

# **Factory Image Restoration Procedures**

## **Technical Reference**

Interaction Application Server

Customer Interaction Center® (CIC™) Packaged Server

Interaction Media Server™ Appliance

Version 4.0

Last updated May 4, 2018

(See Change Log for summary of changes made to this document since GA.)

#### Abstract

This document describes the procedures required to restore the factory image (operating system and/or any PureConnect software) using the Interaction Recovery Environment from a USB flash drive embedded inside the system. DC-900-4.0-RESTPROC-02

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#### Interaction Center Platform® Statement

This document may describe Interaction Center (IC) features that are not available or licensed in your IC product. Multiple products are based on the Interaction CenterPlatform, and some features are disabled or unavailable in some products.

Products based on the PureConnect Platforminclude:

- Customer Interaction Center® (CIC)
- Messaging Interaction Center<sup>™</sup> (MIC<sup>™</sup>)

Since these products share some common features, this document is intended for use with all PureConnect products, unless specifically stated otherwise on the title page or in the context of the document.

#### How do I know if I have a documented feature?

Here are some indications that the documented feature is not currently licensed oravailable in your version:

- The menu, menu item, or button that accesses the feature appears grayed-out.
- One or more options or fields in a dialog box appear grayed-out or do not appear atall.
- The feature is not selectable from a list of options.

If you have questions about feature availability, contact your vendor regarding thefeature set and licenses available in your version of this product.

## **Factory Image Restoration Procedures**

This technical reference explains how to restore packaged server devices to factory default settings using Interaction Recovery software stored on a USB drive embedded in theserver 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, should the system need to be recovered.

Several situations may impact the need to restore factory defaults. For example, you might want to start with a clean software configuration before repurposing or extensively overhauling the configuration of a server. Or, recovery may be necessary due to replacement of hard drives, or recommended by a support associate.

If possible, back up your license files before recovering the server. You may also want to make copies of logs and recordings before recovering, if those are pertinent to asupport 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 Media Server 4.0 Small Appliance	SY-014-4.0-MSAS-B02
Interaction Media Server 4.0 Medium Appliance	SY-014-4.0-MSAM-B02
Interaction Media Server 4.0 Large Appliance	SY-014-4.0-MSAL-B02
Customer Interaction Center Packaged Server 4.0	TH-900-4.0-CICISRV-B01

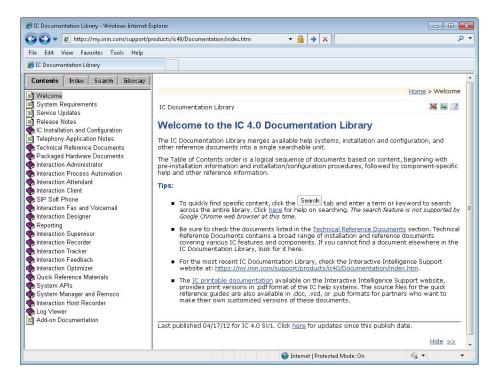
#### **Additional Information**

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 documentationset for a document title, topic, term, or keyword. Factory Image Restoration Procedures and related packaged server installation and configuration guides are located in the Packaged Hardware Documents section of the PureConnect Documentation Library at:

https://help.genesys.com/cic/desktop/welcome\_page.html.



#### **PureConnect Testlab Site**

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

## **Recovery Tasks**

Recovering factory default settings involves three tasks:

- 1. Confirm the device's RAID configuration matches the factory settings. This taskis particularly important if drives have been replaced.
- 2. If necessary, delete and redefine the disk array configuration.
- 3. Restore factory defaults by running the Interaction Recovery utility. To perform this task, you must temporarily modify the System BIOS boot sequence to start from the internal flash drive. Once the system has been recovered, boot sequence settings are changed back.

