



EMC[®] ViPR[®] Controller Add-in for Microsoft[®] System Center Virtual Machine Manager

Version 2.3

Installation and Configuration Guide

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CHAPTER 1

EMC ViPR Add-in for SCVMM Overview

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Overview

Microsoft® System Center Virtual Machine Manager (SCVMM) is a comprehensive IT infrastructure, virtualization, and cloud management platform that manages applications and services across multiple hypervisors as well as across public, hosted, and private cloud infrastructures. EMC® ViPR® Controller is a software platform that provides a single point of access to heterogeneous storage arrays. The EMC ViPR Controller Add-in for SCVMM integrates prepackaged services with SCVMM for allocating and managing EMC ViPR Controller storage with the SCVMM hypervisors and hosts through the System Center Virtual Machine Manager console (VMM console).

The following services are prepackaged with the EMC ViPR Controller add-in.

EMC ViPR Add-in Service	Description
EMC ViPR Controller Host and Cluster services	
Provision a Volume for a Cluster on page 14	<ol style="list-style-type: none"> 1. Creates a block volume from EMC ViPR Controller storage. 2. Presents the EMC ViPR Controller volume to the hosts in the cluster.
Expand a Volume for a Cluster on page 14	Expands the size of an EMC ViPR Controller block volume.
Delete Volume on page 15	Deletes an EMC ViPR Controller block volume.
EMC ViPR Controller Pass-through Disk services	
Create Pass-through Disk on page 15	Creates a pass-through disk from an EMC ViPR Controller volume for the virtual machine.
Expand Pass-through Disk on page 16	Expands the size of the pass-through disk associated with the virtual machine.

CHAPTER 2

Configuration Requirements

This chapter contains the following information.

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EMC ViPR and SCVMM configuration requirements

EMC ViPR and SCVMM must meet specific configuration requirements before using the EMC ViPR Add-in for SCVMM.

General configuration requirements

- Hosts must be added to ViPR before they can be managed by the ViPR add-in for SCVMM. Prior to using any ViPR add-in services, EMC ViPR tenant administrators can either:
 - Add the hosts to ViPR, after the EMC ViPR add-in for SCVMM is installed. Refer to [Add SCVMM Clusters/Hosts to EMC ViPR Resources on page 12](#) for details.
 - Alternatively, add the hosts using the EMC ViPR Administration and Self-service UI, ViPR API, or ViPR CLI. Refer to the EMC ViPR documentation for details.
- The user adding the hosts must have the EMC ViPR tenant administrator role. Refer to the *EMC ViPR Administration Guide* for details on setting up EMC ViPR users through the ViPR UI.

EMC ViPR configuration requirements for the EMC ViPR add-in

The EMC ViPR environment must meet specific configuration requirements to support the EMC ViPR add-in for SCVMM.

- The EMC ViPR user that will use the EMC ViPR add-in for SCVMM must have been assigned an EMC ViPR Tenant Administrator role or a Project Administrator role for the Project resources being configured. EMC ViPR roles are configured by EMC ViPR Security Administrators from the ViPR Administration and Self-Service UI.
- EMC ViPR resources, such as virtual storage arrays (virtual arrays) and virtual storage pools (virtual pools), must have been configured through the EMC ViPR Administration and Self-Service UI. Refer to the *EMC ViPR Administration Guide*.

SCVMM configuration requirements for the EMC ViPR add-in

System Center Virtual Machine Manager (SCVMM) must meet specific configuration requirements to support the EMC ViPR add-in for SCVMM.

- The EMC ViPR add-in is supported on Microsoft System Center 2012 SP1 - Virtual Machine Manager.
EMC recommends installing the Microsoft Administration Console (KB2826392) update package. You can install the package from the Microsoft support page for System Center 2012 SP1 page (<http://support.microsoft.com/kb/2802159>). Locate the Virtual Machine Manager – Administration Console (KB2826392) download link and follow the instructions to install the package.
- Microsoft Hyper-V Server 2008 R2 and Microsoft Hyper-V Server 2012 are supported by the EMC ViPR add-in.
- The services provided with the EMC ViPR add-in for SCVMM can only be used through the VMM console, and cannot be integrated with other applications.

CHAPTER 3

EMC ViPR Add-in for SCVMM Installation

This chapter contains the following information.

