Deployment Guide

A10 Provider Package for Microsoft System Center Virtual Machine Manager 2012

August 2013

DG_SCVMM_082013.1

TABLE OF CONTENTS

1 Introduction 3

2 Installation Requirements 3

3 Installing the Provider Package 3

4 Adding an A10 ADC to the SCVMM Fabric 5

5 Configuring an ADC in the SCVMM Fabric 9

5.1 Create VIP Templates for A10 Load Balancer in VMM 9

5.1.1 VIP Template Configuration 9

5.1.2 VIP Type Configuration 10

5.1.3 VIP Protocol Options 11

5.1.4 Persistent Configuration 13

5.1.5 Load Balancing Options 14

5.1.6 Health Monitoring Configuration 15

6 Summary and Conclusion 16

1 INTRODUCTION

Microsoft System Center Virtual Machine Manager (SCVMM) 2012 enables centralized management and monitoring of virtual machines and physical infrastructure, while increasing server performance, enhancing availability, accelerating applications, and providing dynamic resource optimization across multiple virtual platforms. SCVMM provides fabric management of virtual machine and virtual network appliance infrastructure.

A10 Networks, the technology leader in Application Deliver Controllers (ADCs), offers solutions to manage virtual ADCs (SoftAX virtual appliances) and physical appliances such as the A10 Thunder or the AX Series within an SCVMM fabric.

2 INSTALLATION REQUIREMENTS

This deployment guide requires the following systems and packages:

- Microsoft Windows Server 2012
- Microsoft SQL Server 2012 SP1
- Microsoft Windows Server 2012 Essential Assessment and Deployment Kit
- Microsoft .NET Framework 4.0
- Microsoft System Center Virtual Machine Manager (SCVMM) 2012 SP1
- ACOS[1] 2.7.1-P2 or later
- A10 Load Balancing Provider package installer

Note: *Contact A10 Sales to obtain the A10 SCVMM LB provider package.*

3 INSTALLING THE PROVIDER PACKAGE

This section of the deployment guide explains how to install the A10 provider package within the SCVMM Server. The installation adds the A10 load balancing options to the SCVMM fabric.

[1] Advanced Core Operating System (ACOS) runs on all hardware- and software-based Thunder and AX Series models.

Once the SCVMM is downloaded and unzipped, launch the matching installer, based on your server platform. The supported installers are A10VMMLB (x64) and A10VMMLB (Itanium).

1. Launch the installer. You will be prompted for a password.
2. Enter "123" as the password.

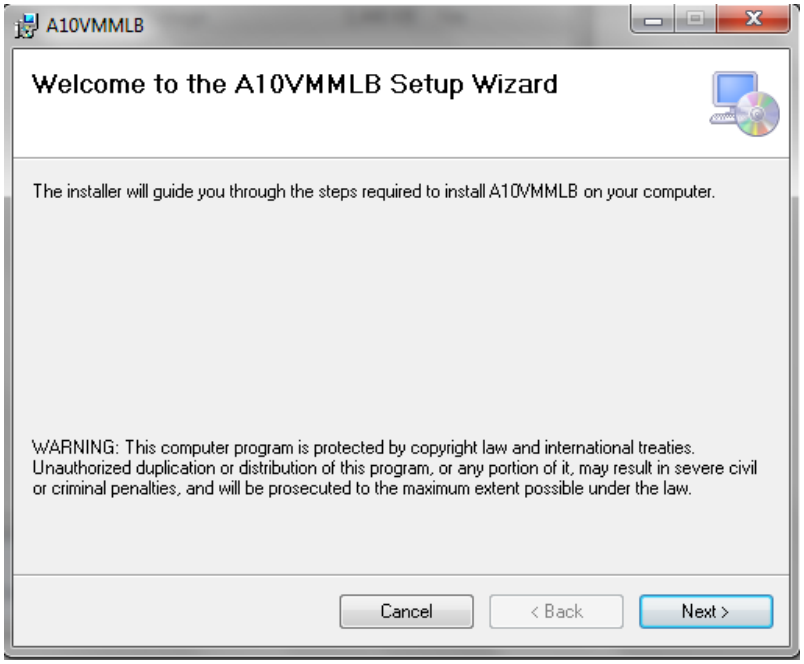

Figure 1: A10 provider package installer

3. Click **Next**, select the installation folder, and complete installation.
4. After the installation is complete, you must restart the SCVMM service. To restart the service, from an elevated command prompt, process the **net stop scvmmservice** and **net start scvmmservice** commands.

