Red Hat Enterprise Virtualization 3.1
Manager Release Notes

Release notes for Red Hat Enterprise Virtualization Manager 3.1
Edition 1

Steve Gordon

Red Hat Enterprise Virtualization 3.1 Manager Release Notes

Release notes for Red Hat Enterprise Virtualization Manager 3.1 Edition 1

Steve Gordon
sgordon@redhat.com

Abstract

The Release Notes provide high-level coverage of the improvements and additions that have been implemented in Red Hat Enterprise Virtualization 3.1. For a detailed list of all changes included in Red Hat Enterprise Virtualization 3.1, refer to the Technical Notes.

Table of Contents

Preface

1. Document Conventions

This manual uses several conventions to highlight certain words and phrases and draw attention to specific pieces of information.

In PDF and paper editions, this manual uses typefaces drawn from the Liberation Fonts set. The Liberation Fonts set is also used in HTML editions if the set is installed on your system. If not, alternative but equivalent typefaces are displayed. Note: Red Hat Enterprise Linux 5 and later include the Liberation Fonts set by default.

1.1. Typographic Conventions

Four typographic conventions are used to call attention to specific words and phrases. These conventions, and the circumstances they apply to, are as follows.

`Mono-spaced Bold`

Used to highlight system input, including shell commands, file names and paths. Also used to highlight keys and key combinations. For example:

> To see the contents of the file **`my_next_bestselling_novel`** in your current working directory, enter the **`cat my_next_bestselling_novel`** command at the shell prompt and press **`Enter`** to execute the command.

The above includes a file name, a shell command and a key, all presented in mono-spaced bold and all distinguishable thanks to context.

Key combinations can be distinguished from an individual key by the plus sign that connects each part of a key combination. For example:

> Press **`Enter`** to execute the command.
>
> Press **`Ctrl`**+**`Alt`**+**`F2`** to switch to a virtual terminal.

The first example highlights a particular key to press. The second example highlights a key combination: a set of three keys pressed simultaneously.

If source code is discussed, class names, methods, functions, variable names and returned values mentioned within a paragraph will be presented as above, in **`mono-spaced bold`**. For example:

> File-related classes include **`filesystem`** for file systems, **`file`** for files, and **`dir`** for directories. Each class has its own associated set of permissions.

Proportional Bold

This denotes words or phrases encountered on a system, including application names; dialog box text; labeled buttons; check-box and radio button labels; menu titles and sub-menu titles. For example:

> Choose **System** → **Preferences** → **Mouse** from the main menu bar to launch **Mouse Preferences**. In the **`Buttons`** tab, select the **`Left-handed mouse`** check box and click **`Close`** to switch the primary mouse button from the left to the right (making the mouse suitable for use in the left hand).
>
> To insert a special character into a **`gedit`** file, choose **Applications** → **Accessories** →

> **Character Map** from the main menu bar. Next, choose **Search** → **Find...** from the **Character Map** menu bar, type the name of the character in the **Search** field and click **Next**. The character you sought will be highlighted in the **Character Table**. Double-click this highlighted character to place it in the **Text to copy** field and then click the **Copy** button. Now switch back to your document and choose **Edit** → **Paste** from the **gedit** menu bar.

The above text includes application names; system-wide menu names and items; application-specific menu names; and buttons and text found within a GUI interface, all presented in proportional bold and all distinguishable by context.

Mono-spaced Bold Italic or ***Proportional Bold Italic***

Whether mono-spaced bold or proportional bold, the addition of italics indicates replaceable or variable text. Italics denotes text you do not input literally or displayed text that changes depending on circumstance. For example:

> To connect to a remote machine using ssh, type **ssh *username*@*domain.name*** at a shell prompt. If the remote machine is **example.com** and your username on that machine is john, type **ssh john@example.com**.
>
> The **mount -o remount *file-system*** command remounts the named file system. For example, to remount the **/home** file system, the command is **mount -o remount /home**.
>
> To see the version of a currently installed package, use the **rpm -q *package*** command. It will return a result as follows: ***package-version-release***.

