



# VMWARE VREALIZE OPERATIONS MANAGER FOR HPE SIMPLIVITY

Version 1.2.0

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## 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](https://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

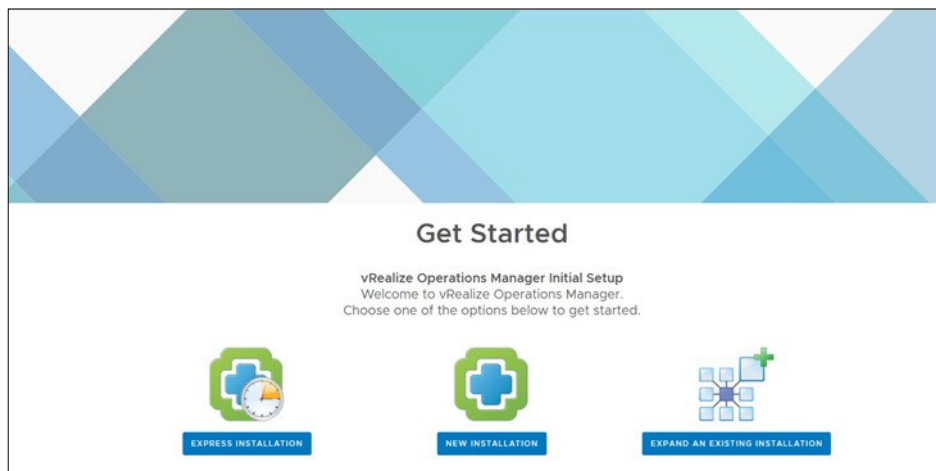
Installing VMware vRealize Operations for HPE SimpliVity.

### 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](https://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](https://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>](https://<vROps_Manager_IP>) and select the appropriate option below based on your need.

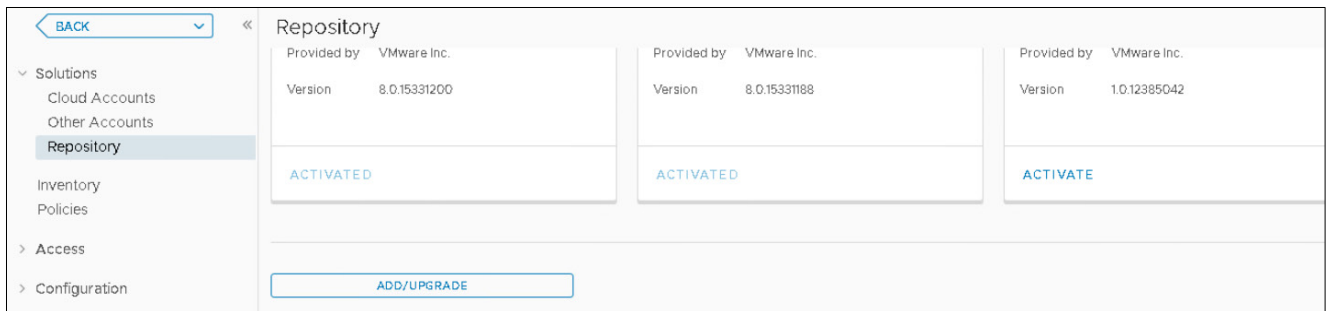


4. After the configuration is complete, start the VMware vRealize® Operations Manager™.

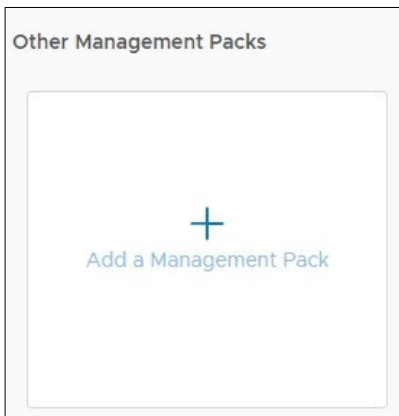


## Procedure for Installing the VMware vRealize Operations for HPE SimpliVity

1. Download the ZIP file from [github.com/HewlettPackard/simplivity-vrops-plugin](https://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**.

### Add Solution

- 1 Select Solution
- 2 End User License Agreement
- 3 Install

### Select a Solution to Install

Browse your file system to select a PAK file for the solution you want to install.

Select a PAK file to import BROWSE...

☒ Install the PAK file even if it is already installed.

☒ Reset Default Content, overwriting to a newer version provided by this update. User modifications to DEFAULT Alert Definitions, Symptoms, Recommendations, Policy Definitions, Views, Dashboards, Widgets and Reports will be overwritten. If you are installing a product software update, clone or backup the content before you proceed.

