What is the HQ server IP address Enter the listen address of your Hyperic Server.	The server must be running. If the server is on the same machine as the agent, you can enter localhost. If there is a firewall blocking traffic from the agent to the server, specify the address of the firewall.
Should Agent communications to HQ always be secure [default=yes].	Accept the default to configure vCenter Hyperic to use SSL for agent-to-server communication. It is good security practice to configure SSL, and is required if you configured unidirectional communications. To configure vCenter Hyperic to use plain HTTP for agent-to-server communication, enter "no".
What IP should HQ use to contact the agent [default=n.n.n.n]	The prompt shows the first IP address that the agent detects on the host. You can specify another IP address on the host. If there is a firewall blocking traffic from the server to the agent, enter the IP address of the firewall, and configure the firewall to forward traffic intended for the vCenter Hyperic agent to the listen address of the agent host.
What port should HQ use to contact the agent [default=2144]	Specify the agent port for the vCenter Hyperic server to use when it initiates contact with the agent. Specify the port that the agent binds to at startup, which by default is 2144. If you have previously edited `agent.properties` to define a different listen port, using the `agent.listenPort` property, specify that value. If there is a firewall blocking traffic from the server to the agent, configure the device to forward traffic on TCP port 2144 to the vCenter Hyperic agent.

The vCenter Hyperic agent initiates a connection to the vCenter Hyperic server and the server verifies that it can communicate with the agent.

The vCenter Hyperic agent discovers the platform and supported products running on it.

Configuring SSL Options

vCenter Hyperic supports the use of SSL communication for both server-to-agent and agent-to-server communications. It is good practice to configure vCenter Hyperic components to communicate with each other using SSL as part of the installation process.

Server-to-agent communication is always SSL.

You configure SSL for agent-to-server communication when you configure agent-server communications.

The vCenter Hyperic agent can manage products over SSL if the product plugin supports it.

When the vCenter Hyperic server and a vCenter Hyperic agent communicate over SSL, each component validates the other's SSL certificate.

vCenter Hyperic Certificate Processing

The first time a vCenter Hyperic agent initiates a connection to the vCenter Hyperic server following installation, the server presents its SSL certificate to the agent. If the agent trusts the certificate that the server presented, the agent imports the server's certificate into its own keystore.

The agent trusts a server certificate:

- If that certificate already exists in the agent's keystore.
- If the certificate has the same CA as the agent's certificate.

By default, if the agent does not trust the certificate presented by the server, the agent issues a warning. You can terminate the configuration process and configure SSL. The vCenter Hyperic server and the vCenter Hyperic agent do not import untrusted certificates unless you respond `yes` to the warning prompt.

It is possible to configure both components to accept untrusted certificates automatically, without warning. For security reasons, this practice is strongly discouraged. Check the values of `agent.setup.acceptUnverifiedCertificate` (in `AgentHome/conf/agent.properties`) and `accept.unverified.certificates` in `ServerHome/conf/hq-server.conf`.

vCenter Hyperic Server and SSL

If you are using the standard vCenter Hyperic `setup.sh` or `setup.bat` installer, you install the vCenter Hyperic server's keystore before installing the server.

If you do not configure the server to use an existing keystore, and supply its location and password during server installation, the vCenter Hyperic installer creates a keystore for the server with a self-signed certificate. The keystore, named `hyperic.keystore`, is located in `ServerHome/conf` and uses the password `hyperic`. The server presents the self-signed certificate when communicating with agents.

vCenter Hyperic Agent and SSL

To use SSL for agent-to-server communication, you install the vCenter Hyperic agent's keystore prior to first startup. If you use the vCenter Hyperic-generated keystores, you will need to update the password for each generated keystore.

Configure SSL for vCenter Hyperic Agent to Server Communication

You can configure your vCenter Hyperic agents to use SSL when communicating with the vCenter Hyperic server.

You must configure SSL for each vCenter Hyperic agent.

Prerequisites

- Verify that the vCenter Hyperic agent's keystore was installed prior to initial startup of the agent.

