Abstract

This paper is about extending single ProLiant Gen8 server configuration settings across multiple servers using an Intelligent Provisioning feature called Deployment Settings. You can save these Deployment Settings on a USB key as a portable package. Deployment Settings allow you to create and edit single server settings. You can deploy the settings to multiple ProLiant Gen8 servers and Gen8 Blade servers using HP iLO Scripting or a USB key. The Intelligent Provisioning Deployment Settings is an easy-to-use Gen8 capability that gives you an alternative to using the HP Scripting Toolkit for Windows and Linux. Deployment Settings lets you avoid configuration and scripting tasks associated with the Scripting Toolkit.

This paper looks at Deployment Settings’ UI access, UI structure, and how you create and use Deployment Settings within Intelligent Provisioning, and the iLO 4 Scripting capability to deploy settings to many servers. Intelligent Provisioning and Deployment Settings are only available with ProLiant Gen8 servers and beyond. To use these tools, iLO 4 v1.10 or later is required.

Server deployment user options

Intelligent Provisioning is the initial configuration and deployment tool for ProLiant Gen8 servers and serves the same purpose that SmartStart did for previous generation servers. You can use Intelligent Provisioning to update the system firmware and drivers from the HP Support Center on hp.com, or through a local repository on your own network. Use the “Firmware Update” feature upon initial setup to ensure you have the latest version of Intelligent Provisioning running. With Intelligent Provisioning, there is no physical medium (DVDs) as there was with SmartStart. Just press F10 to get started during server boot when the prompt appears on the screen.

Intelligent Provisioning builds on proven technology and stores all necessary drivers on the ProLiant Gen8 server motherboard and has access to firmware through the Internet. Intelligent Provisioning provides a user interface with all of the specific tools, drivers, and agents that you need. You can use these tools to setup, deploy and maintain your specific Gen8 server. In the event you need to recover the Intelligent Provisioning capability on the server, recovery media is available by selecting the download tab at: www.hp.com/go/intelligentprovisioning.

Smaller organizations that do not wish to create their own scripts will be particularly interested in using Intelligent Provisioning Deployment Settings to apply specific server configurations to many servers. This capability replaces the use of the Scripting Toolkit for Windows and Linux to apply pre-OS build configuration and subsequent Windows, Linux, or VMware installation. We provide the Scripting Toolkit for more technical users. Intelligent Provisioning’s Deployment Settings GUI incorporates Scripting Toolkit capabilities, giving less technical users similar ability to deploy their server configurations to many servers easily and efficiently. Deployment Settings is an iLO credentials-based system that deploys a prepackaged configuration for easier use by a less technical audience. Intelligent Provisioning Deployment Settings can apply deployments using USB key when only a few servers require updates instead of using scripting and iLO credentials.

It’s important to understand that the Intelligent Provisioning Deployment Settings GUI option and the iLO-based scripting option have different capabilities with regard to creating, editing, and applying deployments, as displayed in Table 1.

Table 1.

<table>
<thead>
<tr>
<th>Method</th>
<th>Create deployment</th>
<th>Edit deployment</th>
<th>Save to USB</th>
<th>Deploy to server</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deployment Settings</td>
<td>✅</td>
<td>✅</td>
<td>✅</td>
<td>✅ Single</td>
</tr>
<tr>
<td>Interactive GUI</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RIBC/XML (iLO Scripting)</td>
<td></td>
<td></td>
<td></td>
<td>✅ Single/Multiple</td>
</tr>
</tbody>
</table>

These capabilities are important to consider when deciding how to administer Intelligent Provisioning Deployment Settings.
Intelligent Provisioning Deployments

You manage ProLiant Gen8 server deployments with the Deployment Settings Editor running in Intelligent Provisioning. You can save and apply Deployment Settings on the server you’re installing and replicate the settings to many servers by saving the settings to a USB key. You can use the USB key or iLO Scripting to deploy one or many Intelligent Provisioning Deployment Settings to other servers (Figure 1).

Figure 1.

Using Deployment Settings to initiate a deployment...