- [Installing the EMC ViPR add-in for SCVMM](#)..... 10
- [Accessing the EMC ViPR Controller Add-in page](#)..... 10
- [Configuring EMC ViPR Controller settings](#)..... 11
- [Adding SCVMM hosts to EMC ViPR resources](#)..... 12

Installing the EMC ViPR add-in for SCVMM

Install the EMC ViPR add-in for SCVMM from the **Virtual Machine Manager (VMM) Console Settings** page.

Before you begin

Uninstall any earlier versions of the EMC ViPR add-in for SCVMM currently installed. Refer to [Uninstalling the EMC ViPR add-in for SCVMM on page 18](#).

Procedure

1. Download the `EMC-ViPR-SCVMM-Add-in-1.0.x.x.zip` file from EMC Support Zone.
2. Launch the Virtual Machine Manager (VMM) Console.
3. Log into a VMM Server.
4. Click **Settings**.
5. Select **Console Add-ins** in the **Settings** pane.
6. Click **Import Console Add-in**.
7. From the **Select an Add-in** window, browse to the local directory containing the:
`EMC-ViPR-SCVMM-Add-in-1.0.x.x.zip` file.
8. Click **Next**.
9. Confirm settings, and click **Finish**.
10. Restart the **VMM console** if:
 - Instructed to do so.
 - Reinstalling a new version of the ViPR add-in on your local machine, and the machine is not in the same domain as the SCVMM server.
11. Access the **EMC ViPR Add-in** service page to verify that the ViPR add-in was properly installed.

Accessing the EMC ViPR Controller Add-in page

Access EMC ViPR Controller configuration settings and services from the **EMC ViPR add-in** page on the VMM console, or from the **Manage ViPR Pass-through Disks** dialog.

Procedure

1. Launch the Virtual Machine Manager (VMM) Console.
2. Log into a VMM Server.
3. Click **VMs and Services**.

To open the EMC ViPR Controller cluster services:

 - a. Expand the **All Hosts** folder in the **VMs and Services** pane.
 - b. Select a cluster or host from the list.
 - c. Click **EMC ViPR Add-in** in the **Home** toolbar.

To open the EMC ViPR Controller pass-through disk services:

 - a. Select the **All Hosts** folder in the **VMs and Services** pane.

- b. Select a virtual machine from the list in the **VMs** pane.
- c. Click **Manage ViPR Pass-through Disks** in the **Virtual Machine** toolbar.

Configuring EMC ViPR Controller settings

Configuring EMC ViPR Controller includes setting up the EMC ViPR Controller host and log in information, and entering volume and system preferences.

Procedure

1. Access the [EMC ViPR Add-in page on page 10](#) in the VMM console.
2. Click **Settings**, and continue to:
 - [Configure the EMC ViPR host and user credentials. on page 11](#)
 - [Define the EMC ViPR add-in Preferences. on page 11](#)

Configuring EMC ViPR host and user credentials

The ViPR host and user can be set prior to working in the ViPR services, or the first time a ViPR service is executed. After the host and user credentials have been entered, they can only be changed from the ViPR Configuration Settings and cannot be changed while executing a ViPR service.

Before you begin

- The ViPR add-in services can only be logged into a single ViPR instance per VMM console session.
- The ViPR user entered in the EMC ViPR Controller Configuration Settings must be assigned a ViPR Tenant Administrator role or a Project Administrator role for the Project being set. ViPR roles are configured by ViPR Security Administrators from the ViPR Administration and Self-service UI. Refer to the *EMC ViPR Administration Guide* for details.

Procedure

1. From the **ViPR Configuration Settings** dialog, click **ViPR Credentials**.
2. Enter the ViPR **Hostname** (or IP address) **Port**, and ViPR host log in **Username** and **Password**.
3. Click **Apply**.

Note

Before clicking **Apply**, uncheck the **Save Credentials** box if you do not want ViPR to remember your login credentials.

Defining volume and system preferences

Preferences includes defining a default volume name prefix and counter that are applied to the ViPR volume names when provisioning a new volume, or adding a new EMC ViPR Controller pass-through disk, and entering a time for how long the service will run until it times out.

Before you begin

- Defining the volume and system preferences is an optional step.
- The prefix and counter can be changed while setting up provisioning for a new volume or pass-through disk.

- The process timeout period, is used for all services and can only be changed from the ViPR Configuration Settings.

Procedure

1. From the **ViPR Configuration Settings** dialog, click **Preferences**.
2. Enter the **Volume Name Prefix** that will be applied to the start of all new volume names.
3. Enter the **Counter for Volume Suffix**.
The suffix is a number that is incrementally increased and included in the volume name for each newly created volume.
4. Enter the **Timeout** period in minutes that each operation within a service runs before timing out.
5. Click **Apply**.

