How to troubleshoot usage reporting issues Intel Hybrid Cloud 3.0.x – 3.5.1 Platform

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History

Version	Date	Comment
1.0	12/11/2011	Initial release
1.1	7/23/2012	Updated with Windows* admin fix
1.2	10/30/2012	Updated Windows admin fix and installing activAeon.
2.0	4/23/2013	Revised with activAeon 2.9.650.7, VMLC 3.2, and updated screenshots

Applies To

Platform

- Intel® Hybrid Cloud server version 3.0.x - 3.5.1

Appliances

- Microsoft Windows Server 2008 R2* or appliances running in Microsoft Windows Server 2008 R2*
- Microsoft Windows Small Business Server Standard 2008/2011*
- Microsoft Windows Small Business Server Essentials 2011*
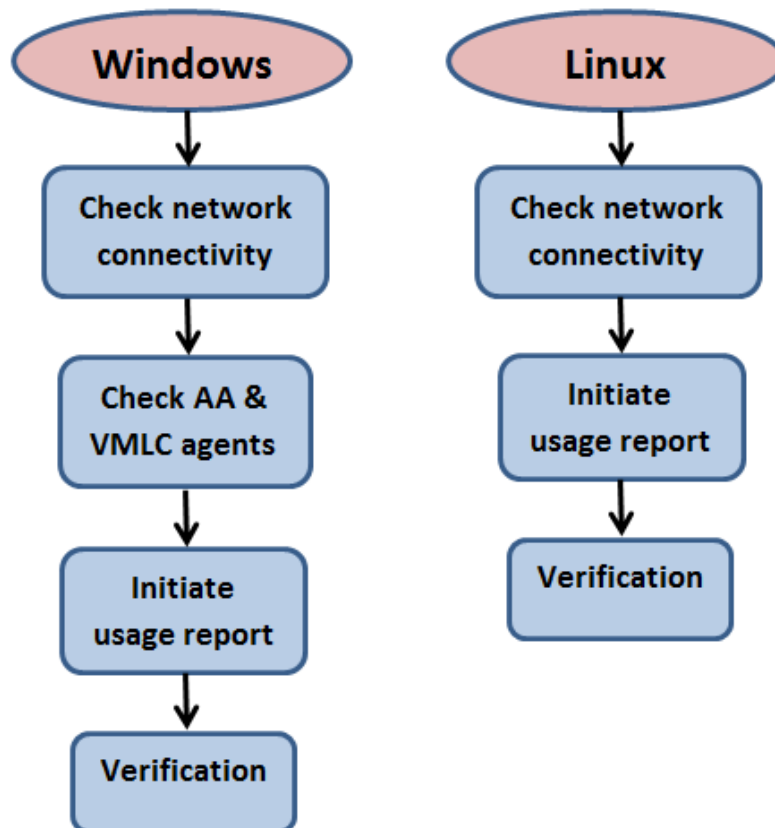- Linux* appliances

Workflow

Figure 1: Workflow diagram

Pre-requisites

Patches / Updates

- It is recommended that the latest patch / update for the respective Intel HybridCloud Platform be applied prior to troubleshooting.

Customer Network Settings

1. Check if the customer has an external firewall / router (i.e. a firewall / router that is not an appliance running on the Intel® Hybrid Cloud Server) and it is configured with the ports required for remote access to the Intel Hybrid Cloud Server, Table 1 below.
   a. **NOTE:** For details regarding the specific firewall/router, refer to the manufacturer's documentation.

Table 1: Inbound and Outbound External Firewall Ports

Outbound TCP Port	Server IP Function	Requirement
80	Software Appliance and Application Download	Must be Open
443	Intel Hybrid Cloud server - Usage Reporting	Must be Open
8080	Web-Based Server Management Console	Optional
16991	Web-Based Server Management Console	Optional
Inbound TCP Port	**Server IP Function**	**Forward to IP Address**
22	SSH to the Intel Hybrid Cloud server	Remote IP Address
5910 - 5920	VNC ports used to access virtual appliances remotely	Remote IP Address
64440	Used for server registration, management and IXE commands	Remote IP Address
64450	Used to manage the server via the Web Portal	Remote IP Address
65222	Used by the script engine for debugging and executing critical tasks	Remote IP Address

Troubleshooting

Windows*

Common Issues and Workarounds

Issue 1
- DC's and member servers running Windows* SBS and Non-SBS, that were automatically updated to activAeon version 2.9.650.7, are reporting zero local or domain users.

