HP VMware Utilities User Guide
VMware vSphere 5.1 U3 for June 2015

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Contents

1 Introduction

This section provides information about the utilities supported on VMware vSphere 5.1 and updates. The following utilities are supported on VMware vSphere 5.1 and updates host:

- HPONCFG — Command line utility used for obtaining and setting ProLiant iLO configurations.
- HPBOOTCFG — Command line utility used for configuring ProLiant server boot order.
- HPSSACLI – Command line utility used for configuration and diagnostics of ProLiant server SmartArrays.
- HPTESTEVENT— Command line utility used to request the HP Insight Management WBEM providers to generate the Information Test Indication with Provider Name "HP Test" and EventID 1, and the CPQ SNMP test trap with OID 1.3.6.1.4.1.232.11.2.8.1.0.11003.
- CONREP – Command line utility used to capture server configuration information. The configuration data can then be edited. The data can be further used to reset the configuration of the server or to duplicate the configuration on another HP ProLiant server.

Installing offline bundles on an vSphere 5.1 and updates host using vSphere CLI 5.0 esxcli utility

This section provides information about installing the VMware vSphere 5.1 updates offline bundles on the vSphere host. You can use the `esxcli` utility in conjunction with offline bundles or with a depot.

Prerequisites

Install `VMware vSphere Command-Line Interface 5.0`(vSphere CLI) on Microsoft Windows or Linux system. For information about importing or installing the `vSphere CLI 5.0`, see the *VMware vSphere Command-Line Interface Installation and Reference Guide* available at:

http://pubs.vmware.com/vsphere-50/topic/com.vmware.vcli.ref.doc_50/vcli-right.html.

To install the offline bundle on an vSphere host, perform the following steps:

1. Power off any virtual machines that are running on the host, and set the host into maintenance mode.
2. Transfer the bundle onto the vSphere host local path, or extract it onto an online depot.
3. Install the bundle on the vSphere host using any of the following command line:

    - Install remotely from client, with offline bundle available as online depot

      ```
      ~# esxcli -s <server> -u root -p mypassword software vib install
      -d <depotURL/bundle-index.xml>
      ```

    - Install remotely from client, with offline bundle available on vSphere host

      ```
      ~# esxcli -s <server> -u root -p mypassword software vib install
      -d <vSphere local path><bundle.zip>
      ```

    - Install from vSphere host, with offline bundle available on vSphere host

      ```
      ~# esxcli software vib install -d <vSphere local path><bundle.zip>
      ```

4. After the bundle is installed, reboot the vSphere host to initialize the utilities.

Installing offline bundles on an vSphere 5.1 and updates host using VMware vCenter Update Manager

The offline bundle can also be installed from VMware vCenter Update Manager as a patch. For more information and detailed instructions, see the *VMware vCenter Update Manager Administration Guide* available at:

http://pubs.vmware.com/vsphere-50/topic/com.vmware.vsphere.update_manager.doc_50/GUID-F7191592-048B-40C7-A610-CFEE6A790AB0.html.

HPONCFG utility

The HPONCFG utility supports the ProLiant servers that are listed in the vSphere Server Support Matrix. To visit the **vSphere Server Matrix** page, go to vibsdepot.hp.com and under **Support Information** section, select **HP server support matrix** .

HP offers support for the iLO 2, iLO 3 and iLO 4 features available on ProLiant servers with the HPONCFG utility.

HPONCFG is an online configuration tool used to set up and reconfigure iLO 2, iLO3 and iLO 4 without requiring a reboot of the server operating system. The utility runs in a command-line mode and must be executed from an operating system command-line.

Observe the following requirements before using HPONCFG:

- The iLO 2, iLO 3 or iLO 4 Management Interface Driver must be loaded on the server. HPONCFG displays a warning if the driver is not installed.

- HPONCFG requires minimum iLO 2, iLO 3 and iLO 4 firmware versions. To determine the minimum firmware version required, see the *HP SmartStart Scripting Toolkit Linux and Windows Editions Support Matrix*.

For more information on HP Integrated Lights-Out, see:http://www.hp.com/servers/lights-out

HPONCFG command-line syntax

Use the following format at the command line:

```
hponcfg -f filename [-l filename] [-v] [-m minFw] -g [-m minFw] -w
filename [-m minFw] -r [-m minFw ] -h -?
```

The HPONCFG utility can be accessed from the location: /opt/hp/tools.

ⓘ **IMPORTANT:** Because the-w argument does not capture certain types of information, such as the administrator password, data files created with HPONCFG using the-w argument cannot then be used as input files for HPONCFG, unless they are modified first.

Table 1 hponcfg Command Line Arguments

Argument	Function
-a, --all	This argument captures complete Management Processor configuration to the file. This option should be used along with the "-w" option.
-i –input	This argument Get/Set Management Processor Configuration from the XML input received through the standard input stream.
-s,--substitute	This argument substitutes variables present in the input configuration file with the values specified in "namevaluepairs".
-f, - -file=filename	This argument sets the iLO 2, iLO 3 or iLO 4 configuration based on the information in the XML input file named filename.
-l, - -log=filename	This argument logs replies to the text log file named filename.
-v, - -xmlverbose	Writes all the responses from iLO 2, iLO 3 or iLO 4.