  Each agent must have its own keystore.
- Verify that you have SSL certificates for the vCenter Hyperic server and each vCenter Hyperic agent.
- Verfiy that you have a JKS-format keystore for the vCenter Hyperic server on its host, and that you have imported its SSL certificate.
- Note the full path to the JKS-format keystore and its password. When you run the vCenter Hyperic installer in `–full` mode, the installer prompts for this information.

Procedure

1 Setup a keystore for the vCenter Hyperic agent on its host.

2 Import the SSL certificate for the agent.

3 In the agent's `agent.properties` file, specify values for the following properties.

Property	Value
`agent.keystore.path`	Specify the location of the agent keystore.
`agent.keystore.password`	Specify the password for the agent keystore. The password of the keystore for the vCenter Hyperic agent and the private key password must be the identical.

4 (Optional) If you are configuring the vCenter Hyperic agent for unidirectional communication, specify the keystore name in the `agent.keystore.alias` property.

5 Save the file and restart the agent.

Change a vCenter Hyperic SSL Certificate to Use a User-Managed Keystore

If you do not configure the vCenter Hyperic server and vCenter Hyperic agents to use keystores that you create and manage before you first start the server and agents, vCenter Hyperic will generate default keystores with self-signed certificates. You can change the SSL certificates to use a user-managed keystore.

Prerequisites

Verify that you have a a trusted PKC12-format keystore for vCenter Hyperic server, and that an SSL certificate of the correct format is installed the the vCenter Hyperic server host.

Procedure

1 Open `ServerHome/conf/hq–server.conf` in a text editor and make the following changes.

  a Set the value of `accept.unverified.certificates` to `false`.

  b Define the location of your trusted keystore with the `server.keystore.path` property.

  c Define the password for your trusted keystore with the `server.keystore.password` property.

  d Save your changes and restart the vCenter Hyperic server.

2 For each vCenter Hyperic agent reporting to the vCenter Hyperic server

  a Obtain an SSL certificate from your CA and install it on the vCenter Hyperic agent host.

  b Open `AgentBundle/AgentHome/agent.properties` in a text editor.

  c Set the value of `agent.setup.acceptUnverifiedCertificate` to "`false`".

  d Define the location of your trusted keystore with the `agent.keystore.path` property.

e Define the password for your trusted keystore with the `agent.keystore.password` property.

f Save your changes and restart the vCenter Hyperic agent.

Change SSL Configuration from a User-Managed Keystore to a vCenter Hyperic Keystore

You can change your SSL configuration from using a user-managed keystore to a vCenter Hyperic-generated keystore.

For best security, do not configure vCenter Hyperic to use self-signed certificates.

Prerequisites

Verify that the vCenter Hyperic and the vCenter Hyperic agents are stopped.

Procedure

1 Open `ServerHome/conf/hq-server.conf` in a text editor.

2 Set the value of `accept.unverified.certificates` to `true`.

3 Restart the vCenter Hyperic server.

4 For each vCenter Hyperic agent reporting to the vCenter Hyperic server, open `AgentBundle/AgentHome/agent.properties` in a text editor.

5 Set the value of `agent.setup.acceptUnverifiedCertificate` to `true`.

6 Save your changes and restart the agents.

Install Multiple vCenter Hyperic Agents Simultaneously

If you have multple agents to install at one time, you can create a single standardized `agent.properties` file that can be used by all the agents.

Installing multiple vCenter Hyperic agents entails a number of steps, as described below. Perform the steps in the order listed.

Prerequisites

Verify that the following prerequisites are satisfied.

1 Set up an install server.

An install server is a server that can access the the target platforms from which to perform remote installation.

The server must be configured with a user account that has permissions to SSH into each target platform without requiring a password.

2 Verify that each target platform on which a vCenter Hyperic agent will be installed has the following items.

- A user account that is identical to that created on the install server.
- An identically named installation directory, for example `/home/vfabrichyperic`.
- A trusted keystore, if required.

