VERITAS

Veritas™ Deployment Manager User's Guide

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Veritas Technologies LLC
500 E Middlefield Road
Mountain View, CA 94043
http://www.veritas.com

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Veritas Services and Operations Readiness Tools (SORT)

Veritas Services and Operations Readiness Tools (SORT) is a website that provides information and tools to automate and simplify certain time-consuming administrative tasks. Depending on the product, SORT helps you prepare for installations and upgrades, identify risks in your datacenters, and improve operational efficiency. To see what services and tools SORT provides for your product, see the data sheet:

https://sort.veritas.com/data/support/SORT_Data_Sheet.pdf

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Introduction to the Veritas Deployment Manager

Veritas Deployment Manager is a centralized, web-based console for installing, uninstalling, and managing the InfoScale products. You can use this console to monitor, visualize, and manage storage and cluster resources.

Deployment Manager facilitates management of:

- Hosts
- Clusters
- Release image repository that is required to deploy InfoScale products
- Tasks performed in the Deployment Manager

This guide provides a high-level overview of installing and uninstalling Veritas InfoScale products using the Veritas Deployment Manager web console. For the other installation methods, refer to the Veritas InfoScale Installation Guide.

Supported InfoScale products, versions, and platforms

Deployment of the following products and their components can be done using the Deployment Manager:

Product	Components	Versions	Platform
InfoScale Foundation	SF	7.0 and later	RHEL 6, RHEL 7
InfoScale Availability	VCS	7.0 and later	RHEL 6, RHEL 7
InfoScale Storage	SF, SFCFS	7.0 and later	RHEL 6, RHEL 7
InfoScale Enterprise	SF, VCS, SFHA, SFCFSHA	7.0 and later	RHEL 6, RHEL 7

Licensing the Veritas InfoScale products

A product-specific license is available for individual InfoScale products. You can procure the license from Veritas portal at https://my.veritas.com/.

For more information on obtaining and registering the Veritas InfoScale product licenses, refer to the Veritas InfoScale Getting Started Guide.

During product installation using the Deployment Manager, you can select one of the following licensing options:

- Keyless:

  Select Keyless as the License Type if you do not have a license key. You can use the keyless license for 60

days.

- Non-keyless:
  Select 'Non-keyless' as the License Type if you have obtained a license key, and enter the license key in the License Key field.

Preparing to install the Veritas Deployment Manager

To install the Veritas Deployment Manager web console, you must have the Java Runtime Environment, and the NGINX web server set up on an RHEL 6 or RHEL 7 host.

Installing JRE

1. To install JRE, run the following command:
   sudo yum install java-1.8.0-openjdk
   For more information, refer to:
   http://openjdk.java.net/install/index.html

2. To verify that the JRE is installed successfully, run the following command:
   ```
   java –version
   ```
   Sample response that can be seen as:
   ```
   [root@sles95212 gui]# java -version
   openjdk version "1.8.0_121"
   OpenJDK Runtime Environment (build 1.8.0_121-b13)
   OpenJDK 64-Bit Server VM (build 25.121-b13, mixed mode)
   ```

Installing NGINX web server

1. You need to create the yum repository file before installing the NGINX server.
   To create the yum repository file, run the following command:
   ```
   /etc/yum.repos.d/nginx.repo
   ```

2. Copy and paste the following content inside the yum repository file:
   ```
   [nginx]
   name=nginx repo
   baseurl=http://nginx.org/packages/rhel/<$releasever>/$basearch/
   gpgcheck=0
   ```

`enabled=1`

Note: <`$releasever`> attribute needs to be manually replaced with the release version of the host's OS.

Example: `baseurl=http://nginx.org/packages/rhel/`**`7`**`/<$basearch>/`

3. To install the NGNIX web server, run the following command:
   `sudo yum install nginx`
   For more information refer to:
   https://www.nginx.com/resources/wiki/start/topics/tutorials/install/

Installing the Veritas Deployment Manager web console

1. Execute the deployment script to install the Veritas Deployment Manager. To execute the script, run `deployment.sh`, which is located inside the InfoScale media folder at `scripts/MCPI`.
2. Provide the IP and Port of the host when prompted. Veritas recommends that you use the port 80 to access the deployment manager web console. Alternatively, you can use the port 8080.
   Note: The port 8081 cannot be used to access the web console, as it is reserved for the web server.
3. Access the Deployment Manager at the url <`http://server_ip:port/`> in a browser.
   Example: To access the web console at the IP address 10.198.10.10 and the port 8080, open the url `http://10.198.10.10:8080/` in a browser.
   If you use the default port 80, the port number can be omitted from the url.
   Example: To access the web console at the IP address 10.198.10.10 and the port 80, open the url `http://10.198.10.10/` in a browser.

