



# **Red Hat Virtualization 4.0**

## **Introduction to the User Portal**

Accessing and Using the User Portal



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Accessing and Using the User Portal

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## Abstract

This document shows you how to use the Red Hat Virtualization User Portal.

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# CHAPTER 1. ACCESSING THE USER PORTAL

## 1.1. BROWSER AND CLIENT REQUIREMENTS

The following browser versions and operating systems can be used to access the Administration Portal and the User Portal.

Browser support is divided into tiers:

- Tier 1: Browser and operating system combinations that are fully tested and fully supported. Red Hat Engineering is committed to fixing issues with browsers on this tier.
- Tier 2: Browser and operating system combinations that are partially tested, and are likely to work. Limited support is provided for this tier. Red Hat Engineering will attempt to fix issues with browsers on this tier.
- Tier 3: Browser and operating system combinations that are not tested, but may work. Minimal support is provided for this tier. Red Hat Engineering will attempt to fix only minor issues with browsers on this tier.

**Table 1.1. Browser Requirements**

Support Tier	Operating System Family	Browser	Portal Access
Tier 1	Red Hat Enterprise Linux	Mozilla Firefox Extended Support Release (ESR) version	Administration Portal and User Portal
Tier 2	Windows	Internet Explorer 10 or later	Administration Portal and User Portal
	Any	Most recent version of Google Chrome or Mozilla Firefox	Administration Portal and User Portal
Tier 3	Any	Earlier versions of Google Chrome or Mozilla Firefox	Administration Portal and User Portal
	Any	Other browsers	Administration Portal and User Portal

Virtual machine consoles can only be accessed using supported Remote Viewer (virt-viewer) clients on Red Hat Enterprise Linux and Windows. To install virt-viewer, see [Installing Supported Components](#) in the *Virtual Machine Management Guide*. Installing virt-viewer requires Administrator privileges.

SPICE console access is only available on other operating systems, such as OS X, through the unsupported SPICE HTML5 browser client.

Supported QXL drivers are available on Red Hat Enterprise Linux machines, Windows XP and Windows 7 machines.

SPICE support is divided into tiers:

- Tier 1: Operating systems on which remote-viewer has been fully tested and is supported.
- Tier 2: Operating systems on which remote-viewer is partially tested and is likely to work. Limited support is provided for this tier. Red Hat Engineering will attempt to fix issues with remote-viewer on this tier.

**Table 1.2. Client Operating System SPICE Support**

Support Tier	Operating System	SPICE Support
Tier 1	Red Hat Enterprise Linux 7	Fully supported on Red Hat Enterprise Linux 7.2 and above
	Microsoft Windows 7	Fully supported on Microsoft Windows 7
Tier 2	Microsoft Windows 8	Supported when spice-vdagent is running on these guest operating systems
	Microsoft Windows 10	Supported when spice-vdagent is running on these guest operating systems

## 1.2. LOGGING IN TO AND OUT OF THE USER PORTAL

Log in to and out of the Red Hat Virtualization User Portal directly from your web browser.

### Procedure 1.1. Logging in to the User Portal

1. Access the User Portal:
  - o Enter the provided **User Portal URL** in the address bar of your web browser. The address must be in the format of `https://server.example.com/UserPortal`.
  - o Enter the provided **server address** into the web browser to access the welcome screen. Click **User Portal**. An SSO login page displays. SSO login enables you to log in to the User Portal and the Administration Portal (if you have permission) at the same time.
2. Enter your **User Name** and **Password**. Use the **Profile** drop-down menu to select the correct domain.
3. Select the required language from the drop-down list.
4. Click **Log In**. The list of virtual machines assigned to you displays.



**NOTE**

You can configure the User Portal to automatically connect to a virtual machine, as long as there is only one running virtual machine. See the [Automatically Connecting to a Virtual Machine](#) section in the *Virtual Machine Management Guide* for more information.

To log out of the Red Hat Virtualization User Portal click your user name in the header bar and click **Sign Out**. You are logged out of all portals and the Manager welcome screen displays.

