

Installing or Replacing a Remote LAN Module

This flyer describes the following tasks:

- ◆ “[Removing an RLM](#)”
- ◆ “[Installing and Testing an RLM](#)”
 - ❖ “[Installing the RLM](#)”
 - ❖ “[Testing the RLM](#)”
 - ❖ “[Testing and Booting the System](#)”
- ◆ “[Completing the Replacement Process](#)”
- ◆ “[Where to Go Next](#)”

Removing an RLM

To remove a Remote LAN Module (RLM), complete the following steps:

1. Perform a clean system shutdown by entering the following command from the system console:

```
mssystem-1> halt
```

Caution

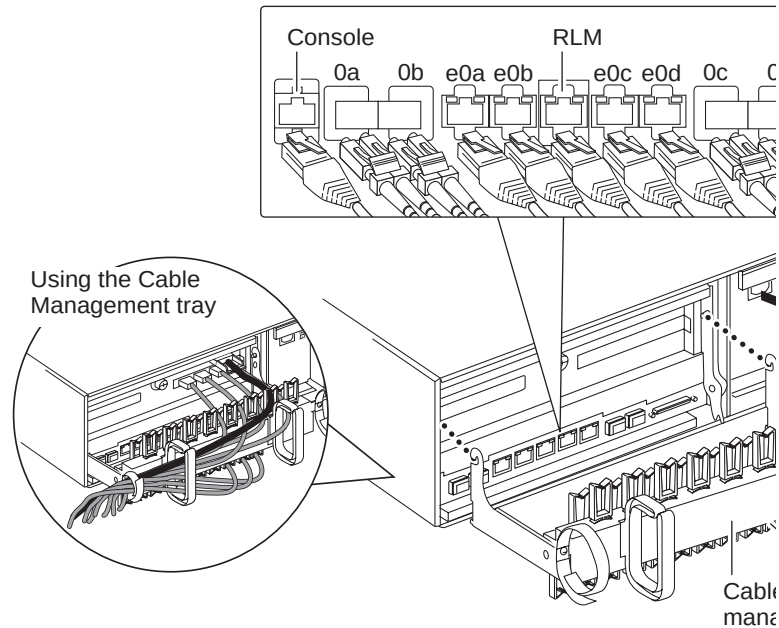
You must perform a clean shutdown to replace components inside your system.

2. Ground yourself to the system chassis using the grounding leash, and then turn off the power to the system.

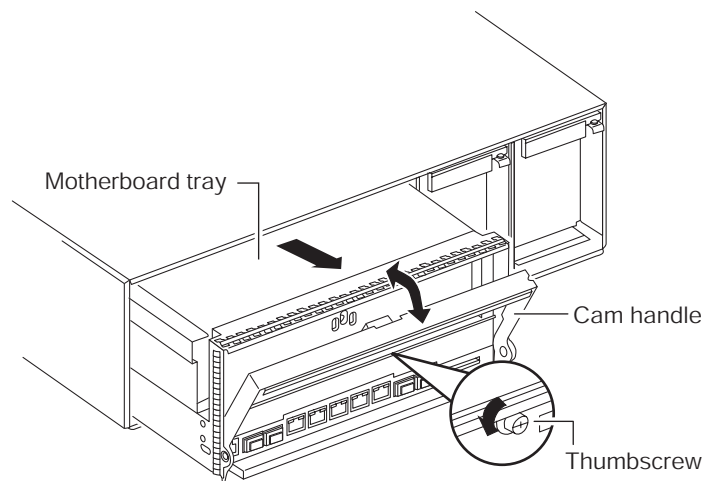
IF your system uses AC power supplies, unplug the power cords from the power source, and then unplug the power cords from the power supplies.

IF your system uses DC power supplies, remove the power at the DC source. Remove the DC wires from the power supplies, if necessary.

