



Zenoss Service Impact Installation and Upgrade Guide for Resource Manager 5.x and 6.x

Release 5.3.1

Zenoss, Inc.

www.zenoss.com

Zenoss Service Impact Installation and Upgrade Guide for Resource Manager 5.x and 6.x

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Contents

About this guide	4
Tested operating environments.....	4
Service Impact publications.....	5
Change history.....	6
Chapter 1: Preparing to install or upgrade Service Impact	7
Understanding Service Impact packaging, architecture, and deployment.....	7
Install and upgrade best practices.....	7
Downloading required files.....	7
Staging required files on the master host.....	8
Chapter 2: Installing or removing Service Impact	9
Installing Service Impact.....	9
Removing Service Impact.....	10
Chapter 3: Upgrading Service Impact	12
Upgrading both Service Impact ZenPacks.....	12
Upgrading only ZenPacks.zenoss.ImpactServer.....	14
Upgrading only ZenPacks.zenoss.Impact.....	15

About this guide

The *Zenoss Service Impact Installation and Upgrade Guide for Resource Manager 5.x and 6.x* provides detailed instructions for installing and upgrading Zenoss Service Impact (Service Impact). To install Service Impact, you need a fully-installed deployment of Zenoss Resource Manager (Resource Manager) version 5.x or 6.x.

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.

For the latest information about this release of Service Impact, refer to the *Zenoss Service Impact Release Notes*.

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, 6.1.1, 6.1.2**	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 6.0.0 - controlled availability

* Version 5.2.5 - withdrawn

Hypervisor	Versions
	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.

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

Service Impact publications

Title	Description
<i>Zenoss Service Impact Installation and Upgrade Guide for Resource Manager 5.x and 6.x</i>	Describes how to install Service Impact with a Resource Manager version 5.x or 6.x deployment.
<i>Zenoss Service Impact Installation and Upgrade 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, please visit the [Zenoss Support](#) site or contact Zenoss Support.

* Enterprise mode only; compatibility mode is not tested.

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 (*Zenoss Service Impact Installation and Upgrade Guide for Resource Manager 5.x and 6.x*) and part number (1200.18.081.20).

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 Service Impact Release Notes*.

1200.18.100.25 (5.3.1)

Update version and release dates.

1200.18.081.20 (5.3.0)

Add this history section.

Change document title to better reflect its content.

Change file download location from the *Zenoss Support* site to delivery.zenoss.com.

Update the installation and removal procedures to use the `serviced` CLI exclusively.

Move preparation steps into a new chapter.

Update the procedure for upgrading only `ZenPacks.zenoss.Impact`.

Preparing to install or upgrade Service Impact

1

This chapter describes how Service Impact, and provides instructions for downloading and staging required software.

Understanding Service Impact packaging, architecture, and deployment

Service Impact 5.x for Resource Manager 5.x or 6.x is packaged as a Docker image and two ZenPacks (ZenPacks.zenoss.Impact and ZenPacks.zenoss.ImpactServer). The files are available from delivery.zenoss.com. The ZenPacks require a customized installation procedure, which is documented in this guide.

The `Impact` service includes the Service Impact server and database. The install process adds the service 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 included in 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.

Install and upgrade best practices

The following list outlines recommended best practices for installing or upgrading Service Impact:

- Download a copy of the *Zenoss Service Impact Release Notes* for this release and review its contents. The latest information is included in that document.
- Use `screen`, `tmux`, or a similar program to establish sessions on the master host. If you become disconnected, the commands you initiate will continue to run.
- Review the procedures in this guide before performing them. Every effort is made to avoid mistakes and anticipate needs; nevertheless, the instructions may be incorrect or inadequate for some requirements or environments.

Downloading required files

To perform this procedure, you need:

- A workstation with internet access.
- Permission to download files from delivery.zenoss.com. To request permission, file a ticket at the [Zenoss Support](#) site.
- The names of the files to download. The files are listed in the *Zenoss Service Impact Release Notes*.
- A secure network copy program.

Follow these steps:

- 1 In a web browser, navigate to the download site, and then log in.
The download site is delivery.zenoss.com.
- 2 Download the Docker image file for Service Impact.

```
install-zenoss-impact_Version.run
```

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

- 3 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.

- 4 Use a secure copy program to copy the Docker image file and the ZenPack files to the Control Center master host.

Staging required files on the master host

To perform this procedure, you need permission to log in to the Control Center master host as `root`, or as a user with superuser privileges.

Use this procedure to install the Docker image and to prepare the ZenPack files for installation.