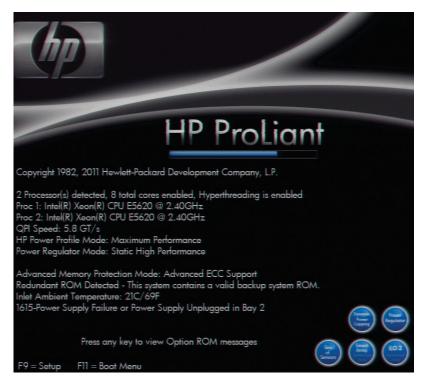
Procedures for each task follow. All procedures apply to **G7 4.0 platforms** only. Toobtain hardware specifications for your packaged server, contact <u>GlobalLogistics@genesys.com</u>.

## **Verify RAID configuration**

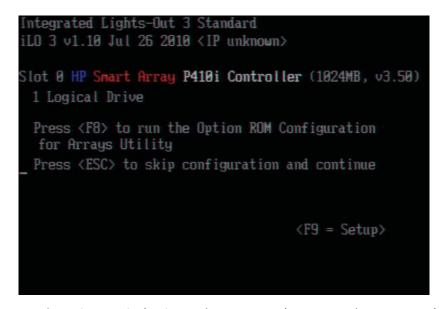
Before you reimage a server, ensure the server's RAID configuration matches the default configuration required to restore factory settings.

#### To confirm RAID configuration:

1. Boot the device. The HP ProLiant Power-On Self-Test (POST) begins. Whenprompted, press any key to view Option ROM messages.



2. When prompted, press **F8** to run **Option ROM Configuration for Arrays Utility**. The RAID BIOS Main Menu opens (see Appendix A, Figure 1).



- 3. Select View Logical Drive and press Enter (See Appendix A, Figure 2).
- 4. 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	RAID Configuration Requirements		
Interaction Application Server	the device. If the re	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 needed.		
	Proceed to <b>Restore</b>	Factory Defaults.		
	not OK, you must d	If the required logical drive configuration does not exist, or the status is not OK, you must delete the current array configuration and recreate it. Proceed to <b>Delete and refine array configuration</b> .		
	Model RAID Configuration			
	120 G7	None		
	360 G7 2-Drive	Single RAID 1+0 logical drive, consisting of 2 HDDs		
	360 G7 4-Drive	Single RAID 1+0 logical drive, consisting of 4 HDDs		
	380 G7	Single RAID 1+0 logical drive, consisting of 8 HDDs		

Device Type	RAID Configuration Requirements		
Interaction Media 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 needed.		
	Proceed to <b>Restore Factory Defaults</b> .		
	If the required logical drive configuration does not exist, or the status is not OK, you must delete the current array configuration and recreate it. Proceed to <b>Delete and refine array configuration</b> .		
	Model	RAID Configuration	
	Small (120 G7)	None	
	Medium (360 G7)	Single RAID 1+0 logical drive, consisting of 2 HDDs	
	Large (360 G7)	Single RAID 1+0 logical drive, consisting of 4 HDDs	
Customer Interaction Center® (CIC™)	ion 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 needed.  Proceed to Restore Factory Defaults.		
	If the required logical drive configuration does not exist, or the status is not OK, you must delete the current array configuration and recreate it.  Proceed to <b>Delete and refine array configuration</b> .		
	Model RAID Configuration		
	360 G7	Single RAID 1+0 logical drive, consisting of 4 HDDs	

Device Type	RAID Configura	tion Requirements		
SQL Server		Verify the existence of two RAID 1+0 logical drives, the first containing 2 HDDs and the second, 6 HDDs.		
		If two RAID 1+0 logical drives already exist and their status is "OK", no further configuration is needed. Proceed to <b>Restore Factory Defaults</b> . If one or both of the RAID 1+0 logical drives do not exist or the status is not "OK," you must delete the current array configuration and recreate it. Proceed to <b>Delete and redefine array configuration</b> .		
	not "OK," you n			
	Model	RAID Configuration		
	380 G7	One RAID 1+0 logical drive consisting of 2 HDDs, and one RAID 1+0 logical drive consisting of 6 HDDs		

## Delete and redefine array configuration

To delete and redefine an existing RAID because its configuration is invalid or does not match required settings:

- 1. Select **Delete Logical Drive** from the RAID BIOS Main Menu and press **Enter**.
- 2. Select an existing drive array, and then press the function key that deletes an existing drive array.

