

Using StackMaker

StackMaker is an application that works with the CiscoView software to provide enhanced manageability for devices. StackMaker enables you to display a set of individual, stackable devices and create a stack containing these devices. When you use StackMaker, CiscoView retrieves the stack name for the devices and displays the individual devices in the StackMaker window. Devices supported by StackMaker include (but are not limited to) the Catalyst 1900, Catalyst 2800, and Catalyst 2820.

StackMaker enables you to do the following:

- Create a stack from individual devices.
- Identify conflicts within a stack.
- View a list of stackable neighbors that can be added to a stack.
- Reconfigure stacks by adding devices, removing devices, clearing all devices and restoring all devices.

This appendix contains the following sections:

- Accessing StackMaker from CiscoView
- Viewing the StackMaker Main Window
- Viewing Appended Regions to the StackMaker Window
- Using Other Windows and Dialog Boxes
- Requirements for Building the Stack
- Configuring Stacks
- Troubleshooting Error Messages

Accessing StackMaker from CiscoView

To access StackMaker from CiscoView, complete the following steps:

Step 1 Go to CiscoView - Main.

Step 2 Display a stackable device.

A stackable device is a device containing the StackMaker MIB. However, a device cannot be a member of more than one stack at the same time. Each device you want to add to the stack must have an IP address, and you must preset the SNMP community strings by using the command line interface (CLI) for the device.

Step 3 From the stackable display, select **View>Stack**.

A small CiscoView dialog box appears that contains the following buttons:

- **StackMaker:** Use StackMaker.
- **StackView:** View a list of other devices in the same stack as the displayed device. You can also view a list of stack members in the StackMaker window.
- **Cancel:** Return to the CiscoView display.
- **Cancel:** Return to the CiscoView display.

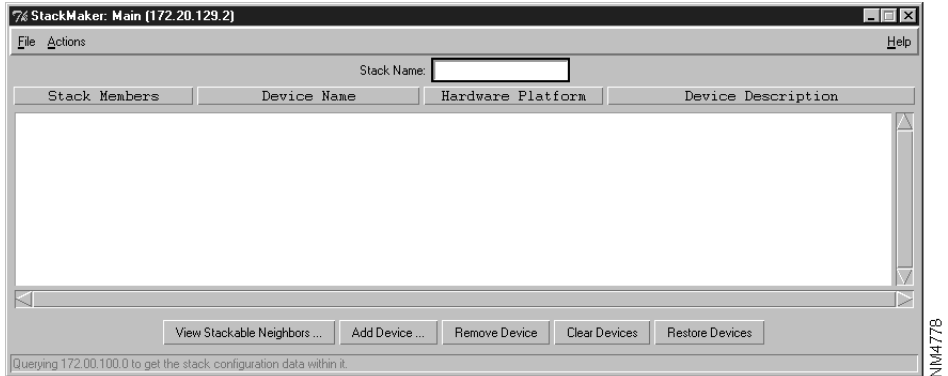
Step 4 Click **StackMaker** to access, create, or change stack information.

The StackMaker window appears, displaying all devices in the stack in the order listed in the StackMaker MIB. StackMaker also displays every device and hardware platform for the device. The seed device is highlighted in the list by default.

Viewing the StackMaker Main Window

The StackMaker Main window is illustrated in Figure A-1. The buttons available in the StackMaker Main window are described in Table A-1 and fields are described in Table A-2.

Figure A-1 StackMaker Main Window



The StackMaker Main window elements include the following areas:

- Title Bar** Provides the StackMaker application name and the IP address for the seed device in the stack. The seed device is the starting point of the stack and is used to locate the stack and all members within the stack. By default, the seed device is highlighted with an asterisk by the IP address.
- Menu Bar** Provides access to all StackMaker dialog boxes. Table A-3 through Table A-5 lists and explains the items under each menu.
- Status Bar** Provides a brief description of the currently selected device, and provides an ongoing operational status.

Table A-1 StackMaker Buttons

Button	Description
View Stackable Neighbors	Lists devices that can be added to the stack.
Add Device	Adds a device to a stack.
Remove Device	Removes a device from a stack.

Viewing the StackMaker Main Window

Table A-1 StackMaker Buttons (Continued)

Button	Description
Clear Devices	Clears all devices from a stack.
Restore Devices	Restores all devices if you do not apply changes. This button undoes the Remove or Clear function.

Table A-2 StackMaker Fields

Stack Name	Names stacks containing individual devices.
Stack Members	Lists individual devices that are in a stack.
Device Name	Provides the host name for the device.
Hardware Platform	Displays the Cisco model name and number.
Device Description	Describes the device.