Adding SCVMM hosts to EMC ViPR resources

Hosts that will be managed by the EMC ViPR add-in for SCVMM must be added as ViPR resources. If the hosts have not yet been added to ViPR, then use the **Add SCVMM Hosts to ViPR** functionality in the ViPR add-in to add them to the ViPR resources.

Before you begin

- Adding the hosts from the ViPR add-in for SCVMM is an optional step. Hosts may be added to the ViPR resources through one of the ViPR interfaces prior to running an ViPR add-in service.
- Only users assigned an EMC ViPR tenant administrator role can add hosts to the ViPR resources. ViPR roles are assigned from the EMC ViPR Administration and Self-service UI (ViPR UI).
- Hosts will be added to the ViPR instance provided in the ViPR add-in for SCVMM, **ViPR Configuration Settings**. Refer to [Configure EMC ViPR Host and User Credentials on page 11](#) for details.

Procedure

1. From the **EMC ViPR Add-in** page, click **Add Hosts to ViPR** in the top right of the **EMC ViPR Add-in** page title bar. The **Add Hosts and Clusters to ViPR** wizard is displayed.
2. Select the hosts or clusters to add to ViPR, then click **Next**.
3. Type your **username**, **password**, and the **port number** for the host or cluster, then click **Preview**.
4. Click **Finish**.

The hosts or cluster have been added to ViPR.

CHAPTER 4

EMC ViPR Add-in for SCVMM Service Procedures

This chapter contains the following information.

- [EMC ViPR Controller Add-in services general practices](#) 14
- [Provisioning a volume for a cluster or host](#) 14
- [Expanding a volume](#) 14
- [Deleting a volume](#) 15
- [Adding a pass-through disk from an EMC ViPR Controller volume](#) 15
- [Expanding a pass-through disk](#) 16
- [Monitoring EMC ViPR Controller add-in service activity](#) 16

EMC ViPR Controller Add-in services general practices

Consider best practices before using the EMC ViPR Controller add-in services.

- All mandatory fields are marked with an asterisk.
- If an EMC ViPR Controller hostname, port, username or password has not been specified, you are prompted to enter the values the first time that you try to execute a service. Once set, the ViPR host information and credentials can only be changed from the **EMC ViPR Add-in Configuration Settings** dialog, and not in the context of a service.
- The EMC ViPR Controller user entered in the **EMC ViPR Add-in Configuration Settings** dialog must be assigned an EMC ViPR Controller tenant administrator role or project administrator role for the Project being set. EMC ViPR Controller roles are configured by EMC ViPR Controller Security Administrators from the EMC ViPR Controller Administration and Self-service UI.
- When services are launched for the cluster selected in the **VMs and Services** pane, the cluster that the service will be used to manage can be changed while configuring the service.

Provisioning a volume for a cluster or host

Use the **Provision a Volume for a Cluster or Host** service to create a block volume from EMC ViPR storage and present the EMC ViPR volume to the hosts in the cluster.

Before you begin

The EMC ViPR virtual array is set the first time the provisioning service is executed. The target array is automatically computed and populated into the service options. If the virtual array option is blank, speak with your ViPR Administrator to ensure the virtual array is available for provisioning with the EMC ViPR add-in.

Procedure

1. From the VMM console, click **VMs and Services**.
2. Expand **All Hosts**.
3. Select a cluster.
4. Click **EMC ViPR Add-in** in the **Home** toolbar.
5. Click **Provision a Volume for a Cluster or Host**.
6. Complete the service form, and click **Next**.
7. Enter the Windows Drive Parameters, and click **Preview**.
8. Review the information in the **Preview** page, and click **Finish** to provision storage for the selected cluster or host.

Expanding a volume

Use the **Expand a Volume** service to increase the amount of EMC ViPR storage available to the cluster.

Procedure

1. From the **VMs and Services** pane, expand **All Hosts**.

2. Select a cluster, or expand the cluster and select a host.
3. Click **EMC ViPR Add-in** in the **Home** toolbar.
4. Click **Expand a Volume** in the **EMC ViPR Add-In** pane.
5. From the **Expand a Volume** dialog, keep or select a different **Cluster or Host**.
6. Select the **Volume** to expand.
7. Enter the **New Size (GB)** for the volume.
The size must be a larger value than the Old Size (GB).
8. Enable **Extend Partition** to extend the partition on the hosts.
9. If Extend Partition is enabled, enable **Use current Windows session identity**, or enter the **User name** and **Password** for the hosts.
10. Click **Expand**.