**Note**: This key varies between drive controllers, but is identified on-screen. Once you confirm the delete operation, all data will be removed from the logical drive. No datacan be recovered after this operation.

- 3. Repeat the procedure to delete all drive arrays.
- 4. When all arrays have been deleted, you can redefine them. Select **Create a Logical Drive** from the RAID BIOS Main Menu and press **Enter**.
- 5. Follow the steps in the table below, using the configuration requirements foryour particular server, to recreate the array configuration required by the device (see Appendix A, Figure 3).

Device Type	RAID Configuration Steps		
Interaction Application Server	Recreate logical drives to match the RAID configuration for the model you are using:		
	Model	RAID Configuration	
	120 G7	None	
	360 G7 2-Drive	Single RAID 1+0 logical drive, consisting of 2 HDDs	
	360 G7 4-Drive	Single RAID 1+0 logical drive, consisting of 4 HDDs	
	380 G7	Single RAID 1+0 logical drive, consisting of 8 HDDs	

Device Type	RAID Configuration Steps		
	<ol> <li>Create the required Logical Drive Array by selecting its physical drives with an [X].</li> </ol>		
	2. Press <b>TAB</b> to select <i>RAID Configuration</i> . Choose <b>RAID 1+0</b> .		
	<ol> <li>Press Enter to save changes. Then press the function key assigned by the drive controller to save a configuration. This key is identified on screen.</li> </ol>		
When you are finished, the configuration should match the RAID Configuration for the model you have.			

Device Type	RAID Configuration Steps			
Interaction Media Server™	Recreate logical drives to match the RAID configuration for the model you are using:			
	Model		RAID Configuration	
	Small (1	.20 G7)	None	
	Mediun	n (360 G7)	Single RAID 1+0 logical drive, consisting of 2 HDDs	
	Large (3	660 G7)	Single RAID 1+0 logical drive, consisting of 4 HDDs	
	Create the required Logical Drive Array by selecting its physical drives with an [X].			
	2. Press <b>TAB</b> to select <i>RAID Configuration</i> . Choose <b>RAID 1+0</b> .			
	<ol> <li>Press Enter to save changes. Then press the function key assigned by the drive controller to save a configuration. This key is identified on screen.</li> </ol>			
	When you are finished, the configuration should match the RAID Configuration for the model you have.			
Customer Interaction Center®	Recreate logical drives to match the RAID configuration for the model you are using:			
(CIC™)	Model		RAID Configuration	
	360 G7		Single RAID 1+0 logical drive, consisting of 4 HDDs	
	Create the required Logical Drive Array by selecting its physical drives with an [X].			
	2.	2. Press <b>TAB</b> to select <i>RAID Configuration</i> . Choose <b>RAID 1+0</b> .		
	<ol> <li>Press Enter to save changes. Then press the function key assigned by the drive controller to save a configuration. This key is identified on screen.</li> </ol>			
	When you are finished, the configuration should match the RAID Configuration for the model you have.			
SQL Server	Recreate logical drives to match the RAID configuration for the model you are using:			

Model		RAID Configuration		
380 G7		One RAID 1+0 logical drive consisting of 2 HDDs, and one RAID 1+0 logical drive consisting of 6 HDDs.		
1.	drives with an [X	Create each required Logical Drive Array by selecting its physical drives with an [X]. Unselect all other physical drives by selecting them and pressing the space bar.		
2.	Press <b>TAB</b> to select <i>RAID Configuration</i> . Choose <b>RAID 1+0</b> .			
3.		ve changes. Then press the function key assigned roller to save a configuration. This key is identified		

## **Restore factory defaults**

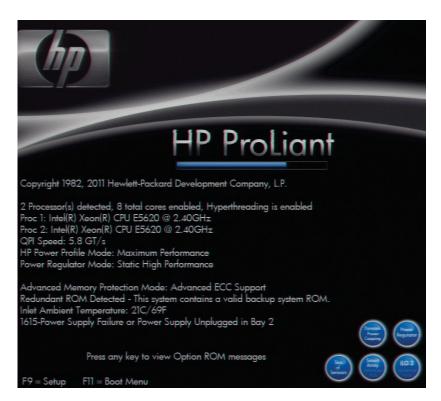
If you properly configured the RAID, you can restore the device to factory settings. The reimaging software resides on an internal USB flash drive. To access the internal drive, modify the BIOS boot sequence to boot from the USB drive instead of RAID, or performa one-time boot override described in the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