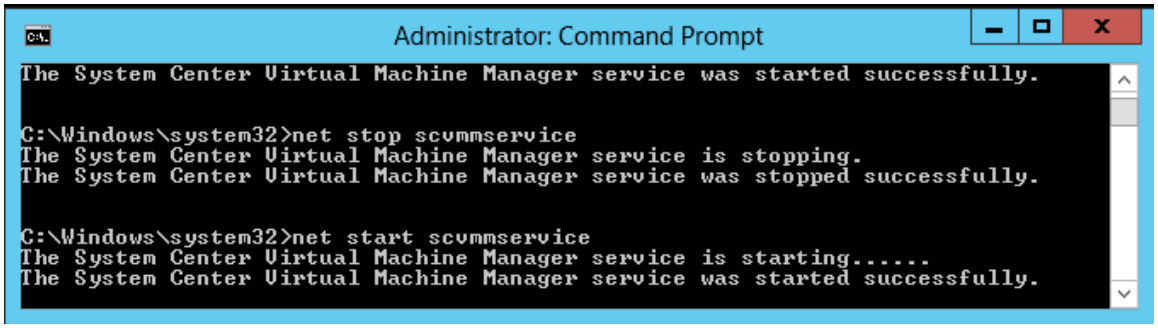

Figure 2: SCVMM command line stop and start feature

5. After restart is complete, log in to the SCVMM portal. The A10 Networks Load Balancer should appear in the Configuration Providers list (**Settings > Configuration Providers**).

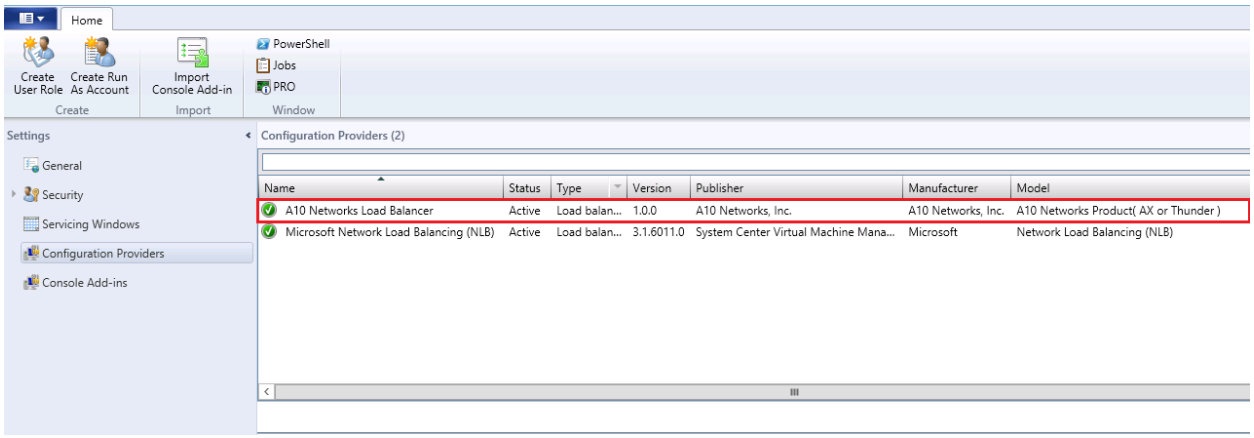

Figure 3: SCVMM Configuration Providers list

6. If the **A10 Networks Load Balancer** is listed, go to the next section.

4 ADDING AN A10 ADC TO THE SCVMM FABRIC

This section explains how to add the A10 Virtual ADC to the SCVMM Fabric.

1. Navigate to the Fabric workspace of the SCVMM.

2. In the Fabric pane, expand Networking, then click Load Balancers. Alternatively, you can use the **Home** tab: in the **Show** group, click **Fabric Resources**.

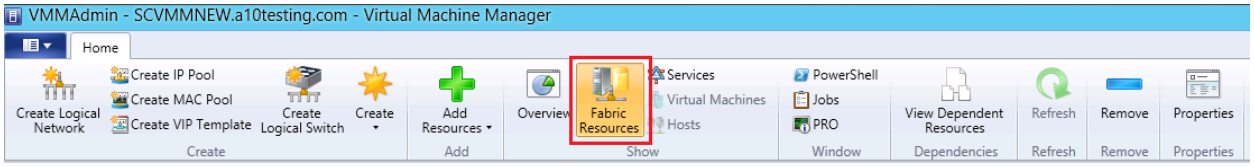

Figure 4: SCVMM Fabric Resources

3. On the **Home** tab, in the **Add** group, click **Add Resources**, and then click **Load Balancer**.

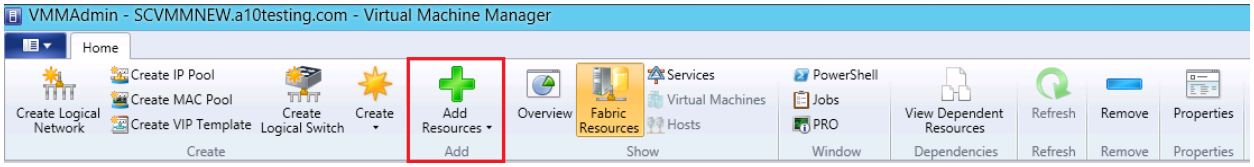

Figure 5: SCVMM Add Resources

4. The **Add Load Balancer Wizard** starts, Click **Browse** to select the account name, **Select a Run As Account** dialog appears. Then click **OK**.

