SOLARWINDS
TECH TIPS

Monitoring the DHCP and DNS nodes using SolarWinds® IP Address Manager

solarwinds
Unexpected Simplicity™

Monitoring the performance of DHCP and DNS nodes using SolarWinds IP Address Manager

[SolarWinds® IP Address Manager](#) (IPAM) is a comprehensive IP address management solution that offers centralized management and monitoring of all your IP addresses, subnets, and DHCP/DNS services from a single, easy-to-use Web console.

SolarWinds IPAM includes functionality for automating IP address management, simplifying network management, and improving your overall operational efficiency, saving you valuable time and effort.

This document explains how quick and easy it is to monitor the performance of your DHCP and DNS nodes, and how SolarWinds IPAM helps simplify your IP address management.

DHCP Server Monitoring

SolarWinds IPAM allows you to monitor DHCP servers to check which IP addresses are in use, reserved, and available. After you add the DHCP servers, they are displayed as nodes.

Monitoring DHCP Scopes on DHCP Servers

IPAM allows you to group the scopes within the server - by server, location, status, etc.
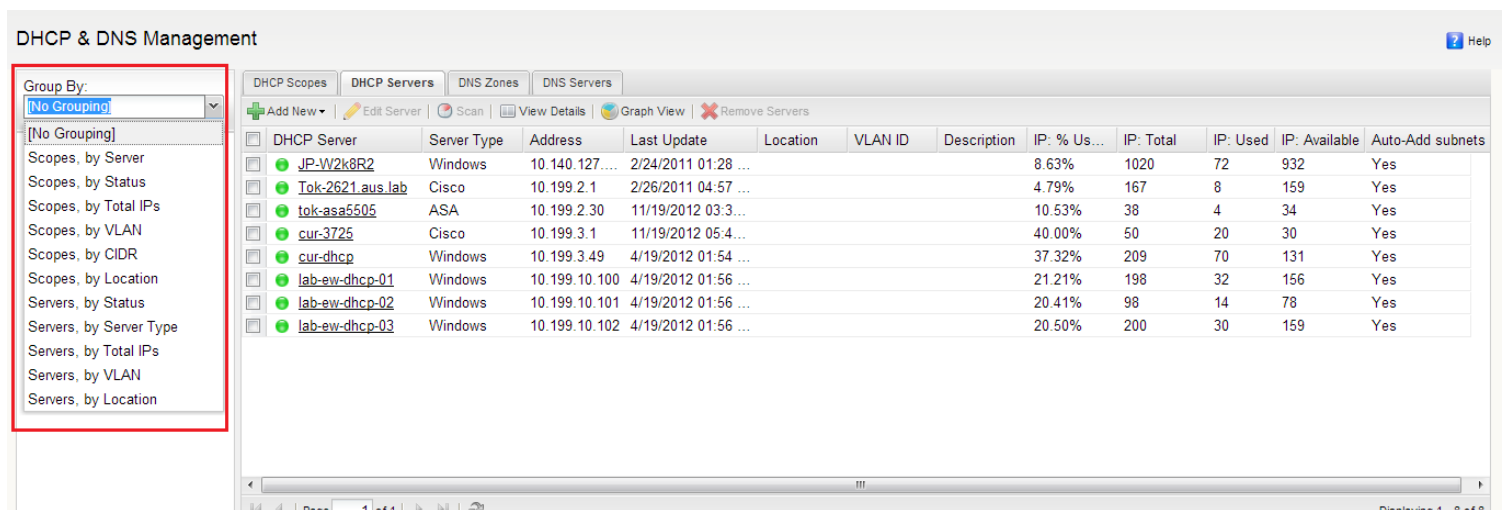
Grouping Scopes within SolarWinds IPAM

After you select a particular server, it displays the scopes within the servers as below.

Scopes within a server

SolarWinds IPAM supports both Microsoft® and Cisco® DHCP split scope functionality. It gives you the range of IP addresses between the DHCP scopes which have been split in a customized manner.

Split Scope pop-up displayed in SolarWinds IPAM

IPAM also allows you to add DHCP scopes, edit the properties, and remove them from your DHCP server from one centralized management console.

ISC DHCP with SolarWinds IPAM

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Configuration files in ISC DHCP are in plain text and contain many lines of code. Editing a subnet involves scanning the entire file, which can be time-consuming. Making the smallest change involves using a Command Line Interface (CLI), which requires skills with CLI commands. The absence of monitoring mechanisms to detect full subnets makes it difficult to find details on subnet utilization and available IP addresses.

