



## Running the BBSM Wizards

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This chapter describes how to use the Address Change Wizard to configure BBSM IP addresses. Use the Switch Discovery Wizard to discover the access points and switches on your network.

### Running the Address Change Wizard

This procedure describes how to run the Address Change Wizard to enter BBSM IP addresses for singlenet, multinet, and/or dual-VLAN configurations. (The default configuration for BBSM is singlenet.) If you are planning to use public and private IP addressing, be sure to configure Windows for multinet before running the Address Change Wizard. Refer to the [“Configuring Windows for Public and Private IP Addressing”](#) section on page 3-4.

Before you begin using the Address Change Wizard, review the following information to verify that you are using the correct BBSM tool to enter or change addresses.

- For the initial configuration, use the BBSM tools as follows to enter IP addresses:
  - If you purchased a BBSM appliance (rather than BBSM software on CD), use the Address Change Wizard to enter all BBSM IP addresses:
    - The internal and external NIC IP addresses and subnet masks
    - The BBSM internal network address ranges (DHCP, Management, Foreign, and Temp DHCP)
  - If you purchased BBSM software on CD (rather than a BBSM appliance), you should have configured the internal and external NIC IP addresses when you installed the Windows 2000 operating system. In this case, you can use either the Address Change Wizard or the IP Addresses page in WEBconfig to enter the BBSM internal network address ranges. Refer to the [“Configuring BBSM Sites”](#) section on page 10-1.
- To change IP addresses after the initial configuration, use the BBSM tools as follows:
  - You can change all BBSM IP addresses by using the Address Change Wizard. You must use the Address Change Wizard to change the TCP/IP internal and external NIC addresses and subnet masks. They cannot be changed on the IP Addresses web page in WEBconfig.
  - You can use the IP Addresses web page in WEBconfig to change the BBSM internal network address ranges (DHCP, Management, Foreign, and Temp DHCP).
  - If you are using multinet and/or dual VLANs, you must use the Address Change Wizard to delete the second multinet and/or the dual-VLAN configuration.

**Caution**

If you do not enter the TCP/IP internal and external IP addresses and subnet masks correctly, BBSM will not function properly. If you are performing the initial configuration, be sure to install any service packs or patches before beginning the configuration.

**Step 1** Choose **Start > BBSM Configuration Wizards > Address Change Wizard:**

- If your configuration is a single VLAN, the IP Addresses window appears. Go to [Step 4](#).
- If your configuration is a dual VLAN, a window appears to map VLAN IDs to the client and management VLANs. This window contains two drop-down menus for mapping VLANs and a check box for deleting the dual-VLAN configuration. (See [Figure 5-1](#).) Go to [Step 2](#).

**Figure 5-1** Address Change Wizard VLAN Window

- Step 2** Verify that the correct VLAN type is associated with the VLAN ID. If the VLAN type does not match the VLAN ID, choose the other VLAN type from the drop-down menu. Notice that the second VLAN type changes to the correct type. When you click **Next**, the IP Addresses window appears, showing the new IP address fields for the client and management VLANs. Go to [Step 4](#).

- Step 3** If you want to delete the dual-VLAN configuration, follow these steps:
- a. In the VLAN window, click **Delete Dual VLAN Configuration** and perform Steps 8 through 12. (You have completed the steps you must follow in the Address Change Wizard.)
- Step 4** Verify that the information in the BBSM TCP/IP Properties area is accurate. Figures 5-2 through 5-4 show the IP Addresses window for a singlenet, single-VLAN configuration and a multinet, dual-VLAN configuration. (If you installed BBSM from the CD, only the TCP/IP addresses were automatically entered.)

**Caution**

Do not use the Windows Network and Dial-up Connections window to change IP addresses. This window should only be used to set up multinet and dual VLANs.