Workaround 1
- Please Contact Intel Customer Support for support in resolving this issue.

Issue 2
- DC's and member servers running Windows* SBS and Non-SBS, that were automatically updated to activAeon version 2.9.650.7, the Reports folder and XML usage reports are not created when xareport.exe is ran manually or automatically.

Workaround 2
- Please Contact Intel Customer Support for support in resolving this issue.

Issue 3
- VMLC Agent Service is not running and is unable to be started.

Workaround 3
- Verify the VMLC Agent Service Log On is NT AUTHORITY\SYSTEM, see Check activAeon* & VMLC Agent

Check network connectivity
1. Collect the following information:
    a. Windows* administrator login
    b. Windows* administrator password
2. In the HybridCloudServerManager console, navigate to the Appliances tab then click on the Windows* appliance
3. Click on the Console tab and click "Launch" next to VNC Console
4. Login to Windows* appliance with the administrator name and password collected earlier.
5. Open a command prompt
    a. If the appliance is configured on the remote network, ping the Intel® Hybrid Cloud server (IHC) remote IP else ping the IHC local IP
6. If no response to ping,
    a. Make sure the appliance is configured on the correct network in the IHC console
    b. Make sure the appliance is assigned with a valid IP address by checking network settings inside Windows*

  c. Fix Windows* network issues and ensure Windows is able to ping the IHC server before continuing.

Check Intel required Windows firewall ports

1. Inside of the Windows* appliance, click on Start, go to Administrative tools then open Windows Firewall with Advanced Security

2. If Windows* firewall is disabled (off), Figure 2 below, and no other 3rd party firewalls are in use skip to Checking ActivAeon* & VMLC agents:

Figure 2: Windows Firewall Disabled

3. If the Windows* firewall is enabled (on), Figure 3 below, or a 3rd party firewall is enabled.

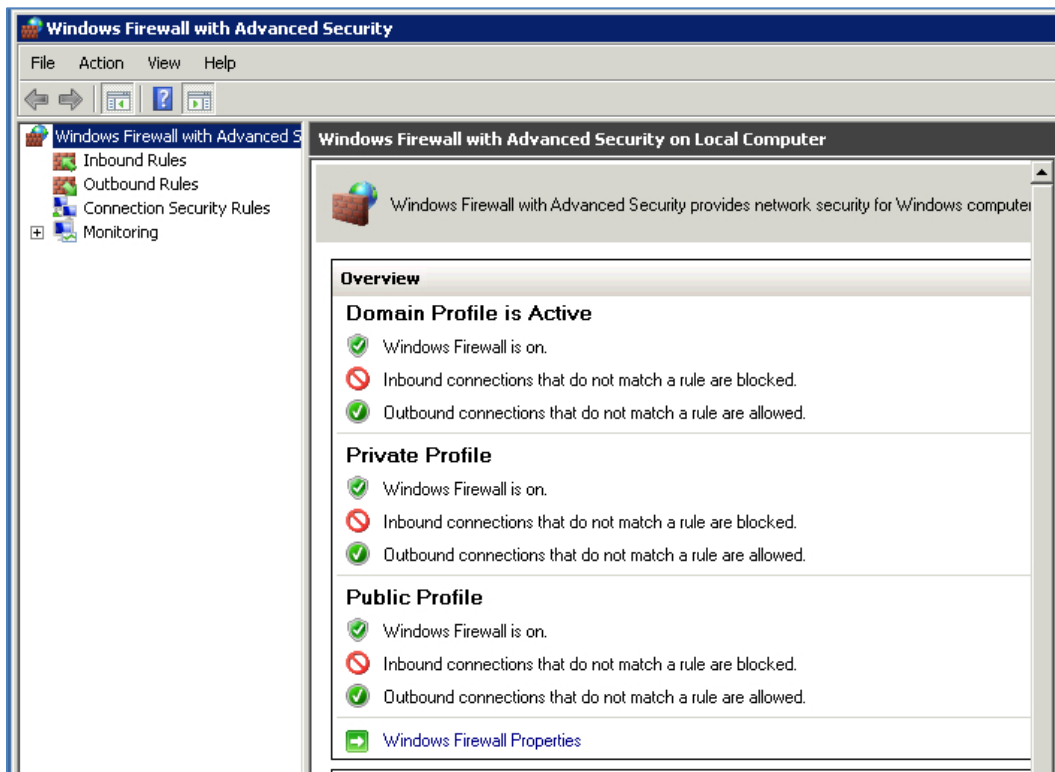   a. **NOTE:** For details regarding the specific firewall, refer to the manufacturer's documentation.