For subnets and scopes for ISC DHCP, SolarWinds IPAM provides a simple wizard to easily create/modify subnets and specify scope properties like exclusions, pools, IP ranges, and leases without having to manually edit remote configuration files. Click here to learn more about creating and modifying subnets and scopes on ISC DHCP.
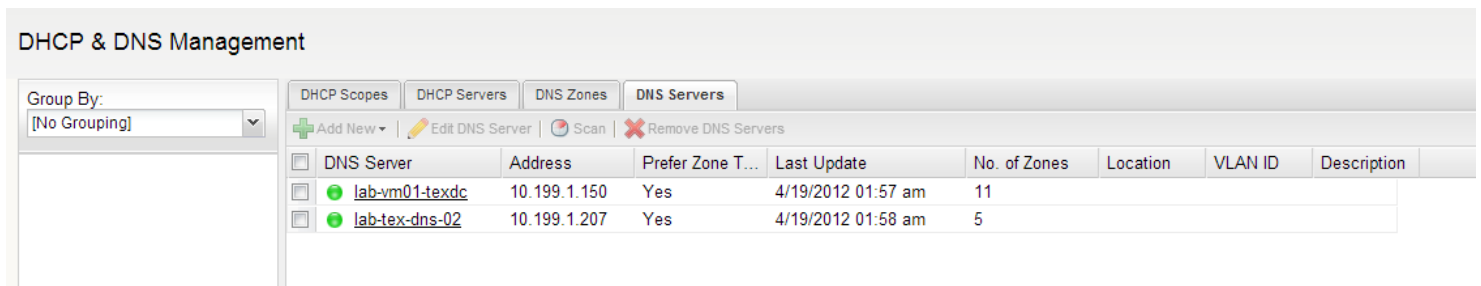
DNS Server Monitoring

DNS servers are critical in most environments. Monitoring their performance benefits you by:

- Providing a useful benchmark for predicting, estimating, and optimizing DNS server performance.

- Helping with troubleshooting DNS servers, where server performance has degraded either over time or during periods of peak activity.

Monitoring DNS Servers and Zones

IPAM's DNS monitoring lets you check the availability of your DNS servers by clicking the DNS Severs tab on your IPAM screen.

DNS Monitoring using SolarWinds IPAM

Once you identify which servers are available, you can identify DNS zone and lookup type (forward/reverse), as displayed below.

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DNS zones within the server

With IPAM, you can view the DNS records for all your DNS zones, monitor and consolidate Microsoft DNS info from multiple servers, and view alongside DHCP information.

In addition to monitoring IP addresses, DHCP, and DNS servers using the LUCID dashboards, you can set up alerts and manage your entire IP infrastructure from a single, intuitive Web console.

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BIND DNS with SolarWinds IPAM

BIND configuration and management is done via the CLI. With constant network changes, you would need to edit/add/delete zones/records from these BIND configuration files.
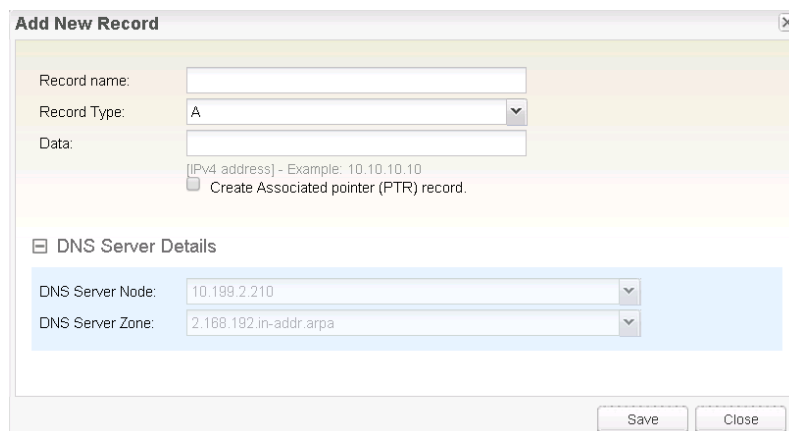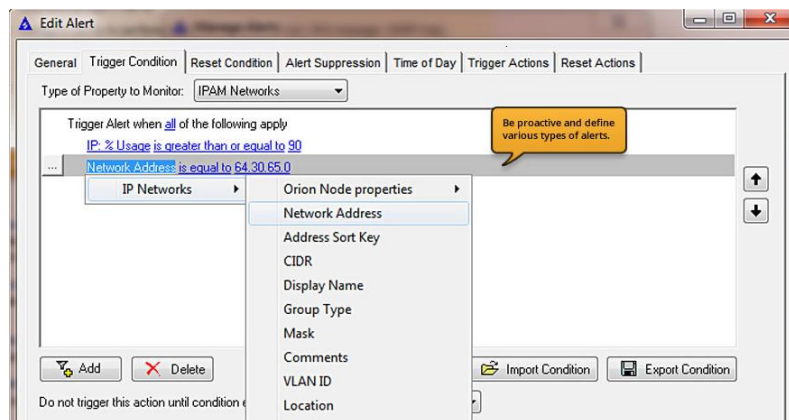
Making these changes from the CLI is not only complex, it's prone to human error. SolarWinds IPAM