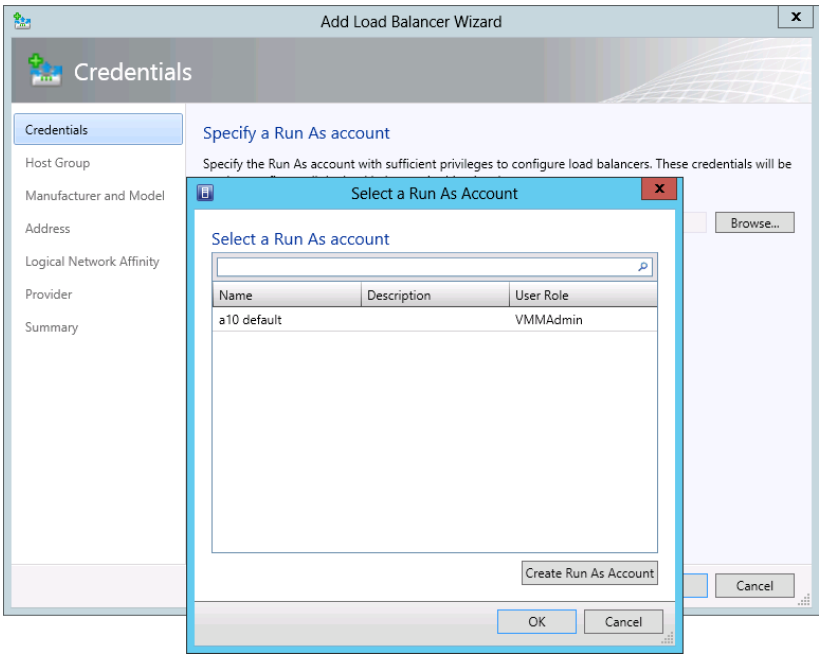

Figure 6: SCVMM Run as Account dialog

5. On the specific host group, select **All Hosts** and click **Next**.

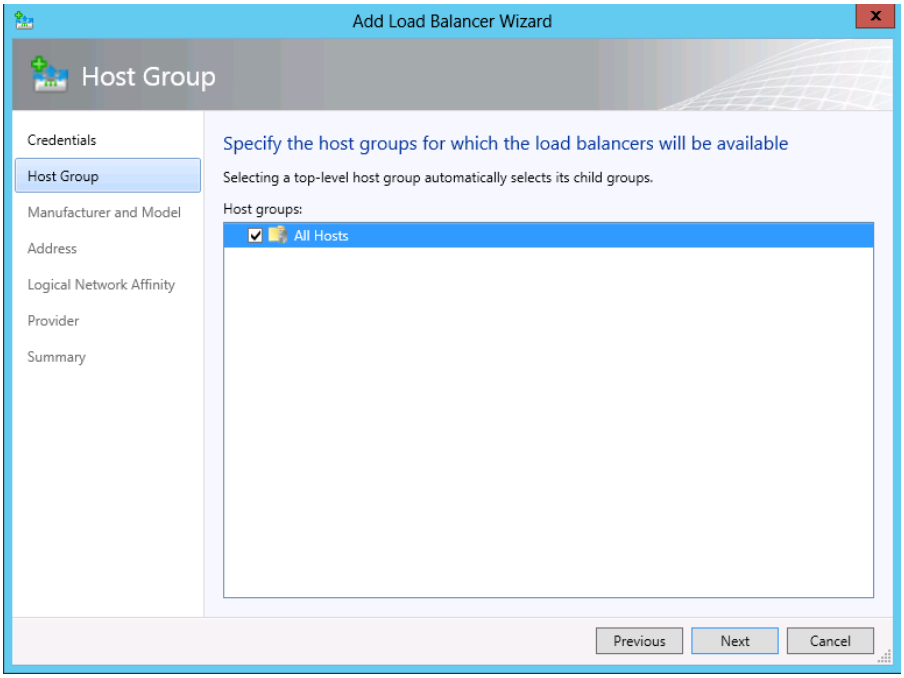

Figure 7: Host Group configuration

6. The **Manufacturer and Model** window appears. Leave the defaults selected and click **Next**.

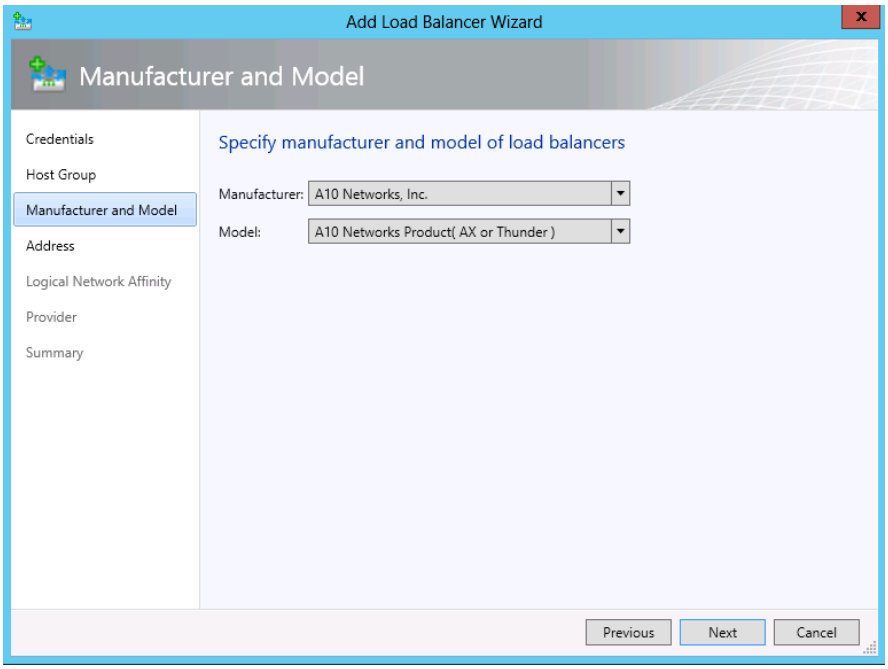

Figure 8: Manufacturer and Model configuration

7. The **Address** window appears.

8. Enter the IP address and port of the A10 Load Balancer and click **Next**.

Note: *If you have multiple IP addresses, separate the addresses from one another using commas or line breaks.*