Procedure

1 Create a Standard vCenter Hyperic Agent Properties File on page 41

You can create a single properties file that contains property values that are used by multiple agents.

2 (Optional) Deploy and Start Multiple Agents One-By-One on page 41

You can perform remote installations to deploy agents that use a single `agent.properties` file one-by-one.

3 (Optional) Deploy and Start Multiple Agents Simultaneously on page 42

You can perform remote installations to simultaneously deploy agents that use a single `agent.properties` file.

Create a Standard vCenter Hyperic Agent Properties File

You can create a single properties file that contains property values that are used by multiple agents.

To enable mass agent deployment, you create an `agent.properties` file that defines the agent properties required for the agent to start up and connect with the vCenter Hyperic server. If you supply the necessary information in the properties file, each vCenter Hyperic agent will locate its setup configuration at startup, rather than prompting you for the location. You can create a standard agent profile that you can copy to the agent installation, or to a location available to the agent installation.

Prerequisites

Verify that the prerequisites in "Install Multiple vCenter Hyperic Agents Simultaneously," on page 40 have been satisfied.

Procedure

1 Create an `agent.properties` file in `HqUserHome/.hq` on the install server.

2 Configure the properties as required. The minimum configuration is the IP address and port of the vCenter Hyperic install server.

Do not specify values for the agent listen address and port. At first startup, if explicit values for IP address and port are not set, the vCenter Hyperic agent - which detects the network interfaces on the platform - uses the first detected interface as its listen address, and port 2144 or 2443 as its listen port, depending on whether you configure the agent for plain text or SSL communications.

3 Save your configurations.

The first time that the agents are started, they read the `agent.properties` file to identify the server connection information, will connect to the server and register themselves.

What to do next

Perform remote agent installations. See "(Optional) Deploy and Start Multiple Agents One-By-One," on page 41 or "(Optional) Deploy and Start Multiple Agents Simultaneously," on page 42.

(Optional) Deploy and Start Multiple Agents One-By-One

You can perform remote installations to deploy agents that use a single `agent.properties` file one-by-one.

Prerequisites

Verify that the prerequisites in "Install Multiple vCenter Hyperic Agents Simultaneously," on page 40 have been satisfied.

You must have configured a standard agent properties file and copied it to the agent installation, or to a location available to the agent installation

Procedure

1 Log in to the install server user account that you configured with permissions to SSH into each target platform without requiring a password.

2 SSH to the remote platform.

3 Copy the agent archive to the agent host.

4 Unpack the agent archive.

5 Copy the `agent.properties` file to the `/.hq` directory under the home directory of the standard agent installation user account.

6 Start the new agent.

The vCenter Hyperic agent registers themself with the vCenter Hyperic server and the agent runs an autodiscovery scan to discover its host platform and supported managed products that are running on the platform.

What to do next

Check the Auto-Discovery portlet in the vCenter Hyperic dashboard to verify that the platform was discovered.

(Optional) Deploy and Start Multiple Agents Simultaneously

You can perform remote installations to simultaneously deploy agents that use a single `agent.properties` file.

Prerequisites

Verify that the prerequisites in "Install Multiple vCenter Hyperic Agents Simultaneously," on page 40 have been satisfied.

You must have configured a standard agent properties file and copied it to the agent installation, or to a location available to the agent installation

Procedure

1 Create a `hosts.txt` file on your install server that maps the hostname to the IP address of each platform on which you are installing an agent.

2 Open a command line shell on the install server.

3 Type the following command in the sell, supplying the correct name for the agent package in the export command.

```
$ export AGENT=hyperic-hq-agent-4.6.0-x86-linux.tgz
$ for host in `cat hosts.txt`; do scp $AGENT $host:</path/to/agent/install>
&& ssh $host "tar zxf $AGENT && ./hyperic-hq-agent-4.6.0/hq-agent.sh start"; done
```

4 (Optional) If the target hosts have sequential names, for example host001, host002, host003, and so on, you can skip the `hosts.txt` file and use the seq command, as follows.

```
$ export AGENT=hyperic-hq-agent-4.6.0-x86-linux.tgz
$ for i in `seq 1 9`; do scp $AGENT host$i: && ssh host$i "tar zxf $AGENT &&
./hyperic-hq-agent-4.6.0/hq-agent.sh start"; done
```

The vCenter Hyperic agents registers themselves with the vCenter Hyperic server and the agents run an autodiscovery scan to discover their host platform and supported managed products that are running on the platform.