## 1.3. LOGGING IN FOR THE FIRST TIME: INSTALLING THE ENGINE CERTIFICATE

### 1.3.1. Installing the Red Hat Virtualization Manager Certificate in Firefox

The first time you access the User Portal, you must install the certificate used by the Red Hat Virtualization Manager to avoid security warnings.


#### Procedure 1.2. Installing the Red Hat Virtualization Manager Certificate in Firefox

1. Navigate to the URL for the User Portal in Firefox.
2. Click **Add Exception** to open the **Add Security Exception** window.
3. Ensure the **Permanently store this exception** check box is selected.
4. Click the **Confirm Security Exception** button.

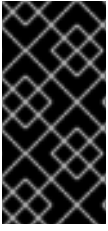
### 1.3.2. Installing the Red Hat Virtualization Manager Certificate in Internet Explorer

The first time you access the User Portal, you must install the certificate used by the Red Hat Virtualization Manager to avoid security warnings.

#### Procedure 1.3. Installing the Red Hat Virtualization Manager Certificate in Internet Explorer

1. Navigate to the following URL:  
 `https://[your manager's address]/ca.crt`
2. Click the **Open** button in the **File Download - Security Warning** window to open the **Certificate** window.
3. Click the **Install Certificate** button to open the **Certificate Import Wizard** window.
4. Select the **Place all certificates in the following store** radio button and click **Browse** to open the **Select Certificate Store** window.
5. Select **Trusted Root Certification Authorities** from the list of certificate stores, then click **OK**.
6. Click **Next** to proceed to the **Certificate Store** screen.

7. Click **Next** to proceed to the **Completing the Certificate Import Wizard** screen.
8. Click **Finish** to install the certificate.



