Hewlett Packard Enterprise

Technical white paper

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VMWARE VREALIZE OPERATIONS MANAGER FOR HPE SIMPLIVITY

Version 1.2.0

CONTENTS

ABSTRACT

This guide provides the information you need to install and use HPE SimpliVity for VMware vRealize® Operations™ to monitor performance for servers and is intended for administrators who monitor and direct system performance, capacity, and configuration information for HPE SimpliVity infrastructure.

INTRODUCTION

VMware vRealize Operations for HPE SimpliVity provides integrated and highly automated performance, capacity, configuration compliance, and cost management tools to the vRealize Operations custom GUI. The software uses the VMware®'s analytics engine that analyzes what is normal and then applies that baseline to a dynamic server environment.

For information on vRealize Operations, see VMware vRealize Operations Enterprise documentation at docs.vmware.com/en/vRealize-Operations-Manager/index.html. When the VMware vRealize Operations for HPE SimpliVity is installed, the Custom HPE SimpliVity Dashboards is added to the vRealize Operations custom GUI. The HPE SimpliVity Dashboard allows you to monitor resources which are HPE SimpliVity specific and not part of the stock vROps suite. The attributes that can be monitored include the performance and capacity related data like compression ratios etc. which are specific to HPE SimpliVity. The analytics engine allows for proactive monitoring of the HPE SimpliVity resource environment and indicates the state of the resources. The analytics engine also provides for proactive prediction which can determine the point in the future when a resource will reach a predefined critical level.

VMware vRealize Operations for HPE SimpliVity can be installed with the standard edition. However, you would need an advanced or an enterprise license to run the management pack as of now. See licensing on page 7 for more details.

INSTALLATION

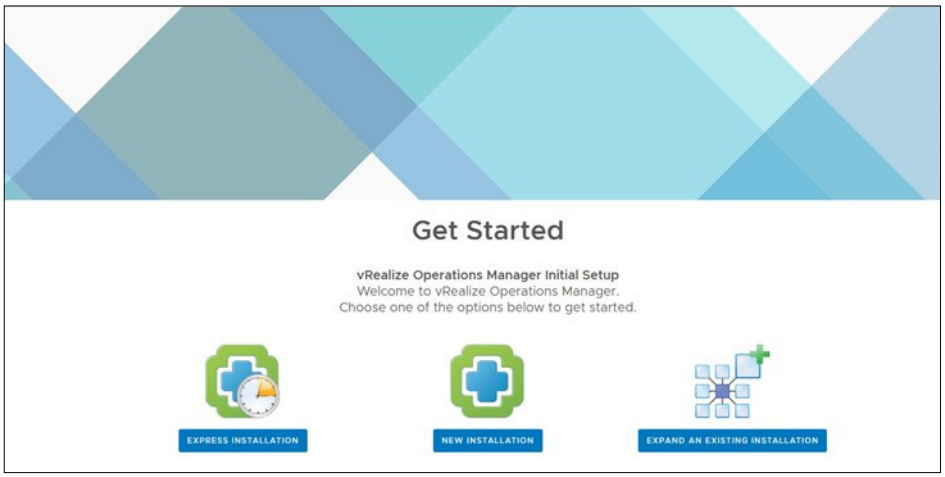
Installing VMware vRealize Operations for HPE SimpliVity.

Prerequisites

VMware vRealize Operations for HPE SimpliVity is compatible with VMware vRealize Operations versions 8.0.1 and with HPE OmniStack software versions 4.0.1 and above. For prerequisites, see the vRealize Operations Manager vApp Deployment and Configuration Guide located at: docs.vmware.com/en/vRealize-Operations-Manager/8.1/vrealize-operations-manager-81-vapp-deploy-guide.pdf

vROps Installation

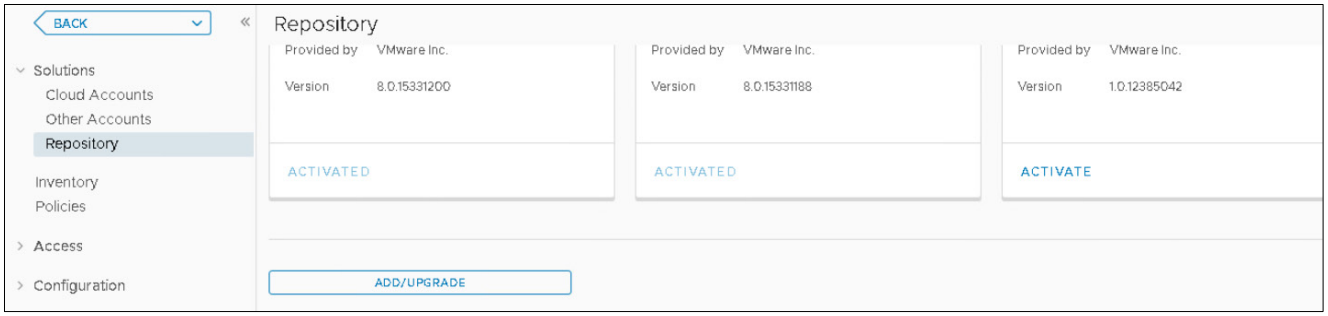
1. Download the vROps application as an OVA file from the link: my.vmware.com/web/vmware/details?productId=940&downloadGroup=VROPS-801-OSS.
2. Follow the installation procedure mentioned in the deployment and installation guide for vROps 8.0.1, available in the official VMware site.
3. After the deployment is finished, log in to the IP of the vROps Manager through your browser **https://<vROps_Manager_IP>** and select the appropriate option below based on your need.



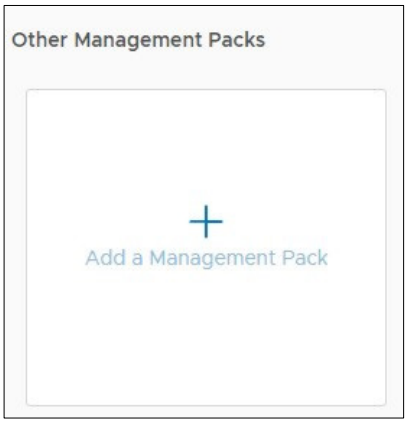
4. After the configuration is complete, start the VMware vRealize® Operations Manager™.

Procedure for Installing the VMware vRealize Operations for HPE SimpliVity

1. Download the ZIP file from github.com/HewlettPackard/simplivity-vrops-plugin
2. Unzip the downloaded file.
3. Open a browser window and log in to the vRealize Operations GUI as the admin user.
4. From the vRealize Operations home page, click the **Administration** icon, located on the vRealize Operations toolbar.
5. Expand **Solutions** tab displayed on the left menu.

