Red Hat Storage 3
Console Installation Guide

Installing Red Hat Storage Console

Shalaka Harne   Pavithra Srinivasan
Red Hat Documentation Team

Red Hat Storage 3 Console Installation Guide

Installing Red Hat Storage Console

Shalaka Harne
Red Hat Engineering Services and Operations
sharne@redhat.com

Pavithra Srinivasan
Red Hat Engineering Content Services
psriniva@redhat.com

Red Hat Documentation Team
Red Hat Engineering Services and Operations

Legal Notice

Abstract

This guide is a step-by-step guide for users to install the Red Hat Storage Console.

Table of Contents

Preface

Part I. Before you Begin

Chapter 1. Overview

The Red Hat Storage Console helps to meet the challenges of managing complex environments. Red Hat's state of the art storage platform helps to reduce the cost and complexity of large deployments. Red Hat Storage Console platform provides features such as:

▷ Support to quickly create and manage storage clusters and volumes.

▷ Multilevel administration to enable administration of physical infrastructure as well as administration of virtual objects.

Report a bug

1.1. System Components

The Red Hat Storage platform consists of one or more servers. Each server is based on either Red Hat Storage Servers or Red Hat Enterprise Linux 6.5 and 6.6 systems. The hosts are grouped into Red Hat Storage clusters, and volumes are created in each cluster. The system and its components are managed through a centralized management system.

Red Hat Storage Console

The Red Hat Storage Console is a centralized management system and is used to view and manage storage servers. Red Hat Storage Console features include search capabilities, resource management, and provisioning. The Red Hat Storage Console runs on Red Hat Enterprise Linux 6.5 and Red Hat Enterprise Linux 6.6.

The console provides a graphical user interface (GUI) to administer the storage environment's physical and logical resources. The console manages provisioning, user sessions, and high availability / clustering.

The Red Hat Storage Console exposes an Administration Portal and an Application Programming Interface (API).

▷ The Administration Portal is used for set up, configuration, and management tasks for the Red Hat Storage environment.

▷ The REST API is an interface used to automate manual user tasks. Scripts for the REST API can be written in any language that supports accessing HTTP and HTTPS resources.

Report a bug

1.2. Installation Workflow

Ensure that the following component requirements are met to use Red Hat Storage Console:

Check System Requirements

1. Install and configure the hardware requirements listed in Section 2.1, "Hardware Requirements".

2. Install and configure the software requirements listed in Section 2.3, "Software Requirements".

Red Hat Storage Console Installation

1. Install the Red Hat Storage Console. For details, see Chapter 3, *Red Hat Storage Console Installation*.

Contact Red Hat Support to address any errors or unexpected behavior during the installation and configuration process.

Report a bug

Chapter 2. System Requirements

This chapter outlines the minimum hardware and software requirements to install the Red Hat Storage Console.

> **Important**
>
> Ensure that all requirements are met before installation starts. Missing requirements can result in Red Hat Storage Console environment to not function as expected.

Report a bug

2.1. Hardware Requirements

The Red Hat Storage Console environment requires:

- One machine to act as the management server

- One or more machines to act as storage servers. At least two machines are required to support replicated volumes.

- One or more machines to use as clients to access the Administration Portal.

Report a bug

2.1.1. Management Server Requirements

The hardware requirements outlines are for a small to medium sized deployment. The requirements can vary for larger or smaller deployment sizes.

Minimum Requirements

- A dual core CPU.

- 4 GB of available system RAM that is not being consumed by existing processes.

- One Network Interface Card (NIC) with bandwidth of at least 1 Gbps.

Recommended Requirements

- A quad core CPU or multiple dual core CPUs.

- 16 GB of available system RAM that is not being consumed by existing processes.

- One Network Interface Card (NIC) with bandwidth of at least 1 Gbps.

- An out of band management card to manage and monitor the Red Hat Storage Console node even when the server is down.

Report a bug

2.2. Storage Server Requirements

For more information on the storage server requirements, see the *Prerequisites* section of the *Red Hat Storage Installation Guide*.

> **Note**
>
> Installing Red Hat Storage Console 3.0 on Red Hat Storage server is not supported.

Report a bug

2.3. Software Requirements

> **Important**
>
> The Red Hat Storage Console setup script (`rhsc-setup`) supports the `en_US.UTF-8`, `en_US.utf8`, and `en_US.utf-8` locales. Installing on a system without one of the supported locale values fails.

Report a bug

2.3.1. Red Hat Storage Console Operating System Requirements

The Red Hat Storage Console Management Server is supported on the Red Hat Enterprise Linux 6.5 64-bit version and in Red Hat Enterprise Linux 6.6 64-bit version. Ensure complete and successful installation of the operating system before starting the installing the Red Hat Storage Console.

> **Important**
>
> Red Hat Storage Console must be installed on a base installation of Red Hat Enterprise Linux. Do not install any additional packages after the base installation, as it could cause dependency issues when attempting to install the packages required by the Console.

Report a bug

2.3.2. Red Hat Storage Console Client Requirements

Use a client with a supported web browser to access the Administration Portal. The portal support the following clients and browsers:

- Mozilla Firefox 24 or later, on Red Hat Enterprise Linux is required to access the Administration Portal.

- Internet Explorer 9 or 10 on Microsoft Windows is required to access the Administration Portal. Use the desktop version, not the touchscreen version for Internet Explorer version 10.

Report a bug

2.3.3. Directory Services

Directory services are a collection of software, hardware, and processes that store information about an enterprise, subscribers, or both and provide this information to users. Each directory service contains at least one instance of Directory Server and at least one directory client program. Client programs access names, phone numbers, addresses, and other data stored in the directory service.