What to do next

Check the Auto-Discovery portlet in the vCenter Hyperic dashboard to verify that the platforms were discovered.

Activating and Configuring Your vCenter Hyperic License

vCenter Hyperic is part of several VMware products, including vCenter Operations Management Suite, vCloud Suite, and vFabric Suite, each with its own licensing mechanism. vCenter Hyperic is also available as a standalone product. You configure the license according to the requirements of the product of which it is a part.

- If your vCenter Hyperic is part of vCenter Operations Management Suite, see "Configure the vCenter Hyperic License for vCenter Operations Management Suite," on page 43.
- If your vCenter Hyperic is part of vCloud Suite, see "Configure the vCenter Hyperic License for vCloud Suite," on page 43.
- If your vCenter Hyperic is part of vFabric Suite, see "Configure the vCenter Hyperic License for vFabric Suite," on page 44.

If you have more than one license, you configure each of them.

vCenter Hyperic is licensed on a per managed platform basis, where a platform is:

- A physical machine or a virtual machine on which a vCenter Hyperic agent is running.

  If an agent manages a vSphere vCenter instance, it consumes a license for the platform that hosts vCenter, a license for each vSphere vHost that is administered by the vCenter instance and, if an agent is installed on each virtual machine, a license for each vSphere virtual machine on each vHost.

- A network device or network host that is managed remotely by a vCenter Hyperic agent. See *vCenter Hyperic Resource Configuration and Metrics* for information about vCenter Hyperic functionality for managing remote devices and hosts.

If you have licenses for both vCenter Operations Management Suite and vFabric Suite, you are licensed for the total number of licenses provided by your vCenter Hyperic license plus the number of licenses provided in your vCenter Operations Management Suite license.

Configure the vCenter Hyperic License for vCenter Operations Management Suite

You configure the vCenter Hyperic license in vCenter Operations Management Suite by editing the `hq-server.conf` file.

Prerequisites

Stop the vCenter Hyperic server.

Procedure

1 Open the `ServerHome/conf/hq-server.conf` file for editing.

2 Add the line `vcops.license.key=`*`LicenseKey`*, where *`LicenseKey`* is the vCenter Operations Management Suite license key.

What to do next

Restart the vCenter Hyperic server.

Configure the vCenter Hyperic License for vCloud Suite

You configure the vCenter Hyperic license in vCloud Suite by editing the `hq-server.conf` file.

Prerequisites

Stop the vCenter Hyperic server.

Procedure

1 Open the `ServerHome/conf/hq-server.conf` file for editing.

2 Add the line `vcloud.license.key=LicenseKey`, where *`LicenseKey`* is the vCloud Suite license key.

What to do next

Restart the vCenter Hyperic server.

Configure the vCenter Hyperic License for vFabric Suite

The method you use to activate your license is dependent on whether the product was acquired as standalone, or as part of vFabric Suite.

The vCenter Hyperic evaluation distributions include a time-limited license for 60 platforms.

After you purchase vCenter Hyperic, a production license specifies the number of platforms that you may manage and, unless you have a perpetual license, the license expiration date.

Prerequisites

- If you obtained your vCenter Hyperic license as part of vFabric Suite, refer first to the license information and procedure in *Getting Started with vFabric Suite*. If necessary, complete these additional licensing tasks.
- Stop the vCenter Hyperic server.