Table A-3 StackMaker File Menu Items

Menu Item	Description
Print	Prints the stack configuration. The printout is a text list showing the stack name, the stack name, list of inconsistencies, and time and date of printing.
Print Setup	Enables you to select a printer and set printing options.
Exit	Exits the StackMaker application. If you change the stack definition but do not update the device information, StackMaker prompts you to apply the new stack configuration to the stack members. If you do not want to apply the update, click No or Cancel . No closes the StackMaker without applying the changes. Cancel returns you to the StackMaker window.

Table A-4 StackMaker Actions Menu Items

Actions	Description
View Stack Member Details	Lists details for each member in the stack.
Verify Stack Configuration	Checks that each member of the stack meets the criteria for a stack member.
Apply Stack Configuration	Updates the stack configuration information.
View Log	Displays the log file that StackMaker maintains for MIB updates.
Options	Enables you to set properties such as Polling Frequency, Retries, Timeouts, Read Community, Write Community, Debug and Debug SNMP.

Table A-5 StackMaker Help Menu Items

Help Name	Description
Contents	Displays the help contents.
Using Help	Displays information about how to use online help viewer.
Using StackMaker	Displays a topic about how to use the StackMaker software.
About StackMaker	Displays version information about the product and software.

Viewing Appended Regions to the StackMaker Window

When you perform certain tasks, StackMaker appends a region at the bottom of the main window. For example, when you select **Actions>View Stack Member Details**, StackMaker appends details for each member in the stack. Table A-6 describes the buttons and fields in this region.

Viewing Appended Regions to the StackMaker Window

Table A-6 Stack Member Details

Button/Field	Description
Close Button	Removes the appended list of stackable neighbors.
SubMember Address Field	Lists individual devices (by IP address) that are in the stack.
SubMember Name Field	Shows the name of the stack.
SubMember Platform Field	Shows the type of hardware platform that is configured for the device. This information reflects the Cisco model name and number.
SubMember Description Field	Describes the device.

When you click View Stackable Neighbors, StackMaker appends a region to the bottom of the StackMaker window, listing stackable neighbors for the device you select. A stackable neighbor is a device that can be reached using the Cisco Discovery Protocol (CDP) and can be stacked using SNMP. Stackable Neighbor buttons are described in Table A-7.

Table A-7 Stackable Neighbor Buttons

Button	Description
Close	Removes the appended list of stackable neighbors.
Up Arrow	Enables you to add a device to the stack.

The viewable neighbors are displayed in a list that contains the following information (Table A-8).

Table A-8 Stackable Neighbor Fields

Field	Description
Neighbor Address	Lists the individual devices (by IP address) that are in a stack.
Neighbor Name	Displays the name of the stack.
Neighbor Platform	Displays the type of hardware platform for the device. This information reflects the Cisco model name and number.
Neighbor Description	Displays a comment that describes the device.

Using Other Windows and Dialog Boxes

Two additional windows (Table A-9 and Table A-10) allow you to use the log file associated with StackMaker and change the management properties.

Table A-9 StackMaker Log Window

Button	Description
Print	Enables you to print the contents of the log file.
Clear Log	Clears the contents of the log file.
Close	Closes the StackMaker Log window.
Help	Displays the Help topic.

Table A-10 StackMaker Properties Dialog Box

Field	Description
Retries	The retries value indicates how many times CiscoView attempts to reach an unresponsive device. In busy networks, SNMP datagrams can get discarded. The Retries value allows the application to continue operation during network problems. A setting of 5 is considered reasonable. The value can be increased if the device is not being responsive. The default is 3.
Timeout	<p>The interval value is specified in seconds that CiscoView attempts to reach a device. The default is 3.</p> <p>As a guideline, the timeout value should be set to twice the average end-to-end delay in your network. If you have a network with several slow links, you may need to set the timeout to a higher value. If you have only LAN links in your network, a value of 2 seconds is reasonable to account for processing delays and timer accuracy.</p>
Read Community	The read community string allows you to view device status. You cannot change device parameters without the write community string.
Write Community	<p>The write community string allows you to change device parameters.</p> <p>This option allows you to enter the write community string for a device after you display the device.</p> <p>This is useful, for example, if you want to make changes to a device or port setting but did not specify the write community string when you first opened the device display. You can enter the write community string in the Write Community field without exiting and reopening the window.</p>
Debug	The Debug option prints debug messages to the StackMaker Debug Log file when the option is set to On . The default is Off .

Table A-10 StackMaker Properties Dialog Box (Continued)

Field	Description
Debug SNMP	The Debug SNMP option prints SNMP debug messages to the console when the option is set to On . The messages show the SNMP packets that have been sent and received. The default is Off .