**Figure 5-2** Address Change Wizard IP Addresses Window (Singlenet, Dual VLAN)

BBSM Internal Network Address Ranges	
DHCP Start	192.168.100.21
DHCP End	192.168.100.230
Management Start	192.168.2.2
Management End	192.168.2.20
Foreign (Static) Start	192.168.100.231
Foreign (Static) End	192.168.100.254

BBSM TCP/IP Properties	
Clients VLAN IP	192.168.100.1
Clients VLAN Subnet Mask	255.255.255.0
Mgmt VLAN IP	192.168.2.1
Mgmt VLAN Subnet Mask	255.255.255.0
External NIC IP	10.10.1.2
External NIC Subnet Mask	255.255.255.0
Default Gateway	10.10.1.1

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Figure 5-3 Address Change Wizard IP Addresses Window (Multinet, Single VLAN)

Address Change Wizard [BBSM Services Stopped]

BBSM Internal Network Address Ranges

	Multinet 1	Multinet 2
DHCP Start	192.168.100.21	192.100.100.2
DHCP End	192.168.100.170	192.100.100.102
Management Start	192.168.100.2	192.100.100.103
Management End	192.168.100.20	192.100.100.254
Foreign (Static) Start	192.168.100.171	
Foreign (Static) End	192.168.100.180	
Temp DHCP Start	192.168.100.183	
Temp DHCP End	192.168.100.254	

BBSM TCP/IP Properties

	Multinet 1	Multinet 2
Internal NIC IP	192.168.100.1	192.100.100.1
Internal NIC Subnet Mask	255.255.255.0	255.255.255.0
External NIC IP	10.10.1.2	
External NIC Subnet Mask	255.255.255.0	
Default Gateway	10.10.1.1	

Multinet

Temp DHCP Lease Duration: 60  Delete Second Multinet

< Back Finish Cancel Help

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Figure 5-4 Address Change Wizard IP Addresses Window (Multinet, Dual VLAN)

- Step 5** In the BBSM Internal Network Address Ranges area, enter the DHCP, Management, Foreign (static), and, if applicable, Temp DHCP IP address ranges. Note the following about entering the addresses:
- If you are entering temporary DHCP IP addresses, the minimum number of addresses in the range must be at least 20 percent of the total permanent DHCP IP addresses in multinets 1 and 2.
  - If you are using dual VLANs, you must change the IP addresses in the management range to the appropriate addresses for the management VLAN. Refer to [Chapter 4, “Configuring Dual VLANs.”](#)
  - For field descriptions and important notes, refer to [Table 9-2 on page 9-5](#).
- Step 6** For a multinet configuration, enter the number of seconds in the Temp DHCP Lease Duration field. (Refer to [Table 9-3 on page 9-6](#).)
- Step 7** To delete multinet 2 after the initial configuration, check the **Delete Second Multinet** check box in the Multinet section.



**Caution** You must delete multinet 2 by using the Address Change Wizard for BBSM to function properly. Although you used the Windows Network and Dial-up Connections window to add multinet functionality, do not delete multinets using this window.

- Step 8** Click **OK**. A dialog box appears, stating that you must stop BBSM services to make the change and asking you to verify this action.
- Step 9** To stop BBSM services, click **OK**. A second dialog box appears, stating that you have altered the IP addresses and must reboot for the changes to take effect.

**Step 10** Click **Yes** to reboot your server.



**Note** If you change only the Temp DHCP Lease Duration, the server does not require a reboot. In this case, the Yes/No dialog box does not appear, and the server does not reboot.

**Step 11** After your server reboots, log in as an administrator with the proper password.

**Step 12** If you are deleting the dual-VLAN configuration, you must check the Adaptive Network Address Translation Service component that you unchecked in the procedure to add VLANs in [Chapter 4, “Configuring Dual VLANs.”](#) Follow these steps:

- Right-click **My Network Places** and select **Properties**. The Network and Dial-up Connections window appears.
- Right-click **AtNatMP** and select **Properties**. The AtNatMP Properties window appears.
- Check the **Adaptive Network Address Translation Service** check box and click **OK** to close the window.
- Close the Network and Dial-up Connections window.

When you are configuring your server for the first time, you must run the Switch Discovery Wizard after you run the Address Change Wizard. Continue with the next section.

