# Dell OpenManage Essentials v1.2 -Support For Dell Client Devices

This Dell technical white paper provides the required information about Dell client devices (OptiPlex, Precision, Latitude) support in OpenManage Essentials.

**OME Engineering Team** 



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July 2013 | Rev 1.0

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# **Executive Summary**

Dell OpenManage Essentials (OME) is a lightweight, Web-based, one-to many systems management solution that provides a comprehensive view of Dell systems, devices, and components in an enterprise network. OME lets you discover Dell business client devices (Dell OptiPlex, Dell Precision, and Dell Latitude), and perform some management operations on these devices. OME retrieves client device hardware information using the WMI protocol and can do so with or without Dell OpenManage Client Instrumentation (OMCI) being present on the remote device. OME requires OMCI to show the device health, hardware logs, and to perform specific operations on multiple devices using the generic command line task framework. Discovery and device classification works without OMCI installed on the remote device.

## Introduction

This document helps you understand the Dell client devices support with Dell OpenManage Essentials. To learn more, go to: <a href="https://www.delltechcenter.com/ome">www.delltechcenter.com/ome</a>

## Scope

The scope of this document is to discover/inventory Dell business client devices and explore various OME features for client devices. The following devices fall under the Business client category:

- OptiPlex
- Precision
- Latitude

**Note:** OME may work for Dell Vostro and Dell XPS business client devices as well but with very limited functionality and OMCI does not support these models.

## Assumption

This document is specific to client devices supported by OME. It is assumed that you are already aware of OME, its installation and how to discover devices features. To learn more about OME and its features, go to <u>www.delltechcenter.com/ome</u>

# What is supported?

Dell client device support was introduced in OpenManage Essentials v1.1 providing the following support to Dell client devices:

- Discovery and inventory
- Hardware logs
- Warranty
- Health monitoring alerts

# Dell OpenManage Client Instrumentation

Dell OpenManage Client Instrumentation (OMCI) is available on Dell OptiPlex, Dell Precision Workstation, and Dell Latitude client systems. Using OMCI, system administrators can remotely manage assets, monitor system health, and inventory deployed systems in the enterprise. To learn more and to download OMCI, go to:

http://en.community.dell.com/techcenter/systems-management/w/wiki/1773.openmanage-clientinstrumentation-omci.aspx

The default OMCI install exposes hardware information with the help of the **\root\dcim\sysman** WMI namespace. Remotely, OME retrieves client device health and hardware logs from this namespace.

## Prerequisites

The following are the requirements for discovery and classification of the client devices in OME:

- Supports only Dell client devices.
- Device should respond to WMI queries. WMI specific settings are enabled on the remote device.
- Client device should have the following supported operating systems installed:
  - o Microsoft Windows 8
  - o Microsoft Windows 7
  - o Windows Vista
  - o Windows XP.
- OMCI 8.x (Optional Helps you retrieve more information. Refer to Table 1.)

Note: Dell Clients with Linux kernels/Operating systems are not supported by OpenManage Essentials.

OpenManage Essentials can discover clients with or without having OMCI installed. When OMCI is absent, OME fetches the information from client's operating system. It consumes data from **\root\cimv2** WMI namespace. However, installing OMCI is recommended and the differences are included in the table below.

Feature	With OMCI	Without OMCI
Discovery - Basic Information	Yes	Yes
Inventory - Basic Information	Yes	Yes
Inventory - Additional Information*	Yes	No
Device Health & Status Available	Yes	No
Device's Hardware Logs Available	Yes	No

#### Table 1. Feature comparison with/without OMCI

\* To learn more about the "Inventory - Additional Information," refer to Table 2: Discovery and inventory details with/without OMCI.

# **Discovery and Inventory**

Use the following steps for the discovery of client devices using OME:

- 1. Launch OpenManage Essentials.
- 2. Navigate to Manage  $\rightarrow$  Discovery and Inventory.
- 3. In the left panel, click Add Discovery Range.
- 4. Enter the IP address of the specific client device or the IP range having all the client devices with the subnet mask details.

