



## Configuring Dual VLANs

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This chapter describes how to configure BBSM to support two VLANs on its internal network. The procedure in this chapter assumes that you have already configured your network devices to support the VLANs. For additional information, refer to the product manual for your network device. You must also use the Intel PRO family of NICs for dual VLANs to be supported on the BBSM server.



### Note

If the internal NIC link speed on the BBSM 5.3 Hotspot appliance is set to auto-detect and/or auto-negotiate, no clients can connect in the dual VLAN configuration. The internal NIC model of the D530 server is Intel Pro/1000 MT Desktop, and it does not forward packets with its link speed set to auto-negotiate after dual VLANs are configured. For it to forward packets in the dual VLAN configuration, its link speed must be set to either 100 or 1000 Mbps full duplex, depending on the speed of the switch port that it is connected to. To set the link speed of the internal NIC on D530, launch the PROset application and click **Intel Pro/1000 MT Desktop Adapter** from the left-hand panel. Click the **Speed** tab on the right-hand panel and then click **100 Mbps full duplex** or **1000 mbps full duplex** radio button.

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### Caution

In a multi-VLAN configuration, the VLANs associated with the trunk port should not be native because packets on a native VLAN are sent untagged to the BBSM server and the server rejects them when the internal NIC is enabled for Institute of Electrical and Electronics Engineers (IEEE) protocol 802.1Q (specifies formatting for dual VLANs).

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### Caution

If you need to install the restore image on a BBSM 5.3 rack-mounted server, you must have the Intel PRO/1000 MT Dual Port Server Adapter, part number PWLA8492MT, installed in the lower slot or the image installation will fail. Refer to the *Cisco BBSM 5.3 Quick Start Guide* for details.

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**Caution**

If you forget to uncheck this component and your server starts to reboot continuously, unplug the internal NIC. This will stop the continuous reboot and allow you to uncheck the component.

**Step 2** Install the Intel PROset utility that is used to create the management and client VLANs:

- If you purchased a BBSM appliance, go to [Step 3](#).
- If you are installing BBSM from the installation CD, go to [Step 4](#).

**Note**

The PROSet pack includes 10, 100, and gigabit adapter base drivers and the PROSet utility for Intel PRO network adapters for Windows 2000 and XP.

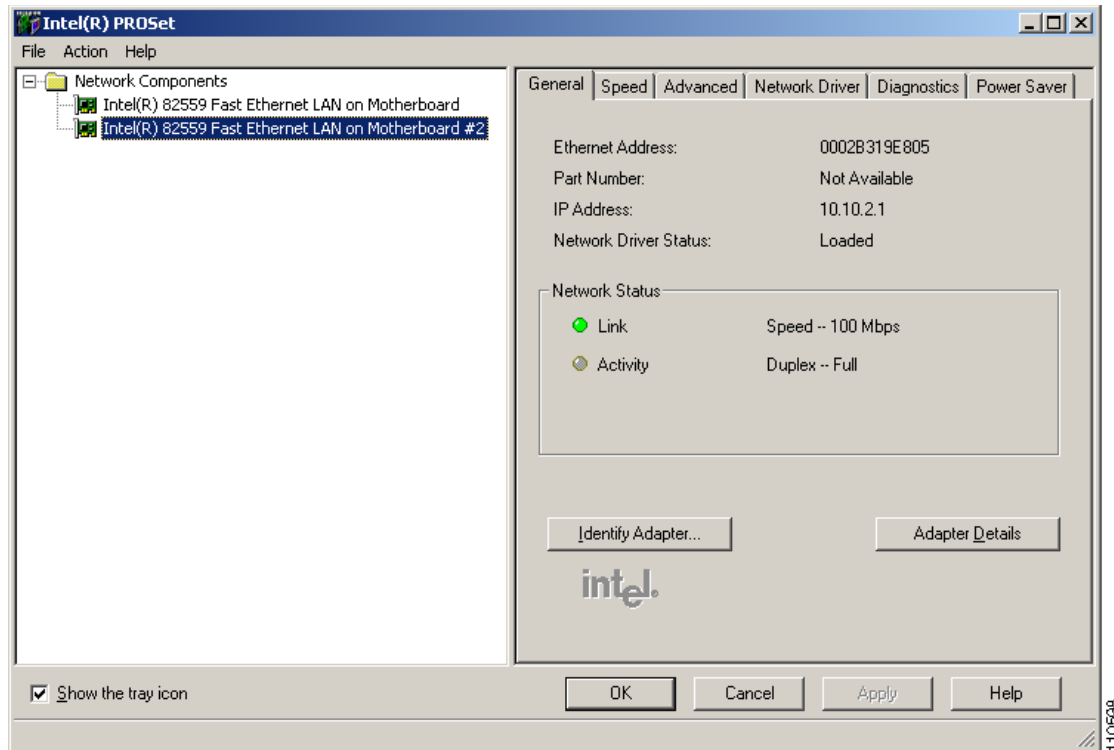
**Step 3** Cisco ships the BBSM appliance with the PROset utility installed on it. You can launch it from a small PROset icon in the right-hand corner of the task bar at the bottom of the window. You can also launch it by using the executable file at this location: `c:\Program Files\Intel\NCS\ProSet\Proset.exe`.