Interactively:

Press F10 during POST

Loads Intelligent Provisioning

Choose “Perform Maintenance” Then “Deployment Settings”

Displays the available deployments

Create a new deployment or select a locally or USB stored deployment

Deployment stored on the system or on USB key

(Deploy) immediately or at next boot

Proceeds unattended to apply settings and deploy

Programmatically:

Start with a RIBCL/XML file that names an available deployment on the system

Customized from the samples provided; deployment must be stored on the system

Utilize the “CP0LOCEG.EXE” utility to address the iLO of the system

Requires a Windows station and iLO credentials; alternatively use Linux Perl examples from hp.com

<APPLY_NOW> directive proceeds immediately or <STAGE> for next boot

Proceeds unattended to apply settings and deploy

Different deployment methods are suitable for the different deployment environments and goals shown in Table 2.

Table 2.

<table>
<thead>
<tr>
<th>Deployment maintenance method</th>
<th>Deployment goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>USB Key</td>
<td>Use a USB key if you want to transfer a deployment manually from one server to one or more additional servers.</td>
</tr>
<tr>
<td>iLO Scripting</td>
<td>Use iLO Scripting if you want to script the deployment to multiple servers. iLO scripting also allows you to automate future maintenance themed deployments.</td>
</tr>
<tr>
<td>HP Systems Insight Manager (HP SIM)</td>
<td>You are still using iLO Scripting, but if you want to send deployments settings to servers that HP SIM has already discovered and manages, this is a convenient deployment method.</td>
</tr>
</tbody>
</table>

Toolkit Scripting is a collection of bash scripting command line tools intended for use in a customer prepared pre-boot environment to perform various tasks. iLO scripting uses RIBCL commands to control the server via iLO.

NOTE: You can read more about iLO Scripting and tools in the “Applying deployments through iLO Scripting” section later in this paper.
Accessing Deployment Settings

To initially create a deployment you must boot into Intelligent Provisioning. When the server boots you see the screen in Figure 2, enter Intelligent Provisioning by pressing the F10 key.

Figure 2:

You will boot into the Intelligent Provisioning main screen. During the manufacture of Gen8 servers we flash the system with the Intelligent Provisioning software. So there is no additional software for you to deploy in order to activate Intelligent Provisioning and Deployment Settings.

Once you’ve entered Intelligent Provisioning, access Deployment Settings by clicking on the Intelligent Provisioning **Perform Maintenance** icon in Figure 3.

Figure 3:
The “Perform Maintenance” options screen shown in Figure 4 displays the range of maintenance activities you can perform. This is where you will find the Deployment Settings feature.

Figure 4:
**Creating and managing deployments**

When you choose “Deployment Settings” from the Intelligent Provisioning “Perform Maintenance” options screen shown in Figure 4, you arrive at the Deployment Settings welcome screen (Figure 5). The options include “Manage” which allows you to create a new customized deployment or manage an existing one, or the option to choose from a set of HP default deployments.

**Figure 5:**

To create a new Deployment Setting or edit an existing one, click **Manage**.

If you want to create a deployment based on default templates, use the second group of choices under the “Create a new collection of deployment settings based on one of the following” section.

Whether you choose “Manage” or select one of the available default templates, the UI opens the “Select a deployment” popup screen shown in Figure 6. “DL380_test_install” deployment was created for the purpose of illustrating the Deployment Setting process. The deployment you see will depend on the name you choose. One advantage of creating Intelligent Provisioning Deployment Settings is that you can create them on a specific server (in this case a DL380); using the GUI but you can apply the settings to any Gen8 server requiring the same settings.
The “Select a Deployment” screen allows you to create a new deployment and edit the settings for existing deployments.

**Figure 6:**

This screen lets you select and manage an existing deployment or create a new one. The available selections are those in the left-hand “Local Server” window, and those appearing in the right-hand “USB Key” window. Whenever you insert a USB key, it should appear in the “Target USB Key” field. Click **Rescan** if you don’t see the desired USB key option. You manage Deployments by selecting a Deployment in either window and clicking an icon. Table 3 lists the tasks you can perform with the available icons.