When you are finished, the configuration should match the RAID

#### To restore factory defaults

1. Reboot your machine. The HP ProLiant Power-On Self-Test (POST) runs.

Configuration for the model you have



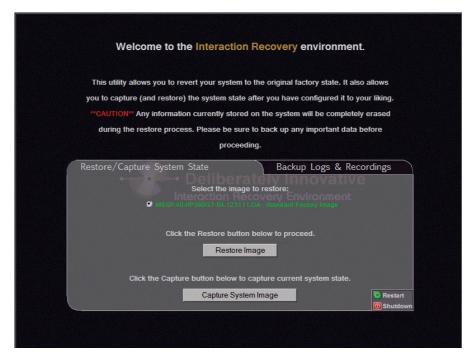
2. Press F11 to enter the Boot Menu and select 3) One Time Boot to USB DriveKey.

```
Please Choose one of the Following Default Boot Override Options:

1) One Time Boot to CD-ROM
2) One Time Boot to Floppy
3) One Time Boot to USB DriveKey
4) One Time Boot to HDD
5) One Time Boot to Network (1st NIC in IPL)
9) Enter the ROM Based Setup Utility (RBSU)
8) Exit Boot Override Menu and Continue Default Boot Process
This option allows the user to choose a specific boot override option for this boot only. This will not modify your normal boot order settings.
```

3. Wait for the system to reboot. When the system completes the restart process, the

Welcome to the Interaction Recovery Environment screen appears.



- 4. Ensure that the Standard Factory Image is selected and then click Restore Image.
- 5. The system requests confirmation of the recovery operation. Click **Confirm** to proceed.
- 6. Wait while the device is reset to factory defaults. This can take several minutes. The process is complete when "Factory reversion complete." appears.
- 7. Click **Restart** in the lower right corner of the page.
- 8. 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 I mage** feature to create an image of the

current system state, excluding recordings and logs, and save it on the internal USB flash drive. We recommend you capture a system image immediately afteryou have a working configuration in place.

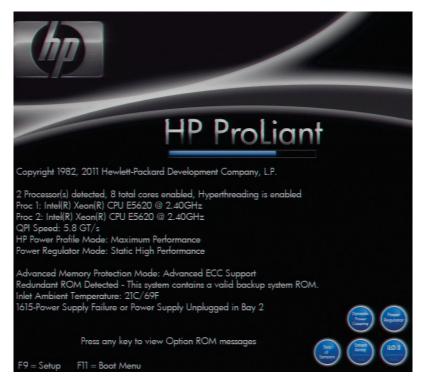
### **Capture the Current System State**

#### Notes:

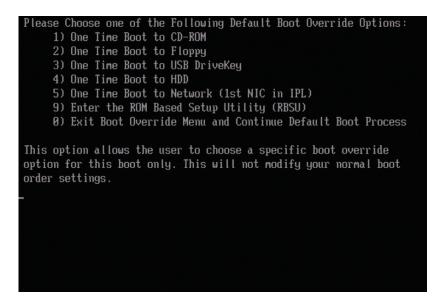
- The capture process does NOT save recordings and logs; therefore, we strongly recommend that you back up your recordings and logs before you capture a systemimage.
- The capture process saves only ONE system state capture. Capturing the current system state will overwrite all previous system state captures.

#### To capture the current system state:

1. Reboot your machine. The HP ProLiant Power-On Self-Test (POST) runs.



2. Press F11 to enter the Boot Menu and select 3) One Time Boot to USB DriveKey.



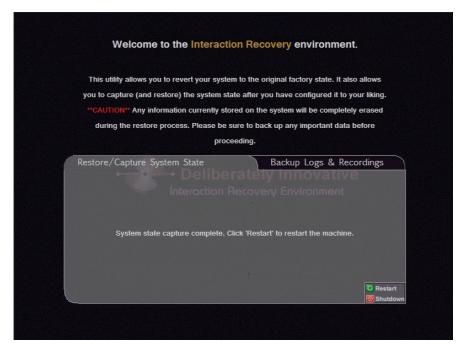
3. Wait for the system to reboot. When the system completes the restart process, the

Welcome to the Interaction Recovery Environment screen appears.