**Step 4** To install the PROset utility from the BBSM Version 5.3 Software CD, follow the steps below. (If the BBSM Installation window appears, click **Exit** in the bottom-right corner of the window.)

- a. Choose **Start > Run**.
- b. Type `e:\Drivers\PRO2KXP8.2.1.exe` and press **Enter** to start the PROset installation.
- c. Click **I accept the terms of the license agreement** and click **Next**.
- d. Verify that the files are being saved in the folder `c:\IntelPRO` and click **Next**.
- e. From the Intel PRO Network Connections window, click **Install Software**.
- f. After the files have been installed, click **Exit**.
- g. As in [Step 3](#), you can run PROset from a small PROset icon in the right-hand corner of the task bar at the bottom of the window. You can also launch it by using the executable file at this location: `c:\Program Files\Intel\NCS\ProSet\Proset.exe`.

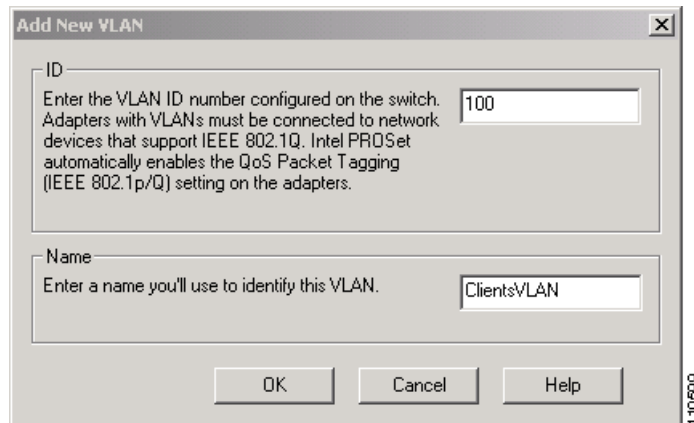
[Figure 4-2](#) shows the main window on the PROset utility.

Figure 4-2 PROset Utility Main Window



- Step 5** To select the appropriate internal NIC from the two menu items in the Network Components area of the PROset window, follow one of the steps below:
- If you purchased an appliance, select **Intel(R) 82559 Fast Ethernet LAN on Motherboard #2** for the internal NIC from the Network Components.
  - If you installed the BBSM software from a CD, select the internal NIC by examining which network component matches the internal NIC IP address shown in the IP Address line on the right-hand side of the window.
- Step 6** To add the VLANs, follow these steps for the management and client VLAN:
- From the Action menu, click **Add Vlan**. (See Figure 4-3.)
  - For the first VLAN, enter the appropriate VLAN ID and name the VLAN, such as *MgmtVLAN* and then click **Apply**.
  - Repeat these steps for the second VLAN and then close the PROset window.