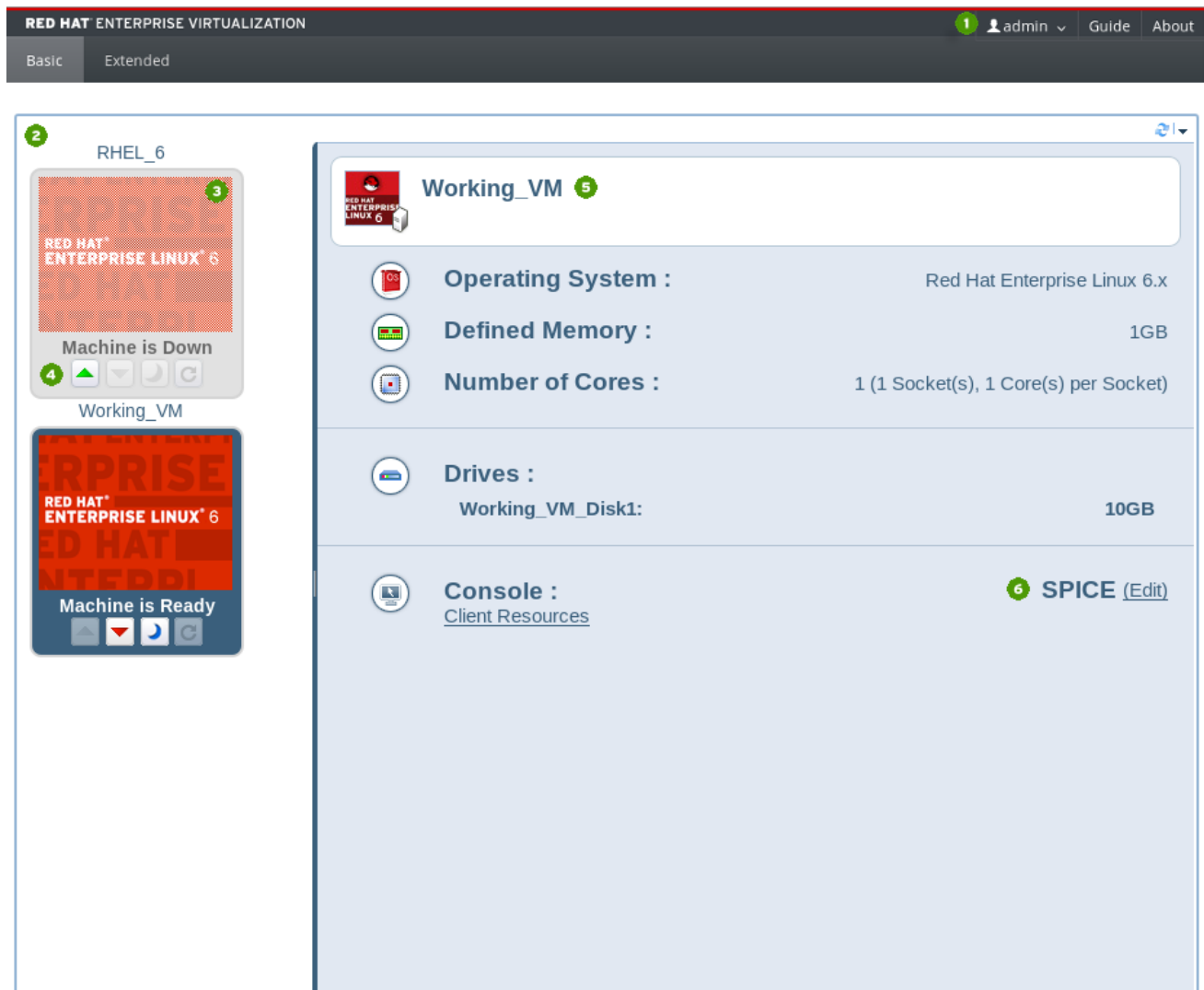
### **IMPORTANT**

If you are using Internet Explorer to access the User Portal, you must also add the URL for the Red Hat Virtualization welcome page to the list of trusted sites to ensure all security rules for trusted sites are applied to console resources such as `console.vv` mime files and Remote Desktop connection files.

## CHAPTER 2. THE BASIC TAB

### 2.1. BASIC TAB GRAPHICAL INTERFACE

The **Basic** tab enables you to view and use all the virtual machines that are available to you. The screen consists of three areas: the header bar, a virtual machines area, and a details pane. A number of control buttons allow you to work with the virtual machines.







**Figure 2.1. The User Portal**

The header bar (1) includes the name of the **User** logged in to the portal and links to the **Guide** and **About** pages.

The virtual machines area displays the name of the virtual machines or virtual machine pools assigned (2). The logo of the virtual machine's operating system or a custom icon also displays (3). When a virtual machine is powered up, you can connect to it by double-clicking on the virtual machine's logo.

On each virtual machine's icon, buttons allow you to start, stop, pause, or reboot a virtual machine (4).

-  The green **Run VM** button starts up the virtual machine. It is available when the virtual machine is paused, stopped or powered off.

-  The red **Shutdown** VM button stops the virtual machine. It is available when the virtual machine is running.
-  The blue **Suspend** VM button temporarily halts the virtual machine. To restart it, press the green **Run** VM button.
-  The green **Reboot** VM button reboots the virtual machine. It is available when the virtual machine is running.

The status of the virtual machine is indicated by the text below the virtual machine's icon - **Machine is Ready** or **Machine is Down**.

Clicking on a virtual machine displays the statistics of the selected virtual machine on the details pane to the right (5), including the operating system, defined memory, number of cores and size of virtual drives. You can also configure connection protocol options (6) such as enabling the use of USB devices or local drives.

## 2.2. RUNNING VIRTUAL MACHINES

In the User Portal, virtual machines are represented by icons that indicate both type and status. The icons indicate whether a virtual machine is part of a virtual machine pool or is a standalone Windows or Linux virtual machine. The icons also show whether the virtual machine is running or stopped.

The User Portal displays a list of the virtual machines assigned to you. You can turn on one or more virtual machines, connect, and log in. You can access virtual machines that are running different operating systems, and you can use multiple virtual machines simultaneously.

If you have only one running virtual machine and have enabled automatic connection, you can bypass the User Portal and log in directly to the virtual machine, similar to how you log in to a physical machine.

### 2.2.1. Turning on a Virtual Machine

To use a virtual machine in the User Portal, you must turn it on and then connect to it. If a virtual machine is turned off, it is grayed out and displays **Machine is Down**.

You can be assigned an individual virtual machine or assigned to one or more virtual machines that are part of a virtual machine pool. Virtual machines in a pool are all clones of a base template, and have the same operating system and installed applications.




