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Prepared by ISSG

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# Gigabit Ethernet Upgrade for the TaskSmart N-Series Appliance Server

*Abstract:* This document outlines the provisions for Gigabit Ethernet support for the Compaq *TaskSmart*<sup>™</sup> N2400 appliance. Specifically, it outlines the supported options and requirements to be met when utilizing the NC6132 Gigabit Ethernet Controller from Compaq.

## Notice

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## Introduction

The Compaq *TaskSmart*™ N2400 appliance comes equipped with the Compaq NC3134 and NC3135 10/100-megabit Ethernet boards. The combination of the two gives the customer four available 10/100-megabit copper ports. In order for the customer to upgrade to the NC6132, it is necessary to remove the NC3135 NIC from the NC3134 board. Two copper ports are lost when this is done. This document will cover the following areas:

- Factory configuration
- Installing the hardware on both a new, “out-of-box” system and a system currently in use
- Reconfiguring TCP/IP protocol for the new NIC on both new systems and those currently in use
- Setting up TaskSmart N2400 appliance-supported features for the NC6132 upgrade module

Two installation situations will be addressed. The **configured server** is an already configured server that may even be up and running. The **unconfigured server** is a server that has not been set up yet.

## TaskSmart N2400 Gigabit Ethernet Support

The TaskSmart N2400 appliance with the NC6132 installed supports different features than those found on the NC3135 and NC3134 NICs. A discussion of the supported and unsupported features will enable the administrator to achieve maximum performance from the system.

### Unsupported Features

Due to the nature of the NC6132 Gigabit Ethernet Controller, the ability to control options such as setting the NIC speed or setting the NIC to Half or Full Duplex is relinquished.

The system will not permit the use of the NC6132 for load balancing with the other NICs due to the way those NICs operate.

For more detail, consult the NC6132 users manual.

### Supported Features

The supported feature discussed in this document is setting up Network Teaming between the NC6132 and the NC3134 and NC3163. Compaq Network Teaming can be set up for fail-over between the NC6132 and the NC3134 or NC3163. This can be accomplished using the Fail on Fault or Smart Switch feature provided in the Compaq Network Teaming and Configuration Utility. Any combination between the four NICs will function when setting up Fault Tolerance.

## Factory Configuration

The TaskSmart N2400 appliance is shipped from the factory with five active network interface controllers (NICs). These controllers are factory configured with five NIC assignments that are referenced in the System settings and the Compaq Network Teaming and Configuration utilities.

The physical locations of the controllers are shown in Figure 1, Hardware identification.