Discover Devices		23
Discovery Range Configura	ion Discovery Range Configuration	1/10
Discovery Range Configuration ICMP Configuration SNMP Configuration WMI Configuration Storage Configuration WS-Man Configuration SSH Configuration	Specify IP address, range, or host name.         Enter an IP address or a range. The first octet cannot be zero. Specify a range (for example, 12-115) or wildcate the last two octets.         IP address / range:       .       .         Host name:       .       .         Subnet mask:       255       .       .         Add       Remove       Im	ırd(*) in
Discovery Range Action	IP Range / Host Name Discovery Range Name Subnet Mask	
Summary	10.94.20.44 255.255.0	
Help	Cancel Next F	inish

#### Figure 1. Specifying IP address, host name, and subnet mask.

- 5. Click Next.
- 6. In the ICMP Configuration page, click Next.
- 7. In the SNMP Configuration page, clear the **Enable SNMP discovery** check box.

## Figure 2. Discovery Range Configuration - clear the Enable SNMP discovery check box.

Discover Devices		23
Discovery Range Configuration	SNMP Configuration	3/10
Discovery Range Configuration	pecify the SNMP settings for discovery.	?
ICMP Configuration SNMP Configuration	Enable SNMP discovery:	
WMI Configuration Get	t community: public	
Storage Configuration Set	t community:	
WS-Man Configuration	neout: 4 🛓 seconds	
SSH Configuration	tries: 2 🔹 attempts	
IPMI Configuration		
Discovery Range Action		
Summary		
Help	Cancel Back Next	Finish

- 8. Click Next.
- 9. In the WMI Configuration page, select Enable WMI discovery.

## Figure 3. Discovery Configuration - Enable WMI discovery.

Discover Devices		23
Discovery Range Configurat	tion WMI Configuration	4/10
Discovery Range Configuration ICMP Configuration	If you choose to configure the WMI parameters, then specify the domain as part of the user name to authenticate and connect to remote devices.	of ?
SNMP Configuration WMI Configuration Storage Configuration		
WS-Man Configuration SSH Configuration	☑ Enable WMI discovery: Domain \ User name: mydomain\administrator	
IPMI Configuration Discovery Range Action Summary	Password:	
Help	Cancel Back Next	Finish

10. Provide the WMI credentials for the remote devices.

#### 11. Click Finish.

Once the discovery task finishes, OpenManage Essentials classifies the client devices under the *Clients* device group.

and the second													licit
Details Alerts H	ardware Logs												
Al Dev	ice Sumr	nary											
Health Status	Connection Statu	s Device Name	Device Type M	lodel	Service Tag A	uset Tag	Express Service Code	Location Rev	vision Device Disco	overy Time	Device Inventory Time	Device Status Time	
	🔾 On	wn7-8tbx3bs.bl	r.amer.dell.com Client L	atitude E6400	atex365 0	ME DELL	4/A	N/A N/A	A 10/24/2012	1:54:33 AM	10/24/2012 1:54:33 AM	10/24/2012 4:35:04 AM	0
os :	Informat	ion											
OS Name		OS Total Physical	Nemory(MB) OS Locale OS Re	vision Service	Pack Version								
Nicrosoft Windo	ws 7 Enterprise	3536	English 6.1.76	101 1									
Soft	ware Ag	ent Infor	mation	123									
Agent Global St	stus Agent Nam	a Agent Version	Agent Description	Agen	t Hanufacturer								
	CALCS.	6.1.7001.1731	Windows Hendgement Instrum	sencepon Price	nort Corporation								
	Divics	ine.	open Hanage Grent Interaries	regotion . Lifes :	Inc.								
	Informa	tion											
JPv4 Address	Pvő Address MA	C Address	Description		TOE Capability	TOE Enable	đ						
N/A	4/A 41	:56:45:00:00:30	Aventail VPN Adapter		N/A	N/A							
10.94.22.97	4/A 00	:24:EB:C7:26:4E	Intel(R) 82567LM Gigabit Netwo	rk Connection	N/A	N/A							
N/A I	U/A 00	121:64:69:C8:DA	Intel(R) WiFi Link 5300 AGN		N/A	N/A							
			when a chieve to account of			all da							

Figure 4. Clients discovered and classified in the device tree

## Inventoried Information With and Without OMCI

Table 2 shows information about discovery and inventory with and without OMCI.