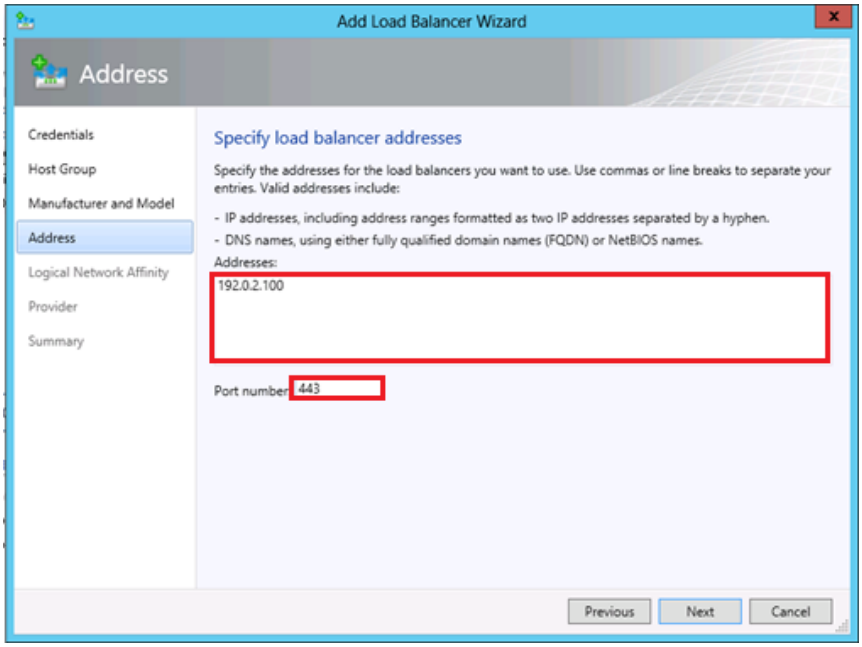

Figure 9: Address configuration

9. Click **Next** again to navigate to the **Provider** window.

10. Click **Test**. The status in the **Test Result** column should be "Passed" for each function.

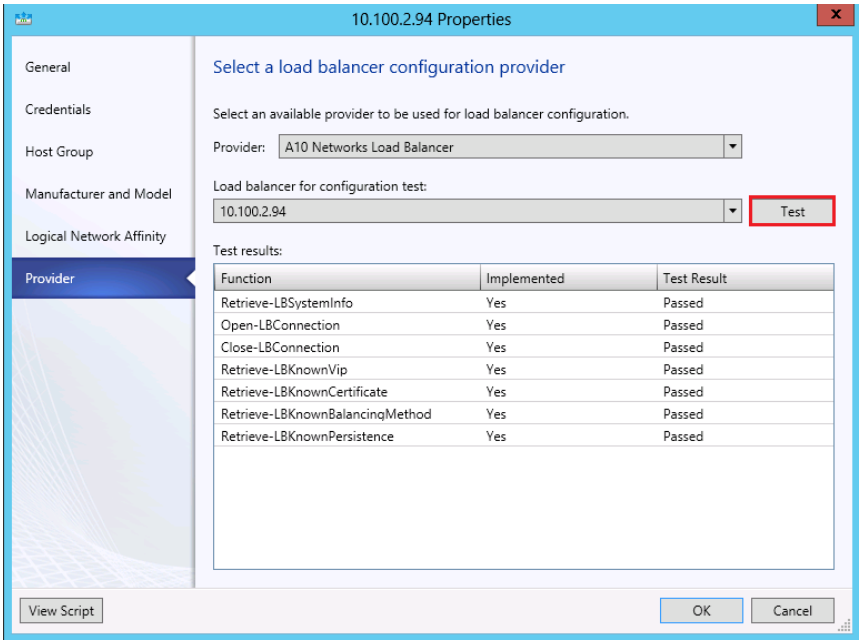

Figure 10: A10 provider verification

This completes the installation of the A10 SCVMM Provider Package to the SCVMM 2012 Configuration Fabric.

5 CONFIGURING AN ADC IN THE SCVMM FABRIC

This section shows how to create a Virtual IP (VIP) template for the added A10 ADC in SCVMM.

