

Quick Tip: How to Monitor Memory Utilization on Your Core Routers and Switches, in Real Time

A lot of factors affect a router's or switch's memory utilization. Unmonitored memory usage might become a ticking time-bomb, resulting in an unstable and unpredictable network. For example, a change in the subnet configuration or routing protocol would affect a core router's memory utilization, which in turn will impact end-to-end traffic flow. Therefore, having total visibility of live memory stats is a valuable asset in troubleshooting memory spikes.

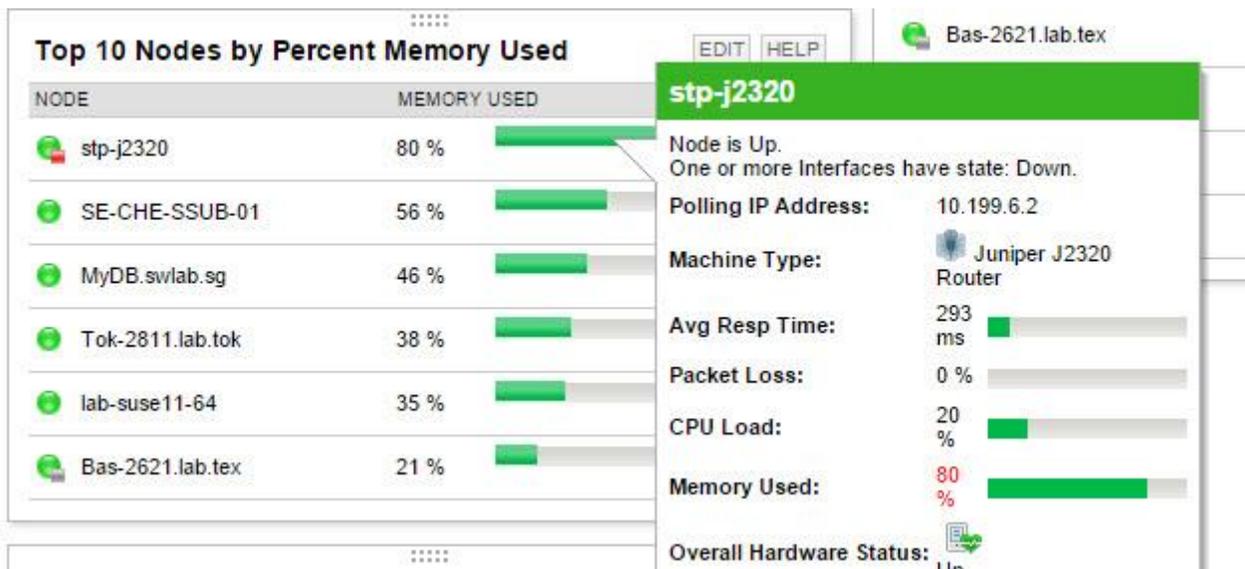
[SolarWinds Engineer's Toolset \(ETS\)](#) is a bundle of 60+ must-have tools that help you troubleshoot network issues and optimize your network performance. These tools can help you simplify detection, diagnosis, and resolution of network issues—before they cause major disruptions in your network.

While proactive monitoring systems keep you informed about network problems, you can significantly reduce troubleshooting time with a reactive troubleshooting tool. For example, you can quickly analyze your current memory utilization along with the total available memory in real time with three easy steps using [SolarWinds® Network Performance Monitor \(NPM\)](#) and [SolarWinds Engineer's Toolset's Memory Monitor](#) application.

1. Set alerts to monitor Top 10 nodes by percent memory used
2. Set up and configure memory monitor
3. Dive deep into memory stats

Step 1 - Set Alerts to Monitor Top 10 Nodes by Percent Memory Used

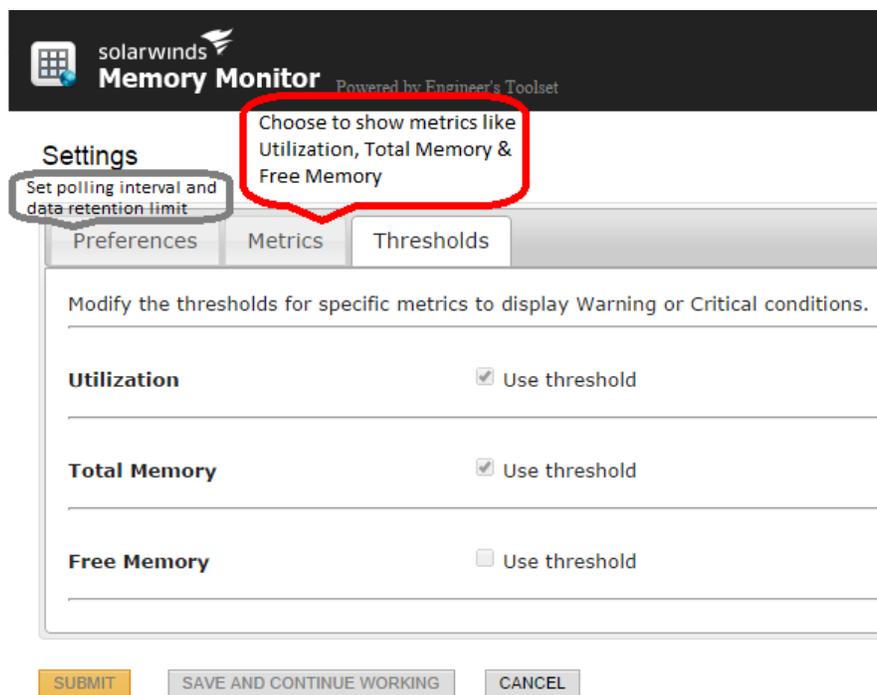
To predict the factors that can affect the performance of your network devices, you can set alerts on the Top 10 nodes by percent memory used and get an overview of the nodes that record the highest memory usage.