Category	With OMCI	Without OMCI
Device Summary *	✓	✓
OS Information	✓	✓
Software Agent Information *	~	✓
NIC Information	✓	✓
Processor Information	$\checkmark$	✓
Memory Device Information	$\checkmark$	✓
Firmware Information	$\checkmark$	✓
Controller Information	$\checkmark$	✓
Physical Disk Information	$\checkmark$	✓
Volume Information	$\checkmark$	$\checkmark$
Contact Information	$\checkmark$	✓
FRU Information	$\checkmark$	Х

 Table 2. Discovery and Inventory tables available for Dell Client devices

\* If OMCI is not installed on a Dell Client device, then the "Software Agent Information" table will show only one entry for the WMI agent and health will be displayed as *Unknown*.

# Hardware Logs

OME helps you see the hardware logs of a remote client device on which Dell OpenManage Client Instrumentation is installed.

These logs are not stored in the OME database. The latest logs are fetched from the device when you request them by clicking on the Retrieve button. Connection to the device is made with discovery credentials. Make sure OME has connectivity to the device to fetch the logs.



Figure 5. Hardware logs (Initial)

Figure 6	Harc	ware	l ogs -	Loaded
riguic 0.	Thanc		LUYS	Louucu

Reports Preferen	ces Logs Ti	ubrials Edensions		
evice Search Discovery	and inventory	Alerts System Update Remote	Taks	
levon	wn7-8tb)	3bs.blr.amer.dell.com		800
wn7-fitha Tha hir an	Details Ale	ets Hardware Logs		
A Clusters	Drag a colu	umm header and drop it here to group I	y that column	
/14	Course S	1 700	Y tetals Y	
icrosoft Virtualization	101	00/13/0012 03-54-00 AM	Contrast Administration administra	
odular Systems		00/12/2012 07:54:00 444	Sector Advisions many	
twork Devices		Che i Statute de la fail de la fail	**WN7-BTIXXIBS*Isstrumentation Service*Physical memory on the system has increased	
8 Unclassified Devic	8	09/12/2012 07:57:11 AM		
ver Devices		09/12/2012 09:56:23 AM	System Management Data Manager Stopped	
rters	8	09/12/2012 12:59:32 AM	System Administrator starting	
c	2	09/12/2012 12:59:32 AM	System Administrator startup complete	
rvers		09/12/2012 12:59:32 AM	System Management Data Manager Started	
rage Devices	2	09/12/2012 04:26:08 PM	System Administrator starting	
known	2	09/12/2012 04:26:08 PM	System Administrator startup complete	
Iware ESX Servers	2	09/12/2012 04:26:09 PM	System Management Data Manager Started	
	0	09/12/2012 05:53:01 PM	"*WN7-878X386*Instrumentation Service*Number of hand data on the system has increased	
	1	09/12/2012 11:04:03 PM	System Administrator starting	
		09/12/2012 11:04:01 PM	System Administrator startus comolete	
	10	09/12/2012 11-04-01 PM	Sustan Nananament Data Managar Garted	
	-	06/12/2012 11:04:49 84	""WN7-8TBX385"Instrumentation Service"Number of hard daks on the system has decreased	
	- V	V# 12/10/12 11/04/47 FM	"Number, ATTIVANE Manufacture and and Manufacture and hand dates on the system has increased	
	4	09/13/2012 01:14:05 AM	Here's locator and differences denice include or hard data on the system has increased	
	*	09/15/2012 03:12:21 AM	"*WN7+8T5X38S*Instrumentation Service*Number of hard disks on the system has decreased	
	2	09/13/2012 03:54:44 PM	System Management Data Hanager Stopped	
	1	09/13/2012 05:22:34 PM	System Administrator starting	
	10	09/13/2012 05:22:34 PM	System Administrator startup complete	
	10	09/13/2012 05:22:34 PM	System Nanatement Data Manager Started	
		06/13/2012 05/28/48 PM	"#WN7-BTEX385"Instrumentation Service"Number of hard deke on the system has increased	
	0	09/13/2012 06:06:55 PM	"#WN7-8T[0X385"Instrumentation Service*Number of hard daks on the system has decreased	
		09/14/2012 04:34:05 AM	System Administrator starting	

# Warranty Information

OpenManage Essentials has a built-in warranty report that shows warranty information for discovered client devices. Warranty information for the client devices is available as part of this report. OME retrieves this information from the Dell Web site for the given device Service Tags.

Because this is live data, OpenManage Essentials expects connectivity to the Dell Web site when you run the report. If OpenManage Essentials is installed behind the proxy server, then provide the proxy server details in the **Preferences**  $\rightarrow$  **Console settings** page.