UPLOAD

100%

The PAK file has been uploaded and is ready to install.

PAK file details

PAK filename	HPESimpliVityVropsMP-1.2.0.pak
Name	HPE SimpliVity Management Pack for VMware vRealize Operations
Description	HPE SimpliVity Management Pack
Version	1.2.0

The PAK file is unsigned.

CANCEL NEXT

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

### Add Solution

- 1 Select Solution
- 2 End User License Agreement
- 3 Install

### End User License Agreement

Read and agree to the End User License Agreement to continue.

MIT License

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☐ I accept the terms of this agreement

CANCEL BACK NEXT



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

### Add Solution

- Select Solution
- End User License Agreement
- Install**

### Install Solution

The selected solution is being installed.

Installation Details

Node Address: 10.170.18.27  
State: Preapply Validated (Candidate)  
Node Address: 10.170.18.27  
State: Applied System Update (Candidate)  
Node Address: 10.170.18.27  
State: Applied Adapter Pre Script (Candidate)  
Node Address: 10.170.18.27  
State: Applied Adapter (Candidate)  
Node Address: 10.170.18.27  
State: Applied Adapter Post Script (Candidate)  
Node Address: 10.170.18.27  
State: Applied and Cleaned (Completed)

FINISH


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.

BACK

«

### Account Types

Please select your account type



HPE SimpliVity vROps Adapter

Solutions

Cloud Accounts

**Other Accounts**

Repository

Inventory

Policies

> Access

> Configuration



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 starts 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.

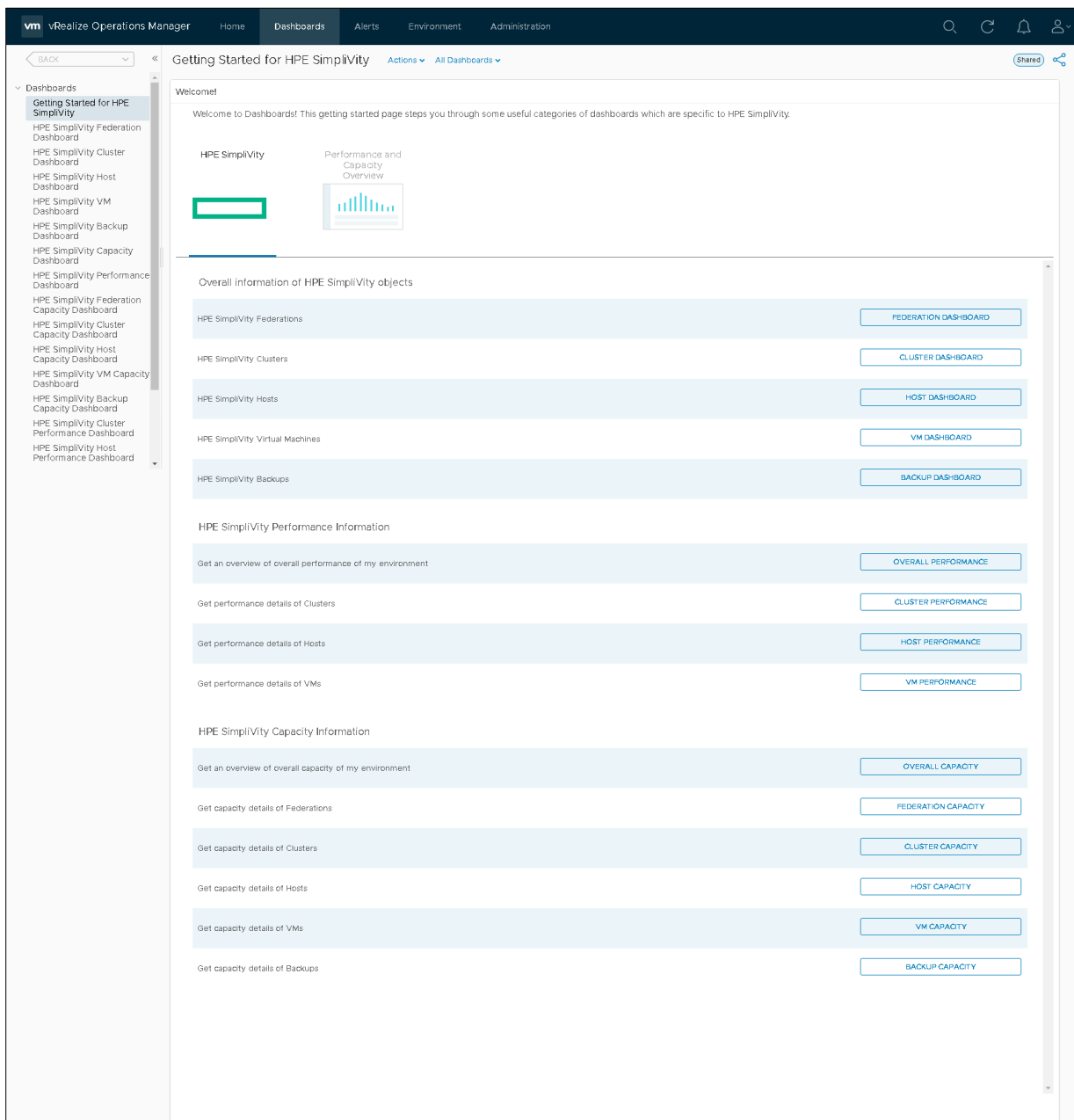
VMware vRealize Operations license (Advanced) must also be acquired for each of the hosts as per VMware licensing guidelines.