#### NOTE

When you take a virtual machine from a virtual machine pool, you are not guaranteed to receive the same virtual machine each time. However, if you configure console options for a VM taken from a virtual machine pool, those options are saved as the default for all virtual machines taken from that virtual machine pool.


#### Procedure 2.1. Turning on a Virtual Machine

1. Turn on the standalone virtual machine or take a virtual machine from a pool as follows:

- o To turn on a standalone virtual machine, select the virtual machine icon and click the  button.



**Figure 2.2. Turn on virtual machine**

- o To take a virtual machine from a pool, select the virtual machine pool icon and click the  button.



**Figure 2.3. Take virtual machine from a pool**

If there is an available virtual machine in the pool, an icon for that virtual machine will appear in your list. The rest of this procedure then applies to that virtual machine. If you can take multiple virtual machines from a pool, the icon for the virtual machine pool will change into an icon for the last virtual machine you have taken when you take the maximum number of virtual machines possible for that pool.

2. The virtual machine powers up.



Figure 2.4. Virtual machine powering up

3. When the virtual machine is powered up, the icon is no longer grayed out. The text displays as **Machine is Ready**. You are now ready to connect.



Figure 2.5. Virtual machine turned on



#### NOTE

You can only connect to a virtual machine after it has powered up.

### 2.2.2. Connecting to a Powered-On Virtual Machine

After a virtual machine has been turned on, you can connect to it, log in, and start work the same way that you would with a physical machine. The text "Machine is Ready" displays on virtual machines that are powered up.

#### Procedure 2.2. Connecting to a Powered on Virtual Machine

1. Double-click on the selected virtual machine to connect.



**Figure 2.6. Connect to Virtual Machine**

2. A console window of the virtual machine displays. You can now use the virtual machine in the same way that you would use a physical desktop.




#### NOTE

The first time you connect with SPICE, you are prompted to install virt-viewer.

### 2.2.3. Logging out of a Virtual Machine

To minimize the risk of data loss log out from a virtual machine before shutting it down. Additionally, if you attempt to forcefully shut down a virtual machine from the User Portal, it might freeze with a status of **Powering Down**.

#### Procedure 2.3. Shutting down a virtual machine

1. Log out of the guest operating system.
2. If you were using your virtual machine in full screen mode, press **Shift+F11** to exit full screen mode, and close the virtual machine's console window. You are now returned to the User Portal.
3. To shut down the virtual machine, click the  button. The virtual machine is grayed out and displays as "Machine is Down" when it has been turned off.

# CHAPTER 3. THE EXTENDED TAB

## 3.1. EXTENDED TAB GRAPHICAL INTERFACE

The Extended tab graphical interface enables you to access and monitor all the virtual resources that are available to you.

