



Zenoss Service Impact Installation Guide for Resource Manager 5.x

Release 5.2.3

Zenoss, Inc.

www.zenoss.com

Zenoss Service Impact Installation Guide for Resource Manager 5.x

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Part Number: 1200.18.008

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

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About this guide

The *Zenoss Service Impact Installation Guide for Resource Manager 5.x* provides detailed instructions for installing and upgrading Zenoss Service Impact (Service Impact) with a Zenoss Resource Manager (Resource Manager) version 5.x deployment.

Audience

This guide is designed for system administrators with Resource Manager experience. In addition, administrators need working knowledge of Linux system administration, and their data center environment.

Related publications

Title	Description
<i>Zenoss Service Impact Installation Guide for Resource Manager 4.2</i>	Describes how to install Service Impact with a Resource Manager version 4.2 deployment.
<i>Zenoss Service Impact User Guide</i>	Provides an overview of Service Impact architecture and features, and information about using the system.
<i>Zenoss Service Impact Release Notes</i>	Describes known issues, fixed issues, and late-breaking information not already provided in the published documentation set.

Additional information and comments

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

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.

Supported clients and browsers

The following table identifies the supported combinations of client operating systems and web browsers.

Client OS	Supported browsers
Windows 7, 10	Internet Explorer 11*
	Firefox 56 and later
	Chrome 61 and later
macOS 10.12.3, 10.13	Firefox 56 and later
	Chrome 61 and later
Ubuntu 14.04 LTS	Firefox 56 and later
	Chrome 61 and later

* Enterprise mode only; compatibility mode is not tested.

Tested operating environments

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

Resource Manager, Control Center, and operating systems

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

Resource Manager release	Control Center	
	Minimum release	Host OS
6.0.1, 6.1.0	1.5.0	RHEL/CentOS 7.2, 7.3, or 7.4 (64-bit)
5.3.0, 5.3.1, 5.3.2, 5.3.3	1.3.0, 1.3.1, 1.3.2, 1.3.3, 1.3.4, 1.4.0, 1.4.1	RHEL/CentOS 7.1, 7.2, or 7.3 (64-bit)
5.2.0, 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.6*	1.2.0, 1.2.1, 1.2.2, 1.2.3, 1.3.0, 1.3.1, 1.3.2, 1.3.3, 1.3.4, 1.4.0, 1.4.1	RHEL/CentOS 7.1, 7.2, or 7.3 (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, 6.5
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 tested.

Microsoft Azure has been tested only for collector pools. Creating a full Control Center deployment to operate Resource Manager has NOT been tested on Microsoft Azure.

* Version 5.2.5 - withdrawn.

Installing Service Impact

This chapter describes how to install and remove Service Impact in Resource Manager 5.x deployments. To install Service Impact, you need a fully-installed deployment of Resource Manager 5.x. For information about compatibility with Resource Manager 5.x, refer to the *Zenoss Service Impact Release Notes*.

Understanding Service Impact packaging, architecture, and deployment

Service Impact 5.x for Resource Manager 5.x is packaged as a Docker image and two ZenPacks (ZenPacks.zenoss.Impact and ZenPacks.zenoss.ImpactServer) and is available from the [Zenoss Support](#) site. The ZenPacks require a customized installation procedure, which is documented in this chapter.

The `Impact` service includes the Service Impact server and database, and the service is added to the **Infrastructure** hierarchy in Control Center. Its requirements are minimal, compared to the other services in that hierarchy. The resource pool you select for the **Infrastructure** hierarchy easily accommodates the `Impact` service.

The `zenimpactstate` service includes the `zenimpactstate` daemon. In Control Center, the service is added to the **Events** category of the **Zenoss** hierarchy.

Note Once Service Impact is installed, Resource Manager is dependent on Service Impact. If Service Impact services are unavailable, Resource Manager continues to monitor devices, but is unable to perform modeling, or properly install or remove ZenPacks.

Preparing to install or upgrade

This procedure describes how to download and stage the files that are required to install or upgrade Service Impact.

To perform this procedure, you need:

- A workstation with internet access.
 - A portable storage medium, such as a USB flash drive, with at least 5 GB of free space.
 - Permission to download files from the [delivery.zenoss.com](#) site. To request permission, file a ticket at the [Zenoss Support](#) site.
- 1 In a web browser, navigate to the [delivery.zenoss.com](#) site.
 - 2 Log in with the account provided by Zenoss Support.

- 3 Download the Docker image file for Service Impact.

```
install-zenoss-impact_5.2-5.2.x.0.0.run
```

Replace the variable *x* with the minor release number of the version that you are installing.