Note the words in bold italics above — username, domain.name, file-system, package, version and release. Each word is a placeholder, either for text you enter when issuing a command or for text displayed by the system.

Aside from standard usage for presenting the title of a work, italics denotes the first use of a new and important term. For example:

> Publican is a *DocBook* publishing system.

1.2. Pull-quote Conventions

Terminal output and source code listings are set off visually from the surrounding text.

Output sent to a terminal is set in **mono-spaced roman** and presented thus:

```
books        Desktop   documentation  drafts  mss    photos   stuff  svn
books_tests  Desktop1  downloads      images  notes  scripts  svgs
```

Source-code listings are also set in **mono-spaced roman** but add syntax highlighting as follows:

```
static int kvm_vm_ioctl_deassign_device(struct kvm *kvm,
                 struct kvm_assigned_pci_dev *assigned_dev)
{
         int r = 0;
         struct kvm_assigned_dev_kernel *match;

         mutex_lock(&kvm->lock);

         match = kvm_find_assigned_dev(&kvm->arch.assigned_dev_head,
                                       assigned_dev->assigned_dev_id);
         if (!match) {
                 printk(KERN_INFO "%s: device hasn't been assigned before, "
                   "so cannot be deassigned\n", __func__);
                 r = -EINVAL;
                 goto out;
         }

         kvm_deassign_device(kvm, match);

         kvm_free_assigned_device(kvm, match);

out:
         mutex_unlock(&kvm->lock);
         return r;
}
```

1.3. Notes and Warnings

Finally, we use three visual styles to draw attention to information that might otherwise be overlooked.

Note

Notes are tips, shortcuts or alternative approaches to the task at hand. Ignoring a note should have no negative consequences, but you might miss out on a trick that makes your life easier.

Important

Important boxes detail things that are easily missed: configuration changes that only apply to the current session, or services that need restarting before an update will apply. Ignoring a box labeled 'Important' will not cause data loss but may cause irritation and frustration.

Warning

Warnings should not be ignored. Ignoring warnings will most likely cause data loss.

2. Getting Help and Giving Feedback

2.1. Do You Need Help?

If you experience difficulty with a procedure described in this documentation, visit the Red Hat Customer

Portal at http://access.redhat.com. Through the customer portal, you can:

- search or browse through a knowledgebase of technical support articles about Red Hat products.
- submit a support case to Red Hat Global Support Services (GSS).
- access other product documentation.

Red Hat also hosts a large number of electronic mailing lists for discussion of Red Hat software and technology. You can find a list of publicly available mailing lists at https://www.redhat.com/mailman/listinfo. Click on the name of any mailing list to subscribe to that list or to access the list archives.

2.2. We Need Feedback!

If you find a typographical error in this manual, or if you have thought of a way to make this manual better, we would love to hear from you! Please submit a report in Bugzilla: http://bugzilla.redhat.com/ against the product **Red Hat Enterprise Virtualization Manager**.

When submitting a bug report, be sure to mention the manual's identifier: *Guides*

If you have a suggestion for improving the documentation, try to be as specific as possible when describing it. If you have found an error, please include the section number and some of the surrounding text so we can find it easily.

Chapter 1. Introduction

1.1. Introduction to Red Hat Enterprise Virtualization 3.1

Red Hat Enterprise Virtualization is a feature-rich server and desktop virtualization management system. It provides advanced capabilities for managing virtualization hosts and virtualized guests.

1.2. What's New?

1.2.1. Administration Portal Features

These Administration Portal features have been added since the release of Red Hat Enterprise Virtualization 3.0:

Cross-platform User Interface

The new web administration portal interface introduced as a technology preview in Red Hat Enterprise Virtualization 3.0 is now the supported interface for connecting to the Administration Portal. The Administration Portal is now accessible using Mozilla Firefox 10 or later on Red Hat Enterprise Linux and Internet Explorer 9 or later on Microsoft Windows. The new user interface is provided as a complete replacement of the Windows Presentation Framework (WPF) interface used to access the Administration Portal in previous releases.