	ESSENTIALS			Dell TechCenter   Support   Help   About   Mohan_Anun
Home Manage Reports Preferences Console Settings Email Settings Alert	Logs Tutonals Extensions Settings Custom URL Settings			
Console Settings				?
Console Session Timeout	10 Minutes 0:20	6 Moure		
Database Maintenance Execution Sche	edule	12:00 AM		
Restart All OpenManage Essentials Ser	ervices:	Restart Services		
Security Settings (ActiveX)		An and a second construction of the second		
Allow Remote Desktop Launch				
Allow Troubleshooting Tool Launch	h			
ActiveX Status : Disabled Refresh 1	STATUS.			
Client Time Zone: (UTC+05:30) OME Server Time Zone: (UTC+0 OME Server Daylight Savings Stat:	Chennel, Kolkata, Mumbel, New Delh 5:30) Chennal, Kolkata, Mumbel, Ner tus: Standard Time	Dehi		
Proxy Settings (used for System U	Jpdate and Warranty)			
Domain \ Usemame:	mydomain\myusemame			
Pasaword:				
Proxy Server Address or Name:	myproxyserver			
Proxy Port Number:	80/04	Test Connection		
KACE Appliance Settings	1			
KACE Appliance URL	[	Test URL		
		anned Apply		
é				Local intranet   Protected Mode: Off 🛛 🖓 * 🔩 100%



## Warranty Report

The Warranty report shows all the warranty information related to the service tag of the client hardware. To view the warranty report, navigate to **Reports**  $\rightarrow$  **Warranty Information**.



Figure 8. Warranty Information

## Viewing Information and Renewing Warranty

1. To view and renew the warranty of a client device, right-click on the device in device tree  $\rightarrow$  Application Launch  $\rightarrow$ View and Renew Warranty.



#### Figure 9. Application Launch warranty.

This takes you to <u>www.dell.com</u> and displays the warranty information page for the specific device. You can renew the warranty from this location.

United States 🛩 (	Contact Us					Premier Login Sign In
Shop	Support	Community	r.			Search Seaa
Drive	ers and Downloads ~	Product Suppo	ort ~ Support	t by Topic ~	Order Support~	Warranty Information * View More *
> Support > Produ	ct Support					Del recommends Wir
oduct Su	ipport for L	atitude E	6400			📥 My Account 🛛 🜉 Order Status [+] Feed
2	Latit Servic	ude E6400 e Tag: 8TBX385 A Different Prod	uct >			
Product Support Warranty	System Configuration	Drivers & Downloads	Parts & Upgrades	Manuals & Documentation	Warranty	Need configuration or software help? - Pay by Incident Get expert help to optimize your
Product Support Warranty Country: Indi Ship Date: 9/	System Configuration	Drivers & Downloads	Parts & Upgrades	Manuals & Documentation	Warranty	Need configuration or software help? - Pay by Incident           Get expert help to optimize your PC, configure your network, remove a virus or more.           Call 1-800-945-8061 for as needed assistance.
Product Support Warranty Country: Indi Ship Date: 9/ Services	System Configuration	Drivers & Downloads	Parts & Upgrades Provider	Manuals & Documentation Start Date	Warranty End Date	Related Links
Product Support Warranty Country: Indi Ship Date: 9/ Services COMPLETEC	System Configuration	Drivers & Downloads	Parts & Upgrades Provider Dell	Manuals & Documentation Start Date 9/2/2009	Warranty End Date 9/3/2012	Need configuration or software help? - Pay by Incident Get expert help to optimize your PC, configure your network, remove a virus or more. Call -800-945-8061 for as needed assistance. Related Links Order Status
Product Support Warranty Country: Indi Ship Date: 9/ Services COMPLETECT POW (Parts of	System Configuration	Drivers & Downloads	Parts & Upgrades Provider Dell Dell	Manuals & Documentation Start Date 9/2/2009 9/2/2011	Warranty End Date 9/3/2012 9/3/2012	Reed configuration or software help? - Pay by incident           Get expert help to optimize your PC, configure your network, remove a virus or more.           Cat 1-800-945-8061 for as meeded assistance.           Related Links           Order Status           Drivers Help

## Figure 10. Warranty Information on the Dell Web site.

# **Internal Health Alerts**

Currently, OpenManage Essentials does not have the WMI events listening functionality. Alerts generated by Client devices are not shown in OME. OME generates internal health alerts whenever it detects a change in the health state of the device. Check Enable Internal Health Alerts on the Preferences  $\rightarrow$  Alert Settings page.