Figure 3: Windows Firewall Enabled

   b. Verify that the Intel required firewall ports, Table 2 below, are enabled, Figure 4 below.

Name	TCP Port
IntelAEPort1	5179
IntelAEPort2	5180
IntelAEPort3	5181
IntelVMLCPort	64550

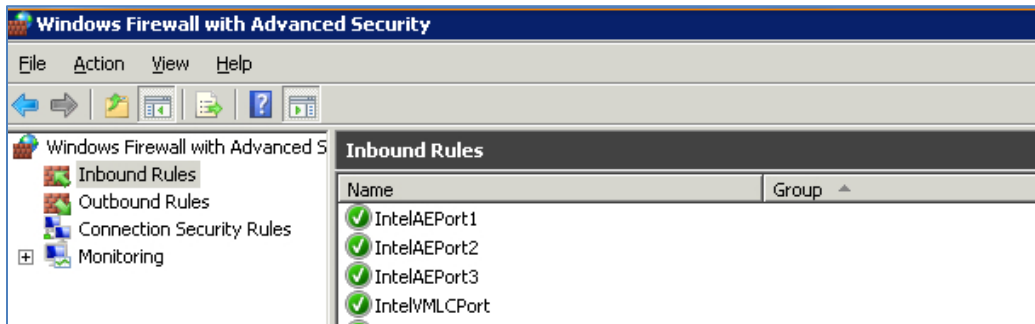Table 2: Intel Required Windows Firewall TCP Ports

Figure 4: Intel Firewall Ports Enabled

4. If the Intel required ports are missing, see Adding Intel required Windows firewall ports.

Adding Intel Required Windows firewall Ports

1. Inside of the Windows* appliance , open a file explorer and navigate to C:\Program Files (x86)\OEM
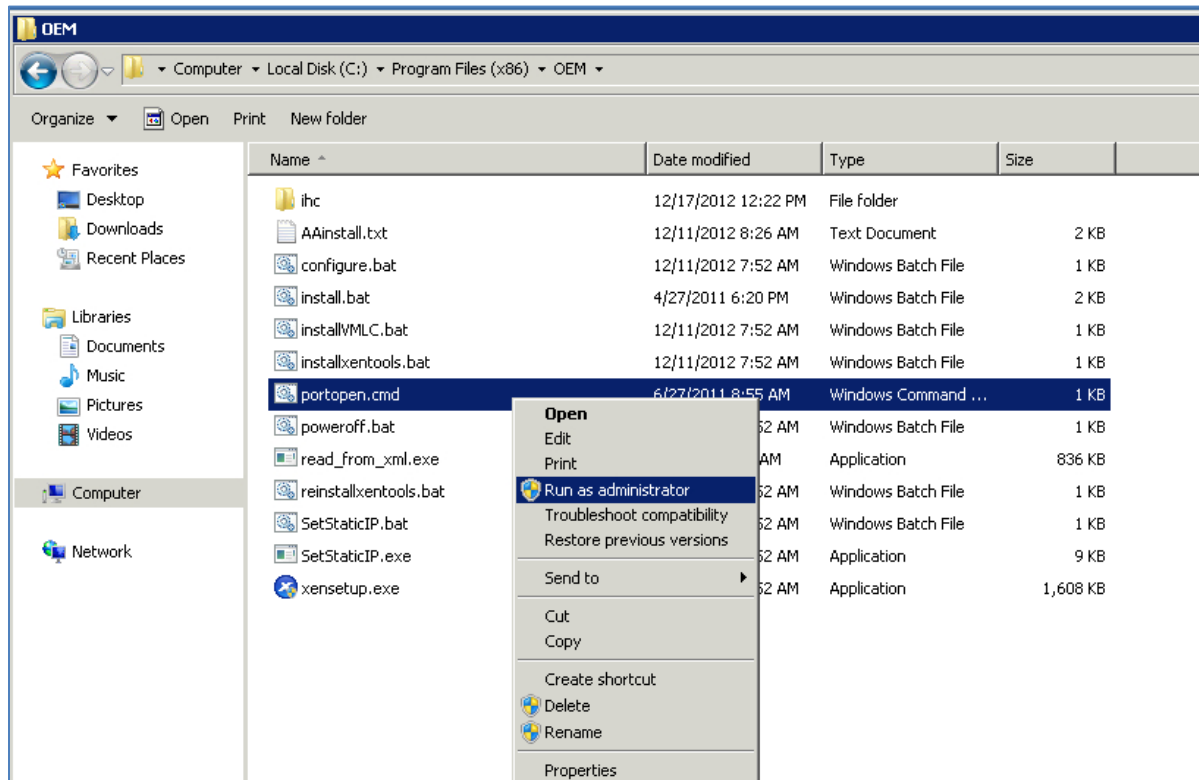2. Right click on the file portopen.cmd and select run as administrator.