## Running the Switch Discovery Wizard

After you run the Address Change Wizard, run the Switch Discovery Wizard to discover the switches and access points connected to the BBSM network. The wizard determines the network device type and creates records for the network devices in the BBSM database. Note the following about running the wizard:

- The wizard discovers switches and access points that were configured with an IP address in the Management range (as specified in the Address Change Wizard) and that have the same SNMP read-write community string (password).
- It discovers switches and access points at a single site or multiple sites (one site at a time).
- It discovers network devices in bridged network configurations, not in routed or mixed (bridged and routed) configurations.
- It does not discover CMTSs. Refer to the [“Adding and Configuring CMTSs”](#) section on page 12-7.
- The wizard only discovers cluster members and then adds them to the BBSM database; it does not create or enable them. You can cluster up to 16 switches, which use a single IP address. Because clustered Cisco switches do not all have the same SNMP read-write community string (password), specify the password of the master switch, and the wizard will discover all of the switches in the cluster.



**Caution**

If you want to cluster your switches, you must first create the Cisco switch clusters before running the Switch Discovery Wizard.

For information on clustering, go to these Cisco websites:

<http://www.cisco.com/warp/public/cc/techno/media/lan/ether/sgth/index.shtml>

[http://www.cisco.com/warp/public/cc/pd/si/casi/ca3550/prodlit/cclms\\_ds.htm](http://www.cisco.com/warp/public/cc/pd/si/casi/ca3550/prodlit/cclms_ds.htm)

For information on debugging switch connectivity problems, go to this website:

[http://www.cisco.com/en/US/products/hw/switches/ps607/products\\_tech\\_note09186a0080094709.shtml#javaplugin](http://www.cisco.com/en/US/products/hw/switches/ps607/products_tech_note09186a0080094709.shtml#javaplugin)

Follow this procedure to run the Switch Discovery Wizard:

- Step 1** Choose **Start > BBSM Configuration Wizards > Switch Discovery Wizard**. The Site Information dialog box appears. (See [Figure 5-5](#).)

**Figure 5-5 Site Information**

Site Information

Site Number

Site Name

Site Description

< Back Next > Cancel Help

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- Step 2** Verify that the site number is correct.

- Step 3** Enter the site name and description and click **Next**:

- If this is a new site, the Enter Site Account Information dialog box appears. Go to [Step 4](#). (See [Figure 5-6](#).)
- If this is an existing site, the The Network Elements Information dialog box appears. Go to [Step 5](#). (Figures [5-7](#) and [5-8](#) show singlenet and multinet configurations.)

**Figure 5-6 Enter Site x Account Information**

Enter Site #1 Account Information

Every site has an operator account, that can create access and update the portmap, and a report account, that can run reports but cannot change any sites. Please enter this account information for the site you are creating.

Operator Account Information

Name:

Password:

Verify Password:

Report Account Information

Name:

Password:

Verify Password:

OK Cancel

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- Step 4** Enter the new Operator and Report account names and passwords and then click **OK**. The Network Elements Information dialog box appears. (Figures 5-7 and 5-8 show a singlenet, single VLAN configuration and a multinet, dual-VLAN configuration.)



**Note** Operator and Report permissions are specified for each site. The same Operator and Report names and passwords can be used for multiple sites.

Figure 5-7 Network Elements Information Window (Singlenet)