DØLL	OPENMAN	iage essen	TTIALS					
Home Manage Console Settings	Reports Prefe	Rences Logs	Tutorials Custom U	Extensions URL Settings	-	-	-	-
Alert Setting	gs							
Enable Inte	rnal Health Alert	s						
	Apply							

If this feature is enabled, OME monitors the health status. The health depends upon the schedule status task. Change in the client device status generates internal traps, which you can view in the Event console and then you can configure the required alert actions for these traps.

**Note:** As this feature is related to client health status, it requires that *Dell Open Manage Client Instrumentation* be installed on the remote device.









## Command line - Remote Tasks

OME supports execution of generic command-line tasks on remote computers. This feature lets you run/schedule a task against a selected set of discovered devices. You can run any custom script against the client devices and perform operations on them.

To create remote command-line task navigate to Manage  $\rightarrow$  Remote Tasks  $\rightarrow$  Create Command Line Task.

Figure 14.	Command	line	task
i igai o i ii	oommania		. aon

DELL OPENMANAGE ESSENTIA	ALS
Home Manage Reports Preferences Logs Tuto	rials Extensions
Devices Device Search Discovery and Inventory Al	lerts System Update Remote Tasks
Common Tasks	Remote Tasks
Create Command line Task	
Create Deployment Task	All Tasks Server Power Options Server Adm
Create Power Task	Schedule State 🗑 Tack Name

The benefits of using remote command-line tasks against your environment include:

- Leverages the scripting capabilities within the product.
- Targets one-to-many configurations.
- Targets only specific hosts or devices groups.
- Windows power shell commands/scripts
- OMCI scripts to get/set values (PowerShell/VB Script).

# Running Command-Line Tasks and Configuring Custom Scripts

OME makes use of Windows power shell scripts for a variety of purposes including, but not limited to, software deployment and power cycling the device. For detailed information on how to make use of windows power shell against OME, refer to:

http://en.community.dell.com/techcenter/extras/m/white\_papers/20024495.aspx

OMCI supports VBScript and PowerShell based scripting. Use these scripts for:

- Remote BIOS update
- Remote system shutdown/restart
- Retrieve/set BIOS password
- Enabling/Disabling PXE boot on next reboot

To see sample OMCI scripts, refer to: <u>http://en.community.dell.com/techcenter/systems-</u> management/w/wiki/omci-sample-scripts.aspx

The section below is a step-by-step creation of generic command-line task to run one OMCI script to fetch the Service Tag for many client devices in a single report file.

------ Script Begins------

<sup>&#</sup>x27;\*\*\* Name: serviceTag.vbs

<sup>\*\*\*\*</sup> Purpose: To get service tag & bios version on a Dell OMCI client.

\*\*\*\* Usage: cscript.exe //nologo serviceTag.vbs <systemname>
\*\*\*\* This sample script is provided as an example only, and has not been
\*\*\*\* tested, nor is warranted in any way by Dell; Dell disclaims any
\*\*\*\* liability in connection therewith. Dell provides no technical
\*\*\*\* support with regard to such scripting. For more information on WMI
\*\*\*\* scripting, refer to applicable Microsoft documentation.

**Option Explicit** 

```
'*** Declare variables
Dim strNameSpace
Dim strComputerName
Dim strClassName
Dim strClassNameBIOS
Dim strKeyValueChassis
Dim objInstance
Dim ColSystem
Dim objWMIService
Dim strMessage
'*** Check that the right executable was used to run the script
'*** and that all parameters were passed
If (LCase(Right(WScript.FullName, 11)) = "wscript.exe") Or
  (Wscript.Arguments.Count < 1) Then
  Call Usage()
  WScript.Quit
End If
'*** Initialize variables
strNameSpace = "root/dcim/sysman"
strComputerName = WScript.Arguments(0)
strClassName = "DCIM_Chassis"
strClassNameBIOS = "DCIM BIOSElement"
strKeyValueChassis = "DCIM_Chassis"
'*** Retrieve the instance of DCIM_Chassis class (there should
'*** only be 1 instance).
'*** Establish a connection to the dcim\sysman namespace
Set objWMIService = GetObject("winmgmts:{impersonationLevel=impersonate," &_
  "AuthenticationLevel=pktprivacy}\\" & strComputerName & "\" &_
  strNameSpace)
Set ColSystem=objWMIService.execquery ("Select * from " & strClassName)
For each objInstance in ColSystem
       if (objInstance.CreationClassName = strKeyValueChassis) Then
               strMessage = "Asset Tag: "
               strMessage = strMessage & objInstance.Properties_.Item("ElementName").Value
               strMessage = strMessage & vbCRLF & "Service Tag:"
               strMessage = strMessage & objInstance.Properties_.Item("Tag").Value
       End if
Next
```

```
**** Retrieve all instances of DCIM_BIOSElement (there should
```

```
'*** only be 1 instance).
```

```
Set ColSystem=objWMIService.execquery ("Select * from " & strClassNameBIOS)
```