Internationalization

The Administration Portal has been localized. Initial support for English, French, German, Spanish, Japanese, and Simplified Chinese is provided.

User Experience

The new Administration Portal interface greatly improves upon the overall user experience.

1.2.2. Backend Features

These backend features have been added since the release of Red Hat Enterprise Virtualization 3.0:

Remote PostgreSQL Database Support

Previously the **`rhevm-setup`** script only supported the use of a local PostgreSQL database when installing the Manager. The **`rhevm-setup`** script now supports the use of a remote PostgreSQL database.

Default HTTP and HTTPS Ports

Previously Red Hat Enterprise Virtualization Manger listened for incoming connections on ports **`8080`** and **`8443`** by default. The defaults have changed and Red Hat Enterprise Virtualization Manager now listens for incoming connections on the standard HTTP and HTTPS ports (**`80`** and **`443`**).

Cancel Migration

Support for canceling virtual machine migration tasks has been added to both the user facing interfaces and the application programming interfaces.

1.2.3. Developer Features

These developer features have been added since the release of Red Hat Enterprise Virtualization 3.0:

Linux Command Line Interface

A command line interface for interacting with Red Hat Enterprise Virtualization Manager, using the REST API, is now available. The Red Hat Enterprise Virtualization 3.1 *Command Line Shell Guide* provides instructions on installing and using the command line interface.

Python Software Development Kit (SDK)

A Python SDK for interacting with Red Hat Enterprise Virtualization Manager, using the REST API, is now available. The Red Hat Enterprise Virtualization 3.1 *Developer Guide* provides instructions on installing and using the SDK as well as an extended reference for the REST API itself.

Session Support

The REST API now supports sessions. This mean it is no longer necessary to send authentication credentials with each and every request to the REST API.

Non-administrative User API Access

Users without administrator access are now able to access the REST API. Users have the same permissions when accessing the system through the REST API as they have been granted by the Red Hat Enterprise Virtualization environment's administrator.

Quota Management Support (Technology Preview)

Support for managing quotas is available to users of the Software Development Kit, Command Line Shell, and REST API. This functionality is offered as a technology preview.

Important

For more information on the support scope for features marked as technology previews refer to https://access.redhat.com/support/offerings/techpreview/

1.2.4. Guest Features

These guest features have been added since the release of Red Hat Enterprise Virtualization 3.0:

Windows Driver Deployment

The *virtio-win* drivers for Windows guests are now available as **`inf`** and **`ini`** files on the guest tools ISO. They also remain available on the virtual floppy disk (VFD).

CPU Pinning

It is now possible to pin the virtual CPUs (vCPUs) of a guest virtual machine to specific physical CPU cores on the host from the user interface. CPU pinning options are available from the **`Host`** tab of the **`Edit Desktop Virtual Machine`** and **`Edit Server Virtual`**

Machine dialog boxes.

Stable Device Addresses

Devices attached to guest virtual machines now retain the same address allocations as other devices are added to and/or removed from the virtual machine.

Memory Balloon Device

The **virtio-balloon** device is used to control the amount of memory a guest accesses. It offers an opportunity for increased memory over-commitment. By default the **virtio-balloon** device is enabled for all virtual machines in 3.1 compatible clusters. The device may be disabled using the REST API.

At this time the Manager does not however manage the balloon functionality. Users wishing to make use of this functionality must ensure that the memory balloon device driver from the Red Hat Enterprise Virtualization guest tools is installed on their virtual machines. Additionally an administrator must provide a mechanism to control the memory balloon to make use of the device.

1.2.5. Networking Features

These networking features have been added since the release of Red Hat Enterprise Virtualization 3.0:

Hot Plug Support for Virtual Network Interface Cards (vNICs)

Hot plugging and unplugging of vNICs attached to a virtual machine is now supported. It is no longer necessary to stop the virtual machine before adding or removing vNICs.

