



HP StorageWorks

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OBDR
Remote
Access
Functionality
Instructions

Performing Remote Disaster Recovery on HP ProLiant Servers Using the HP Remote Insight Board Lights Out Edition (RILOE) and HP One Button Disaster Recovery (OBDR).

Abstract:

OBDR is a firmware driven software utility found in HP tape drives that provides a disaster recovery solution for HP ProLiant servers. When implemented, OBDR can provide a simple and efficient solution for total recovery of HP ProLiant servers in the event of a disaster or failure. It reduces the need from multiple pieces of media down to only one tape. HP ProLiant Servers are the only servers which support these innovative features. When combined with the powerful features of the Remote Insight Board family, OBDR can be extended to provide remote disaster recover.

This document describes new functionality found in HP SCSI HBAs that allow remote disaster recovery to be performed via the HP Remote Insight Management boards. This document assumes that the server using the bootable tape drive contains Remote Insight Lights-Out hardware. It also assumes the user is able to attach and perform remote graphical management of the system in need of repair.

Introduction to RILOE and OBDR:

RILOE, RILOE II and iLO:

HP's Remote Insight Lights-Out Edition management board provides IT managers with full virtual presence to their servers located in remote sites and data centers, using any standard browser from a Windows client. IT managers are thus able to control their IT infrastructure from any location increasing their effectiveness to respond to any downtime events. RILOE, RILOE II, and iLO provide a rich suite of features for IT managers to improve the timeliness of issue notification and response, thereby reducing the total cost of ownership. Many HP ProLiant G3 servers include integrated iLO boards at no additional HW cost to the end user. Please refer to iLO documentation for GUI interface activation.

Two RILOE features that can be used in conjunction with OBDR are:

- Virtual Power
The ability to shut down and reboot a server remotely
- Remote Graphical Interface
The ability to remote control a server even during POST (Power on Self Test)

Additional References:

Please refer to the "Best Practices for Remote Insight Lights-Out edition – RILOE and RILOE II" White Paper and RILOE User Guides for added details about Remote Insight Board technology.

OBDR:

HP provides the ability to perform a boot-from-tape OBDR restore in the event of a total system failure. Reducing the number of media types needed for recovery allows for faster restores using fewer human resources. OBDR technology has greatly simplified the restore process and has now gone one step further. Functionality has been implemented to allow an administrator to perform a complete system restore from a remote location via the HP Remote Insight Lights-Out controller.

HP engineers have designed this new procedure to be as simple as possible. The former procedure for initiating OBDR is still in place for those that do not have the required HP SCSI HBAs with the latest firmware. The new process includes <F8> support for invoking OBDR mode at POST. With the ability to put the drive into OBDR mode via the <F8> key you can now run OBDR locally or remotely. Now, inserting the tape boot media into the drive is the only step that requires local intervention. You will need a non-technical person on site that has access to the previously prepared bootable tape media in the event of a complete system disaster.

For additional information regarding OBDR please refer to the white paper "Disaster Recovery Through One Button Disaster Recovery (OBDR)"

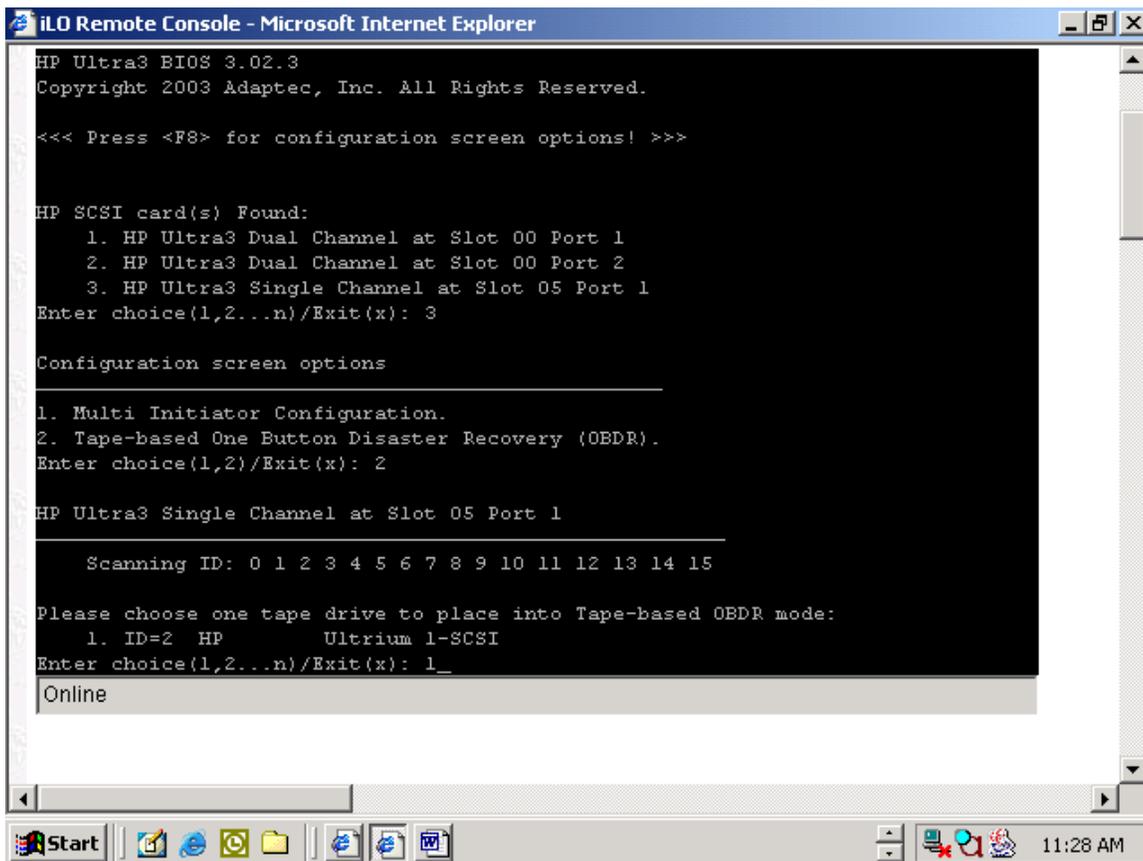
Remote OBDR Requirements:

- 1) A backup software package (ISV) that supports disaster recovery from tape loaded and configured on the system in need of disaster protection
- 2) An HP tape drive capable of OBDR
- 3) A person on site to insert the bootable tape media into the tape drive
- 4) The SCSI HBA(s) below with the latest firmware
 - For HP Ultra160 HBA controllers (**64-bit/66-Mhz Dual and Single Channel Wide Ultra3 SCSI Adapters**) you will need 3.02.03 level of firmware.
 - Most New HP Ultra 320 HBA controllers (**64-bit/133-Mhz Dual Channel Wide Ultra3 SCSI Adapters**) will come loaded with an adequate level firmware. The minimum required level is 5.05.11.
 - Servers with embedded Ultra 160 SCSI controllers can also be used if their BIOS level is 03.02.03. Embedded controller firmware is upgradeable only via system ROM updates. Refer to the OBDR <F8> Support Matrix on HP.COM to verify that your server supports updates to 03.02.03.
- 5) A Remote Insight board in the server that is being recovered. Most ProLiant G3 servers have the Remote Insight Board integrated onto the server's main board. (iLO)

New procedure:

For the purpose of this paper we will describe remote procedures and show a screen capture from a RILOE board remotely connected to an HP Ultra160 HBA. The <F8> selections are slightly different for the HP Ultra320 HBA. Just follow the onscreen prompts.

- 1) An onsite individual will need to load the previously written bootable tape media into the tape drive.
Note: Do NOT manually put the tape drive into OBDR mode via the buttons on the front of the drive. The proper mode select command will automatically be sent to the drive during the <F8> selection. This will place the tape drive into a CDROM emulation mode with no intervention needed from the individual on site.
- 2) Attach remotely to the server containing the remote insight board and the bootable tape drive via your remote web interface. Refer to remote insight board documentation for details.



- 3) During POST you will be prompted with an option to select <F8> at the HP HBA BIOS prompt. Press <F8> at this time from the remote station.
- 4) Follow the onscreen prompts to complete activation of tape boot mode. In the event there are multiple supported HBA(s) in the system select the controller that has the bootable tape drive attached.

Your boot drive has now been placed into boot from tape mode. Your tape drive will now appear to the server as if it were a bootable CDROM. Now that your tape is in boot mode you may complete the installation as specified by your backup software Disaster Recovery documentation.

When the server is recovered using the boot media all of your system setting, partitions, and software will be intact. Simply mount your latest backup media and restore any of the missing data that had been backed-up since the last bootable system backup was performed.

Additional HP recommendations:

- 1) Make it a practice to follow the ISV guidelines for periodic updates of your bootable tape media. Notably when SCSI drivers, HBAs, and disk partitions have been modified.
- 2) Label bootable tape media clearly and keep in a safe place. This will be your life-line to a seamless, complete system recovery.
- 3) Show the on site individual the location of the bootable tape.
- 4) Show the on site individual how to load and unload a tape prior to a disaster.
- 5) Make sure you can attach via the RILEO or iLO board prior to a disaster.
- 6) When applicable it is highly recommend that you perform a test restore. This is both for your own knowledge and to verify functionality of your boot media. You will want to replace active disk drives with blank drives prior to performing the test restore. This will help to preserve any important original data during testing.

Conclusion:

The powerful combination of OBDR and RILOE gives remote administrators the ability to completely recover a failed server without setting foot in the room where the server resides.