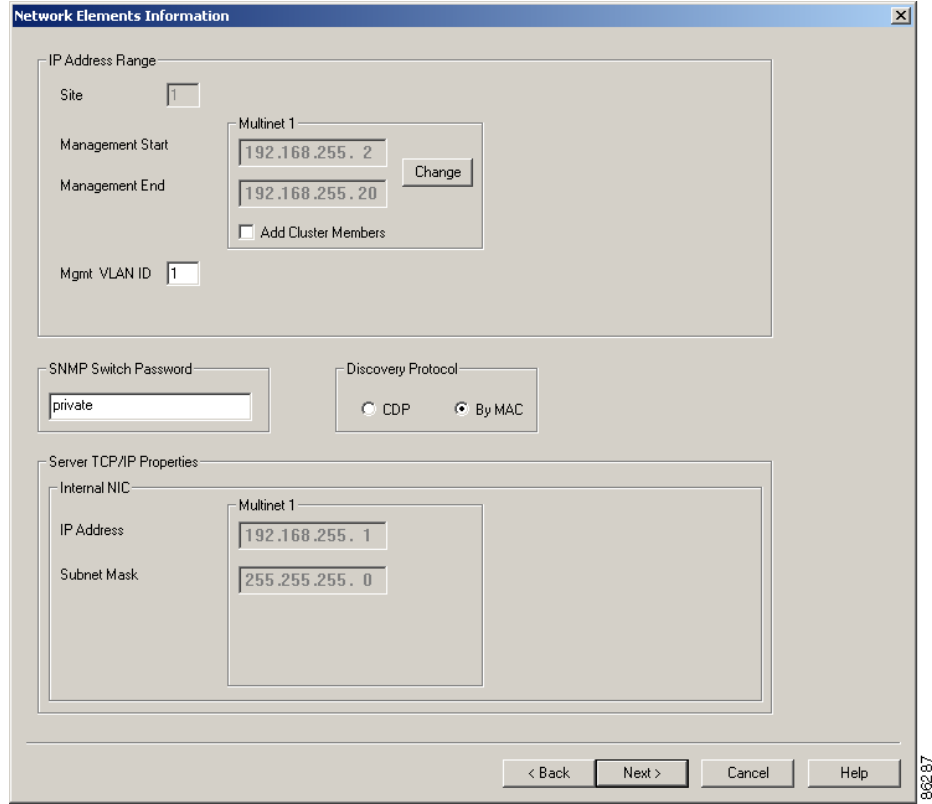
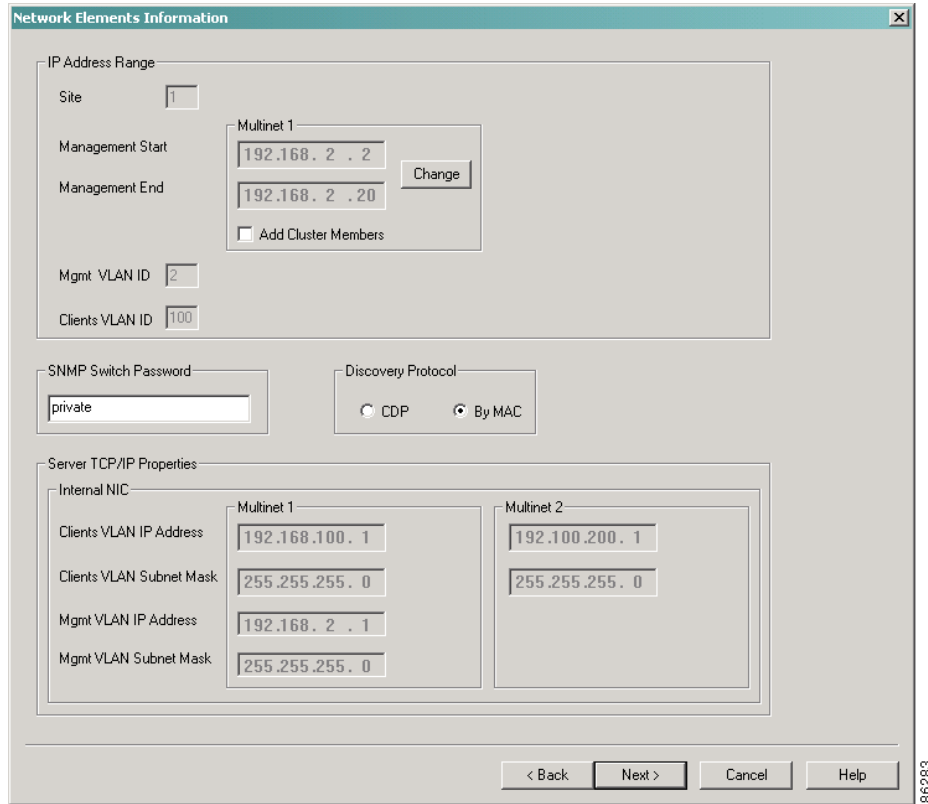


Figure 5-8 Network Elements Information Window (Multinet and Dual VLAN)



**Step 5** Verify that the information is correct and make any needed changes by using the information in Table 5-1.

Table 5-1 Network Elements Information Window Options

Field	Description
<b>IP Address Range</b>	
Site	Displays the site number that is being configured.
Management Start Management End Change	Displays the beginning and ending IP addresses of the Management range. These IP addresses are obtained from the Address Change Wizard. Click <b>Change</b> to edit the management IP addresses.
Add Cluster Members	Check this check box if you want the wizard to automatically add all cluster members to the BBSM internal network.
Mgmt Vlan ID	If you are using a single-VLAN configuration, displays the default VLAN ID. Change this value if you are using a non-default management VLAN number in your BBSM network. All network devices on the BBSM internal NIC must have this VLAN number.  If you are using a dual-VLAN configuration, displays the configured management VLAN ID.
Clients VLAN ID (dual VLANs only)	If you are using a dual-VLAN configuration, displays the configured client VLAN ID.