Deleting a volume

Use the **Delete Volume** service to delete an EMC ViPR block volume, the volume's snapshots, and the volume's association to other hosts.

Deleting the volume disassociates the volume from all hosts and destroys the volume.

Procedure

1. From the **VMs and Services** pane, expand **All Hosts**.
2. Select a cluster, or expand the cluster and select a host.
3. Click **EMC ViPR Add-in** in the **Home** toolbar.
4. Click **Delete a Volume** in the **EMC ViPR AddIn** pane.
5. From the **Delete Volume** dialog, keep, or select a different **Cluster or Host**.
6. Select the **Volume** to delete.
7. Enable **Use current Windows session identity**, or enter the **User name** and **Password** for the hosts.
8. Click **Delete**.

Adding a pass-through disk from an EMC ViPR Controller volume

Use the **Add Pass-through Disk** service to create a pass-through disk for a cluster from EMC ViPR Controller storage.

Before you begin

- The target virtual array is automatically computed and populated into the service options. If the virtual array option is blank, speak with your ViPR Administrator to ensure the virtual array is available for provisioning with the EMC ViPR add-in.
- Once the **Manage ViPR Pass-through Disks** dialog has been opened, the virtual machine for which the dialog was opened does not change when a different virtual machine is selected from the VMM Console. To change the virtual machine in the **Manage ViPR Pass-through Disks** dialog, select a different virtual machine in the VMM Console, and click **Manage ViPR Pass-through Disks** again, or right-click the virtual machine in the VMM Console and select **Manage ViPR Pass-through Disks**.

Procedure

1. Go to the **VMs and Services** pane, select the **All Hosts** folder, and optionally select a cluster in the **All Hosts** folder, or a host in the cluster.
2. Select a virtual machine from the list in the **VMs** right pane.
3. Click **Manage ViPR Pass-through Disks** in the **Virtual Machine** toolbar.
4. Click **Add Pass-through Disk**.

If this is the first time accessing the pass-through disk services, you are prompted to enter the **EMC ViPR Configuration Settings**. Accept the defaults or enter new configuration settings, click **Apply**, and continue to step 5.

Refer to [Configuring EMC ViPR Settings on page 11](#) for configuration settings details.

5. Enter the information in the **Add a Pass-through Disk** dialog and click **OK**.

Expanding a pass-through disk

Use the Expand Pass-through Disk service to increase the amount of EMC ViPR storage available to the virtual machine pass-through disk.

Before you begin

Once the **Manage ViPR Pass-through Disks** dialog has been opened, the virtual machine for which the dialog was opened does not change when a different virtual machine is selected from the VMM Console. To change the virtual machine in the **Manage ViPR Pass-through Disks** dialog, select a different virtual machine in the VMM Console, and click the **Manage ViPR Pass-through Disk** button again, or right-click the virtual machine in the VMM Console, and select **Manage ViPR Pass-through Disk**.

Procedure

1. From the **VMs and Services** pane, select the **All Hosts** folder, and optionally select a cluster in the **All Hosts** folder or a host in the cluster.
2. Select a virtual machine from the list in the **VMs** pane.
3. Click **Manage ViPR Pass-through Disks** in the **Virtual Machine** toolbar.
4. Click **Expand Pass-through Disk**.
5. Complete the service form and click **OK**.

Monitoring EMC ViPR Controller add-in service activity

You can monitor the progress of the service operation in the **EMC ViPR Add-in services** pane or in the **Manage ViPR Pass-through Disks** dialog. The progress pane displays the state, time the service was in the state, and detailed messages of the service progress.

APPENDIX A

EMC ViPR for SCVMM Maintenance

This appendix includes the following information.

- [Uninstalling the EMC ViPR add-in for SCVMM](#)..... 18

Uninstalling the EMC ViPR add-in for SCVMM

Use this procedure to uninstall the EMC ViPR add-in for SCVMM.

Before you begin

If a previous version of the EMC ViPR add-in for SCVMM is currently installed, uninstall the older version prior to installing a more recent version of the add-in.

Procedure

1. Launch the Virtual Machine Manager (VMM) Console.
2. Log into a VMM Server.
3. Click **Settings**.
4. Select **Console Add-ins** in the **Settings** pane.
5. Right-click on the **EMC ViPR Add-in** row in the right pane, and select **Remove**.

You do not need to restart the VMM Console before installing a later version of the EMC ViPR add-in.