HP ProLiant iLO Management Interface Driver for Solaris 10 x64/x86 User Guide

April 2008

©Copyright 2008 Hewlett-Packard Development Company, L.P.

Confidential computer software. Valid license from HP required for possession, use or copying. Consistent with FAR 12.211 and 12.2 12, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Microsoft, Windows, and Windows NT are trademarks of Microsoft Corporation in the U.S. and other countries.

Sun and Solaris are registered trademarks of Sun Microsystems, Inc. April 2008

Contents

Introduction 4
Package Format and Contents 4
Package Format 4
Package Contents 4
Functionality 4
Package Installation and Configuration 5
System Requirements 5
Hardware Requirements 5
Software Requirements 5
Package Installation 5
Configuration 7
Add HPQilo to PATH and MANPATH 7
Useful References 7
Package Maintenance 8
Package Removal 8
Package Upgrade 8
Configuration Utilities 9
hponcfg 9
cpqlocfg 9
Examples 9
Terms and Definitions 10

Introduction

This document describes the installation, configuration, functionality, and mainte-nance of the HP ProLiant iLO management interface driver package (HPQilo) for selected HP ProLiant systems running Sun Solaris 10 x64/x86 operating system in 64-bit kernel mode.

Package Format and Contents

Package Format

The HPQilo package is distributed in a compressed tar file and can be extracted using the gunzip(1) and tar(1) utilities on a system running Solaris 10 x64/x86.

Package Contents

The HPQilo package contains:

HP ProLiant iLO Management Interface Driver for Solaris 10 x64/x86 (cpqci(7M)).

- Supporting libraries
- Supporting documentation
- HP Lights-Out Online Configuration Utility (hponcfg)
- HP Lights-Out Remote Configuration Utility (cpqlocfg)
- (release notes, man pages).

Functionality

HP ProLiant iLO Management Interface Driver (also known as channel interface driver) enables communication to the integrated Lights Out Management device from the Operating System. It is through this driver that the rack service is able to communicate with the rack components.

The driver is also necessary for System Management as it is used by the HP Man-agement Agents (HPQhma(5)) and other management tools.

Package Installation and Configuration

System Requirements

The following list of hardware and software requirements are necessary in order to use the HPQilo package:

Hardware Requirements

An HP ProLiant server having iLO controller and listed in the ProLiant – Solaris support matrix.

Software Requirements

Solaris 10 x64/x86 operating system running in 64-bit kernel mode.

Package Installation

Follow the instructions below to install the HPQilo package to a standalone target system.

NOTE: Here, x.y.z is the version number of the package. It should be substituted with the appropriate version when executing the listed commands.

1. Download the HPQilo distribution compressed tar file to a temporary local directory, such as /tmp. The name of the compressed tar file has the form HPQilo-x.y. z-solaris10. i386.tar.gz.

```
$ cd /tmp

$ gunzip HPQilo-x.y.z-solaris10-i386.tar.gz $ tar xvf
HPQilo-x.y.z-solaris10-i386.tar
```

2. Review the license and release notes included in the distribution:

```
$ cd HPQilo-x.y.z-solaris10-i386

$ more LICENSE.HPQilo

$ more RELEASENOTES.HPQilo
```

You must agree to the terms of the license in order to install and use the HPQilo package and its components.

3. Use pkgadd(1M) to install the HPQilo package on to the system (you will need to be root in order to use pkgadd):

IMPORTANT: The HPQilo package must be installed using a BASEDIR of /opt/HPQilo. This is the package default. If your system overrides the default BASEDIR (via, for example, /var/sadm/install/admin/default), you will need to disable this override before running pkgadd.

```
$ su

# pwd

/tmp/HPQilo-x.y. z-solaris10-i386

# pkgadd -d HPQilo-x.y.z-solaris10-i386.pkg
```

During an interactive session, several prompts will appear during installation:

a) The following packages are available:

```
1 HPQilo    HP ProLiant iLO Management Interface Driver
(i386) x.y.z

Select package(s) you wish to process (or 'all' to
process all packages). (default: all) [?,??,q]:
```

