



Quick Tip: Take TraceRoute a Step Ahead to Troubleshoot Network Segment Failures

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In IT administration, you know that one machine is never enough to do your job effectively. Naturally, you have your laptop, but you're also flanked by your smart phone and tablet, which are all connected to your network. This directly translates to the amount of activity that could happen on your network. With multiple machines tapping into your network, it becomes important for you to trace latency or packet loss in order to identify critical bandwidth and segment issues.

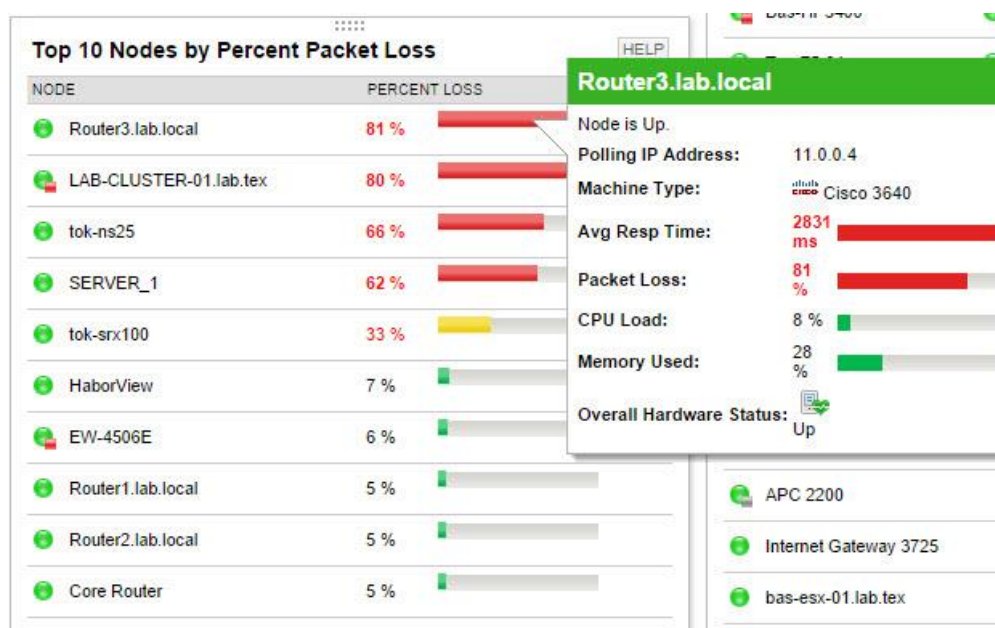
[SolarWinds® Engineer's Toolset \(ETS\)](#) is an all-in-one, real-time network troubleshooting tool that includes 60+ tools to help you troubleshoot issues in your network to maintain optimum performance.

With a combination of proactive and reactive network monitoring tools, you can significantly reduce the amount of time you spend troubleshooting issues. For example, you can quickly isolate and identify a bandwidth or segment failure within your network with four simple steps using proactive [SolarWinds Network Performance Monitor \(NPM\)](#) and reactive [SolarWinds Engineers Toolset's TraceRoute](#) application.

1. Set alerts to monitor top 10 nodes by percent packet loss.
2. View vital stats - average response time and packet loss.
3. Setup and configure TraceRoute.
4. Get detailed ICMP information with TraceRoute stats.