Table 1 hponcfg Command Line Arguments *(continued)*

Argument	Function
-g, - -get_hostinfo	This argument returns the host server name and serial number.
-m, - -minfwlevel	This argument indicates to HPONCFG the minimum firmware level that must be present in the management device to execute the RIBCL script. If the minimum level is not met, HPONCFG returns an error without performing any additional actions.
-w, - -writeconfig=filename	This argument writes the iLO 2, iLO 3 or iLO 4 configuration obtained from the device to the XML output file named filename.
-r, - -reset	This argument resets the iLO 2, iLO 3 or iLO 4 to factory defaults.
-h, - -help, - -?	These arguments display simple help messages.

HPONCFG return codes

This section provides description about the return code after running the command.

Table 2 hponcfg return codes

Value	Meaning
-1	`ERROR: A general system error detected while running HPONCFG`
0	Script succeeded.
1	Script failed
2	`ERROR : Unable to shutdown the iLo Channel Interface`
3	Firmware flash is in progress. Please wait for a while.
4	General error detected while checking firmware flash.
5	iLO Lights-Out functionality is Disabled. Please enable Lights-Out functionality before using this `software`. To Enable Lights-Out functionality: Set iLO Security Override Switch to ON and Use iLO ROM-based Setup Utility or iLO Browser interface to enable lights-out functionality.
7	You are not a `root/superuser`. Only `root/superuser` can access the utility.
9	`ERROR: Please specify firmware level as numeric input`
10	Could not get status of the Lights-Out Functionality
13 - 20	`ERROR: Failed to capture the configuration`

If the script itself fails, errors are reported in the log file created by HPONCFG.

HPONCFG command file contents

The `hponcfg` command can be used to perform the following tasks:

- Obtain an entire configuration
- Obtain a specific configuration
- Set a configuration

Obtaining an entire configuration

The `hponcfg` command can be used to obtain an entire configuration from an iLO 2, iLO 3 or iLO 4. In this case, the utility executes from the command line without specification of an input file. The name of the output file is given on the command line. For example:

```
/opt/hp/tools # ./hponcfg -w config.xml
```

In this example, the utility indicated that it obtained the data successfully and wrote it to the output file as requested. The following is a typical example of the contents of the output file:

```
<HPONCFG VERSION="1.1">
<!-Generated 04/15/04 15:20:36->
<MOD_DIR_CONFIG>
<DIR_AUTHENTICATION_ENABLED VALUE="N" />
<DIR_LOCAL_USER_ACCT VALUE="Y" />
<DIR_SERVER_ADDRESS VALUE=""/>
<DIR_SERVER_PORT VALUE="25"/>
<DIR_OBJECT_DN VALUE=" "/>
<DIR_OBJECT_PASSWORD VALUE=""/>
<DIR_USER_CONTEXT_1 VALUE=""/>
<DIR_USER_CONTEXT_2 VALUE="_"/>
<DIR_USER_CONTEXT_3 VALUE=""/>
</MOD_DIR_CONFIG>
<MOD_NETWORK_SETTINGS>
<SPEED_AUTOSELECT VALUE="Y"/>
<NIC_SPEED VALUE="100"/>
<FULL_DUPLEX VALUE="Y"/>
<IP_ADDRESS VALUE="XX.XXX.XXX.XX"/>
<SUBNET_MASK VALUE="xxx.xxx.xxx.x"/>
<GATEWAY_IP_ADDRESS VALUE="XX.XXX.XXX.X"/>
<DNS_NAME VALUE="ILOD234KJ44D002"/>
<PRIM_DNS_SERVER value="xx.xx.x.xxx"/>
<DHCP_ENABLE VALUE="Y"/>
<DOMAIN_NAME VALUE="americas.cpqcorp.net"/>
<DHCP_GATEWAY VALUE="Y"/>
<DHCP_DNS_SERVER VALUE="Y"/>
<DHCP_STATIC_ROUTE VALUE="Y"/>
<DHCP_WINS_SERVER VALUE="Y"/>
<REG_WINS_SERVER VALUE="Y"/>
<PRIM_WINS_SERVER value="xx.xx.x.xxx"/>
<STATIC_ROUTE_1 DEST="0.0.0.0" GATEWAY="0.0.0.0"/>
<STATIC_ROUTE_2 DEST="0.0.0.0" GATEWAY="0.0.0.0"/>
<STATIC_ROUTE_3 DEST="0.0.0.0" GATEWAY="0.0.0.0"/>
</MOD_NETWORK_SETTINGS>
<ADD_USER
USER_NAME="Administrator"
USER_LOGIN="Administrator"
PASSWORD="">
</ADD_USER>
<ADD_USER
USER_NAME="Landy9"
USER_LOGIN="mandy9"
PASSWORD="">
</ADD_USER>
<RESET_RIB VALUE="Y"/>
</HPONCFG>
```

For security reasons, the user passwords are not returned.

