



LoadMaster System Center Plugin

Feature Description

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1 Prerequisites

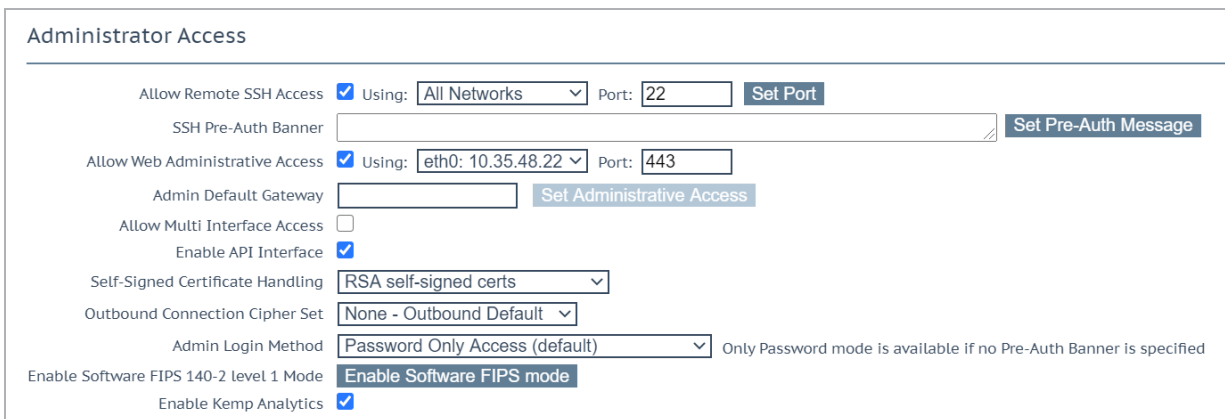
The following prerequisites are required in order to utilize the Kemp LoadMaster plugin for System Center Virtual Machine Manager (SCVMM) 2012 R2:

- System Center Virtual Machine Manager (SCVMM) 2012 R2 must be fully deployed based on Microsoft best practices.
 - Generation 1 Virtual Machine (VM) Templates to be used within Service Template configuration.
- A Kemp LoadMaster must be fully deployed based on Kemp best practices. Further Kemp documentation can be found on the Kemp website:
<http://kemptechnologies.com/documentation/>
 - Enable the API Interface on the LoadMaster within **Remote Access** settings. For step-by-step instructions on how to do this, refer to the next section.

1.1 Enable the API Interface on the LoadMaster

In order for the System Center VMM plugin to work with the LoadMaster, the API interface on the LoadMaster must be enabled. To enable it, follow the steps below in the LoadMaster Web User Interface (WUI):

1. In the main menu, go to **Certificates & Security > Remote Access**.



The screenshot shows the 'Administrator Access' configuration page in the LoadMaster WUI. The page has a light blue header with the title 'Administrator Access'. Below the header, there are several configuration options with checkboxes and input fields. The 'Enable API Interface' checkbox is checked. Other options include 'Allow Remote SSH Access' (checked), 'SSH Pre-Auth Banner' (empty), 'Allow Web Administrative Access' (checked), 'Admin Default Gateway' (empty), 'Allow Multi Interface Access' (unchecked), 'Self-Signed Certificate Handling' (set to 'RSA self-signed certs'), 'Outbound Connection Cipher Set' (set to 'None - Outbound Default'), 'Admin Login Method' (set to 'Password Only Access (default)'), 'Enable Software FIPS 140-2 level 1 Mode' (checked), and 'Enable Kemp Analytics' (checked). There are also buttons for 'Set Port', 'Set Pre-Auth Message', and 'Set Administrative Access'.

