How to troubleshoot usage reporting issues Intel Hybrid Cloud 3.6.x – 3.7 Platform

Table of Contents

History

Version	Date	Comment
1.0	12/19/2012	Initial draft release
1.1	2/20/2013	Draft revision 1
2.0	3/4/2013	Draft revision 1 edits published as final version.

Applies To

Platform

- Intel® Hybrid Cloud server version 3.6.x - 3.7.

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*
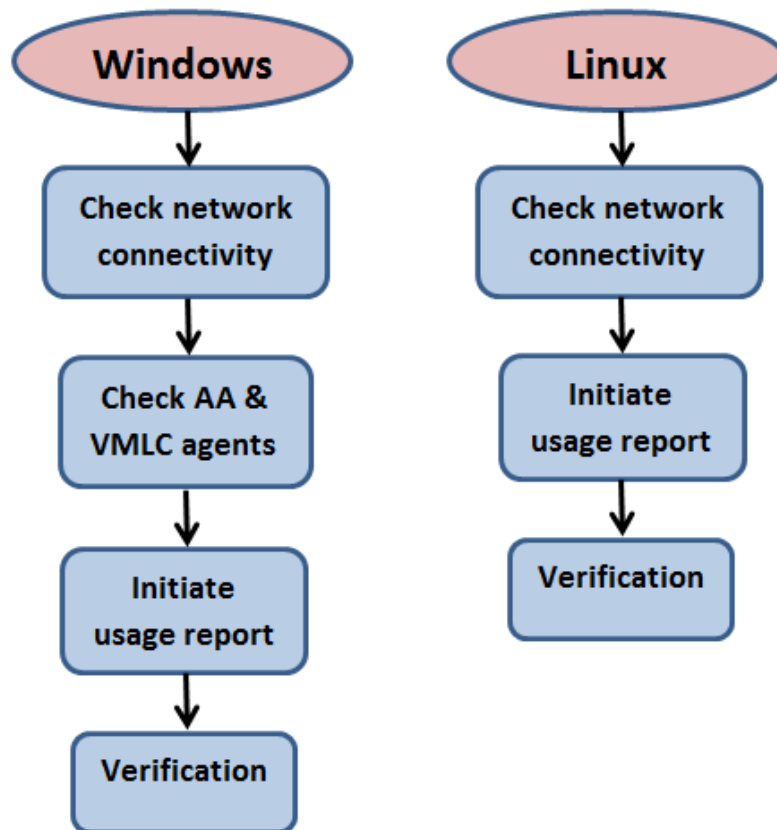- Linux* appliances

Workflow

Figure 1: Workflow diagram

Pre-requisites

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*

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 Check activAeon* & VMLC Agent Services

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

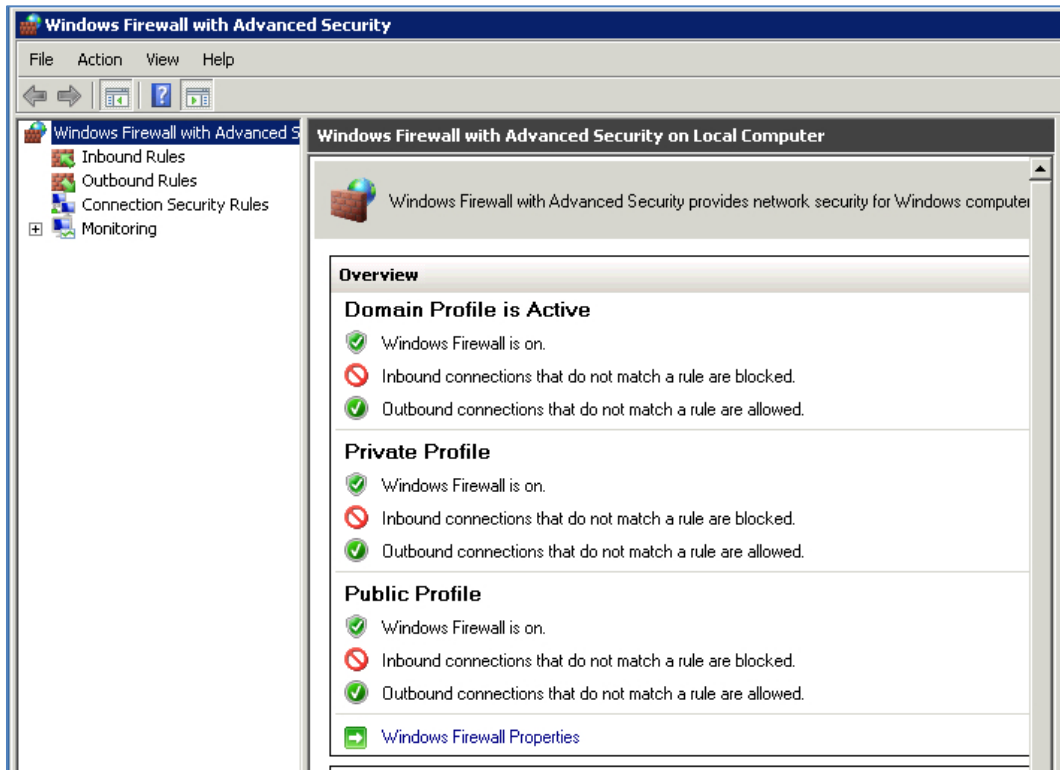   a. **NOTE:** For details regarding the specific firewall, refer to the manufacturer's documentation.

