How to Setup and Configure ESXi 5.0 and ESXi 5.1 for OpenManage Essentials

This Dell technical white paper provides step-by-step instructions to set up and configure ESXi for OpenManage Essentials.

Benjamin Villanueva

Dell Enterprise Product Group

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September 2012| Rev 1.0

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Executive summary

OpenManage Essentials (OME) is a systems management console that provides simple, basic Dell hardware management and is available as a free download. OME is an essential tool for administrators to assist in managing their environment. Some of the benefits of using OME in your environment include:

- Discovery, inventory, and monitoring Dell servers
- Discovery, inventory, and monitoring of VMware ESXi 5 running on Dell servers
- Support for 11th and 12th Generation Dell PowerEdge servers

This white paper demonstrates the prerequisites to set up and configure VMware ESXi 5.0 and ESXi 5.1 to take advantage of these benefits.

Introduction

OpenManage Essentials provides a central point of access to monitor and manage systems on a local area network (LAN). By allowing a comprehensive view across the enterprise, Essentials can increase system uptime, reduce repetitive tasks, and prevent interruption in critical business operations.

As datacenters become more virtualized, it is necessary to have the ability to discover, inventory, and monitor Dell servers running VMware ESXi 5. This white paper focuses on how to set up and configure OpenManage Essentials capabilities to support your ESXi 5.0 and ESXi 5.1 environment.

Prerequisites

Installing OpenManage Essentials

Download the latest version of OpenManage Essentials package from support.dell.com Web site.

1. Browse to the server on which you want to install OpenManage Essentials.
2. Click on **Drivers and Download** tab.
3. Expand the **Systems Management**.
4. Find the *OpenManage Essentials* application and download the file.

You can find detailed steps for installing OME at the following location:
http://en.community.dell.com/techcenter/extras/m/white_papers/19998614.aspx

VMware ESXi 5.0 and 5.1 required version

OpenManage Essentials requires the ESXi 5.0 server to be running build 474610 or later to ensure WS-MAN service reliability.

The latest patches for ESXi 5.0 are available at: http://www.vmware.com/go/downloadpatches

OpenManage Essentials requires the ESXi 5.1 server to be running Release build 799733 or later.

Environment discovery and inventory

A fundamental element of any organization's device management is the discovery and inventory of all devices in your network. Discovery needs to be non-invasive, easy to administer, efficient, thorough, accurate, broad in scope, and responsive to network changes. Discovery is a process for identifying all Dell hardware devices in your network, such as Dell PowerEdge servers and Dell Out-of-Band devices (iDRAC). To understand and configure OME and to discover and inventory your environment, go to:

http://en.community.dell.com/techcenter/extras/m/white_papers/19998626.aspx

You can find detailed steps for setting up the WS-MAN credentials for discovery and inventory of your ESXi 5 server in the section *Creating a discovery range for ESXi 5*.

Downloading and installing the necessary software tools

The following software tools are necessary for configuring ESXi 5 for OpenManage Essentials discovery and inventory.

- Download and install the latest version of the vSphere CLI 5.1 from the following location: http://www.vmware/com/support/developer/vcli
- Download and install the latest version of WinSCP from the following location: http://winscp.net/eng/download.php
- **Optional**: Download and install the latest version of Putty from the following location: http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html

VMware ESXi 5 host server settings

The VMware ESXi 5 host server requires the following settings:

- Make sure the ESXi 5 host is in *Maintenance Mode*.
- Make sure you have enabled *SSH* in the *Troubleshooting Mode Options* on the ESXi 5 host located in the <F2> Customize System menu.

Downloading and installing the Dell OpenManage Offline Bundle and VIB for ESXi 5

The Dell OpenManage Offline Bundle and VIB file are required on ESXi 5 for OpenManage Essentials to retrieve the complete hardware and software inventory of Dell PowerEdge servers.

Note: The latest available version of the Dell OpenManage Offline Bundle and VIB for ESXi is 7.1.

Prior to installing the VIB file, the ESXi 5 host must be in maintenance mode.

1. Download the **OM-SrvAdmin-Dell-Web-7.1.0-5304.VIB-ESX50i_A00.zip** from the following location:

   http://www.dell.com/support/drivers/us/en/555/DriverDetails/DriverFileFormats?DriverId=Y0WHR

