vCenter CapacityIQ Installation Guide

vCenter CapacityIQ 1.0.1

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Contents

About This Book

The *vCenter CapacityIQ Installation Guide* describes how to install the VMware vCenter™ CapacityIQ virtual appliance.

Intended Audience

CapacityIQ is a capacity planning and management tool for VMware vSphere environments. This book is intended for administrators of vSphere who are familiar with virtual machine technology and datacenter operations, and who are also responsible for administering CapacityIQ. This book offers instructions for installing CapacityIQ and information that helps resolve installation issues.

Document Feedback

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VMware CapacityIQ Documentation

The complete documentation set for VMware CapacityIQ consists of the following documents.

- *CapacityIQ Installation Guide*. Explains installation of CapacityIQ.

- *CapacityIQ 1.0.1 Release Notes*. Late-breaking news and descriptions of known issues and workarounds.

- CapacityIQ online help. Conceptual and procedural information to help you complete a task.

- CapacityIQ Admin Portal help. Conceptual and procedural information to help you complete an administrative task.

The vCenter CapacityIQ landing page provides release notes that contain current information about the release. You can find the landing page, as well as documentation for vSphere, at http://www.vmware.com/support/pubs.

Technical Support and Education Resources

The following technical support resources are available to you. To access the current version of this book and other books, go to http://www.vmware.com/support/pubs.

Online and Telephone Support
To use online support to view your product and contract information, register your products and submit technical support requests, go to http://www.vmware.com/support.

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About vCenter CapacityIQ 1

VMware vCenter™ CapacityIQ helps vSphere system administrators monitor and manage the capacity of virtualized environments.

Install CapacityIQ as a vCenter Server plug-in. CapacityIQ ensures that virtualized infrastructure capacity is efficient and predictable.

The what-if scenario feature of CapacityIQ allows administrators who are managing capacity to model changes to the virtualized environment and assess the effect of a change without implementation costs or time-consuming trial and error.

This chapter includes the following topics:

CapacityIQ Main Tasks

CapacityIQ collects performance information about managed objects, such as hosts and virtual machines in the virtual infrastructure. CapacityIQ stores the information in the CapacityIQ database.

You query the database to understand available capacity in the virtual infrastructure. CapacityIQ performs these tasks.

1   Collects performance statistics about managed objects in the virtual infrastructure

2   Stores the statistics in the CapacityIQ database and builds a performance history for each object

3   Collects and stores inventory history for each object, such as moving a virtual machine from one host to another

4   Retrieves and presents the statistics on demand through the CapacityIQ user interface

5   Allows you to filter the information presented and to modify the date range of data viewed to target specific objects, time periods, or types of activity

6   Allows you to create scenarios to model potential changes to the virtual infrastructure

CapacityIQ Architecture

CapacityIQ is a virtual appliance that you install on vCenter Server. A virtual appliance is a virtual machine image that contains software designed to run inside a virtual machine.

CapacityIQ does not affect the performance of vSphere. All of the data processing that CapacityIQ performs is done within the CapacityIQ virtual appliance.

You must have one CapacityIQ virtual appliance instance for each vCenter Server instance.

The virtual appliance includes the following components as illustrated in Figure 1-1.

CapacityIQ Administrative Server	The CapacityIQ administrative server provides a user interface for the CapacityIQ system administrator to configure and maintain the virtual appliance. The user interface is called the Admin Portal.
CapacityIQ Server	The CapacityIQ server hosts an operating system and the CapacityIQ application. A monitoring feature called watchdog tracks whether CapacityIQ processes are operating normally. The watchdog logs exceptions such as services stopping and starting. Events are posted in the `ciq_watchdog.log` file.
Database Server	The CapacityIQ virtual appliance includes its own database. The database server stores data collected from objects managed in vCenter Server. NOTE CapacityIQ 1.0.1 does not support storing data in an external database.
Data Collector	The data collector collects inventory and performance data. Configure the data collector to access vCenter Server through port 443 on vCenter Server.