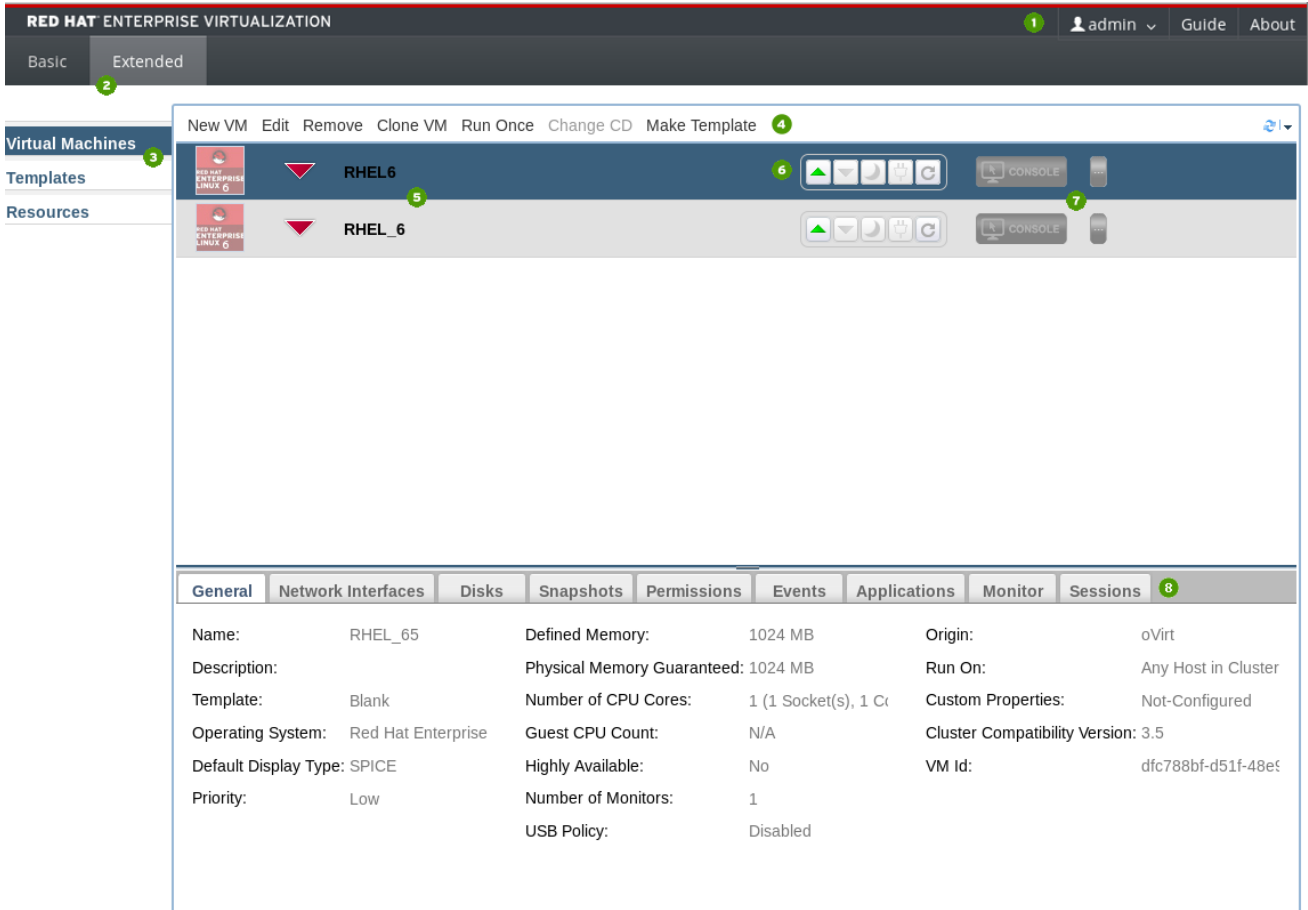






Figure 3.1. The Extended Tab

Table 3.1. The Extended Tab

Number	Element Name	Description
1	Header Bar	Includes the name of the <b>User</b> logged in to the portal and links to the <b>Guide</b> and <b>About</b> pages.
2	User Portal View Option Tabs	Power Users have access to the <b>Extended</b> tab of the User Portal and the <b>Basic</b> tab of the User Portal. The <b>Basic</b> view is the default view for users with basic permissions.



Number	Element Name	Description
3	Navigation Pane	The Navigation Pane allows you to toggle between the Virtual Machines, Templates, and Resources tabs.
4	Management Bar	The management bar is used to create and make changes to virtual machines.
5	Virtual Machine List	The list of virtual machines, with the operating systems installed on them and their statuses (running, paused, or stopped).
6	Virtual Machine Control Buttons	<p>Virtual Machine Control Buttons allow you to start, stop, pause, or power off virtual machines.</p> <ul style="list-style-type: none"> <li data-bbox="1098 891 1433 1122">•  The green <b>Run VM</b> button starts up the virtual machine. It is available when the virtual machine is paused, stopped or powered off.</li> <li data-bbox="1098 1160 1433 1357">•  The red <b>Shutdown VM</b> button stops the virtual machine. It is available when the virtual machine is running.</li> <li data-bbox="1098 1395 1433 1563">•  The blue <b>Suspend VM</b> button temporarily halts the virtual machine. To restart it, press the green <b>Run VM</b> button.</li> <li data-bbox="1098 1601 1433 1816">•  The green <b>Reboot VM</b> button reboots the virtual machine. It is available when the virtual machine is running.</li> </ul>
7	Console Button	The console button launches a SPICE window and connects to machines that have been powered-up.