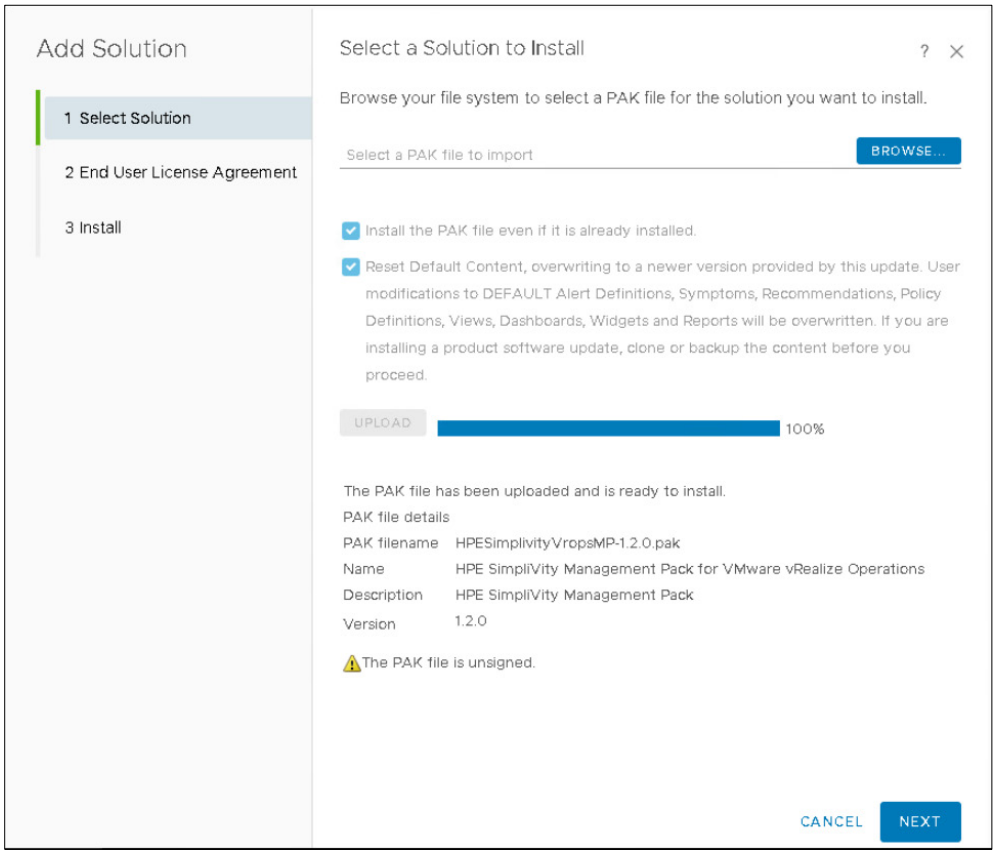


6. Click **Repository** tab under Solutions on the left and choose the **Add a Management Pack** option below.

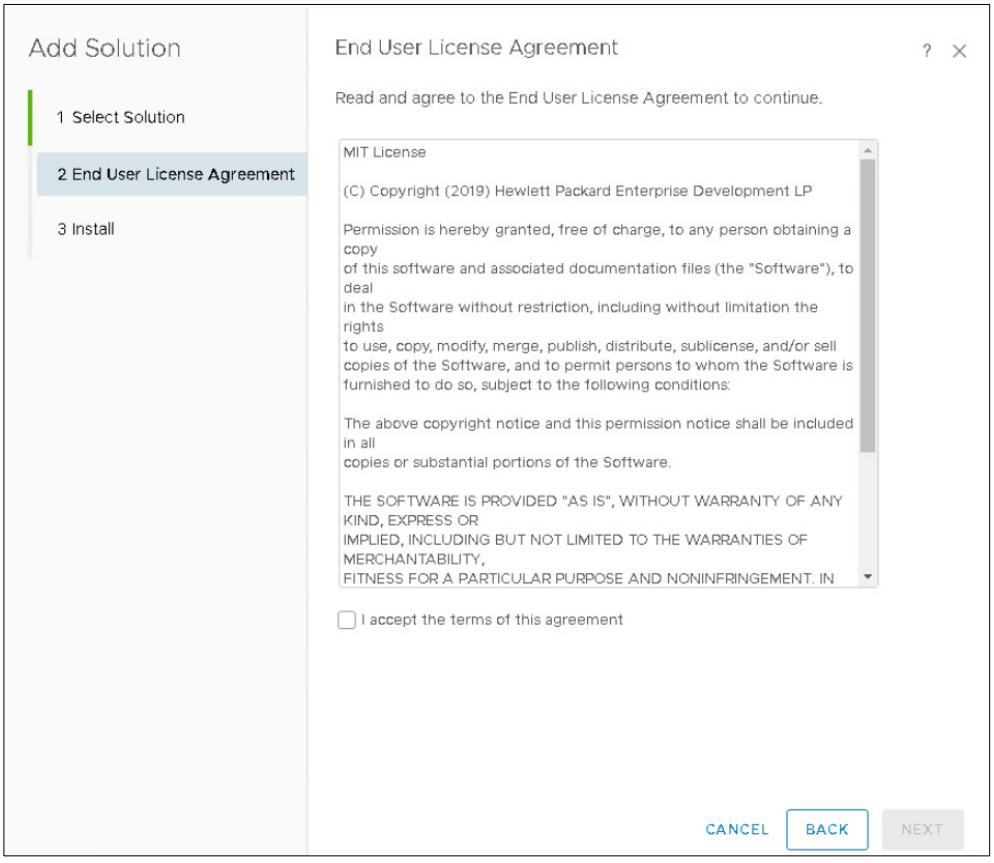


7. The Add Solution install dialog box is displayed.
8. Click **Browse a solution** and select HPESimplivityVropsMP-x.x.x.pak file from the unzipped files above.

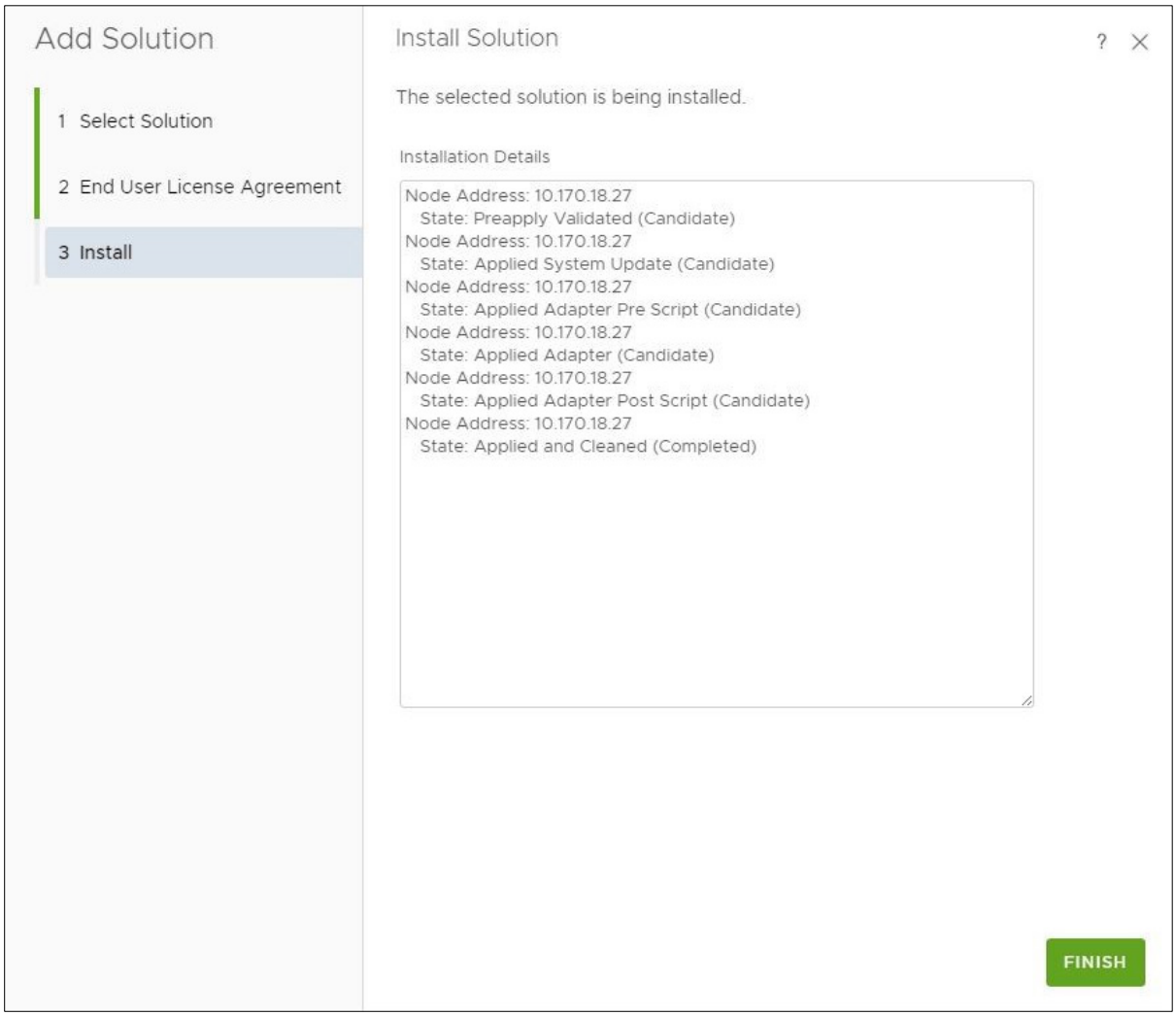
9. Click **Upload**.