Obtaining a specific configuration

A specific configuration can be obtained using the appropriate XML input file. For example, here are the contents of a typical XML input file, `get_global.xml`:

```
<!-- Sample file for Get Global command -->
<RIBCL VERSION="2.0">
<LOGIN USER_LOGIN="x" PASSWORD="x">
<RIB_INFO MODE="read">
<GET_GLOBAL_SETTINGS />
</RIB_INFO>
</LOGIN>
</RIBCL>
```

The XML commands are read from the input file `get_global.xml` and are processed by the device:

`/opt/hp/tools # ./hponcfg -f get_global.xml -l log.txt > output.txt`

The requested information is returned in the log file, which, in this example, is named `log.txt`. The contents of the log file are shown below:

```
<GET_GLOBAL_SETTINGS>
<SESSION_TIMEOUT VALUE="30"/>
<ILO_FUNCT_ENABLED VALUE="Y"/>
<F8_PROMPT_ENABLED VALUE="Y"/>
<REMOTE_CONSOLE_PORT_STATUS VALUE="3"/>
<REMOTE_CONSOLE_ENCRYPTION VALUE="N"/>
<PREFER_TERMINAL_SERVICES VALUE="N"/>
<HTTPS_PORT VALUE="443"/>
<HTTP_PORT VALUE="80"/>
<REMOTE_CONSOLE_PORT VALUE="23"/>
<TERMINAL_SERVICES_PORT VALUE="3389"/>
<VIRTUAL_MEDIA_PORT VALUE="17988"/>
<MIN_PASSWORD VALUE="4"/>
</GET_GLOBAL_SETTINGS>
```

Setting a configuration

A specific configuration can be sent to the iLO 2, iLO 3 or iLO 4 by using the command format:

`/opt/hp/tools # ./hponcfg -f add_user.xml -l log.txt`

In this example, the input file has contents:

```
<!-Add user with minimal privileges to test default setting of assigned privileges to 'N'—>
<RIBCL version="1.2"/>
<LOGIN USER_LOGIN="x" PASSWORD="x">
<USER_INFO MODE="write">
<ADD_USER USER_NAME="Landy9" USER_LOGIN="mandy9"
PASSWORD="floppyshoes">
<RESET_SERVER_PRIV value="Y" />
<ADMIN_PRIV value="Y" />
</ADD_USER>
</USER_INFO>
</LOGIN>
</RIBCL>
```

The specified user will be added to the device.

HPONCFG command-line examples

This section provides sample examples to run the utility.

Table 3 hponcfg command-line examples

Command-line argument	Description
`hponcfg -h`	This argument displays help information.
`hponcfg -g`	This argument returns the host server name and serial number.

To view the command usage options, run the following command:

`/opt/hp/tools # ./hponcfg —h`

All options supported by the command are listed in the output.

To get the host server name and serial number, run the following command:

```
/opt/hp/tools # ./hponcfg —g
```

The following output is displayed:

```
HP Lights-Out Online Configuration utility

Version 4.0-12 (c) Hewlett-Packard Company, 2011
Firmware Revision = 1.30 Device type = iLO 4 Driver name = hpilo
iLO IP Address: x.x.x.x
Host Information:
Server Name: localhost.usa.hp.com
Server Serial Number: x.x.x.x
```

x.x.x.x – As per customer's environment.

To set the minimum firmware level, run the following command:

```
/opt/hp/tools # ./hponcfg —m 2
```

The following output is displayed:

```
    Firmware Revision = 2.05 Device type = iLO 2 Driver name = hpilo
```

HPBOOTCFG utility

The `hpbootcfg` utility supports the ProLiant servers that are listed in the vSphere Server Support Matrix. To visit the **vSphere Server Matrix** page, go to vibsdepot.hp.com and under **Support Information** section, select **HP server support matrix**.

HPBOOTCFG is also supported when the system is booted in UEFI boot mode or Legacy BIOS.

This utility allows an application to set the device for the next subsequent boot of the system except where the option states it is persistent.

HPBOOTCFG command-line syntax

Use the following format at the command line:

```
hpbootcfg [-L -E] [-F -C -H -U] [-S -Q -R -P] [-b]
```

Table 4 hpbootcfg Command Line Arguments

Argument	Function
-L	Sets the persistent boot mode to legacy bios boot mode. **CAUTION:** Installed OS may be boot-mode sensitive. It cannot boot an OS installed in UEFI mode, in legacy mode, and vice versa.
-E	Sets the persistent boot mode to UEFI bios boot mode. **CAUTION:** Installed OS may be boot-mode sensitive. It cannot boot an OS installed in UEFI mode, in legacy mode, and vice versa.
-D	Sets default device as the boot option
-F	Sets Floppy Drive as the first boot device for the system boot
-C	Sets CD-ROM Drive as the first boot device for the system boot
-H	Sets Hard Drive as the first boot device for the system boot
-U	Sets USB as the first boot device for the system boot
-S	Sets system configuration utility as the boot device for the current boot
-Q	Sets quick configuration utility as the boot device for the current boot

Table 4 hpbootcfg Command Line Arguments *(continued)*

Argument	Function
-R	Sets ROM-Based Setup Utility (RBSU) as the boot device for the current boot
-P	Sets PXE client as the boot device for the current boot
-b	Bypasses `F1` / `F2` prompts

HPBOOTCFG ESXCLI syntax

The `hpbootcfg` utility is supported by the `ESXCLI` utility.

