



Zenoss Resource Manager Installation Guide

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Zenoss, Inc.

www.zenoss.com

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Zenoss, Inc.
11305 Four Points Drive
Bldg 1 - Suite 300
Austin, Texas 78726

Contents

About this guide	4
Supported operating environments	7
Chapter 1: Installing Resource Manager	8
Installing the Resource Manager template.....	8
Optional: Importing Resource Manager images.....	9
Deploying Resource Manager.....	9
Appendix A: Preparing to install without internet access	11
Downloading Resource Manager image files.....	11
Installing the repository mirror.....	12
Staging Docker image archive files.....	12

About this guide

Zenoss Resource Manager Installation Guide provides detailed procedures for installing Zenoss Resource Manager (Resource Manager).

Related Resource Manager publications

Title	Description
<i>Zenoss Resource Manager Administration Guide</i>	Provides an overview of Resource Manager architecture and features, as well as procedures and examples to help use the system.
<i>Zenoss Resource Manager Configuration Guide</i>	Provides required and optional configuration procedures for Resource Manager, to prepare your deployment for monitoring in your environment.
<i>Zenoss Resource Manager Installation Guide</i>	Provides detailed information and procedures for creating deployments of Control Center and Resource Manager.
<i>Zenoss Resource Manager Browser Interface Guide</i>	Describes how to navigate and use the Resource Manager browser interface.
<i>Zenoss Resource Manager Planning Guide</i>	Provides both general and specific information for preparing to deploy Resource Manager.
<i>Zenoss Resource Manager Release Notes</i>	Describes known issues, fixed issues, and late-breaking information not already provided in the published documentation set.
<i>Zenoss Resource Manager Upgrade Guide</i>	Provides detailed information and procedures for upgrading deployments of Resource Manager.

Additional information and comments

If you have technical questions about this product that are not answered in this guide, please visit the [Zenoss Support](#) site or contact Zenoss Support.

Zenoss welcomes your comments and suggestions regarding our documentation. To share your comments, please send an email to docs@zenoss.com. In the email, include the document title and part number. The part number appears at the end of the list of trademarks, at the front of this guide.

Change history

The following list associates document part numbers and the important changes to this guide since the previous release. Some of the changes involve features or content, but others do not. For information about new or changed features, refer to the *Zenoss Resource Manager Release Notes*.

1052.16.335

- Add a section detailing the supported operating environments.

- Remove procedures for installing Control Center clusters. That information is now in the *Control Center Installation Guide*.

- Remove the high-availability chapters. High-availability installations are now performed by Zenoss personnel.

- Remove the appliance installation chapters. The chapters will be replaced when the appliances are available.

The instructions for downloading and installing the software artifacts for offline deployments are now in an appendix.

1052.16.316

Update release numbers.

1052.16.291

Update release numbers.

1052.16.277

Update release numbers.

1052.16.264

Update release numbers.

1052.16.257

Added supported operating environments and updated release numbers.

1052.16.207

Update release numbers.

1052.16.176

Update release numbers.

1052.16.153

Update release numbers.

1052.16.146

Update release numbers.

1052.16.125

Refine the procedure for creating the application data thin pool.

1052.16.118

Add support for Resource Manager 5.1.2.

Add a substep to create the docker override directory.

1052.16.111

Add this document change history.

Add chapters describing how to install the Resource Manager appliance.

Chapters are organized into parts.

Docker configuration steps now add the storage driver flag (`-s devicemapper`) to the `/etc/sysconfig/docker` file.

Docker needs a longer startup timeout value, to work around a known Docker issue with the `devicemapper` driver. Docker configuration steps now include adding `TimeoutSec=300`.

Rather than editing `/lib/systemd/system/docker.service`, Docker configuration steps now include adding a `systemd` override file.

Add a symlink to `/tmp` in `/var/lib/docker`.

Update the commands for starting and testing a ZooKeeper ensemble.

Add a procedure for updating the `SERVICED_ZK` value on resource pool hosts that are not members of a ZooKeeper ensemble.

Add a reference topic for the ZooKeeper variables required on hosts in a Control Center cluster.

Add procedures for configuring an NTP server and clients for offline deployments.