   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

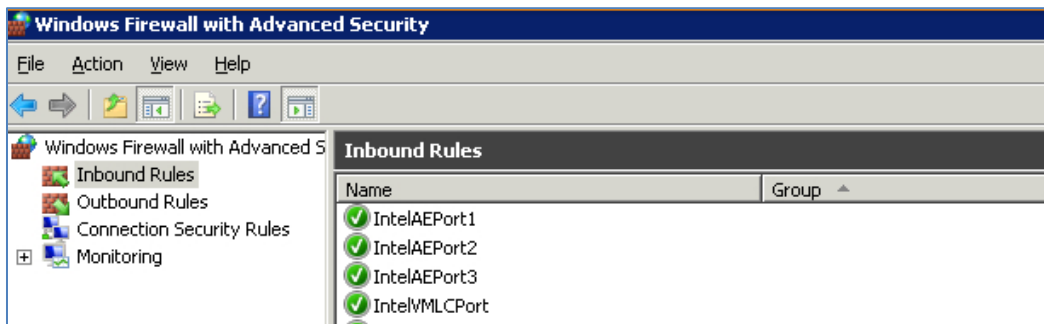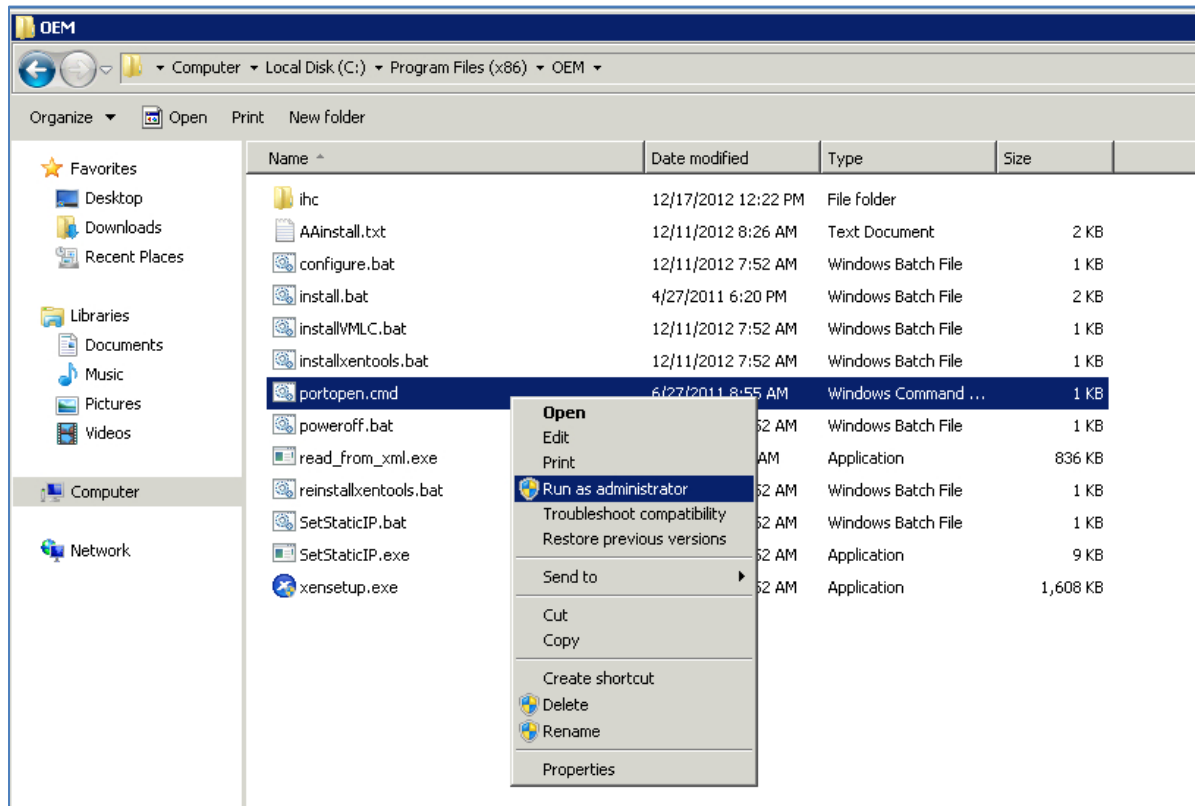Table 2: Intel Required Windows Firewall TCP Ports

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.