**Table 3:**

<table>
<thead>
<tr>
<th>Icon</th>
<th>Function</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Left Arrow" /></td>
<td>Copying a deployment to a local server</td>
<td>Click the Copy to local server icon to copy a selected deployment from the attached USB key to a local server.</td>
</tr>
<tr>
<td><img src="image" alt="Right Arrow" /></td>
<td>Copying a deployment to a USB key</td>
<td>Click the Copy to USB key icon to copy a selected deployment from the server to the attached USB key.</td>
</tr>
<tr>
<td><img src="image" alt="Plus Sign" /></td>
<td>Creating a new deployment</td>
<td>Click the Create new deployment icon to create a new deployment on the local server.</td>
</tr>
<tr>
<td><img src="image" alt="Renaming Icon" /></td>
<td>Renaming a deployment</td>
<td>Click the Rename icon to rename the selected deployment. Use only alphanumeric characters and underscores in the deployment name.</td>
</tr>
</tbody>
</table>
Duplicating a deployment  Click the Duplicate icon to duplicate the selected deployment or template.

Deleting a deployment  Click the Delete icon to delete the selected deployment.

Double clicking a deployment under the “local Server heading” takes you to the main Deployment Settings screen where you can begin configuring the settings.

Editing Deployment Settings

The “Deployment Settings” screen (Figure 7) appears after the “Select a Deployment” screen. This is the main screen for the Deployment Settings editor.

Figure 7:

At the top right of the screen, “DL380_test_install” is the name of the Deployment Setting example we’re editing. If you want to manage a specific deployment for your server, use the dropdown window.

This is your first opportunity to apply the deployment you’ve selected in the previous screen. The “Deployment Settings” screen allows you to choose the Deploy button, deploying the selected settings without editing. You can choose the Manage button to return to the previous screen and select another deployment, or create a new one. You can also Save the selected deployment, or Exit without saving your deployment selection.

Table 4 lists possible Deployment Settings that appear on the left side of the screen and what they mean. Clicking a setting displays the editable fields associated with that setting. You can leave these optional fields blank or unchanged.
The Intelligent Provisioning Editor saves setting changes automatically, so you can click between settings without losing data. Clicking **Rescan** refreshes the list of available Deployment Settings.

**Table 4.**

<table>
<thead>
<tr>
<th>Properties</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version Information</td>
<td>Use the User Notes field to enter any type of identifying information you want to assign to the deployment.</td>
</tr>
<tr>
<td>Firmware Update</td>
<td>Choose from where to update the firmware, or enter the URL of the repository.</td>
</tr>
<tr>
<td>Array Configuration</td>
<td>Enter the RAID levels if you prefer to change the default, as well as Stripe Size, Read Cache, and Write Cache.</td>
</tr>
<tr>
<td>Operating System</td>
<td>Select the operating system you are installing and enter the path name of the ISO image to the ftp or smb/cifs share. These fields contain the same data as the Intelligent Provisioning Recommended Install, but are specific to the deployment for future redeployment. Not all source media types are available for every operating system.</td>
</tr>
<tr>
<td>ROM Settings</td>
<td>Reset the ROM settings to default, change the Power Profile or Boot Order, enable SATA RAID, or enable Virtual Install Disk.</td>
</tr>
<tr>
<td>System Options</td>
<td>Contains fields such as Interface language, Keyboard language, and Accept EULA. You can also enable or disable whether the F10 key boots Intelligent Provisioning during POST. This System Options information is also entered in Intelligent Provisioning Preferences, but it does not need to match the Preferences section.</td>
</tr>
</tbody>
</table>

Clicking **Manage** opens the “Select a deployment” popup previously seen in Figure 6. If you do click **Manage** without saving, you lose your notes.

Notice that the screen says “Captured from: Intelligent Provisioning Editor 1.30”. This helps indicate when you’ve successfully created the Deployment.
Firmware Update

This setting (Figure 8) allows you to perform a firmware update. If you select “hp.com” and save this deployment, when you re-launch this deployment on a different server the deployment will automatically initiate a firmware update and it will select “hp.com” as the repository, assuming that the server has internet connections.

Figure 8:

Should you choose to do so, the Intelligent Provisioning User Guide shows you how to create a local repository. You can find the user guide at [www.hp.com/go/intelligentprovisioning](http://www.hp.com/go/intelligentprovisioning)

---

You can set the proxy in the Intelligent Provisioning preferences on the maintenance page
Array Configuration

You have many potential options when performing array configurations. In order to keep the Deployment process straightforward, we kept the adjustments simple. Your Read/write values in Figure 9 should total 100%.

Figure 9:
Operating System

Enter the operating system you are installing and the path name of the ISO image (Figure 10). These fields contain the same data as the Intelligent Provisioning “Recommended Install”. Not all source media types are supported for every operating system.