Each instance of the vSphere Client installed on vCenter Server can use CapacityIQ. CapacityIQ does not require changes to your vCenter Server setup, such as modifying the logging levels.

Figure 1-1. CapacityIQ Architecture Components
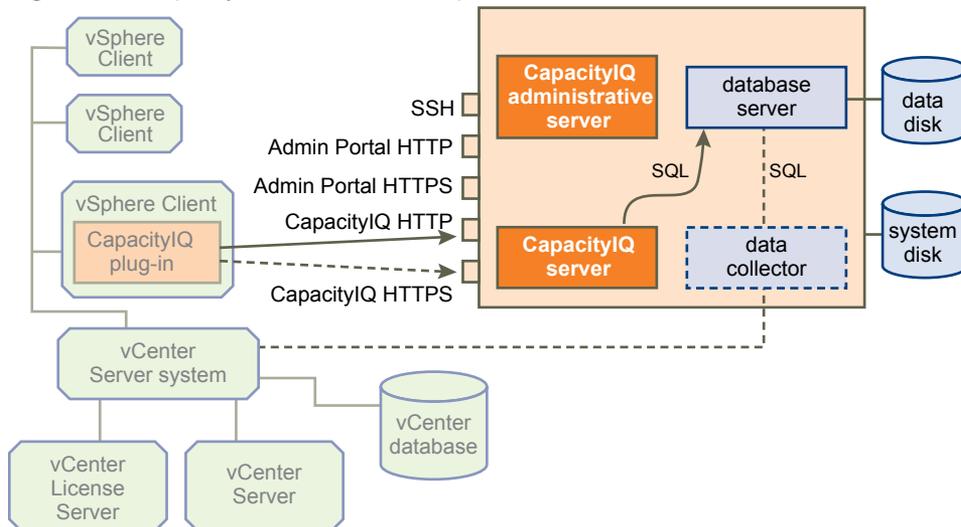
CapacityIQ begins collecting performance data shortly after installation. Updates to performance statistics in the CapacityIQ database occur using standard vSphere APIs. Data collection remains continuous unless you stop CapacityIQ.

The dashboard begins to populate within an hour or so after you install CapacityIQ. To get meaningful information in views and reports, wait until you have collected at least three days of performance data.

Administrator Process Overview

The person administering CapacityIQ is responsible for installation, maintenance, and troubleshooting.

Setup

The initial setup includes the following tasks.

1   In the vSphere Client, import the CapacityIQ appliance.

2   Deploy the CapacityIQ appliance, which means that CapacityIQ completes an initialization sequence. This process includes entering account credentials for the Virtual Appliance services and Admin Portal access.

3   Configure the network and time zone settings.

4   Open a browser and log in to the CapacityIQ Admin Portal.

5   Configure the settings to register CapacityIQ with vCenter Server.

6   Apply the CapacityIQ license.

7   Verify the installation.

The Dashboard takes a few minutes to populate with data.

Alternatively, if you already have a CapacityIQ 1.0 instance installed, you can update to CapacityIQ 1.0.1 using an update pack.

Maintenance

After initial setup is complete, perform ongoing administrator tasks on an as-needed basis.

■   Stop or restart CapacityIQ, for example, during a vCenter Server maintenance cycle.

■   Check the status of CapacityIQ on the Admin Portal Status page.

■   Apply patches and updates to the CapacityIQ application.

■   Manage license changes and renewals.

■   Back up and restore CapacityIQ.

■   Troubleshoot any problems and send diagnostic data to VMware Technical Support.

Licensing CapacityIQ

CapacityIQ and vCenter Server licensing are separate. The vSphere Management Installer does not install CapacityIQ. You can download a free evaluation version of CapacityIQ that you can use for 60 days. To use CapacityIQ for more than a trial period, purchase a full product license.

You can obtain CapacityIQ licenses for an evaluation or as a full license.

