Data Gathering 101

For system issues several things are usually always required:

1. IML Integrated Management Log
   Contains server/failure/hardware events with timestamps
2. Survey Revision information – includes – model/bios/hardware/firmware/driver revisions
3. OS Includes software details, configuration and logs
4. Desc Problem Description – this is something that needs to be as precise as possible
   This should include system name/names, error type crash, panic, does not work
   Frequency, what was running at the time of failure and system use.

Optional Logs - by request only

ILO	on request
OA	for blade enclosures – configuration and logs
VC	for virtual connect – dump
VC	for configuration and log
screen shot	

Preferred tool to gather data

OS	IML	Survey	OS rep
Windows	HPSreports	HPSreports/Insite Diag	HPSreports
RH Linux	Smart Start/ILO	Smart Start/Insite Diag	sosreports
Suse/Debian	Smart Start/ILO	Smart Start/Insite Diag	Cfg2html/support-conf
VMware			vm-support

Note

/ = or

Smart start is an offline tool and require the server be down

Insite Diagnostics require they be installed on the server.

A single tool could gather data for one or more areas – HPSreports is an example.

Please provide this data to the Call center when opening your case.

This could greatly reduce your time to resolution.

IML

IML can be obtained by several ways.

1. Offline:
   a. Use the SmartStart CD.
   See section Creating a Survey Report – Offline Method, step 4 in this document.
2. Online:
   a. If the ProLiant Support Pack has been installed, then:
   b. Start -> All Programs -> HP System Tools -> HP ProLiant Integrated Management Log Viewer
   c. You can also collect IML under Insight Diagnostics if you wish

3. Can also be collected via connection to iLO and iLO2:
   a. Log into the iLO/iLO2.
   b. On the "System Status Tab", click on "IML".
   c. Once the log contents are displayed, click anywhere within the displayed log contents.
   d. Enter <CTRL>A (to select "all").
   e. Copy/paste the contents of the log to a file, and save that file to a local disk drive.

iLO/iLO2/iLO3 log collection – NOT collected by HPS Reports
The HP iLO, iLO2, & iLO3 management processor provides multiple ways to configure, update, and operate servers remotely. This is a log that is not collected with HPS Reports.

1. iLO website that has information for all versions:
http://h18013.www1.hp.com/products/servers/management/remotemgmt.html?jumpid=servers/lights-out

2. User guide is available for iLO at the following site (can‟t seem to find it in the website in step 1):
http://h20000.www2.hp.com/bizsupport/TechSupport/DocumentIndex.jsp?lang=en&cc=us&taskId=101&contentType=SupportManual&docIndexId=64255&prodSeriesId=397989&prodTypeId=18964

3. iLO log collection:
   a. Log into the iLO
   b. Click on the „iLO Event Log‟ button.
   c. Click anywhere within the log data.
   d. Pres <CTRL>A (to select „all‟)
   e. Copy/paste the contents of the log to a file, and save that file to a local disk drive.

