VxRail Manager Pre-Installation IP Address PowerShell Script

User's Guide

Abstract

VxRail PowerShell enables you to set VxRail Manager Static IP addresses using PowerShell cmdlets.

April 2020

Revisions

Date	Description
August 2020	Updated Documentation reference
April 2020	Initial release

Table of contents

1 About VxRail Manager Pre-Installation IP Address PowerShell Script

Starting with VxRail 4.7.510, you can configure VxRail Manager static IP network to enable remote execution of VxRail Day-1 deployments.

1.1 VxRail Set static IP

VxRail 4.7.510 introduces the ability to set a static IP address for the VxRail Manager of a cluster using iDRAC. This release provides remote access so that you can perform Day-1 bring-up activities across a global organization. To access VxRail Manager remotely, change the default VxRail Manager private IP address to a customer-specified public IP.

Note: This feature is not supported on PowerEdge 13G systems.

2 How to install the VxRail API modules

Note: VxRail API modules require PowerShell version 5.0 or later.

Import the modules manually, using the standard PowerShell commands.

1. Extract the module contents to the following directory: **C:\Program Files\WindowsPowerShell\Modules**.

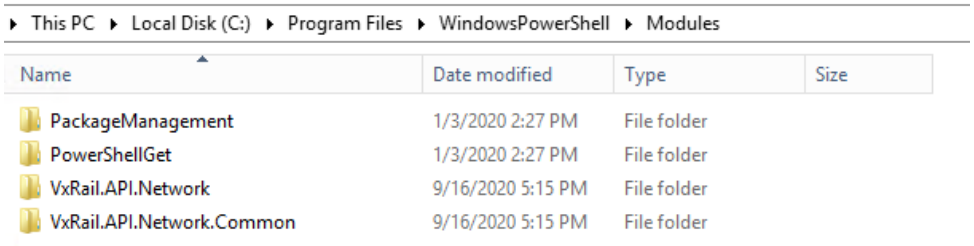

Figure 1 **Extracting the modules**

2. To import the module, run the following command from PowerShell:

```
Import-module VxRail.API.Network
```

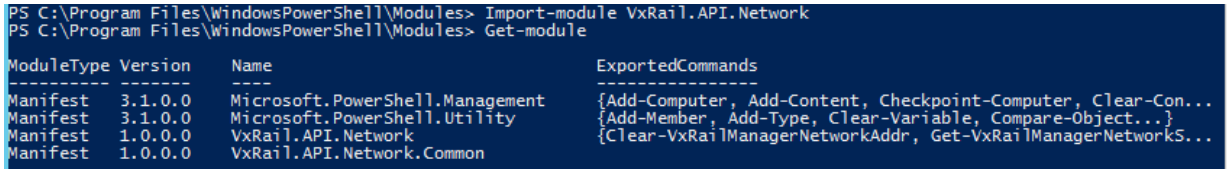

Figure 2 **Importing the PowerShell cmdlet**

3. To confirm that the module has imported successfully, run the following command:

```
Get-Module
```

Modules with name containing “VxRail.API.Network” should be listed as shown in Figure 2.

For PowerShell documentation, go to https://docs.microsoft.com/en-us/powershell/scripting/developer/module/installing-a-powershell-module?view=powershell-6

3 PowerShell cmdlets

The PowerShell cmdlets provide the VxRail Manager IP address using the iDRAC interface as shown in Figure 2.

3.1 Procedure

1. Decide which iDRAC to run the commands against. Select only one iDRAC from any of the powered-on nodes to be added to the cluster.

```
PS C:\> Get-VxRailManagerNetworkStatus -Server 192.168.105.17 -Username root -Password calvin
The current staging values all cleared.
PS C:\> Get-VxRailManagerNetworkStatus -Server 192.168.105.10 -Username root -Password calvin
The current staging values all cleared.
PS C:\> Get-VxRailManagerNetworkStatus -Server 192.168.105.26 -Username root -Password calvin
The current staging values all cleared.
```

2. Configure the VxRail Manager static IP using the following command:

   `Set-VxRailManagerNetworkAddr`

```
PS C:\> Set-VxRailManagerNetworkAddr -Server 192.168.105.17 -Username root -Password calvin -IP 192.168.105.17 -Netmask 255.255.255.0 -Gateway 192.168.105.226
IP      : 192.168.105.17
Netmask : 255.255.255.0
Gateway : 192.168.105.226
vLAN    : 0
Status  : configuration in progress.
```

3. Run the `get` command to get the configuration status. It should take just a few minutes to get a success status.

```
PS C:\> Get-VxRailManagerNetworkStatus -Server 192.168.105.17 -Username root -Password calvin
IP       : 192.168.105.17
Netmask  : 255.255.255.0
Gateway  : 192.168.105.226
vLAN     : 0
Status   : configuration is set successfully.
```

4. If there are any errors, clear the contents on one or multiple iDRACs using the `clear` command shown in the following section, and start over from Step 2.