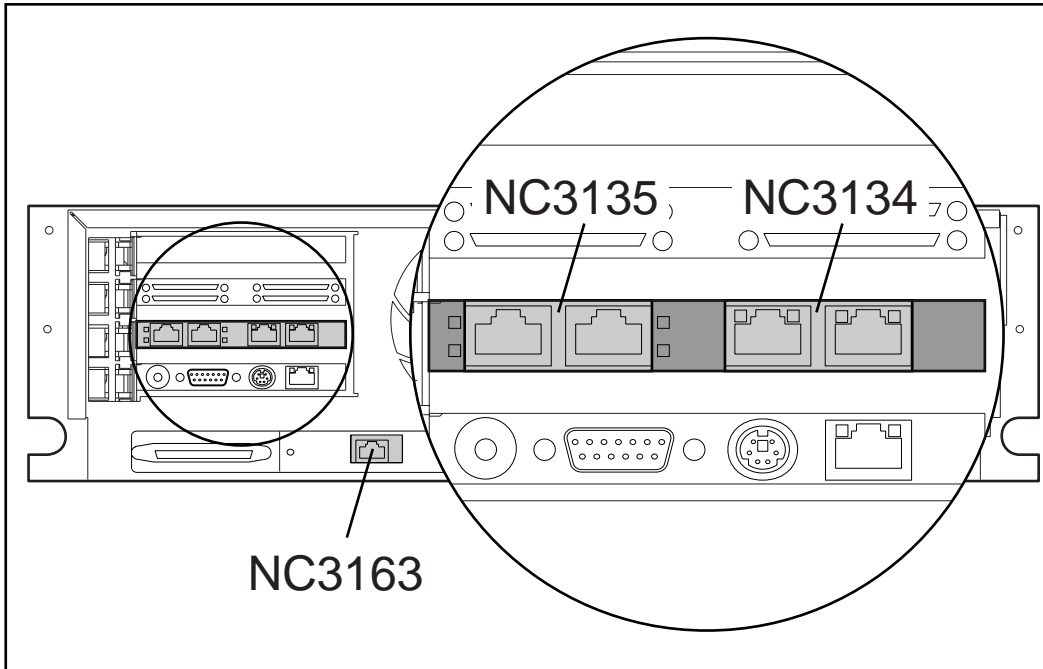


Figure 1. Hardware identification

## Installing the Gigabit Ethernet Board

### Unconfigured Installation

When setting up the TaskSmart N2400 appliance for the first time, there is no need to modify system settings. On the first power-up, the system prompts require entries used to configure the TaskSmart N2400 appliance. (Refer to the Quick Initialization poster for setup instructions.)

### Installing the NC6132

To install the NC6132 NIC, remove the cover from the TaskSmart N2400 appliance, and then remove the NC3134 and NC3135 from PCI slot 2. Follow the instructions in the NC6132 installation guide to replace the NC3135 with the NC6132 NIC.

When this procedure is completed, power up the system and configure the NC6132 with the required settings.

### Configuring the NC6132

Since this is the first configuration of the TaskSmart N2400 appliance, follow the instructions included with the unit for using the Offline Configuration Data Diskette. There will be one minor exception associated with the installation of the NC6132 NIC. The Configuration Data Diskette will require specific IP addresses for each of the five Ethernet controllers. Because the NC3135 has been removed and replaced with the NC6132, the system now has only four Ethernet controllers. Input the desired IP addresses for the NC3163, NC3134 and NC6132. When you enter the IP address for the NC6132, the system will prompt for Duplex and Speed settings. These

settings do not apply to the Gigabit Ethernet board and the default settings must be accepted. When the system prompts for the fifth IP address (Eth4), leave it blank, as shown in Figure 2, TaskSmart Configuration Utility.

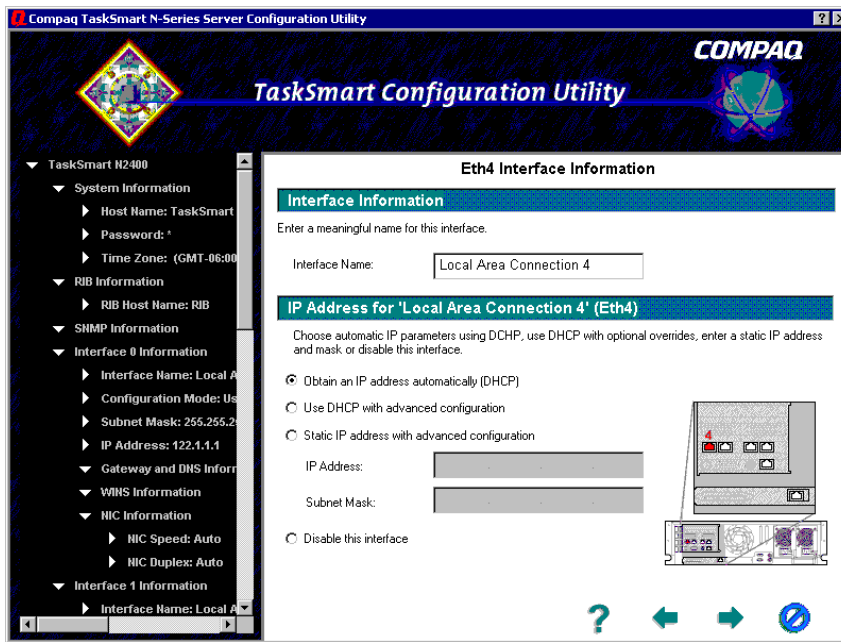


Figure 2. TaskSmart Configuration Utility

Continue the installation process indicated in the TaskSmart N2400 Quick Setup poster. On completion, the NC6132 NIC will be set up.

## Configured Installation

To upgrade to the NC6132 NIC on a system where the NC3134 and NC3135 are already configured, additional procedures must be completed before the system is powered down and the NC6132 is installed.