Logging into the Veritas Deployment Manager

1. Open the Veritas Deployment Manager at the url <`http://server_ip:port/`> in a browser.
2. On the login page, enter the following:
   - Username: admin
   - Password: Enter the default password that is available at: *`/var/MCPIGUI/default_password_timestamp`*

   Note: Veritas recommends that you change the password after you have logged in.
3. Select Role as Admin, and click Sign In.

You may begin to use the deployment manager as an administrator.

Deploying InfoScale products using the Veritas Deployment Manager web console

Upon logging in, the following menu options can be seen on the Deployment Manager landing page:

Host Management	Host Management facilitates the following operations: 1. Adding the hosts 2. Refreshing the hosts 3. Deleting the hosts 4. Installing the InfoScale product **Note**: You need root user privileges to manage hosts.
Cluster Management	Cluster Management facilitates the following operations: 1. Starting the clusters 2. Stopping the clusters 3. Adding a node to a cluster 4. Deleting a node from a cluster 5. Uninstalling the cluster 6. Configuring IO fencing
Repository Management	Repository Management facilitates adding and deleting the directory path for the decompressing release image files of Veritas InfoScale products.
Task Management	Task Management facilitates the following operations: 1. Viewing the deployment tasks that are carried out in the deployment manager 2. Filtering the deployment tasks by dates 3. Deleting the history of deployment tasks
Settings	Settings facilitate the following operations: 1. Changing the user password 2. Setting the communication protocol for hosts and nodes

Settings

Click Settings to perform any of the following operations:

Changing the password

1. Click on Password Setting.
2. Enter new and old passwords in the respective textboxes.
3. Click Save to change your password.

You may click Cancel to abort the operation at any time.

Setting the communication protocol

Deployment manager uses password-less Secure Shell (ssh) protocol to communicate with the remote hosts and among cluster nodes.

1. Click on Communication Protocol Setting.
2. Select ssh from the drop-down list.
3. Click Save to set the communication protocol.

Managing repository

Click Repository Management, to perform any of the following operations:

Adding a release image

1. Click Add.
2. In the pop-up window that appears, select a product, release version, and platform.
3. In the Image Path textbox, enter the path to an image file for the product you want to install.
4. Click Submit.

You can view the list of the InfoScale releases and the corresponding paths to their release images that you have added.

Deleting a release image

1. Select one or more releases from the list.
2. Click Delete.

The selected InfoScale products and the corresponding release images are deleted from the repository.

Managing hosts

Click Host Management, to perform any of the following operations:

Adding one host at a time

1. Click Add, and then click Add One Host from the drop-down menu.
2. In the pop-up window that appears, enter the host IP and root password.
3. Click Ok to add a new host.

You can view the newly added host, with a default status as 'Connected'.

Adding more than one hosts at a time

1. Click Add, and then click Add Multiple Hosts from the drop-down menu.
2. In the pop-up window that appears, browse to upload the CSV file containing multiple host IPs and their root passwords. Follow the given procedure to create the CSV file:
   - Create an Excel file on your local system containing multiple host IPs and the corresponding root passwords, and save it in CSV format.
     A template file is provided for reference.
3. Click Ok to add more than one new hosts.

You can view all the newly added hosts, with a default status as 'Connected'.

Deleting the hosts

Select the hosts, and click Delete.

The hosts are deleted after you confirm the deletion.

Note: If the hosts belong to any clusters, they cannot be deleted.

Refreshing the hosts

Select the hosts, and click Refresh.

The connection status of the hosts is checked, and the status is refreshed accordingly.

Installing InfoScale products

The Deployment Manager lets you install any InfoScale product and its components, except SFRAC.

Follow the given steps in order to install an InfoScale product:

1. Click Host Management.
2. Select a host and click Install. If you want to install one product on multiple hosts, select more than one hosts and then click Install.
3. In the pop-up window that appears, select InfoScale release version, and the product that you want to install.
4. Select the corresponding component of the InfoScale product.

- If you selected SF as a component, you can proceed to select a licensing option, and begin installation.
- If you selected any one of these components – SFHA, SFCFS, SFCFSHA, or VCS, you are required to create the cluster and configure LLT.

The following section describes how to configure LLT.

Configuring LLT

To configure LLT in the cluster environment, follow the given steps in order, if you want to install SFHA, SFCFS, SFCFSHA, or VCS:

1. Enter a cluster name.
2. Select LLT Type from any of the following options, and follow the given steps:

LLT Type	Steps to configure LLT
LLT over Ethernet	1. Select one or more NICs to establish LLT links 2. If you want to add low-priority links, select that option and select one or more NICs to establish low-priority LLT links.
LLT over UDP	1. You must select two NICs to establish LLT links. 2. If you want to add low-priority links, select that option and select one or more NICs to establish low-priority LLT links. Alternatively, you may select one NIC as a priority LLT link, and one NIC as a low-priority link. 3. Enter the IP/Prefix, and port of the corresponding node for the LLT links that you want to establish.
LLT over TCP	For InfoScale version 7.3.1 or higher, you can also configure LLT over TCP. 1. Select the NIC. 2. Enter the IP/Prefix and port of the corresponding node to establish the LLT link.