Click on a node to display the Node Details view. Alternatively, click on the node’s memory used percentage to get more details on that node’s memory usage over a period of time. With customizable chart, you can see the memory used and the usage trends of the selected nodes over a specified period. However, this information may not be sufficient to troubleshoot and determine if a router is crossing the threshold limits set for its memory. To investigate further, you need to see the memory stats in real time. [SolarWinds Engineer’s Toolset](#) enables this by integrating seamlessly with NPM.

Step 2 - Set Up and Configure Memory Monitor

If you want to monitor all of your core routers, you may have to open multiple telnet sessions and run the command for each one, which is cumbersome. [Memory Monitor](#) in SolarWinds Engineer’s Toolset helps you visualize and analyze the memory utilization, along with total and free memory available on critical nodes with 5 second granularity.



Step 3 - Deep Dive with Memory Stats

Engineer’s Toolset’s Memory Monitor can analyze the memory utilization of multiple routers and switches in real time. It can also plot CPU and RAM memory utilization based on a predefined polling interval using a chart that refreshes continuously frequently. For example, if a router reaches the user-defined warning threshold, the chart

displays the load bar in yellow. If the threshold reaches the critical level, the bar turns red. Engineer's Toolset's Memory Monitor also records the peak load level and when it happened.



If you find that a router is crossing the threshold limits set for its memory, you can take action by reworking the subnets associated with this router, reconsidering the routing protocols, or even adding another router as a load balance option. Memory Monitor captures memory stats as data, which refreshes constantly. Further, Memory Monitor enables data sharing by allowing you to export the collected memory stats in CSV/text/PDF formats.

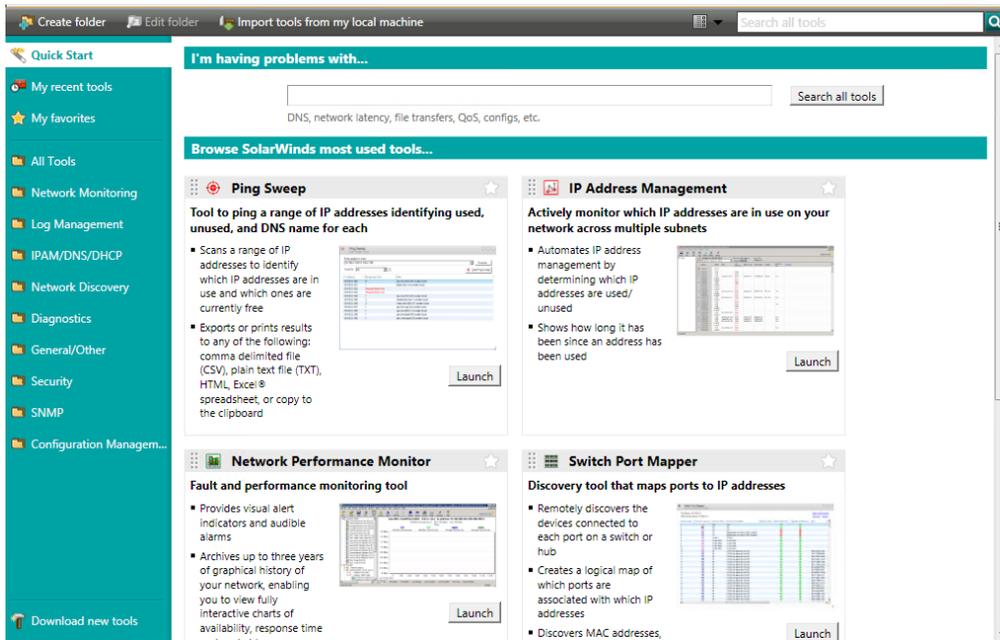
You can significantly reduce the time required to troubleshoot your critical routers or switches with real-time memory statistics within your network by downloading [SolarWinds Engineer's Toolset](#) now.

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:

- All the network tools you need in one complete package
- Monitoring tools include Real-Time Interface Monitor, SNMP Real-Time Graph, and more
- Diagnostic tools include Ping Sweep, DNS Analyzer, Trace Route, and more
- Network discovery tools include Port Scanner, Switch Port Mapper, Advanced Subnet Calculator, and more

- Cisco management tools include Real-Time 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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