For each objInstance in ColSystem strMessage = strMessage & vbCRLF & "BIOS Version: " strMessage = strMessage & objInstance.Properties\_.Item("Version").Value Next \*\*\*\* Display the results WScript.Echo strMessage \*\*\*\* Sub used to display the correct usage of the script

Sub Usage() Dim strMessage strMessage = "incorrect syntax. You should run: " & vbCRLF & \_\_ "cscript.exe //nologo serviceTag.vbs <systemname>" WScript.Echo strMessage End Sub ------ Script Ends -----

**Note:** If you copy the above contents into the script, run it first before configuring with OME. This makes sure that any doc/pdf characters are not breaking the script.

Steps:

- 1. Copy the contents (between "Script Begins" and "Script Ends") and save the file as serviceTag.vbs to the C:\temp directory.
- 2. Launch the OME console and navigate to Manage  $\rightarrow$  Remote Tasks.
- 3. Select Create Command Line Task.
- 4. Select Generic Command.
- 5. Name the task, for example: Client Service Tag.
- 6. In Command, type: cscript.exe
- 7. In Arguments, provide: //nologo c:\temp\serviceTag.vbs \$IP

Note: \$IP is used to select a Task Target.

8. Select **Output to file**. Name the file: C:\temp\client-service-tag.txt and select the **Append** and **Include errors** check boxes.

General	Task Target	Schedule and Credentials
Task I	Name	Client Service Tag
		Cenerie Command
		PACADM Command Line
Com	mand:	cscript.exe
Argu	ments:	
		//nologo c:\temp\serviceTag.vbs \$IP
	Ping Devic	e
	Output to	file c:\temp\client-service-tag.txt
		Append Include errors

Figure 15. Configuring a generic command-line task.

- 9. Click Next.
- 10. Select the client devices for which you want to run this task.
- 11. Click Next.
- 12. Select Run Now or schedule the task as per your requirement.
- 13. Provide the OME Administrator credentials, which are applicable to this OME system (as this script runs on the OME system).
- 14. Finish the task.
- 15. Verify that the task completed successfully by right-clicking the task under Task Execution History and selecting Details

A successful result is included below. You can see the Service Tag collected from all the devices in the C:\temp\client-service-tag.txt file.

#### Figure 16. Executed Command result window

					23
Executio	on Details				
Status 🍸	Target System 🏾 🕅	Execution Summary	Execution State 🍸	Start Time 🛛 🕅	End Time
	wn7-8tbx3bs.blr.amer.dell.com	The task completed successfully for the target device.	Complete	10/27/2012 2:01:22 AM	10/27/2012 2:01:26 AM
•		II			•
Result fo	or Target : wn7-8tbx3bs.blr.	amer.dell.com			
Results: Output f	Exit code:0. from command (stdout): Asset	Tag: OME DELL			
Service	Tag: 8TBX3BS				
BIOS Ve	ersion: A27				
L					· · · · · ·
					Copy Result
		ок			

## **Recommendations**

The following recommendations are for performance reasons and to avoid confusion between clients and server classification.

- Use the WMI protocol for client devices.
- Enable Internal Health Alerts only if necessary. Some alert actions are associated with it and affect the performance of OpenManage Essentials.

## Known Behaviors in OpenManage Essentials

The following information lists known behaviors in OpenManage Essentials considering support for Dell client devices:

- OMCI version is shown as *N/A*. OMCI 8.x is not exposing the correct version information, so OME will show N/A for OMCI version.
- As of now, OMCI does not support XPS, Vostro devices. Health status for these devices will appear *Unknown*.