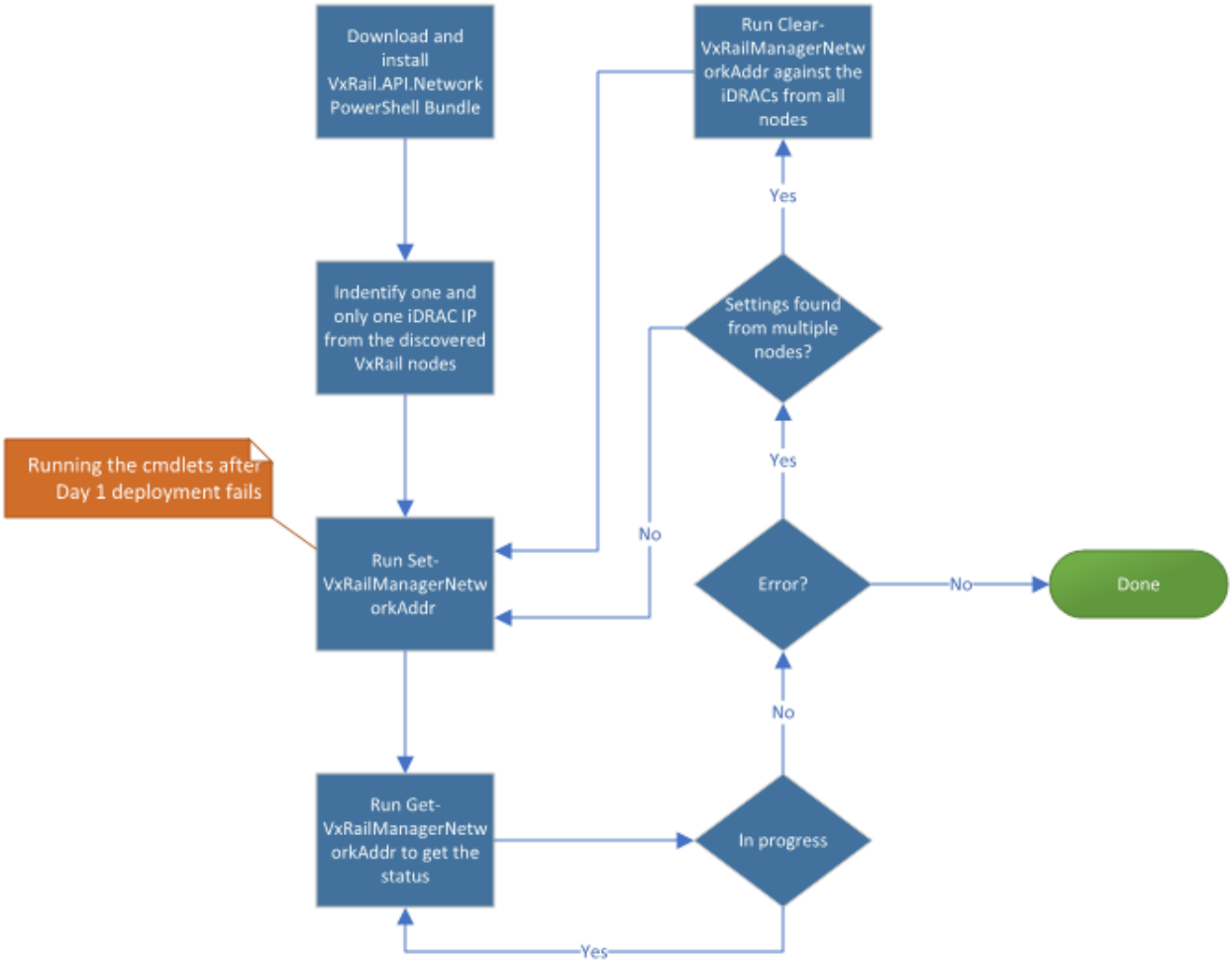

Figure 3 **PowerShell cmdlets workflow**

3.2 VxRail API network commands

The following API commands are new for the VxRail network. In this section, VxRail Manager is abbreviated to vxm.

- **Get vxm network**

```
Get-VxRailManagerNetworkStatus -Server <iDrac IP> -
Username <iDrac username> -Password <iDrac password>
```

- **Set vxm network from iDRAC**

```
Set-VxRailManagerNetworkAddr -Server <iDrac IP> -
Username <iDrac username> -Password <iDrac password> -IP <IP> -
Netmask <network mask> -Gateway <gateway> -VlanID <vlan ID>
```

- **Set vxm network from iDRAC (no VLAN)**

```
Set-VxRailManagerNetworkAddr -Server <iDrac IP> -
Username <iDrac username> -Password <iDrac password> -IP <IP> -
Netmask <network mask> -Gateway <gateway>
```

- **Clear the iDRAC LCAttribute value**

```
    Clear-VxRailManagerNetworkAddr -Server <iDrac IP> -
Username <iDrac username> -Password <iDrac password>
```

- **Clear the iDRAC LCAttribute value without user interaction**

```
    Clear-VxRailManagerNetworkAddr -Server <iDrac IP> -
Username <iDrac username> -Password <iDrac password> -Force
```