## 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.

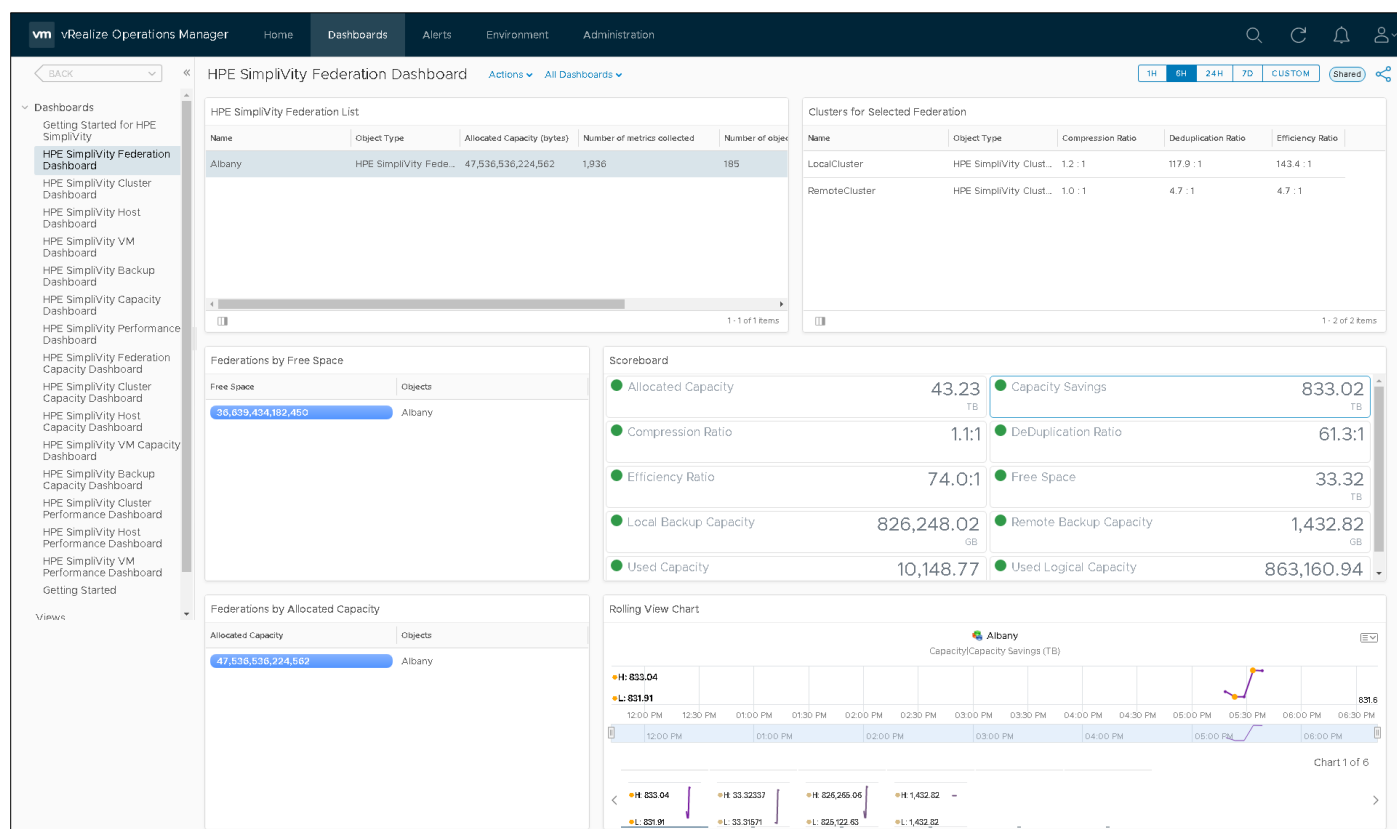
A cumulative information of all the Federation along with information pertaining to the selected Federation can be viewed with the widgets provided as part of the dashboard.