Add step to install the Nmap Ncat package, which is used to check ZooKeeper ensemble status.

1052.16.060

Planning information is now in the *Zenoss Resource Manager Planning Guide*.

Information about how to start and configure Resource Manager is now in the *Zenoss Resource Manager Configuration Guide*.

New procedures are included, for installing without internet access, and for installing high-availability deployments.

Supported operating environments

The Resource Manager application is deployed in and managed by Control Center. The supported operating environments of Resource Manager are the environments that Control Center supports at a given release. The following sections identify the supported operating environments of Resource Manager.

Resource Manager, Control Center, and operating systems

The following table identifies the supported combinations of Resource Manager, Control Center, and operating system releases.

Resource Manager Release	Control Center	
	Release	Host OS
5.2.0	1.2.0	RHEL/CentOS 7.1 or 7.2 (64-bit)
5.1.9, 5.1.10	1.1.9, 1.2.0	RHEL/CentOS 7.1 or 7.2 (64-bit)
5.1.8	1.1.5, 1.1.6, 1.1.7, 1.1.8, 1.1.9	RHEL/CentOS 7.1 or 7.2 (64-bit)
5.1.7	1.1.5, 1.1.6, 1.1.7, 1.1.8	RHEL/CentOS 7.1 or 7.2 (64-bit)
5.1.6 (internal release only)	(none)	(none)
5.1.4, 5.1.5	1.1.5, 1.1.6, 1.1.7	RHEL/CentOS 7.1 or 7.2 (64-bit)
5.1.3	1.1.2, 1.1.3, 1.1.5	RHEL/CentOS 7.1 or 7.2 (64-bit)
5.1.2	1.1.2, 1.1.3	RHEL/CentOS 7.1 or 7.2 (64-bit)
5.1.1	1.1.1, 1.1.2	RHEL/CentOS 7.1 or 7.2 (64-bit)

Hypervisors

Hypervisor	Versions
VMware vSphere	5.0, 5.1, 5.5, 6.0
Microsoft Hyper-V	Version 2.0 with Windows Server 2008 R2 SP1
	Version 3.0 with Windows Server 2012 and 2012 R2

Public cloud platforms

Amazon Web Services (AWS) is fully supported.

Microsoft Azure is supported only for collector pools. Deploying a full Control Center cluster to operate Resource Manager is NOT supported on Microsoft Azure.

Supported clients and browsers

Resource Manager supports the same client operating systems and web browsers that Control Center supports. For more information, refer to Control Center documentation.

Installing Resource Manager

This chapter describes how to install Resource Manager on a Control Center cluster. For more information about creating a Control Center cluster, refer to the following documents:

- *Control Center Planning Guide*
- *Zenoss Resource Manager Planning Guide*
- *Control Center Installation Guide*

If you are installing on a Control Center cluster that does not have internet access, perform the procedures in [Preparing to install without internet access](#) on page 11 before performing the procedures in this chapter.

Installing the Resource Manager template

Use this procedure to install the Resource Manager service definition template on the Control Center master host.

If you are installing on a Control Center cluster that does not have internet access, perform the procedures in [Preparing to install without internet access](#) on page 11 before performing this procedure.

- 1 Log in to the Control Center master host as `root`, or as a user with superuser privileges.
- 2 Install the Resource Manager template file.

With internet access:

```
yum --enablerepo=zenoss-stable install -y zenoss-resmgr-service-5.2.0
```

Without internet access:

```
yum --enablerepo=zenoss-mirror install -y zenoss-resmgr-service-5.2.0
```

The template file is stored in `/opt/serviced/templates`.

- 3 Authenticate to the Docker Hub repository.

Replace *User* with the name of your Docker Hub account.

```
docker login -u User
```

The `docker` service prompts you for the password of the Docker Hub account, and saves a hash of the credentials in the `$HOME/.docker/config.json` file (root user account).

Optional: Importing Resource Manager images

Use this procedure to import the Resource Manager images into the local registry, if necessary. This procedure is only required on a Control Center cluster that does not have internet access. For more information, see [Preparing to install without internet access](#) on page 11.