The Red Hat Storage platform has a default **admin** user configured. Use the domain management tool (**rhsc-manage-domains**) to authenticate additional users by attaching directory service domains.

> **Note**
>
> You do not require additional firewall rules if you use a local database server (default option) on the Console itself.

Report a bug

2.3.4. Firewall Configuration

Red Hat Storage requires specific ports to remain accessible.

While specific configuration instructions for additional network infrastructure which may exist between these systems will not be covered it is intended that the information provided will assist with this task.

Use the **rhsc-setup** script to automatically set up the firewall rules required by Red Hat Storage Console. If a firewall configuration is previously implemented, skip this step and manually integrate the new and existing configurations.

The provided firewall information is for a default configuration. If alternative ports are used during installation, adjust the firewall rules to allow access to the customized port.

Table 2.1. Red Hat Storage Console Firewall Requirements

Port(s)	Protocol	Source	Destination	Purpose
22	TCP	≫ System(s) used for maintenance of the console including back end configuration, and software upgrades.	≫ Red Hat Storage Console	SSH (optional)
80, 443	TCP	≫ Administration Portal clients ≫ Red Hat Enterprise Linux host(s) ≫ REST API clients	≫ Red Hat Storage Console	Provides HTTP and HTTPS access to the console.

2.3.5. Directory Server Firewall Requirements

Red Hat Storage Console requires a directory server to support user authentication. A number of ports need to be opened in the directory server's firewall to support the GSS-API authentication as used by the Red Hat Storage Console.

Table 2.2. Directory Firewall Requirements

Port(s)	Protocol	Source	Destination	Purpose
88, 464	TCP, UDP	Red Hat Storage Console	Directory Server	Kerberos authentication
389, 636	TCP	Red Hat Storage Console	Directory Server	Lightweight Directory Access Protocol (LDAP) and LDAP over SSL

2.3.6. Database Server Firewall Requirements

Red Hat Storage Console supports the use of a remote database server. If you plan to use a remote database server with Red Hat Storage Console, ensure that the remote database server allows connections from the Console

Table 2.3. Database Server Firewall Requirements

Port	Protocol	Source	Destination	Purpose
5432	TCP, UDP	Red Hat Storage Console	PostgreSQL database server	Default port for PostgreSQL database connections.

.

2.3.7. Red Hat Storage Server Firewall Requirements

Red Hat Storage servers require that a number of ports be opened to allow network traffic through the system's firewall.

For more information on the ports that you need to open, see chapter *Planning Red Hat Storage Installation* in the *Red Hat Storage Installation Guide*.

Table 2.4. Server Firewall Requirements

Port	Protocol	Source	Destination	Purpose
22	TCP	Red Hat Storage Console	Red Hat Storage Servers	Secure Shell (SSH) access.

Port	Protocol	Source	Destination	Purpose
54321	TCP	Red Hat Storage Console	Red Hat Storage Servers	VDSM communications with the Red Hat Storage Console.

Report a bug

2.3.8. Red Hat Storage Console User Accounts and Groups

When the rhsc package is installed, a number of user accounts are created. The default user identifier (UID) for each account and the default group identifier (GID) for each entry are:

» The **kvm** group (GID **36**) includes the **vdsm** user (UID **36**)

» The **ovirt** group (GID **108**) includes the **ovirt** user (UID **108**)

Report a bug

Part II. Installing Red Hat Storage Console

Chapter 3. Red Hat Storage Console Installation

3.1. Console Installation Overview

3.1.1. Registering to Red Hat Network

The Red Hat Storage Console installation requires that the system be subscribed/registered to a number of Subscription Manager repositories or Red Hat Satellite Server channels. These channels or repositories are used to retrieve both the initial installation packages and later updates as they become available.

Procedure 3.1. Registering with Subscription Manager using Command Line

1. **Register the System with Subscription Manager**

   Run the following command and enter your Red Hat Network user name and password to register the system with the Red Hat Network:

   ```
   # subscription-manager register
   ```

2. **Identify Available Entitlement Pools**

   Run the following commands to find entitlement pools containing the repositories required to install the Red Hat Storage Console:

   ```
   # subscription-manager list --available | grep -A8 "Red Hat
   Enterprise Linux Server"
   # subscription-manager list --available | grep -A8 "Red Hat
   Storage"
   ```

3. **Attach Entitlement Pools to the System**

   Use the pool identifiers located in the previous step to attach the **Red Hat Enterprise Linux Server** and **Red Hat Storage Console** entitlements to the system. Run the following command to attach the entitlements:

   ```
   # subscription-manager attach --pool=[POOLID]
   ```

4. **Enable the Required Repositories**

   Run the following commands to enable the repositories required to install Red Hat Storage Console:

   ```
   # subscription-manager repos --enable=rhel-6-server-rpms
   # subscription-manager repos --enable=jb-eap-6-for-rhel-6-server-
   rpms
   # subscription-manager repos --enable=rhsc-3-for-rhel-6-server-rpms
   # subscription-manager repos --enable=rhs-nagios-3-for-rhel-6-
   server-rpms
   ```

5. **Verify if the Repositories are enabled**

Run the following command to verify if the repositories are enabled:

```
# yum repolist
```

Procedure 3.2. Registering with Subscription Manager using GUI

1. To register and to attach suitable subscription, see *Registering from the GUI* section in *Red Hat Subscription Management Guide*.

