How to Set Up Automatic Subnet Scan Using SolarWinds® IP Address Manager
How to Set Up Automatic Subnet Scan Using SolarWinds IPAM?

**SolarWinds IP Address Manager** (IPAM) allows you to perform scheduled automated IP address scans on all your subnets. SolarWinds IPAM makes it easy to create your own scan job from scratch. Each job performs a scan of network devices based on subnet. You can automate IP address scanning for all your subnets, a group of subnets, or for an individual subnet.

There are three scanning modes used to scan IP addresses:

- ICMP scan (ping sweep)
- SNMP scan
- Neighbor scan (using ARP tables)

SolarWinds IPAM allows you to periodically scan a subnet. You have the flexibility to set it to scan as frequently as every 10 minutes or up to every 7 days based on your requirements. You can use this document as a quick reference guide for understanding how to set up and manage subnet scans with SolarWinds IPAM.

Configuring Automatic Subnet Scanning

SolarWinds IPAM is capable of using both SNMP and ICMP scanning to continuously determine the status of your monitored network. The Subnet Scan Settings view allows you to select how IPAM automatically scans your network for changes.

You can configure the scan while adding a new subnet or by editing the properties for any existing subnet.

- On the **Manage Subnets & IP Addresses** screen, select the subnet(s) that you want to automate the scan for.
- On the right pane, click **Edit** to open the **Edit Subnet Properties** window.

![Subnet & IP address management screen in SolarWinds IPAM](image)
You can enter the **Scan Interval** field to set the automated scan period (in minutes, hours, or days) between 10 minutes and 7 days.

![Automatic Scanning](image)

**Automatic subnet scanning in SolarWinds IPAM**

### Configuring Neighbor Scanning

**Neighbor Scanning** attempts to retrieve the status of a device that may not be responding to ICMP. It scans the ARP table of a neighbor router to determine which IP addresses are active.

The Neighbor Scanning feature is disabled by default. When you un-check it, additional options appear where you can add the **IP Address** of the neighbor device and select a **Scan Interval**.

![Neighbor Scanning](image)

**Neighbor Scanning in SolarWinds IPAM**

### Managing Subnet Scan Settings

Scheduled IP address scanning also helps avoid IP address conflicts by recognizing transient IP statuses. For example, if a static IP address goes offline during a maintenance update and is not reachable, SolarWinds IPAM configures that IP address as “transient” to prevent other network engineers from assigning it. You can configure the transient period for any number of consecutive days up to one year. During a subsequent scan, if the network device appears online again, IPAM shows its associated status as "used."

SolarWinds IPAM continuously scans all managed IP addresses on your network. If a device fails to respond to any SNMP or ICMP requests during the period of time designated as the **Transient Period**, IPAM changes the status of the unresponsive IP address from “used” to “available.”
You can provide an appropriate value for the Transient Period (which must be a value from .2 to 340 days) in the **Duration (days)** field.

If you want to customize the Transient Period settings further, select **Inherit Values from Subnet Scan Settings**. This opens a new browser with advanced **Subnet Scan Settings** where you can specify ICMP and SNMP scanning thresholds.

**Transient Period settings in SolarWinds IPAM**

**Subnet Scan Settings**

- **Max number of Simultaneous Scans**: 2

- **Transient Period**
  - Unlimited Duration
  - Duration (days): 7

- **ICMP Scanning**
  - Enable ICMP Scanning
  - Pings per Address: 3
  - Delay between Pings: 45
  - Ping Timeout (ms): 2500

- **SNMP Scanning**
  - Enable SNMP scanning (dependent on ICMP scanning)
  - Enable SNMP neighbor scanning
  - SNMP Retries: 3
  - SNMP Timeout (ms): 2500

**Subnet Scan Settings in SolarWinds IPAM**
Why SolarWinds IP Address Manager?

*Eliminate Complexity, Improve Reliability, Save Time & Money!*

- Manage & monitor Microsoft® DHCP/DNS, ISC DHCP/DNS, and Cisco® DHCP servers.
- Automatic subnet discovery and IP address scanning for the most accurate real-time discovery and verification.
- Easily search addresses for history, op status, MAC, device type, DHCP, DNS properties and more.
- Optional UDT integration shows where an end-point device is connected to the network and who is using the device.
- Delegate tasks to network engineers and system administrators based on role.
- Supports IPv4 and IPv6 networks.
- Alert notifications help prevent your subnets and DHCP scopes from filling up.
- Automatically discovers used and unused addresses.
- Typically deploys in less than an hour.
SolarWinds (NYSE: SWI) provides powerful and affordable IT management software to customers worldwide - from Fortune 500 enterprises to small businesses. The company works to put its users first and remove the obstacles that have become “status quo” in traditional enterprise software. SolarWinds products are downloadable, easy to use and maintain, and provide the power, scale, and flexibility needed to address users’ management priorities. SolarWinds online user community, thwack, is a gathering-place where tens of thousands of IT pros solve problems, share technology, and participate in product development for all of the company’s products. Learn more today at http://solarwinds.com.

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