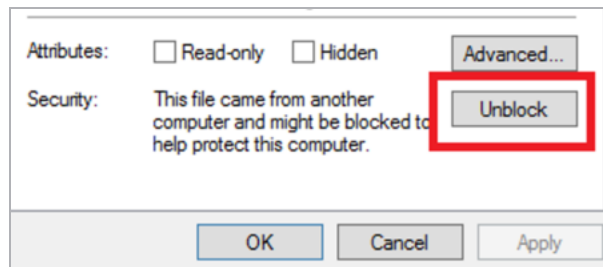
Allow Remote SSH Access	<input checked="" type="checkbox"/>	Using:	All Networks	Port:	22	Set Port
SSH Pre-Auth Banner						Set Pre-Auth Message
Allow Web Administrative Access	<input checked="" type="checkbox"/>	Using:	eth0: 10.35.48.22	Port:	443	
Admin Default Gateway						Set Administrative Access
Allow Multi Interface Access	<input type="checkbox"/>					
Enable API Interface	<input checked="" type="checkbox"/>					
Self-Signed Certificate Handling		RSA self-signed certs				
Outbound Connection Cipher Set		None - Outbound Default				
Admin Login Method		Password Only Access (default)				
Enable Software FIPS 140-2 level 1 Mode	<input checked="" type="checkbox"/>	Enable Software FIPS mode				
Enable Kemp Analytics	<input checked="" type="checkbox"/>					

2. Tick the **Enable API Interface** check box.

2 Install the SCVMM Configuration Provider

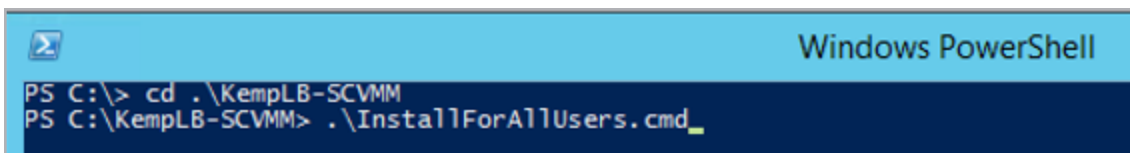
To install the SCVMM Configuration Provider, follow the steps below:

1. Download the Kemp LoadMaster plugin for SCVMM 2012 R2 from the Kemp documentation page - <http://www.kemptechnologies.com/documentation/>.



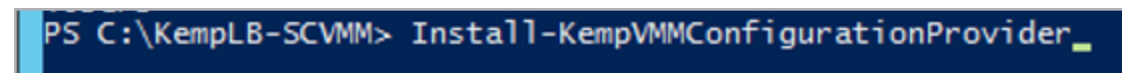
Before you extract the zip file, open the properties and click **Unblock** if necessary.

2. Extract the zip file.
3. Open Windows PowerShell as Administrator and navigate to the location of the extracted files.



4. Run the **InstallForAllUser.cmd** file.
5. Verify the installation of the PowerShell modules by ensuring that the **KempLB** folder has been placed in the following location:

C:\Windows\System32\WindowsPowerShell\v1.0\modules\KempLB



6. When the installation has completed, run **Install-KempVMMConfigurationProvider**

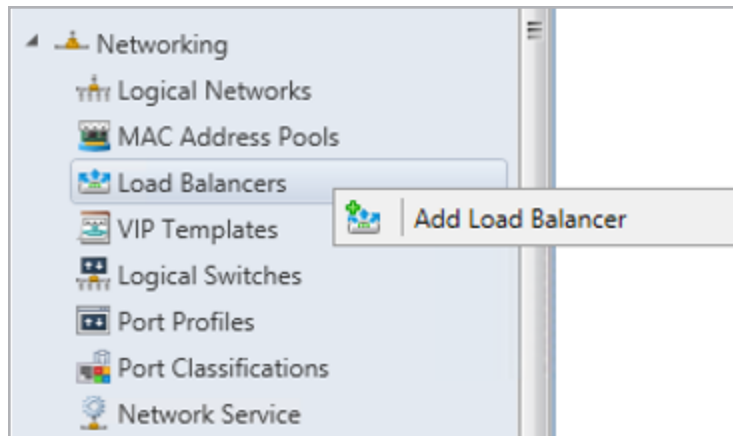
2 Install the SCVMM Configuration Provider

This will restart VMM services.