Here, select all or the HPQilo package (1).

b)

```
The selected base directory </opt/HPQilo> must exist
before installation is attempted.

Do you want this directory created now [y,n,?,q]
```

Select 'y' to create the base directory.

c)

```
This package contains scripts which will be executed
with super-user permission during the process of
installing this package.

Do you want to continue with the installation of
<HPQilo> [y,n,?]
```

Successful installation of the HPQilo package will display a message similar to the following:

```
HP ProLiant iLO Management Interface Driver

Installation Notes

Please see /opt/HPQilo/RELEASENOTES.HPQilo for more

information on this version of the HP ProLiant iLO Management
Interface Driver package.
```

```
The man pages for this package have been installed in
/opt/HPQilo/share/man/. Please see HPQilo(5).

Installation

The driver will be loaded immediately after installation.

To check whether the driver is loaded properly, type: modinfo

You should see an entry indicating that driver "cpqci" was
loaded. Once installed, the driver will be automatically loaded
every time the server boots.

See also hpqriisd(1M), hmarackd(1M) and hmasm2d(1M).

Installation of <HPQilo> was successful. #
```

Configuration

The HPQilo package and its components do not require any configuration. The following are some optional configuration steps:

Add HPQilo to PATH and MANPATH

The libraries that are part of HPQilo are installed in /opt/HPQilo/lib/, and the associated man pages are installed in /opt/HPQilo/share/man/. To allow easier access to these components, these paths can be added to the PATH and MANPATH environment variables. For example, for s h/k sh/ba s h shells, the following could be added to /etc/profile:

```
MANPATH="${MANPATH}:/opt/HPQilo/share/man"

export MANPATH
```

Useful References

For more information, please consult the following sources:

- Release Notes The release notes for the installed version of HPQilo package are available at /opt/HPQilo/RELEASENOTES.HPQilo. These notes contain information such as the revision history, new features added, obsolete features removed, and a list of known issues.
- man(1) Pages The man pages provided with the HPQilo package include: HPQilo(5), and cpqci(7M). These pages provide detailed information on the HPQilo package and its components.

Package Maintenance

Package Removal

To remove the iLO Management interface driver and the HPQilo package, use pkgrm(1M):

```
$ su

# pkgrm HPQilo
```

pkgrm will remove the package and its components from the system.

Package Upgrade

To upgrade the HPQilo package, first remove the existing version of the package, and then add the desired version of the package:

1) Remove the current package:

```
$ su

# pkgrm HPQilo
```

2) Add the new package, following the steps outlined above in Package Installation.

IMPORTANT: Replacing the HPQilo package without first removing the previously installed HPQilo package is not recommended and may result in undefined behavior.

Configuration Utilities

hponcfg

The HPONCFG utility is an online configuration tool used to set up and configure the iLO and iLO 2 from within the Solaris® operating system 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 using an account with administrator or root access.

This utility is located at /opt/HPQilo/bin.

cpqlocfg

The Lights-Out Configuration Utility (CPQLOCFG) is a Solaris®-based utility that connects to the iLO 2 using a secure connection over the network. RIBCL scripts are passed to the iLO 2 over the secure connection to CPQLOCFG. This utility requires a valid user ID and password with the appropriate privileges.

Cpqlocfg supports all features of iLO 1.80, iLO2 1.00 and later versions.

Please refer to the “HP Integrated Lights-Out Management Processor Scripting and Command Line Resource Guide” for additional information concerning the RIBCL XML format and capabilities.

This utility is located at /opt/HPQilo/bin.

Examples

Example XML files are provided in /opt/HPQilo/xml/examples. These scripts are provided for educational purposes only and are not supported by HP support. Included in these examples is perl script which simulates the capability of cpqlocfg.

Terms and Definitions

iLO	integrated Lights Out
HPQilo	HP ProLiant iLO Management Interface Driver package
cpqci	Channel Interface Driver
HPQsmh	HP System Management Homepage package
HPQhma	HP Management Agents package