- 1 Log in to the Control Center master host as `root`, or as a user with superuser privileges.
- 2 Stage the Docker image file and ZenPack 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`.

```
mkdir /tmp/impact
```

- b Copy or move the Docker image file and ZenPack files to `/tmp/impact`.
 - c Change the file permissions. The files must have the same permissions as their parent directory.

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

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

```
cd /tmp/impact
```

- b Install the image.

```
yes | ./install-zenoss-impact_*.run
```

- c Synchronize the local registry.

```
serviced docker sync
```


2

Installing or removing Service Impact

This chapter describes how to install and remove Service Impact in Resource Manager 5.x and 6.x deployments.

Installing Service Impact

Before performing this procedure, complete the steps in [Preparing to install or upgrade Service Impact](#) on page 7.

- 1 Log in to the Control Center master host as a user with Control Center CLI privileges.
- 2 Create a snapshot:

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

On completion, the `serviced` command returns the ID of the new snapshot. If the installation of a ZenPack fails, you can restore the snapshot created in this step. For more information about restoring a snapshot, refer to the *Control Center Reference Guide*.

- 3 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` directory:

```
cd /tmp/impact
```

- 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
```

- 4 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.

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

- 5 Install the `ZenPacks.zenoss.Impact` ZenPack, and then initialize the Service Impact server database.
 - a Install the `ZenPacks.zenoss.Impact` ZenPack.

Replace *Version* with the ZenPack version number:

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

- b** Initialize the Service Impact server (*Neo4j*) database.

The following command is used only to initialize the Neo4j database. For more information about database operations, refer to the *Zenoss Service Impact User Guide*.

```
serviced service run zenimpactstate update
```

- 6** Restart all **Zenoss** services:

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

Removing Service Impact

Use this procedure to remove Service Impact from a Resource Manager 5.x or 6.x deployment.

- 1** Log in to the Control Center master host as a user with Control Center CLI privileges.
- 2** Create a snapshot:

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

On completion, the `serviced` command returns the ID of the new snapshot. If the installation of a ZenPack fails, you can restore the snapshot created in this step. For more information about restoring a snapshot, refer to the *Control Center Reference Guide*.

- 3** Stop the **Zenoss** services, and then verify that the services are stopped.
 - a** Stop Resource Manager.

```
serviced service stop Zenoss.resmgr/Zenoss
```

- b** Wait until all services are stopped.

Use the `watch` command to monitor the stop.

```
watch serviced service status Zenoss.resmgr/Zenoss
```

- 4** Start the services that are required for the removal of Service Impact.

```
serviced service start zeneventserver zope
```

- 5** Remove the ZenPacks.zenoss.Impact ZenPack.

Removing the ZenPack also removes the `zenimpactstate` service.

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

- 6** 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
```

- 7** Restart all **Zenoss** services:

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

3

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 procedures in [Preparing to install or upgrade Service Impact](#) on page 7.
- Resource Manager should be running normally at the beginning of an update. The procedures in this section stop, start, or restart specific services, but the assumed starting point is Resource Manager running normally.
- 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 about importing and exporting service models, refer to the *Zenoss Service Impact User Guide*.

Upgrading both Service Impact ZenPacks

Before performing this procedure, complete prerequisites listed in [Upgrading Service Impact](#) on page 12.

Perform this procedure to upgrade **both** Zenpacks, 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.

```
watch 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.

```
watch 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 directory:

```
cd /tmp/impact
```

- 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.

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

11 Install the ZenPacks.zenoss.Impact ZenPack

- Replace
- Version*
- with the ZenPack version number:

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

12 Restart Zenoss services.

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

Alternatively, restart 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 12.

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.

```
watch 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.

```
watch 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` directory:

```
cd /tmp/impact
```

- 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.

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

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

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

Alternatively, restart 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 12.

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

- 1 Log in to the Control Center master host as a user with Control Center CLI privileges.
- 2 Create a snapshot:

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

On completion, the `serviced` command returns the ID of the new snapshot. If the installation of a ZenPack fails, you can restore the snapshot created in this step. For more information about restoring a snapshot, refer to the *Control Center Reference Guide*.

- 3 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.

```
watch serviced service status zenimpactstate
```

- 4 Install the `ZenPacks.zenoss.Impact` ZenPack
Replace *Version* with the ZenPack version number:

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

- 5 Start the `zenimpactstate` service, and then verify that it stopped.
 - a Start the `zenimpactstate` service.

```
serviced service start zenimpactstate
```

- b Verify that the service is started.

```
watch serviced service status zenimpactstate
```