- 1 Log in to the Control Center master host as `root`, or as a user with superuser privileges.
- 2 Change directory to `/root`.

```
cd /root
```

- 3 Import the images.

The images are contained in self-extracting archive files.

```
for image in install-*.run
do
  echo -n "$image: "
  ./$image
done
```

Importing begins when you press the `y` key. If you press the `y` key and then the **Return** key, the current image is imported, but the next one is not.

- 4 List the images in the registry.

```
docker images
```

The result should include one image for each archive file.

- 5 Optional: Delete the archive files, if desired.

```
rm -i ./install-*.run
```

Deploying Resource Manager

Use this procedure to add the Resource Manager application to Control Center, and to pull application images into the local registry.

- 1 Log in to the Control Center master host as a user with `serviced` CLI privileges.
- 2 Add the Resource Manager application template to Control Center.

```
serviced template add /opt/serviced/templates/zenoss*.json
```

On success, the `serviced` command returns the template ID.

- 3 Identify the resource pool to which the master host belongs.

```
serviced host list
```

- 4 Deploy the application.

- Replace *Template-ID* with the identifier Resource Manager template
- Replace *Pool* with the name of the resource pool to which the master host belongs
- Replace *Deployment* with a name for this deployment (for example, `Test` or `Production`)

```
serviced template deploy Template-ID Pool Deployment
```

Control Center pulls Resource Manager images into the local registry, or just tags the images.

Resource Manager is ready to be configured for your environment. For more information, refer to the *Zenoss Resource Manager Configuration Guide*.

Preparing to install without internet access

A

This appendix includes procedures for downloading and installing or staging Resource Manager software and its operating system dependencies.

Downloading Resource Manager image files

To perform this procedure, you need:

- A workstation with internet access.
- Permission to download files from the [File Portal - Download Zenoss Enterprise Software](#) site. Zenoss customers may request permission by filing a ticket at the [Zenoss Support](#) site.
- A secure network copy program.

Use this procedure to download the required files to a workstation and then copy the files to the Control Center master host.

Perform these steps:

- 1 In a web browser, navigate to the [File Portal - Download Zenoss Enterprise Software](#) site.
- 2 Log in with the account provided by Zenoss Support.
- 3 Download the self-installing Docker Engine image files for Resource Manager. Select the files with the highest version number. The version number is represented as *Version* in the following file names:

- `install-zenoss-hbase:vVersion.run`
- `install-zenoss-opentsdb:vVersion.run`
- `install-zenoss-resmgr_Version.run`

- 4 Download a RHEL/CentOS repository mirror file.

The download site provides a repository mirror file each supported release of RHEL/CentOS. Each file contains the Resource Manager application template and other packages.

To download the correct repository mirror file, match the operating system release number in the file name (`centos7.1` or `centos7.2`) with the version of RHEL/CentOS installed on all of the hosts in your Control Center cluster. Also, choose the file with the highest version number. The version number is represented as *Version* in the following file names:

- `yum-mirror-centos7.centos7.1-Version.x86_64.rpm`
- `yum-mirror-centos7.centos7.2-Version.x86_64.rpm`

- 5 Use a secure copy program to copy the files to the Control Center master host.

Installing the repository mirror

Use this procedure to install a local RHEL/CentOS repository mirror on the Control Center master host. The mirror contains the Control Center package.

- 1 Log in to the target host as `root`, or as a user with superuser privileges.
- 2 Copy or move the RPM file to `/tmp`.
- 3 Install the RHEL/CentOS repository mirror.

```
yum install -y /tmp/yum-mirror-*.x86_64.rpm
```

- 4 Optional: Delete the RPM file, if desired.

```
rm /tmp/yum-mirror-*.x86_64.rpm
```

Staging Docker image archive files

Before performing this procedure, verify that approximately 640MB of temporary space is available on the file system where `/root` is located.

Use this procedure to add Docker image archive files to the Control Center master host. The files are used when Docker is fully configured.

- 1 Log in to the master host as `root`, or as a user with superuser privileges.
- 2 Copy or move the archive files to `/root`.
- 3 Add execute permission to the files.

```
chmod +x /root/*.run
```