Figure 10:
The “Operating System” screen (Figure 11) lets you use Windows Share or FTP on your local network.

Figure 11.

For more detailed information regarding network connection configuration, see the Intelligent Provisioning User Guide located at [www.hp.com/go/intelligentprovisioning](http://www.hp.com/go/intelligentprovisioning) (Click on the “HP Intelligent Provisioning Library link”).

**NOTE:** The security-conscious user should be aware that currently there is no encryption for the Window Share password. Those users with security concerns can use FTP since there is no password requirement.
When selecting the “OS media path” (Figure 12), we recommend you click **Browse** to ensure the correct path selection.

**Figure 12:**

![Deployment Settings](image)

The “OS media path” specifies the location of your Windows install. When you define this Deployment Setting, it automatically pulls that ISO over the network and installs the OS using the IP deployment setting. If you do not provide the ISO in a shared location, it means that when a deployment is initiated through Deployment Settings the OS media will need to be present at the server, either in a local drive or through iLO Virtual Media.

The product key is not mandatory. But, if you choose not to enter product key when a product key is required, the OS installation will pause (indefinitely). The installation resumes whenever you enter the product key.

The product key is only required for Windows. VMware installation is similar to the procedure described here, but may require an FTP installation. VMware ESXi allows both Network Share (SMB/CIFS) and FTP.
Remote Support

Remote Support lets you to register the server running the deployment to an Insight Remote server (Figure 13). You enter the local Insight Remote Support server and the server port. This feature requires Insight Remote Support 7.0.5 or later as it works with Gen8 Agentless Management, but does not include Insight Remote Support Advanced or Insight Remote Support Standard.

Figure 13:
ROM Settings

The “Reset to Default Settings First” option (Figure 14) is important if you are re-provisioning a server already in use, and you need to clear or ‘reset’ some or all of the settings. You can elect to revert to the default settings and then apply the new settings. Or, you can keep the settings already on the system and then apply new settings on top of the existing settings. The key here is if you choose “No” (elect not to reset to default), and then every change you make is a modification of the existing settings.

Figure 14:

The remaining ROM Settings options are straightforward:

- The “Power Profile” option lets you to select the power profile of the system. The selections are “Balanced Power and Performance”, “Minimum Power Usage”, or “Maximum Performance”.
- The “Boot Order” option lets you select from 4 x predefined device boot order options. “hd, usb, cdrom, pxe” is a common boot order you might select. There is no ability to create a custom boot order.
- The “Enable SATA RAID” option lets you enable these devices when they are available.
- The “Enable Virtual Install Disk” option installs a virtual USB disk that contains drivers from HP.
System Options

System Options (Figure 15) are settings on the system you are currently deploying. These include:

- Interface Language – Language localization
- Keyboard Language – Keyboard localization
- EULA – Acceptance of the Intelligent Provisioning EULA
- Intelligent Provisioning F10 Key – You can disable the F10 key so you can’t boot into IP environment. In some cases, an administrator might want to lock down the servers so you can’t access IP capabilities.

Figure 15:

It’s important to understand that you don’t have to adjust all of the deployment settings. For example, if all you really care about is firmware updates, click Firmware Updates, and select your repository. Firmware Updates will be the only setting contained in your deployment.

At this point you can click Save and deploy it at a later time, or deploy it immediately. You can also choose Manage to create a new deployment or edit an existing one.

**NOTE:** Typically, you apply ProLiant Gen8 Server Blade settings to other ProLiant Gen 8 Server Blades and ProLiant Gen8 DL or ML server settings to other ProLiant Gen8 DL or ML servers. However, Deployment Settings can be used interchangeably depending on your environment and the number of deployments you want to create.
Applying deployments on servers

When working with Intelligent Provisioning Deployment Settings, you have the option of creating or copying/editing deployments stored on the server or copying a deployment from a USB key. Once stored on the system, it can be used interactively or programmatically for subsequent deployment tasks. Using the Intelligent Provisioning GUI is an effective and easy way of applying the desired deployments on a few systems, but applying a consistent set of deployments across a larger set of systems can be done by distributing or deleting stored deployments through the iLO and the RIBCL/XML command language using the procedures below.

Applying deployments through iLO Scripting

In addition to creating Intelligent Provisioning Deployment Settings for a single server, we can efficiently apply Deployment Settings to one or more servers by using iLO Scripting. We accomplish this by using a web server hosting the deployment and having iLO Scripting replicate the deployment from the web server.