To view the command usage options, run the following command:

`# esxcli hpbootcfg`

The following output is displayed:

```
Usage: esxcli hpbootcfg {cmd} [cmd options]
Available Commands:
execute execute — hpbootcfg command with options parameter
help — show hpbootcfg help
show — show current hpbootcfg settings
```

To view the current boot settings, run the following command:

`# esxcli hpbootcfg show`

This System only support BIOS/Legacy boot.

Boot mode: `00 00 Legacy BIOS boot mode`

Boot order: `00 00: Normal Device first, normal boot process`

For UEFI enabled boot mode, following output is displayed:

Boot mode: `01 01 UEFI BIOS boot mode, UEFI optimized boot mode enabled`

Boot order: `00 00: Normal Device first, normal boot process`

To set the command parameter values, use the `"execute"` cmd and one of the options listed in Table 4. The following is an example of the command to set the defaults:

`# esxcli hpbootcfg execute -D`

The following output is displayed:

This System only support BIOS/Legacy boot.

Boot mode: `00 00 Legacy BIOS boot mode`

Boot order: `00 00: Normal Device first, normal boot process`

HPBOOTCFG return codes

This section provides description about the return code after running the command.

Table 5 hpbootcfg return codes

Value	Meaning
0	Indicates success
Non zero	Indicates failure

HPBOOTCFG command-line examples

This section provides sample examples to run the utility.

Table 6 hpbootcfg command-line examples

Command-line argument	Description
`/opt/hp/tools/hpbootcfg -h`	This argument displays help information.
`/opt/hp/tools/hpbootcfg -D`	This argument sets the default values.

HPSSACLI utility

The `HPSSACLI` utility supports HP ProLiant 300/500/700 and Blade servers with integrated SmartArray controllers and option controllers. The utility supports reporting and configuration of the SmartArray. Configuration includes the ability to create arrays; create, expand, and delete logical drives and many other advanced operations. The information provided in the guide is introductory and example focused . For more information, see *Configuring Arrays on HP Smart Array Controllers Reference Guide* available at:http://h20000.www2.hp.com/bc/docs/support/SupportManual/c00729544/c00729544.pdf.

Additional references to *HP Smart Storage Administrator guides and white papers* are available at:

http://h20000.www2.hp.com/bizsupport/TechSupport/DocumentIndex.jsp?lang=en&cc=us&contentType=SupportManual&prodTypeId=18964&prodSeriesId=468780&docIndexId=64179.

HPSSACLI command-line syntax

Using VMware esxcli requires knowledge about the CLI usage. The VMware vSphere command line documentation is available at: http://www.vmware.com/support/developer/vcli/.

The following is an overview of the ESXCLI command-line format:

```
# esxcli {namespace} {object} {command} {cmd options} "command-string"
```

Table 7 HPSSACLI Command-Line Arguments

Argument	Function
esxcli	The `esxcli` application.
namespace	Each plugin must have an associated namespace which defines any environment or other system variables required by the application.
object	A plugin must have one or more associated objects which defines a single operation.
command	Prepares the `esxcli` target to accept a command-line string.
cmd options	Additional switches associated with the command itself (if necessary).
"command-string"	This is the string which dictates the operation that should be executed by the target application itself.

The current namespace and command names are: `hpssacli` and `cmd` respectively. The `{cmd options}` parameter can be `cmdopts` or `-q`. There is no need for an `{object}` type for `hpssacli` since the application operates on internal commands supplied in the `command-string`.

HPSSACLI ESXCLI syntax

The `HPSSACLI` utility is supported by the `ESXCLI` utility.

Use the following command syntax for all commands:

```
# esxcli –server="servername or IP" –user="username" –password="root
password" hpssacli cmd -q "command-string"
```

The `command-string` parameter supports same commands that are specified at the `HPSSACLI` interactive command-line interface.