- 4 Make the file executable.

```
chmod +x /tmp/impact-zenpacks/*.run
```

- 5 Download the Service Impact ZenPack files.

```
ZenPacks.zenoss.ImpactServer-Version-py2.7.egg
```

```
ZenPacks.zenoss.Impact-Version-py2.7.egg
```

Replace *Version* with the most recent version number available on the download page.

- 6 Copy the files to your portable storage medium, and then move and mount the medium on the Control Center master host.
- 7 Log in to the Control Center master host as `root`, or as a user with superuser privileges.
- 8 Stage the files in `/tmp`.
 - a Create a directory in `/tmp` for the files. The directory must be local (not mounted) and must be readable, writable, and executable by all users. For example, `/tmp/impact-zenpacks`.

```
mkdir /tmp/impact-zenpacks
```

- b Copy the files from your portable storage medium to `/tmp/impact-zenpacks`.
 - c Change the file permissions. The files must have the same permissions as their parent directory.

```
chmod -R 777 /tmp/impact-zenpacks
```

- 9 Install the Service Impact image.
 - a Change to the directory in which the Service Impact image is located.

```
cd /tmp/impact-zenpacks
```

- b Install the image.

```
/tmp/impact-zenpacks/install-zenoss-impact_5.*.run
```

- c Synchronize the local registry.

```
serviced docker sync
```

Installing Service Impact

Before performing this procedure, complete the steps in [Preparing to install or upgrade](#) on page 6.

- 1 Log in to the Control Center browser interface.
- 2 In the **Applications** table, click the Resource Manager instance to modify.
- 3 Create a snapshot.
 - a Log in to the Control Center master host as a user with `serviced` CLI privileges.

- b Create a snapshot.

```
serviced service snapshot Zenoss.resmgr
```

On completion, the `serviced` command returns the ID of the new snapshot.

- 4 Restart required services.

- a Click the **Zenoss** service to expand its child services.
- b Restart the `zeneventserver` child service.

Note In the **Services** table, the Failing icon (a red circle with an exclamation point) in the **Status** column represents the cumulative result of one or more customized health checks. To view the status of individual health checks, move the pointer over the icon, which displays a pop-up.

- 5 Install the `ZenPacks.zenoss.ImpactServer` ZenPack.

- a Change directory to the directory in which the Service Impact ZenPack egg files are located. For example, the `/tmp/impact-zenpacks` directory:

```
cd /tmp/impact-zenpacks
```

- b Install the ZenPack.
Replace *Version* with the ZenPack version number:

```
serviced service run zope zenpack-manager install \
  ZenPacks.zenoss.ImpactServer-Version-py2.7.egg
```

The installation process displays several CRITICAL warning messages, which can be ignored.

- 6 Start the Infrastructure/Impact service, and then verify that it started.

- a Start the Impact service.

```
serviced service start Infrastructure/Impact
```

- b Verify that the service is started.

```
serviced service status Infrastructure/Impact
```

- 7 Install the `ZenPacks.zenoss.Impact` ZenPack, and then update the Service Impact server database.

- a Install the ZenPack.
Replace *Version* with the ZenPack version number:

```
serviced service run zope zenpack-manager install \
  ZenPacks.zenoss.Impact-Version-py2.7.egg
```

- b Update the server database by performing the following:

- 1 Attach to the `zenimpactstate` container:

```
serviced service attach zenimpactstate/0
```

- 2 Switch to the `zenoss` user:

```
su - zenoss
```


- 3 Update the server database:

```
zenimpactgraph run --update --workers=10
```

- 8 Restart the **Zenoss** services.

```
serviced service restart Zenoss.resmgr/Zenoss
```

Alternatively, start the **Zenoss** services by using the Control Center browser interface.

Removing Service Impact

- 1 Log in to the Control Center browser interface.
- 2 In the **Applications** table, click the Resource Manager instance to modify.
- 3 Scroll down to the **Services** table, and then collapse the child services of the **Infrastructure** and **Zenoss** services.
- 4 Stop the **Zenoss** service, and then verify that its child services are stopped.
 - a In the **Actions** column of the **Services** table, click **Stop**.
 - b In the **Service** column, click **Zenoss**, and then scroll down to verify that all child services are stopped.
- 5 Create a snapshot.
 - a Log in to the Control Center master host as a user with `serviced` CLI privileges.
 - b Create a snapshot.

```
serviced service snapshot Zenoss.resmgr
```

On completion, the `serviced` command returns the ID of the new snapshot.