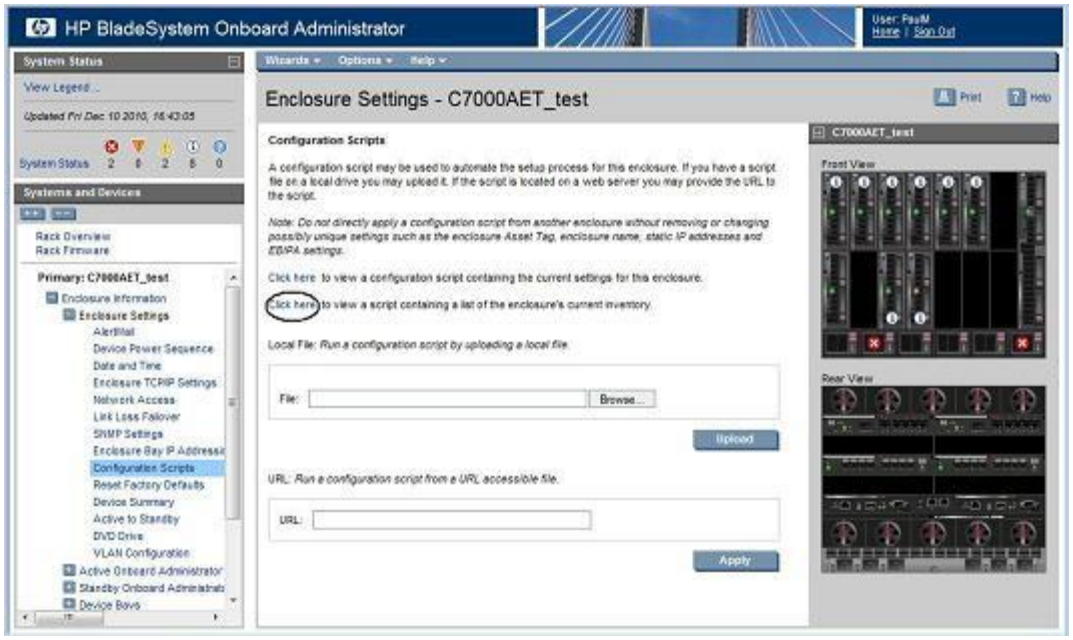
4. iLO2 & iLO3 log collection:
   a. Log into the iLO.
   b. On the System Status page, find the log hyperlink to click on.
   c. Once the log contents are displayed, click anywhere within the displayed log contents.
   d. Enter <CTRL>A (to select "all").
   e. Copy/paste the contents of the log to a file, and save that file to a local disk drive.

Collecting Blade Enclosure OA 'show all'
The following will show how to collect show all via CLI, GUI, or VCSU.

1. From Onboard Administrator CLI:
    a. Open a telnet session to the Onboard Administrator using a terminal emulator (like HyperTerminal or Putty)
    b. Turn on the feature in the terminal emulator that allows you to capture/record the terminal session to a file on the local disk
    c. Log into the Onboard Administrator
    d. Enter "show all" (without the quotes) on the Onboard Administrator command line
    e. The show all output will scroll across the screen, and the output will be captured to the local disk by the terminal emulator

    f. Log out of the Onboard Administrator
    g. Turn off the capture/record feature in the terminal emulator and exit the terminal emulator
    h. Email the terminal session output to HP

2. From Onboard Administrator GUI:
    a. Use a browser to log into the Onboard Administrator
    b. Click on the icon for the Enclosure on the left side of the screen
    c. Click on "Configuration Scripts"
    d. Click the second link under "Scripts"
    e. Save the popup output to a file on the local disk
    f. mail the show all output to HP



Collecting Blade Enclosure Virtual Connect Debug Dump – GUI or CLI

This is a dump the virtual connect gurus may need to look at to help debug problems.

1. GUI method:
    a. Connect to the VCM GUI. If you don"t know what the ip is of the VCM, log into the OA and perform „show vcmode". This will display the following. Use the connect URL.

    >SHOW VCMODE
        Virtual Connect Mode: Enabled
        Virtual Connect URL: http://16.127.99.109/
        Virtual Connect Domain Name: OA-001CC414EAF1_vc_domain

    b. Once VCM GUI comes up, login. Select the tools tab at the top and click on „Export Support Information" in the pull down box. After a few minutes a popup will appear and offer you an extension less file to save. If you don"t see the popup box, you may need to turn off your web browser popup blocker.

2. CLI method:
    a. Download and install the VCSU from the following link. Version at the writing of this document was 1.5.1

http://h20000.www2.hp.com/bizsupport/TechSupport/SoftwareDescription.jsp?swItem=MTX-ccc90a2dc2b2424794d489fd24&lang=en&cc=us&mode=3&

    b. VCSU user"s guide can be downloaded from the following URL. User"s guide does an excellent job of explaining all the commands along with their options.

http://h20000.www2.hp.com/bizsupport/TechSupport/DocumentIndex.jsp?contentType=SupportManual&lang=en&cc=us&docIndexId=64180&taskId=101&prodTypeId=3709945&prodSeriesId=3552695

    c. Execute the following command. You will need the ip address of the OA, OA user with privileges to access all enclosure bays and its associated password, and a VC user with domain privileges along with its associated password.
        i. vcutil -a supportdump -i <OA ip address> -u <OA administrator privileged user> -p <OA password> –vcu <VC domain privileged user> -vcp <VC user password>

        ii. Output of the file will be placed in the VCSU install directory. In the case of a default

        iii. install it would be c:\Program Files\Hewlett-Packard\Virtual Connect Support Utility. The file name will start with vcSupportInfo-OA…….
        Be patient, it can take a few minutes to save the support dump