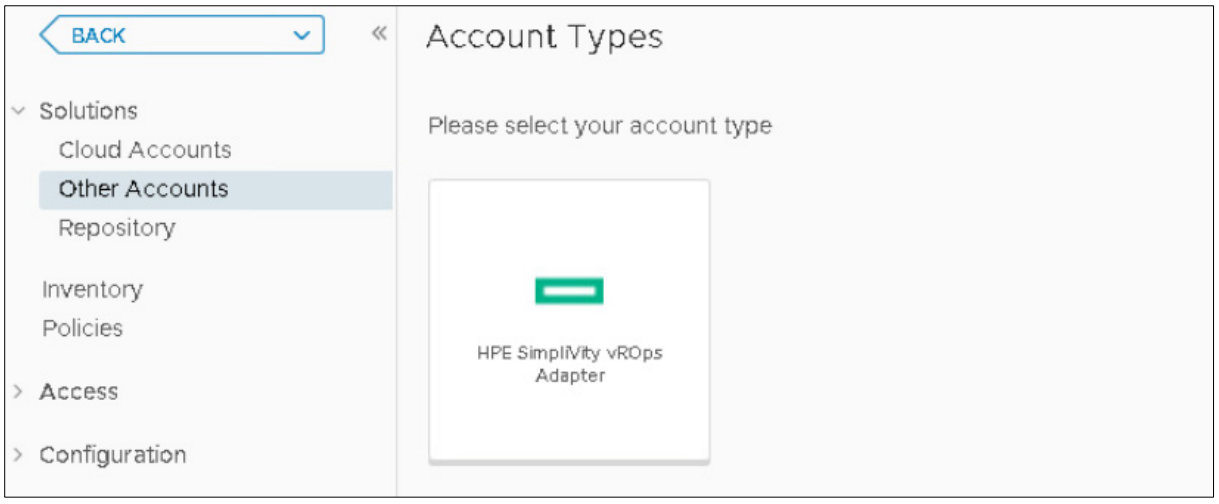
10. Click **Next** to advance to EULA.



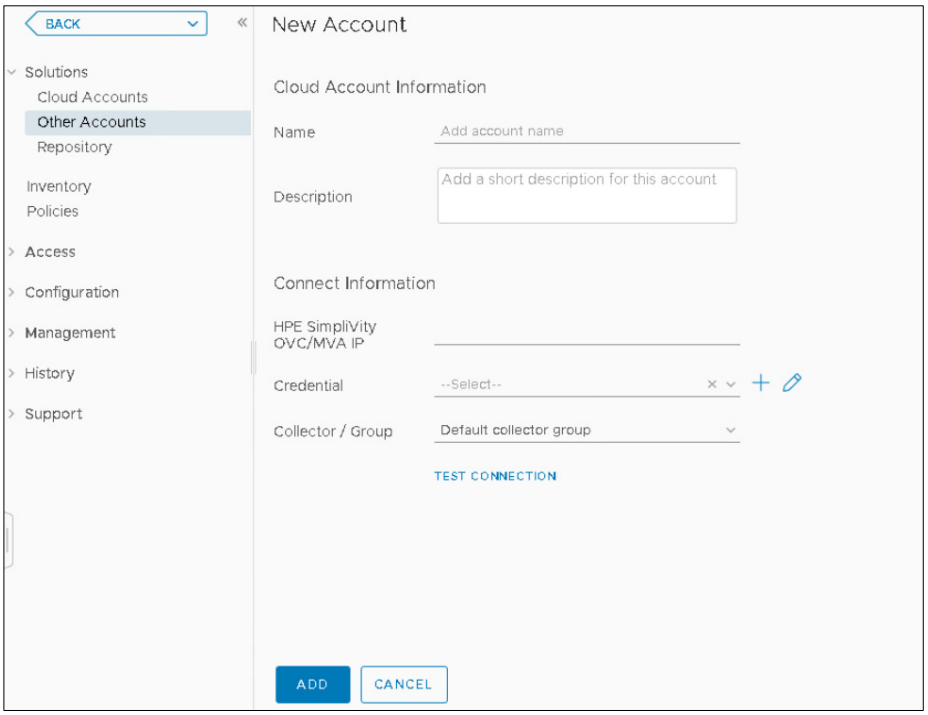
11. Install the solution in the next screen after you have read and accepted the EULA.



12. Go to **Other Accounts** on **Solutions** tab and click on **Add Account** and choose the HPE SimpliVity solution we installed on the previous step.



13. Configure vROps to point to HPE SimpliVity OVC/MVA and enter the VMware vCenter® details in the pop up and save settings.



Enter the following information:

a. **Name**—A name for the HPE SimpliVity Adapter Instance that is being configured.

b. **Description**—The Description of the HPE SimpliVity Adapter Instance.

c. **HPE SimpliVity OVC/MVA IP**—Provide OVC/MVA IP of the Host.

NOTE

A single OVC/MVA IP is sufficient to monitor the entire Federation the host belongs to.

Set name of the HPE SimpliVity Federation as the Name so you can identify it better in Federation Dashboard.

OVC—OmniStack Virtual Controller

MVA—Management Virtual Appliance

d. Credential—Click ✚

   I. Credential Name: Provide Name

   II. HPE SimpliVity User Name: Enter HPE SimpliVity user name

   III. HPE SimpliVity Password: Enter HPE SimpliVity password

14. Click **Test Connection** to make sure vROps can access your OVC/MVA.

NOTE

You need to get a “Test was successful” message to proceed further.

15. Click on **Add**.

16. The HPE SimpliVity adapter instance appears in the **Other Accounts** list.

17. The adapter stars to collect data (Usually takes a few minutes).

NOTE

1. To monitor multiple federations, configure multiple adapter instances (Follow procedure above), and add OVC/MVA IPs from each fed.
2. Please make sure all the Federations to be monitored are reachable from the network the vROps appliance is configured on.

