^eGENESYS[™]

Factory Image Restoration Procedures

Technical Reference

Interaction Application Server Interaction Media Server[™] Appliance (HP ProLiant Gen10)

Version 2018 R4

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Abstract

This document describes the procedures required to restore the factory image (operating system and any PureConnect software) using the Interaction Recovery Environment from a USB flash drive embedded inside the system.

DC-900-4.0-RESTPROC-05

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About factory image restoration procedures

This document describes how to restore packaged server devices to factory default settings using Interaction Recovery software stored on a USB drive embedded in the server case. This internal USB flash drive replaces System Recovery discs previously distributed for this purpose. Bundling USB media inside the system ensures that the software is always available for recovering the system.

Several situations can impact the need to restore factory defaults. For example, when you want to start with a clean software configuration before repurposing or extensively overhauling the configuration of a server. Or, after replacing hard drives or when PureConnect Customer Care instructs you to.

Back up your license files before recovering the server. You can also make copies of logs and recordings before recovering, when pertinent to a support case.

Packaged servers available for factory image restoration

The Factory Image Restoration procedures outlined in this document are available for the following packaged servers:

Packaged server	Part number
Interaction Application Server 360 Medium Gen10	TH-900-4.0-HPIAS36010M
Interaction Application Server 360 Large Gen10	TH-900-4.0-HPIAS36010L
Interaction Application Server 380 Gen10	TH-900-4.0-HPIAS38010
Interaction Media Server Small Appliance Gen10	SY-014-4.0-MSAS10
Interaction Media Server Medium Appliance Gen10	SY-014-4.0-MSAM10
Interaction Media Server Large Appliance Gen10	SY-014-4.0-MSAL10

Additional information

For more information about Factory Image Restoration Procedures and related packaged servers, see the documents and website pages listed in this section.

PureConnect Documentation Library

The PureConnect Documentation Library merges all help systems and documentation installed on the CIC server into a single searchable unit. You can view or search the entire documentation set for a document title, topic, term, or keyword.

Factory Image Restoration Procedures and related packaged server installation and configuration guides are in the **Packaged Hardware Documents** section of the PureConnect Documentation Library at: <u>https://help.genesys.com/cic/mergedProjects/wh_ps/desktop/introduction_packagedhardware.htm</u>.

PureConnect Testlab site

The PureConnect Testlab site at: <u>http://testlab.inin.com/</u> is a resource for tracking hardware and software components that Genesys tested, approved, and recommended for use with PureConnect products.

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Recovery tasks

Recovering factory default settings involves three tasks:

- 1. Confirm the device's RAID configuration matches the factory settings. This task is important if you replaced drives.
- 2. If necessary, delete and redefine the disk array configuration.
- 3. Restore factory defaults by running the Interaction Recovery tool. To perform this task, you can perform a one-time startup override or modify the BIOS start sequence to boot from the internal USB drive instead of RAID.

Procedures for each task follow. All procedures apply to **Gen10 platforms** only. To obtain hardware specifications for your packaged server, contact <u>HardwareQuotes@genesys.com</u>.

Verify RAID configuration

Before you reimage a server, ensure that the server's RAID configuration matches the default configuration required to restore factory settings.

- HPE ProLiant **Hewlett Packard** Enterprise (C) Copyright 1982-2018 Hewlett Packard Enterprise Development LP HPE ProLiant DL360 Gen10 System ROM Version: U32 v1.32 (02/01/2018) Serial Number: Installed System Memory: 32 GB, Available System Memory: 32 GB 2 Processor(s) detected, 16 total cores enabled, Hyperthreading is enabled Proc 1: Intel(R) Xeon(R) Silver 4110 CPU @ 2.106Hz Proc 2: Intel(R) Xeon(R) Silver 4110 CPU @ 2.106Hz UPI Speed: 9.6 GT/s Workload Profile: Custom Power Regulator Mode: Static High Performance Advanced Memory Protection Mode: Advanced ECC Support Boot Mode: UEFI $\ensuremath{\mathsf{HPE}}$ SmartMemory authenticated in all populated DIMM slots. Starting required devices. Please wait, this may take a few moments.... System configuration has changed. Starting all devices. Please wait.... iLO 5 IPv4: iL0 5 IPv6: FE80::9AF2:B3FF:FE21:AAF4 IPE REST F9 System Utilities (F10) Intelligent Provisioning (F11) Boot Menu (F12) Network Boot
- 1. Start the device. The HP ProLiant Power-On Self-Test (POST) begins.