Number	Element Name	Description
8	Details Pane	The Details Pane displays the statistics of the virtual machine selected in the Navigation Pane.

#### Details Pane Tab Functions:

- The **General** tab displays basic software and hardware information of the virtual machine, including its name, operating system, display protocol and defined memory.
- The **Network Interfaces** tab displays the name, type and speed of the network connected to the virtual machine. You can add, edit and remove network interfaces using this tab.
- The **Disks** tab displays the name, size and format of the disk attached to the virtual machine. You can add, edit and remove virtual disks using this tab.
- The **Snapshots** tab displays a view of the virtual machine's operating system and applications. You can create and use snapshots using this tab.
- The **Permissions** tab displays the users and roles assigned to each virtual machine. You can assign and remove user permissions using this tab.
- The **Events** tab displays the description and time of events which affect the virtual machine.
- The **Applications** tab displays the applications which have been installed on the virtual machine.
- The **Monitor** tab displays the CPU Usage, Memory Usage, and Network Usage statistics for the machine selected in the Navigation Pane.
- The **Sessions** tab displays the Logged-In User, Console User, and Console Client IP for the machine selected in the Navigation Pane.

## 3.2. RUNNING VIRTUAL MACHINES

In the User Portal, virtual machines are represented by icons that indicate both type and status. The icons indicate whether a virtual machine is part of a virtual machine pool or is a standalone Windows or Linux virtual machine. The icons also show whether the virtual machine is running or stopped.

The User Portal displays a list of the virtual machines assigned to you. You can turn on one or more virtual machines, connect, and log in. You can access virtual machines that are running different operating systems, and you can use multiple virtual machines simultaneously.


If you have only one running virtual machine and have enabled automatic connection, you can bypass the User Portal and log in directly to the virtual machine, similar to how you log in to a physical machine.

### 3.2.1. Connecting to Virtual Machines

After you have logged into the portal, you can start, stop, or connect to the virtual machines that are displayed. Alternatively, you can configure the system to automatically connect to a virtual machine, as long as there is only a single virtual machine running when you log in. See the [Automatically](#)

Connecting to a [Virtual Machine](#) section in the *Virtual Machine Management Guide* for more information.

### Procedure 3.1. Connecting to Virtual Machines

1. Select the required virtual machine, then click the Run  button. The virtual machine powers up.



**Figure 3.2. Virtual machine turned off**

The Stop symbol next to the virtual machine's name changes to a Powering Up symbol.

When the virtual machine is turned on, the Run symbol displays next to the virtual machine's name.



**Figure 3.3. Virtual machine turned on**

2. Click the **Console** button to connect to the virtual machine.



**Figure 3.4. Connect to virtual machine**

3. If it is the first time connecting with SPICE, you will be prompted to install virt-viewer.

A console window of the virtual machine displays. You can now use the virtual machine in the same way that you would use a physical desktop.

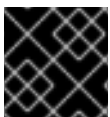


#### WARNING

By default, a virtual machine running Windows 7 will be suspended after an hour of inactivity. This prevents users from connecting to the virtual machine from the User Portal. To avoid this, disable the power-saving feature on the guest's power manager.

### 3.2.2. Turning Off a Virtual Machine from the User Portal


If you attempt to turn off a virtual machine from the User Portal, it may freeze with a status of **Powering Down**, indicating that it has not completely shut down.



#### IMPORTANT

To minimize the risk of data loss, log off from a virtual machine before turning it off.

### Procedure 3.2. Turning Off a Virtual Machine from the User Portal

1. Log out of the guest operating system.
2. If you were using your virtual machine in full screen mode, press **Shift+F11** to exit full screen mode, and close the virtual machine's console window. You are now returned to the User Portal.
3. To turn off the virtual machine, click the  button. The Stop symbol appears next to the name of the virtual machine when it has been turned off.