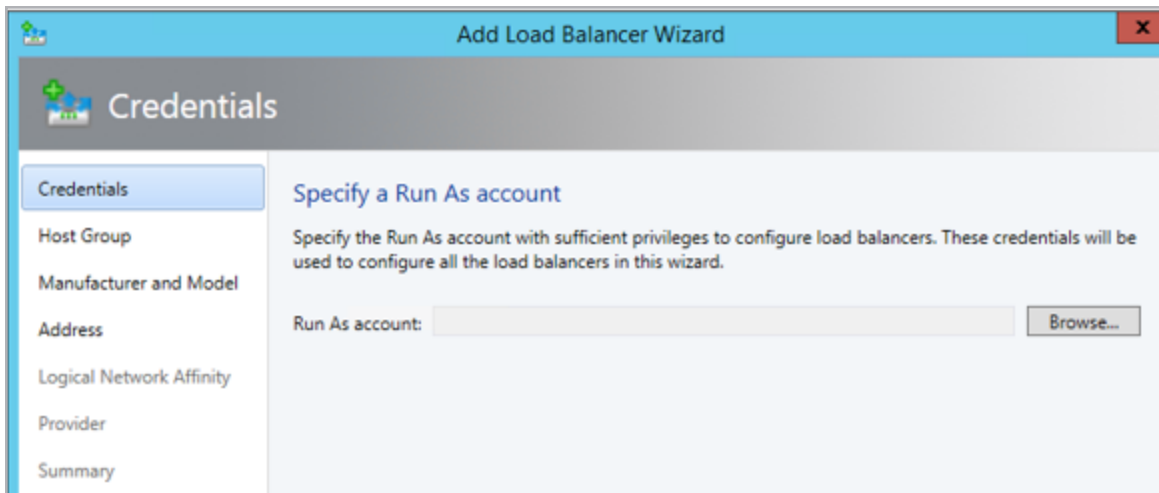
3 Add the Kemp LoadMaster to the SCVMM

System Center Virtual Machine Manager 2012 R2 is now able to accept the Kemp LoadMaster as a load balancer within the Fabric. To add the LoadMaster to the SCVMM, follow the steps below:

1. Launch the Virtual Machine Manager console.
2. Select **Fabric** in the left-hand navigation.

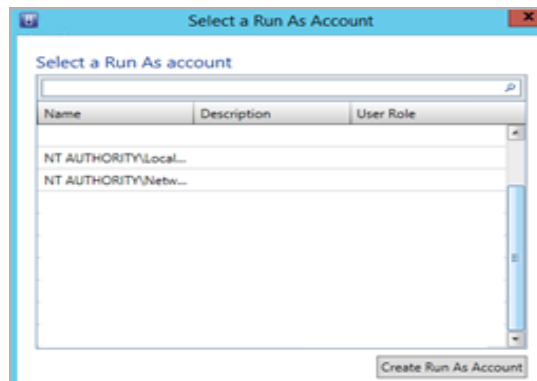


3. Add Load Balancer under Networking, right-click **Load Balancers** and select **Add Load Balancer**.

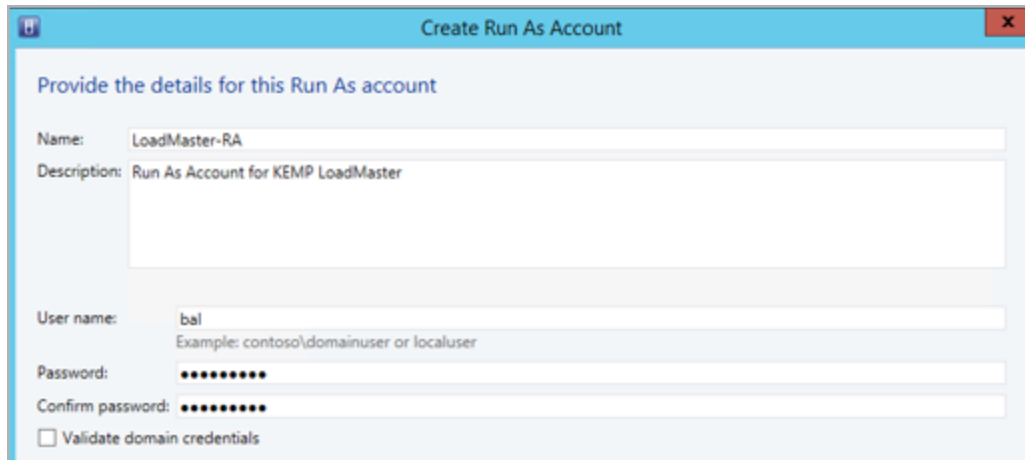


3 Add the Kemp LoadMaster to the SCVMM

4. Click **Browse**.



5. Click **Create Run As Account**.



Provide the details for this Run As account

Name: LoadMaster-RA

Description: Run As Account for KEMP LoadMaster

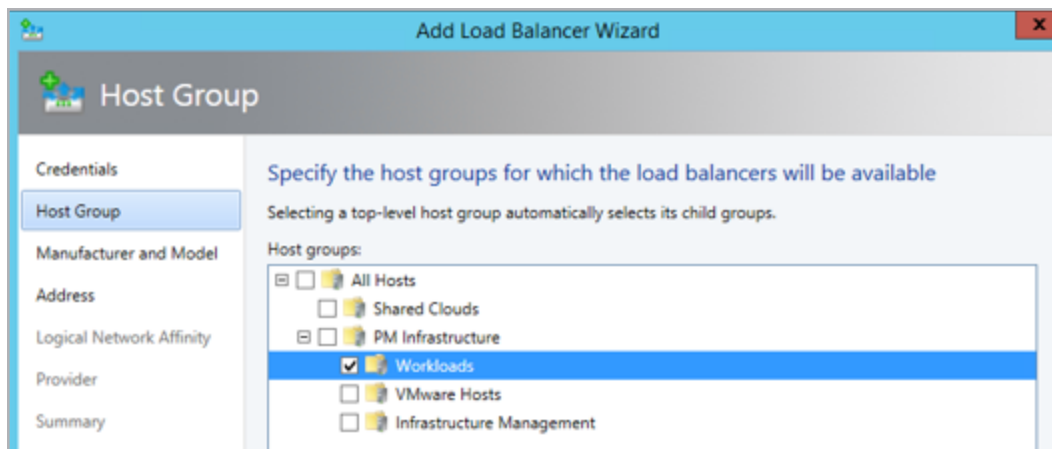
User name: bal
Example: contoso\domainuser or localuser

Password: ●●●●●●

Confirm password: ●●●●●●

☐ Validate domain credentials

6. Enter the LoadMaster login details for the **bal** account.



Add Load Balancer Wizard

Host Group

Credentials

Host Group

Manufacturer and Model

Address

Logical Network Affinity

Provider

Summary

Specify the host groups for which the load balancers will be available

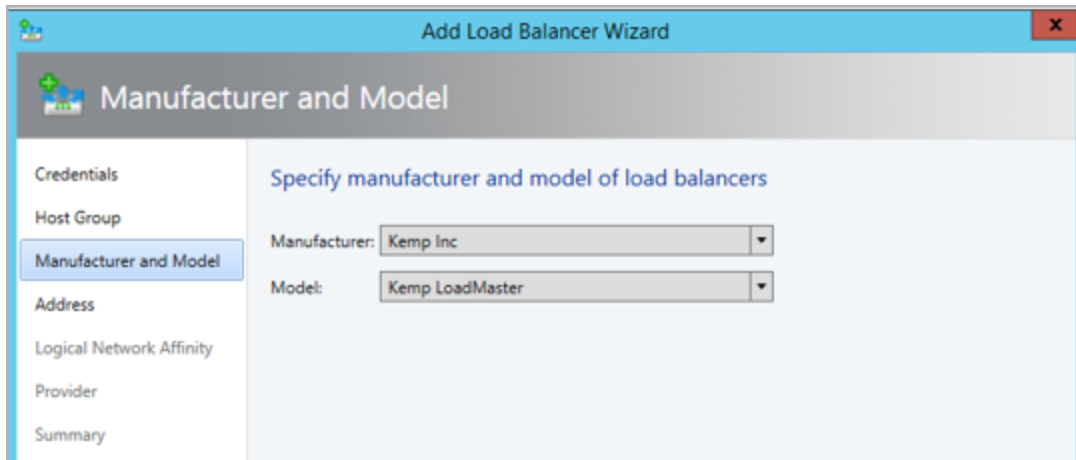
Selecting a top-level host group automatically selects its child groups.