Figure 5: portopen.cmd Run as administrator

3. Inside of the Windows* appliance, click on Start, go to Administrative tools then open Windows Firewall with Advanced Security
4. Verify that the Intel required Windows firewall ports were added and are enabled; Table 2 and Figure 4 above.

Check activAeon* & VMLC Agent System Variables

1. Inside of the Windows* appliance, click on Start, right click on Computer and select properties then click on advanced system settings then environment variables
2. Check that the following variables are set under *System variables*. If not, create the following variables
   a. Variable name: activAeon
      i. Variable value: c:\program files (x86)\activAeon\activAeon XA\
   b. Variable name: ihc_software
      i. Variable value: c:\program files (x86)\OEM\ihc

Check activAeon* & VMLC Agent

1. Inside of the Windows* appliance, click on Start, go to Administrative tools then Services

2. Check that the activAeon* and VMLC services, Table 3 or Table 4 below, are "Started", are set for "Automatic" startup, and have the correct "Log On" information.

Windows SBS Appliances			
Name	Startup	Log On As	Description
activAeon XA ACS	Automatic	Local System	Controls activAeon XA MSA and RSP Services.
activAeon XA CMS	Automatic	Local System	
activAeon XA MSA	Automatic	Local System	Collects licensing data for activAeon XA.
activAeon XA RSP	Automatic	Local System	Provides proxy for domain related services.
activAeon XA SUS Agent	Automatic	Local System	System update service account.
activAeon XA SUS Client	Automatic	Local System	System update service client.
vmlcagent	Automatic	NT AUTHORITY\SYSTEM	This service is responsible for communication with Dom0.

Table 3: activAeon & VMLC services SBS Appliances

Non - Windows SBS Appliances			
Name	Startup	Log On As	Description
activAeon XA ACS	Automatic	Local System	Controls activAeon XA MSA and RSP Services.
activAeon XA MSA	Automatic	Local System	Collects licensing data for activAeon XA.
activAeon XA SUS Agent	Automatic	Local System	System update service account.
vmlcagent	Automatic	NT AUTHORITY\SYSTEM	This service is responsible for communication with Dom0.