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:

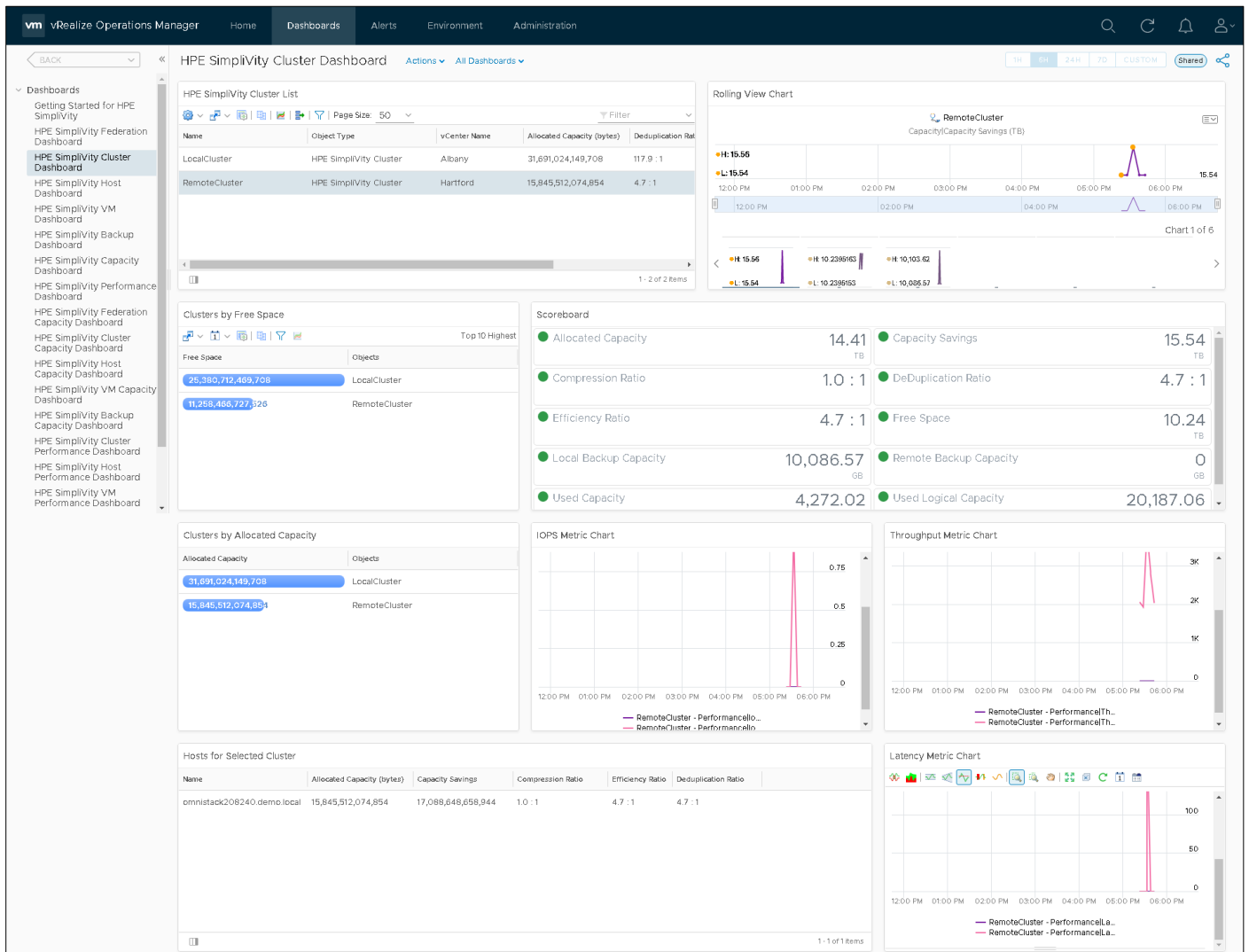
## Cluster

### 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



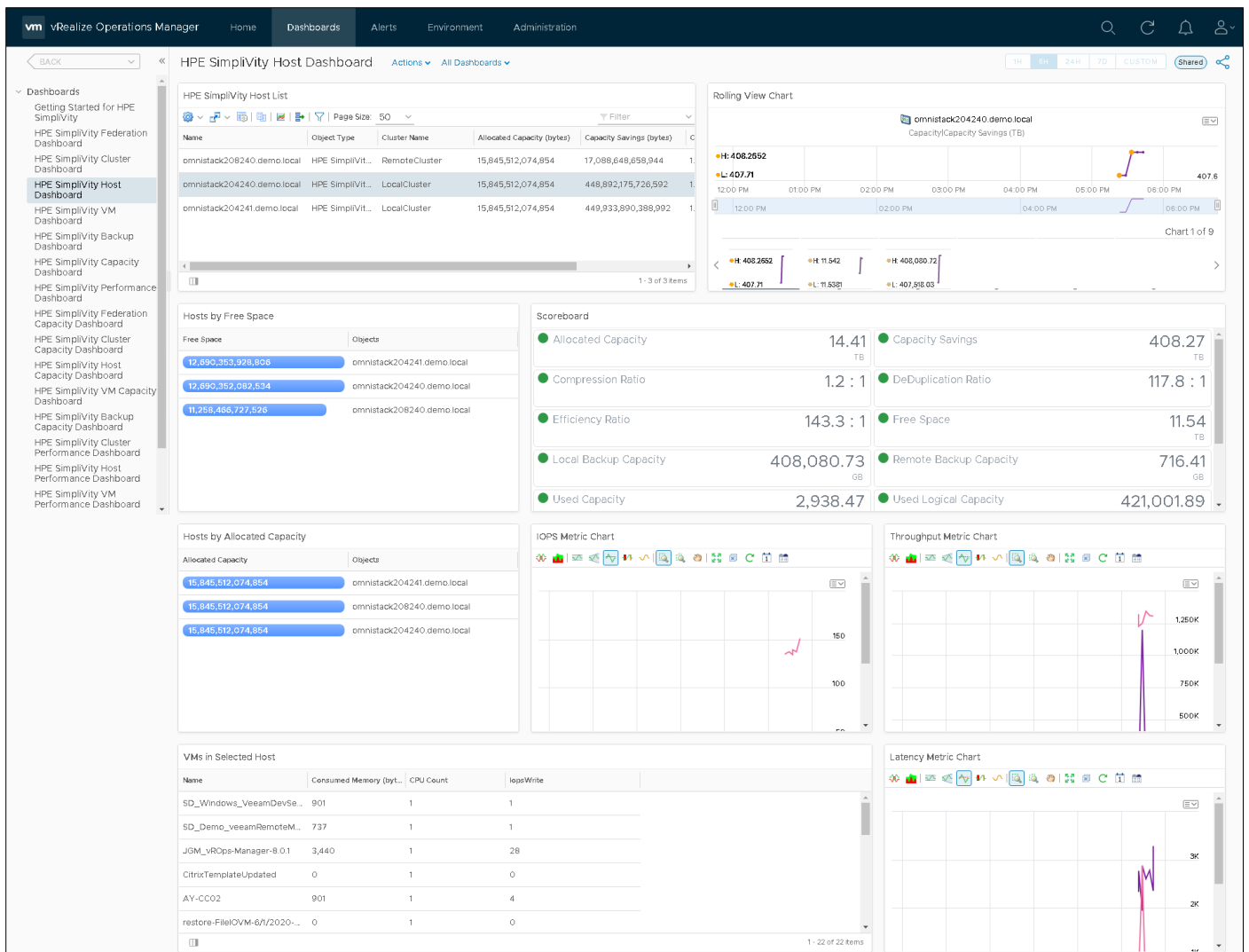
## Host Dashboard

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
	<ul style="list-style-type: none"><li>Allocated Capacity</li><li>Capacity Savings</li><li>Compression Ratio</li><li>Deduplication Ratio</li><li>Efficiency Ratio</li><li>Free Space</li><li>Local Backup Capacity</li><li>Remote Backup Capacity</li><li>Used Capacity</li><li>Used Logical Capacity</li><li>Stored Compressed Data</li><li>Stored Uncompressed Data</li><li>Stored Virtual Machine Data</li></ul>	<ul style="list-style-type: none"><li>Throughput Write</li><li>Throughput Read</li><li>Latency Read</li><li>Latency Write</li><li>IOPS Read</li><li>IOPS Write</li></ul>