**Note**: The capture process does NOT save recordings and logs; therefore we strongly recommend you back up these recordings and logs before you capture a systemimage.



- 4. Click **Capture System Image** and follow the prompts on the screen to save the current configuration.
- 5. The system requests confirmation of the system image capture operation. Click **Confirm** to proceed.
- 6. Wait while the current system state is captured. This can take several minutes.



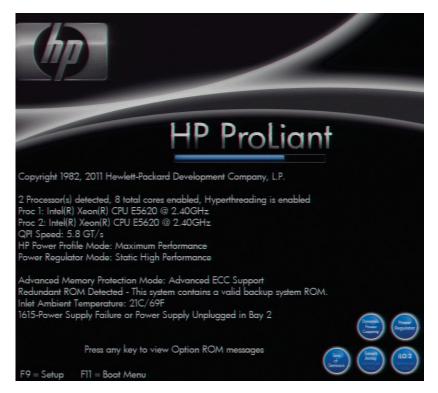
- 7. When the System state capture complete. Click "Restart" to restart the machine message appears, click **Restart** to reboot your machine and complete the process.
- 8. Select **Yes** to confirm that you want to restart.

#### **Restore a Captured System State**

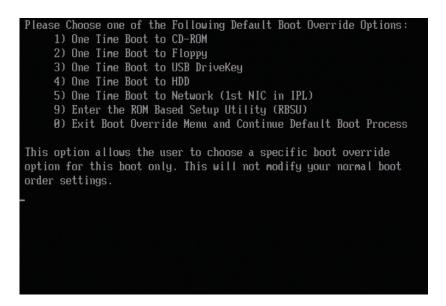
Note: The restore process erases **ALL** information currently stored on the server; therefore we strongly recommend you back up recordings, logs, and other critical files before you restore a system image (if possible).

#### To restore a previously captured state:

1. Reboot your machine. The HP ProLiant Power-On Self-Test (POST) runs.



2. Press F11 to enter the Boot Menu and select 3) One Time Boot to USB DriveKey.



3. Wait for the system to reboot. When the system completes the restart process, the

Welcome to the Interaction Recovery Environment screen appears.

**Note**: The restore process erases **ALL** information currently stored on the server; therefore we strongly recommend you back up recordings, logs, and other critical files before you restore a system image (if possible).



- 4. In the **Select the image to restore** area, select the **User Configured Image** to which you want to restore the machine and then click **Restore Image**.
- 5. The system requests confirmation of the image restore operation. Click **Confirm** to proceed.
- 6. Wait while the current system state is captured. This can take several minutes.
- 7. When the System state capture complete. Click "Restart" to restart the machine message appears, click **Restart** to reboot your machine and complete the process.



8. Select **Yes** to confirm that you want to restart.

## **Appendix A: Screen Examples**

This appendix shows example screens from various steps in the recovery process.

