

# remote insight lights-out edition II hardware installation and configuration poster

for  
hp netserver lc 2000  
hp server tc3100  
hp server tc4100  
hp netserver lh 3000/3000r



## Introduction

This poster provides an overview of the steps for installing a Remote Insight Lights-Out Edition II (RILOE II) board and a Virtual Power Button cable in an HP server. To complete configuration of the RILOE II and for more detailed information, refer to the *Remote Insight Lights-Out Edition II User Guide*.

For more detailed procedures, refer to the *Remote Insight Lights-Out Edition II User Guide*, which is available on the Documentation CD or at

[www.hp.com/servers/lights-out](http://www.hp.com/servers/lights-out)

## RILOE II Virtual Power Button Cable Kit Contents

Be sure the RILOE II Virtual Power Button cable kit contains the following items:

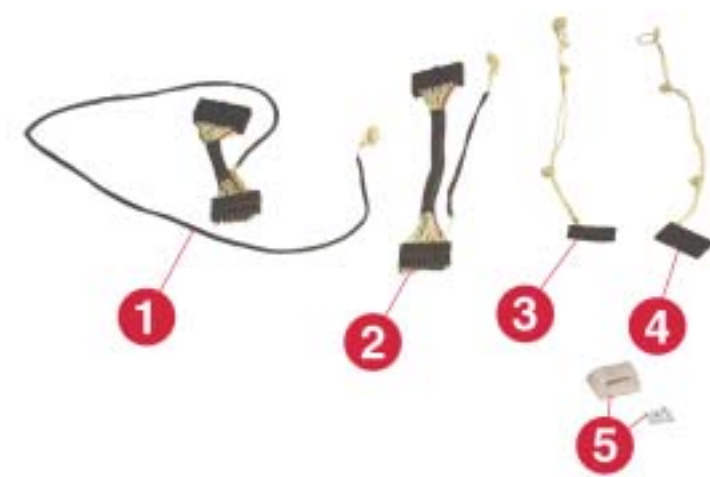


Figure 1: RILOE II Virtual Power Button cable kit

Item	Description
1	303294-001 cable assembly for LH 3000/3000r
2	303293-001 cable assembly for LC 2000
3	303292-001 cable assembly for tc3100
4	303291-001 cable assembly for tc4100
5	Cable clips

## Server PCI Slot and Cable Matrix

RILOE II may be server-slot specific. Determine an appropriate PCI slot by using the table below:

Table 1: Server PCI Slot and Cable Matrix

Server	PCI Slot	Remote Insight Internal Cable
LC 2000	1,2	2
tc3100	3,4,5,6	3
tc4100	3,4,5,6	4
LH 3000/3000r	7,8	1

**NOTE:** Virtual Power Button cables and Remote Insight internal cable description and part numbers include:

- 1 = P/N 303294-001 (4-pin cable assembly) ships with the RILOE II cable kit.
- 2 = P/N 303293-001 (4-pin cable assembly) ships with the RILOE II cable kit.
- 3 = P/N 303292-001 (4-pin cable assembly) ships with the RILOE II cable kit.
- 4 = P/N 303291-001 (4-pin cable assembly) ships with the RILOE II cable kit.

**NOTE:** All listed servers require the AC power adapter and keyboard/mouse adapter cable provided in the RILOE II kit.

**NOTE:** Disabling of the onboard video using the dip switch is not supported on these servers.

**NOTE:** The most current Server PCI Slot and Cable Matrix is available at

[www.hp.com/servers/lights-out](http://www.hp.com/servers/lights-out)

## 1 Installing the RILOE II board

### Installing the RILOE II in the HP Netserver LC 2000

**CAUTION:** Electrostatic discharge can damage electronic components. Be sure that you are properly grounded before beginning this procedure.

1. Power down the server, remove the power cord, and remove the left side panel from the server.

**NOTE:** Refer to the server documentation for instructions on disassembling the server to install an option board.

For steps 2 through 7, use Figure 2 as a reference.

2. Locate and remove the control panel cable from the control panel connector on the system board.
3. Secure the control panel cable in the ribbon cable clip above the system board.

**NOTE:** All cables are secured with cable clips to the top of the chassis to prevent damage while installing an option card in PCI slot 1.

4. Connect the 20-pin keyed connector on the Virtual Power Button cable to the control panel connector on the system board.
5. Connect the remaining 20-pin connector on the Virtual Power Button cable to the control panel cable.

**IMPORTANT:** The red wire denotes pin 1 and must be connected to the control panel cable pin 1. If the cable is connected incorrectly, the server will not power up.

6. Connect the large cable clip to the top of the chassis and attach the 20-pin portion of the Virtual Power Button cable.
7. Connect the small cable clip to the system board and attach the 4-pin connector of the Virtual Power Button cable.