Evaluation license	An evaluation license allows you to try CapacityIQ and make a buying decision. Download an evaluation license from http://vmware.com/download/. After 60 days, you receive a warning of expiration starting seven days before the evaluation license expires.
Full license	A full license gives you access to CapacityIQ and all updates and is renewable yearly. A full license migrates when CapacityIQ is upgraded to a new version.

For more information about licensing, see the VMware licensing portal.

Install the CapacityIQ Virtual Appliance

2

Only the CapacityIQ administrator performs installation and setup tasks. Installation includes using the vSphere Client interface for importing the appliance, deploying the appliance by running a Linux-based installation script, and configuring the virtual appliance.

Procedure

1 CapacityIQ Installation Requirements on page 11

   Before you install CapacityIQ, your vSphere environment must meet virtual appliance, port access, and listening port requirements.

2 Deploy the Virtual Appliance on page 13

   You use the vSphere Client user interface to deploy the CapacityIQ appliance. VMware distributes the appliance as a `.pak` file that includes an Open Virtualization Format (OVF) file.

3 Configure the Virtual Appliance on page 13

   After you import the CapacityIQ OVF file, configure the virtual appliance.

4 Configure Network and Time Zone Settings on page 14

   When the configuration process completes, you can optionally configure network and time zone settings.

5 CapacityIQ Configuration on page 14

   Configuring CapacityIQ includes registering CapacityIQ, installing the license, and optionally installing a custom SSL certificate.

6 Grant Access to CapacityIQ on page 17

   The vSphere administrator grants users access to CapacityIQ by assigning CapacityIQ privileges to a role.

7 Verify Installation on page 17

   Verify that CapacityIQ is properly installed so that you can start working with CapacityIQ.

CapacityIQ Installation Requirements

Before you install CapacityIQ, your vSphere environment must meet virtual appliance, port access, and listening port requirements.

vCenter Server/ESX Requirements

For a list of vCenter Server and ESX Server versions that CapacityIQ supports, see the CapacityIQ release notes.

A single instance of the CapacityIQ virtual appliance supports capacity analysis for up to 200 hosts and 2000 virtual machines. CapacityIQ installs even if you exceed that number, but might not perform as expected. Do not exceed your license capacity.

CapacityIQ Virtual Appliance Requirements

Table 2-1 lists the requirements for the CapacityIQ virtual appliance.

Table 2-1. Requirements for the CapacityIQ Virtual Appliance

Component	Minimum Requirement
CPU	1vCPU on a 2.4GHz or faster CPU
Memory	3GB
Disk space	Approximately 110GB
ESX host	ESX 3.0.2

The CapacityIQ virtual appliance uses the Community ENTerprise Operating System (CentOS) 5.2 operating system.

CapacityIQ Port Requirements

Table 2-2 describes CapacityIQ port access requirements for TCP connection. Configure your external firewalls so that these ports are open.

NOTE Customization of server ports is not supported.

Table 2-2. CapacityIQ Port Access Requirements

Port Number	Description
22	Must be open to enable SSH access to the CapacityIQ virtual appliance
80	Admin Portal HTTP server port (forwards to port 8080)
443	Admin Portal HTTPS server port (forwards to port 9443)
5480	HTTPS server port for the VMware Studio version of the Admin Portal
8080	CapacityIQ HTTP port
8443	CapacityIQ HTTPS port

CapacityIQ Listening Ports

Table 2-3 describes the local listening ports that CapacityIQ requires. These ports do not require an opening in your firewall.

Table 2-3. CapacityIQ Listening Ports

Port Number	Description
5432	PostgreSQL server port. Listens to connections from localhost only.
5488, 5489	Ports that the VMware Studio version of the Admin Portal use
8005, 9005	Apache Tomcat management ports for the Admin Portal
8080, 8443	These CapacityIQ ports are listening ports and ports that are required for TCP connection
9080	Admin Portal HTTP server port
9443	Admin Portal HTTPS server port

Admin Portal Supported Browsers

Access the CapacityIQ Admin Portal using these browsers.