2. Locate the **OM-SrvAdmin-Dell-Web-7.1.0-5304.VIB-ESX50i_A00.zip** file that was downloaded.

3. Using WinSCP or similar, copy the VIB zip file over to the ESXi 5 host; for example, to the /tmp directory.

4. Install the VIB file by running one of the following commands:

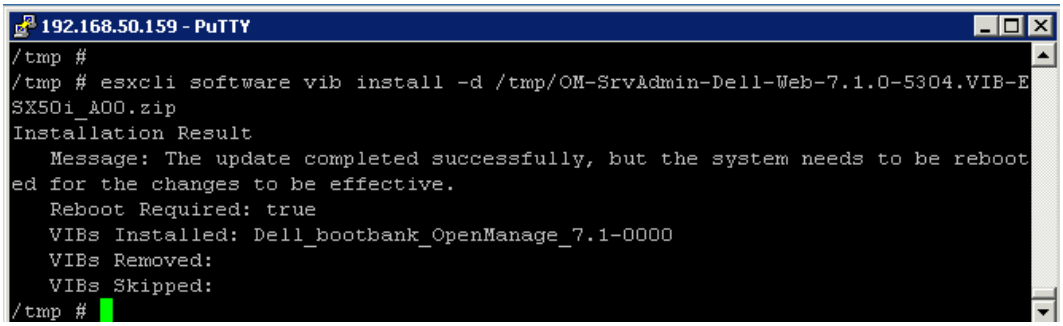
   a. Using Putty, SSH into the ESXi 5 host and type the following command:

```
esxcli software vib install -d /tmp/ OM-SrvAdmin-Dell-Web-7.1.0-5304.VIB-ESX50i_A00.zip
```

   b. Using the VMware CLI tools from OpenManage Essentials server type:

```
esxcli -server <IP address of ESXi5 host> software vib install -d /tmp/ OM-SrvAdmin-Dell-Web-7.1.0-5304.VIB-ESX50i_A00.zip
```

5. Verify VIB installs as shown below:



6. For the changes to be effective, reboot the ESXi 5 host.

7. After reboot is complete, remove the ESXi 5 host from *Maintenance Mode*.

Configuring SNMP for hardware alerting

This configuration is only for sending SNMP traps to OpenManage Essentials. SNMP is not used for discovery. WS-MAN is the only protocol ESXi 5 supports.

Use the following VMware knowledge base article to configure SNMP traps for ESXi 4.x and 5.0:

http://kb.vmware.com/kb/1008065

1. Navigate to the directory where vicfg-snmp.pl is stored. By default, vicfg-snmp.pl is located in:

   C:\Program Files (x86)\VMware\VMware vSphere CLI\bin

2. Run this command:

   ```
   vicfg-snmp.pl --show
   ```

   Note: Run the `vicfg-snmp.pl --help` command for a full list of options.

3. Specify the communities and trap targets with this command:

   ```
   vicfg-snmp.pl --server hostname --username username --password password
   -t target hostname@port/community
   ```

   Example: To send SNMP traps from the host host.example.com, to port 162 on target.example.com, using the public community, use this command:

   ```
   vicfg-snmp.pl --server host.example.com --username root --password
   password -t target.example.com@162/public
   ```

   Note: To prevent clear text display of the user password, remove the --password password portion. You are then prompted to enter the password, and the entry is hidden.

4. To enable the SNMP service, run this command:

   ```
   vicfg-snmp.pl --server hostname --username username --password password
   --enable
   ```

   Note: To verify SNMP settings, run this command:

   ```
   vicfg-snmp.pl --server hostname --username username --password password
   --show
   ```

5. (Optional) To send a test trap to verify that the agent is configured correctly, run this command:

   ```
   vicfg-snmp.pl --server hostname --username username --password password
   --test
   ```

   The test trap generated is a warmStart trap.

   Note: Changes to the SNMP configuration are stored on the ESX/ESXi host in /etc/vmware/snmp.xml.

What is new in VMware vSphere CLI 5.1 for ESXi 5.1

The following new commands have been added to the ESXCLI command set to configure SNMP on ESXi 5.1.

The new *esxcli system snmp* namespace replaces *vicfg-snmp* command and the following commands have been added:

- *esxcli system snmp get | hash | set | test*

Follow these steps to configure SNMP on ESXi 5.1

1. Navigate to the directory where *esxcli* is stored. By default, *esxcli* is located in:

   C:\Program Files (x86)\VMware\VMware vSphere CLI\bin

2. Configure SNMP using the following command:

   esxcli -s <IP ESXi HOST> system snmp set -communities=public -enable=yes -targets=<IP of OME>/public