Requirements for Building the Stack

A device containing the StackMaker MIB can be added to the stack as a stack member. However, a device cannot be a member of more than one stack at the same time.

Each device you want to add to the stack must have an IP address, and you must preset the SNMP community strings by using the command line interface (CLI) for the device. When you use **Actions>Apply Stack Configuration**, StackMaker looks for each stack member. If StackMaker cannot find one of the stack members, the MIB information in that stack member does not change when you use **Actions>Apply Stack Configuration**. StackMaker updates all other stack members it finds.



Caution Make sure that all other stack members are updated. If one member in the stack is not updated, conflicts within the stack can occur.

If CiscoView is not integrated with an SNMP Manager platform, all members of a stack must share the same community strings and timeout and retry values specified in the StackMaker Properties dialog box. Because StackMaker accepts the data you supply, you must ensure that stack members meet the requirements to be included in the stack. For example, you must ensure that devices have not been added to multiple stacks. StackMaker only checks whether a device can belong to a stack. It does not check the StackMaker MIB table to determine if the device has already been added to another stack.

If an SNMP Manager platform is not available, all members of a stack must share the same community strings and timeouts and retry values.

Because StackMaker accepts the data you supply, you must manually maintain data integrity across devices. You must ensure that the data is consistent and that devices have not been added to multiple stacks. It does not process the information stored in the MIB table.

Configuring Stacks

To configure stack devices, you add devices to or remove devices from the stack. Use the Stack Properties dialog box to provide specifications for the various settings.

Adding Devices

To add a device to a stack, do the following:

Step 1 From the StackMaker Main window, click **Add Device**.

The Add Device dialog box appears.

Step 2 Enter the IP address for the device you want to add.

Step 3 Click **OK**.

Step 4 Restart CiscoView.

Or

Step 1 Select **Actions>View Stackable Neighbors**.

StackMaker lists all stackable neighbors at the bottom of the window.

Step 2 Select a device from the stackable neighbors list.

Step 3 Click the Up arrow.

Step 4 Restart CiscoView.

Note For changes to take effect, you must use **Actions>Apply Stack Configuration**. Then exit CiscoView and restart the application.

Removing Devices

To remove a device from a stack, do the following:

- Step 1** From the StackMaker Main window, select the device you want to remove.
- Step 2** Click **Remove Device**.
StackMaker displays a confirmation dialog box.
- Step 3** Click **Yes** to remove the device.
The Remove Device confirmation dialog box appears. To remove the device from the stack, click **Yes**. To cancel the command, click **No**.
- Step 4** Apply changes by using **Actions>Apply Stack Configuration**.

Note Once you apply the stack configuration changes, you cannot restore a removed device.

Clearing Devices

To clear device information, do the following:

- Step 1** Click **Clear Devices**. This removes all devices from the StackMaker window.
- Step 2** The Clear Stack confirmation dialog box appears. To remove the device from the stack, click **Yes**. To cancel the command, click **No**.
- Step 3** Apply changes by using **Actions>Apply Stack Configuration**.

Note Once you apply the stack configuration changes, you cannot restore a cleared device.

Restoring Devices

Note If you apply changes after removing or clearing devices, you cannot restore those devices to the displayed stack list. To include those devices, you must add them to the stack again by clicking **Add Device**.

To restore device information, do the following:

- Step 1** Click **Restore Devices**. This displays or restores all devices in the stack list that you deleted using the Remove Device or Clear Devices command. Devices are restored up to the last configuration change you made or when you opened the StackMaker window, whichever is the most recent action. After you click **Restore Devices**, the Restore Stack confirmation dialog box appears.
- Step 2** To restore devices to the stack, click **Yes**. To cancel the command, click **No**.
- Step 3** Apply changes by using **Actions>Apply Stack Configuration**.

Troubleshooting Error Messages

Error Message Could not reach device <devicename>; SNMP request timed out.

Explanation The device is not reachable via SNMP with the configured Read Community string. This error occurs when you try to launch StackMaker by clicking the Stack icon from a device display in CiscoView.

Recommended Action Ensure that the device is in operation and reachable by SNMP. Then launch StackMaker again.

Error Message This device is not stackable and doesn't support StackMaker.

Explanation StackMaker finds the device via SNMP but the device is not stackable because it does not contain the StackMaker MIB. This error occurs when you attempt to stack a device (such as Catalyst 2820) that does not have the latest firmware containing the StackMaker MIB.

Recommended Action Upgrade your firmware to a compatible version. To do this, go to Cisco Connection Online (CCO) and download the firmware. For more information on downloading from CCO, see the "Downloading Device Packages" chapter.

Note When a new member of a stack is added, close CiscoView and reopen it to get the new view.