   > **Important**
   >
   > To attach Red Hat Storage Console subscription, select **Manually assign subscriptions after registration** option.

2. Run the following commands as **root** user to enable the repositories required to install Red Hat Storage Console:

   ```
   # subscription-manager repos --enable=rhel-6-server-rpms
   # subscription-manager repos --enable=jb-eap-6-for-rhel-6-server-
   rpms
   # subscription-manager repos --enable=rhsc-3-for-rhel-6-server-rpms
   # subscription-manager repos --enable=rhs-nagios-3-for-rhel-6-
   server-rpms
   ```

3. **Verify if the Repositories are enabled**

   Run the following command to verify if the repositories are enabled:

   ```
   # yum repolist
   ```

Procedure 3.3. Registering with Red Hat Satellite Server

1. Configure the client system to access Red Hat Satellite. Refer section *Registering Clients with Red Hat Satellite Server* in *Red Hat Satellite 5.6 Client Configuration Guide*.

2. Run **rhn_register** command to register the system with the Red Hat Satellite.

3. In the select operating system release page, select All available updates and follow the prompts to register the system to the standard base channel for Red Hat Enterprise Linux 6 **rhel-x86_64-server-6**.

4. Run the following command to subscribe the system to the required Red Hat Storage Console server channels.

   ```
   # rhn-channel --add --channel rhel-x86_64-server-6-rhs-rhsc-3 --
   channel  jbappplatform-6-x86_64-server-6-rpm --channel rhel-x86_64-
   server-6-rhs-nagios-3
   ```

5. Run the following command to verify that the system is registered successfully.

   ```
   # rhn-channel --list
   rhel-x86_64-server-6
   ```

```
rhel-x86_64-server-6-rhs-rhsc-3
jbappplatform-6-x86_64-server-6-rpm
rhel-x86_64-server-6-rhs-nagios-3
```

Report a bug

3.1.2. Installing Red Hat Storage Console

The Red Hat Storage Console and its dependencies are available via Red Hat Network (RHN). To install the Console, you must ensure that connectivity with either Red Hat Network or a Red Hat Network Satellite Server is available. You need to ensure that you have access to all the required Red Hat Network channels.

> **Important**
>
> » Installing Red Hat Storage Console 3.0 on Red Hat Storage 3.0 is not supported.
> » Set SELinux to permissive on the Nagios server.
> » If you have existing installations of the technology preview version of the Red Hat Storage Console, you need to remove those installations and perform a fresh installation of the product. An upgrade from technical preview version is not supported.

Procedure 3.4. Installing the Red Hat Storage Console

1. Use the **yum** command to enure that the most recent version of installed packages are in use.

   ```
   # yum update
   ```

2. Use **yum** to initiate the installation of the rhsc package and all the dependencies. You must run this command as the **root** user.

   ```
   # yum install rhsc
   ```

Report a bug

3.1.3. Upgrading Red Hat Storage Console

Upgrading Red Hat Storage Console comprises three main steps:

» Configuring channels and entitlements.

» Updating the required packages.

» Performing the upgrade.

The command used to perform the upgrade is **rhsc-setup**, which provides an interactive interface. While the upgrade is in process, Red Hat Storage hosts continue to operate independently. When the upgrade is complete, you can then upgrade your hosts to the latest versions of Red Hat Storage.

> **Important**
>
> You must run SELinux in permissive mode to use Nagios Monitoring.

Report a bug

3.1.3.1. Upgrades between Minor Releases

Upgrade Red Hat Storage Console between minor relases.

Procedure 3.5. Checking for Red Hat Storage Console Updates

1. Run the following command on the machine on which the Red Hat Storage Console is installed:

   ```
   # rhsc-upgrade-check
   ```

2. A. If there are no updates are available, the command will output the text **No upgrade**:

   ```
   # rhsc-upgrade-check
   VERB: queue package rhsc-setup for update
   VERB: Building transaction
   VERB: Empty transaction
   VERB: Transaction Summary:
   No upgrade
   ```

   B. If updates are available, the command will list the packages to be updated:

   ```
   # rhsc-upgrade-check
   VERB: queue package rhsc-setup for update
   VERB: Downloading: repomdoInTMztmp.xml (0%)
   VERB: Downloading: repomdoInTMztmp.xml 4.4 k(100%)
   VERB: Downloading: repomdhPVwA7tmp.xml (0%)
   VERB: Downloading: repomdhPVwA7tmp.xml 4.4 k(100%)
   VERB: Downloading: repomdvWktrFtmp.xml (0%)
   VERB: Downloading: repomdvWktrFtmp.xml 3.3 k(100%)
   VERB: Downloading: rhs-nagios-3-for-rhel-6-server-rpms/primary_db
   (0%)
   VERB: Downloading: rhs-nagios-3-for-rhel-6-server-rpms/primary_db
   13 k(74%)
   VERB: Downloading: rhs-nagios-3-for-rhel-6-server-rpms/primary_db
   18 k(100%)
   VERB: Downloading: repomds0eFt9tmp.xml (0%)
   VERB: Downloading: repomds0eFt9tmp.xml 2.8 k(100%)
   VERB: Downloading: repomdrL4fCttmp.xml (0%)
   VERB: Downloading: repomdrL4fCttmp.xml 3.3 k(100%)
   VERB: Downloading: rhsc-3-for-rhel-6-server-rpms/primary_db (0%)
   VERB: Downloading: rhsc-3-for-rhel-6-server-rpms/primary_db 9.1
   k(55%)
   VERB: Downloading: rhsc-3-for-rhel-6-server-rpms/primary_db 16
   k(100%)
   VERB: package rhsc-setup queued
   VERB: Building transaction
   ```

```
VERB: Transaction built
VERB: Transaction Summary:
VERB:       updated    - otopi-1.1.2-1.el6ev.noarch
VERB:       update     - otopi-1.2.0-1.el6ev.noarch
VERB:       updated    - otopi-java-1.1.2-1.el6ev.noarch
VERB:       update     - otopi-java-1.2.0-1.el6ev.noarch
VERB:       obsoleted  - rhevm-setup-plugins-3.3.0-4.el6ev.noarch
VERB:       updated    - rhsc-lib-2.1.2-0.40.el6rhs.noarch
VERB:       update     - rhsc-lib-3.0.0-0.14.el6rhs.noarch
VERB:       updated    - rhsc-setup-2.1.2-0.40.el6rhs.noarch
VERB:       update     - rhsc-setup-3.0.0-0.14.el6rhs.noarch
VERB:       install    - rhsc-setup-base-3.0.0-0.14.el6rhs.noarch
VERB:       install    - rhsc-setup-plugin-ovirt-engine-3.0.0-
0.14.el6rhs.noarch
VERB:       install    - rhsc-setup-plugin-ovirt-engine-common-
3.0.0-0.14.el6rhs.noarch
VERB:        obsoleting - rhsc-setup-plugins-3.0.0-0.2.el6rhs.noarch
Upgrade available
```