Procedure

- (Optional) If you acquired vCenter Hyperic as a standalone product, create a file named `vf.hyp-serial-numbers.txt` that contains the product serial number provided by VMware. Install the file in one of the following directories, as appropriate. If the file does not exist, create it.
  - `/etc/opt/vmware/vfabric/` for Unix-like platforms.
  - `%ALLUSERSPROFILE%\vmware\vfabric` on Windows-like platforms
- (Optional) If you acquired vCenter Hyperic as part of the vFabric Suite, configure the location of the VMware license server that administers the network license for vFabric Suite by adding the `vfabric.licenseserver.url` property to `ServerHome/conf/hq-server.conf`.

What to do next

Restart the vCenter Hyperic server.

View License Terms

You can view the terms of your license and usage on the **Administration** tab of the vCenter Hyperic user interface.

Migrating and Upgrading vCenter Hyperic Components

3

It is good practice to upgrade your vCenter Hyperic components. New versions offer enhancements to existing functionality, performance, and so on.

Upgrading vCenter Hyperic Components and Migrating the Database

Upgrading your existing vCenter Hyperic installation to the most recent version provides you with access to the latest features and enhancements. If you have been using a database other than vPostgreSQL, you must migrate it to continue access to its data.

The installer installs a new version of vCenter Hyperic, configuring the new server instance based on the configuration information from your previous server installation configuration files.

If you use the vCenter Hyperic internal database, the installer creates a new database instance that contains the data from the existing instance. The new instance has an updated schema. The PostgreSQL server is not upgraded to a new version.

If you use an external database, the installer updates the existing instance.

Upgrade vCenter Hyperic Server to Version 5.x on a Windows Platform

You upgrade the vCenter Hyperic server on Windows platforms using the upgrade option of the vCenter Hyperic installer.

Use this procedure to upgrade the vCenter Hyperic server on Windows platforms.

Prerequisites

- Verify that the current server instance is stopped.

  Use the Windows Services Control Panel.
- (Optional) If you use an external vCenter Hyperic database, verify that it is backed up.
- (Optional) It is good practice to archive your existing vCenter Hyperic server directory, so that you can revert to it if necessary.

Procedure

1 Run the vCenter Hyperic installer in `upgrade` mode.

  `c:\hyperic\hyperic-hq-installer\setup.bat -upgrade`.

2 Acknowledge the VMware license prompt.

3 Type the full path to the previous vCenter Hyperic server instance when prompted.

  For example, `/opt/hyperic/server-5.0.0`

4 Type the full path to the directory under which the new server instance will be installed.

  For example, to install the new instance under your existing vCenter Hyperic home directory, type `c:\hyperic\`.

The installer completes the upgrade.

f you use the in-product vCenter Hyperic database, the upgrade process migrates your database schema to the latest edition.

What to do next

1 Update the Windows Service with the new version information. For example, `c:\hyperic\server-5.1.0\bin\hq-server.bat install`

2 Start the new server instance. For example type `/opt/hyperic/server-5.1.0/bin/hq-server.sh start`.

Upgrade vCenter Hyperic Server to Version 5.x on a Unix-Based Platform

You upgrade the vCenter Hyperic server on Unix-based platforms using the upgrade option of the vCenter Hyperic installer.

Use this procedure to upgrade the vCenter Hyperic server on Unix-based platforms.

Prerequisites

- Verify that the current server instance is stopped.

  For example, run `/opt/hyperic/server-5.0.0/bin/hq-server.sh stop`.
- (Optional) If you use an external vCenter Hyperic database, verify that it is backed up.

- (Optional) It is good practice to archive your existing vCenter Hyperic server directory, so that you can revert to it if necessary.

  For example, `tar -zcvf hq-server-5.0.0-archive.tgz hq-server-5.0.0-EE`.

Procedure

1 Run the vCenter Hyperic installer in `upgrade` mode.

  `/opt/hyperic/hyperic-hq-installer/setup.sh -upgrade`.

2 Acknowledge the VMware license prompt.

3 Type the full path to the previous vCenter Hyperic server instance when prompted.

  For example, `/opt/hyperic/server-5.0.0`

4 Type the full path to the directory under which the new server instance will be installed.

  For example, to install the new instance under your existing vCenter Hyperic home directory, type`/opt/hyperic`.

The installer completes the upgrade.