Bridge-less Network Support

It is now possible to define logical networks on a virtualization host without requiring a bridge to support that network. A bridge is now only required if the logical network is marked as a virtual machine network, other logical network types do not require a bridge.

New Network Setup Dialog

The network setup dialog box has been updated to better support complex networking operations. It is now possible to add or remove networks, add or remove bonds, and attach networks to bonds or detach networks from bonds in a single transaction.

Port Mirroring

It is now possible to configure the virtual Network Interface Card (vNIC) of a virtual machine to run in promiscuous mode. This allows the virtual machine to monitor all traffic to other vNICs exposed by the host on which it runs. This facility is useful for intrusion detection and other virtual appliances. Only users for which administrators have defined a custom role with the **Manipulate port mirroring** action group attached to it will be able to enable or disable port mirroring for a virtual machine.

Configurable Maximum Transmission Unit (MTU)

Support for configuring the MTU of a logical network is now available from the **Edit Logical Network** screen.

Default Network Filter (`nwfilter`) Rules for all Virtual Machines

By default **`nwfilter`** rules are now defined for all virtual machines, enhancing security. To disable this functionality set the value of the **`EnableMACAntiSpoofingFilterRules`** configuration key to **`False`** using the **`rhevm-config`** command.

1.2.6. Platform Features

These platform features have been added since the release of Red Hat Enterprise Virtualization 3.0:

JBoss Enterprise Application Platform (EAP) 6

Red Hat Enterprise Virtualization 3.1 is delivered using the power of the recently released JBoss EAP 6.

Red Hat Directory Server (RHDS) support

User authentication using RHDS domains is now supported. This comes in addition to existing support for Identity, Policy, Audit (IPA) and Active Directory (AD) domains.

Tasks

A **`Tasks`** tab has been added to the Administration Portal, supporting the monitoring of long running operations and tasks in the system.

Quotas (Technology Preview)

Administrators now have the ability to enable quota mode for a data center. With quota mode enabled administrators have the ability to define per-user quotas for storage resources (disk space) and run-time resources (CPU usage and memory). This functionality is offered as a technology preview.

Important

For more information on the support scope for features marked as technology previews refer to https://access.redhat.com/support/offerings/techpreview/.

1.2.7. Reporting Features

These reporting features have been added since the release of Red Hat Enterprise Virtualization 3.0:

Administration Portal Integration

Reporting functionality is now exposed from within the Administration Portal itself. While the standalone Reporting Portal is still available it now offers single sign-on support, allowing the same authentication credentials to be used for both systems. Additionally reporting dashboards for the system, specific data centers, or specific clusters, are now available from the **`Dashboard`** tab.

1.2.8. Storage Features

These storage features have been added since the release of Red Hat Enterprise Virtualization 3.0:

Live Snapshots

Creation of live snapshots is now supported. Snapshots of a virtual machine can now be created without first having to stop it.

Clone Virtual Machine from Snapshot

Support for creating virtual machines from snapshots has been added. This allows users to create copies of the state of a virtual machine as it was at the specific point in time at which the snapshot was taken.

Disk Management

Disks now have an elevated status and can be managed as objects in their own right. New features enabled by this change include floating disks and shared disks.

- *Floating Disks* are not necessarily attached to a virtual machine at any one point in time. Floating disks can be attached, and detached, from virtual machines throughout the data center as required.
- *Shared Disks* are disks that are attached to multiple virtual machines at the same time.

Once you have installed Red Hat Enterprise Virtualization Manager, log in to the Administration Portal and click the **Disks** tab to begin managing disks.

Hot Plugging and Unplugging of Disks

It is now possible to attach disks to, and detach disks from, virtual machines without first having to stop the virtual machine.

Direct LUN Support

It is now possible to attach any block device to a virtual machine as a disk by specifying the block device's GUID. It is no longer necessary to use the **directlun** VDSM hook script to perform this task.

Cross Storage Domain Virtual Machines

It is now possible to create a virtual machine which has disks on multiple different storage domains. Previously all disks for a virtual machine had to be stored on the same storage domain.