You have checked for updates to the Red Hat Storage Console.

Procedure 3.6. Updating Red Hat Storage Console

Updates to the Red Hat Storage Console are released via Red Hat Network. Before installing an update from Red Hat Network, ensure you read the advisory text associated with it and the latest version of the *Red Hat Storage Release Notes* and *Red Hat Storage Technical Notes*. A number of actions must be performed to complete an upgrade, including:

≫ Stopping the **ovirt-engine** service.

≫ Downloading and installing the updated packages.

≫ Backing up and updating the database.

≫ Performing post-installation configuration.

≫ Starting the **ovirt-engine** service.

1. Run the following command to update the *rhsc-setup* package:

   ```
   # yum update rhsc-setup
   ```

2. Run the following command to update the Red Hat Storage Console:

   ```
   # rhsc-setup
   ```

3. Run the following command to ensure that all packages are up to date:

   ```
   # yum update
   ```

You have successfully updated the Red Hat Storage Console.

Report a bug

3.1.3.2. Upgrading Red Hat Storage Console 2.1 Update 4 to Red Hat Storage Console 3.0

> **Important**
>
> You can upgrade to Red Hat Storage Console 3.0 only from Red Hat Storage Console 2.1 Update 4 release. If your current version is lower than Update 4, then upgrade it to Update 4 before upgrading to Red Hat Storage Console 3.0. Follow the steps given in *Updating Red Hat Storage Console* section of Section 3.1.3.1, "Upgrades between Minor Releases"

The following procedures describe the process for upgrading Red Hat Storage Console 2.1 Update 4 to Red Hat Storage Console 3.0 using Subscription Manager and Red Hat Satellite Server. These procedures assume that the system on which the Red Hat Storage Console is hosted is subscribed to the channels/repositories and entitlements for receiving Red Hat Storage Console 3.0 packages.

For more information on Subscribing to the Red Hat Storage Console Channels, refer Section 3.1.1, "Registering to Red Hat Network"

Procedure 3.7. Upgrading Red Hat Storage Console 2.1 Update 4 to Red Hat Storage Console 3.0 using Subscription Manager

1. Verify the subscription status by running the following command:

   ```
   # migrate-rhs-classic-to-rhsm --status
   ```

2. Install the required packages using the following command:

   ```
   # yum install subscription-manager-migration
   ```

3. Execute the following command to migrate from Red Hat Network Classic to Red Hat Subscription Manager:

   ```
   # migrate-rhs-classic-to-rhsm --rhn-to-rhsm
   ```

4. To enable the Red Hat Storage Console 3.0 repositories, execute the following command:

   ```
   # migrate-rhs-classic-to-rhsm --upgrade --version 3
   ```

5. To verify if the migration from Red Hat Network Classic to Red Hat Subscription Manager is successful, execute the following command:

   ```
   # migrate-rhs-classic-to-rhsm --status
   ```

6. Run the following command to ensure that you have the most recent version of **rhsc-setup** by updating the **rhsc-setup** package:

   ```
   # yum update rhsc-setup
   ```

7. Run the following command and follow the prompts to upgrade the Red Hat Storage Console:

   ```
   # rhsc-setup
   ```

   Enter **Yes** or **No** when prompted to select whether to enable or disable monitoring.

8. Remove or disable the Red Hat Storage Console 2.1 repositories to ensure that the system does not use any Red Hat Storage Console 2.1 packages using the following command:

```
# subscription-manager repos --disable=rhsc-2.1-for-rhel-6-server-
rpms
```

9. Run the following command to ensure all packages are up to date:

```
# yum update
```

Procedure 3.8. Upgrading Red Hat Storage Console 2.1 Update 4 to Red Hat Storage Console 3.0 using Red Hat Satellite Server

1. Subscribe the system on which the Red Hat Storage Console is installed to the required channels for receiving Red Hat Storage Console 3.0 packages using the following command:

```
# rhn-channel --add --channel rhel-x86_64-server-6-rhs-rhsc-3 --
channel rhel-x86_64-server-6-rhs-nagios-3
```

2. Run the following command to ensure that you have the most recent version of **rhsc-setup** by updating the **rhsc-setup** package:

```
# yum update rhsc-setup
```

3. Run the following command and follow the prompts to upgrade the Red Hat Storage Console:

```
# rhsc-setup
```

Enter **Yes** or **No** when prompted to select whether to enable or disable monitoring.