5.1 CREATE VIP TEMPLATES FOR A10 LOAD BALANCER IN VMM

1. In Virtual Machine Manager (VMM), open the **Fabric** workspace.
2. In the **Fabric** pane, expand **Networking**, then click **VIP Templates**.

Note: *The steps are grouped into separate sections based on the SCVMM GUI. However, the step numbering continues sequentially throughout the sections, because the steps in all the sections below are performed in most deployments of this solution.*

5.1.1 VIP TEMPLATE CONFIGURATION

1. On the **Home** tab, in the **Show** group, click **Fabric Resources**. The Load Balancer VIP Template Wizard starts.

2. On the **Name** page, enter the information, then click **Next**.

Note: *Virtual IP Port is the virtual port configured under the VIP on the A10 device.*

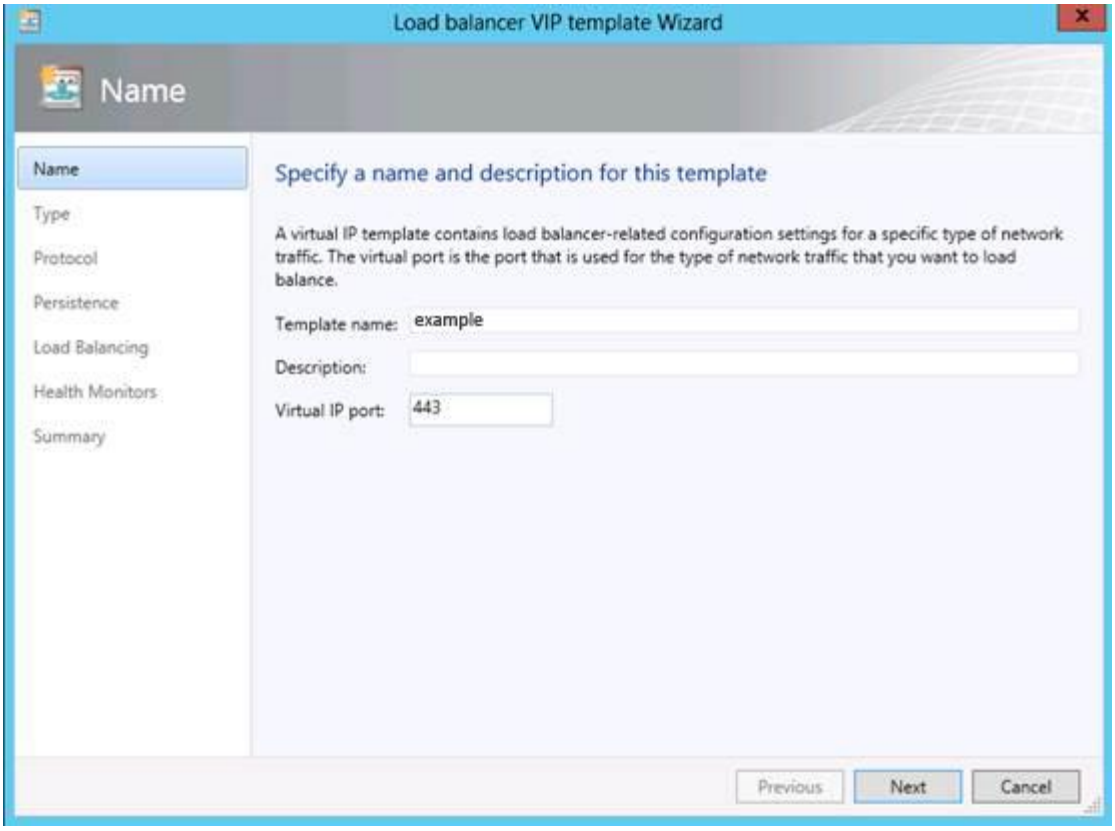

Figure 11: Name configuration (for VIP template information)

5.1.2 VIP TYPE CONFIGURATION

On the **Type** page, select **Specific**, then select A10 Networks from the Manufacturer and Model list.