**CAUTION:** The small cable clip must be attached in a clear space on the system board. To avoid possible overheating or system damage, do not place the cable clip on any chips or other components.

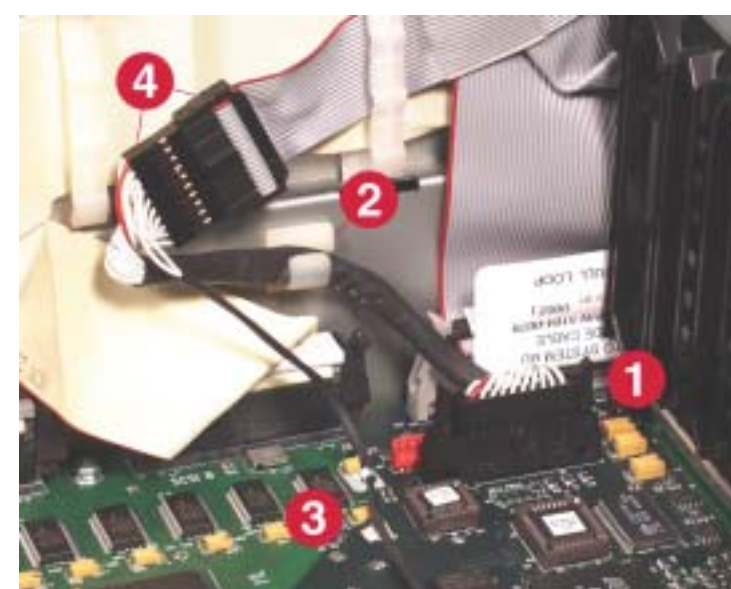


Figure 2: Cable installed in the LC 2000

Item	Description
1	Control panel connector on system board
2	Large clip attached to the top of the chassis
3	Small clip attached to the system board
4	Correct cable connection (pin 1 to pin 1)

For steps 8 through 10, use Figure 3 as a reference.

8. Connect the 4-pin connector on the Virtual Power Button cable to the 4-pin Virtual Power Button cable connector located on the rear of the RILOE II at the opposite end from the RILOE II connectors.
9. Determine an appropriate PCI slot. **RILOE II may be server-slot specific.** Refer to Table 1.
10. Install the RILOE II board.

**NOTE:** When installing a card in PCI slot 1, the 20-pin keyed connector cable of the Virtual Power Button cable passes under the RILOE II board to the connector.

11. Reassemble the server.

**NOTE:** Refer to the server documentation for instructions on reassembling the server.

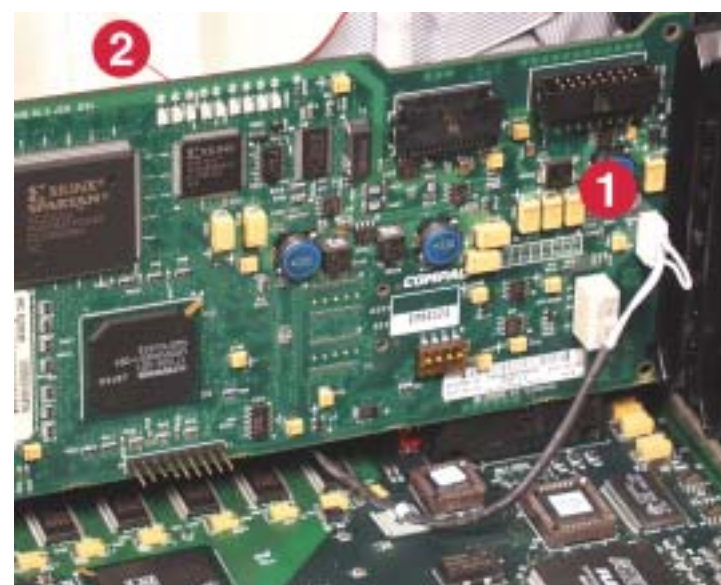


Figure 3: RILOE II installed in the LC 2000

Item	Description
1	4-pin cable installed connected to RILOE II
2	Installed RILOE II board

### Installing the RILOE II in the HP Server tc3100 or HP Server tc4100

See Figure 4 for an installed RILOE II board in a tc3100/tc4100 server (tc4100 shown).

**CAUTION:** Electrostatic discharge can damage electronic components. Be sure that you are properly grounded before beginning this procedure.

1. Power down the server, remove the power cord, and remove the left side panel from the server.

**NOTE:** Refer to the server documentation for instructions on disassembling the server to install an option board.

2. Locate the open header directly adjacent to the 24-pin panel connector on the system board.
  - On the tc3100 server, the open header is the 24-pin G4\_panel header cable.
  - On the tc4100 server, the open header is the 10-pin NC8\_panel header cable.