What to do next

Start the new server instance. For example type `/opt/hyperic/server-5.1.0/bin/hq-server.sh start`.

Upgrade the vCenter Hyperic vApp

You can upgrade the version of the vCenter Hyperic vApp to the latest version.

Prerequisites

- You must be connected to the vCenter Hyperic vApp management console. See "Connect to the vCenter Hyperic vApp Management Console," on page 29.
- Take snapshots of the vCenter Hyperic and vPostgreSQL database to retain as backup.
- Identify the URL link to the new vCenter Hyperic installer TAR or ZIP file.

Procedure

1 On the **Hyperic Server Upgrade** tab of the vCenter Hyperic vApp management console, paste the link to the latest version of the vCenter Hyperic installer in the upgrade text box.

2 Click **Upgrade**.

vCenter Hyperic vApp is upgraded to the latest version.

Migrate to a vPostgreSQL Database

To use the latest version ofvCenter Hyperic you must use a vPostgreSQL database. If you have an earlier version of vCenter Hyperic that supported other database types, you can migrate the database to vPostgreSQL after you have installed the upgraded vCenter Hyperic server.

This process involves exporting the data from your existing database, then importing it into the vPostgres database.

Prerequisites

Verify that the following prerequisites have been satisfied, before proceeding with the migration process.

- The latest version of vCenter Hyperic server is installed under the same account that you are running the import process.

- The older vCenter Hyperic server is stopped.
- You have superuser privileges to import the database.

  By default, the process uses the database credentials defined by the `server.database-user` and `server.database-password` properties in `hq-server.conf`. If the database user account defined in `hq-server.conf` is not a superuser, you must supply superuser account credentials at the the command line during the import phase.
- The latest version of vPostgreSQL database is installed.
- The installer directory is owned by the vCenter Hyperic user. You can use the command `chown -R hyperic /opt/hyperic/hyperic-hqee-installer/installer/` to verify the owner.

Procedure

1 Export the existing database and the server configuration.

   a Copy the `hq-migration-5.8.zip` migration package from the `installer/bin` directory in your new vCenter Hyperic installer package to the host server from which you are migrating the database, for example an Hyperic 4.x host.

   b Unpack the ZIP file on the host.

   The root of the unpacked ZIP, `hq-migration-5.8`, is now referred to as `MigrationHome`.

   c To export all configuration and metric data, in a shell run the command `PathToMigrationHome/hq-migrate.sh hq-export -Dhqserver.install.path=`*`PathToServerHome`*, where *PathToServerHome* is the full path to the vCenter Hyperic server installation directory, or the path relative to `MigrationHome`.

   You can add `-DconfigOnly=true` to the command line to export only the configuration data.

   The script reads the `hq-server.conf`file in the older vCenter Hypericversion, connects to its database, exports the database, and creates a tarball with key artifacts and the database dump in `hq-migration-export-HqVersion.tgz`.

   By default, the archive is written to the `migration_home/tmp/export-data` import staging directory, or the value of `staging.dir`, if specified.

2 Import the database and the server configuration.

   a Copy `hq-migration-export-HqVersion.tgz` to the new server host, or make it available to the machine on which the server is installed.

   Expect some latency if you do not copy the tarball to the server host.

   b Run the `PathToMigrationHome/hq-migrate.sh hq-import -Dhqserver.install.path=`*`PathToServerHome`* `-Dexport.archive.path=`*`PathToExportArchive`* command, ensuring that the command is on a single line.

   Enter appropriate values for the *PathToServerHome* and *PathToExportArchive* properties.

The database and server configuration properties are migrated.

Upgrading the vCenter Hyperic Agent

You can upgrade the vCenter Hyperic agent by pushing it from an upgraded vCenter Hyperic server, by performing a manual upgrade that retains the configuration of the original agent.

Push a vCenter Hyperic Agent Bundle from the vCenter Hyperic Server

You can update one or more vCenter Hyperic agents by pushing the new agent bundle to it from the vCenter Hyperic server, using the vCenter Hyperic user interface.

