CHAPTER 24

Monitoring IP Pools

An IP pool is a sequential range of IP addresses within a certain network. We can have multiple pool configurations. Each pool can have a priority and can be assigned to a group.

IP addresses can be assigned dynamically from a single pool or from a group of pools. The Least Recently Used (LRU) method is used to assign IP addresses. In each pool, the addresses are placed in a queue. At the time of assigning, the address at the head of the queue is assigned, and when released is placed at the end of the queue.

When a group of pools have the same priority, an algorithm is used to determine a probability for each pool based on the number of available addresses. A pool is selected based on the probability determined. This method allocates addresses evenly from the group of pools.

IP pool supports both IPv4 and IPv6 addresses. With the IP Pool feature, Prime Network provides the flexibility of assigning IP addresses dynamically for services running on a network element. A service running on a network element can refer to an appropriate IP pool and an IP address gets assigned to the service from the IP pool.

This chapter contains the following topics:

Viewing the IP Pool Properties

To view the IP pool properties for a device:

Step 1 In Prime Network Vision, right-click the required device, and choose **Inventory**.

Step 2 In the Inventory window, choose **Logical Inventory** > *Context* > **IP Pools**. A list of IP pools are displayed in the content pane.

Table 24-1 describes the fields that are displayed in the content pane.

Table 24-1   IP Pool Properties

Field Name	Description
Table Types	Displays the type of table, which is **IP Pools**.
IP Pools	
Name	Name of the IP pool.
IP Pool Entries	Indicates whether entries exist for this pool.

Step 3   Right-click on an IP pool name and choose **Properties**. The IP Pool Properties dialog box is displayed as shown in Figure 24-1.

Figure 24-1   *IP Pool Properties*
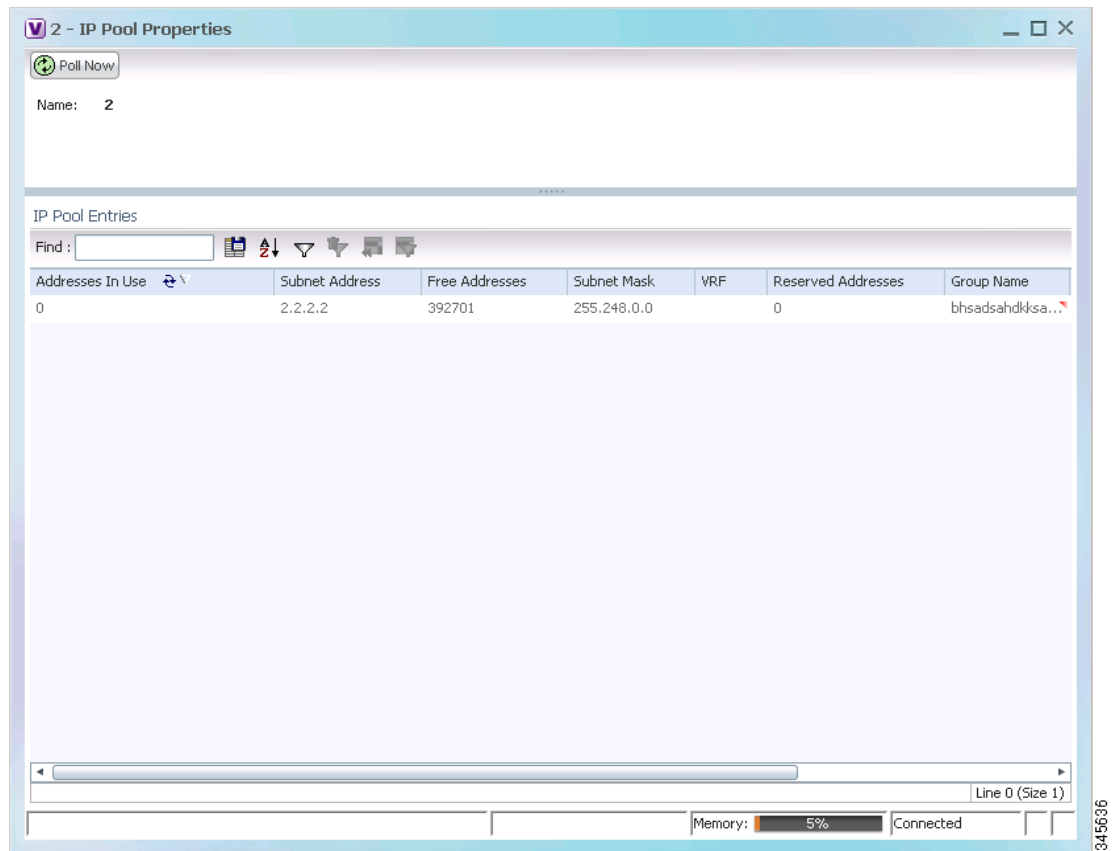
Table 24-2 describes the fields that are displayed in the IP Pool Properties dialog box.

Table 24-2   IP Pool Properties

Field Name	Description
Name	Name of the IP pool.
IP Pool Entries	
Addresses In Use	Number of IP addresses assigned from the pool.
Start Address/Subnet Address	Could be one of the following: • Starting IP address in the pool, if the pool is configured with a range. • Subnet address, if the pool is configured with a subnet mask.
Free Addresses	Number of free addresses available in the pool.
End Address/Subnet Mask	Could be one of the following: • Ending IP address in the pool, if the pool is configured with a range. • Subnet mask, if the pool is configured with a subnet mask.
VRF	Virtual Routing and Forwarding (VRF) name, if the pool belongs to a VRF.
Reserved Addresses	Number of reserved addresses in the pool.
Group Name	Name of the group to which the pool belongs.
Pool Status	Status of the pool.
Pool Type	Type of the pool, which could be Public, Private, Static, Resource, or NAT.
Pool Priority	Priority of the pool, which is used when multiple pools are available.

Configuring IP Pool

The following commands can be launched from the inventory by right-clicking on an IP pool name and choosing **Commands > Configuration**. Before executing any commands, you can preview them and view the results. If desired, you can also schedule the commands. To find out if a device supports these commands, see the *Cisco Prime Network 3.10 Supported Cisco VNEs*.

Note   You might be prompted to enter your device access credentials while executing a command. Once you have entered them, these credentials will be used for every subsequent execution of a command in the same GUI client session. If you want to change the credentials, click **Edit Credentials**. The Edit Credentials button will not be available for SNMP commands or if the command is scheduled for a later time.

Command	Navigation	Description	Supported On
Delete IP Pool	*Right-click on IP Pool name* > **Commands** > **Configuration**	Use this command to delete an IP Pool	Cisco ASR 5000 devices
Modify IP Pool		Use this command to modify IP Pool details.	