Delete the adapter instance

- Click on **Uninstall** on the adapter instance on Solution tab to uninstall the solution.

Licensing

VMware vRealize Operations for HPE SimpliVity has a permissive Open Source license (MIT). You need an HPE SimpliVity license for each host you will be monitoring with this integration and VMware vRealize Operations.

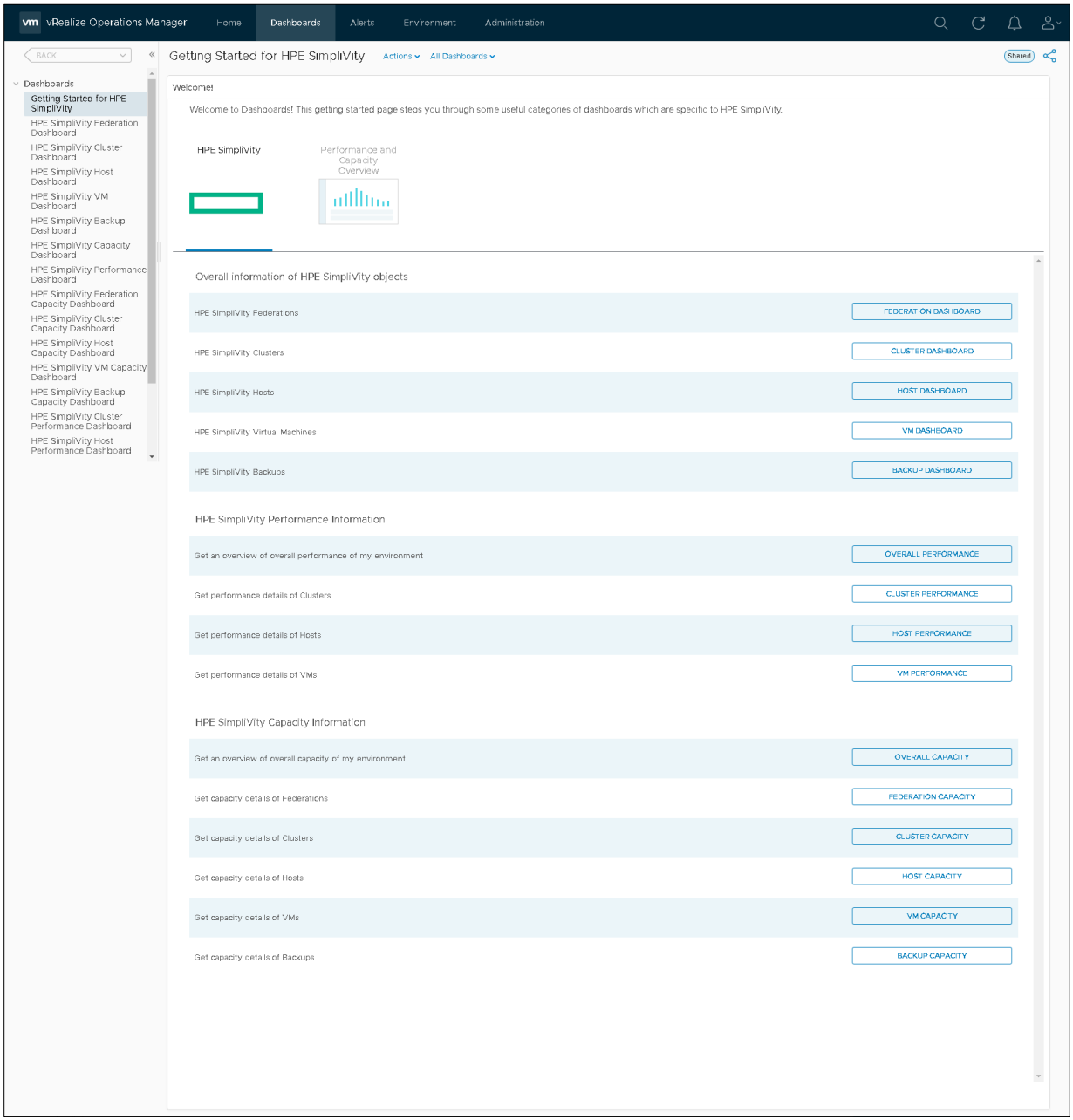
VMware vRealize Operations license (Advanced) must also be acquired for each of the hosts as per VMware licensing guidelines.

DASHBOARDS

Getting Started Dashboard

The Getting Started Dashboard provides a comprehensive view of all the dashboards which are shipped as part of the Management pack. The links provided as part of the dashboard navigate to the respective dashboards.

A Sample screenshot of the dashboard is shown below. Please make use of this dashboard to get started with the Management pack.