**NOTE:** On the tc3100 server, removing the control panel cable provides easier access to the open header.

3. Using the appropriate Virtual Power Button cable for the server, connect the keyed connector on the Virtual Power Button cable to the open-header on the system board.
4. Connect the 4-pin connector on the Virtual Power Button cable to the 4-pin Virtual Power Button cable connector located on the rear of the RILOE II at the opposite end from the RILOE II connectors.
5. Determine an appropriate PCI slot. **RILOE II may be server-slot specific.** Refer to Table 1.
6. Install the RILOE II board.
7. Reassemble the server.

**NOTE:** Refer to the server documentation for instructions on reassembling the server.

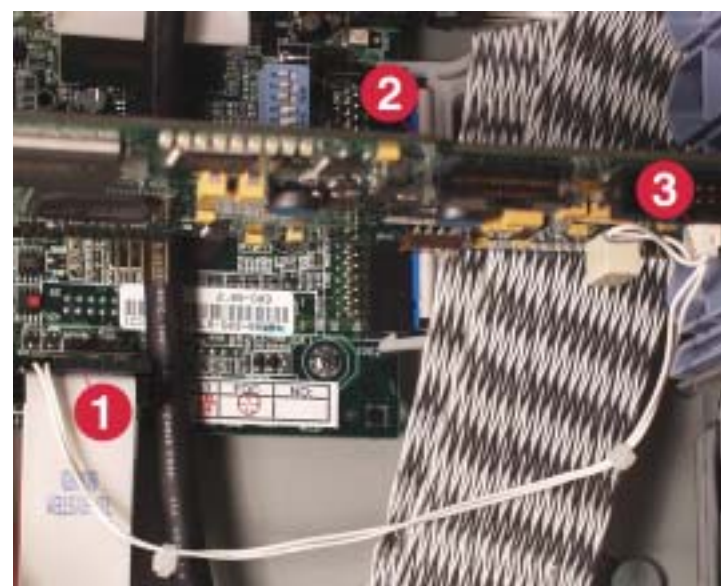


Figure 4: RILOE II installed in the tc4100

Item	Description
1	Open header of panel connector
2	Installed RILOE II board
3	4-pin connector installed

## Installing the RILOE II in the HP Netserver LH 3000 or LH 3000r

**CAUTION:** Electrostatic discharge can damage electronic components. Be sure you are properly grounded before beginning this procedure.

**CAUTION:** Do not operate the HP Netserver for more than 30 minutes without first installing all covers and the front bezel. Operating the system without all covers in place reduces critical cooling airflow over some components, such as hard disk drives and processors. Operating the system without all covers in place may result in failure of these components.

1. Power down the server, remove the power cord, and remove either:
  - The left and right side panels of the Netserver Pedestal LH 3000 server.
  - or
  - Or the top and bottom of the Netserver Rack Mount LH 3000r server.

**NOTE:** Refer to the server documentation for instructions on disassembling the server to install an option board.

For steps 2 through 5, use Figure 5 as a reference.

2. Locate and disconnect the control panel cable from the control panel connector on the Power Management/Interconnect board.
  3. Connect the 20-pin keyed connector on the Virtual Power Button cable to the control panel connector on the Power Management/Interconnect board.
  4. Connect the remaining 20-pin connector on the Virtual Power Button cable to the control panel cable.
- IMPORTANT:** The red wire denotes pin 1 and must be connected to the control panel cable pin 1. If the cable is connected incorrectly, the server will not power on.
5. Route the 4-pin connector on the Virtual Power Button cable from the right side of the server to the left side of the server (or bottom to top) by threading the connector through the opening in the chassis next to the control panel connector.

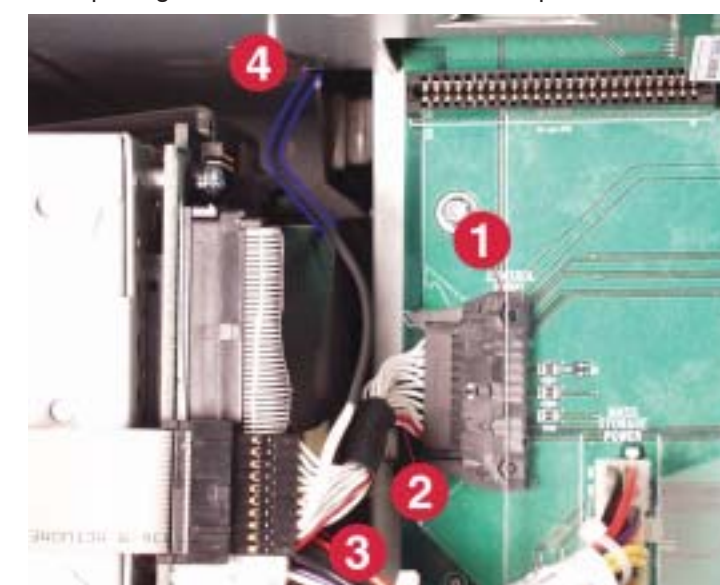


Figure 5: Virtual Power Button cable in the LH3000/LH3000r

Item	Description
1	Control panel connector with the Virtual Power Button 20-pin keyed connector attached
2	20-pin connector cable
3	Red wire to control panel cable pin 1 location
4	4-pin cable path through chassis to left side of server

For steps 6 through 9, use Figure 6 as a reference.