#### NOTE

You can also turn off virtual machines gracefully using the native method from within the virtual machine itself. For example, in Windows virtual machines you can click **Start** → **Shut Down**, and in Red Hat Enterprise Linux virtual machines you can click **System** → **Shut Down**.


### 3.2.3. Rebooting a Virtual Machine from the User Portal



#### IMPORTANT

To minimize the risk of data loss, log off from a virtual machine before rebooting.

### Procedure 3.3. Rebooting a Virtual Machine from the User Portal

1. Log out of the guest operating system.
2. If you were using your virtual machine in full screen mode, press **Shift+F11** to exit full screen mode, and close the virtual machine's console window. You are now returned to the User Portal.
3. To reboot the virtual machine, click the  button. The Reboot symbol appears next to the name of the virtual machine while it is rebooting, then changes back to a Run symbol when reboot completes.

## 3.3. RESOURCES

### 3.3.1. Monitoring Resources

Before making configuration changes to virtual machines in the User Portal, it is recommended that you take an inventory of the resources available. This is to ensure the resources are sufficient for peak performance and to avoid overloading the hosts running the virtual machines.

The **Resources** tab in the navigation pane shows a cumulative view of all the resources available in the User Portal, and the performance and statistics of each virtual machine.

The screenshot shows the 'Resources' tab in the Red Hat Enterprise Virtualization interface. It is divided into three main panels: 'Virtual CPUs', 'Memory', and 'Storage'. Each panel has a 'Quota Summary' section with a progress bar at 0% and a 'Show Quota Distribution (0)' link. The 'Storage' panel includes a table for 'Virtual Machines' Disks & Snapshots.

Description	Disks	Virtual Size	Actual Size	Snapshots
RHEL_7	2	15GB	5GB	1

Figure 3.5. Resources tab

- **Virtual CPUs:** This box displays the number of your machines' virtual CPUs in use, and the consumption of CPU quota used by you and others.
- **Memory:** This box displays the consumption of memory quota used by you and others, and available memory as defined by the quota.
- **Storage:** This box displays the consumption of storage quota by you and others, the total size of all your virtual disks, and the number and total size of your virtual machines' snapshots. It also displays a breakdown of storage details for each virtual machine. Click the + button next to the virtual machine name to display all the virtual disks attached to the virtual machine.

### 3.3.2. Quota - A User's Introduction

When you create a virtual machine, the virtual machine consumes CPU and storage resources from its data center. Quota compares the amount of virtual resources consumed by the creation of the virtual machine to the storage allowance and the runtime allowance set by the system administrator.

If you do not have enough of either kind of allowance, you are not allowed to create the virtual machine. Avoid exceeding your quota limit by using the Resources tab to monitor your CPU and storage consumption.

The screenshot displays the 'Resources' tab in the Red Hat Enterprise Virtualization User Portal. The interface is divided into several sections:

- Virtual CPUs:** Shows a 'Quota Summary' with a 0% progress bar and a 'Show Quota Distribution (0)' link.
- Storage:** Shows a 'Quota Summary' with a 0% progress bar and a 'Show Quota Distribution (0)' link. To the right, summary statistics are listed:
  - Total Size: 15GB
  - Number of Snapshots: 2
  - Total Size of Snapshots: 5GB
- Memory:** Shows a 'Quota Summary' with a 0% progress bar and a 'Show Quota Distribution (0)' link.
- Virtual Machines' Disks & Snapshots:** A table listing the disks and snapshots for the virtual machines.
 