Example 1 This example shows the information about all the SmartArray controller on the server.

```
esxcli –server="servername or IP" –user="username" –password="root
password" hpssacli cmd -q "controller all show status "
```
The following output is displayed:

```
Smart Array P212 in Slot 9
 Controller Status: OK

Smart Array P410i in Slot 0 (Embedded)
 Controller Status: OK
 Cache Status: OK
 Battery/Capacitor Status: OK
```

Example 2 This example shows the detailed configuration information for the SmartArray controller in slot 0.

```
# esxcli –server="servername or IP" –user="username" –password"root
password" hpssacli cmd -q "controller slot=0 show config detail"
```
The following output is displayed:

```
  Smart Array P410i in Slot 0 (Embedded)
   Bus Interface: PCI
   Slot: 0

   Serial Number: 5001438013A25C90
   Cache Serial Number: PBCDF0CRH0J7SD
   RAID 6 (ADG) Status: Disabled
   Controller Status: OK
   Hardware Revision: C
   Firmware Version: 3.70
   Rebuild Priority: Medium
   Expand Priority: Medium
   Surface Scan Delay: 15 secs
   Surface Scan Mode: Idle
   Queue Depth: Automatic
   Monitor and Performance Delay: 60 min
   Elevator Sort: Enabled
   Degraded Performance Optimization: Disabled
   Inconsistency Repair Policy: Disabled
   Wait for Cache Room: Disabled
   Surface Analysis Inconsistency Notification: Disabled
   Post Prompt Timeout: 0 secs
   Cache Board Present: True
   Cache Status: OK
   Accelerator Ratio: 25% Read / 75% Write
   Drive Write Cache: Disabled
   Total Cache Size: 1024 MB
   Total Cache Memory Available: 912 MB
   No-Battery Write Cache: Disabled
   Cache Backup Power Source: Capacitors
   Battery/Capacitor Count: 1
   Battery/Capacitor Status: OK
   SATA NCQ Supported: True

  Array: A
    Interface Type: SAS
    Unused Space: 0 MB
    Status: OK
    Logical Drive: 1
    Size: 136.7 GB
```

```
Fault Tolerance: RAID 1
Heads: 255
Sectors Per Track: 32
Cylinders: 35132
Strip Size: 256 KB
Full Stripe Size: 256 KB
Status: OK
Array Accelerator: Enabled
Unique Identifier: 600508B1001CB65083D63C5E781ABF65
Disk Name: vmhba2:C0:T0:L1
Mount Points: None
Logical Drive Label: A00D1AF35001438013A25C90F0BA
Mirror Group 0:
physicaldrive 1I:1:1 (port 1I:box 1:bay 1, SAS, 146 GB, OK)
Mirror Group 1:
physicaldrive 1I:1:2 (port 1I:box 1:bay 2, SAS, 146 GB, OK)

physicaldrive 1I:1:1
Port: 1I
Box: 1
Bay: 1
Status: OK
Drive Type: Data Drive
Interface Type: SAS
Size: 146 GB

 Rotational Speed: 10000
 Firmware Revision: HPDE
 Serial Number: 6SD3FJVL0000B145MFXB
 Model: HP      EG0146FAWHU
 Current Temperature (C): 36
 Maximum Temperature (C): 46
 PHY Count: 2
 PHY Transfer Rate: 6.0GBPS, Unknown

 physicaldrive 1I:1:2
 Port: 1I
 Box: 1
 Bay: 2
 Status: OK
 Drive Type: Data Drive
 Interface Type: SAS
 Size: 146 GB
 Rotational Speed: 10000
 Firmware Revision: HPDE
 Serial Number: 6SD3EVBH0000B144Q7RD
 Model: HP      EG0146FAWHU
 Current Temperature (C): 37
 Maximum Temperature (C): 49
 PHY Count: 2
 PHY Transfer Rate: 6.0GBPS, Unknown

unassigned

 physicaldrive 1I:1:3
 Port: 1I
 Box: 1
 Bay: 3
 Status: OK
 Drive Type: Unassigned Drive
 Interface Type: SAS
 Size: 146 GB
 Rotational Speed: 10000
 Firmware Revision: HPDE
 Serial Number: 6SD3FK4A0000B145J6JK
```

```
        Model: HP        EG0146FAWHU
        Current Temperature (C): 37
        Maximum Temperature (C): 48
        PHY Count: 2
        PHY Transfer Rate: 6.0GBPS, Unknown
    ...
```

These examples are not inclusive of all the capabilities of the `HPSSACLI` command. Commands and options for additional operations using the `HPSSACLI`, such as creating a logical drive, are documented in the *Configuring Arrays on HP Smart Array Controllers Reference Guide.*

HPTESTEVENT utility

The `hptestevent` utility allows an application to request, so that the HP Insight Management WBEM Providers generate the Informational Test Indication with ProviderName "HP Test" and EventID 1, and the CPQ SNMP test trap with OID 1.3.6.1.4.1.232.11.2.8.1.0.11003.

The HP Insight Management WBEM Providers must be installed, enabled and running on the system where this utility is executed. The WBEM Providers must be configured to send indications to the listener. VMware SNMP traps must be enabled and configured to use WBEM indications as a source for SNMP traps.

The Informational Test Indication and the CPQ Test SNMP trap will be sent to any listener configured to receive indications from the system.

See the HP Insight Management WBEM Provider Datasheets for information on the test indication, and the SNMP Data Migration Guide for information on the test SNMP trap on the BSC (Business Support Center).