6. Connect the 4-pin connector on the Virtual Power Button cable to the 4-pin Virtual Power Button cable connector located on the rear of the RILOE II at the opposite end from the RILOE II connectors.
7. Determine an appropriate PCI slot. **RILOE II may be server-slot specific.** Refer to Table 1.
8. Install the RILOE II board.
9. Attach the large cable clip to the PCI card guide. Center the clip among the supported slots. Secure the 4-pin connector cable with the cable clip.
10. Reassemble the server.

**NOTE:** Refer to the server documentation for instructions on reassembling the server.

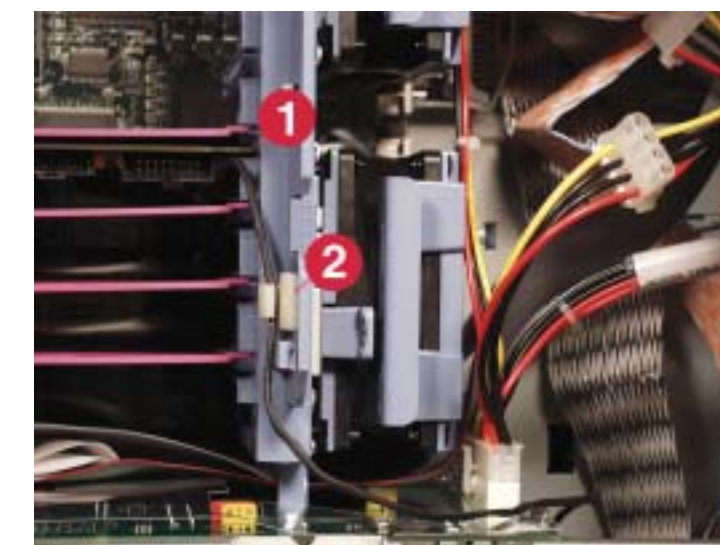


Figure 6: RILOE II installed in the LH3000/LH3000r

Item	Description
1	Installed RILOE II board
2	Installed large cable clip and 4-pin cable

## 2 Completing the Installation of the RILOE II Board

To complete the installation of the RILOE II board, you must

- Install the external cables. Refer to the Remote Insight Lights-Out Edition II User Guide for more details.
- Install the appropriate device drivers for the server operating system. Refer to the Remote Insight Lights-Out Edition II User Guide for more details.
- Download and install the RILOE II Firmware Version 1.02 available at [www.hp.com/servers/lights-out](http://www.hp.com/servers/lights-out)

## 3 Running the ROM Configuration Utility for Netervers

The following HP servers may require the download of the HPRIBROM.EXE - HP Remote Insight Board ROM Configuration Utility for Netervers:

- LH 3000
- LH 3000r

You can download this utility at [www.hp.com/servers/lights-out](http://www.hp.com/servers/lights-out)

The HP Remote Insight Board ROM Configuration Utility for Netervers provides the same functionality as the RBSU F8 function, which allows you to enable or disable the ROM-Based Setup Utility (RBSU).

## RILOE II User Guide Updated Information

The following are HP sever-specific updates to the *Remote Insight Lights-Out Edition II User Guide*:

- Virtual Devices
  - USB Virtual Devices are only supported on HP ProLiant servers that have the USB 30-pin connector. USB Virtual Devices are not supported and will not work on HP Netervers.

**NOTE:** HP Netervers do support the RILOE II Virtual Floppy option.

- Power Cycle (Reset)
  - On HP servers, the virtual power button and Power Cycle features are only available through a virtual power cable provided as part of the RILOE II Virtual Power Button Cable Kit for HP Netervers. If the cable is not plugged in, the ability to power down or reset the server is not supported.
- Discovery of HP Tiptools remote management card
  - Insight Manager 7 will discover and identify HP Tiptools remote management cards, associate each card with its server, and allow you to launch the remote management cards.
- HP Tiptools support
  - HP Tiptools will discover RILOE II and provide an association between RILOE II and the server in which it is installed, thus allowing you to access all the RILOE II boards from inside Tiptools.
- Insight Manager Suite
  - The Insight Manager Suite is only supported on ProLiant servers.
- System Status
  - Survey information and the Integrated Management Log (IML) are not available to Netervers.
- EMS Console
  - The Windows .NET EMS Console option is not available to Netervers.
- Host Generated OS Traps
  - The Host Generated OS Traps option is not available to Netervers.