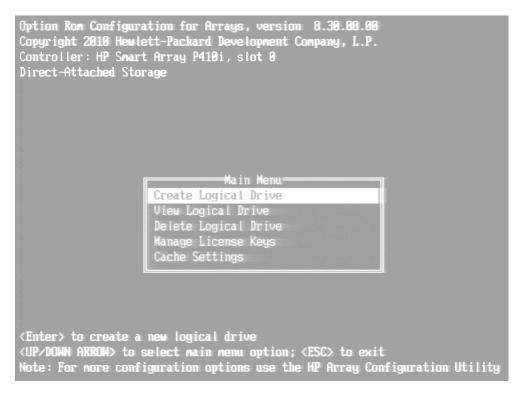


Figure 1: RAID BIOS Main Menu

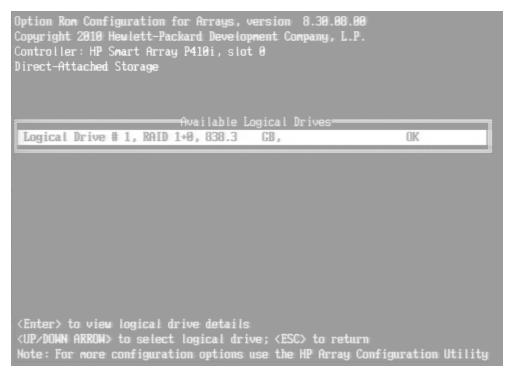


Figure 2: View Logical Drives in RAID BIOS

```
Option Row Configuration for Arrays, version 8.30.88.80

Copyright 2010 Hewlett-Packard Development Company, L.P.

Controller: HP Smart Array P410i, slot 0

Direct-Attached Storage

Available Physical Drives

[X] Port 1I, Box 1, Bay 1, 450.1GB SAS HDD

[X] Port 1I, Box 1, Bay 2, 450.1GB SAS HDD

[X] Port 1I, Box 1, Bay 3, 450.1GB SAS HDD

[X] Port 1I, Box 1, Bay 4, 450.1GB SAS HDD

[X] Port 1I, Box 1, Bay 4, 450.1GB SAS HDD

[X] Port 1I, Box 1, Bay 4, 450.1GB SAS HDD

[X] Port 1I, Box 1, Bay 4, 450.1GB SAS HDD

[X] Port 1I, Box 1, Bay 4, 450.1GB SAS HDD

[X] Disable (4GB maximum)

[X] Disable (4GB maximum)
```

Figure 3: Create Logical Drive in RAID BIOS

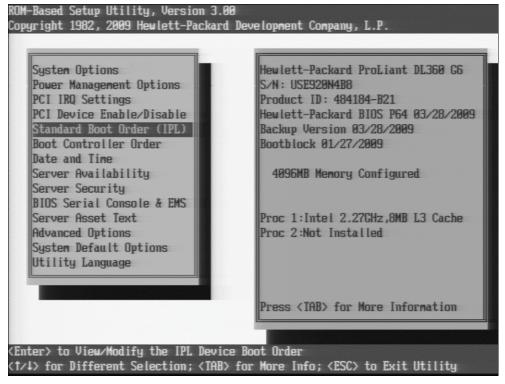


Figure 4: System BIOS Setup Utility

Figure 5 shows how to boot from RAID drives. To boot from the internal flash drive, USB DriveKey would appear in the IPL:1 position.

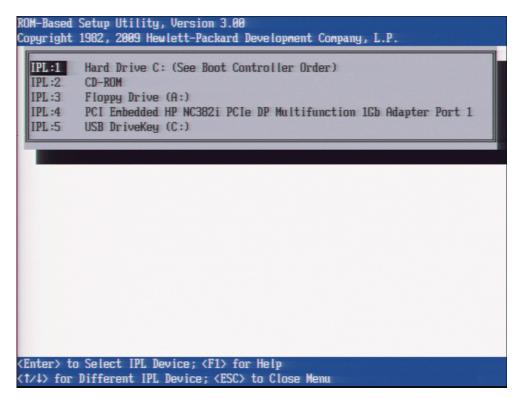


Figure 5: Standard Boot Order

## **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 denotes anerror.

### Successful restore or capture messages

The successful restore or capture messages include:

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

**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 rebooting from the flash drive.

### Unsuccessful restore or capture messages

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

Possible error conditions are:

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

# **Change Log**

Change	Date
Updated Title page, Copyright page, and Platform Statement page.	July 27, 2012
Updated document part number.	
<ul> <li>Outlined procedures to capture and restore a configured image, in addition to the previous capability of restoring a system to the factory image state.</li> </ul>	May 8, 2012
Added Interaction Recovery Error messages to Appendix B.	
Added applicable server models and part numbers.	
<ul> <li>Provided more resource information, including documentation and test lab website locations.</li> </ul>	
Updated copyright statement.	
Rebranded to Genesys.	May 4, 2018

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