HPTESTEVENT command-line syntax

Use the following format at the command line:

`hptestevent`

`There are no command options for the hptestevent utility.`

HPTESTEVENT ESXCLI syntax

The `hptestevent` utility is supported by the `ESXCLI` utility.

To view the command usage options, run the following command:

`# esxcli hptestevent`

The following output is displayed:

`Usage: esxcli hptestevent {cmd} [cmd options]`

`Available Commands:`

`execute execute the hptestevent command`

To request a test indication and test SNMP trap to be generated, run the following command:

`# esxcli hptestevent execute`

The following output is displayed:

`Request successful. Test event will be generated.`

HPTESTEVENT return codes

This section provides description about the return code after running the command.

Table 8 hptestevent return codes

Value	Meaning
0	Indicates success
1	Request failed. No test event will be generated.
2	Request failed, must be root. No test event will be generated.
3	Request failed, couldn't determine if HP WBEM Providers are installed and running. No test event will be generated.
4	Request failed, HP WBEM Providers are not installed and running. No test event will be generated.

HPTESTEVENT command-line examples

This section provides sample examples to run the utility.

Table 9 hptestevent command-line examples

Command-line	Description
`/opt/hp/tools/hptestevent`	Run command directly on the ESXi host
`esxcli hptestevent execute`	Use esxcli to run the command

HP CONREP utility

The conrep utility reads the state of the system environment settings to determine an HP Proliant server configuration and writes the results to an XML data file. You can edit this file and use it to reset the system configuration on the same server or to duplicate the hardware configuration on another HP ProLiant server.

The utility uses the XML file called hardware definition file to determine what information to retrieve from and restore to the server. You can make a copy of this file and edit the copy to update new features or restrict features when capturing server configurations. The default conrep.xml file contains common hardware configuration settings for the supported HP ProLiant series servers. You can change the default using –x file option.

△ **CAUTION:** Improper modification of the conrep.xml file can result in the loss of critical data. Only experienced users should attempt to modify the file.

The server configuration information is captured in the default conrep.dat data file. This file is an XML data file which contains the actual system configuration retrieved from the ROM-Based Setup Utility (RBSU). You can edit this data file to restore the settings or use –f file option to change the default.

△ **CAUTION:** Improper modification of the conrep.dat file can result in the loss of critical data. Only experienced users should attempt to modify the data files. Because of the potential risk of data loss, take all necessary precautions to ensure that mission-critical systems remain online if a failure occurs.

The utility runs in a command-line mode and must be executed from an operating system command-line and can be accessed from the location: `/opt/hp/tools`. You can also find the default conrep.xml file here.

The conrep utility only supports HP ProLiant 300/400/500/700/800/900 and Blade servers. In addition, all of Proliant 100 series Gen8, Gen9 that are listed in the vSphere Server Support Matrix are supported. To visit the vSphere Server Matrix page, go to www.hp.com/go/vmware and select Certified ProLiant's under Tools/Resource section.

CONREP command-line syntax

```
conrep [-s | -l] [-x hardware_definition_file] [-f
system_configuration_data_file] [-h]
```

Table 10 CONREP command line arguments

Command-line Argument	Description
-s	This argument saves the system configuration to a file.
-l	This argument loads the system configuration from a file and writes it to the target server. If no file specified, default conrep.dat is used.
-x filename	This argument defines the name and location of the XML hardware definition file. . The default file is `/op/hp/tools/conrep.xml`. If conrep is not run from directory `/opt/hp/tools`, this option must be used.
-f filename	This argument defines the name and location of the system configuration data file. The default file is conrep.dat.
-h	This argument displays help information.

Table 11 CONREP return codes

Value	Meaning
0	The command was completed successfully.
1	The hardware definition file (conrep.xml) is not found.
2	The system configuration data file (conrep.dat) is corrupt or not found.
5	The XML hardware definition file (conrep.xml) is corrupt or not appropriate for the current platform.
6	No XML tag defined in hardware definition file.
7	Invalid command line or usage error.
255	General error. See error message for details.

CONREP -s (Store to Data file)

This is an example of usage for HP Proliant servers to extract BIOS settings using the default conrep.xml file and configuration stored in default `conrep.dat` file.

```
/opt/hp/tools # ./conrep –s
conrep 4.0.0.0 - HP Configuration Replication Utility
Copyright (c) 2007-2014 Hewlett-Packard Development Company, L.P.
System Type:ProLiant BL465c Gen8
ROM Date: 11/02/2013
ROM Family : A26
Processor Manufacturer: AMD
XML System Configuration: conrep.xml
Hardware Configuration: conrep.dat
Global Restriction: [3.40]
OK
Platform check:
[ProLiant BL ]match
Saving configuration data to conrep.dat
Conrep Return Code:0
```

Following is an example of usage of conrep tool when run from directory other than /op/hp/tools, using the default files:

```
/vmfs/volumes/mytoolsdir# /opt/hp/tools/conrep –x /opt/hp/tools/conrep.xml –s
conrep 4.0.0.0 - HP Configuration Replication Utility
Copyright (c) 2007-2014 Hewlett-Packard Development Company, L.P.
System Type: ProLiant BL465c Gen8
ROM Date: 11/02/2013
ROM Family : A26
Processor Manufacturer: AMD
XML System Configuration: /op/hp/tools/conrep.xml
Hardware    Configuration: conrep.dat
Global Restriction: [3.40 ]
OK
Platform check:
[ProLiant BL] match
Saving configuration data to conrep.dat
Conrep Return Code: 0
```

The `conrep.dat` is created in `/vmfs/volumes/mytoolsdir`.