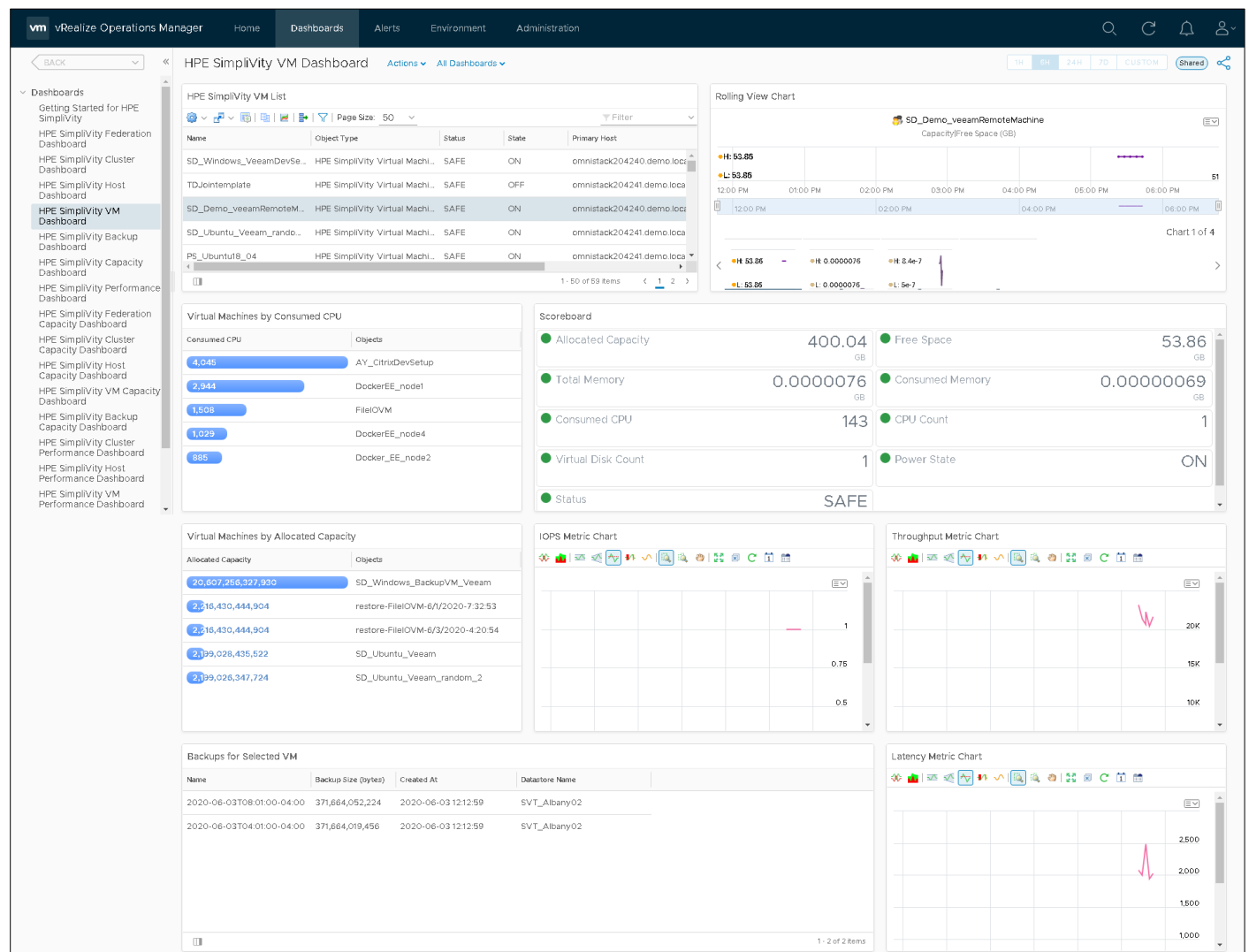
## VM (Virtual Machine) Dashboard

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	State
	<ul style="list-style-type: none"> <li>Allocated Capacity</li> <li>Free Space</li> <li>Virtual Disk Count</li> </ul>	<ul style="list-style-type: none"> <li>HA State</li> <li>Power State</li> </ul>
	Compute	Performance
	<ul style="list-style-type: none"> <li>Allocated CPU</li> <li>Consumed CPU</li> <li>CPU Count</li> </ul>	<ul style="list-style-type: none"> <li>Throughput Write</li> <li>Throughput Read</li> <li>Latency Read</li> <li>Latency Write</li> <li>IOPS Read</li> <li>IOPS Write</li> </ul>
	Memory	
	<ul style="list-style-type: none"> <li>Total Memory</li> <li>Consumed Memory</li> </ul>	



## 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

**vm vRealize Operations Manager** Home Dashboards Alerts Environment Administration

BACK

### HPE SimpliVity Backup Dashboard

Actions All Dashboards

Shared

**Backups Overview**

Page Size: 50 Filter

Name	Backup Size (bytes)	Created At	Datastore Name	Virtual Machine Name
2020-06-03T08:01:00-04:00	10,230,628,352	2020-06-03 12:27:59	SVT_Albian01	WindowsServer2016-MSCS
2020-06-03T04:01:01-04:00	38,954,770,432	2020-06-03 12:27:59	SVT_Albian01	PS_Ubuntu_18_Container_Pro...
2020-06-03T08:01:00-04:00	82,315,231,232	2020-06-03 12:27:59	SVT_Albian01	DockerEE_node1
2020-06-03T04:01:01-04:00	41,174,794,240	2020-06-03 12:27:59	SVT_Albian01	PS_Ubuntu18_04
2020-06-03T08:01:00-04:00	16,859,136,512	2020-06-03 12:27:59	SVT_Albian02	AY-CC02
2020-06-03T04:01:00-04:00	41,285,378,048	2020-06-03 12:27:59	SVT_Albian02	SD_Windows_VeeamDevSetup
2020-06-03T04:01:01-04:00	53,617,934,336	2020-06-03 12:27:59	SVT_Albian01	Demo_vROps_7.5