Figure 4-3 PROset Add Vlan Window



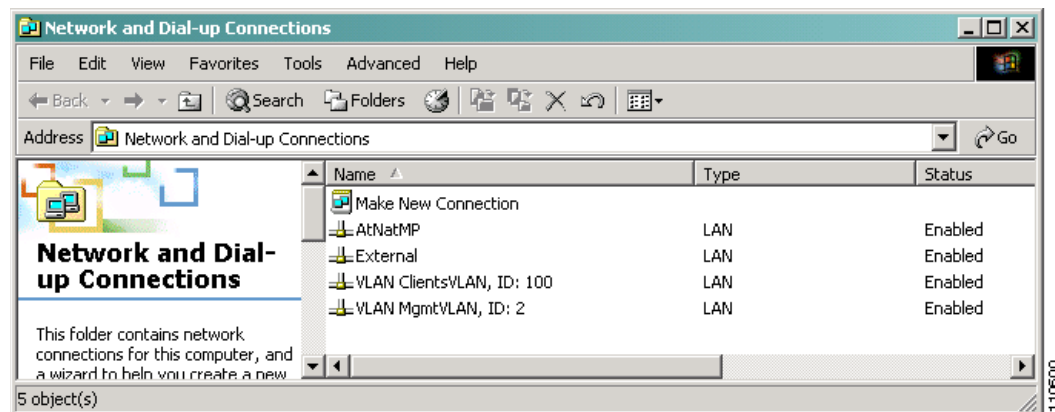
**Step 7** To configure the IP addresses for the management and client VLANs, follow these steps:



**Note** These steps describe how to configure the IP address for the client VLAN.

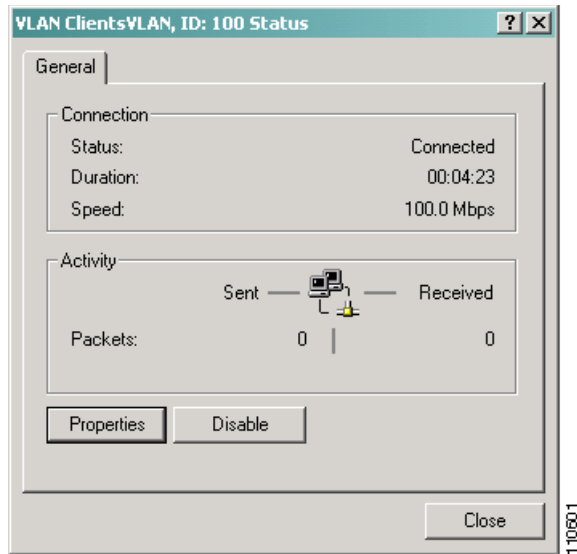
- a. Right-click **My Network Places** and select **Properties**. The Network and Dial-up Connections window appears.
- b. Verify that the two VLANs appear in the window. (See Figure 4-4.)

Figure 4-4 Network and Dial-up Connections Window Showing Two VLANs



- c. Double-click the first VLAN. (When you finish these steps, you will double-click the second VLAN to configure its IP address.) The VLAN is named VLAN <VLAN name>, ID: <VLAN ID>, such as *VLAN ClientsVLAN, ID: 100*. This is one of the VLANs that you named in Step 6. The VLAN Status dialog box appears. (See Figure 4-5.)

Figure 4-5 VLAN Status Window



- d. Click **Properties**. The VLAN Properties window appears.
- e. Specify the properties for the VLAN, as shown below:
  - For the client VLAN, uncheck all boxes except **TCP/IP** and **Adaptive Network Translation Service**.
  - For the management VLAN, uncheck all boxes except **TCP/IP**.
- f. Select **Internet Protocol (TCP/IP)** and click **Properties**. The Internet Protocol (TCP/IP) Properties window appears.
- g. Click **Use the following IP address** and enter a client IP address for the client VLAN you just created (or if applicable a management IP address for the management VLAN).
- h. Leave the default gateway and preferred DNS server entries blank.
- i. Click **OK**. A dialog box appears, stating that you have left the DNS field blank. Click **OK** to acknowledge the message and then click **OK** to close the window.
- j. Repeat these steps for the second VLAN listed in the Network and Dial-up Connections window and then close this window.

**Step 8** Use the Address Change Wizard to configure the management and client VLANs and to delete dual-VLAN configurations. Refer to the [“Running the Address Change Wizard”](#) section on page 5-1.