- Internet Explorer 6.0.x, 7.0.x, and 8.0.x

- Mozilla Firefox 2.0.x and 3.0.x

Deploy the Virtual Appliance

You use the vSphere Client user interface to deploy the CapacityIQ appliance. VMware distributes the appliance as a `.zip` file that includes an Open Virtualization Format (OVF) file.

Prerequisites

You are in the vSphere Client and your assigned role and permissions allow you to import a virtual appliance.

Procedure

1 Download and open the CapacityIQ `.zip` file.

2 Select **File > Virtual Appliance > Import**.

3 Open the `.zip` file and locate the OVF folder.

For instructions about how to complete deployment of the virtual appliance, see the vSphere Client online help and documentation. The network switch that you select must have access to vCenter Server.

The virtual appliance appears in the vSphere Client inventory panel as a virtual machine.

What to do next

Configure the virtual appliance.

Configure the Virtual Appliance

After you import the CapacityIQ OVF file, configure the virtual appliance.

Prerequisites

You imported the OVF file. The appliance appears as a virtual machine in the vSphere Client inventory panel.

Procedure

1 Select the virtual appliance icon in the vSphere Client inventory panel.

2 Start the virtual machine by powering it on.

3 Click the **Console** tab.

The deployment process begins.

4 When prompted, specify the following items.

- A password to accompany the default user name, which is ciqadmin

- A root user name and password

When the process completes, the appliance console interface displays the URL to the Admin Portal.

The virtual appliance is configured.

What to do next

On the **Console** tab, configure the network and time zone settings.

Configure Network and Time Zone Settings

When the configuration process completes, you can optionally configure network and time zone settings.

Prerequisites

You deployed and configured the CapacityIQ virtual appliance, and you are on the **Console** tab in the console interface.

NOTE The CapacityIQ virtual appliance uses DHCP (Dynamic Host Configuration Protocol) by default, and time synchronizes with the ESX host on which it is running. Time settings use VMware Tools to synchronize.

Procedure

1   Navigate to **Configure Network**.

2   Select an IP address for the ESX host where vCenter CapacityIQ will be installed.

   ■   Use a DHCP server to select an IP address by domain name, such as ciq.vmware.com.

      NOTE CapacityIQ does not provide an interface to set the host name.

   ■   Use a static IP address for the vCenter CapacityIQ address. Static IP is the recommended choice.

   Either choice works. This choice is left to administrator preference or policies in your organization.

3   Navigate to **Set Timezone**, select the time zone from the drop-down menu, and click **OK**.

   Select the time zone that matches local time for vCenter Server where the CapacityIQ virtual appliance is installed.

You configured the network and time zone settings. You are finished working in the vSphere Client for now.

What to do next

Configure CapacityIQ. Open a browser window and navigate to the URL that appears in the console interface to start the Admin Portal.

CapacityIQ Configuration

Configuring CapacityIQ includes registering CapacityIQ, installing the license, and optionally installing a custom SSL certificate.

Register CapacityIQ

Register the CapacityIQ appliance to establish communications and credentials for vCenter Server to which CapacityIQ connects.

Prerequisites

Open a browser window and log in to the Admin Portal with the user name ciqadmin and the password you selected during installation. The Admin Portal is accessible using the IP address shown in the virtual appliance console interface.

NOTE If the user name or password contains a space, you must use the alternate method for registering CapacityIQ. See "Alternative Method for Registering a New Instance of CapacityIQ," on page 21 for instructions.

Procedure

1 Review the settings that appear on the Setup page.

2 (Optional) Click **Register** to change the vCenter CapacityIQ address selection and configure the registration settings.

   You might have already set up the vCenter CapacityIQ address setting when you configured network settings after you completed the installation. This address must be able to access vCenter Server.

3 In the vCenter CapacityIQ - Register dialog box, specify the Client connection type.

   ■ Select HTTPS for a more secure connection.

   ───
   NOTE HTTPS uses a self-signed SSL certificate unless you install a customized certificate.
   ───

   ■ Select HTTP if speed is more important than security.