### Dissolving Network Teaming on the NC3135

If the TaskSmart N2400 appliance uses Compaq Network Teaming on the NC3135, it is necessary to disable Network Teaming before continuing any further. To check if Network Teaming is running on the system, look on the desktop status bar to see whether the Network Teaming icon shown in Figure 3 exists.



Figure 3. Network Teaming icon

If the icon shown in Figure 3 is displayed on the status bar, Network Teaming is in operation and must be disabled. To disable Network Teaming, double-click the icon to display the Compaq Network Teaming and Configuration Properties window.

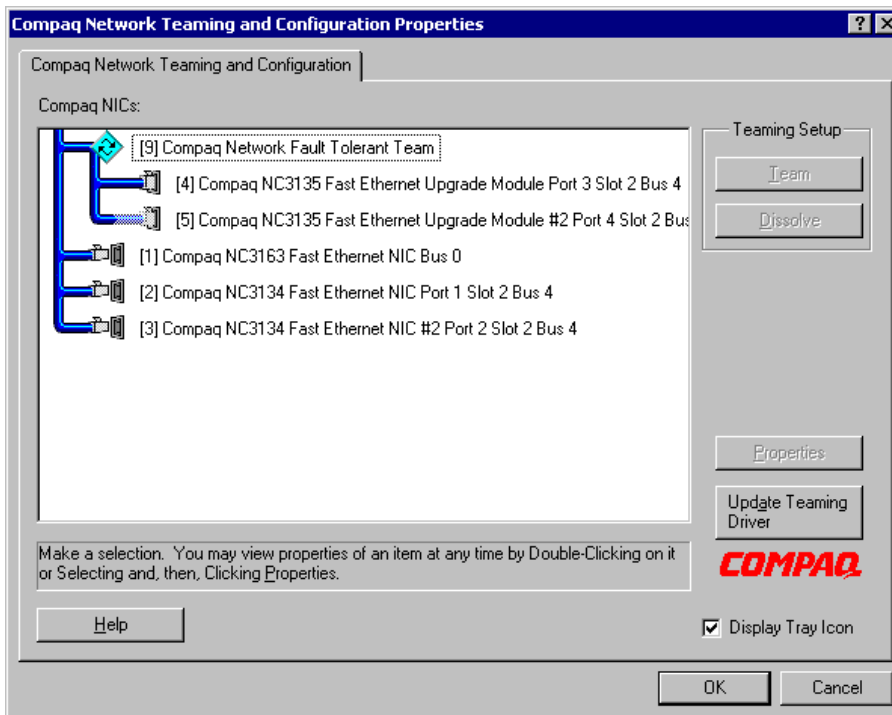
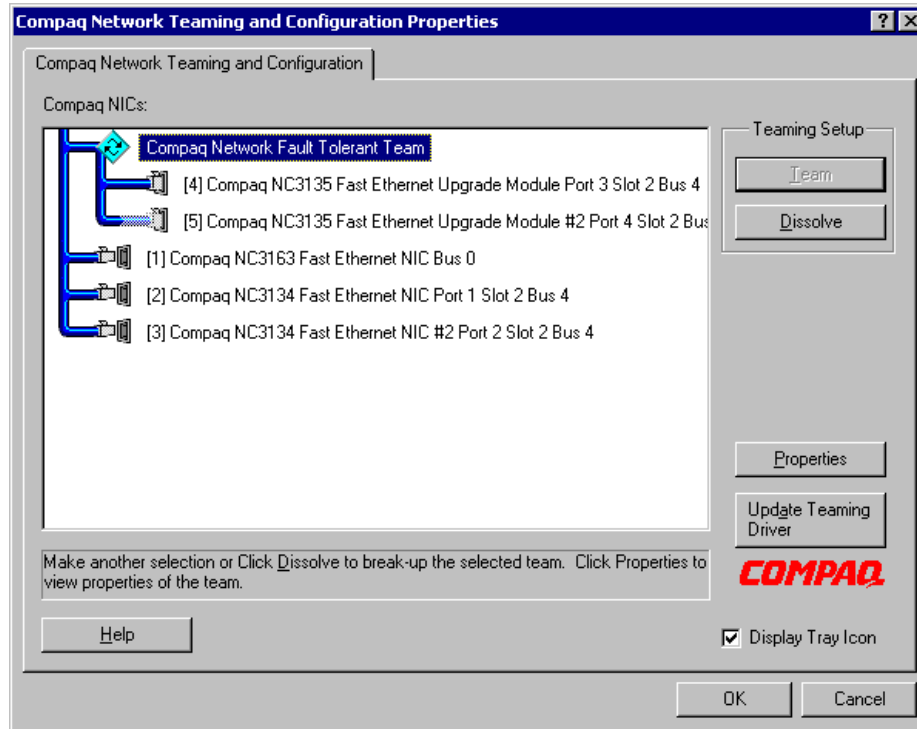