## Troubleshooting tips

The Dell Troubleshooting Tool is bundled along with OpenManage Essentials and is installed with the product. Use this tool to root-cause if client devices are not getting discovered, or classified under the *Clients* device group, or if warranty reports are not showing information for these devices.

## Not Able to Discover Client Device

Make sure that the client device is reachable from the OME system and that the credentials are proper for a successful discovery. You can run the WMI protocol test using the troubleshooting tool to verify this. An error message like "Failed to connect to windows name space" means that OME could not connect to the client device.

roubleshooting Tool	
	HOOTING TOOL Reset Help At
otocols (Remote Box)   Miscellaneous (	(Local Box)
teps: 1) Enter IP Address of the target o pecific settings and 4) Click on "Run Te	device, 2) Select protocol(s) from the list box to verify for the given device, 3) Provide protoc est" button.
Remote Device	
IP Address/Host Name:	10.94.22.97
Test	
Database	Configure WMI Settings:
	User Name: localhost\administrator
	Password:
OMSA Remote Enablement	
Port PowerVault Modular Disk Arrays	
Services SNMP	
SSH WMI	
WSMAN	
xecution	
	Run Test
esuit Doff 🗙 🔂 🛋	
Tim	ne: 10/24/2012 3:19:30 AM Device: 10 94 22 97
Protocols Selected are:	
1. <u>WMI</u>	
Error	Failed to connect to - Windows Name Space
Top	
TOP	

#### Figure 17. Troubleshooting tool - failure.

If Ping works and WMI the connection fails for the administrator credentials, then perform the following steps on the remote (client) device:

- 1. Run secpol.msc.
- 2. Go to Local Policies → Security Options → Network Access: Sharing and security model for local accounts.
- 3. Right click and select Properties → Change → Local Security Settings to Classic: local users authenticate as themselves.

4. Restart the WMI service.

Now rerun the *Dell Troubleshooting Tool* against the same client device. The Dell Troubleshooting Tool should connect to the device, and show the available namespaces found on the remote device.

Note:

- The Dell OpenManage Client Instrumentation (OMCI) agent Namespace presence depends on whether the OMCI is installed on the client device or not.
- Absence of OMCI does not impact the discovery of the client device.

## Hardware Logs for the Client Device Do Not Display

The hardware logs for a device are not cached or stored in the database. To show these logs, OME connects to the device when you click on the refresh/retrieve icon under *Hardware Logs* tab for the given device.

Make sure that OME can connect to the specific remote client device and that the supported OMCI (8.0 or higher) is installed on that device. Use the Dell Troubleshooting Tool to verify the OMCI presence on the remote device.