Host groups:

- ☐ All Hosts
- ☐ Shared Clouds
- ☐ PM Infrastructure
- ☒ Workloads
- ☐ VMware Hosts
- ☐ Infrastructure Management

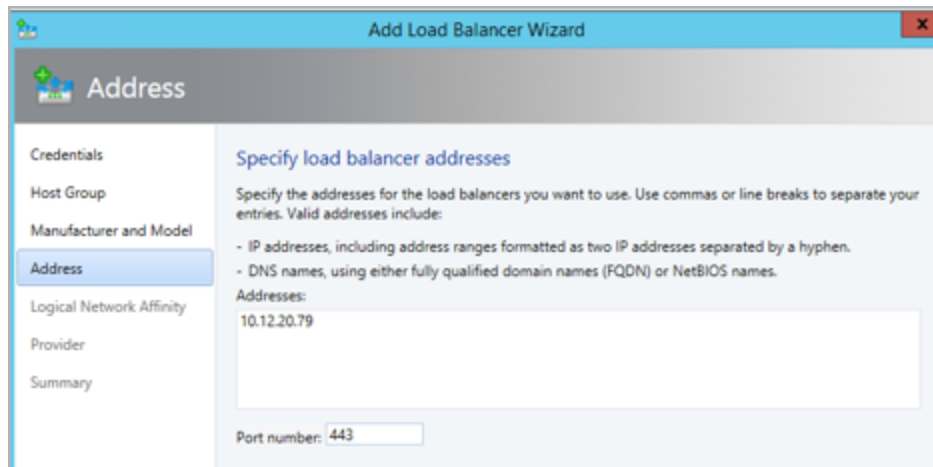
3 Add the Kemp LoadMaster to the SCVMM

7. Select which host groups the LoadMaster should be available to.



The screenshot shows the 'Add Load Balancer Wizard' window with the 'Manufacturer and Model' step selected in the left sidebar. The main area is titled 'Specify manufacturer and model of load balancers'. It contains two dropdown menus: 'Manufacturer' set to 'Kemp Inc' and 'Model' set to 'Kemp LoadMaster'.

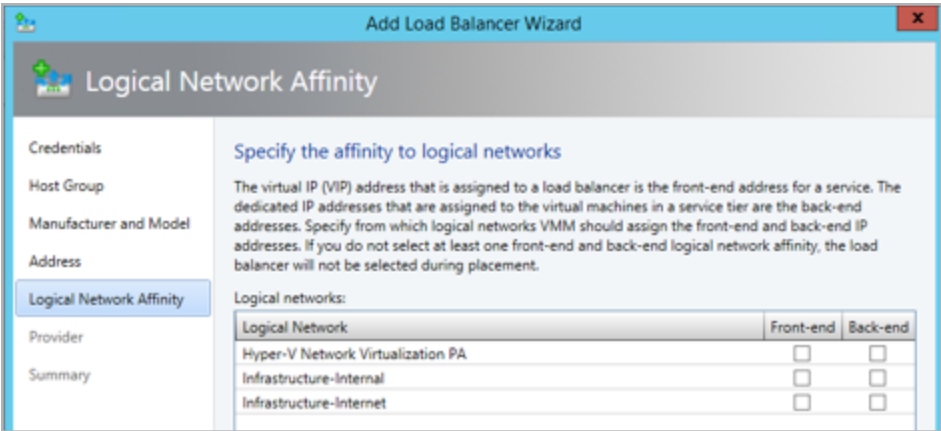
8. Ensure that **Kemp Inc** and **Kemp LoadMaster** are selected as the **Manufacturer** and **Model**.



The screenshot shows the 'Add Load Balancer Wizard' window with the 'Address' step selected in the left sidebar. The main area is titled 'Specify load balancer addresses'. It includes instructions: 'Specify the addresses for the load balancers you want to use. Use commas or line breaks to separate your entries. Valid addresses include: - IP addresses, including address ranges formatted as two IP addresses separated by a hyphen. - DNS names, using either fully qualified domain names (FQDN) or NetBIOS names.' Below this, there is a text box labeled 'Addresses:' containing the IP address '10.12.20.79'. At the bottom, there is a 'Port number:' field with the value '443'.