Figure 4. Compaq Network Teaming and Configuration Properties window

The NC3135 is shown Teamed and must be dissolved.

To dissolve the Teaming, click the icon to the left of Compaq Network Fault Tolerant Team as shown in Figure 5. The Dissolve button becomes active. Click Dissolve to remove Teaming.



**Figure 5. Dissolve Teaming**

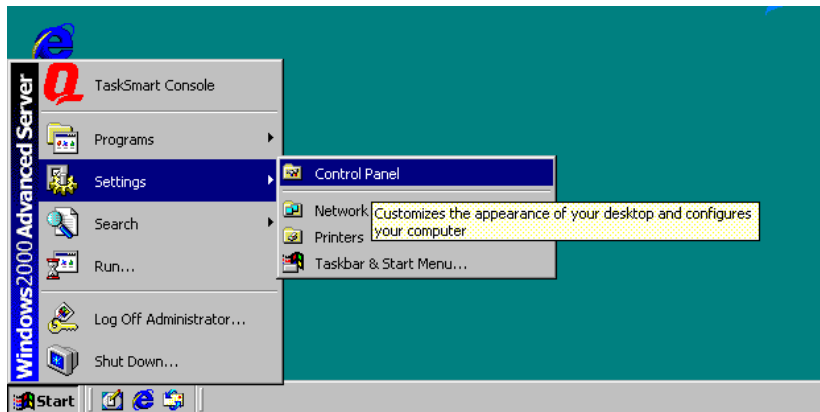
On completion of the dissolve, you may uninstall the NC3135 NIC.

### Uninstalling the NC3135

To properly administer the system, it is important to go to the Device Manager and uninstall the NC3135 ports.

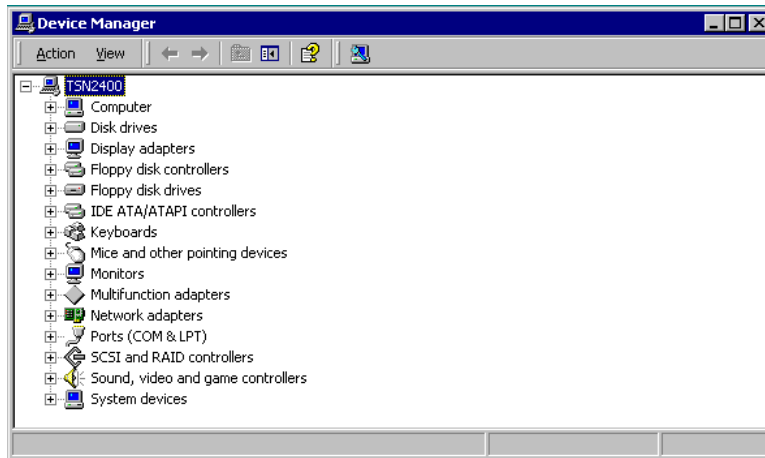
To disable the NC3135 in Device Manager, perform the following steps:

1. From the Start menu, expand Settings and click Control Panel.



**Figure 6. Start menu**

2. Under Control Panel, double-click System to open the System Properties window.
3. Select the Hardware tab and click Device Manager. The Device Manager window displays.