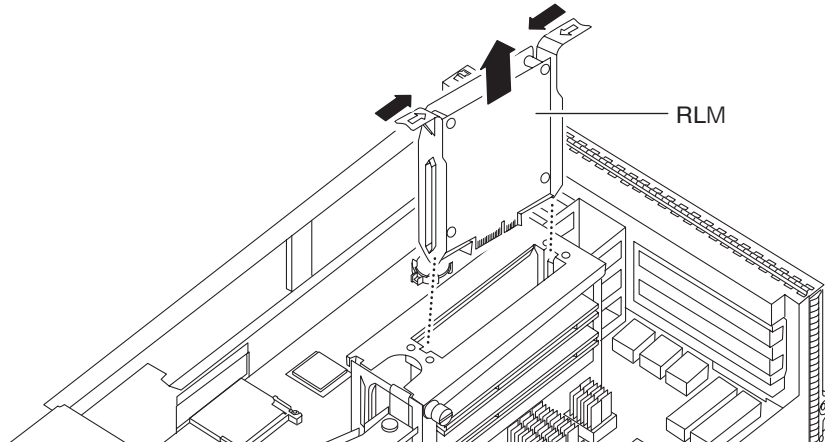
- 3.** Remove the cable management tray by completing the following substeps, using the figure for reference:



- a.** Unplug all the cables from the back of the motherboard tray.
Do not remove the cables from the cable clips, so that when you reinstall the cable management tray, the cables are already aligned with the correct ports on the system.
 - b.** Grasp the cable management tray by the side, gently push one side of the tray so that the arm slides across and off the retaining pin, and then lift it off the back of the motherboard tray and set it aside.
- 4.** Loosen the thumbscrew on the cam handle, shown in the figure in Step 5.
- 5.** Using the figure for reference, open the motherboard tray by pulling the cam handle downward and sliding the tray out of the system until it catches. Make sure that you support the bottom of the motherboard tray with your free hand.



6. Release the motherboard tray from the system by gently lifting the retaining latch under the motherboard tray, sliding the motherboard tray all the way out of the system, and then placing the motherboard tray on a stable, grounded surface.
7. Locate the RLM, in the center of the riser housing, pinch the retaining tabs on the RLM, and then lift the RLM straight out of the socket and the housing.



Installing and Testing an RLM

Installing the RLM consists of the following tasks:

- ◆ “[Installing the RLM](#)”
- ◆ “[Testing the RLM](#)”
- ◆ “[Testing and Booting the System](#)”

Installing the RLM

To install an RLM, complete the following steps:

1. Complete Steps 1 through 7 in “[Removing an RLM](#),” if necessary.
2. Align the edges of the RLM with the guide slots on the edges of the riser housing, lower the RLM into place in the housing, and then press it into the socket by using your thumbs in the top center of the RLM. Make sure that you press down at the places indicated by the sticker on the RLM housing.
3. Reinstall the motherboard tray by completing the following substeps:
 - a. Align the end of the motherboard tray with the motherboard tray opening in the system chassis, and gently push the motherboard tray back into the system chassis. The cam handle begins to engage when the motherboard tray is properly seated all the way inside the chassis.
 - b. Firmly push the cam handle to finish seating the motherboard tray in the system, lift the cam handle to the closed position, and then tighten the thumbscrew on the cam handle.

4. Reinstall the cable management tray.

IF you are replacing an existing RLM, recable the system, as needed.

IF you are installing an RLM for the first time, plug one end of the RJ-45 cable into the RLM port, and then plug the other end into a 10/100 Ethernet network port.

5. Check the link LED on the RLM port to ensure that it is green and that the link is active.

Note

The network for the RLM should be a 10/100 Ethernet network, or a network that can autonegotiate settings to a 10/100 Ethernet network.

6. Boot the system.

IF you are replacing an existing RLM, run diagnostics, as described in “[Testing and Booting the System](#).”