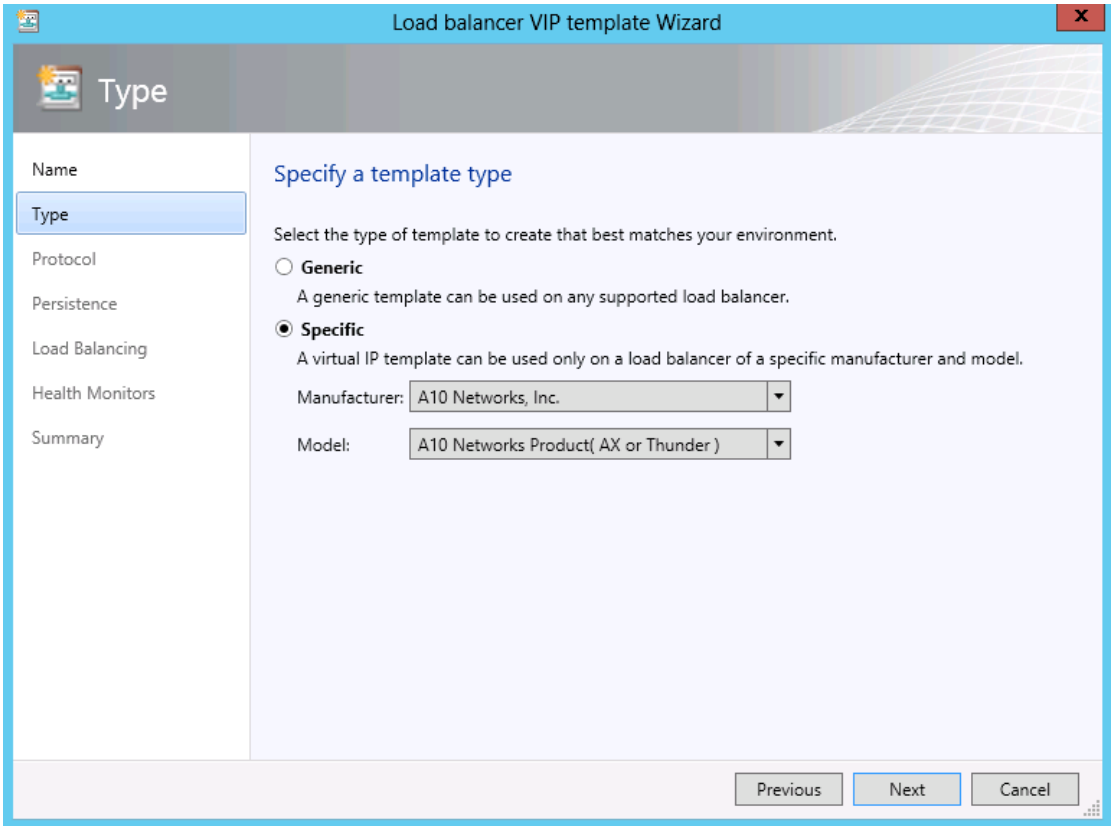

Figure 12: Type configuration

5.1.3 VIP PROTOCOL OPTIONS

On the **Protocol** page, click the protocol for which you want to create the virtual IP template. The protocol determines the virtual port type on the A10 device.

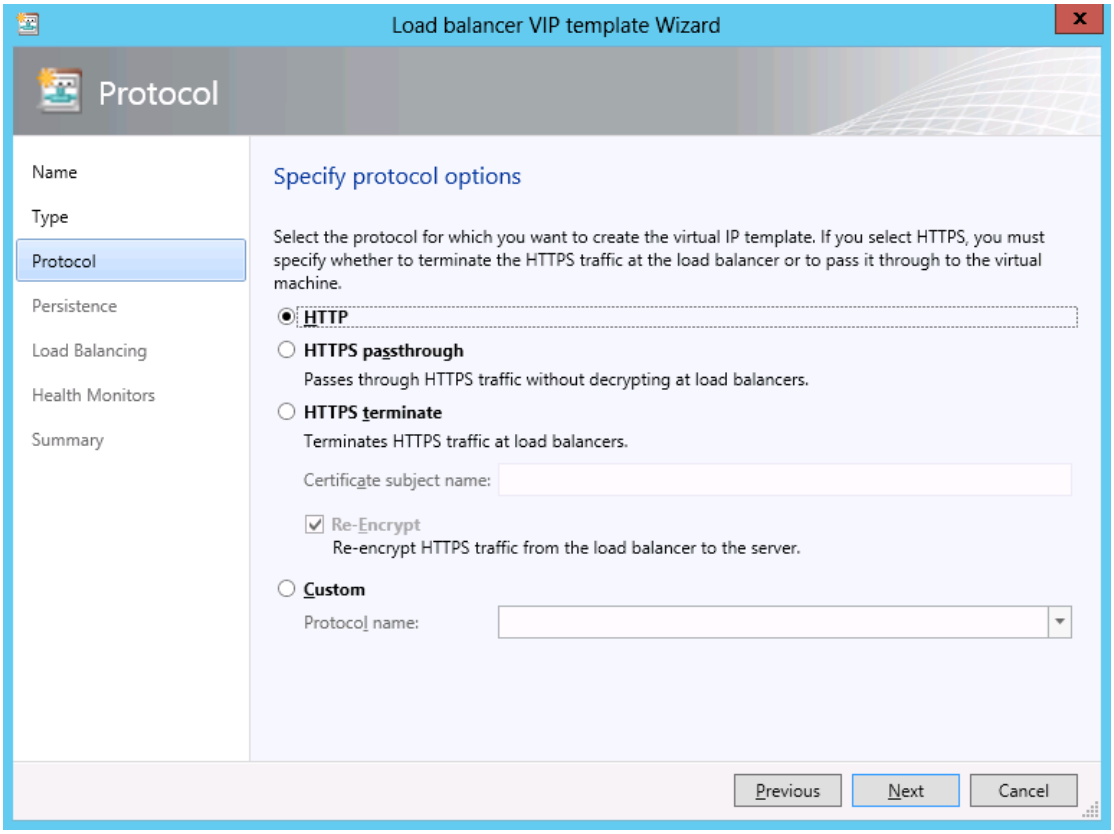

Figure 13: Protocol configuration

Notes:

- **HTTPS passthrough** – If you select this option, encryption carries all the way through to the virtual machine. The traffic is not decrypted at the A10 device. This option creates a TCP virtual port on the A10 device.
- **HTTPS terminate** – If you select this option, traffic is decrypted at the A10 Device. This option requires a SSL certificate and key to be loaded onto the A10 device. VMM just inputs a certificate, so you will need to create or import a certificate and key of the same name on the A10 device. (See example below.)