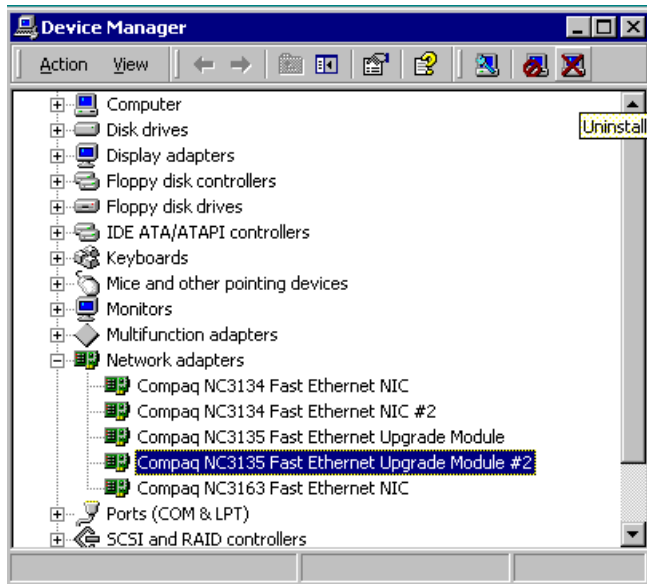


**Figure 7. Device Manager window**

4. In the Device Manager window, expand Network adapters.



5. Under Network adapters, a total of five adapters are shown. Select the adapter marked Compaq NC3135 Fast Ethernet Upgrade Module #2, as shown in Figure 8.



**Figure 8. NC3135 Fast Ethernet Upgrade Module #2 selected**

6. To uninstall the selected adapter, click the tool bar icon shown in Figure 9.



**Figure 9. Tool bar icon**

7. On the Confirm Device Removal window, click OK and repeat steps 5 through 7 to uninstall the other NC3135 Upgrade Module port.

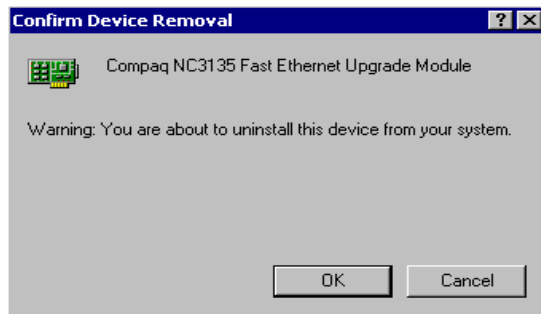


Figure 10. Confirm Device Removal window

8. After the NC3135 ports have been removed, the Device Manager screen displays, as shown in Figure 11.



Figure 11. Device Manager screen

9. Uninstalling the NC3135 NIC is complete. Close any active windows and power down the computer.

The system is now ready for installation of the NC6132 NIC.

## Installing the NC6132

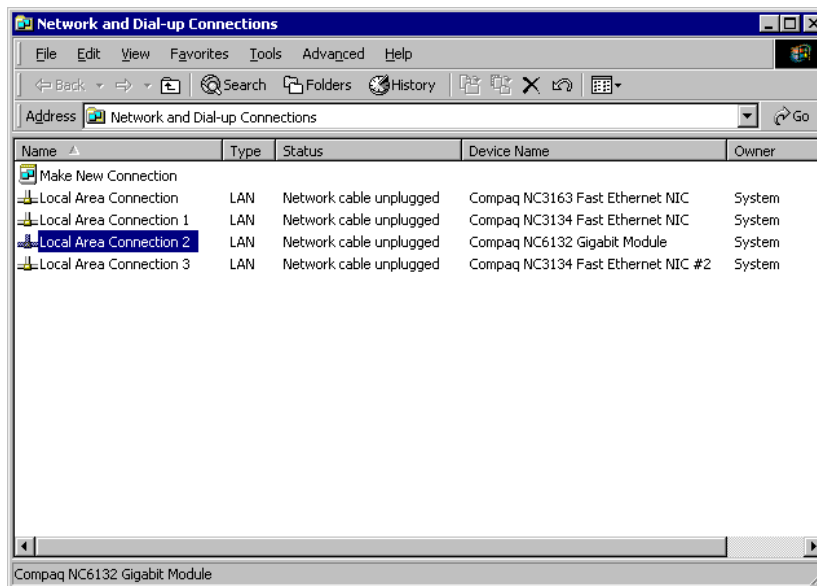
To install the NC6132 NIC, remove the cover on the base unit. Then remove the NC3134 and NC3135 from PCI slot 2. Follow the instructions issued in the NC6132 installation guide to remove the old module and install the new module.