- 2. Press F9. The System Utilities menu appears.
- 3. Click System Configuration (see System Utilities Menu in Appendix A).
- 4. On the System Configuration menu, select the appropriate disk controller:

360 Gen10: HP Smart Array P408i-a Controller

380 Gen10: Smart Array P408i Controller

- 5. Click **Exit** and then start HP Smart Storage Administrator (HPSSA).
- Select HP Smart Storage Administrator (see <u>Select HP Smart Storage Administrator</u> in Appendix A.)
- 7. After the HP Smart Storage Administrator loads, click the appropriate array controller in the left pane (see <u>Select Smart Array Controller</u> in Appendix A):

360 Gen10: Smart Array P408i-a

380 Gen10: Smart Array P408i

- 8. Under Actions, select Configure.
- 9. In the left pane, under **Controller Devices** click **Logical Devices**. (see <u>Verify RAID Configuration</u> in Appendix A.)
- 10. Verify that the RAID configuration matches the settings required for the device, according to your server's configuration requirements listed in the table below.

Device Type	RAID Configuration Re	quirements
Interaction Application Server	Based on your server model, verify the existence of the logical drive on the device. If the required logical drive exists, and the status is OK, no further configuration is necessary. Proceed to Restore Factory Defaults .	
	If the required logical of not OK, delete the curr to Delete and redefine	Irive configuration does not exist, or the status is ent array configuration and recreate it. Proceed array configuration.
	Model	RAID Configuration
	360 Gen10 Medium	Single RAID 1+0 logical drive, consisting of 4 HDDs
	360 Gen10 Large	Single RAID 1+0 logical drive, consisting of 4 HDDs
	380 Gen10	Single RAID 1+0 logical drive, consisting of 8 HDDs
Interaction Media Server™	Based on your server n the device. If the requi further configuration is Defaults .	nodel, verify the existence of the logical drive on red logical drive exists, and the status is OK, no s necessary. Proceed to Restore Factory
	If the required logical of not OK, delete the curr to Delete and redefine	Irive configuration does not exist, or the status is ent array configuration and recreate it. Proceed array configuration.

Device Type	RAID Configuration Requirements		
	Model	RAID Configuration	
	360 Gen10 Small	Single RAID 1 logical drive, consisting of 2 HDDs	
	360 Gen10 Medium	Single RAID 1+0 logical drive, consisting of 4 HDDs	
	360 Gen10 Large	Single RAID 1+0 logical drive, consisting of 4 HDDs	

Delete and redefine array configuration

You can delete and redefine an existing RAID because its configuration is invalid or does not match required settings.

Delete the drive arrays

- 1. Open the HP Smart Storage Administrator and select the appropriate array controller.
- 2. Under Actions, select Clear Configuration.
- 3. Review the warning and click **Clear** to confirm.

Note: Once you confirm the clear operation, the system removes all data from the logical drive. You cannot recover data after this operation.

- 4. When the controller configuration clears, click **Finish**.
- 5. Repeat the procedure to delete all drive arrays.

Redefine the arrays

After deleting all arrays, you can redefine them.

- 1. Under Actions select Create Array.
- 2. Follow the steps in the table below, using the configuration requirements for your particular server, to recreate the array configuration required by the device.

Device Type	RAID Configuration Ste	ps
Interaction Application	Recreate logical drives to match the RAID configuration for the mode are using:	
Server	Model	RAID Configuration
	360 Gen10 Medium	Single RAID 1+0 logical drive, consisting of 4 HDDs
	360 Gen10 Large	Single RAID 1+0 logical drive, consisting of 4 HDDs
	380 Gen10	Single RAID 1+0 logical drive, consisting of 8 HDDs
	1. Create the required drives.	Logical Drive Array by selecting its physical