4 Enter the Server address, User name, and Password for vCenter Server for which you want to analyze capacity.

   ───
   NOTE The user name and password must give you administrator privileges. The credentials are verified each time CapacityIQ starts up. If a change occurs, such as an expired password, you must update the credentials on the Admin Portal **Setup** tab.
   ───

5 Click **Apply** to complete the setup.

   The vCenter CapacityIQ - Register dialog box closes.

Install License

Install the CapacityIQ license on the License page of the Admin Portal.

Prerequisites

Log in to the Admin Portal.

Procedure

1 Type your CapacityIQ license key in the space provided and click **Apply**.

   The License information area populates.

2 Verify that the License information is correct.

   For example:

License Type	License type is Demo if you installed an evaluation version, or Valid for a full license.
License Capacity	This value is based on the number of physical CPUs you are using. For example, if you have 689 ESX physical hosts that are visible to vCenter Server, you might have a license capacity of 1000 to allow for growth.
License Used	The number of licenses that are deployed.
License Remaining	License Remaining is the License Capacity minus License Used.
License Expires on	Shows you the date and time of license expiration.
License Expires in	Shows you the remaining number of days before expiration.

You have installed and verified the license. The CapacityIQ License field on the Setup page updates.

What to do next

Install the SSL certificate if you plan to use one. Otherwise, grant access to CapacityIQ.

Request and Install a Custom SSL Certificate

By default, CapacityIQ installs a self-signed SSL certificate on the virtual appliance. The self-signed certificate generates security warnings. If you do not want to use the self-signed security certificate, you can install a custom SSL certificate for CapacityIQ at the command line. This task is optional and does not affect CapacityIQ functionality. If you are familiar with SSL certificate handling, you can use other methods.

Procedure

1   Log in to the CapacityIQ virtual appliance by using an SSH client such as PuTTY to access the ciq-admin command-line interface.

2   Open a command-line prompt.

3   Enter the `ciq-admin` command to create the certificate request.

Use the following syntax.

```
ciq-admin ssl genkey
--org-unit <organizationUnit>  --org-name <organizationName>
--city <city name> --state <state/province name> --country <two-letter country code>
[--use IP] [--validity <certificate validity in days>]
```

The certificate signing request (CSR) appears on your screen.

NOTE   Type your entries with care. You cannot regenerate the CSR without restarting the process.

4   (Optional) If you must start over, include the `--force` flag to regenerate the CSR.

```
ciq-admin ssl genkey --force
--org unit ...<certificate validity in days>]
```

5   Copy the CSR and send it to a certifying authority to obtain your SSL certificate.

The certificate must be in X509 or .PK7 format.

6   When you have the authorized certificate, use a file-copying tool to upload the certificate file to the virtual appliance.

This step must be completed correctly. If it is not, you might not be able to install the certificate.

7   Use the `install --cert` option of the `ciq-admin` command to install the certificate.

```
ciq-admin ssl install --cert <filename>
```

8   Confirm the certificate details.

The certificate details appear in the SSL certificate information area of the HTTPS page in the Admin Portal.

The custom certificate replaces the default self-signed certificate that CapacityIQ installed. Installing the custom certificate restarts CapacityIQ and the ciqadmin processes.

On the Setup page in the Admin Portal, the CapacityIQ HTTPS certificate field updates with the new certificate name and certificate expiration date.

What to do next

Grant access to CapacityIQ.

Grant Access to CapacityIQ

The vSphere administrator grants users access to CapacityIQ by assigning CapacityIQ privileges to a role.

When you configure CIQ, a new CapacityIQ privilege is added. Restart the vSphere Client before you choose one of the following methods to assign privileges.

Prerequisites

Restart the vSphere Client before you assign privileges.

Procedure

- Add CapacityIQ privileges to an existing role that is already assigned to a user.

- Create a new role with CapacityIQ privileges and assign the role to a user.