4. Remove or disable the Red Hat Storage Console 2.1 channels to ensure that the system does not use any Red Hat Storage Console 2.1 packages using the following command:

```
# rhn-channel --remove --channel rhel-x86_64-server-6-rhs-rhsc-2.1
```

5. Run the following command to ensure all packages are up to date:

```
# yum update
```

Report a bug

3.1.4. Post-Upgrade Tasks

The Red Hat Storage Console clusters have a compatibility version. The cluster compatibility version need to be changed after upgrading the Red Hat Storage Console version. The cluster compatibility version indicates the features of Red Hat Storage Console supported by all of the hosts in the cluster. The cluster compatibility is set according to the version of the least capable host operating system in the cluster.

> **Note**
>
> To change the cluster compatibility version, you must have first updated all the hosts in your cluster to a level that supports your desired compatibility level.

Procedure 3.9. Migrating Red Hat Storage Nodes

1. Log in to the Administration Portal as the administrative user. By default this is the **admin** user.

2. Click the **Hosts** tab and select the desired host to display the Details pane.

3. Click **Maintenance** and click **OK** to place the host in maintenance mode.

4. Upgrade the Red Hat Storage nodes.

   For more information, refer section *Upgrading from Red Hat Storage 2.1 Update 4 to Red Hat Storage 3.0 using yum* in *Red Hat Storage 3 Administration Guide*.

5. To activate the hosts, click **Hosts** tab in Red Hat Storage Console.

6. Select the host and click **Activate**.

Procedure 3.10. Changing the Cluster Compatibility Version

1. Log in to the Administration Portal as the administrative user. By default this is the **admin** user.

2. Click the **Clusters** tab.

3. Select the cluster to change from the list displayed. If the list of clusters is too long to filter visually then perform a search to locate the desired cluster.

4. Click the **Edit** button.

5. Change the **Compatibility Version** to the desired value.

   For more information on the Cluster compatibility version, refer *Cluster Properties* section in *Red Hat Storage Console Administration Guide*.

6. Click **OK** to open the **Change Cluster Compatibility Version** confirmation window.

7. Click **OK** to confirm.

You have updated the compatibility version of the cluster.

Report a bug

3.1.5. Configuring Red Hat Storage Console

When package installation is complete, the Red Hat Storage Console must be configured. The **rhsc-setup** script is provided to assist with this task. The script asks you a series of questions, and configures the environment based on the answers. When required values are provided, the updated configuration is applied and the Red Hat Storage Console services are started. The **rhsc-setup** script guides you through several distinct configuration stages. The script suggests possible configuration defaults in square brackets. No additional input is required wherever the default values are acceptable.

Procedure 3.11. Configuring the Console

1. **Execute rhsc-setup command**

   ```
   #rhsc-setup
   ```

2. **Packages Check**

   The **rhsc-setup** script checks if it is performing an upgrade, or an installation. No user input is required at this stage.

   ```
   Checking for product updates...
   No product updates found
   ```

3. **Network Configuration**

   A reverse look-up is also performed on the hostname, which is automatically detected. You can correct the auto-detected hostname if it is incorrect. The fully qualified domain name should have both forward and reverse lookup records in DNS.

   ```
   Host fully qualified DNS name of this server [autodetected domain-
   based name]:
   ```

   The **rhsc-setup** script looks for firewall managers which are both active and enabled in the environment and you can choose to configure the firewall.

   ```
   Setup can automatically configure the firewall on this system.
   Note: automatic configuration of the firewall may overwrite current
   settings.
   Do you want Setup to configure the firewall? (Yes, No) [Yes]: yes
   [INFO] iptables will be configured as firewall manager.
   ```

4. **Database Configuration**

   You can use either a local or remote PostgreSQL database. The script can automatically configure the database, including adding a user and a database, or use the values that you provide.

   ```
   Where is the database located? (Local, Remote) [Local]: Local
   Setup can configure the local postgresql server automatically for
   the engine to run. This may conflict with existing applications.
   Would you like Setup to automatically configure postgresql, or
   prefer to perform that manually? (Automatic, Manual) [Automatic]:
   Automatic
   ```

   For information on how to prepare a postgrSQL database, see Section 3.1.8, "Preparing a PostgreSQL Database Server for use with Red Hat Storage Console"

5. *Set the administrator credentials*

   You need to set an administrator password for the automatically created administrative user of the Red Hat Storage Console: **admin@internal**.

   ```
   Engine admin password:
   Confirm engine admin password:
   ```

A message appears on the terminal if the password you have set is weak.

6. **PKI Configuration**

   The Console uses certificates to communicate securely with its hosts. You need to provide the organization name for the certificate. This certificate can also optionally be used to secure HTTPS communications with the Console.

   ```
   Organization name for certificate [autodetected domain-based
   name]:
   ```

7. **Apache Configuration**

   The external SSL (HTTPS) communications with the Console are secured with the self-signed certificate created in the PKI configuration stage by default, to securely communicate with hosts. You may choose to use another certificate for external HTTPS connections, without affecting how the Console communicates with hosts.