Step 1 - Set Alerts to Monitor Top 10 Nodes by Percent Packet Loss

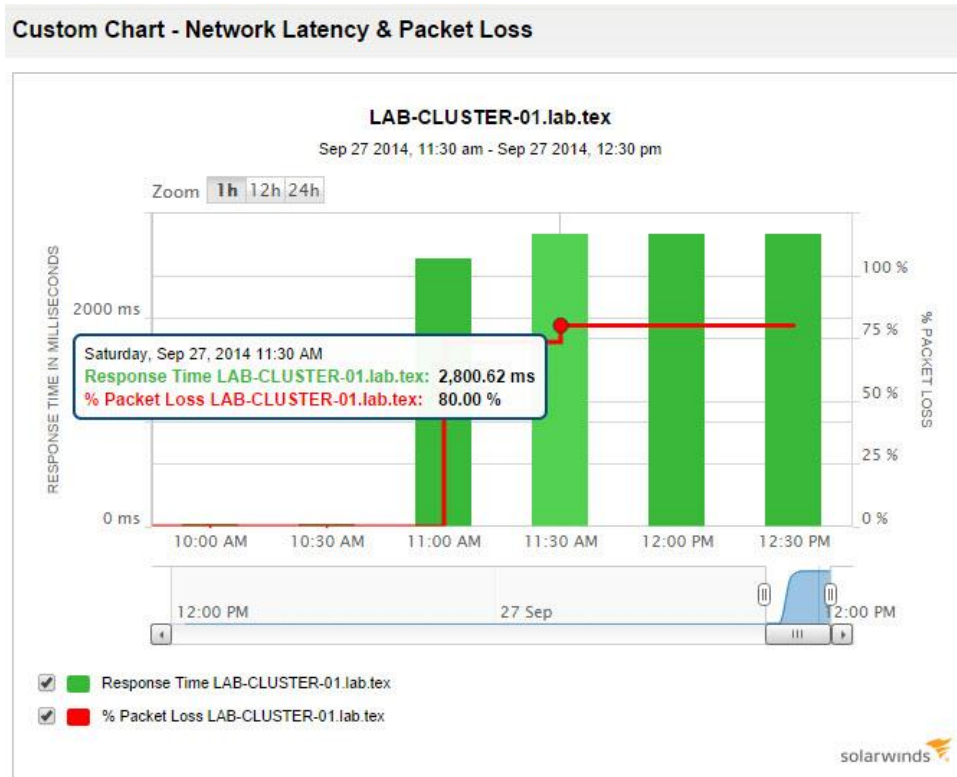
To predict the factors that can affect the performance of your network devices, you can set your alerts to monitor the top 10 nodes by packet loss. This gives you an overview of the nodes that record the highest packet loss.



Click on a node to see its details. Alternatively, click on the percent loss of a node to see the percent packet loss on a customizable chart.

Step 2 - View Vital Stats - Average Response Time and Packet Loss

Using historical data, you can set up customizable charts to simultaneously see both the average latency (response time) and the percentage packet loss of the selected node over a designated period.



To see where the traceroute stops or where the latency goes up, you need a visual traceroute to quickly pinpoint issues or investigate further. [SolarWinds ETS](#) integrates seamlessly with NPM to enable you to easily see the traceroute.

Step 3 - Set Up and Configure TraceRoute

From TraceRoute Settings, you can change the polling frequency and maximum number of hops allowed in a route (and choose to resolve DNS).

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Trace Route Powered by Engineer's Toolset

Settings

Choose to show: Hop, IP Address, DNS Name, Current/Min/Max/Ave Response Time in ms & Packet Loss

Preferences **Metrics**

ICMP

ICMP Timeout: milliseconds, max. value is 8000

Polling interval: seconds

Trace

Maximum Number of Hops: hops


☒ Resolve DNS

SUBMIT **SAVE AND CONTINUE WORKING** **CANCEL**

Step 4 - Get Detailed ICMP Information with TraceRoute stats

The ETS TraceRoute reports the standard ICMP information. It shows the communication path between your PC and a target device, analyzes the performance and latency of each hop across the communication path, and displays ICMP information for the devices along the path. In addition to displaying detailed information for each hop, it lets you connect with that network device directly (right-click) and get an average, minimum, or maximum response-time analysis of each hop.

To get the live route stats, click [TraceRoute](#) on the NPM Web console enter the hostname or IP Address of a node, and run Trace.


Powered by Engineer's Toolset
Settings Learn More Close Tool

Enter Hostname or IP Address:
 sys-esx-01.aus.lab
 TRACE

Select from Orion
Resolve DNS

Resolves the DNS Real-Time
Display the domain names and response time for each hop

TraceRoute to sys-esx-01.aus.lab
Tracing in progress... Polling frequency: 10 sec
Stop
Export

Hop	IP Address	DNS Name	Response Time	Maximum Respo...	Minimum Respo...	Average Respon...	Packet Loss
1	192.168.10.15	DNS1.solarwinds...	320 ms	492 ms	36 ms	237 ms	0%
2	10.168.4.1	DNS2.solarwinds...	456 ms	456 ms	24 ms	250 ms	0%
3	100.50.25.15	DNS3.solarwinds...	32 ms	459 ms	19 ms	230 ms	0%
4	10.3.52.49	solarwinds.com	220 ms	471 ms	35 ms	244 ms	0%
5	2a00:1450:4001...	sys-esx-01.aus.lab	470 ms	470 ms	3 ms	177 ms	0%

The route has been discovered.