Following is an example of usage for HP ProLiant servers to extract the BIOS settings from a BL465 Gen8 server and save the configuration to a "`BL465conrep.dat`" data file:

NOTE: `BL465conrep.xml` is a copy of `/opt/hp/tools/conrep.xml`. Following example shows how to pass non-default file names.

```
/opt/hp/tools # ./conrep -s -x BL465conrep.xml -f BL465conrep.dat
conrep 4.0.0.0 - HP Configuration Replication Utility
Copyright (c) 2007-2014 Hewlett-Packard Development Company, L.P.
System Type: ProLiant BL465c Gen8
ROM Date :11/02/2013
ROM Family : A26
Processor Manufacturer: AMD
XML System Configuration: BL465conrep.xml
Hardware    Configuration: BL465conrep.dat
Global Restriction: [3.40]
OK
Platform check:
[ProLiant BL ] match
Saving configuration data to BL465conrep.dat
Conrep Return Code: 0
```

CONREP –l (Load from Data File)

This is a simple example of usage for HP ProLiant servers to load the BIOS configuration settings from a previously captured/edited default conrep.dat data file to a BL465 Gen8 server.

```
/opt/hp/tools # ./conrep -l
conrep 4.0.0.0 - HP Configuration Replication Utility
Copyright (c) 2007-2014 Hewlett-Packard Development Company, L.P.
System Type: ProLiant BL465c Gen8
ROM Date: 11/02/2013
ROM Family :  A26
Processor Manufacturer: AMD
XML System Configuration: conrep.xml
Hardware Configuration: conrep.dat
Global Restriction: [3.40 ]
OK
Platform check:
[ProLiant BL] match
Loading configuration data from conrep.dat
Conrep Return Code: 0
```

Following is an example of usage for HP ProLiant servers to load the BIOS configuration settings from a previously captured/edited data file (in this case `BL465conrep.dat`) to a BL465 Gen8 server:

```
/opt/hp/tools # ./conrep -l –x BL465conrep.xml -f BL465conrep.dat
conrep 4.0.0.0 - HP Configuration Replication Utility
Copyright (c) 2007-2014 Hewlett-Packard Development Company, L.P.
```

```
System Type:ProLiant BL465c Gen8
ROM Date:11/02/2013
ROM Family :A26
Processor Manufacturer:AMD
XML System Configuration: BL465conrep.xml
Hardware Configuration: BL465conrep.dat
Global Restriction: [3.40]
OK
Platform check:
[ProLiant BL] match
Loading configuration data from BL465conrep.dat
Conrep Return Code: 0
```

CONREP data file sample contents for HP ProLiant servers

The `conrep.dat` file contents the ROM section tags and values. You can view this file using the ROM Based Setup Utility (RBSU). See the *ROM Based Setup Utility User Guide* available at http://www.hp.com.

A sample content of the data file generated by conrep is similar to the following:

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<!--generated by conrep version 4.0.0.0-->
```

```
<Conrep version="4.0.0.0" originating_platform="ProLiant BL460c Gen8"
originating_family="I31" originating_romdate="09/16/2013"
originating_processor_manufacturer="Intel">
```

```
<Section name="IMD_ServerName" helptext="LCD Display name for this
server"><Line0>localhost</Line0></Section>
```

```
<Section name="IPL_Order" helptext="Current Initial ProgramLoad device
boot order."> <Index 0>00 </Index 0><Index 1>02</Index
1><Index2>01</Index 2><Index3>03</Index 3><Index 4>04</Index 4><Index
5>05</Index 5><Index 6>ff</Index 6><Index 7>ff</Index 7><Index
8>ff</Index 8><Index 9>ff</Index 9><Index 10>ff</Index 10><Index
11>ff</Index 11><Index 12>ff</Index 12><Index 13>ff</Index 13><Index
14>ff</Index 14><Index 15>ff</Index 15></Section>
```

```
<Section name="IPL_Order_Size" helptext="Current Initial ProgramLoad
device boot order size."><Size0>06</Size0></Section>
```