Collecting Blade Enclosure Virtual Connect Configuration with VCSU

The HP Blade System c-Class Virtual Connect Support Utility enables administrators to upgrade VC-Enet and VC-FC firmware, and to perform other maintenance tasks remotely on both HP Blade System c-Class c7000 and c3000 enclosures using a standalone, Windows-based command line utility.

1. Download and install the VCSU from the following link. Version at the writing of this document was 1.5.1

http://h20000.www2.hp.com/bizsupport/TechSupport/SoftwareDescription.jsp?swItem=MTX-ccc90a2dc2b2424794d489fd24&lang=en&cc=us&mode=3&

2. VCSU user‟s guide can be downloaded from the following URL. User‟s guide does an excellent job of explaining all the commands along with their options.

http://h20000.www2.hp.com/bizsupport/TechSupport/DocumentIndex.jsp?contentType=SupportManual&lang=en&cc=us&docIndexId=64180&taskId=101&prodTypeId=3709945&prodSeriesId=3552695

3. The following command will collect the VC configuration. You will need the ip address of the OA, OA user with privileges to access all enclosure bays and its associated password, and a VC user with domain privileges along with its associated password.

a. vcutil -a configbackup -i <OA ip address> -u <OA administrator privileged user> -p <OA password> –vcu <VC domain privileged user> -vcp <VC user password>

b. Output of the file will be placed in the VCSU install directory. In the case of a default install it would be c:\Program Files\Hewlett-Packard\Virtual Connect Support Utility. The file name will start with vcConfig-OA……

c. *NOTE:* The file is not readable, but can be used to restore the domain configuration.

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Creating a Survey Report – <u>Offline Method</u>

This reporting tool is used for collecting system/diagnostic information from a system that won˚t boot or a system that is running an O/S that does not support running an HPS Report, i.e. Linux, NT4, XP, Vista, etc.. Follow these steps to generate/save a Survey report using a SmartStart CD or the HP Offline Diagnostics CD:

1. If a SmartStart CD or HP Offline Diagnostics CD (for ProLiant 100 series) is not available, iso images can be downloaded from:

- SmartStart (All ProLiant models except for 100 series):

http://h20000.www2.hp.com/bizsupport/TechSupport/DriverDownload.jsp?lang=en&cc=us&prodNameId=344318&taskId=135&prodTypeId=18964&prodSeriesId=345557&lang=en&cc=us&submit=Go%20Â»

Both links are to .iso images for a bootable CD. Burn the .iso file to a CD using Roxio, Nero, etc.

2. Boot from one of the two CD's.
   - Click on "Continue" at the "Select the Language" screen.
   - Agree to the user license on the next screen.

3. If you booted from a SmartStart CD,
   - Select "Maintain Server" on the "SmartStart Home" screen.
   - Select "Diagnose Server" on the "Server Maintenance - Options" screen.
   - Wait while the system identifies the installed hardware.

   a. If you booted from an Offline Diagnostics CD, just wait for the system to identify the installed hardware.
   - The next screen will be positioned on the “Survey” tab.
   - Change the "View Level" setting to "Advanced".
   - For "Categories", select "All".
   - Click on "Save".
   - Specify the device to save the report to (USB key, USB floppy, etc.), enter a file name (leave the file
   - type as .html), and click on the "Save" button.
   - After the file is saved, click on "Exit".

4. After the Survey report is saved, click on the “Logs” tab.
   - Select “Integrated Management Log”.
   - Click on “Save”.
   - Specify the device to save the report to (USB key, USB floppy, etc.), enter a file name (leave the file

     type as .html), and click on the "Save" button.
   - After the file is saved, click on „Exit˚.