helps simplify the management of your BIND DNS servers by leveraging the user-friendly GUI of IPAM to:

- Add/edit/delete DNS servers

- Add/edit/delete DNS zones

- Assign views and records to DNS zones

Learn more about [BIND with IPAM](#)

With the alert feature, you can:

- Prevent running out of available IP addresses in your DHCP scopes with advanced alerting.

- Define subnet capacity thresholds and configure alerts to notify you before your subnets become full.

- Escalate alerts automatically when they are not acknowledged in a given time period.

- Detect mismatches in DNS records.

- Automatically create DNS PTR records when registering a DNS record.

You can leverage the intuitive dashboards and the Top 10 Views from IPAM to quickly view the IP address utilization, including DHCP scope and subnet utilization. All these views are entirely customizable so you can track the key performance indicators of the servers themselves, such as **CPU load and memory utilization, average response time and packet loss, node details, polling details**, etc.

Polling Details   HELP

Polling IP Address	10.199.3.10
Polling Engine	ADF-DEMO-NPM-A (10.10.11.55)
Polling Method	SNMP
Polling Interval	300 seconds
Next Poll	12/12/2012 03:51 PM
Statistics Collection	10 minutes
Enable 64 bit Counters	No
Rediscovery Interval	30 minutes
Next Rediscovery	Wednesday, December 12, 2012 4:16 PM
Last Database Update	Wednesday, December 12, 2012 3:46 PM
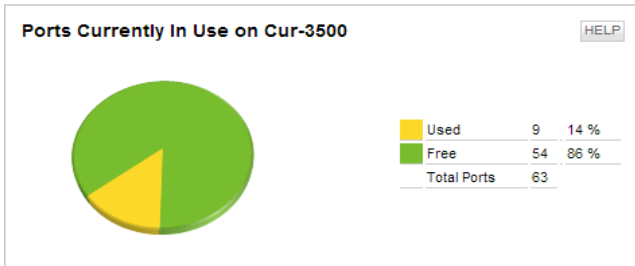
Node Details   HELP

Node Status	Node is Up. One or more Interfaces have state: Down.
Polling IP Address	10.199.3.10
Dynamic IP	No
Machine Type	Cisco Catalyst 3548 XL
DNS	
System Name	Cur-3500
Description	Cisco Internetwork Operating System Software IOS (tm) C3500XL Software (C3500XL-C3H2S-M), Version 12.0(5)WC17, RELEASE SOFTWARE (fc1) Copyright (c) 1986-2007 by cisco Systems, Inc. Compiled Tue 13-Feb-07 15:04 by antonino
Location	Curitba
Contact	Patrick Hubbard
SysObjectID	1.3.6.1.4.1.9.1.278
Last Boot	Sunday, November 18, 2012 3:09 AM
Operating System	12.0(5)WC17, RELEASE SOFTWARE (fc1)
IOS Image	C3500XL-C3H2S-M
Hardware	Physical
No of CPUs	1
Telnet	telnet://10.199.3.10
Web Browse	http://10.199.3.10

Ports Currently In Use on Cur-3500   HELP

Used	9	14 %
Free	54	86 %
Total Ports	63	

Why SolarWinds IP Address Manager?

Eliminate Complexity, Improve Reliability, Save Time and Money!

- Manage and monitor Microsoft DHCP/DNS, ISC DHCP/DNS, and monitor 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.

- Historical IP address tracking for trend analysis and IP capacity planning.

- Automatically discovers used and unused addresses.

- Typically deploys in less than an hour.

SolarWinds IP Address Manager

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://www.solarwinds.com.

For additional information, please contact SolarWinds at 866.530.8100 or e-mail sales@solarwinds.com.

To locate an international reseller near you, visit http://www.solarwinds.com/partners/reseller_locator.aspx

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