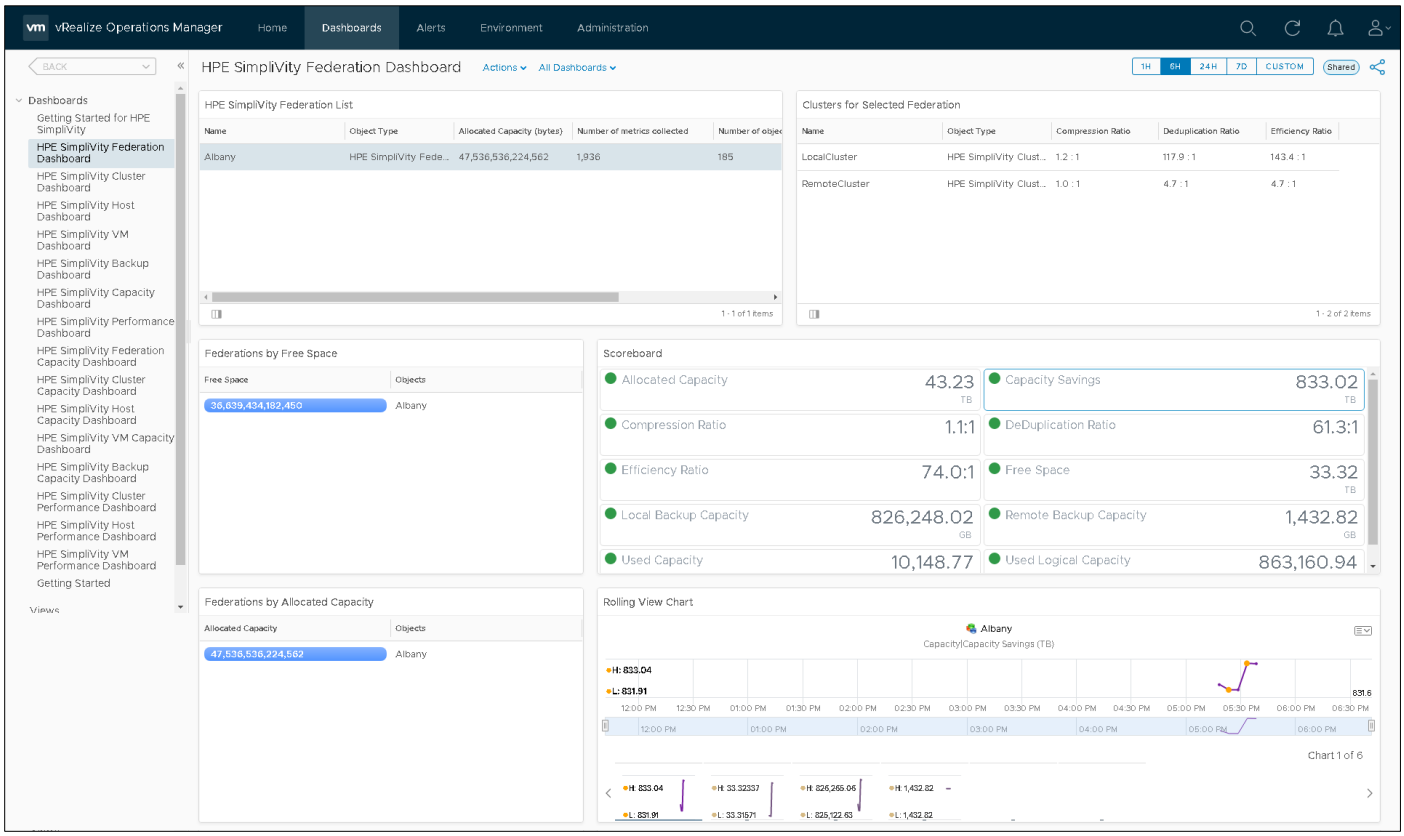
Federation Dashboard

The HPE SimpliVity Federation Dashboard provides information pertaining to Capacity and compliance information related to the monitored Federation.

A cumulative information of all the Federation along with information pertaining to the selected Federation can be viewed with the widgets provided as part of the dashboard.

The metrics provided as part of the Federation Dashboard are:

Federation	Capacity
	• Allocated Capacity • Capacity Savings • Compression Ratio • Deduplication Ratio • Efficiency Ratio • Free Space • Local Backup Capacity • Remote Backup Capacity • Used Capacity • Used Logical Capacity



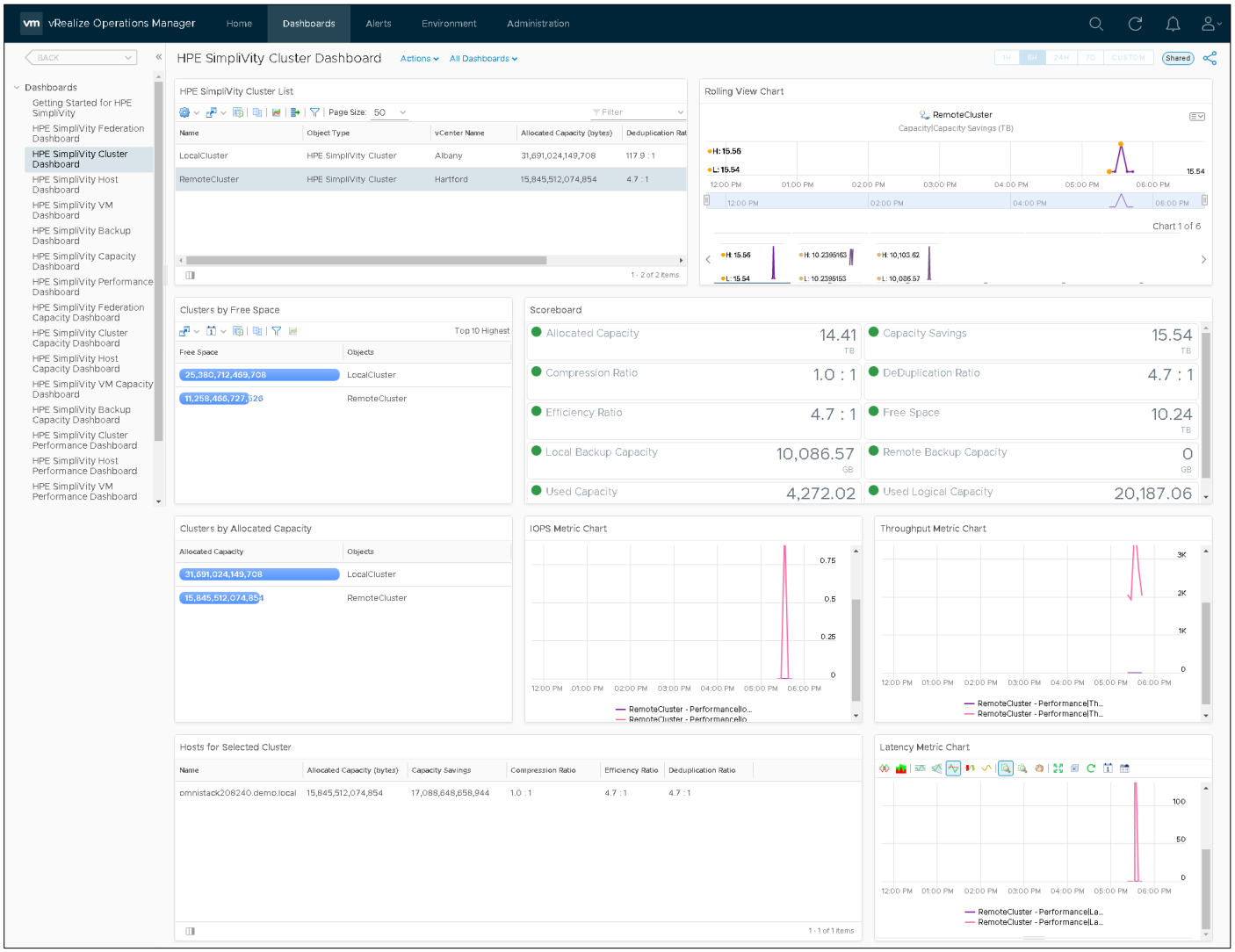
Cluster Dashboard

The HPE SimpliVity Cluster Dashboard provides information pertaining to capacity, performance, and compliance information related to the monitored Cluster.

A cumulative information of all the clusters along with information pertaining to the selected cluster can be viewed with the widgets provided as part of the dashboard.

The metrics provided as part of the Cluster Dashboard are:

Cluster	Capacity • Allocated Capacity • Capacity Savings • Compression Ratio • Deduplication Ratio • Efficiency Ratio • Free Space • Local Backup Capacity • Remote Backup Capacity • Used Capacity • Used Logical Capacity **Performance** • Throughput Write • Throughput Read • Latency Read • Latency Write • IOPS Read • IOPS Write