We provide iLO Scripting files in a zipped package containing files with all the Deployment Settings created. This package consists of RIBCL/XML files. Each RIBCL/XML file maps to one of the Deployment Settings and iLO Scripting includes these tools: LOCFG.PL, CPQLOCFG, HPONCFG. We have also included below the individual RIBCL/XML scripts that deal with maintaining Intelligent Provisioning.

RIBCL/XML scripts and configuration tools

Intelligent Provisioning Deployment Settings uses iLO Scripting’s command line environment. You can access the scripting environment by downloading the LOCFG.PL, CPQLOCFG, or HPONCFG scripting utilities from the links in Table 5.

Table 5.

<table>
<thead>
<tr>
<th>Utility</th>
<th>Resource</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPQLOCFG.EXE</td>
<td>HP Lights-Out Configuration Utility</td>
<td>Windows executable utility for connecting to iLO over the network to RIBCL/XML command files.</td>
</tr>
<tr>
<td>HPONCFG.EXE</td>
<td>HP Lights-Out Online Configuration Utility</td>
<td>Windows executable utility for using RIBCL/XML command files directly with the iLO from the parent host (not over the network)</td>
</tr>
<tr>
<td>windows-LOsamplescripts[x.xx.x].zip</td>
<td>HP Lights-Out XML Scripting Sample for Windows</td>
<td>Example RIBCL/XML command files to be used along with CPQLOCFG.EXE or HPONCFG.EXE.</td>
</tr>
<tr>
<td>LOCFG.PL</td>
<td>HP Lights-Out XML Scripting Sample for Linux</td>
<td>LOCFG.PL in the Scripting Sample bundle is a Perl script example for connecting to iLO over the network in place of the Windows CPQLOCFG.EXE utility.</td>
</tr>
</tbody>
</table>

NOTE: Downloads of all of the above are available from www.hp.com/go/ilo

CPQLOCFG Utility

The CPQLOCFG.EXE utility is a Windows command line utility that sends XML configuration and control scripts over the network to iLO. Run this utility manually from a Windows command prompt, or create a batch file to run the same script to many iLO devices. CPQLOCFG also integrates with HP SIM for easy launching of the same script on multiple devices. CPQLOCFG version 4.01 is required for use with iLO firmware version 4.

HPONCFG utility

Use the HPONCFG.EXE utility to send XML configuration and control scripts (the same scripts as CPQLOCFG) from the server host operating system to iLO. HPONCFG has both Windows and Linux versions. One common usage is to run an
HPONCFG script to configure iLO to a standard configuration at the end of your server deployment process. HPONCFG integrates with HP Insight Control server deployment and also runs at the end of an unattended OS installation.

When you run HPONCFG from the host operating system, you must be logged into the host server using an Administrator or root level user account. An iLO user ID and password is not required.

Windows server operating systems also have the HPONCFG_GUI.EXE utility. This utility provides the same basic configuration capabilities as the iLO F8 ROM-RBSU during the server boot-up process.

Version 4.0 of HPONCFG is required for use with the iLO 4 firmware. The HPONCFG utility is an online configuration tool used to set up and configure iLO from within Windows and Linux operating systems without requiring a reboot of the server operating system. HPONCFG provides a limited graphical interface for servers that use Windows operating systems.

HPONCFG is available on Windows, Linux, and VMware. For supported OS versions, see the HP iLO 4 Scripting and Command Line Guide at http://www.hp.com/go/ilo

LOCFG.PL scripting utility
The LOC_CFG.PL scripting utility is a PERL script that provides similar functionality as the CPQLOCFG utility. Run this tool on any client that has a compatible PERL environment (including OpenSSL) installed. This tool uses the same XML scripts as CPQLOCFG input files.

For information on the syntax of the XML data files, see “RIBCL XML Scripting Language” in the HP iLO 4 Scripting and Command Line Guide. To download sample XML scripts from the HP website, go to http://www.hp.com/go/ilo. Sample Scripts are available under “Support & Downloads HP iLO Firmware”. Click “HP iLO 4 Firmware”.

Sample scripts using iLO Scripting
This is the format used to script actions for Intelligent Provisioning Deployment Settings.

Downloading a Deployment to a Server using a Script
Figure 16 displays a sample script used to download a deployment to a server.