POSIX Compliant Filesystems (POSIXFS)

Support has been added for storage domains backed by POSIX compliant file systems. This support enables the use of file systems other than those already supported by Red Hat Enterprise Virtualization.

Network File System (NFS) Version 4 Support

Support for storage exported using NFSv4 has been added to Red Hat Enterprise Virtualization. In addition it is now possible to set additional NFS mount options from the Administration Portal.

Automatic Storage Domain Recovery

When a storage domain becomes temporarily inactive or non-operational Red Hat Enterprise Virtualization Manager will now automatically recover and update the status of the storage domain as **Up** when it becomes available again.

Configurable Storage Pool Manager (SPM) Priority

Hosts now have an **SPM Priority** attribute allowing administrators to influence the SPM selection process. Valid priority values range are **Low**, **Normal**, and **High**. Hosts with a priority of **High** are most likely to be selected by the Manager as the SPM. By default all hosts are assigned an SPM priority of **Normal** until such time as an administrative user changes it.

Storage Live Migration (Technology Preview)

Initial support for storage live migration is available in Red Hat Enterprise Virtualization 3.1. This allows migration of virtual machine disks to different storage devices without first shutting the virtual machine down. This functionality is offered as a technology preview.

Integrated Red Hat Storage Management (Technology Preview)

Initial support for managing Red Hat Storage volumes and bricks using Red Hat Enterprise Virtualization Manager is offered as a technology preview.

Important

For more information on the support scope for features marked as technology previews refer to https://access.redhat.com/support/offerings/techpreview/.

1.2.9. User Portal Features

These User Portal features have been added since the release of Red Hat Enterprise Virtualization 3.0:

Disk and Quota Support

The User Portal has been updated to support new quota and disk features.

Internationalization

The User Portal has been localized. Initial support for English, French, German, Spanish, Japanese, and Simplified Chinese is provided.

1.2.10. VDI Features

These VDI features have been added since the release of Red Hat Enterprise Virtualization 3.0:

Enhanced Virtual Machine Pools

It is now possible to configure a queue of virtual machines from a pool to be running without having been assigned to a user. As users with access to the pool sign in they will be assigned a virtual machine from the queue, shortening the time required for users to start and sign in to a virtual machine from the pool.

Enhanced SPICE client

An updated SPICE client, including native USB 2.0 support and USB support for Linux guests, is now included in Red Hat Enterprise Virtualization.

Multiple Monitor Support for Red Hat Enterprise Linux Guests

The Administration and User Portals now support the configuration of multiple monitors for Red Hat Enterprise Linux guests.

Additional Wide Area Network (WAN) Configuration Options

Additional SPICE configuration options have been added to provide improved performance in WAN environments. The new configuration keys available to be set using the **`rhevm-config`** command are:

- **`WANDisableEffects`**: The WAN effects to disable in SPICE consoles. Valid values are **`animation`**, **`wallpaper`**, **`font-smooth`**, **`all`**.
- **`WANColorDepth`**: The WAN color depth value to send to SPICE consoles. Valid values are **`16`** and **`32`**.

An additional **`Enable WAN Options`** check box has been added to **`Console Options`** shown in the Administration and User Portal. Selecting the check box indicates that the console is being launched over a WAN connection. This results in the values of the **`WANDisableEffects`** and **`WANColorDepth`** configuration keys being applied to the SPICE console.

1.2.11. Virtualization Host Features

These virtualization host features have been added since the release of Red Hat Enterprise Virtualization 3.0:

Increased CPU Support

Red Hat Enterprise Virtualization now supports virtualization hosts using:

- Intel Core i3, i5, and i7 CPUs — code named "Sandy Bridge", and
- AMD 15h, or Opteron G4, CPUs — code named "Bulldozer".

Common Information Model (CIM) Support

Support has been added for configuring Red Hat Enterprise Virtualization Hypervisors for use with existing CIM management infrastructure. Once configured add the Hypervisor to your Common Information Model Object Manager (CIMOM). You will then be able to begin monitoring the virtual machines that run on the Hypervisor from the CIMOM.