   ```
    Setup can configure apache to use SSL using a certificate issued
   from the internal CA.
   Do you wish Setup to configure that, or prefer to perform that
   manually? (Automatic, Manual) [Automatic]: Automatic
   ```

   The Red Hat Storage Console uses the Apache web server to present a landing page to users. **rhsc-setup** script can make the Console's landing page the default page presented by Apache.

   ```
    Setup can configure the default page of the web server to present
   the application home page. This may conflict with existing
   applications.
   Do you wish to set the application as the default page of the web
   server? (Yes, No) [Yes]:
   ```

8. **System Configuration**

   The **rhsc-setup** script by default uses the GlusterFS application mode and skips the NFS configuration.

   ```
   [ INFO ] NFS configuration skipped with application mode Gluster
   ```

   The **rhsc-setup** script validates all the inputs, and warns you of any possible problem. Further input is only required if any of the inputs you provided would adversely impact the environment.

   The **rhsc-setup** script prompts to confirm whether to connect to the Red Hat Access Plug-in.

   On agreeing to configure the proxy server, you are prompted to enter the IP address and the port number of the proxy server. You also have the option to set a user name for the proxy server with a password.

   ```
   Would you like transactions from the Red Hat Access Plug-in sent
   from the RHSC to be brokered through a proxy server? (Yes, No)
   [No]: No
   ```

The **rhsc-setup** script prompts to confirm whether to enable or disable monitoring by entering **Yes** or **No**

For information on how to configure Nagios, see *Configuring Nagios for Red Hat Storage Console* in *Red Hat Storage Console Administration Guide*

```
Would you like external monitoring to be enabled? (Yes, No) [Yes]:
```

```
--=CONFIGURATION PREVIEW=--
Engine database name                      : engine
Engine database secured connection        : False
Engine database host                      : localhost
Engine database user name                 : engine
Engine database host name validation      : False
Engine database port                      : 5432
PKI organization                          : example.com
Application mode                          : gluster
Firewall manager                          : iptables
Update Firewall                           : True
Configure WebSocket Proxy                 : False
Host FQDN                                 : rhsc.example.com
Configure local Engine database           : True
Set application as default page           : True
Configure Apache SSL                      : True
Nagios monitoring enabled for gluster hosts: True


          Please confirm installation settings (OK, Cancel) [OK]:
OK
[ INFO  ] Stage: Transaction setup
[ INFO  ] Stopping engine service
[ INFO  ] Stage: Misc configuration
[ INFO  ] Stage: Package installation
[ INFO  ] Stage: Misc configuration
[ INFO  ] Initializing PostgreSQL
[ INFO  ] Creating PostgreSQL 'engine' database
[ INFO  ] Configuring PostgreSQL
[ INFO  ] Creating Engine database schema
[ INFO  ] Creating CA
[ INFO  ] Generating post install configuration file '/etc/ovirt-
engine-setup.conf.d/20-setup-ovirt-post.conf'
[ INFO  ] Stage: Transaction commit
[ INFO  ] Stage: Closing up
```

A. To confirm the displayed configuration values, type **OK** and press **Enter**.

B. To correct one or more configuration values, type **cancel**, this causes the set-up to fail. Run the setup again to provide the correct values.

9. **Summary**

When all the required values are provided, the script lists the values for a final confirmation.

When the script completes, note the additional information provided. Copy the **SSH Certificate fingerprint**, **SSH Public key fingerprint**, and **Red Hat Storage Console URL** for later reference.

```
 --== SUMMARY ==--

[ INFO  ]  To enable monitoring, ensure the managed nodes are
migrated to Red Hat Storage-3.0.Also make sure the auto discovery
tool is executed to start monitoring the RHS Nodes, after the
cluster nodes are added to Red Hat Storage Console. For detail,
refer to RHSC Administration Guide.
[WARNING] Less than 16384MB of memory is available
          SSH fingerprint:
          Internal CA
          Web access is enabled at:
              http://HostURL:portnumber/ovirt-engine
              https://HostURL:portnumber/ovirt-engine
          Please use the user "admin" and password specified in
order to login.
```

10. **End of Summary**

    At this stage, the engine service and http daemon are started.

    ```
              --== END OF SUMMARY ==--

    [ INFO  ] Starting engine service
    [ INFO  ] Restarting httpd
    [ INFO  ] Stage: Clean up
              Log file is located at /var/log/ovirt-engine/setup/ovirt-
    engine-setup-20141120141807-f4igl5.log
    [ INFO  ] Generating answer file '/var/lib/ovirt-
    engine/setup/answers/20141120142427-setup.conf'
    [ INFO  ] Stage: Pre-termination
    [ INFO  ] Stage: Termination
    [ INFO  ] Execution of setup completed successfully
    ```

> **Note**
>
> Automated installations are created by providing the **rhsc-setup** with an answer file. An answer file contains answers to the questions asked by the setup command.
>
> » To create an answer file, use the **--generate-answer** parameter to specify a path and file name with which to create the answer file. When this option is specified, the answers for the questions in the setup process are recorded in the answer file.
>
> ```
> # rhsc-setup --generate-answer=[ANSWER_FILE]
> ```
>
> » To use an answer file for a new installation, use the **--config-append** parameter to specify the path and file name of the answer file to be used. The **rhsc-setup** command will use the answers stored in the file to complete the installation.
>
> ```
> # rhsc-setup --config-append=[ANSWER_FILE]
> ```
>
> *--config* - replaces default system configuration
>
> *--config-append* - appends configuration to existing system configuration
>
> Run **rhsc-setup** **--help** for a full list of parameters.

Result:

The Red Hat Storage Console is installed and configured. You can connect to the Administration Portal using the instructions in Section 3.1.7, "Connecting to the Administration Portal".