9. Specify the IP address and port of the Kemp LoadMaster deployed in the environment.

3 Add the Kemp LoadMaster to the SCVMM



10. Select which networks to use for the **Front-end/Back-end**.

Test results:		
Function	Implemented	Test Result
Retrieve-LBSystemInfo	Yes	Passed
Open-LBConnection	Yes	Passed
Close-LBConnection	Yes	Passed
Retrieve-LBKnownVip	Yes	Passed
Retrieve-LBKnownCertificate	Yes	Passed
Retrieve-LBKnownBalancingMethod	Yes	Passed
Retrieve-LBKnownPersistence	Yes	Passed

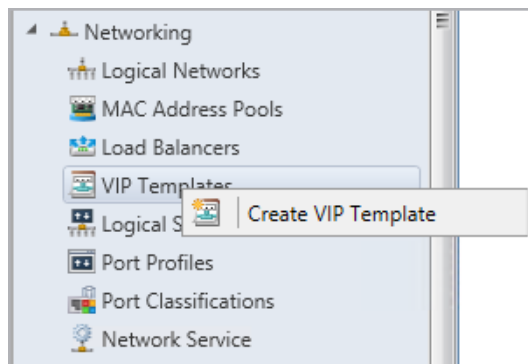
11. Click **Test** and confirm that all tests pass.

If some tests fail, please confirm that the API interface is enabled on the LoadMaster by following the steps in the **Enable the API Interface on the LoadMaster** section.

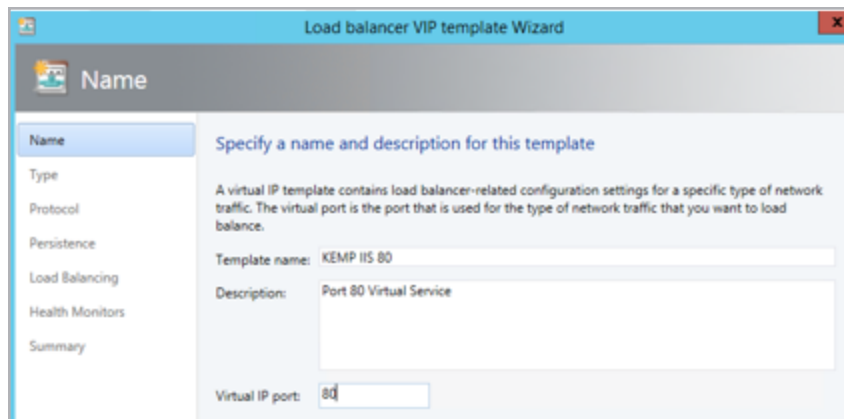
4 Add Virtual IP (VIP) Templates to the SCVMM

VIP Templates can be created after the LoadMaster has been added to SCVMM.

To create a VIP Template, follow the steps below:



1. Under **Networking**, right-click **VIP Templates** and select **Create VIP Template**.



Load balancer VIP template Wizard

Name

Specify a name and description for this template

A virtual IP template contains load balancer-related configuration settings for a specific type of network traffic. The virtual port is the port that is used for the type of network traffic that you want to load balance.