Automatic Host Recovery

When a host becomes temporarily non-operational Red Hat Enterprise Virtualization Manager will now automatically recover and update the status of the host to **`Up`** when it becomes available again.

Chapter 2. Technical Notes

2.1. Recommended Practices

You must take these recommended practices into account to ensure the best possible outcomes for your Red Hat Enterprise Virtualization environment.

BZ#858279

```
The ovirt-engine service is now used to control the Red Hat Enterprise
Virtualization Manager. The jbossas service still exists but IS no longer
used to control the Manager. Starting the jbossas service launches a
standalone instance of JBoss Enterprise Application Platform 6 and will not
start Red Hat Enterprise Virtualization Manager. The jbossas service must
not be started on a machine hosting the Manager.
```

BZ#848862

```
The Manager is now able to automatically detect time drift on
virtualization hosts. To use this functionality, set these configuration
values using the rhevm-config command:

* EnableHostTimeDrift - Enables time drift detection, the default value is
false.
* HostTimeDriftInSec - Sets the maximum time drift allowable, in seconds,
before an alert is raised. The default value is 300.

Each time the Manager checks the state of the host it compares the system
time of the two systems, expressed in GMT. If EnableHostTimeDrift is true
and the manager detects that the times returned differ by more than
HostTimeDriftInSec then an alert is written to the log file.

A "VDS_TIME_DRIFT_ALERT" event is also raised, which can be tracked using
the event notification daemon.
```

BZ#843798

```
Hosts must be moved to maintenance mode before changing their Storage Pool
Manager (SPM) priority to '-1' using the REST API, otherwise the change
will not take effect. An SPM priority of '-1' indicates the host must never
be considered for the SPM role.
```

BZ#844429

```
When making configuration changes using the rhevm-config tool it is
necessary to restart the ovirt-engine service before they will take effect.
Additionally changes to values that are cached on the client side require a
restart of the client browser to clear cached values before they will take
effect.
```

BZ#856499

In environments that contain virtual machine pools it is recommended that you do not assign user roles other than VM_CREATOR, TEMPLATE_CREATOR, and DISK_CREATOR at the system, data center, or cluster level.

2.2. Known Issues

These known issues exist in Red Hat Enterprise Virtualization 3.1 at this time:

Administration Portal

BZ#868964

Due to the performance constraints imposed by the JavaScript engine included in Internet Explorer 8 it is not a supported client for the new Administration Portal user interface. Later versions of Internet Explorer remain supported.

Application Programming Interfaces

BZ#830517

The new Python SDK maps actions and properties directly to the REST API with the exception of **import** actions. As **import** is a reserved keyword in Python these actions have instead been renamed **import_*resource***, where ***resource*** is replaced by the resource being operated on, for example **vm** or **template**.

BZ#830913

A new syntax for performing event search using the REST API is now supported. The event search URI is now of the form **/api/events;from=<*event_id*>**. The existing search syntax remains supported but is considered deprecated and will be removed in a future release.

Backend

BZ#874443

In previous releases when the disk image of a virtual machine was being modified or used by a task the entire virtual machine was locked. This lock is now more specific and applies to the disk. This means that users are still able to perform additional tasks on the virtual machine, such as adding or removing disks, concurrently.

As a result of this change of behavior the virtual machine status may indicate that a virtual machine is "Up" when the attached disk is in fact being used by another task. Users will not be aware of this lock until such time as they attempt to perform an action that requires a lock on the disk.

BZ#856273

On large scale deployments, of 200 hosts and above, you may need to increase the maximum allowed connection on the database server from the default value of 150 to 75% of the expected number of hosts. By default this value is found in the "/var/lib/pgsql/data/postgresql.conf" file on the database server.

Directory Services

BZ#814445

It is not possible to install Red Hat Enterprise Virtualization Manager (*rhevm*) and IPA (*ipa-server*) on the same system. IPA is incompatible with the *mod_ssl* package, which is required by Red Hat Enterprise Virtualization Manager.