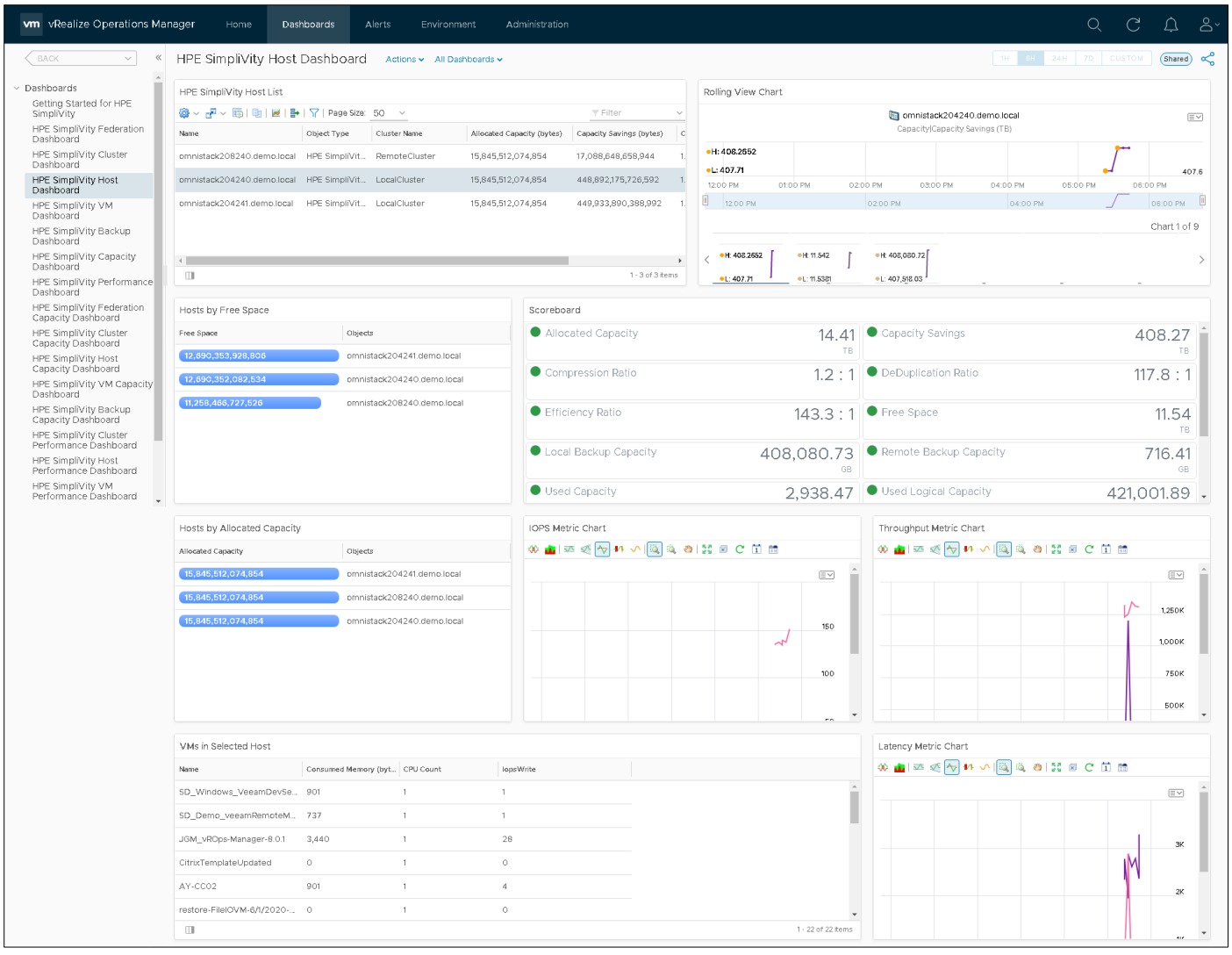
Host Dashboard

The HPE SimpliVity Host Dashboard provides information pertaining to capacity, performance, and compliance information related to the monitored hosts.

A cumulative information of all the hosts along with information pertaining to the selected host can be viewed with the widgets provided as part of the dashboard.

The Metrics provided as part of the Host Dashboard are:

Host	Capacity	Performance
	• Allocated Capacity • Capacity Savings • Compression Ratio • Deduplication Ratio • Efficiency Ratio • Free Space • Local Backup Capacity • Remote Backup Capacity • Used Capacity • Used Logical Capacity • Stored Compressed Data • Stored Uncompressed Data • Stored Virtual Machine Data	• Throughput Write • Throughput Read • Latency Read • Latency Write • IOPS Read • IOPS Write



VM (Virtual Machine) Dashboard

The HPE SimpliVity VM (Virtual Machine) Dashboard provides information pertaining to capacity, compute, memory, performance, and compliance information related to the monitored Virtual Machines.

A cumulative information of all the Virtual Machines along with information pertaining to the selected Virtual Machine can be viewed with the widgets provided as part of the dashboard.

The Metrics provided as part of the VM dashboard are:

VM

Capacity

- Allocated Capacity
- Free Space
- Virtual Disk Count

Compute

- Allocated CPU
- Consumed CPU
- CPU Count

Memory

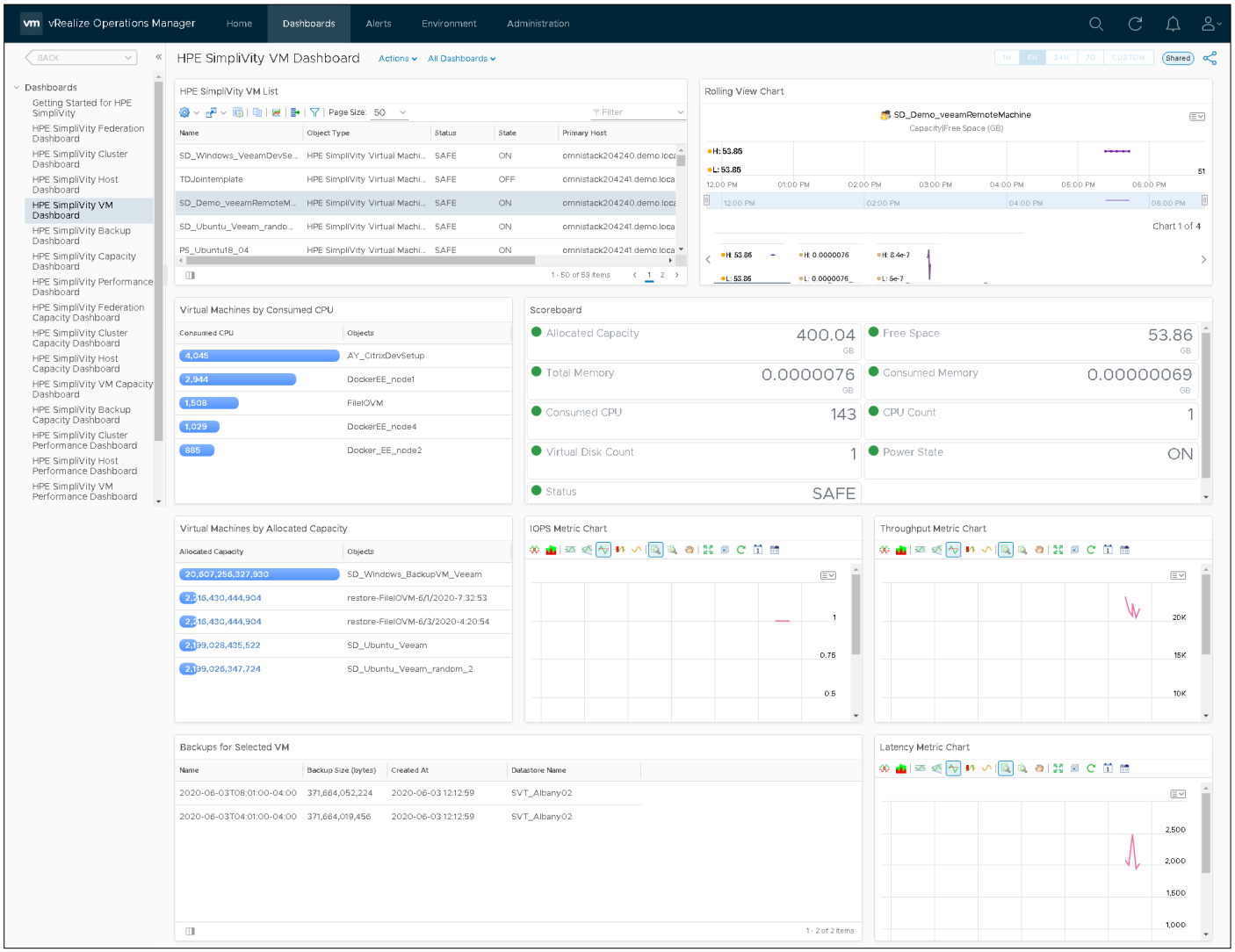
- Total Memory
- Consumed Memory

State

- HA State
- Power State

Performance

- Throughput Write
- Throughput Read
- Latency Read
- Latency Write
- IOPS Read
- IOPS Write