After the NC6132 is installed, the system may be powered up and the NC6132 configured to the desired settings.

## Configuring the NC6132

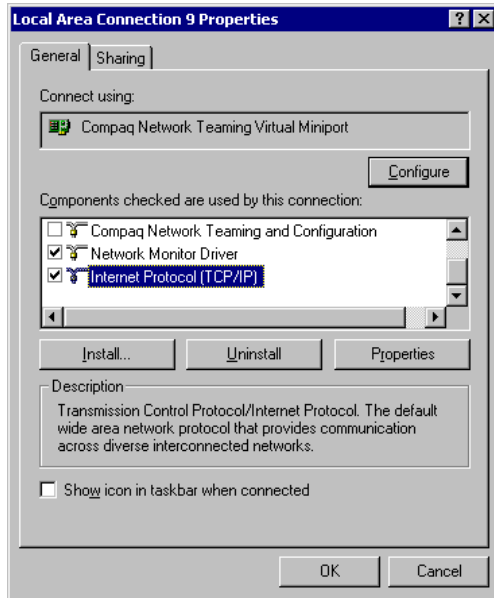
On a pre-configured TaskSmart N2400 appliance server, setting up the new NC6132 is easy. When you power up the unit, Microsoft Windows 2000 Advanced Server will automatically detect the new NIC and load the drivers without user intervention. However, the default settings for the NC6132 will be those of a Dynamic Host Configuration Protocol (DHCP) IP address. When a static IP address is needed for the NC6132, the following steps must be performed.

1. On the desktop, right-click the My Network Places icon.
2. Select Properties from the pull-down menu.
3. If the view is not in Detail, go to View and select Details from the pull-down menu.
4. Right-click the Local Area Connection with the device name NC6132, and select Properties from the pull-down menu.



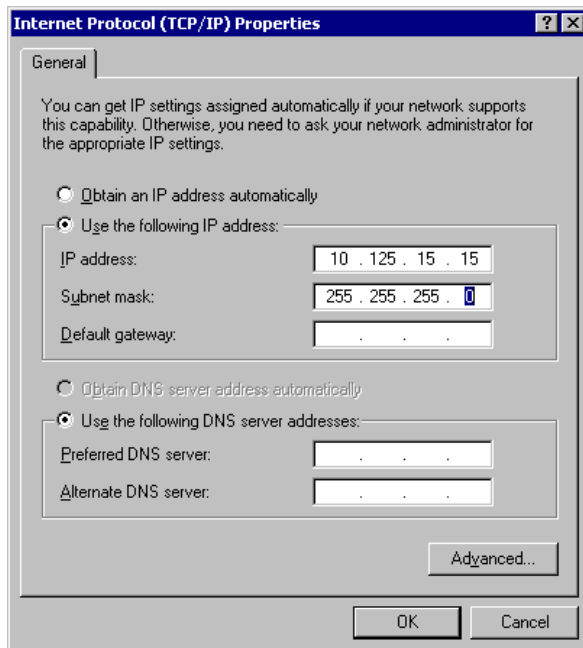
**Figure 12. Local Area Connections**

5. Click the Internet Protocol (TCP/IP) option and then click Properties.



**Figure 13. Local Area Connection 9 Properties**

6. Select Use the following IP address: and enter the IP address, Subnet mask, and Default gateway, if necessary.



**Figure 14. Internet Protocol(TCP/IP) Properties**

Setup of the NC6132 Gigabit Ethernet Controller is complete.

# Compaq Network Teaming

## TaskSmart N2400 Gigabit Ethernet Network Teaming

To set up Network Teaming, open the Compaq Network Teaming and Configuration Utility. The Compaq Network Teaming and Configuration Properties window displays, as shown in Figure 15.