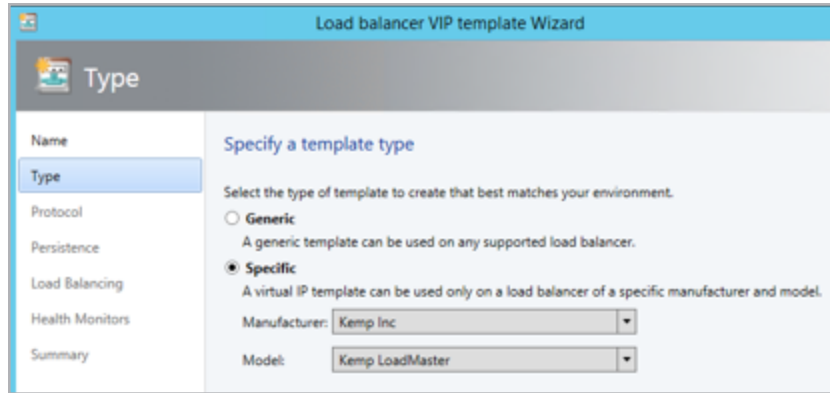
Template name: KEMP IIS 80

Description: Port 80 Virtual Service

Virtual IP port: 80

2. Enter a name and description.
3. Enter the **Virtual IP port** number.

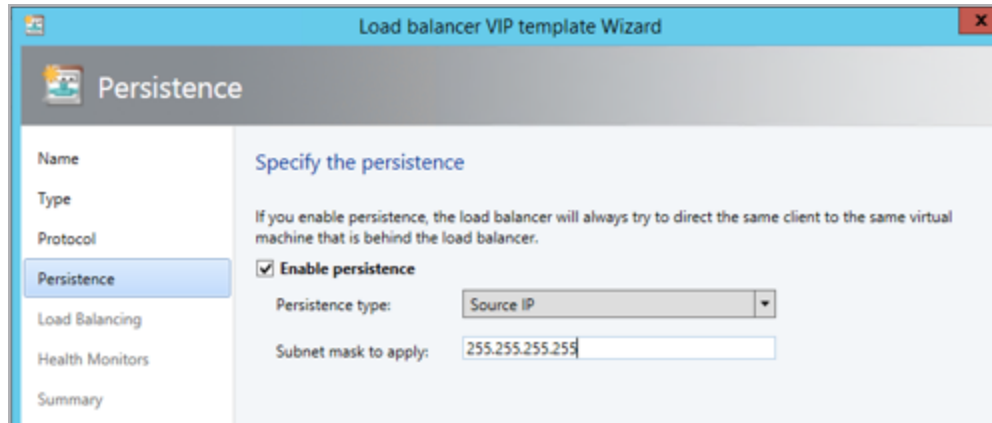
4 Add Virtual IP (VIP) Templates to the SCVMM



The screenshot shows the 'Type' screen of the 'Load balancer VIP template Wizard'. The left sidebar has a list of steps: Name, Type (selected), Protocol, Persistence, Load Balancing, Health Monitors, and Summary. The main area is titled 'Specify a template type' and contains the following text: 'Select the type of template to create that best matches your environment.' There are two radio buttons: 'Generic' (unselected) and 'Specific' (selected). Below 'Generic' is the text: 'A generic template can be used on any supported load balancer.' Below 'Specific' is the text: 'A virtual IP template can be used only on a load balancer of a specific manufacturer and model.' There are two dropdown menus: 'Manufacturer:' with 'Kemp Inc' selected, and 'Model:' with 'Kemp LoadMaster' selected.

4. Select **Specific** and choose **Kemp Inc** and **Kemp LoadMaster**.

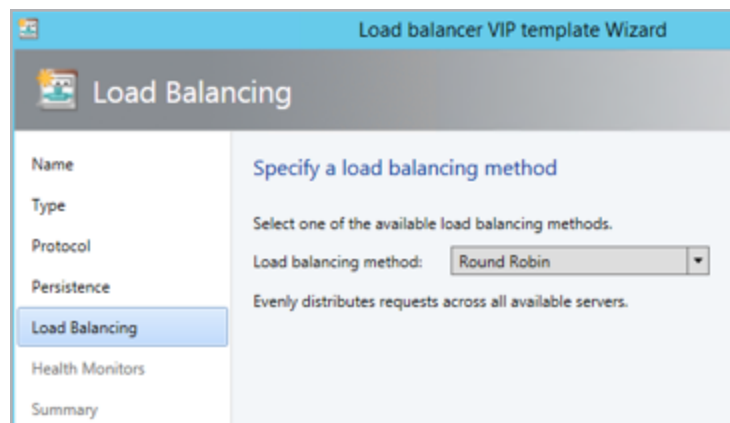
5. Select the relevant protocol option.



The screenshot shows the 'Persistence' screen of the 'Load balancer VIP template Wizard'. The left sidebar has a list of steps: Name, Type, Protocol, Persistence (selected), Load Balancing, Health Monitors, and Summary. The main area is titled 'Specify the persistence' and contains the following text: 'If you enable persistence, the load balancer will always try to direct the same client to the same virtual machine that is behind the load balancer.' There is a checkbox labeled 'Enable persistence' which is checked. Below it are two fields: 'Persistence type:' with a dropdown menu showing 'Source IP', and 'Subnet mask to apply:' with a text input field containing '255.255.255.255'.