1 - 50 of 121 items

**Virtual Machine of Selected Backup**

Name	HA Status	Power State
DockerEE_node1	SAFE	ON

1 - 1 of 1 items

**Scoreboard**

Backup Size	76.66 GB	Created At	2020-06-03 12:27:59
Datastore Name	SVT_Albian01	Virtual Machine Name	DockerEE_node1
Unique Size In Bytes	0 bytes	Sent Completion Time	NA

**Note**

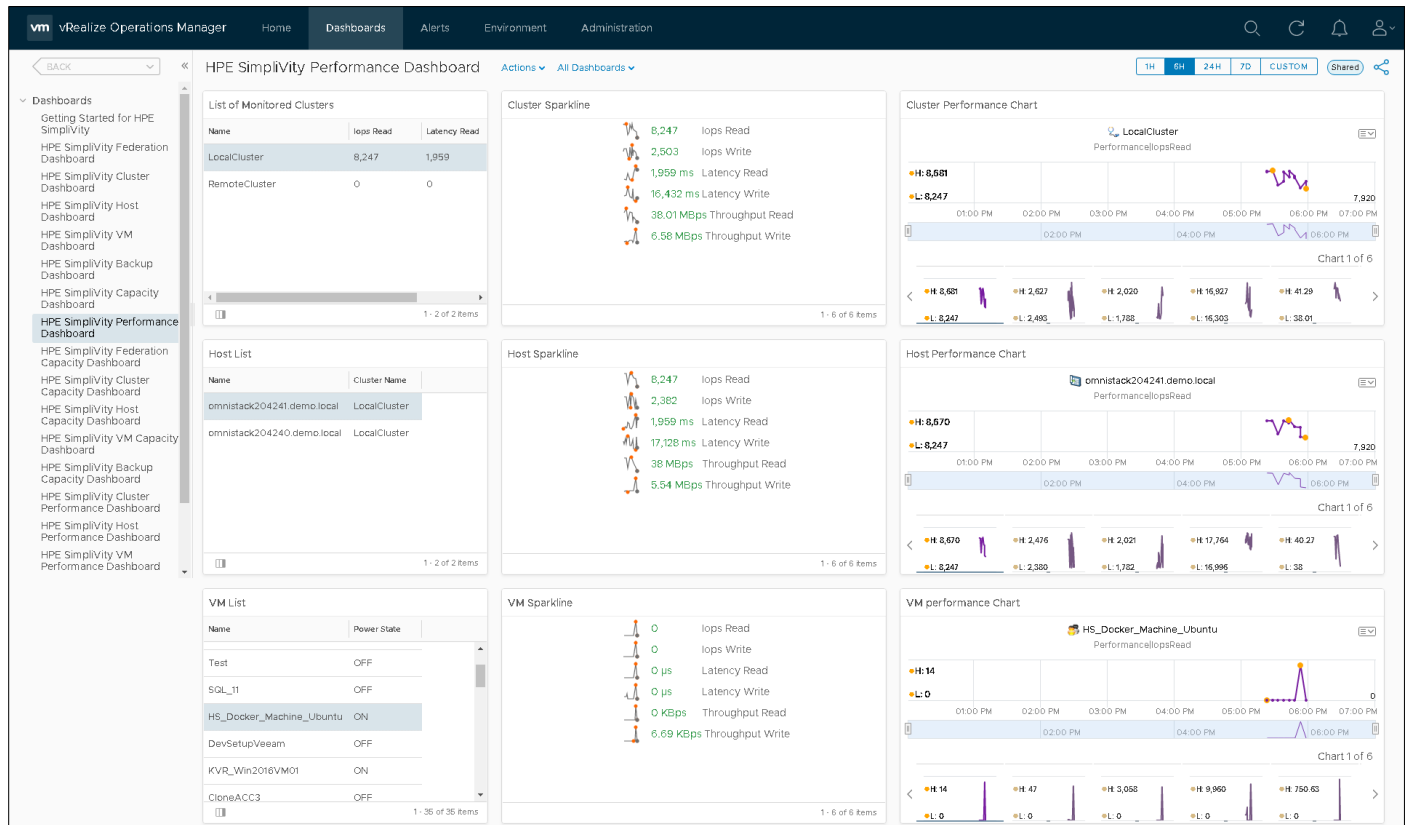
Unique backup Size is not available in vROps by default, as the calculation is a resource intensive operation. Please trigger the calculation manually whenever needed, to display the values here.