Creating a Survey Report – <u>Online Method</u>

1. Information below was pulled from the HP Insight Diagnostics User Guide, fourth edition, 4/2009. The Guide is an excellent reference for the installation and use of Insight in a Windows or Linux environment. Use the following link and then click on „Manuals‟ on the left side of the page to find it:
   - http://h18013.www1.hp.com/products/servers/management/hpid/index.html?jumpid=servers/diags

2. In this case, online, it would probably be easier to have the customer run an HPS Report, but if they are against it or are running Linux, here are the steps. ***NOTE:*** Check the above manual for software requirements. You will need the System Management Homepage and Insight Diagnostics loaded among other software and drivers for the procedures below to work.

3. From a browser to a Windows or Linux system:
   - https://servername:2381
   - Log in to the System Management Homepage. For a Windows system you will likely need an administrator level user, for Linux it will require root privileges.
   - Select the „Webapps‟ tab
   - Under „Other Agents‟, click „Insight Diagnostics‟.
   - On the View Level pull-down, select Advanced
   - On the Category pull-down, select All
   - Save the current information as a text file

4. From the Linux command line:
   - Command is /opt/hp/hpdiags/hpdiags
   - Typical usage:
     – [root@localhost]# /opt/hp/hpdiags/hpdiags -? To output help.
     – [root@ localhost]#/opt/hp/hpdiags/hpdiags –p –v 5 Generate a .txt file with level 5 verbosity as the command is running.

HPS Reports

Created by HP, the report tool performs data collection that queries HP ProLiant and Integrity systems connected to HP SANs. It has a familiar look and feel to the 'classic' Microsoft specialty MPS reports, complimenting them by providing a more HP hardware, HP software, and SAN-centric view. The underlying goal is to collect all pertinent OS and HP specific information needed for troubleshooting. It is not a direct replacement for the Microsoft specialty reports such as SQL, Exchange, Directory Services, IIS, etc.

1. Easy to run, just execute the .exe file and look for the output in the default location of %SystemRoot%\HPSreports\Enhanced\Reports\CAB.

2. Supported environments :
   a. Operating systems: Microsoft Windows 2000, 2003 and 2008.
      NOTE: Microsoft Windows NT4, XP and Vista are not qualified. A warning is displayed if NT 4.0 or XP is detected requiring user confirmation, unless the tool is run silently in a scripted manner.
   b. Platform architecture: x86, X64 and IA64 platforms
   c. There are architecture specific versions of the tool, which are key for collecting data on Integrity Servers and on x64 ProLiant Servers. The classic Microsoft MPS reports do not support these variants, which mean they will only collect data in a 32 bit context which gives incorrect and misleading information from the registry and system files.

3. External website for customer access:
   http://update.external.hp.com/HPS/HPSreports/

SUSE LINUX supportconfig RPM package

Supportconfig is a RPM package that gathers system troubleshooting information and organizes system information to reduce problem resolution time. It serves as a training tool by showing all commands and files used to gather system information. Basic info is collected for SLES8. More comprehensive information is collected for SLES9, SLE10 and OES Linux. The following two websites give install instructions, allow the download of the package, and give troubleshooting examples.

1. http://www.novell.com/communities/node/2332/supportconfig-linux

2. http://www.novell.com/communities/node/4097/basic-server-health-check-supportconfig

Red Hat Linux – sysreport/sosreport

sysreport/sosreport generates a compressed tarball of debugging information for the system it is run on that can be sent to technical support reps that will give them a more complete view of the overall system status.

Note that Red Hat versions 4.5 or earlier used the command sysreport. At version 4.6 it was changed to sosreport. Once run the output of the command will be placed in the /tmp directory as a compressed file.

```
# sosreport
```

cfg2html – Config to HTML Report Collection Script

cfg2html is a UNIX shell script similar to check_config or get_config, except that it creates HTML (and plain ASCII) system documentation. This script will also work on ESX/VMware systems. This script output is often requested by HP GSC/GCC engineers.

1. Overall site for information about the script: http://www.cfg2html.com

VMware collection script - vm-support command

vm-support is a script that creates a tar archive containing debugging information about the server. vm-support has three main uses: gathering general debugging information, gathering performance information, gathering

```
# vm-support -a
```