After a user gains privileges, the user can log in to the vSphere Client and access CapacityIQ. The CapacityIQ icon appears in the vSphere Client.

Verify Installation

Verify that CapacityIQ is properly installed so that you can start working with CapacityIQ.

Prerequisites

You installed the virtual appliance and configured settings on the Admin Portal.

Procedure

1 Log in to vCenter Server and locate the **CapacityIQ** icon on the vSphere Client toolbar.

2 Click the icon to open CapacityIQ.

3 Look at the inventory panel and verify that the objects you expect to see in the inventory panel appear.

CapacityIQ starts collecting data. As it becomes available, data populates the Dashboard. This process might take a few minutes.

NOTE If you were already logged in to the vSphere Client when you registered CapacityIQ, reconnect the vSphere Client to see the CapacityIQ icon.

Update or Replace a CapacityIQ Instance

3

Update or replace a CapacityIQ instance if the original instance has been deleted or you need to register a new instance with the vCenter Server.

This chapter includes the following topics:

Update CapacityIQ

VMware vCenter Update Manager does not manage updates to CapacityIQ. Periodically monitor the VMware CapacityIQ Web site to check for updates.

The Update page of the Admin Portal shows you the version of CapacityIQ that you are using and the last update applied.

Prerequisites

Before you apply an update, perform a backup of the virtual appliance.

> ⚠ CAUTION   You cannot roll back a CapacityIQ update. During the update process, the current session might terminate. If the session terminates, restart CapacityIQ, log in again, and verify that the update was applied.

Before you proceed, decide when to apply the update. CapacityIQ disconnects from the vSphere Client during the update. CapacityIQ services are unavailable until the update completes.

Updating to vCenter CapacityIQ 1.0.1 must adhere to a strict sequence of steps. You must first update vCenter CapacityIQ from 1.0 to 1.0.1 on vCenter Server 2.5. Optionally, then upgrade vCenter Server 2.5 to vCenter Server 4.0.x.

> NOTE   If you upgrade vCenter Server 2.5 to 4.0.x first, CapacityIQ does not function properly, and the statistics in the views render misleading data.

Procedure

1   Consult the VMware CapacityIQ Web site to find available updates that you have not yet applied.

The update package is distributed as a `.zip` file.

2   Download the update package to your computer.

3   On the Update page in the Admin Portal, click **Browse** to find the update package.

4   Select the update package and click **Update** to install.

You receive advisory messages as the update progresses.

5   Once the update completes, log in to the Admin Portal to view the status of the update on the **Update** tab.

The message Successful appears when the update completes successfully. If not, information about why the update failed is available.

What to do next

If the update or patch resolves a security issue, you might need to restart CapacityIQ. Follow the instructions you receive with the update package.

Replace a Registered Instance of CapacityIQ

You might need to replace a registered CapacityIQ instance on a vCenter Server.

NOTE   Do not register more than one instance of CapacityIQ to the same vCenter Server. Multiple instances of CapacityIQ are not supported and will cause an added load on the vCenter Server.

Recommended Method for Registering a New Instance of CapacityIQ

Use the recommended method for registering a new instance of CapacityIQ, unless you experience error messages or other difficulties.

Prerequisites

You must know the address of the original CapacityIQ instance.

Procedure

1   Open a browser window and log in to the Admin Portal with the user name ciqadmin and the password you selected during installation.

The Admin Portal is accessible using the IP address shown in the virtual appliance console interface. Unregister the original CapacityIQ instance from the vCenter Server.

2   Access the new CapacityIQ Admin Portal and register it with the vCenter Server.

The Registration Status updates to Registered and the vCenter Connection Status updates to Connected.

Alternative Method for Registering a New Instance of CapacityIQ

Use the alternative method for registering a new instance of CapacityIQ if you experience difficulties with the recommended method, there are spaces in the user name or password, or you no longer know the address of the original CapacityIQ instance.