**Table 5-1 Network Elements Information Window Options (continued)**

Field	Description
<b>SNMP Switch Password</b>	
SNMP Switch Password	Displays the default name <i>private</i> , which can be changed.
<b>Discovery Protocol</b>	
CDP	Click this option to use the Cisco Discovery Protocol. If you are using Cisco switches or access points exclusively, this option is more efficient than the By MAC protocol for discovering network devices.
By MAC	Click this option to use the network device's MAC address to discover network devices. You can use this protocol if you are using Cisco switches or a combination of Cisco and non-Cisco switches.
<b>Server TCP/IP Properties</b>	
<b>Internal NIC</b>	
IP Address Subnet Mask (single VLAN only)	Displays the internal NIC IP address and subnet mask for multinet 1 (and multinet 2 if applicable), which are obtained from the Address Change Wizard.
Clients VLAN IP Address Clients VLAN Subnet Mask Mgmt VLAN IP Address Mgmt VLAN Subnet Mask (dual VLANs only)	<p><b>Note</b> When dual VLANs are being used, these fields are displayed instead of the Internal NIC IP Address and Subnet Mask fields above.</p> <p>Displays the client VLAN and management IP addresses and subnet masks. If you are using multinets, the Clients VLAN fields show the IP addresses and subnet masks for multinets 1 and 2.</p> <p>These fields can also be changed by using the Address Change Wizard.</p>
<b>Buttons</b>	
Change	Changes the range of IP addresses that the Switch Discovery Wizard searches.
Back	Returns you to the previous page.
Next	Takes you to the next page.
Cancel	Exits the wizard.
Help	Accesses the Switch Discovery Wizard online help.

- Step 6** Click **Next**. The Locating Network Elements dialog box appears. It shows a ping being sent to each IP address in the Management range to find the network devices. When this process is complete, the Next button is enabled. (Figures 5-9 and 5-10 show the dialog box for singlenet and multinet configurations.)
- If more than one BBSM switch type with the same device type identifier from the SNMP MIB II database (sysObjectID) is discovered during the discovery process, the Select Switch Type dialog box appears. (See Figure 5-11.) In this case, select the actual switch type and click **OK**. The SwitchDiscovery dialog box appears, asking you to verify the selected switch type. Click **Yes** to confirm your selection.

Figure 5-9 Locating Network Elements Window (Singlenet)