- 6 From the CLI, start the services that are required for the removal of Service Impact: `zeneventserver` and `zope`.

```
serviced service start zeneventserver && serviced service start zope
```

- 7 Remove the `ZenPacks.zenoss.Impact` ZenPack, and then remove the `zenimpactstate` service.
 - a Remove the ZenPack.

```
serviced service run zope zenpack-manager \
  uninstall ZenPacks.zenoss.Impact
```

- 8 Stop and remove the `Infrastructure/Impact` service, and then remove the `ZenPacks.zenoss.ImpactServer` ZenPack.
 - a Stop the `Infrastructure/Impact` service, then wait 10 seconds.

```
serviced service stop Infrastructure/Impact
```

- b Remove the `Infrastructure/Impact` service.

```
serviced service remove Infrastructure/Impact
```

- c Remove the ZenPack.

```
serviced service run zope zenpack-manager \
  uninstall ZenPacks.zenoss.ImpactServer
```

- 9 In the Control Center browser interface, restart the **Zenoss** subservices.

Upgrading Service Impact

This chapter contains procedures for upgrading Service Impact. For any given upgrade, you only need to perform one of the procedures.

Prerequisites

Before performing an upgrade,

- Complete the steps in [Preparing to install or upgrade](#) on page 6.
- Export service models. As a best practice, exporting before an upgrade provides a quick restore option if the upgrade fails. If necessary, you can uninstall, remove the ZenPack, install again with the working version, and then import from the exported graph. For more information, refer to the *Zenoss Service Impact User Guide* sections "Exporting a service model" and "Importing service model definitions."

Upgrading both Service Impact ZenPacks

Before performing this procedure, complete prerequisites listed in [Upgrading Service Impact](#) on page 10.

Perform this procedure to upgrade **both** ZenPacks.zenoss.Impact and ZenPacks.zenoss.ImpactServer.

- 1 Log in to the Control Center browser interface.
- 2 In the **Application** column of the **Applications** table, click Resource Manager.
- 3 Scroll down to the **Services** table, and then locate the **Impact** service in the **Infrastructure** section.
- 4 Click **Impact**, and then locate the **State Change Queue Length** graph.
- 5 Log in to the Control Center master host as a user with `serviced` CLI privileges.
- 6 Stop the `zenimpactstate` service, and then verify that it stopped.
 - a Stop the `zenimpactstate` service.

```
serviced service stop zenimpactstate
```

- b Verify that the service is stopped.

```
serviced service status zenimpactstate
```

- 7 In the Control Center browser interface, monitor the length of the state change queue. When the queue length is 0 (zero), proceed to the next step.
- 8 Stop the Infrastructure/Impact service, and then verify that it stopped.

- a** Stop the Infrastructure/Impact service.

```
serviced service stop Infrastructure/Impact
```

- b** Verify that the service is stopped.

```
serviced service status Infrastructure/Impact
```

- 9** Extract the upgrade script from the `ZenPacks.zenoss.ImpactServer` ZenPack, make the script executable, and start the upgrade script.

- a** Change to the directory in which the Service Impact ZenPack egg file is located.
For example, the `/tmp/impact-zenpacks` directory:

```
cd /tmp/impact-zenpacks
```

- b** Extract the upgrade script from the `ZenPacks.zenoss.ImpactServer` egg file.
Replace *Version* with the ZenPack version number:

```
unzip -p ZenPacks.zenoss.ImpactServer-Version-py2.7.egg \
  ZenPacks/zenoss/ImpactServer/upgrade/upgrade.sh > upgrade.sh
```

- c** Make the script executable.

```
chmod +x upgrade.sh
```

- d** Start the upgrade script.

```
./upgrade.sh
```

Note The upgrade script might display CRITICAL warning messages, which can be ignored.

- 10** Start the Infrastructure/Impact service, and then verify that it started.

- a** Start the Infrastructure/Impact service.

```
serviced service start Infrastructure/Impact
```

- b** Verify that the service is started.

```
serviced service status Infrastructure/Impact
```

- 11** Install the `ZenPacks.zenoss.Impact` ZenPack

- a** Install the ZenPack.
Replace *Version* with the ZenPack version number:

```
serviced service run zope zenpack-manager install \
  ZenPacks.zenoss.Impact-Version-py2.7.egg
```

- 12** Log in to the Control Center browser interface.

- 13** Restart the **Zenoss** services.

```
serviced service restart Zenoss.resmgr/Zenoss
```

Alternatively, start the **Zenoss** services by using the Control Center browser interface.

Upgrading only ZenPacks.zenoss.ImpactServer

Before performing this procedure, complete prerequisites listed in [Upgrading Service Impact](#) on page 10.

Perform this procedure to upgrade only the ZenPacks.zenoss.ImpactServer ZenPack.