Procedure

1   Open the CapacityIQ Virtual Appliance console through SSH or through the vSphere Client.

2   In the command line interface run the following command.

```
ciq-admin register --vc-server <vc_server_ip> --force --user <vc_username> --password
<vc_password>
```

3   Check for the following problems should the registration fail.

- ■ Problem: Invalid vCenter Server credentials. Solution: The username or password probably has special characters and needs to be escaped. For example, you would need to use single quotes for the following username and password.

  ```
  ciq-admin register --vc-server <vc_server_ip> --force --user 'company_domain\username' --
  password 'password_with_special_characters'
  ```

- ■ Problem: You cannot register the CIQ Virtual Appliance using the hostname. Solution: Use the --use-ip option to resolve DNS issues with hostnames. Setting this option will register CapacityIQ using its IP address instead of its hostname. Run the following command.

  ```
  ciq-admin register --vc-server <vc_server_ip> --use-ip
  --force --user <vc_username> --password <vc_password>
  ```

- ■ Run the following command to see more options for the `ciq-admin` command.

  ```
  ciq-admin register help
  ```

The new instance of CapacityIQ is registered.

Post-Installation Tasks

4

You periodically perform maintenance tasks such as applying updates to CapacityIQ, stopping and restarting CapacityIQ services, or downloading log files for VMware Technical Support.

Monitor the status of CapacityIQ services to see whether services are running normally on the Admin Portal Status page.

For information about these tasks, see the online help in the CapacityIQ Admin Portal.

Convert Evaluation License

You can convert an evaluation license to a fully valid license without losing data in the CapacityIQ database.

Prerequisites

Purchase a fully-licensed version from the VMware store at http://vmware.com/vmwarestore/.

Procedure

◆ On the License page of the Admin Portal, type the new license key in the License key field and click **Apply.**

When the conversion process is complete, the new license information appears. The new number of days until expiration appears in the CapacityIQ License field on the Admin Portal Setup page.

For information about updating an existing valid license, see the CapacityIQ Admin Portal online help.

Troubleshooting Installation 5

Troubleshooting information can help you with problems you might encounter when you install CapacityIQ.

This chapter includes the following topics:

DHCP Address Avoidance at Startup

When CapacityIQ starts for the first time, it attempts to obtain a DHCP address for vCenter Server that is hosting the appliance.

Problem

After startup, you can configure a static IP address, but the first attempt to use a DHCP address is problematic in some environments. The workaround is to disable the virtual appliance network interface card (NIC) before you start the virtual appliance. To configure a static IP address, see "Configure Network and Time Zone Settings," on page 14. For instructions about how to deploy a virtual appliance, see "Configure the Virtual Appliance," on page 13

Solution

1   Deploy the virtual appliance.

2   Select the CapacityIQ virtual machine in the inventory panel but do not start the machine yet.

3   Right-click and select **Edit Settings**.

4   On the **Hardware** tab of the Virtual Machine Properties dialog box, select **Network card 1**.

5   In the Device Status area of the Virtual Machine Properties dialog box, deselect **Connect at Power on** and click **OK.**

6   Power on the virtual machine.

7   Click the **Console** tab.

The Linux-based installation script runs.

8   When the script completes, configure a static IP address.

9   Reverse the change to the NIC settings for Network card 1 by selecting **Connect at Power on**.

10   Restart the virtual machine.

Restarting the vSphere Client is Required After Registration

After you register CapacityIQ with the vSphere Client on the Admin Portal **Setup** tab, you must restart the vSphere Client.

Problem

If you do not restart the vSphere Client after registration, the **CapacityIQ** button does not appear in the vSphere Client toolbar.

Cause

The vSphere Client requires the restart to discover a new plug-in.

Solution

1   Install and register CapacityIQ at a time when it is convenient to restart the vSphere Client.

2   Restart the vSphere Client.

No Data During Initial Startup

When you first open CapacityIQ, it might take up to an hour for the Dashboard to populate with data.

Problem

The Dashboard might appear blank when you first open CapacityIQ.