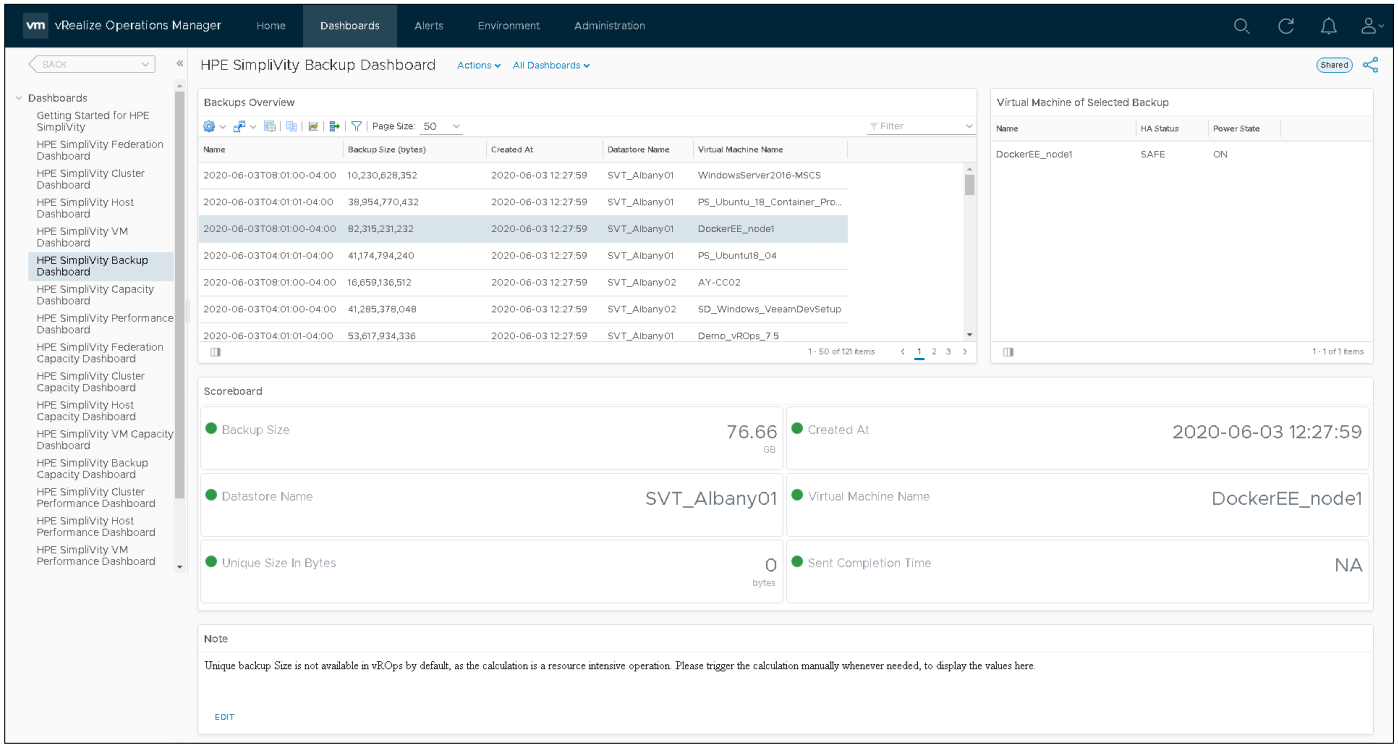


Backup Dashboard

The HPE SimpliVity Backup Dashboard has a list of all the HPE SimpliVity objects (Hosts, Clusters, VMs etc.) as its first widget. When a particular Object is selected, the list of backups and associated information for all the backups is displayed in the subsequent widgets.

The Metrics provided as part of the Backup Dashboard are:

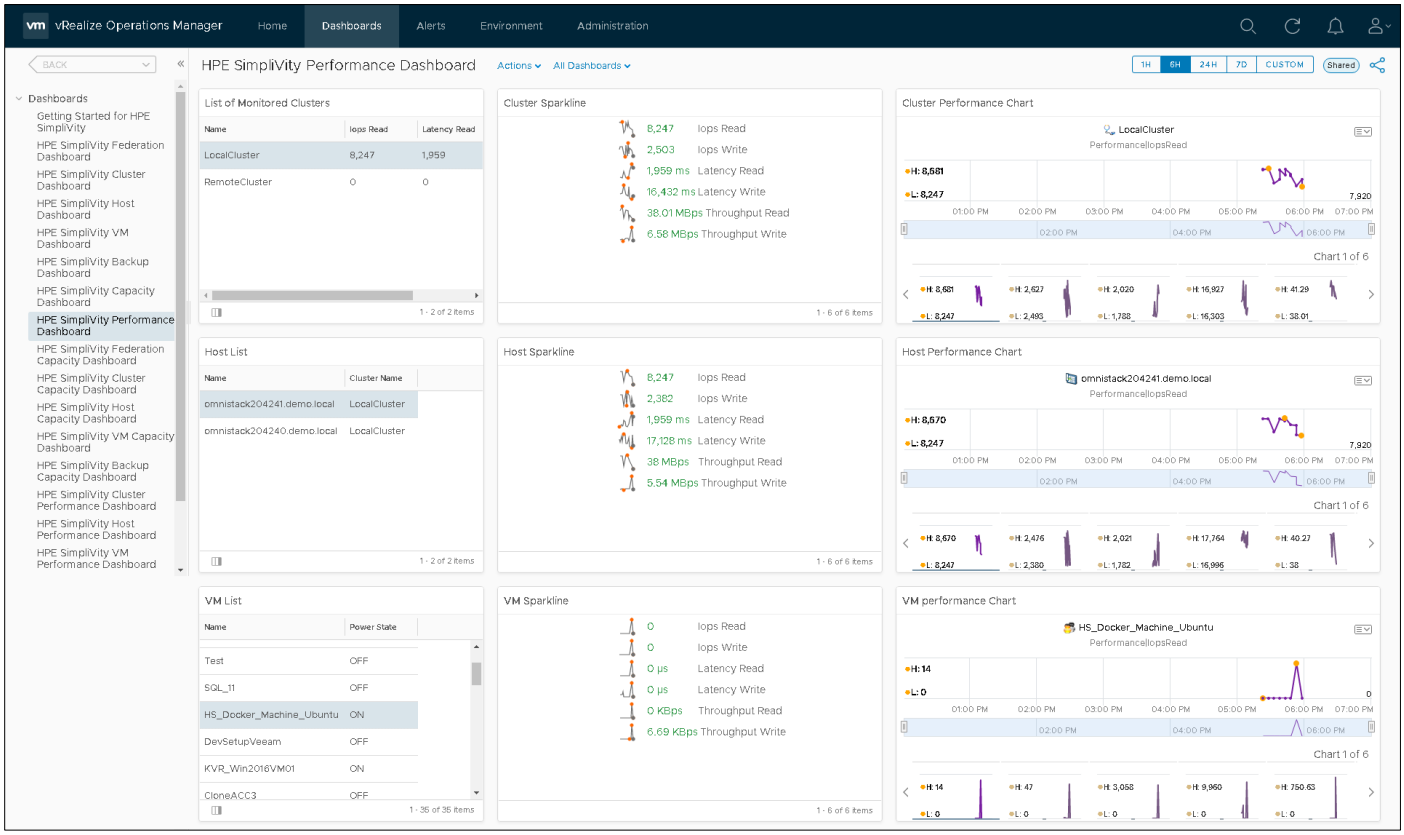
Backup	• Size • Unique Size Bytes • Virtual Machine Name • Created At • Datastore Name • Virtual Machine State • Policy • Sent Completion Time



Performance Dashboard

The HPE SimpliVity Performance Dashboard has a consolidated information of performance of all the HPE SimpliVity objects which are monitored as part of the Management Pack.