- 1 Log in to the Control Center browser interface.
- 2 In the **Application** column of the **Applications** table, click Resource Manager.
- 3 Scroll down to the **Services** table, and then locate the **Impact** service in the **Infrastructure** section.
- 4 Click **Impact**, and then locate the **State Change Queue Length** graph.
- 5 Log in to the Control Center master host as a user with `serviced` CLI privileges.
- 6 Stop the `zenimpactstate` service, and then verify that it stopped.
 - a Stop the `zenimpactstate` service.

```
serviced service stop zenimpactstate
```

- b Verify that the service is stopped.

```
serviced service status zenimpactstate
```

- 7 In the Control Center browser interface, monitor the length of the state change queue.
When the queue length is 0 (zero), proceed to the next step.
- 8 Stop the Infrastructure/Impact service, and then verify that it stopped.
 - a Stop the Infrastructure/Impact service.

```
serviced service stop Infrastructure/Impact
```

- b Verify that the service is stopped.

```
serviced service status Infrastructure/Impact
```

- 9 Extract the upgrade script from the ZenPacks.zenoss.ImpactServer ZenPack, make the script executable, and start the upgrade script.
 - a Change to the directory in which the Service Impact ZenPack egg file is located.
For example, the `/tmp/impact-zenpacks` directory:

```
cd /tmp/impact-zenpacks
```

- b Extract the upgrade script from the ZenPacks.zenoss.ImpactServer egg file.
Replace `Version` with the ZenPack version number:

```
unzip -p ZenPacks.zenoss.ImpactServer-Version-py2.7.egg \
  ZenPacks/zenoss/ImpactServer/upgrade/upgrade.sh > upgrade.sh
```

- c Make the script executable.

```
chmod +x upgrade.sh
```

- d Start the upgrade script.

```
./upgrade.sh
```

Note The upgrade script might display CRITICAL warning messages, which can be ignored.

- 10 Start the Infrastructure/Impact service, and then verify that it started.
 - a Start the Infrastructure/Impact service.

```
serviced service start Infrastructure/Impact
```

- b Verify that the service is started.

```
serviced service status Infrastructure/Impact
```

- 11 Log in to the Control Center browser interface.
- 12 Restart the **Zenoss** services.

```
serviced service restart Zenoss.resmgr/Zenoss
```

Alternatively, start the **Zenoss** services by using the Control Center browser interface.

Upgrading only ZenPacks.zenoss.Impact

Before performing this procedure, complete prerequisites listed in [Upgrading Service Impact](#) on page 10.

This procedure describes how to upgrade only the *ZenPacks.zenoss.Impact* ZenPack.

- 1 Log in to the Control Center browser interface.
- 2 In the **Applications** table, click the Resource Manager instance to modify.
- 3 Scroll down to the **Services** table, and then collapse the child services of the **Infrastructure** and **Zenoss** services.
- 4 Stop the **Zenoss** service, and then verify that its child services are stopped.
 - a In the **Actions** column of the **Services** table, click **Stop**.
 - b In the **Service** column, click **Zenoss**, and then scroll down to verify that all child services are stopped.
- 5 Create a snapshot.
 - a Log in to the Control Center master host as a user with `serviced` CLI privileges.
 - b Create a snapshot.

```
serviced service snapshot Zenoss.resmgr
```

On completion, the `serviced` command returns the ID of the new snapshot.

- 6 Start the **zeneventserver** service by using the CLI or the browser interface.
To start the service with the CLI, enter the following command:

```
serviced service start zeneventserver
```

To start the services with the browser interface, perform the following substeps:

- a Click the **Zenoss** service to expand its child services.
- b Scroll down to the **zeneventserver** service.
- c In the **Actions** column, click the **Start** control of the **zeneventserver** service.

Note In the **Services** table, the Failing icon (a red circle with an exclamation point) in the **Status** column represents the cumulative result of one or more customized health checks. To view the status of individual health checks, move the pointer over the icon, which displays a pop-up.

When all of the health checks of the required services are passing, proceed to the next step.

- 7 Start the Infrastructure/Impact service, and then verify that it started.

- a Start the Infrastructure/Impact service.

```
serviced service start Infrastructure/Impact
```

- b Verify that the service is started.

```
serviced service status Infrastructure/Impact
```

8 Install the ZenPacks.zenoss.Impact ZenPack

- a Install the ZenPack.

Replace *Version* with the ZenPack version number:

```
serviced service run zope zenpack-manager install \  
ZenPacks.zenoss.Impact-Version-py2.7.egg
```

9 Restart the **Zenoss** services.

```
serviced service restart Zenoss.resmgr/Zenoss
```

Alternatively, start the **Zenoss** services by using the Control Center browser interface.