Device Type	RAID Configuration Ste	ps
	2. Click Create Array (Appendix A).	see <u>Select Physical Drives for the New Array</u> in
	3. Under RAID Level se	elect RAID 1+0 .
	4. Under Size select M	aximum Size. Leave remaining settings at default.
	5. Click Create Logical	Drive (see Create Logical Drive in Appendix A).
	6. Click Finish once the	e logical drive creates successfully.
	When finished, the conf for the model you have.	iguration should match the RAID Configuration
Interaction Media Server™	Recreate logical drives t are using:	o match the RAID configuration for the model you
	Model	RAID Configuration
	360 Gen10 Small	Single RAID 1 logical drive, consisting of 2 HDDs
	360 Gen10 Medium	Single RAID 1+0 logical drive, consisting of 4 HDDs
	360 Gen10 Large	Single RAID 1+0 logical drive, consisting of 4 HDDs
	 Create the required drives. 	Logical Drive Array by selecting its physical
	2. Click Create Array (s Appendix A).	see <u>Select Physical Drives for the New Array</u> in
	3. Under RAID Level, s	elect RAID 1+0.
	4. Under Size select M	aximum Size. Leave remaining settings at default.
	5. Click Create Logical	Drive (see Create Logical Drive in Appendix A).
	6. Click Finish once the	e logical drive creates successfully.
	When finished, the conf for the model you have.	iguration should match the RAID Configuration

Restore factory defaults

If you properly configured the RAID, you can restore the device to factory settings. The reimaging software resides on an internal USB flash drive. To access the internal drive, modify the BIOS start sequence to start from the USB drive instead of RAID, or perform a one-time startup override described in the following steps.

- 1. Restart your computer. The HP ProLiant Power-On Self-Test (POST) runs.
- 2. Press F11 to enter the Boot Menu.

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3. Select Internal USB and then press Enter.

Hewlett Packard Boot Menu	۶ ۶
✿ System Utilities	ot Menu
HPE ProLiant DL360 Gen10 Server SN: ILO IPv4: ILO IPv6: FE80::9AF2:B3FF:FE21:AAF4 User Default: OFF	One-Time Boot Menu Windows Boot Manager Embedded RAID 1 : HPE Smart Array P408i-a SR Gen10 - 2235.56 GiB, RAID1+0 Logical Drive 1(Target:0, Lun:0) Generic USB Boot Internal USB 1 : Kingston ININUSB Windows Boot Manager
Enter: Select ESC: Exit F1: Help F7: Load Manufacturing Defaults F10: Save F12: Save and Exit Enter Select Exit Select F12: Save and Exit F12: Save and Exit	Run a UEFI application from a file system Legacy BIOS One-Time Boot Menu
Exit O Changes Pending	g O Reboot Required F7: Load Defaults F10; Save F12: Save and Exit

4. Wait for the system to start. When the system completes the process, the **Welcome to the Interaction Recovery Environment** window appears.

Welcome to the Interaction Recovery Environment	
This utility allows you to revert your system to the original factory state. On certain models, it also allows you to capture (and restore) the system state after you have configured it to your liking. ""CAUTION"" Any information currently stored on the system will be completely erased during the restore process. Please be sure to back up any important data before proceeding.	
Restore/Capture System State Backup Logs & Recordings	
Select the image to restore: • MSSR.2010.072.005.00.02.12.1517.6173 Tactory unage Interaction Recovery Environment	
Click the Restore button below to proceed.	
Restore Image	
Click the Capture button below to capture current system state.	
Capture System Image Restart	

- 5. Ensure that the **Factory Image** is selected and then click **Restore Image**. The system requests confirmation of the recovery operation.
- 6. Click **Confirm** to proceed.
- 7. Wait while the device is reset to factory defaults, which can take several minutes. The process is complete when **Factory reversion complete** appears.
- 8. Click **Restart** in the lower right corner of the page.
- 9. Select **Yes** to confirm that you want to restart.

Capture and restore a configured state

Depending on your server model, you can capture and restore a system state after you have a working configuration in place. Use the **Capture System Image** feature to create an image of the current system state, excluding recordings and logs, and save it on the internal USB flash drive. Genesys recommends that you capture a system image immediately after you have a working configuration in place.

Capture the current system state

Interaction Media Server only: The capture process does NOT save recordings and logs. Therefore, Genesys strongly recommends that you back up your recordings and logs before you capture a system image.

Interaction Application Server only: The capture process saves the OS partition ONLY. Therefore, Genesys strongly recommends that you back up any data you might need after restoring this user-configured image in the future.

Note: The capture process saves only ONE system state capture. Capturing the current system state replaces any previous system state captures.

- 1. Restart your computer. The HP ProLiant Power-On Self-Test (POST) runs.
- 2. Press F11 to enter the Boot Menu.