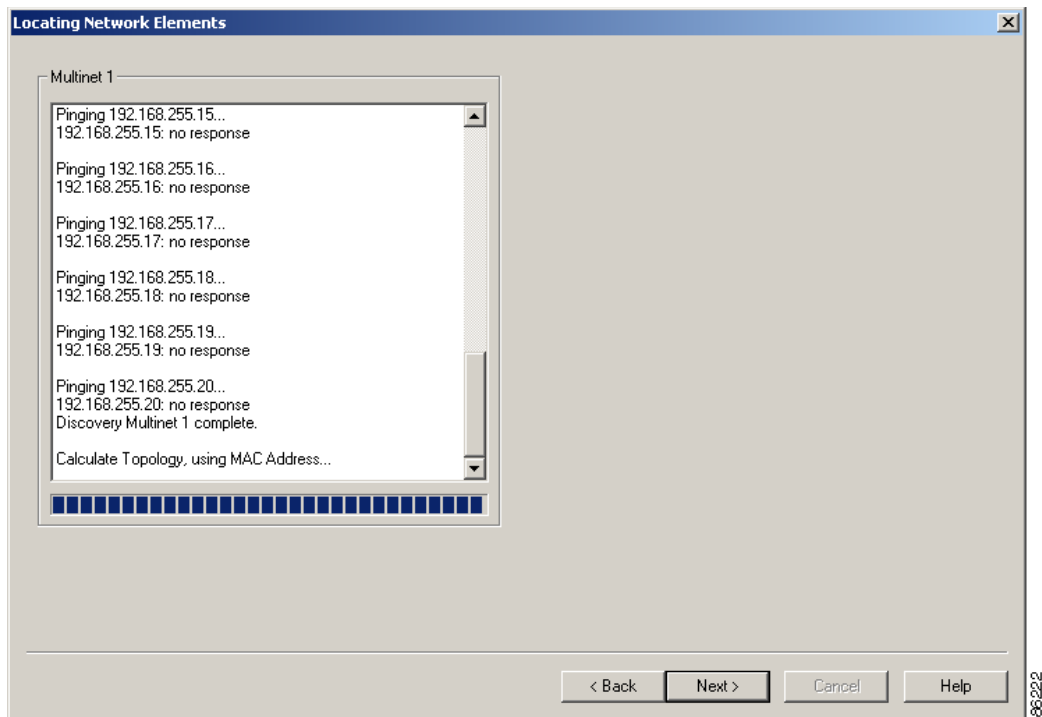
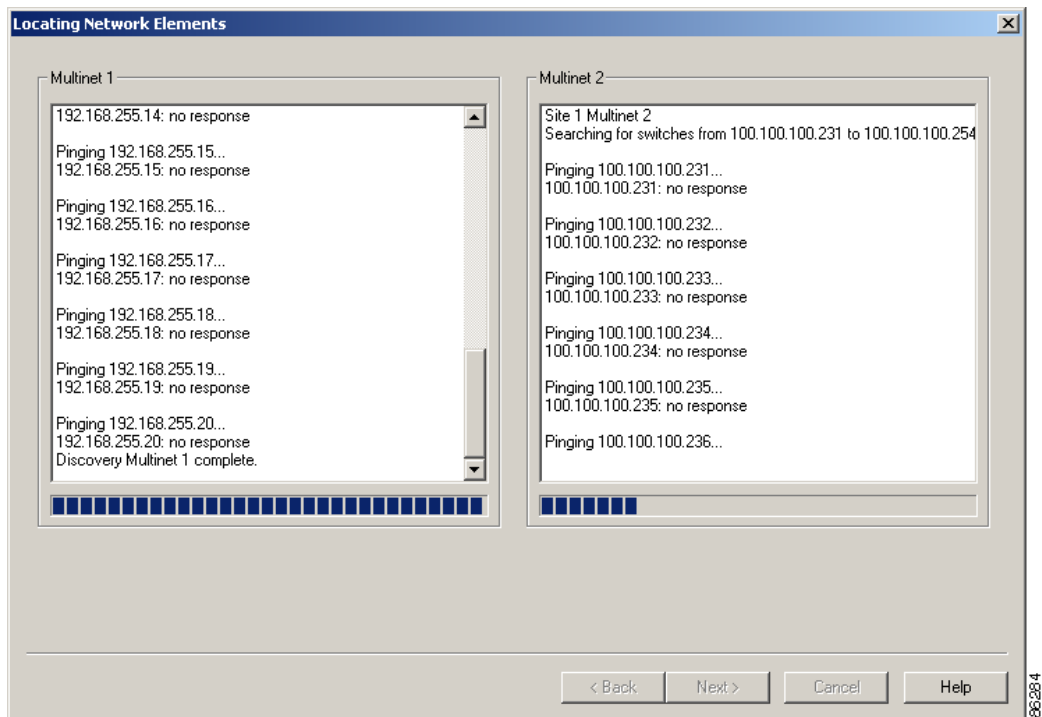
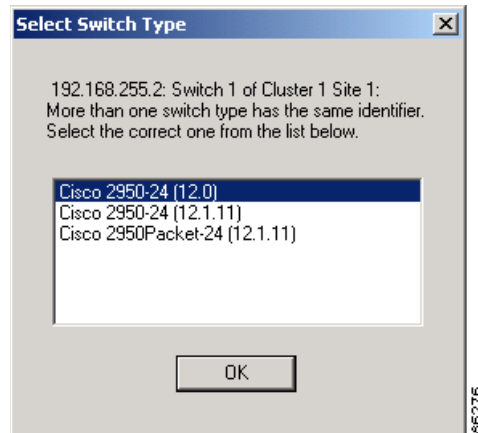
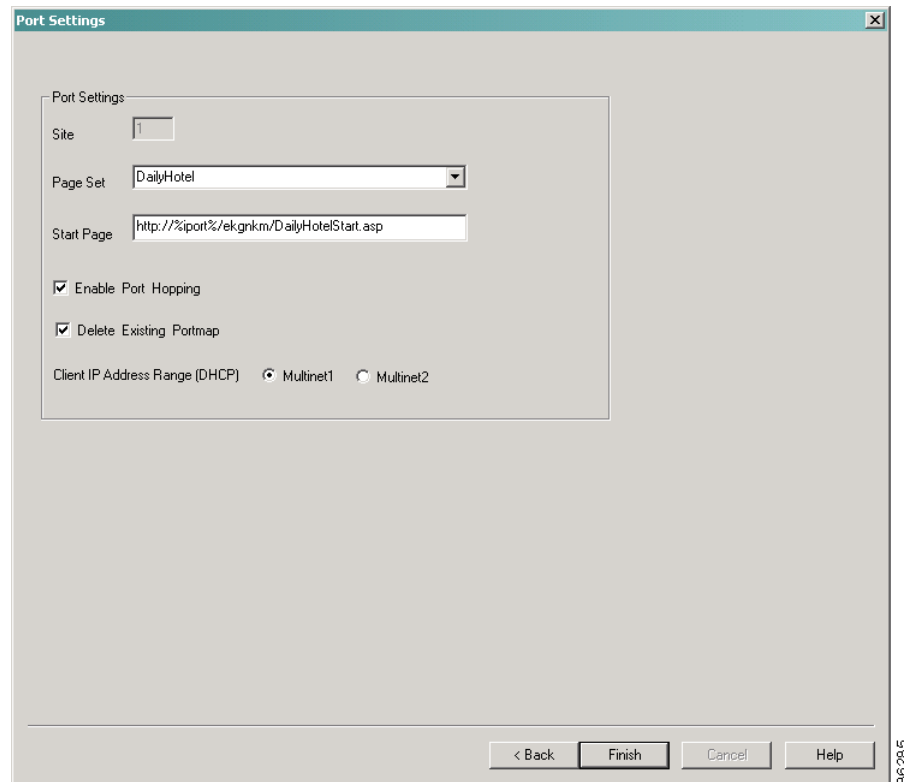