6. Select the desired **Persistence type**, if any.

Use only persistence types found under **Custom**



The screenshot shows the 'Load Balancing' screen of the 'Load balancer VIP template Wizard'. The left sidebar has a list of steps: Name, Type, Protocol, Persistence, Load Balancing (selected), Health Monitors, and Summary. The main area is titled 'Specify a load balancing method' and contains the following text: 'Select one of the available load balancing methods.' There is a dropdown menu labeled 'Load balancing method:' with 'Round Robin' selected. Below it is the text: 'Evenly distributes requests across all available servers.'

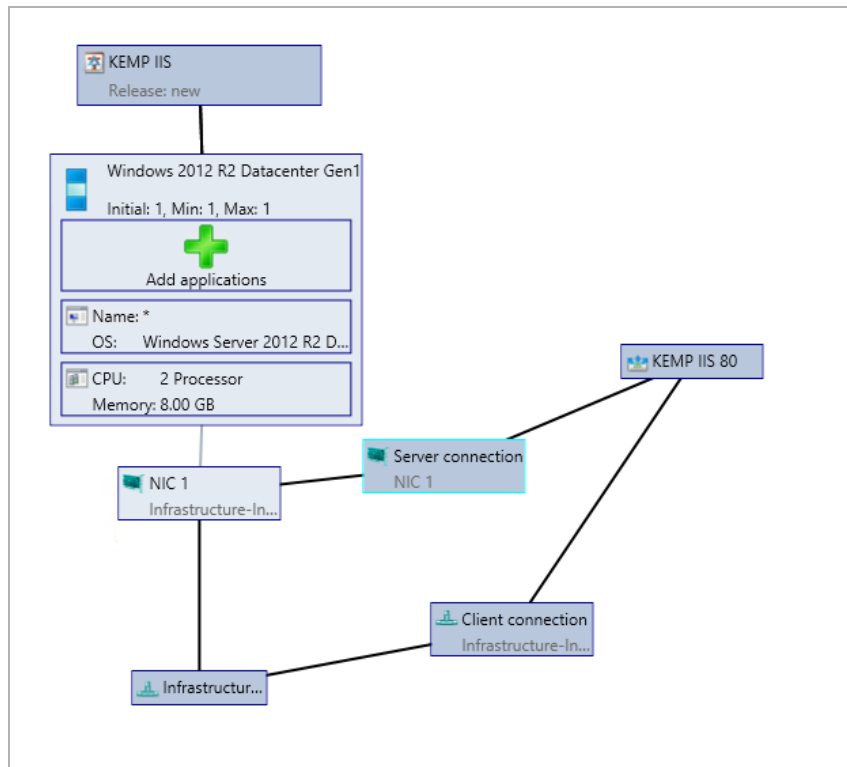
7. Select the relevant **Load balancing method**.

Use only scheduling methods found under **Custom**.

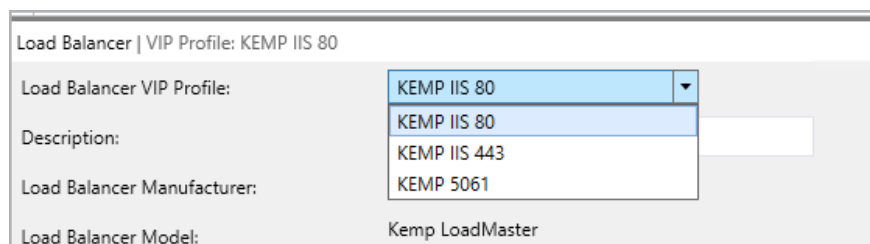
Health Monitors are optional and can be added later.

5 Service Templates in SCVMM

After following the steps above, the Kemp LoadMaster should now be available to be added to Service Templates.



To add the LoadMaster, select **Load Balancer** and choose **VIP Template**.



The screenshot shows the 'Load Balancer' configuration window in SCVMM. The title bar says 'Load Balancer | VIP Profile: KEMP IIS 80'. The 'Load Balancer VIP Profile:' dropdown is set to 'KEMP IIS 80'. The 'Description:' field is empty. The 'Load Balancer Manufacturer:' dropdown is set to 'KEMP IIS 443'. The 'Load Balancer Model:' field is set to 'Kemp LoadMaster'.

Select the relevant **Load Balancer VIP Profile**.

Last Updated Date

This document was last updated on 30 July 2023.