Table 4: activAeon & VMLC services Non-SBS Appliances

3. If the activAeon and VMLC services are not installed, please Contact Intel Customer Support.
4. If the VMLC service Log On is not "NT AUTHORITY\SYSTEM":
   a. Verify the VMLC Agent version (for a list of VMLC Agent versions see VMLC Versioning).
      i. Inside of the Windows* appliance, Open a command prompt with admin privileges and execute the following commands.
      ii. cd "C:\Program Files (x86)\OEM\ihc"
      iii. more vmlcconfig.yaml

Figure 6: VMLC Agent version

b.   If the version number listed is not 3.2, please Contact Intel Customer Support.

c.   If the version number listed is 3.2:

   i.   Inside of the Windows* appliance, click on Start, go to Administrative tools then open Services.

   ii.   Double click on the vmlcagent to open the properties

   iii.   Click on the Log On tab

   iv.   Select "This account" and enter "NT AUTHORITY\SYSTEM" in the account field. Leave the password fields blank.
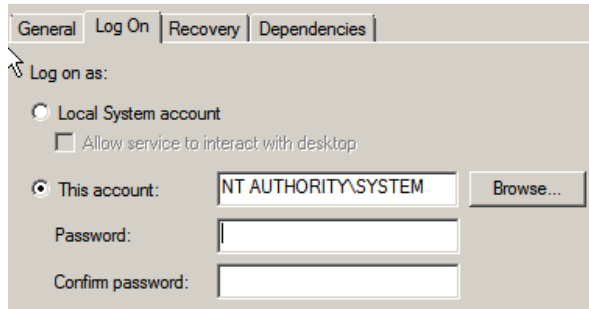

Figure 7: VMLC Agent Service Log On Properties

   v.   Click Ok

   vi.   Stop the VMLC service and then start it (Not restart)

Check activAeon* Version

1.   Inside of the Windows* appliance, Open command prompt with admin privilege and execute the following commands.

2.   cd "C:\Program Files (x86)\activAeon\activAeon XA"

3.   Execute the following from the command line:

   xaReport.exe

4.   Open the Reports folder at C:\Program Files (x86)\activAeon\activAeon XA

5.   Open the xml report. Verify the activAeonVersion = 2.9.650.7.

6.   If the activAeonVersion is not 2.9.650.7, please Contact Intel Customer Support.
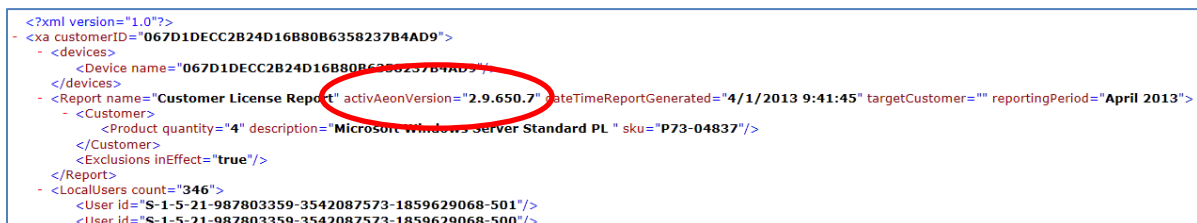

**Figure 8: XML report showing activAeon version 2.9.650.7**

Verification

Initiate Usage Report

1. On the management PC, start a command prompt and initiate a usage reporting using IXE
   a. cd C:\program files (x86)\hybridcloudservermanager\
   b. ixe –h *IHCserverIP* –u admin –p *password* –o initiate-usage-reporting
   c. Wait for Command Successful; it can take up to 10 minutes depending on the number of appliances.
2. If there is an error message stating VMLC agent is not able to report usage then restart the Windows* appliance. If Windows* appliance can't be restarted because it's a production system, try stopping and starting the VMLC & activAeon agents, then try to initiate another report. If error message is not resolved, please Contact Intel Customer Support.