3. Enter username and password when prompted.
4. Verify settings using the following command:

   esxcli -s <IP ESXi HOST> system snmp get

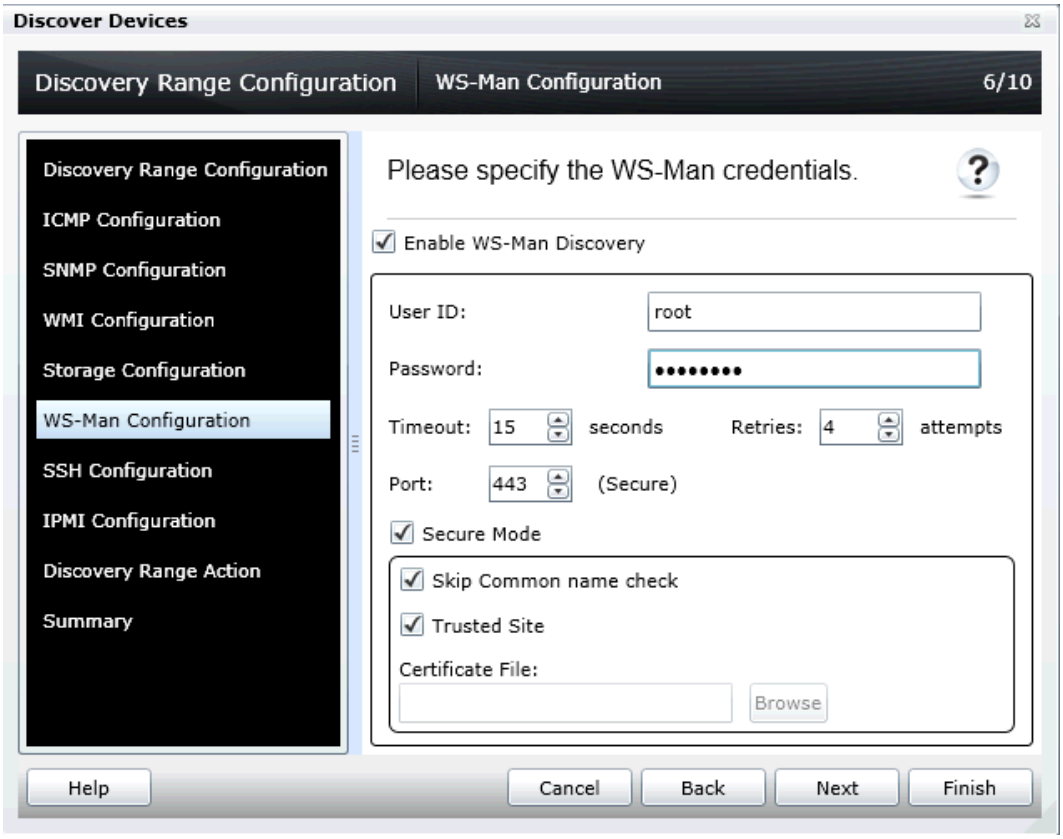
5. Test the SNMP configuration using the following command:

   esxcli -s <IP ESXi HOST> system snmp test

Creating a discovery range for ESXi 5

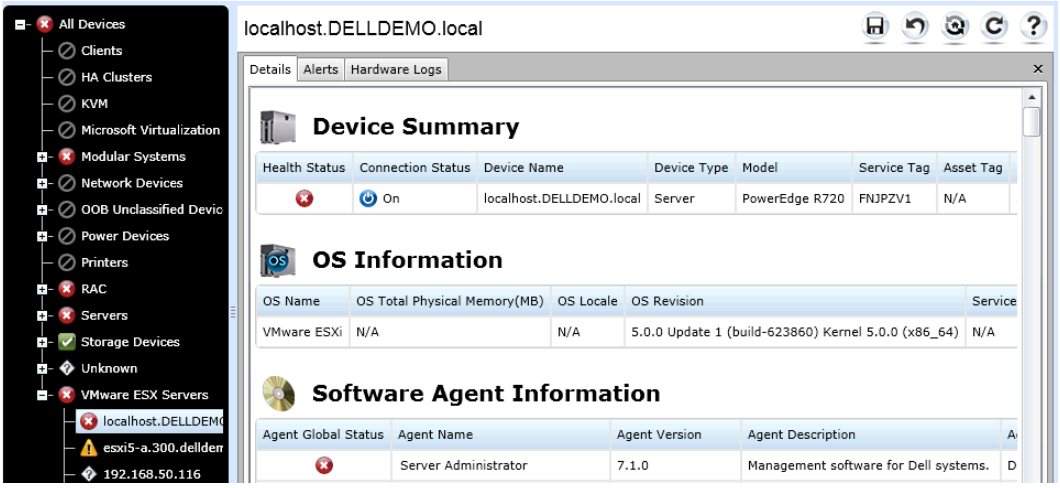
Creating a discovery range for ESXi 5 requires configuration of the WS-MAN section within the *Discovery Range Configuration* wizard as shown in Figure 1.

Figure 1. WS-MAN configuration



Following the steps outlined above you should now see the ESXi 5 host displayed in the device tree as shown in Figure 2.

Figure 2. ESXi host in device tree.



Conclusion

Dell OpenManage Essentials provides a single, easy-to-use, one-to-many, customizable console to manage Dell hardware, including: servers, storage, and network switches, as well as other existing Dell systems in your environment.

OpenManage Essentials helps simplify hardware management and streamlines IT Operations by automating the basic repetitive hardware management tasks such as discovering and inventorying servers, storage, and network switches, monitoring their health status, and sending email alerts for unattended monitoring.

Learn more

Visit www.dell.com/ome or www.delltechcenter.com/ome for more information on Dell OpenManage Essentials.