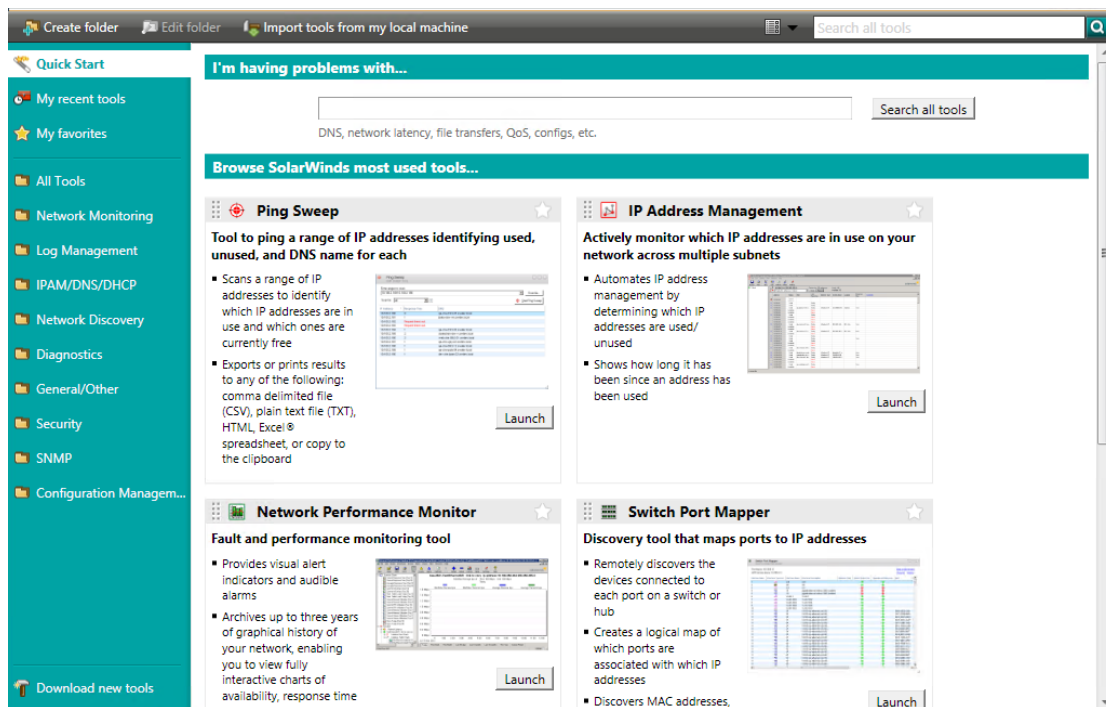
TraceRoute captures response-time and packet loss information as a constantly refreshing data and can often determine the error-prone area over many hops through the public network. TraceRoute also enables data sharing by allowing you to export the collected trace information in CSV/Text/PDF format. This significantly reduces the time required to isolate and identify a bandwidth or segment failure within your network.

Top Five Reasons to Try SolarWinds Engineer's Toolset

[Engineer's Toolset](#) delivers an advanced collection of monitoring, discovery, diagnostic, and Cisco® tools.

Here are the top five reasons to use SolarWinds Engineer's Toolset:

- Includes all the network tools you need in one complete package.
- Monitoring tools include Interface Monitor, SNMP Graph, and more.
- Diagnostic tools include Ping Sweep, DNS Analyzer, TraceRoute, and more.
- Network discovery tools include Port Scanner, Switch Port Mapper, Advanced Subnet Calculator, and more.
- Cisco management tools include NetFlow Analyzer, Config Downloader, and more.



SolarWinds Engineer's Toolset has more than 60 network tools that help you easily perform your daily network management and troubleshooting tasks.

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