Planning and Creating Communities

This chapter provides the concepts and procedures for planning and creating communities by using Network Assistant. For information on using Network Assistant to configure communities, refer to the online help.

Planning a Community

This section describes the guidelines, requirements, and caveats that you should understand before you create a community.

Candidate and Member Characteristics

Candidates are network devices that have IP addresses but that have not been added to a community. Members are network devices that have been added to a community.

To join a community, a candidate must meet these requirements:

- It has an IP address.
- It has HTTP or HTTPS enabled on the default ports.

Note: You cannot add clusters to a community. You can add cluster members individually.

If you add a cluster command device to a community, the other members of the cluster are not added automatically. To manage the cluster members, you must add them individually to the community.

If you add a Catalyst 3750 switch stack master to a community, the individual stack members are automatically added to the community, even though the stack members do not appear in the Modify Community or Discover windows. However, when you connect to the community, the stack members do appear in the Front Panel and Topology views.
Community Device Limit

The combined number of Catalyst switches, Cisco access routers, and PIX firewalls in a community cannot exceed 40. There are no limits on individual device types. There is no limit on the number of Cisco Aironet Access Points.

**Note**
Even though the devices in a Catalyst 3750 switch stack function as a single switch, they count as individual switches against the combined limit and individual device limits.

If the limit of 40 devices is exceeded, you cannot manage a community. You need to remove devices so that the total is not more than 40.

There is no limit to the number of communities that Network Assistant can manage.

Automatic Discovery of Candidates and Members

Beginning with the IP address for a starting device and the port numbers for the HTTPS and HTTP protocols, Network Assistant uses CDP to compile a list of community candidates that are within four CDP hops of the starting device. Network Assistant can discover candidate and member devices across multiple networks and VLANs if they have valid IP addresses. See the “Candidate and Member Characteristics” section on page 4-1 for a list of requirements that network devices must meet in order to be discovered.

**Note**
Do not disable CDP on candidates, members, or any network devices that you might want Network Assistant to discover.

You can edit the list of discovered devices to fit your needs and to add them to the community. If Network Assistant does not discover a network device, you can manually add the device.

For instructions on adding discovered devices to a community or manually adding devices to a community, see the “Manually Adding Members” section on page 4-4.

Community Names

When you create a community, Network Assistant requires that you assign a name to it. The name can contain up to 64 alphanumeric characters and is not case sensitive.

**Note**
When you select a name in the Connect window and a cluster and a community share that name, Network Assistant connects to the community.

Hostnames

You do not need to assign a hostname to a community member, and Network Assistant does not assign one by default. However, Cisco IOS assigns the hostname *Switch* to switches without a hostname. Therefore, you might want to assign hostnames to switches to avoid confusing them.
Passwords

When connecting to a community, Network Assistant prompts you for each unique password that has already been assigned for members of the community. Network Assistant attempts to use these passwords to connect to other devices. You are prompted for a password only if the previously entered password does not work for a device.

For example, if a community has ten members, and five members share one password and the other five share a different password, Network Assistant prompts you twice, once for each password. Network Assistant does not save the passwords to your PC, so it prompts you for the passwords each time that you attempt to connect to a community.

Communication Protocols

Network Assistant uses HTTPS and HTTP to communicate with community members. It first tries to use HTTPS when using CDP to discover neighboring devices and when devices are added manually. If HTTPS fails, it tries again with HTTP.

The HTTPS port is fixed at 443; the HTTP port defaults to 80. You can specify a different HTTP port when you create a community. Afterward, you use the HTTP Port window to change the HTTP port. The port settings for both HTTPS and HTTP must be the same for all the members of a community.

Community Information

Network Assistant saves all individual device information, such as the IP address, the hostname, and the communication protocol, to your local PC. When Network Assistant connects to a community, it uses the locally saved data to rediscover the member devices.

If you try to use a different PC to manage an existing community, none of the member device information is available. You need to create the community again and add the same member devices.

Creating a Community

There are three ways to create a community:

- By discovering candidates that you can add to the community
- By manually adding devices
- By using the Cluster Conversion Wizard to convert a cluster into a community

You should verify that the community contains the devices that you think it contains. This section tells you how to perform these tasks.

Discovering and Adding Devices

Follow these steps to compile a list of candidate devices and to add them to a community:

1. Start Network Assistant, and select **Connect to a new community** in the Connect window. Click **Connect**.
2. In the Create Community window, enter a name for the community.
Creating a Community

3. Click the **Advanced** button if you want to set an HTTP port other than 80, the default port. Enter the HTTP port number that you want to use. Click **OK**.

4. Enter the IP address for the starting device, and click **Discover Neighbors**.

5. In the Devices Found list, select candidate devices that you want to remove.
   - To remove more than one candidate, press **Ctrl** and make your choices, or press **Shift** and choose the first and last device in a range.
   - Click **Remove**.

6. Click **Add All To Community** to add the remaining devices in the list to the community.

Manually Adding Members

Network Assistant provides two ways to manually add devices to a community.

1. In the Create Community window, enter the IP address for the device that you want to add.

2. Click **Add to Community**.

The second way to manually add a device uses the Topology view:

1. If the Topology view does not appear, choose **View > Topology** from the feature bar.

2. Right-click a candidate icon, and select **Add to Community**.

   Candidate device labels are cyan; member labels are green.

Converting a Cluster to a Community

The Cluster Conversion Wizard creates a community by using the information available for the cluster. The wizard prompts you to enter an IP address and from the pulldown lists to select an interface name and subnet mask for each device that does not have them. Network Assistant does not delete the cluster upon creating the community.

There are two ways to start the Cluster Conversion Wizard. When you connect to a cluster command device, the wizard starts and asks if you want to convert the cluster into a community. You can also start the wizard from the feature bar by choosing **Configure > Cluster > Cluster Conversion Wizard**.

Verifying a Community

Follow these steps to verify the community:

1. Choose **Monitor > View > Topology** to display the Topology view.

2. Choose **Monitor > Reports > Inventory** to display an inventory of the devices in the community.
   This summary includes device model numbers, serial numbers, software versions, IP information, and location.

3. Choose **Monitor > View > Front Panel** to display the Front Panel view.