Figure 16.

```xml
<RIBCL VERSION="2.2">
    <LOGIN USER_LOGIN="adminname" PASSWORD="password">
        <RIB_INFO MODE="write">
            <PROFILE_DESC_DOWNLOAD>
                <PROFILE_DESC_NAME VALUE="unique_deployment_name"/>
                <PROFILE_NAME VALUE="Human Readable Name"/>
                <PROFILE_DESCRIPTION VALUE="This is a description of the DL380_test_install"/>
                <PROFILE_SCHEMA VALUE="intelligentprovisioning.1.0.0"/>
                <BLOB_NAMESPACE VALUE="perm"/>
                <BLOB_NAME VALUE="unique_deployment_name"/>
                <PROFILE_URL VALUE="http://depot/deployments/w2008"/>
            </PROFILE_DESC_DOWNLOAD>
            </RIB_INFO>
        </LOGIN>
    </RIBCL>
```

The following are the required elements of the script:

- **PROFILE_DESC_NAME** is a unique identifier used to differentiate various Deployments. It must be less than or equal to 27 characters and consist of only alphanumeric characters and the underscore ("_") character. It may not contain spaces, dots, or slashes and may not be an empty string.

- **PROFILE_NAME** and **PROFILE_DESCRIPTION** are user-definable strings that may consist of any text allowable by iLO Scripting guidelines. For iLO 4 1.20, maximum length is 512 characters of free-form text.

- **PROFILE_SCHEMA** is the schema for which this script is compliant. The value should always be intelligentprovisioning.1.0.0. Empty strings are invalid.

- **BLOB_NAMESPACE** must always be "perm"
- **BLOB_NAME** may be a unique name on a server less than or equal to 31 characters. It is recommended that this be the same value as **PROFILE_DESC_NAME**.
- **PROFILE_URL** is the URL from which iLO will attempt to download the profile for local storage if **BLOB_NAMESPACE** and **BLOB_NAME** are not used.

### Listing Available Deployments on a Server using a Script

Figure 17 shows an example script listing available deployments on a server.

**Figure 17.**

```xml
<?xml version="1.0"?>
<!-- RIBCL Sample Script for HP Lights-Out Products -->
<!--Copyright (c) 2012 Hewlett-Packard Development Company, L.P. -->
<!-- Description: This is a sample XML script to list all the -->
<!-- Profile Descriptors and the data stored in the -->
<!-- Profile Descriptor. -->
<!-- NOTE: You will need to replace the USER_LOGIN and PASSWORD -->
<!-- with values that are appropriate for your -->
<!-- environment. -->
<!-- Use CPQLOCFG.EXE ver 4.01 or greater with this script. -->
<!-- See "HP Integrated Lights-Out Management Processor -->
<!-- Scripting and Command Line Resource Guide" for more -->
<!-- information on scripting and the syntax of the RIBCL -->
<!-- XML. -->
<!-- Firmware support information for this script: -->
<!-- iLO 4 - version 1.10 or later -->
<!-- iLO 3 - None. -->
<!-- iLO 2 - None. -->
<!-- RIBCL VERSION="2.2">
  <LOGIN USER_LOGIN="username" PASSWORD="password">
    <RIB_INFO MODE="read">
      <PROFILE_LIST/>
    </RIB_INFO>
  </LOGIN>
</RIBCL>
```

**NOTE:** When running the "profile_list" command, a high number of stored profile descriptors may cause a delay as the data is gathered and returned.

### Applying A Deployment using a Script

Figure 18 shows an example script applying a deployment to a server.

**Figure 18.**

```xml
<?xml version="1.0"?>
<!-- RIBCL Sample Script for HP Lights-Out Products -->
<!--Copyright (c) 2012 Hewlett-Packard Development Company, L.P. -->
<?xml version="1.0"?>
<!-- RIBCL Sample Script for HP Lights-Out Products -->
<!--Copyright (c) 2012 Hewlett-Packard Development Company, L.P. -->
<!-- Description: This is a sample XML script to apply the -->
<!-- Profile Descriptor. -->
<!-- NOTE: You will need to replace the USER_LOGIN and PASSWORD -->
<!-- with values that are appropriate for your -->
<!-- environment. -->
<!-- Use CPQLOCFG.EXE ver 4.01 or greater with this script. -->
<!-- See "HP Integrated Lights-Out Management Processor -->
<!-- Scripting and Command Line Resource Guide" for more -->
```
NOTE: The "descriptor" name used in the applying a deployment should be same as the name specified in downloading the deployment to the server.