Cause

CapacityIQ needs time to collect the initial inventory and performance data and display the data on the Dashboard.

Solution

◆   Check the vCenter Connection Status on the Setup page of the Admin Portal to verify that CapacityIQ is running. Wait for the information to appear on the Dashboard.

Wrong Time Zone Setting

Setting the time zone incorrectly during installation of the CapacityIQ appliance results in time stamping errors for views and reports.

Problem

If the time zone you select during installation does not match the time zone on vCenter Server where the CapacityIQ appliance is installed, the data you collect does not represent the time zone you are in.

Cause

Data might be collected across numerous time zones that use standard or Daylight Savings Time. To allow you to view data as if it comes from one time zone, CapacityIQ uses the **Set Timezone** setting to adjust the date and time associated with the collected inventory and performance data. Daily and weekly data are time stamped with the date and time of the vCenter Server location where CapacityIQ is installed. Data for monthly and greater intervals uses UTC time.

Solution

1   In the vSphere Client, select the VMware CapacityIQ appliance in the inventory panel.

2   Click the **Console** tab.

3   Select **Set Timezone**.

4   Select the correct time zone from the drop-down menu and click **OK**.

System Time Synchronization

As a best practice, synchronize the time of CapacityIQ with the time of the ESX Server that is hosting CapacityIQ.

Problem

If CapacityIQ is not synchronized with the ESX Server, the system time is not synchronized with time on other systems in your datacenter.

Cause

You disabled the time synchronization feature.

Solution

1   In the vSphere Client, select the CapacityIQ virtual machine and right-click to select **Edit Settings**.

2   In the Virtual Machine Properties dialog box, click the **Options** tab.

3   Select the **VMware Tools** setting.

4   Under Advanced options, select **Synchronize guest time with host**.

5   Click **OK**.

Virtual Appliance Password Forgotten

If you forget your password for logging in to the Admin Portal, reset and make a record of the new password.

Problem

You manage the CapacityIQ administrator password on the Account page in the Admin Portal. If you forget your password, you cannot log in to the Admin Portal to update to a new password.

Solution

1   Boot the virtual appliance and go to the console for the virtual machine in the vSphere Client.

2   Press any key to display the GRUB menu in the console.

3   On the GRUB menu, select CentOS (2.6.18-92.e15).

4   Type **e** to edit the line.

    A list of items in the CentOS configuration file appears.

5   Select the line that starts with kernel and type **e** to edit the line.

6   At the end of the line, press the spacebar and type **single** to indicate single-user mode.

7   Press **Enter** to exit edit mode.

8   On the GRUB screen, type `bb` to boot into single-user mode.

      The virtual appliance boots in single-user mode.

9   Change the ciqadmin user password by using the `password` command.

10   Run the `shutdown -r now` command to restart the virtual appliance.

      When the virtual appliance starts, you can log in using the new password.

No Volume Groups Found

During installation, you might see a `No volume groups found` error message on the Console.

Problem

This error message is from the Linux Logical Volume Manager.

Cause

CapacityIQ uses CentOS, which by default uses logical volumes, but CapacityIQ is configured not to use them.

Solution

◆   Ignore this message.

DHCP Not Available Causes Network Connection Failure

During installation, you might see an error message on the Console that your network connection fails because DHCP is unavailable.

Problem

The CapacityIQ virtual appliance is configured for DHCP by default.

Cause

If DHCP is not available, an error appears after ten attempts to connect with DHCP.

Solution

◆   Ignore the message, continue the installation, and reconfigure the network connection for static IP later.

Cannot Remove SSH Keys

During installation, you might see the `rm: cannot remove [...]/ssh_host_*',: No such file or directory` error message on the Console.

Problem

SSH keys for the self-signed certificate generate when you first start the virtual appliance.

Cause

SSH keys must be unique. The installation process assumes that you have existing SSH keys installed for the virtual appliance and tries to remove them. Because no SSH keys are installed, an error message appears.

Solution

◆   Ignore this message.

Index