[EDIT](#)

## 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.

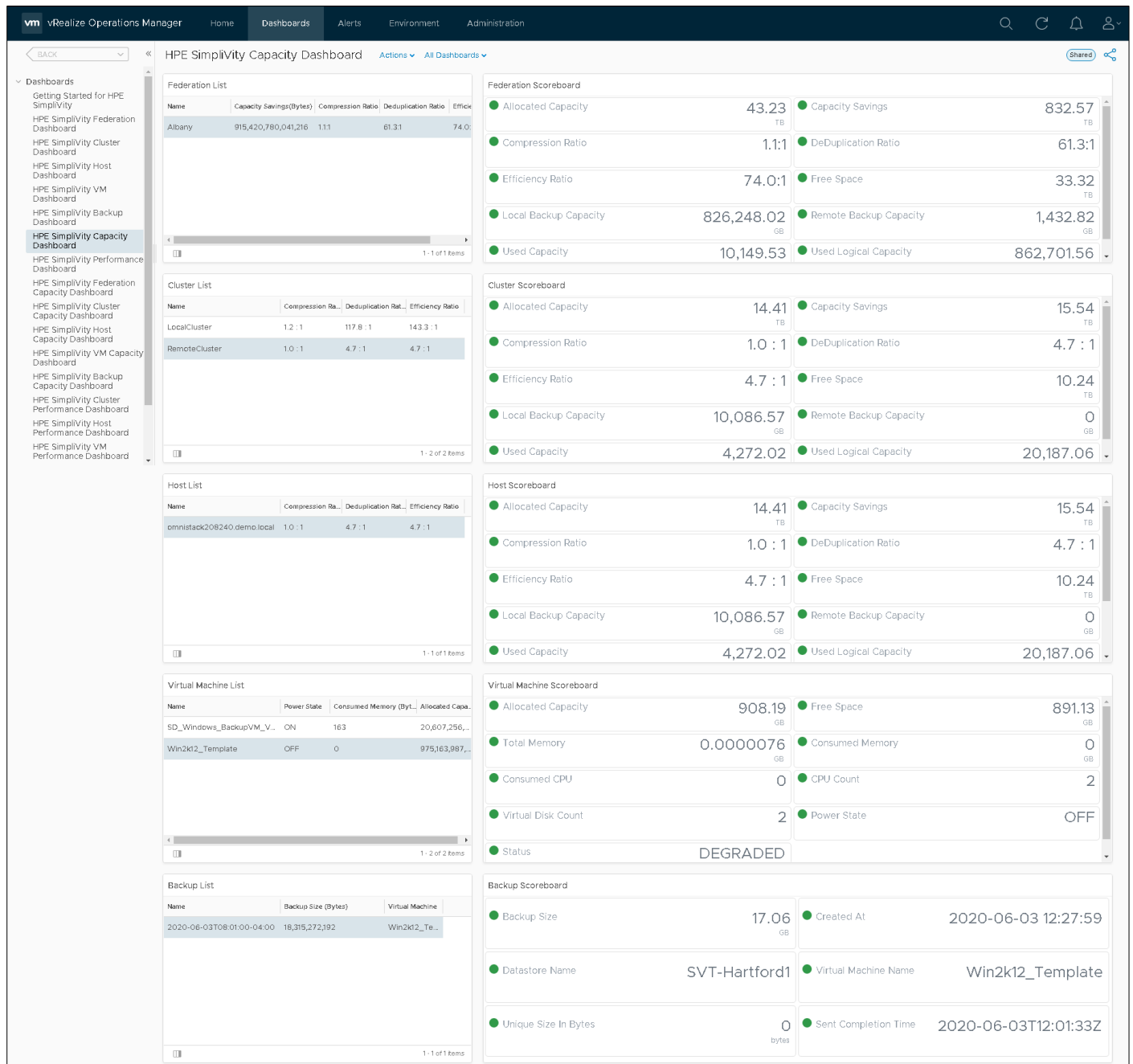
The performance metrics displayed as part of this dashboard are from the performance metrics collected for individual objects. (See tables above)



## 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 **HPESimplivityVropsAdapter** 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.

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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](https://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](https://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](mailto: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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