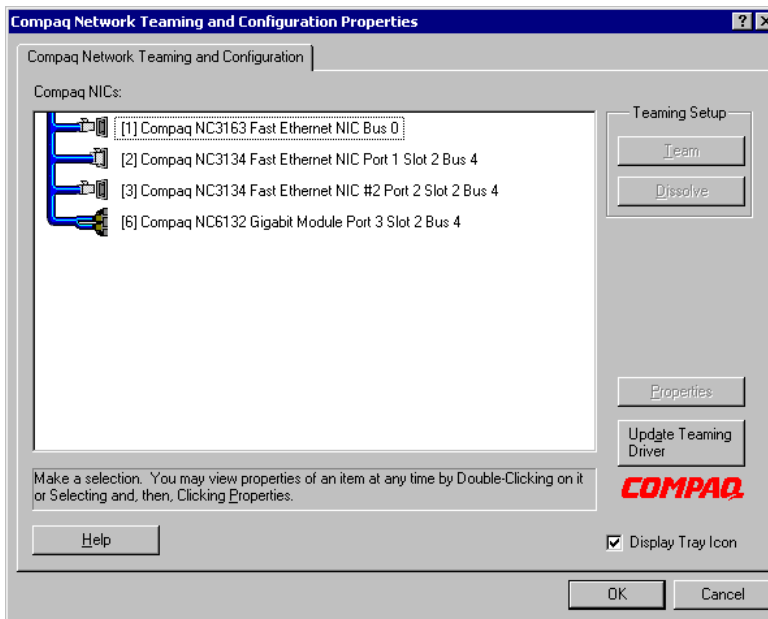
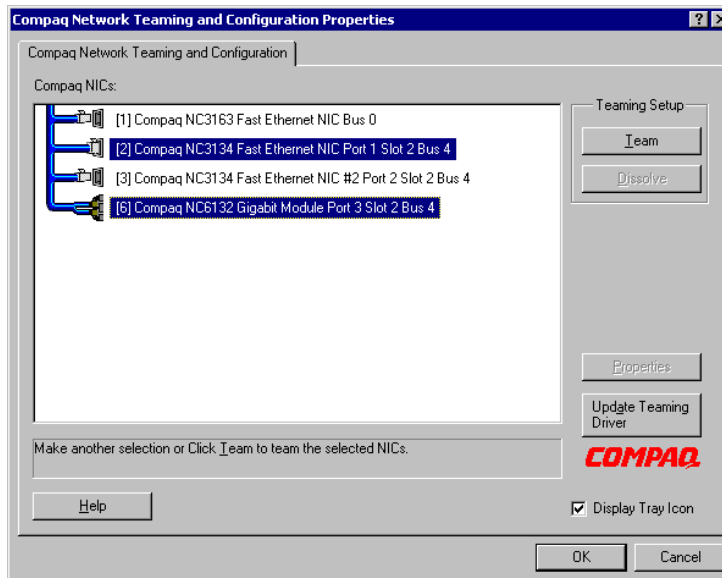


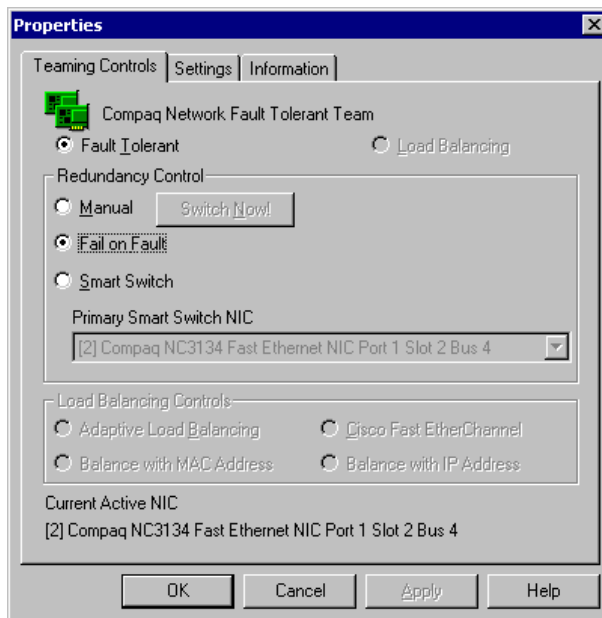
Figure 15. Compaq Network Teaming and Configuration Properties window

Select the Ethernet NIC ports to team. In the example shown in Figure 16, the NC6132 will be teamed with the first port on the NC3134. Click Team. The utility will ask a series of questions on how the team is to be set up.