BZ#739431

Red Hat Enterprise Virtualization Manager does not support the use of user accounts which are marked as expired in the directory server for the domain. This applies to both Active Directory and IPA domains.

The password for the account must be changed in the directory server, re-enabling the account, before it is used with Red Hat Enterprise Virtualization Manager.

BZ#828877

Use of the IBM Tivoli Directory Server (ITDS) provider option of the "rhevm-manage-domains" command is not supported in this release.

Migration

BZ#731100

Migration of a virtual machine between hosts that do not have their clocks synchronized may lead to the virtual machine being unresponsive for a period of time following migration. It is important to ensure that all hosts in your virtualization environment have their clocks synchronized using NTP.

BZ#813279

If the VDSM process is restarted while moving a virtual machine between storage domains the task is currently only partially rolled back. This leaves the virtual machine in an illegal state, unable to be started or moved again. If this occurs contact Red Hat Support.

BZ#844382

Migration of virtual machines which have had all of their disks hot unplugged is not supported. Such a migration will always fail.

BZ#872965

When performing live storage migration a snapshot of the entire virtual machine is created. As a result the actual size of the migrated disk may grow significantly even after merging of the snapshots back into it. This primarily occurs where the disk already had snapshots before the migration process started.

BZ#872950

Live storage migration does not support concurrent migration of disks from a single virtual machine. Instead live migration of each disk attached to the virtual machine must be manually initiated serially.

Roles and Permissions

BZ#847781

In previous versions assigning the "PowerUserRole" to a user over a data center or cluster allowed the user to create virtual machines. The user was only permitted to view virtual machines which they had created. In Red Hat Enterprise Virtualization 3.1 this behavior has changed to provide increased permission granularity for objects. The "PowerUserRole" now grants full control over the data center or cluster including the ability to view the virtual machines it contains.

The new "VMCreator" role grants permissions similar to those of the old "PowerUserRole". Users with the VMCreator role over a data center or cluster are able to create virtual machines, but are only permitted to view virtual machines which they themselves created.

BZ#856499

Assigning user roles other than VM_CREATOR, TEMPLATE_CREATOR, and DISK_CREATOR at the system, data center, or cluster level is known to cause unexpected behaviour related to virtual machine pools in the User Portal. Assigning administrative roles at the system, data center and cluster level does not negatively impact virtual machine pools in the User Portal.

SPICE

BZ#856605

When using the new Native USB Policy mode connected USB devices are always auto-shared regardless the setting of the "Enable USB Auto-Share" option.

Storage

BZ#823437

Block devices for attachment to virtual machines are limited to 8 TB in size. File level disk size remains unlimited by VDSM, the limits of the underlying filesystem do however apply.

BZ#823686

To remove a storage domain it is necessary to first ensure that all disks on the storage domain are moved or removed. This includes any disk(s) that are associated with a template.

To manually move or remove disk(s) associated with a template:

* Open the "Templates" tab in the Administration Portal.
* Select the template from the list.
* Click the "Storage" sub-tab.

The disks associated with the template will be displayed. Select each one and click the button associated with the desired action.

BZ#865021

If the disk of a virtual machine is moved while it is in preview mode then it is not possible to run the virtual machine until the preview is reverted.

BZ#854972

When VDSM attempts to run the getFloppyList command on an NFSv4 storage domain an error is returned if the permissions of the NFS export are not set correctly. An error is also returned if the VDSM host is in a different NFS domain to the storage server.

Upgrades

BZ#854705

Upgrading from Red Hat Enterprise Virtualization Manager 3.0 to 3.1 is now supported for the majority of installations.