5. After configuring LLT, select the License Type.
6. Select the End User License agreement (EULA) checkbox.
7. Click Install, to install the selected product with the selected component enabled.

Managing clusters

Cluster Management facilitates the following operations:

Configuring IO fencing

To configure IO fencing on the cluster, perform the following steps in the given order:

1. Click Cluster management, and then select a cluster.
2. Click Configure, and then click Fencing from the drop-down menu.
3. From the pop-up window that appears, select from one of the following fencing configurations:

Coordination Point server based fencing	Coordination Point server based fencing can be configured in one of the following ways: ▪ Configuring with only CP servers as coordination points. ▪ Configuring with a combination of CP servers and SCSI3 PR enabled disks, as coordination points. See the steps to configure CP server based fencing in the following section. **Note**: Before configuring CP server-based fencing, ensure that all the nodes in the cluster can communicate with all the CP servers, with password-less SSH protocol.
Disk based fencing	To configure disk-based fencing: 1. Select minimum three, or more, odd number of SCSI3 PR enabled disks from the list. 2. Click Configure. **Note**: Disk-based fencing can be configured for all components, except for VCS
Majority based fencing	To configure majority-based fencing: 1. Select the option 'Majority based fencing'. 2. Click Configure
Fencing in disabled mode	To disable fencing: 1. Select the option 'Fencing in disabled mode. 2. Click Configure.

Coordination Point server based fencing

Coordination Point server based fencing can be configured in the following ways:

- To configure Coordination Point (CP) server-based fencing with CP servers only, follow these steps in given order:
    1. Enter the total number of coordination points as three, or any odd number greater than three.
    2. Enter IP addresses and ports for all the CP servers in the respective fields.
    3. Enter the NTP server's name.
    4. Click Configure.

- To configure Coordination Point (CP) server-based fencing with a combination of CP servers and disks, follow

these steps in given order:

1. Select the check box if your storage environment supports SCSI3 PR enabled disks.
2. Enter the total number of coordination points as three, or any odd number greater than three.
3. Enter the number of disks that is lesser than the total number of coordination points.
   Note: The number of disks and CP servers must add up to the total number of coordination points.
4. Enter IP addresses and ports for all the CP servers in the respective fields.
5. Enter the NTP server's name.
6. Select the required number of disks from the drop-down list.
7. Click Configure.

Adding a node to the cluster

To add a node to the cluster:

1. Click Cluster management, and then select a cluster.
2. Click Configure, and then click Add Node from the drop-down menu.
3. If the InfoScale product on the selected cluster has been configured with LLT over UDP or LLT over TCP, configure the LLT links as per the instructions that are provided in the Installing InfoScale Products section
4. If the selected cluster has been configured with Coordination Point server-based fencing, enter the NTP server's name.
5. Select a license type, and click Ok.

Deleting a node from the cluster

To delete a node from the cluster:

1. Click Cluster management, and then select a cluster.
2. Click Configure, and then click Delete Node from the drop-down menu.
3. Select a node to be deleted, and click Ok.

Note: If there is only one node in the cluster, it cannot be deleted.

Starting a cluster

To start a cluster:

1. Click Cluster Management pane.
2. Select one or more clusters.
3. Click Start.

The status of the selected clusters is shown as Healthy.

Stopping a cluster

To stop a cluster:

1. Click Cluster Management pane.
2. Select one or more clusters.
3. Click Stop.

The status of the selected clusters is shown as Stopped.

Uninstalling InfoScale products

To uninstall an InfoScale product:

1. Click Cluster Management.
2. Select one or more clusters or hosts.
3. Click Uninstall.

The selected clusters and/or hosts are uninstalled after you confirm the deletion.

Managing historical tasks

You can view or delete the history of deployment tasks that are carried out in the deployment manager.

Listing the tasks

To view the tasks:

1. Click Task Management to view the list of tasks executed in the deployment manager.
2. Then click on any task to view the details.

Filtering the tasks

To filter the tasks by dates:

1. Click Task Management to view the list of tasks executed in the deployment manager.
2. Click in the Filter by Date field.
3. Select start and end dates from the calendar.
4. Click Filter.

Deleting the tasks

To delete all the tasks:

1. Click Task Management to view the list of tasks executed in the deployment manager.
2. Click Delete, to delete all the tasks.

To delete the tasks filtered by dates:

1. Click Task Management to view the list of tasks executed in the deployment manager.
2. Click in the Filter by Date field.
3. Select start and end dates from the calendar.
4. Click Filter.
5. Then click Delete to delete all the tasks that are executed between those dates.