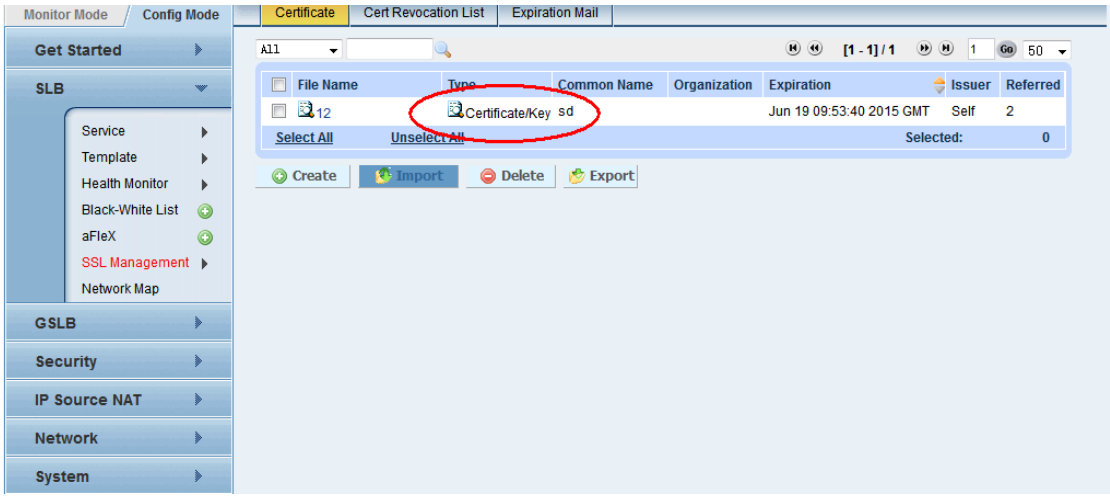

Figure 14: SSL certificate list on A10 device (A10 device's management GUI shown)

- **Re-Encrypt** – If you select this option, HTTPS traffic from the A10 device to real server is re-encrypted, that is known as SSL bridging

5.1.4 PERSISTENT CONFIGURATION

Select **Enable** persistence, then select the Persistence type: SourceIP, DestinationIP, Cookie, or SSLSessionID.