```
<Section name="PCI_Devices" helptext="Lists of PCI devices and their
interrupts - not displayed if default values are
set.">EMPTY_DELETE</Section>
```

Generating an ADU report (diagnostics) from within `HPSSACLI` for vSphere 5.1 and updates

The `HPSSACLI` application contains the ability to generate a diagnostic report of the system and its Smart Array storage configuration. The following steps are required in order to obtain an ADU report from a remote machine running vSphere 5.1 and updates.

1. Obtain and install the HP Smart Storage Administrator Diagnostics Utility (HP SSADU) CLI:
   1. Browse to http://www.hp.com
   2. Click on **Support & Drivers**
   3. Select **Drivers & Software**
   4. In the search box, type **HP Smart Storage Administrator Utility**
   5. Select the operating system of the client machine that will be used to remotely access the machine running vSphere 5.1 and updates.
   6. Under the **Software – System Management** menu, proceed to download the **HP Smart Storage Administrator Diagnostics Utility (HP SSADU) CLI** by clicking on the link.

      NOTE: The desired version is 9.x or newer.

   7. Install the Windows component or Linux RPM package onto the client machine.
2. The location where the package has installed the included applications and then update your system path to include this location.
3. The client machine used to access the remote vSphere 5.1 and updates machine must also have the vSphere CLI `esxcli` command line tool installed and must be accessible through the system path. Ensure that the client machine location is included in the path.
4. Use the following tool and associated command-line parameters to perform the creation and retrieval of the report:

```
hpssaduesxi --server=<server_ip_address> --user=<username>
--password=<password> <targetfile.zip>
```

Example Usage:

```
hpssaduesxi --server=10.12.132.5 --user=root --password=root.123
myreport.zip
```

The hpssaduesxi application uses the supplied parameters to remotely obtain the report from your target vSphere 5.1 and updates machine and saves the data into the target zip file. The zip file can then be opened with any third-party zip application or with the `unzip` command under Linux.

The hpssaduesxi application also contains onboard help which can be obtained by typing `hpssaduesxi` with no parameters.

2 Support and other resources

This chapter provides information about the contact details and reference documents.

Contacting HP

This section provides information about the prerequisites to be verified before contacting HP and mechanism supported by the organization for sharing the feedback.

Before you contact HP

Be sure to have the following information available before you call contact HP:

- Technical support registration number (if applicable)
- Product serial number
- Product model name and number
- Product identification number
- Applicable error message
- Add-on boards or hardware
- Third-party hardware or software
- Operating system type and revision level

HP contact information

For the name of the nearest HP authorized reseller:

- See the Contact HP worldwide (in English) webpage (http://welcome.hp.com/country/us/en/wwcontact.html).

For HP technical support:

- In the United States, for contact options see the Contact HP United States webpage (http://welcome.hp.com/country/us/en/contact_us.html). To contact HP by phone:
  - Call 1-800-HP-INVENT (1-800-474-6836). This service is available 24 hours a day, 7 days a week. For continuous quality improvement, calls may be recorded or monitored.
  - If you have purchased a Care Pack (service upgrade), call 1-800-633-3600. For more information about Care Packs, refer to the HP website (http://www.hp.com/hps).
  - In other locations, see the Contact HP worldwide (in English) webpage (http://welcome.hp.com/country/us/en/wwcontact.html).

Subscription service

HP recommends that you register your product at the Subscriber's Choice for Business website: http://www.hp.com/country/us/en/contact_us.html After registering, you will receive email notification of product enhancements, new driver versions, firmware updates, and other product resources.

Documentation feedback

HP welcomes your feedback. To make comments and suggestions about product documentation, send a message to docsfeedback@hp.com. Include the document title and manufacturing part number. All submissions become the property of HP.

Typographic conventions

This document uses the following typographical conventions:

%, $, or #	A percent sign represents the C shell system prompt. A dollar sign represents the system prompt for the Bourne, Korn, and POSIX shells. A number sign represents the superuser prompt.
audit(5)	A manpage. The manpage name is *audit*, and it is located in Section 5.
Command	A command name or qualified command phrase.
Computer output	Text displayed by the computer.
Ctrl+x	A key sequence. A sequence such as **Ctrl+x** indicates that you must hold down the key labeled **Ctrl** while you press another key or mouse button.
ENVIRONMENT VARIABLE	The name of an environment variable, for example, PATH.
ERROR NAME	The name of an error, usually returned in the errno variable.
Key	The name of a keyboard key. **Return** and **Enter** both refer to the same key.
Term	The defined use of an important word or phrase.
User input	Commands and other text that you type.
Variable	The name of a placeholder in a command, function, or other syntax display that you replace with an actual value.
[]	The contents are optional in syntax. If the contents are a list separated by |, you must choose one of the items.
{}	The contents are required in syntax. If the contents are a list separated by |, you must choose one of the items.
…	The preceding element can be repeated an arbitrary number of times.
⧠	Indicates the continuation of a code example.
|	Separates items in a list of choices.
WARNING	A warning calls attention to important information that if not understood or followed will result in personal injury or nonrecoverable system problems.
CAUTION	A caution calls attention to important information that if not understood or followed will result in data loss, data corruption, or damage to hardware or software.
IMPORTANT	This alert provides essential information to explain a concept or to complete a task
NOTE	A note contains additional information to emphasize or supplement important points of the main text.