IF you are installing an RLM for the first time, enter the following command from the system console to begin the RLM setup script:

```
mysystem-1> rlm setup
```

Example:

```
mysystem-1> rlm setup
```

```
The Remote LAN Module (RLM) provides remote management capabilities
including console redirection, logging and power control.
```

```
It also extends AutoSupport by sending
additional system event alerts. Your AutoSupport settings are used
for sending these alerts via email over the RLM LAN interface.
```

```
Would you like to configure the RLM LAN interface [y]: y
```

```
Would you like to enable DHCP on the RLM LAN interface [y]: n
```

```
Please enter the IP address for the RLM []: 10.10.123.45
```

```
Please enter the netmask for the RLM []: 255.255.224.0
```

```
Please enter the IP address for the RLM gateway []: 10.10.123.1
```

```
mysystem-1>
```

Note

The RLM requires AutoSupport to be activated and configured. If AutoSupport is not set up and configured, do so at this time. See the *System Administration Guide* for AutoSupport setup information.

7. Check the status and settings of the RLM by entering the following command from the system console:

```
mysystem-1> rlm status
```

Example:

```
mysystem-1> rlm status
```

```
Remote LAN Manager
  Part Number:      110-00030
  Revision:         32
  Serial Number:    2P6256
  Firmware Version: 1.0.10 Mon Jan 17 16:27:58 PST 2005
  Mgmt MAC Address: 00:A0:98:01:9A:F8
  Using DHCP       no
```

```
IP Address:      172.22.136.61
Netmask:        255.255.224.0
Gateway:        172.22.128.1
```

8. Go to “[Testing the RLM](#)” to ensure that you can access the RLM from the administration console.

Testing the RLM

The RLM provides a command line interface (CLI) to access its features. You must log in to the RLM over its network interface by using a secure shell client application, such as SSH, OpenSSH, or PuTTY. Insecure connection protocol applications, such as telnet, are not available. See the *System Administration Guide* for more information about secure shell client applications.

To test the RLM, complete the following steps:

1. Log into the RLM console from a remote host acting as a system console by entering the following command from the administration host prompt:

```
admin-host> ssh user_name@RLM_IP_address
```

Example

```
admin-host> ssh admin@10.10.123.45
admin@172.22.136.85's password:*****
RLM admin-host>
```

Note

Root login is not allowed for the RLM. If you need to log in with root credentials, use *naroot* for root login.

2. Check RLM status by entering the following command from the RLM console:

```
RLM admin-host> rlm status
```

3. Exit the RLM console by entering the following command:

```
RLM admin-host> exit
```

4. Connect to the system console using the serial connection or through telnet.

5. Test the RLM AutoSupport functions by sending a test e-mail to AutoSupport with the following command from the system console:

```
mssystem-1> rlm test autosupport
```

6. Go to “[Testing and Booting the System](#).”

Testing and Booting the System

After you recable your system and connect it to the power source, you should run diagnostics on the RLM. If the system passes the diagnostic tests, boot the system and bring it back online.

To run diagnostics on the RLM, complete the following steps:

1. Turn on or reboot the system and press the Delete key during boot.
2. Enter system diagnostics from the CFE prompt by entering the following command at the prompt:

```
CFE> boot_diags
```

3. Select the RLM tests from the main menu, and then run all diagnostics by entering 1.

4. Correct any errors and then boot the system.
5. Go to “[Completing the Replacement Process](#).”

Completing the Replacement Process

Return the failed part to Network Appliance, as described in the SRA instructions shipped with the kit. Contact NetApp® technical support at 408-822-6686 if you need the SRA or additional help with the replacement procedure.

Where to Go Next

The following table provides a list of manuals for configuring and using the RLM. You can view or order them on the NOW™ site at <http://now.netapp.com>.

Note _____
Data ONTAP™ 7.0.1 software or NetCache® 6.0.1 software or later support the RLM.

Manual Title	Information Needed
<i>Installation and Setup Instructions</i> for your platform	Describes the system and RLM cabling.
<i>Diagnostics Guide</i>	Lists and describes the diagnostic tests for a new or existing RLM.
<i>System Administration Guide</i>	Describes RLM configuration and use.
<i>Error Messages and Troubleshooting Guide</i>	Lists RLM error messages and gives corrective action for the error.