When you update an agent bundle, the configuration settings in the agent's `AgentHome/conf/agent.properties` file are not changed. However, the first time you start an agent that you have updated from version 4.5 or earlier, passwords specified in the file are encrypted.

Prerequisites

The bundle must reside in the `ServerHome/hq-engine/hq-server/webapps/ROOT/WEB-INF/hq-agent-bundles` directory.

Procedure

1 On the **Resources** tab, select the server on which the agent bundle resides.

2 On the **Views** tab, click **Agent Commands**.

3 Select **Upgrade** from the **Select an agent operation to run** menu.

4 Select the appropriate bundle from the **Select upgradeable agent bundle** menu.

The bundle includes an update to the JRE. If you do not want to update the JRE, select the bundle that does not include a platform in the file name, for example `agent-`*`version.number`*`.tar.gz`.

5 Click **Execute**.

The bundle is copied to the `bundles` directory and self-extracts. On completion of the extraction process, you can see the version information for the upgraded agent on the **Administration > Agents** tab.

Upgrade a vCenter Hyperic Agent Bundle

If you do not want to push the upgrade agent bundle from the vCenter Hyperic server, you can use this process to upgrade the bundle in your vCenter Hyperic agent installation.

When you update an agent bundle, your previous agent configuration is preserved. The `AgentHome/conf/agent.properties` file is not overwritten.

Prerequisites

Procedure

1 Copy the `agent-5.x.y-nnn.tgz` or `agent-5.x.y-nnn.zip` agent bundle from `ServerHome/hq-engine/hq-server/webapps/ROOT/WEB-INF/hq-agent-bundles` to `AgentHome/bundles`.

2 Unpack the agent bundle.

3 Edit the `rollback.properties` file in `AgentHome/conf` to specify the location of the new agent bundle and the bundle it will replace.

Example:

What to do next

Deploy a vCenter Hyperic vApp Using vCloud Director

4

You can create a vCenter Hyperic vApp in your virtual cloud from a vApp template using VMware vCloud Director.

To deploy a vCenter Hyperic vApp using vCloud Director requires you to complete the following procedures, in the order specified below.

Prerequisites

- The vCenter Hyperic server and vCenter Hyperic database OVF files must have been uploaded to a vCloud catalog to which you have access.
- Your browser must be configured appropriately for accessing and using the vCloud web-based console. See *vCloud Director User Guide* for information.
- You must be a competent vCloud Director user.

Procedure

1 Create and Configure the vCenter Hyperic vApp on page 51

To deploy a vCenter Hyperic vApp using vCloud Director, you must first create and configure the vApp in vCloud Director.

2 Power on the vCenter Hyperic Server on page 52

After you have created your vCenter Hyperic vApp, you must update the vCenter Hyperic server with vCenter Hyperic database location and then power on the vCenter Hyperic server.

Create and Configure the vCenter Hyperic vApp

To deploy a vCenter Hyperic vApp using vCloud Director, you must first create and configure the vApp in vCloud Director.

You cannot configure the vCloud Director server for a user-managed keystore during deployment of the vCloud Director vApp. To configure a user-managed keystore after deployment, see "Configuring SSL Options," on page 38.

Prerequisites

Verify that you have completed the prerequisites described in Chapter 4, "Deploy a vCenter Hyperic vApp Using vCloud Director," on page 51.

Procedure

1 Log in to the vCloud Director Web console.

2 Click **My Cloud > vApps > Build New vApp** to complete the vApp profile.

Option	Description
Name this vApp	Type a name for the vApp and, optionally, a description.
Runtime UI Text	Select a runtime
Storage Lease UI text	Select a storage lease

3 Click **Next**.

4 In the Add Virtual Machines pane, select the Hyperic vApp templates.

You find the Hyperic vApp templates in two possible locations:

- **Look In > My organization's catalogs**
- **Look In > Public catalogs**

5 Browse to and select the vCenter Hyperic server and database virtual machines:

Option	Action
vCenter Hyperic server	Select **Hyperic Server v5.0 Virtual Appliance**.
vCenter Hyperic database	Select **Hyperic Database v5.0 Virtual Appliance**.