> **Note**
>
> Red Hat periodically provides updates for the Red Hat Storage Console.

Report a bug

3.1.6. Removing Red Hat Storage Console

> **⚠ Potential Data Loss**
>
> The **rhsc-cleanup** command removes all the existing Red Hat Storage Console data. This includes configuration settings, certificates, and database tables.

Procedure 3.12. Removing the Console

The Red Hat Storage Console provides the **rhsc-cleanup** utility to allow quick and easy removal of the data files associated with the installation. After **rhsc-cleanup** is run, you can remove the Red Hat Storage Console packages using **yum**.

1. Execute **rhsc-cleanup** on the system that Red Hat Storage Console is installed on. You must be logged in as the root user to run **rhsc-cleanup**.

```
# rhsc-cleanup
```

2. Confirm that you want to remove all of the Red Hat Storage Console components. These include PKI Keys, the locally hosted ISO domain file system layout, PKI Configuration, the local NFS exports configuration, and the engine database content.

```
Do you want to remove all components? (Yes, No) [Yes]: yes
```

> **Note**
>
> A backup of the Engine database and a compressed archive of the PKI keys and configuration are always automatically created. These are saved under **/var/lib/ovirt-engine/backups/**, and their filenames include the date and engine- and engine-pki-, respectively.

3. You will be prompted to confirm the action to remove Red Hat Storage Console. If you choose to proceed, the **ovirt-engine** service is stopped, and the configuration is removed according to the options you select.

```
During execution engine service will be stopped (OK, Cancel) [OK]:
OK
ovirt-engine is about to be removed, data will be lost (OK, Cancel)
[Cancel]: OK
```

The configuration files of the environment are removed.

4. You can safely uninstall the Red Hat Storage Console packages using **yum**.

```
# yum remove rhsc*
```

> **Note**
>
> A backup of the database is made available, the engine setup is cleaned-up, a backup of the PKI configuration and keys are made available, and the log file and answer files are generated.

Report a bug

3.1.7. Connecting to the Administration Portal

Use the Administration Portal to create, configure, monitor, and maintain the Red Hat Storage environment using a graphical user interface. To begin configuring the Red Hat Storage environment you must first log into the Administration Portal.

1. In a browser, navigate to https://<IP Address>/webadmin. Replace <IP Address> with the URL provided during installation.

2. When initially connecting to the Administration Portal, a prompt appears asking if the **ca.cer** certificate is trusted. Follow the prompts and then click the new link that appears on the page to reload the Administration Portal.

3. The portal log in screen displays. Enter **admin** as the **User Name**. Enter the password set during installation in the **Password** field. Select the **internal** domain from the **Domain** list.

   Click **Login** to log in.

3.1.8. Preparing a PostgreSQL Database Server for use with Red Hat Storage Console

You can manually configure a database server to host the Red Hat Storage Console's database. It can be hosted either locally on the Red Hat Storage Console server, or remotely on another server where **posgresql** and **postgresql-server** packages are installed.

Complete these steps on the database server before running the **rhsc-setup** utility.

Procedure 3.13. Preparing a PostgreSQL Database Server for use with Red Hat Storage Console

1. Initialize the database and start the postgreSQL service by running the commands:

   ```
   # service postgresql initdb
   # service postgresql start
   ```

2. Create a postgreSQL user for the Red Hat Storage Console to use when it reads from and writes to the database, and a database to store information about the environment in. This step is required on both local and remote manually configured database servers.

   ```
   # su - postgres
   $ psql
   postgres=# create user USER password 'PASSWORD';
   postgres=# create database DATABASE owner USER;
   ```

3. Make sure that database can be accessed remotely by enabling client authentication. This step is required on manually configured remote database servers. Edit the **/var/lib/pgsql/data/pg_hba.conf** file, and add this line:

   ```
   host all all X.X.X.X/24 trust
   ```

   Replace X.X.X.X with the IP address of the Console server.

4. Allow TCP/IP connections to the database. This step is required on manually configured remote database servers. Edit the **/var/lib/pgsql/data/postgresql.conf** file, and add this line:

   ```
   listen_addresses='*'
   port = 5432
   ```

   This example makes postgreSQL listen for connections on all interfaces. You can specify an interface by giving its IP address.This requires a restart of the postgreSQL server.

5. Restart the **postgres** service. This step is required on both local and remote manually configured database servers.

   ```
   service postgresql restart
   ```

You have manually configured a postgreSQL database server to use with the Red Hat Storage Console. For information on configuring the postgreSQL database, see Section 3.1.9, "Configuring the Manager to use a Manually Configured Local or Remote PostgreSQL Database"

Report a bug

3.1.9. Configuring the Manager to use a Manually Configured Local or Remote PostgreSQL Database

Prerequisites: Prepare a PostgreSQL Database Server for use with the Red Hat Storage Console.

```
# service postgresql initdb
# service postgresql start
```

During the Database Configuration stage of the Red Hat Storage Console configuration using the **rhsc-setup** utility, you can opt to use a manually configured database. You can select to use a locally or remotely installed postgreSQL database.

Procedure 3.14. Configuring the Manager to use a Manually Configured Local or Remote PostgreSQL Database

1. During the Red Hat Storage Console installation using the **rhsc-setup** utility, you are prompted to decide where the database is located.

   ```
   Where is the database located? (Local, Remote) [Local]:
   ```

   The steps involved in manually configuring the Red Hat Storage Console to use remote and local databases are the same, except that to use a remotely hosted database, you need to provide the hostname of the remote database server, and the port it is listening on.