Checking Apply Results using a Script

Figure 19 shows an example script checking a server deployment application.

Figure 19.
Deleting a deployment using a Script

Figure 20 shows an example script that deletes a server deployment.

Creating custom scripting tools through HP SIM

You can and deploy the iLO scripts by creating a custom tool in HP SIM. Use these steps in HP SIM to create a custom tool:

1. Go to Tools→Custom Tools→New Custom tool
2. Select CMS tool.
3. In next page, give a tool name and other details. In the text box “Command with parameters” give the command (the absolute file path of the iLO script file which needs to be executed along with any parameters which are needed by the script file).
4. Click OK and the tool will be created. You can see the tool created in the table. Select the tool and click Run now/Schedule.
5. In the “Verify target Systems” page select the iLO on which you want to deploy the script and click Run Now.

Incorporating the CPQLOCFG tool through HP SIM custom tools

1. Copy cpqlocfg and cpqlocfg sample scripts to HPSIM server at c:\cpqlocfg
2. Create a Custom Tool with the following:
   - Name of tool: Get_UID_STATUS
   - Description: Get_UID_STATUS
– Help: cpqlocfg /?
– Menu placement: Tools|Custom Tools|iLO
– Special User
– unlimited number of targets.
– Command with parameters: c:\cpqlocfg\cpqlocfg -f c:\cpqlocfg\Get_UID_Status.xml -u admin -p password
3. Run the custom tool by selecting the iLO in the “Verify target systems” page.

**Summary**

Deployment Settings is an important new Intelligent Provisioning feature for ProLiant Gen8 servers and server blades allowing you to create and edit individual or groups of configuration settings. You can create single server configuration information, save the settings, and deploy them to multiple servers remotely using either iLO Scripting with iLO or using an USB key for portability.

You manage ProLiant Gen8 server deployments with Intelligent Provisioning’s Deployment Settings Editor. You can use the iLO Scripting with iLO 4 command line environment to distribute server Deployment Settings across multiple servers.

Deployment Settings are simple to use. With Intelligent Provisioning Deployment Settings, you get server configuration deployment capabilities similar to those found in Scripting Toolkit for Windows and Linux, without knowledge of bash and/or cmd scripting. When the server boots, you enter the Intelligent Provisioning environment by clicking the F10 key. You create the Deployment Setting using the Intelligent Provisioning GUI which incorporates Scripting Toolkit capabilities but removes the complexity. When you have completed the Deployment Settings, use iLO Scripting or a USB key to apply/distribute them to multiple servers. There is no additional software for you deploy in order to activate Intelligent Provisioning and Deployment Settings.
For more information

Visit the URLs listed below if you need additional information.

<table>
<thead>
<tr>
<th>Resource description</th>
<th>Web address</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP Intelligent Provisioning</td>
<td><a href="http://www.hp.com/go/intelligentprovisioning">www.hp.com/go/intelligentprovisioning</a></td>
</tr>
<tr>
<td>The Intelligent Provisioning User Guide</td>
<td><a href="http://www.hp.com/go/intelligentprovisioning">www.hp.com/go/intelligentprovisioning</a></td>
</tr>
<tr>
<td></td>
<td>(Click on the HP Intelligent Provisioning Library link)</td>
</tr>
<tr>
<td>HP iLO</td>
<td><a href="http://www.hp.com/go/iLO">http://www.hp.com/go/iLO</a></td>
</tr>
<tr>
<td>HP ProLiant main page</td>
<td><a href="http://www.hp.com/go/proliant">http://www.hp.com/go/proliant</a></td>
</tr>
<tr>
<td>HP ProLiant Technical Whitepapers</td>
<td><a href="http://www.hp.com/servers/technology">http://www.hp.com/servers/technology</a></td>
</tr>
</tbody>
</table>

Send comments about this paper to TechCom@HP.com

Follow us on Twitter: http://twitter.com/ISSGeekatHP

Get connected

hp.com/go/getconnected

Current HP driver, support, and security alerts delivered directly to your desktop

© Copyright 2013 Hewlett-Packard Development Company, L.P. 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.

TC1301958, Created January 2013