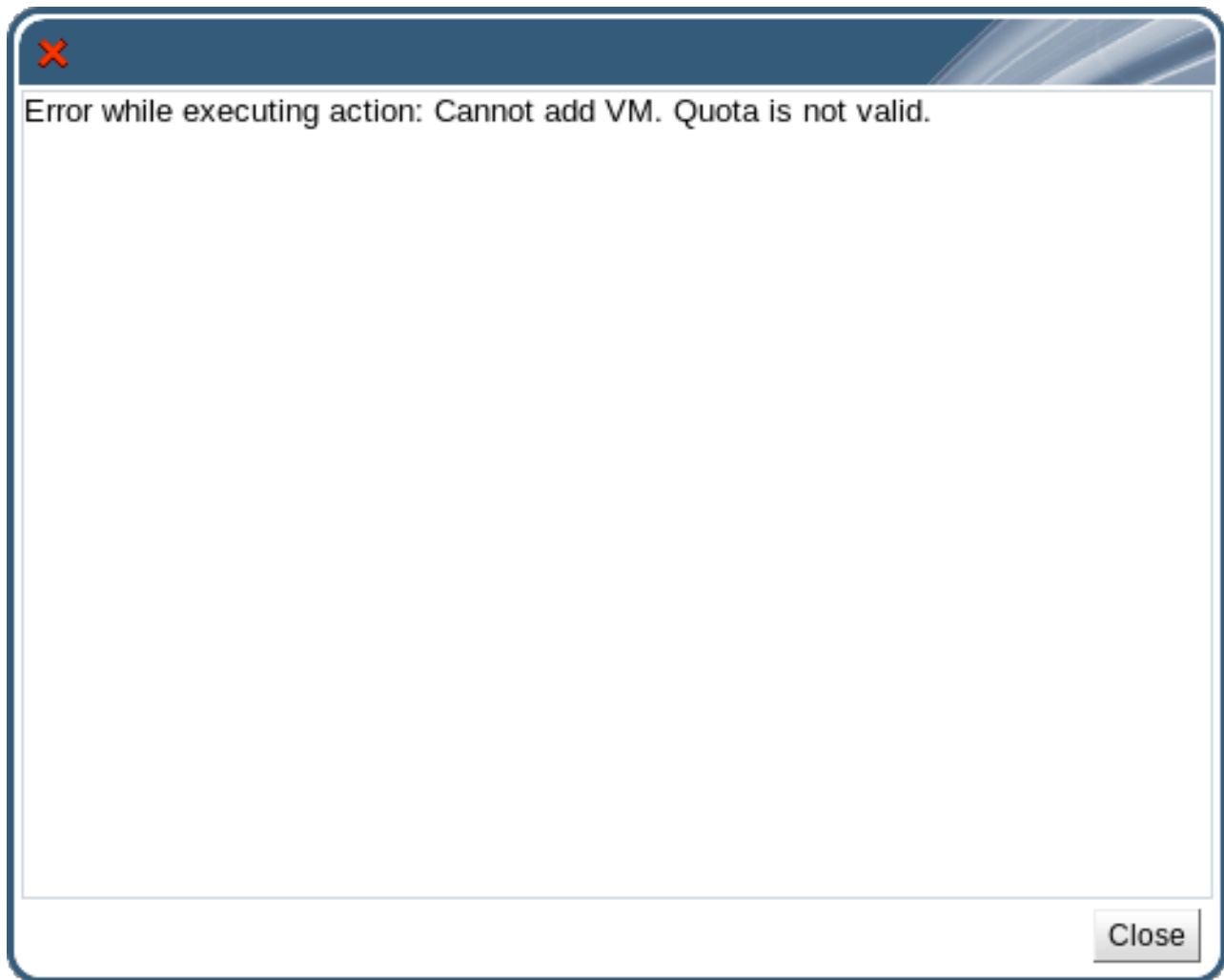
Description	Disks	Virtual Size	Actual Size	Snapshots
RHEL_7	2	15GB	5GB	1

Figure 3.6. Resources tab

### 3.3.3. What to Do When You Exceed Your Quota

Red Hat Virtualization provides a resource limitation tool called *quota*, which allows system administrators to limit the amount of CPU and storage each user can consume. Quota compares the amount of virtual resources consumed when you use the virtual machine to the storage allowance and the runtime allowance set by the system administrator.

When you exceed your quota, a pop-up window informs you that you have exceeded your quota, and you will no longer have access to virtual resources. For example, this can happen if you have too many concurrently running virtual machines in your environment.



**Figure 3.7. Quota exceeded error message**

To regain access to your virtual machines, do one of the following:

- Shut down the virtual machines that you do not need to bring your resource consumption down to a level that does not exceed the quota. Once the resource consumption level is below the quota you will be able to run virtual machines again.
- If you cannot shut down any existing virtual machines, contact your system administrator to extend your quota allowance or remove any unused virtual machines.