3. Select Internal USB and then press Enter.



- 4. Wait for the system to start. When the system completes the process, the **Welcome to the Interaction Recovery Environment** window appears.
- 5. Select one of the following actions based on the type of packaged server you have:

Interaction Media Server only: The capture process does NOT save recordings and logs. Therefore, Genesys strongly recommends that you back up your recordings and logs before you capture a system image.

Interaction Application Server only: The capture process saves the OS partition ONLY. Therefore, Genesys strongly recommends that you back up any data that you might need after restoring this user-configured image in the future.

Welcome to the Interaction Recovery Environme	nt
This utility allows you to revert your system to the original factory stat certain models, it also allows you to capture (and restore) the system sta you have configured it to your liking. "CAUTION" Any information cur stored on the system will be completely erased during the restore process be sure to back up any important data before proceeding.	e. On te after rently 5. Please
Restore/Capture System State Backup Logs & Record	dings
Select the image to restore: • MSSP20161R200510.02.01517/R175-Factory mage Interaction Recovery Environment	
Click the Restore button below to proceed.	
Restore Image	
Click the Capture button below to capture current system state.	
Capture System Image	Restart

- 6. Click **Capture System Image** and follow the prompts to save the current configuration. The system requests confirmation of the system image capture operation.
- 7. Click **Confirm** to proceed.
- 8. Wait while the system captures the current system state, which can take several minutes.



- 9. When the **System state capture complete** message appears, click **Restart** to restart your computer and complete the process.
- 10. Click Yes to confirm that you want to restart.

Restore a captured system state

Note: The restore process deletes ALL information on the server currently. Therefore, Genesys strongly recommends that you back up recordings, logs, and other critical files before you restore a system image.

- 1. Restart your computer. The HP ProLiant Power-On Self-Test (POST) runs.
- 2. Press F11 to open the Boot Menu.



3. Select Internal USB and press Enter.

Hewlett Packard Boot Menu	۶- ۲
✿ System Utilities	pot Menu
HPE ProLiant DL360 Gen10 Server SN: iLO IPv4: iLO IPv6: FE80::9AF2:B3FF:FE21:AAF4 User Default: OFF Enter: Select ESC: Exit F1: Help F7: Load Manufacturing Defaults F10: Save F12: Save and Exit	One-Time Boot Menu Windows Boot Manager Embedded RAID 1 : HPE Smart Array P408i-a SR Gen10 - 2235.56 GiB, RAID1+0 Logical Drive 1(Target:0, Lun:0) Generic USB Boot Internal USB 1 : Kingston ININUSB Windows Boot Manager Run a UEFI application from a file system Legacy BIOS One-Time Boot Menu
http://www.hpe.com/qref/ProLiantGen10UEFLHelp	ng O Reboot Required F7: Load Defaults F10: Save F12: Save and Exit

4. Wait for the system to start. When the system completes the process, the **Welcome to the Interaction Recovery Environment** window appears.

Note: The restore process deletes ALL information currently stored on the server. Therefore, Genesys strongly recommends that you back up recordings, logs, and other critical files before you restore a system image.

Welcome to the Interaction Recovery Environment
This utility allows you to revert your system to the original factory state. On certain models, it also allows you to capture (and restore) the system state after you have configured it to your liking. "CAUTION" Any information currently stored on the system will be completely erased during the restore process. Please be sure to back up any important data before proceeding.
Restore/Capture System State Backup Logs & Recordings
Select the image to restore: • GLSP.2018.012.006.00.02.02.051.01072.configured - factory image • GLSP.2018.012.006.00.02.02.051.01072.0000 image
Click the Restore button below to proceed.
Restore Image
Click the Capture button below to capture current system state.
Capture System Image State Capture System Image

- 5. In the **Select the image to restore** area, select the **User Configured Image** to which you want to restore the computer and then click **Restore Image**. The system requests confirmation of the image restore operation.
- 6. Click **Confirm** to proceed.
- 7. Wait while the user configured image restores, which can take several minutes.
- 8. When the **System restore complete** message appears, click **Restart** to restart your computer and complete the process.

This utility allows you to revert your certain models, it also allows you to c you have configured it to your liking stored on the system will be completel be sure to back up any imp	r system to apture (an _I . **CAUTIO y erased d ortant dat	b the original factory state d restore) the system state N ⁴⁰⁰ Any information cur luring the restore process a before proceeding.	e. On te after rently 5. Please
Restore/Capture System State		Backup Logs & Recor	dings
	JE	SYS	
System restore complete. Clie	ck 'Restart	' to restart the machine.	
			W.e.
			Restart O Shutdow

9. Click **Yes** to confirm that you want to restart.

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Appendix A: Examples

This appendix provides examples from various steps in the recovery process.