Known Issues:

* Upgrades of Red Hat Enterprise Virtualization 3.0 environments that contain V1 format block (iSCSI or FCP) storage domains that (1) are larger than 250 GB in size and (2) were created in Red Hat Enterprise Virtualization 2.2, are not supported. Changing the compatibility mode of a data center that contains such storage domains to 3.1 will result in a failure. A future update will correct this issue. Please note that V1 block storage domains created using the REST API in Red Hat Enterprise Virtualization 3.0 are unaffected. (BZ#893184)

For more information on upgrading to Red Hat Enterprise Virtualization Manager 3.1 consult the Installation Guide:

http://access.redhat.com/knowledge/docs/en-US/Red_Hat_Enterprise_Virtualization/3.1/html/Installation_Guide/chap-Upgrading_to_Red_Hat_Enterprise_Virtualization_3.1.html

Upgrades from Red Hat Enterprise Virtualization 3.1 beta releases are also not supported.

BZ#865506

Support for export storage domains on block storage provided by iSCSI or FCP devices has been deprecated. If the "rhevm-upgrade" script detects export storage domains on block storage devices then it will exit.

To complete the upgrade you must remove the offending export storage domains from the environment and run the "rhevm-upgrade" script again.

BZ#869653

When a Hypervisor is upgraded for Red Hat Enterprise Virtualization 3.1 compatibility the upgraded host will initially be listed in the Administration Portal as unreachable or in maintenance mode. This will be the case even where the upgrade was successful. To resolve this issue use the Administration Portal to put the Hypervisor into maintenance mode (if necessary) and then activate it manually to resume normal operation.

This issue only exists when upgrading from Hypervisors that include vdsm-4.9 to Hypervisors that include vdsm-4.9.6. The issue will not occur on subsequent upgrades.

BZ#841127

All new storage domains created in Red Hat Enterprise Virtualization 3.1 must be of type "V3". This causes existing scripts that call the REST API to create storage domains, specifying type "V2" to fail.

BZ#877748

When upgrading to Red Hat Enterprise Virtualization 3.1 the paths for certificate and sysprep files, stored in the vdc_options table, are reset to their default values.

Where non-default options were in use before the upgrade they must be restored manually using the rhevm-config command.

Virtualization Hosts

BZ#833425

On systems with AMD "Bulldozer" CPUs the number of CPU cores reported always includes hyperthreads. This allows virtual machines run on the host to use up to double the recommended number of virtual CPUs. Additionally this issue may lead to biased scheduling favoring affected hosts over others in the cluster if not all hosts have the same number and type of CPU.

2.3. Resolved Issues

These issues are now resolved in Red Hat Enterprise Virtualization 3.1:

BZ#842344

In previous releases the Manager would attempt to boot virtual machines using an attached disk, in accordance with the user's specified boot order, even when no attached disk was marked as **bootable**. This behaviour has since changed. Disks for booting virtual machines *must* be marked as **bootable**. This includes disks created using the REST API and associated developer tools.

BZ#847733

Previously, adding a host which was already attached to a VLAN tagged network failed. The modifications made to the original configuration script for the ethernet device caused it to lose connectivity. This issue has been resolved, allowing the addition of a host that is already attached to a VLAN tagged network.

BZ#790758

In previous releases the VDSM bootstrap process retrieved utility scripts from the Manager using the HTTP protocol. This exposed virtualization hosts being added to the environment to a potential man in the middle attack. In Red Hat Enterprise Virtualization 3.1 the utility scripts are pushed to hosts using the SSH protocol. This updated bootstrap process prevents man in the middle attacks.

2.4. Security

Administrators can receive the latest security advisories from the Red Hat Enterprise Virtualization watch list. Subscribe to the Red Hat Enterprise Virtualization watch list to receive new security advisories for Red Hat Enterprise Virtualization products by email. Subscribe by completing this form: http://www.redhat.com/mailman/listinfo/rhev-watch-list/.

Revision History

Revision 3.1.0-22.400	**2013-10-31**	**Rüdiger Landmann**
Rebuild with publican 4.0.0		
Revision 3.1.0-22	**Fri Jan 11 2013**	**Stephen Gordon**
Updated upgrade information as a result of RHBA-2012:0003.		
Revision 3.1.0-21	**Mon Dec 3 2012**	**Stephen Gordon**
Built from Content Specification: 10344, Revision: 334336 by sgordon		