3.3 Parameter Descriptions:

-Force: Use this parameter with Clear switch to disable user interaction

-***Server*** *<iDrac IP>: The iDRAC IP address (IPv4) of the target Node*

-***Username*** *<iDrac username>: The username of iDRAC account*

-***Password*** *<iDrac password>: The password of iDRAC account*

-***IP*** *<IP>:* The IP address (IPv4 format) of new VxRail Manager network

-***Netmask*** *<network mask>:* The network mask (IPv4 format) of new VxRail Manager network

-***Gateway*** *<gateway>:* The gateway(IPv4 format) of new VxRail Manager network

-***VlanID*** *<vlan ID>:* Optional. The vLAN of new VxRail Manager network.
The valid vLAN value is from 0 to 4095 (including 0 and 4095). Skip it or input 0 if no vLAN is used.

3.4 iDRAC LCAttributes

PowerShell cmdlets VxRail.API.Network provides command-line interaction to User.

- Set vxm network - After you run PowerShell cmdlets, a string will display to indicate the status.

Normal/Error Case	Response Strings	Definition
Normal Case	configuration is set successfully	The VxRail Manager network configuration has been saved into iDRAC LCAttributes, waiting to be processed by a scheduled task in VxRail Manager.
Normal Case	configuration in progress	The scheduled task is processing current VxRail Manager network with current VxRail Manager network configuration, which should only take a few minutes to finish.
Error Case	Error: configuration is found in multiple nodes	VxRail Manager network is found in multiple nodes. You must clear them as only one info is allowed in one Cluster.
Error Case	Error: configuration error <error code>	Configuration errors from VxRail Manager
Error Case	This system (Model:$model) is older than PowerEdge 14 G and is not supported.	The target system is older than PowerEdge 14 G and is not supported.

- Get vxm network from iDRAC LCAttribute

Normal/Error Case	Response Strings	Definition
Normal Case	IP : <IP> Gateway : <Gateway> Network Mask : <Network Mask> VLAN : <VLAN> VxRail Manager network configuration is set successfully.	Displays the current VxRail Manager network configuration stored in iDRAC, and indicates that it is already set successfully in VxRail Manager. Status Code is 0.
Normal Case	IP : <IP> Gateway : <Gateway> Network Mask : <Network Mask> VLAN : <VLAN> VxRail Manager network configuration in progress.	Displays the VxRail Manager network configuration stored in iDRAC LCAttributes, and indicates that it is waiting to be processed by a scheduled task in VxRail Manager. Status Code is 1.
Normal Case	IP : <IP> Gateway : <Gateway> Network Mask : <Network Mask> VLAN : <VLAN> VxRail Manager network configuration is in progress.	Displays the VxRail Manager network configuration stored in iDRAC LCAttributes, and indicates that it is processing. Status Code is 2.
Error Case	IP : <IP> Gateway : <Gateway> Network Mask : <Network Mask> VLAN : <VLAN> Different network settings are found in multiple nodes. Ensure that only one valid setting exists in the cluster and try again.	Displays the VxRail Manager network configuration stored in iDRAC LCAttributes, and indicates that more than one iDRAC in the Cluster has VxRail Manager network configuration. Only one iDRAC in one Cluster can be used for VxRail Manager network configuration. Status code is 3.
Error Case	IP : <IP> Gateway : <Gateway> Network Mask : <Network Mask> VLAN : <VLAN> Unexpected error $returnCode occurred. Check the VxRail Manager log and try again.	Displays the VxRail Manager network configuration stored in iDRAC LCAttributes, and indicates that an unexpected error occurred when setting VxRail Manager network configuration. Status Code is 4.
Error Case	Not a valid VxRail Manager network configuration.	The value in iDRAC LCAttribute is invalid for VxRail Manager network. It occurs when: • The Node has completed First Run, and you try to set the VxRail Manager network. • The Node was from a cluster which had done Day 1 before. In this case, you can set a new VxRail Manager network with `vxmNetwork.ps1`.
Error Case	This system (Model:$model) is older than PowerEdge 14 G and is not supported.	The target system is older than PowerEdge 14 G and is not supported.

- Clear vxm network configuration in iDRAC LCAttribute

Normal/Error Case	Response Strings	Definition
Normal Case	Successfully cleared VxRail Manager network configuration	The VxRail Manager network configuration stored on iDRAC has been cleared successfully.
Error Case	Internal error $StatusCode encountered, check, and try again.	A readable string to show the error code.
Error Case	This system (Model:$model) is older than PowerEdge 14 G and is not supported.	The target system is older than PowerEdge 14 G and is not supported.

Note: When clearing the network configuration, you are prompted to confirm. Enter `Y` or `y` for confirmation.

Please confirm:
Are you sure you want to Clear the vxm network configuration value on this iDrac?
[Y] Yes [N] No [?] Help (default is "N"):

Note: To clear the VxRail Manager network configuration for automation, use the `-Force` option along with "Clear" switch.