6 Click **Next**.

7 Select the check box to signify your acceptance of the end user license agreement and click **Next**.

8 In the Configure Virtual Machines panel, select a virtual datacenter where the vCenter Hyperic vApp will run.

9 Accept the default values, or specify other values.

VMware recommends that you assign static IP addresses.

10 Click **Next**.

11 In the Application panel, configure the user credentials for the PostgreSQL and vCenter Hyperic databases.

Do not enter data in the **What is the address of the vPostgres database** text box.

12 Click **Next**.

13 In the Networking panel, select the **Always use assigned IP addresses until this vApp or associated networks are deleted** check box and click **Next**.

14 Review the summary for the vApp and click **Finish**.

What to do next

Power on the vCenter Hyperic server. See "Power on the vCenter Hyperic Server," on page 52.

Power on the vCenter Hyperic Server

After you have created your vCenter Hyperic vApp, you must update the vCenter Hyperic server with vCenter Hyperic database location and then power on the vCenter Hyperic server.

You must power on the vCenter Hyperic database, then configure the vCenter Hyperic server with the location of the database. You then start the vCenter Hyperic server.

Prerequisites

Create and configure the vCenter Hyperic vApp. See "Create and Configure the vCenter Hyperic vApp," on page 51.

Procedure

1 In vCloud Director, go to **vApps > Virtual Machines**, select the vPostgres virtual machine and click **Power On**.

2 In vCloud Director, go to **vApps > Virtual Machines** and select the vCenter Hyperic virtual machine.

3 Right-click on the virtual machine to display the vApp menu and select **Properties > Custom Properties**.

4 Type the IP address of the vCenter Hyperic database in the **What is the address of the vPostgres database** text box.

5 Power on the the vCenter Hyperic server.

Post Installation Administration 5

After you have installed the vCenter Hyperic server and agents, you might need to change some of the configuration options that you first specified. There are various properties that you can change.

This chapter includes the following topics:

Encrypt vCenter Hyperic Agent Property Values

Although vCenter Hyperic automatically encrypts some property values, such as for a keystore password, you can encrypt agent property values yourself.

You specify the encryption values in the `agent.properties` file. Following a successful initial startup of the vCenter Hyperic agent, credentials are stored in the agent's `/data` directory. Each time the agent is restarted, it looks first in that directory for server connection details. It does not look directly in the `agent.properties` file.

To encrypt values after the agent has been started the first time, you must stop the agent and delete the agent's `/data` directory. You then make the changes in the properties file and restart the agent, as if it is being started for the first time.

Prerequisites

Verify that the vCenter Hyperic agent can access `AgentHome/conf/agent.scu`. Following the encryption of any agent-to-server connection properties, the agent must be able to access this file to start.

Procedure

1 Stop the vCenter Hyperic agent.

2 Go to `AgentHome` and delete the `/data` directory.

3 In the `agent.properties` file, locate `agent.setup.camPword=` and type a password using a plain text value.

4 Save the `agent.properties` file.

5 Restart the agent.

The `/data` directory is recreated. The plain text value in the `agent.properties` file is encrypted. If you open this file you will see the encrypted value has replace the plain text value that you entered.

What to do next

If your agent deployment strategy involves distributing a standard `agent.properties` file to all agents, you must also distribute `agent.scu`. See "Install Multiple vCenter Hyperic Agents Simultaneously," on page 40.

Uninstall a vCenter Hyperic Agent

From time to time you might need to uninstall a vCenter Hyperic agent.

Prerequisites

Determine whether the agent is managed by vCenter Hyperic, or is installed as a Windows service.

Procedure

- Select the uninstall option that is appropriate to the agent installation environment.

Agent Installation Environment	Action
Agent managed by vCenter Hyperic	Remove the platform for the agent and delete the agent's installation folder.
Agent installed as a Windows service	Run `hq-agent.bat remove` to remove the Windows service.

Index