Figure 5-10 Locating Network Elements Window (Multinet)




**Figure 5-11 Select Switch Type Dialog Box**

- Step 7** From the Locating Network Elements dialog box, click **Next**. The Port Settings dialog box appears. (Figure 5-12 shows multinet configuration.)

**Figure 5-12 Port Settings (Multinet)**

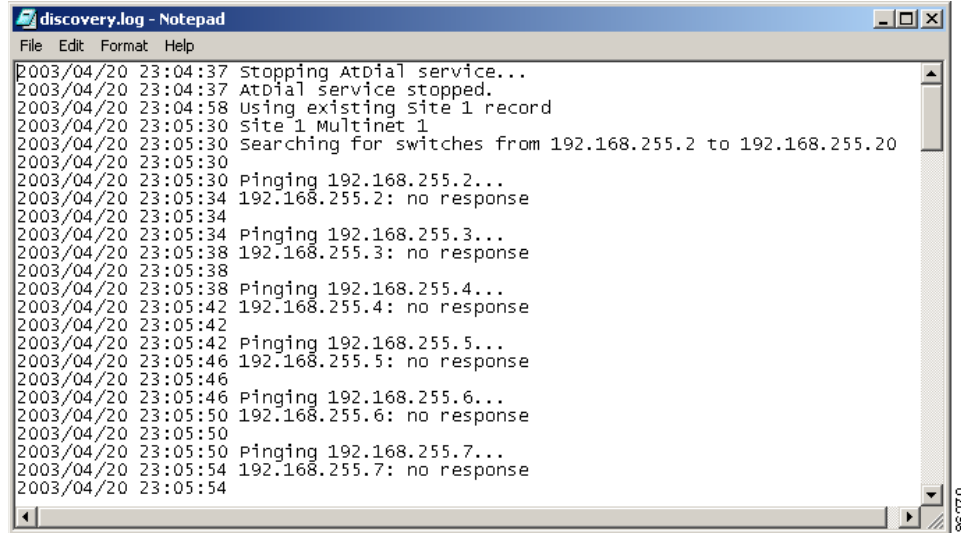
**Step 8** Configure the port settings by using the information shown in [Table 5-2](#).