Check Web Management Portal

1. On the management PC, open a web browser and connect to https://hybridcloud.intel.com and login with the MSP ID and password.
2. Click the servers tab then click the no reports tab on the right
3. Enter 0 days and click the filter button
4. Ensure no server is listed. If servers are still listed, repeat from check network connectivity for all the Windows* appliances on that IHC server that are not reporting usage.
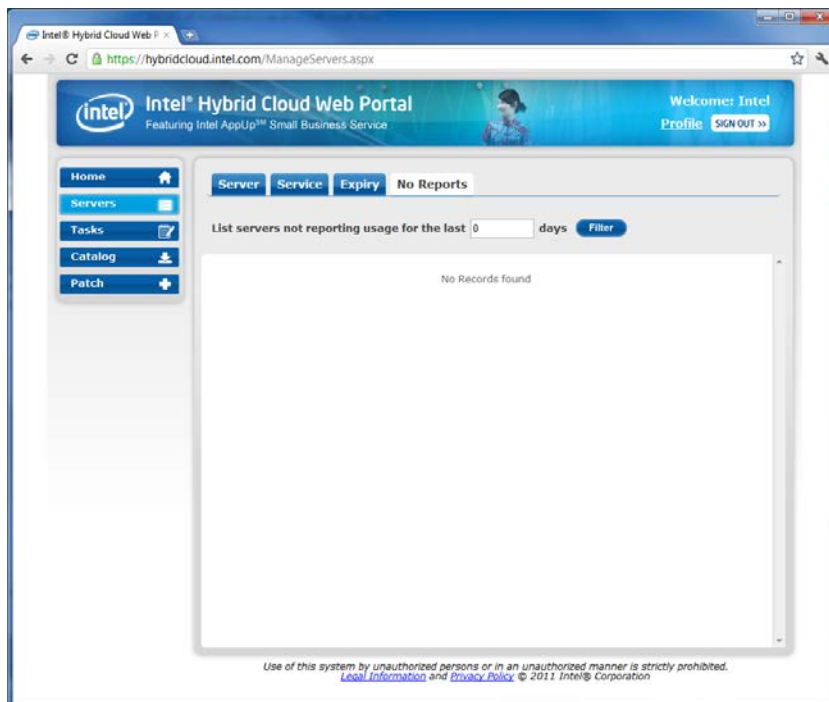
5. End

Linux*

Check network connectivity

1. Connect to Intel® Hybrid Cloud server manager console
2. Verify the appliance is configured on the correct network by navigating to the appliance tab then click on the appliance with the failure and click on the configure tab (remote vs local network)
   a. Configure the network accordingly if necessary
3. Connect to the Linux* based appliance via VNC console and login
4. Type ifconfig and hit enter to check network setting
5. ping the Intel® Hybrid Cloud server management IP. If the appliance is on the local network, ping 192.168.77.1 or the custom local IP of the IHC. If the appliance is on the remote network, ping the remote IP of the IHC
   a. if ping is successful then continue to step 6 else debug appliance network
6. On the management PC, start a command prompt and initiate a usage reporting using IXE
   a. cd C:\program files (x86)\hybridcloudservermanager\
   b. ixe –h serverIP –u admin –p password –o initiate-usage-reporting
   c. Wait for Command Successful, can take up to 5 minutes
7. On management PC, open a web browser and connect to https://hybridcloud.intel.com and login
8. Click the servers tab then click the no reports tab on the right
9. Enter 0 days and click the filter button
10. Ensure no server is listed. If servers are still listed, repeat from step 1 for all Linux* appliances
11. End

Appendix

Contact Intel Customer Support

For technical support, use one of the following options.

Geography	Contact Information	Hours	Holiday Closure - 2012
North America	1-800-404-2284[1] or by e-mail[2] or chat[3]	06:00 to 17:00 (U.S. Pacific Time) Monday-Friday	**U.S. Holidays:** December 25 January 1

[1] Available for Intel® Technology Provider Program partners or MSPs.

[2] E-mail responses are made inside 24-business hours.

[3] Chat is available during business hours for the region selected.

VMLC Versioning

Stack Version	VMLC Version
3.0 - 3.1.2 without VMLC Update	3.1
3.0 - 3.1.2 with VMLC Update	3.2
3.5.x	3.2
3.6.1	3.2
3.7	3.3

activAeon Versioning

Stack Version	ISV	activAeon Version
3.0 - 3.5.x	Microsoft Windows SBS Standard	2.9.650.0
	Microsoft Windows Server	2.9.650.4
	Microsoft Windows SBS Essentials	2.9.650.5
	All Microsoft Windows Server versions	2.9.650.7 (latest release)
3.6.x – 3.7		2.10.920