**Figure 16. Compaq Network Teaming with the NC31134 and NC6132 selected for teaming**

The default setting for the primary NIC is for the NC3134, shown in Figure 17.



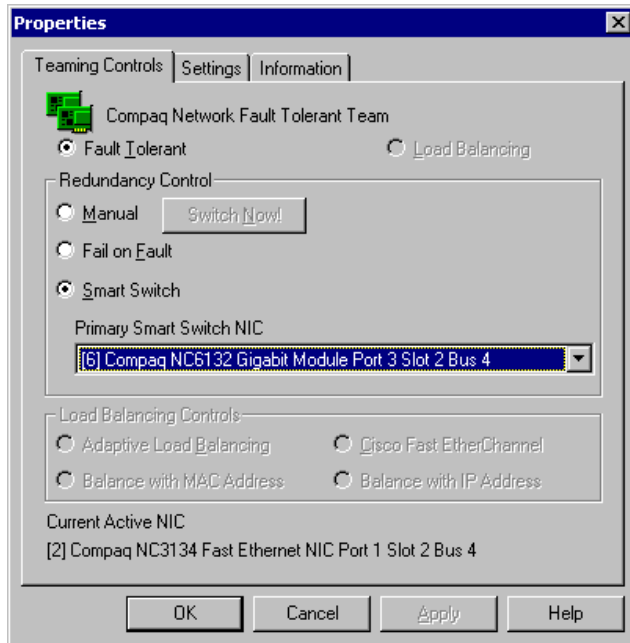
**Figure 17. Teaming with Fail on Fault**

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**Note:** As previously discussed in the “Unsupported Features” section, the load balancing controls are not available.

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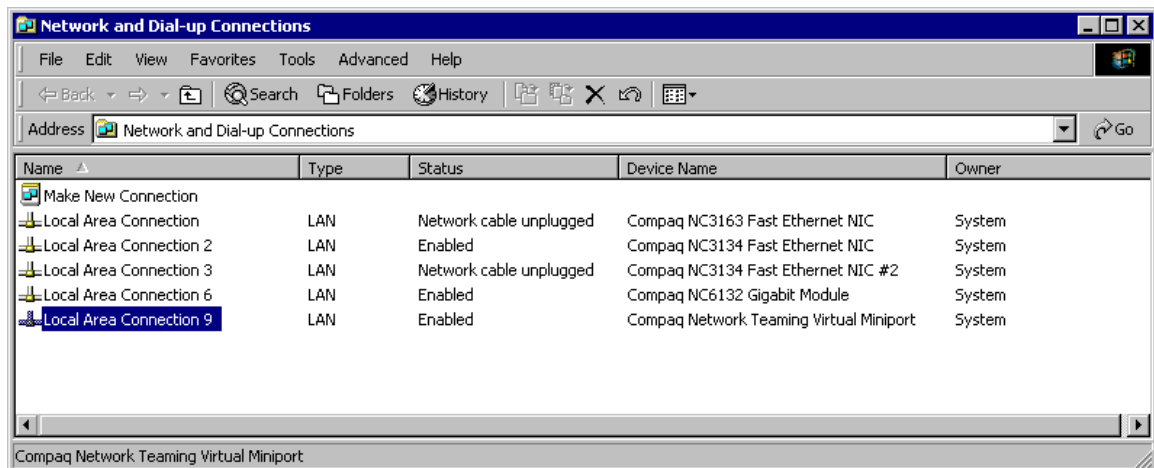
To change the default setting, right-click the NC3134 listing and select Properties, then select Smart Switch and change the setting in the Primary Smart Switch NIC field, as shown in Figure 18.



**Figure 18. Teaming with Smart Switch**

For more information on Compaq Network Teaming, refer to the product administration guide.

Once Teaming setup is complete, the utility will request a restart of the system. After restarting, go to the Network and Dial-up Connections folder to check that Teaming is enabled.



**Figure 19. Network and Dial-up Connections showing Teaming enabled**

Compaq Network Teaming of the NC6132 and the NC3134 is complete.

## Conclusion

The NC6132 Gigabit Ethernet Controller setup and operation is accomplished by following the steps described in this guide. As new information becomes available, it will be posted to the Compaq website at

<http://www.compaq.com/tasksmart/>