**Table 5-2 Port Settings Options**

Field	Description
<b>Port Mapping</b>	
Site	Displays the site number that is being configured.
Page Set	From the drop-down menu, select the appropriate page set for the site that you are configuring.  <b>Note</b> If you will be using SSL and have not yet installed your SSL certificate, you will not be allowed to select SSL page sets. Choose the <i>Clear</i> version of the RADIUS or credit card page set until you install the certificate and then change your page set to the SSL page set. For example, choose RADIUSClear until the certificate is installed. After installing the certificate, change the page set to RADIUS.
Start Page	The Start Page field automatically populates with the URL that corresponds with the page set that you just selected.
Enable Port Hopping	Check this check box to enable the BBSM port-hopping feature, which enables all switches for port hopping and enables the end user to move between network hardware such as wireless access points, switch ports, or cable modems in a BBSM network without interrupting service. If you want to enable port hopping on specific ports, use the Network Elements Port Settings pop-up window in WEBconfig. For additional information, refer to <a href="#">Chapter 13, “Configuring PMS or Print Billing.”</a>
Delete Existing Port Map	Check this check box if you want to clear the existing port settings.   <b>Caution</b> This will erase any previous room mapping.
Client IP Address Range (DHCP)	<b>Note</b> This field appears only in a multinet configuration.  DHCP assigns leases to clients from either the Multinet 1 or Multinet 2 IP address ranges. Select the appropriate multinet. (The page set overrides this setting if the page set specifies which multinet to use.)
<b>Buttons</b>	
Back	Returns you to the previous page.
Finish	Completes the last step of the Switch Discovery Wizard.
Cancel	Exits from the Switch Discovery Wizard.
Help	Opens the Switch Discovery Wizard online help.

**Step 9** Click **Finish**. The SwitchDiscovery completion dialog box appears, stating that switch discovery is complete.

**Step 10** Click **OK**. Windows Notepad opens, displaying a log of Switch Discovery activities. (See [Figure 5-13](#).)

**Figure 5-13** Switch Discovery Activities

```
discovery.log - Notepad
File Edit Format Help
2003/04/20 23:04:37 Stopping AtDial service...
2003/04/20 23:04:37 AtDial service stopped.
2003/04/20 23:04:58 Using existing Site 1 record
2003/04/20 23:05:30 Site 1 Multinet 1
2003/04/20 23:05:30 Searching for switches from 192.168.255.2 to 192.168.255.20
2003/04/20 23:05:30
2003/04/20 23:05:30 Pinging 192.168.255.2...
2003/04/20 23:05:34 192.168.255.2: no response
2003/04/20 23:05:34
2003/04/20 23:05:34 Pinging 192.168.255.3...
2003/04/20 23:05:38 192.168.255.3: no response
2003/04/20 23:05:38
2003/04/20 23:05:38 Pinging 192.168.255.4...
2003/04/20 23:05:42 192.168.255.4: no response
2003/04/20 23:05:42
2003/04/20 23:05:42 Pinging 192.168.255.5...
2003/04/20 23:05:46 192.168.255.5: no response
2003/04/20 23:05:46
2003/04/20 23:05:46 Pinging 192.168.255.6...
2003/04/20 23:05:50 192.168.255.6: no response
2003/04/20 23:05:50
2003/04/20 23:05:50 Pinging 192.168.255.7...
2003/04/20 23:05:54 192.168.255.7: no response
2003/04/20 23:05:54
```

**Step 11** After reviewing the log, close the window.



**Note**

After running the Address Change Wizard and the Switch Discovery Wizard during the initial configuration, you must configure the DNS forwarding. Refer to [Chapter 6, “Configuring DNS Forwarding.”](#)