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 Services

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
3. From Start, go to Administrative tools then Services
4. Check that the activAeon* and VMLC services, Table 3Table 3 below, are "Started", are setup for "Automatic" startup, and have the correct "Log On" information.

Name	Startup	Log On As	Description

aaupgrade	Automatic	NT AUTHORITY\SYSTEM	This service responsible for copying an AA patch if available from Dom0 to the VM.
activAeon XA Intel Agent	Automatic	Local System	This service is responsible for the usage reporting.
vmlcagent	Automatic	NT AUTHORITY\SYSTEM	This service is responsible for communication with Dom0.

Table 3: activAeon & VMLC services

5. If the activAeon and VMLC services are not installed, please Contact Intel Customer Support.

Check activAeon* Version

1. Inside of the Windows* appliance, click on Start, go to Control Panel then open Programs and Features.
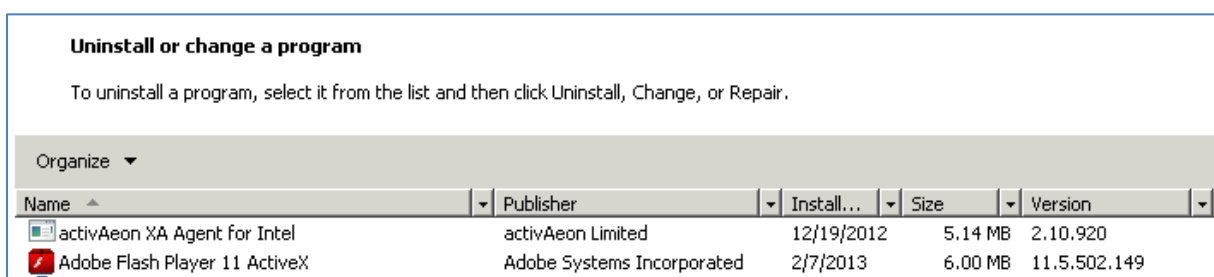2. Verify that the activAeon XA version is 2.10.920 or greater.

**Figure 5: Programs and Features showing activAeon version 2.10.920**

3. If the activAeon XA version is not 2.10.920 or greater, please Contact Intel Customer Support.

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.

Verification

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.
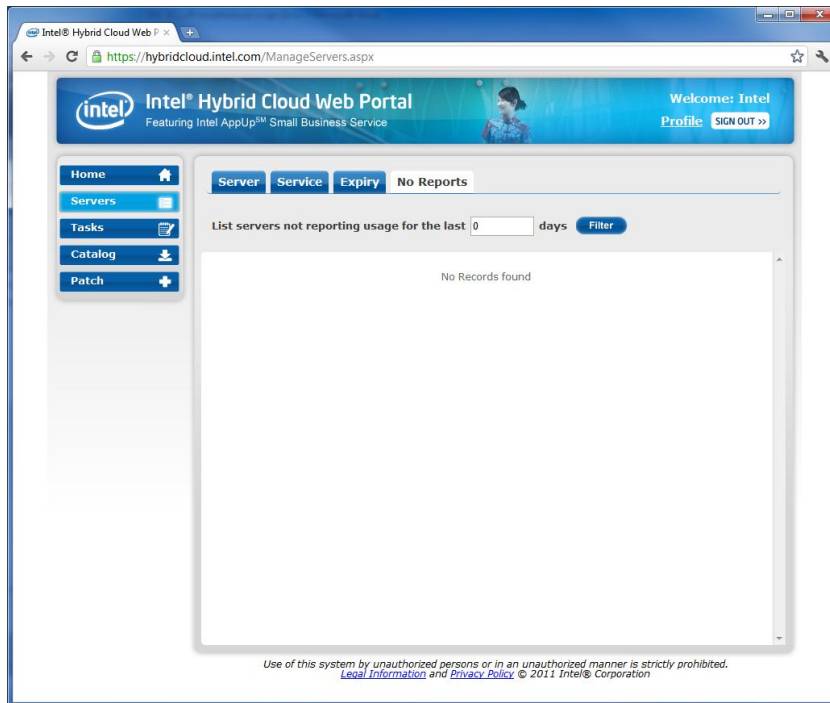
5. End

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
3.1.2	3.1
3.6.1	3.2
3.7	3.3

activAeon Versioning

Stack Version	ISV	activAeon Version
3.1 - 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