System Utilities Menu

Hewlett Packard System Utiliti	es		۶ ۶
HPE ProLiant DL360 Gen10 Server SN: iLO IPv4: ILO IPv6: FE80::9AF2:B3FF:FE21:AAF4 User Default: OFF	System Configuration One-Time Boot Menu Embedded Applications System Information System Health Exit and resume system boot Reboot the System		1
	Select Language	English	\sim
Enter: Select ESC: Exit F1: Help F7: Load Manufacturing Defaults F10: Save F12: Save and Exit Enterthe Second Exit F12: Save and Exit F12: Save and Exit	Setup Browser Selection	Auto	×
Exit O Changes Pending	O Reboot Required F7: Load Defaults	F10: Save F12: Sav	ve and Exit

Select HP Smart Storage Administrator

Hewlett Packard Enterprise			
	Intelligent Provisioning		
	Smart Storage Administrator		
	Scripting Toolkit Windows PE 64 Bit Mode		
(C) Copy	wight 2011 2017 Hawlatt Darkard Entermice Davidonment D		

Hewlett Packard Enterprise	mart Storage Administrator 🗸 .10.3.0	C ?	>
Available Device(s) 📀 Refresh			
Server	Welcome to Administrat	mart Storage r	
smartstart	This application all	vs you to configure, diagnose and ne devices attached to your server	
Smart Array Controllers HPE Smart Array P408i-a SR Gen10 Embedded Stat	To begin, please s	ect a device from the menu on the left.	
Other Devices			

Select Smart Array Controller

Verify RAID Configuration



Select Physical Drives for the New Array

	HPE Smart Array P408i-a SR Gen10 Create Array Embedded Slot Create Array	
Config Selecte	 In a dual domain configuration, mixing single and dual ported SAS drives can lead to a loss of redundancy. To avoid wasting drive capacity, select physical drives that are the same size for the new array. 	Hide
	Select Physical Drives for the New Array (What's this?)	
Control	Sort By Size 🗸	
8	All Items	
	Select All (4)	ary
	😝 1.2 TB 😝 1.2 TB 😝 1.2 TB	
ų	SAS HDD Port 11: Box 1: Bay 1 SAS HDD Port 11: Box 1: Bay 2 SAS HDD Port 11: Box 1: Bay 3 SAS HDD Port 11: Box 1: Bay 4	
Tools		
i î r		
	Selected: 4	
127.0.0.1	Size: 4.37 TIB (4.80 TB)	licer

Create Logical Drive



Appendix B: Interaction recovery messages

Interaction Recovery displays messages to indicate success or an error condition. The color of the message is significant:

- White text indicates success.
- Red text indicates an error.

Successful restore or capture messages

The successful restore or capture messages include:

- Factory reversion complete. Click 'Restart' to restart the computer.
- System restore complete. Click 'Restart' to restart the computer.
- System state capture complete. Click 'Restart' to restart the computer.

Note: These messages indicate that Interaction Recovery restore/capture process ran successfully. When POST resumes, verify that the System BIOS boot sequence is set to the RAID HDD to prevent it from restarting from the flash drive.

Unsuccessful restore or capture messages

If the restore or capture process was unsuccessful, the message, "There was an error while trying to restore the factory image" appears, followed by text that describes the error. Possible error conditions are:

- 208 IRERR. This error usually indicates a faulty Interaction Recovery module configuration.
- **209 PARTERR**. This error usually indicates a variation between the detected and required array configurations.
- **210 BSGERR**. This error usually indicates a variation between the detected and required array configurations.
- 211 IMGERR. This error usually indicates a faulty Interaction Recovery module configuration.
- 212 DICAERR. This error usually indicates a faulty Interaction Recovery module configuration.
- **213 CAPTERR**. An error occurred while trying to capture the current system state. This error usually indicates a faulty Interaction Recovery module configuration.
- **214 RESTERR**. An error occurred while trying to restore the previously saved system state. This error usually indicates a faulty Interaction Recovery module configuration.
- **215 RESTERR**. An error occurred while trying to restore the previously saved system state. This error usually indicates a variation between the detected and required disk configuration.
- **216 DPARTERR**. An error occurred while trying to restore the previously saved system state. Click the **Restore/Capture** tab to try again.