2. If you are using a remote manually configured database, supply the **rhsc-setup** utility with the hostname of the database server and the port it is listening on.

   ```
   Database host [localhost]:
   Database port [5432]:
   ```

3. In either case, you are prompted to confirm whether the database uses a secured connection. Provide a username and password for the newly configured database.

   ```
   Database secured connection (Yes, No) [No]:
   Database name [engine]:
   Database user [engine]:
   Database password:
   ```

   > **Note**
   >
   > Using a secured connection to the database requires you to have also manually configured secured database connections.

You have configured the Red Hat Storage Console to use a manually configured database. The **rhsc-setup** utility continues with the rest of the storage environment configuration.

Report a bug

Report a bug

Part III. Appendices

Additional Utilities

A.1. The Domain Management Tool

Red Hat Storage Console authenticates users using Active Directory services. To add users to Red Hat Storage Console, use the internal administrator user to add the Active Directory service against which the users must be authenticated. You can add and remove directory service domains using the domain management tool, **rhsc-manage-domains**. This command is only accessible from the machine on which Red Hat Storage Console is installed, and must be run as the root user.

Report a bug

A.1.1. Syntax of the Domain Management Tool

The syntax is:

```
rhsc-manage-domains -action=ACTION [options]
```

For full information on usage, see the **rhsc-manage-domains** command's help output:

```
# rhsc-manage-domains --help
```

Report a bug

A.1.2. Adding Domains to a Configuration

In this example, the **rhsc-manage-domains** command is used to add the ActiveDirectory domain **test.redhat.com** to the Red Hat Storage Console configuration. The configuration is set to use the administator user when querying the domain; the password is provided interactively.

Example A.1. rhsc-manage-domains Add Action

```
# rhsc-manage-domains -action=add -domain='test.redhat.com' -
provider=ActiveDirectory -user='admin' -interactive
Enter password:

The domain test.redhat.com has been added to the engine as an
authentication source but no users from that domain have been granted
permissions within the oVirt Manager.
Users from this domain can be granted permissions from the Web
administration interface or by editing the domain using -action=edit
and specifying -addPermissions.
oVirt Engine restart is required in order for the changes to take place
(service ovirt-engine restart).
Manage Domains completed successfully
```

Report a bug

A.1.3. Editing a Domain in the Configuration

In this example, the **rhsc-manage-domains** command is used to edit the **directory.test.redhat.com** domain in the Red Hat Storage Console configuration. The configuration is updated to use the administrator user when querying this domain; the password is provided interactively.

Example A.2. rhsc-manage-domains Edit Action

```
# rhsc-manage-domains -action=edit -domain='test.redhat.com' -
provider=ActiveDirectory -interactive
Enter password:

oVirt Engine restart is required in order for the changes to take place
(service ovirt-engine restart).
Manage Domains completed successfully
```

Report a bug

A.1.4. Deleting a Domain from the Configuration

In this example, the **rhsc-manage-domains** command is used to remove the **directory.test.redhat.com** domain from the Red Hat Storage Console configuration. Users defined in the removed domain will no longer be able to authenticate with the Red Hat Storage Console. The entries for the affected users will remain defined in the Red Hat Storage Console until they are explicitly removed.

The domain being removed in this example is the last one listed in the Red Hat Storage Console configuration. A warning is displayed highlighting this fact, and that only the administrator user from the internal domain will be able to log in until another domain is added.

Example A.3. rhsc-manage-domains Delete Action

```
# rhsc-manage-domains -action=delete -domain='test.redhat.com'
WARNING: Domain test.redhat.com is the last domain in the
configuration. After deleting it you will have to either add another
domain, or to use the internal administrator user in order to login.
Are you sure you like to delete domain test.redhat.com (yes/no) :
yes
Successfully deleted domain test.redhat.com. Please remove all users
and groups of this domain using the Administration portal or the API.
oVirt Engine restart is required in order for the changes to take place
(service ovirt-engine restart).
Manage Domains completed successfully
```

Report a bug

A.1.5. Validating a Domain Configuration

In this example, the **rhsc-manage-domains** command is used to validate the Red Hat Storage Console configuration. The command attempts to log into each listed domain with the credentials provided in the configuration. The domain is reported as valid if the attempt is successful.

Example A.4. rhsc-manage-domains Validate Action

```
#  rhsc-manage-domains -action=validate
Domain test.redhat.com is valid.
The configured user for domain test.redhat.com is admin@TEST.REDHAT.COM
Manage Domains completed successfully
```

Report a bug

A.1.6. Listing the Domains in a Configuration

In this example, the **rhsc-manage-domains** command is used to list the domains defined in the Red Hat Storage Console configuration. For each configuration entry, the command displays the domain, the user name - in User Principle Name (UPN) format - and whether the domain is local or remote.

Example A.5. rhsc-manage-domains List Action

```
# rhsc-manage-domains -action=list
Domain: test.redhat.com
        User name: admin@TEST.REDHAT.COM
Manage Domains completed successfully
```

Report a bug

Revision History

Revision 3-32	**Wed Jan 07 2015**	**Shalaka Harne**

Version for 3.0.3 release.

Revision 3-31	**Tue Dec 23 2014**	**Shalaka Harne**

Version for 3.0.3 release.

Revision 3-29	**Fri Nov 28 2014**	**Shalaka Harne**

Version for 3.0.3 release.

Revision 3-28	**Mon Nov 03 2014**	**Shalaka Harne**

Version for 3.0.2 release.