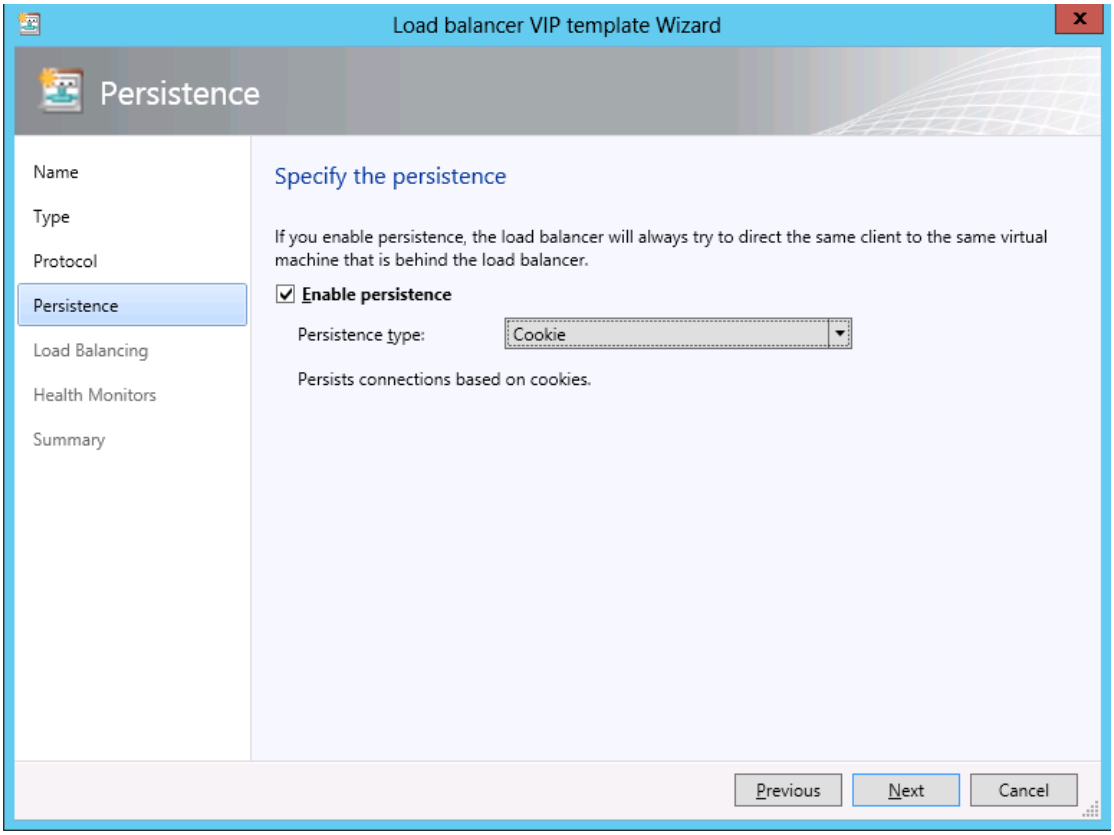

Figure 15: Persistence configuration

5.1.5 LOAD BALANCING OPTIONS

Click **Next** to display the Load Balancing window. Select the Load Balancing method from the list. The A10 plugin supports the following methods:

- RoundRobin
- WeightedRoundRobin
- LeastConnections
- WeightedLeastConnection
- ServiceLeastConnection
- ServiceWeightedLeastConnection
- FastestResponseTime
- LeastRequest
- RoundRobinStrict
- StatelessSourceIPHash
- StatelessSourceIPOnlyHash
- StatelessDestinationIPHast
- StatelessSourceDestinationIPHash
- StatelessPerPacketRoundRobin

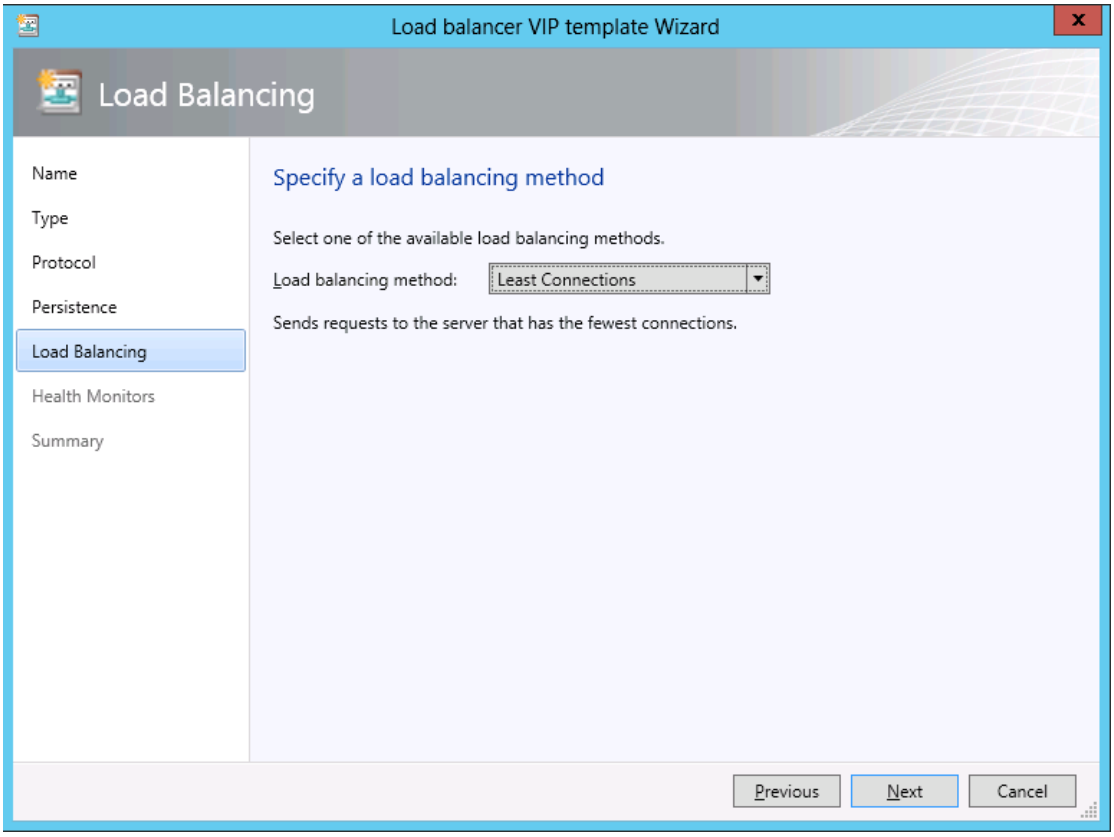

Figure 16: Load Balancing algorithm selection

5.1.6 HEALTH MONITORING CONFIGURATION

1. On the Health Monitors page, configure a health monitor. The A10 plugin supports a single health monitor.

Request Type	Response Required To Pass Health Check
GET /index.html	200 OK (response code or string)
HEAD /index.html	200 (must be response code)
POST /index.html \n\n *post-data*	200 OK (response code or string)

Note: *For Layer 4 (TCP, UDP) or Layer 3 (PING) protocols, please leave the Request and Response strings empty.*

2. On the **Summary** page, review the settings, then click **Finish**.

6 SUMMARY AND CONCLUSION

With the integration of A10's software and hardware appliances within SCVMM 2012, data center administrators have an easier way to deploy A10's advanced ADC capabilities into their virtual machine environment, going beyond the Microsoft NLB capabilities.