TROUBLESHOOTING TOOL       Rest. Hep. Ab         otocols (Remote Box)       Miscellaneous (Local Box)         iteps: 1) Enter IP Address of the target device, 2) Select protocol(s) from the fist box to verify for the given device, 3) Provide protocol pedic satings and 4) Click on "Fun Test" botton.         Remote Device       ID 34.22.37         Test       Configure VMI Settings:         Database       Inter Configure VMI Settings:         Database       Generation of the first box to verify for the given device, 3) Provide protocol (S)         Mark Protocol(s):       Database         Database       Generation of the target device, 2) Select Protocol (S):         Database       Inter PowerVall Modular Disk Arrays         Services       Services         Services       Services         WMI       Time: 10/24/2012 3:14:58 AM Device: 10.94.22.87         Protocols Selected are:       1.         1.       YMI         MAC Address 1       00:24 E9:07:26 4E         Windows NameSpace       Present         Del Client Agent (OMC) NameSpace       Present         Del       Present	TROUBLESHOOTING TOOL       Reset         otocols [Remote Box]       Miscellaneous [Local Box]         https: 1) Enter IP Address of the target device, 2) Select protocol(s) from the list box to verify for the given device, 3) Provide profile settings and 4) Click on "Run Test" button.         Remote Device       ID.94.22.97         Test       Select Protocol(s) :         Database       User Name:         Database       User Name:         Database       Base and a click on "Run Test"         Database       User Name:         Database       americas\mohan_arun         Phene       Password:         PowerVault Modular Disk Arrays       services         Sheet       Gride and the second on the second on the list box to verify for the given device, 3) Provice         Remote Device       Inter Totocol(s) :         Database       User Name:         Password:       americas\mohan_arun         ProverVault Modular Disk Arrays       second         Services       Run Test         WSMAN       Set for the list Database         Off X @ Off	ielp Abo
Address 1	Integer Processor       Reset Processor         otocols (Remote Box)       Miscellaneous (Local Box)         teps: 1) Enter IP Address of the target device, 2) Select protocol(s) from the list box to verify for the given device, 3) Provide perific settings and 4) Click on "Run Test" button.         Remote Device       ID Address/Host Name:         ID Address/Host Name:       ID.94.22.97         Test       Configure WMI Settings:         Database       User Name:         ILMP       IPM         Name Resolution       Password:         PowerVault Modular Disk Arrays       mericessmoote         SNMP       SSH         WWSMAN       Run Test         Imme: 10/24/2012 3:14:58 AM Device: 10.94.22.97	
totools (Remote Box) Miscellaneous (Local Box)   teps: 1) Enter IP Address of the target device, 2) Select protocol(s) from the list box to verify for the given device, 3) Provide protoc Remote Device IP Address/Host Name: 10.94.22.97 Test Select Protocol(s): Database Database Del IEMC ICMP IPMI Name Resolution DMSA Remote Enablement Port Vall Modular Disk Arrays Services SSMP SSH WMM WSMAN Reculion CITE: 10/24/2012 3:14:58 AM Device: 10.94.22.97 Time: 10/24/2012 3:14:58 AM Device: 10.94.22.97	tecols [Remote Box]   Miscellaneous [Local Box]   teps: 1] Enter IP Address of the target device, 2] Select protocol(s) from the list box to verify for the given device, 3) Provide termote Device IP Address/Host Name: 10.94.22.97 Test Select Protocol(s) : Det I EMC ICMP IPMI Name Resolution OMSA Remote Enablement Pot Pot SSH WMM WSMAN Configure VMI Settings: User Name: americas\mohan_arun Password: monomouse Run Test Run Test Enclime Protecomouses Run Test Time: 10/24/2012 3:14:58 AM Device: 10.94.22.97	
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Becade setungs and a joint of international buttor.     Remote Device     IP Address/Host Name:     10.94-22.97     Test     Select Protocol(s):     Database   Deal   EMC   ICMP   IPMI   Name Resolution   OMSA Remote Enablement   Poit   PowerVault Modular Disk Arrays   Services   SMMP   SSH   WMANN     Run Test     execution     Run Test     Protocols Selected are:   1. VMI     MAC Address 1   Windows NameSpace   Present   Det   Client Agent (OMCI) NameSpace	Becilits Settings and 9, cluck of Hindrifest Dation.     Remote Device     IP Address/Host Name:     10.94.22.97     Test     Database   Dell EMC   ICMP   IPMI   Name Resolution   OMSA Remote Enablement   Pott   Pott   Services   SNMP   SSH   WSMAN     recution     Run Test        Time: 10/24/2012 3:14:58 AM Device: 10.94.22.97	
IP Address/Host Name:       10.94.22.97         Test	IP Address/Host Name:       10.94.22.97         Test	
Test Select Protocol(s): Database Del IEMC LICMP IPM ISAH Port Port Power/sault Modular Disk Arrays SNMP SSH WXMI WXMAN   recution  recution  recution  recution  Time: 10/24/2012 3:14:58 AM Device: 10.94.22.97  Protocols Selected are: 1.  VMI MAC Address 1 00:24:E8:C7:26:4E Vindows NameSpace Present Del Client Agent (OMCI) NameSpace Present Pr	Test  Select Protocol(s):  Database Dell IEMC ICMP IPMI Name Resolution DMSA Remote Enablement Port PowerVault Modular Disk Arrays SSH WMM WSMAN  Recution  Recution  Time: 10/24/2012 3:14:58 AM Device: 10.94.22.97	
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#### Figure 18. Troubleshooting Tool - success with OMCI

## Learn More

To learn more, visit: www.delltechcenter.com/ome

## Conclusion

Dell OpenManage Essentials provides Dell business client support using the WMI protocol. Use OME to discover and properly classify business client devices. In addition, you can view a client device's health status and hardware logs if Dell OpenManage Client Instrumentation (OMCI) 8.x is installed on the remote device. Making use of the task framework from OME enables you to simplify remote system management of Dell business client devices.