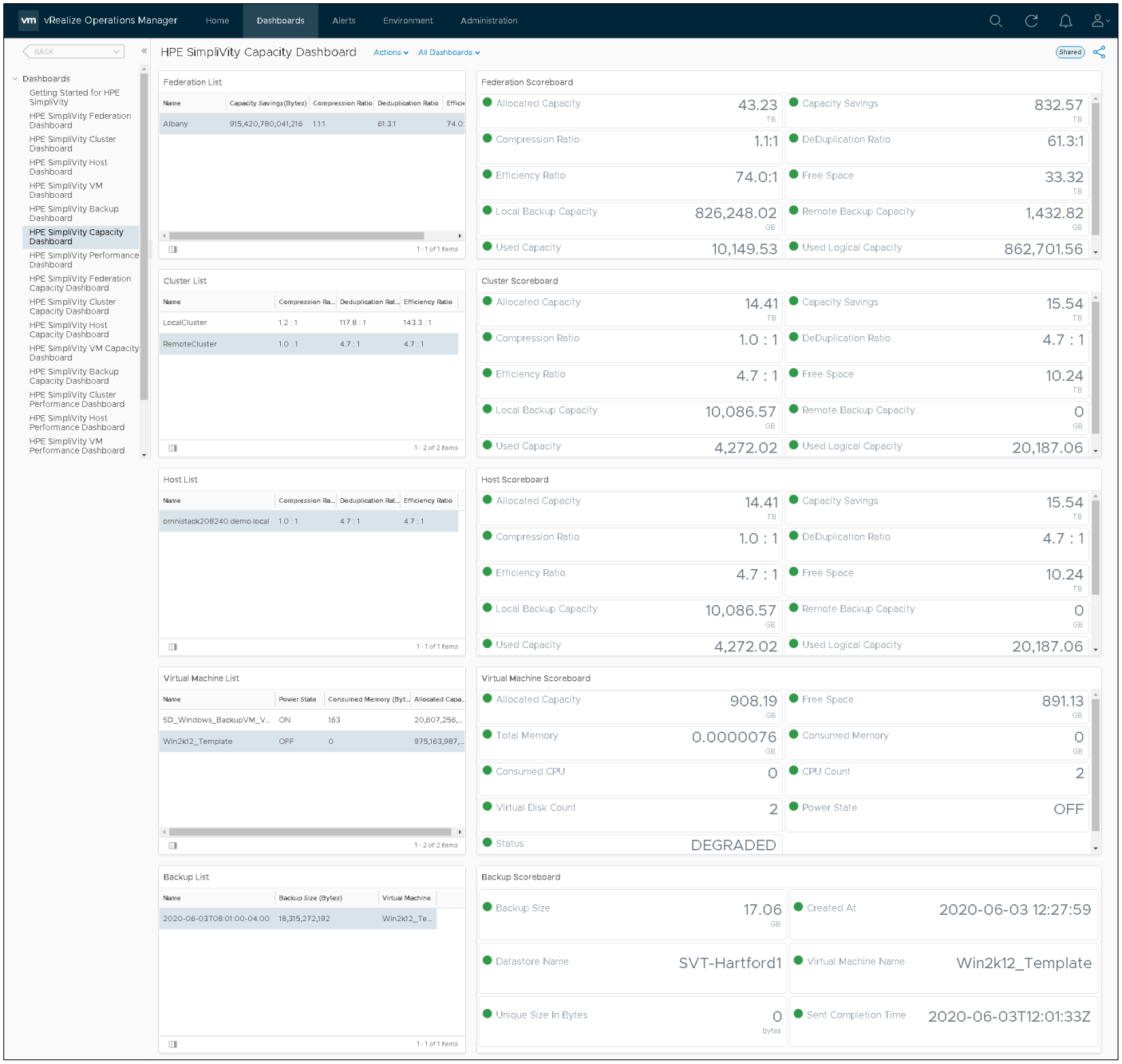
The performance metrics displayed as part of this dashboard are from the performance metrics collected for individual objects. (See tables above)



Capacity Dashboard

The HPE SimpliVity Capacity Dashboard has a consolidated information of Capacity of all the HPE SimpliVity objects which are monitored as part of the Management Pack.

The Capacity metrics displayed as part of this dashboard are from the capacity metrics collected for individual objects. (See tables above)



NOTE

1. Metrics in vROps Object List and Top–N widgets are not subjected to unit conversion and can only be shown in their basic unit.
2. Units in the widgets cannot be dynamically changed. Users need to select the appropriate units for their convenience.

Additional Dashboards

There are few more Additional Dashboards which come with the MP. These dashboards display performance and capacity information specific to the HPE SimpliVity objects which are monitored. You can find these dashboards as part of the getting started dashboard.

TROUBLESHOOTING

Debug logging

Debug logs are a valuable tool to the administrator. These help you to troubleshoot the problems, you may encounter.

To view debug logging:

1. Log in to the VMware vRealize Operations Manager user interface with administrator privileges.
2. Click the **Administration** tab, click **Support** > **Logs**.
3. Select **Log Type** from the **Group** drop-down menu.
4. Expand the **Collector** folder.
5. Expand to **HPESimplivityVropsAdpter** folder.
6. Choose the appropriate log file from the list.
7. Select the **DEBUG** logging level from the drop-down.

> **NOTE**
> To prevent huge log files, set the Debug logging time only for short periods.

8. Click **GO** to view the log section.

SUPPORT AND OTHER RESOURCES

Updates

Subsequent updates to the MP for newer versions of VMware vROps would be released in the public GitHub site itself and the release information can be found in the release notes under this link: github.com/HewlettPackard/simplivity-vrops-plugin/blob/master/README.md

Issues and feedback

Issues pertaining to the management pack can be raised in the issues tab in the public GitHub repo.

Any feedback/enhancements to be proposed can be done in the same tab with relevant tags.

The issues tab can be found here: github.com/HewlettPackard/simplivity-vrops-plugin/issues.

DOCUMENTATION FEEDBACK

Hewlett Packard Enterprise is committed to providing documentation that meets your needs. To help us improve the documentation, send any errors, suggestions, or comments to Documentation Feedback (docsfeedback@hpe.com). When submitting your feedback, include the document title, part number, edition, and publication date located on the front cover of the document. For online help content, include the product name, product version, help edition, and publication date located on the legal notices page.

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