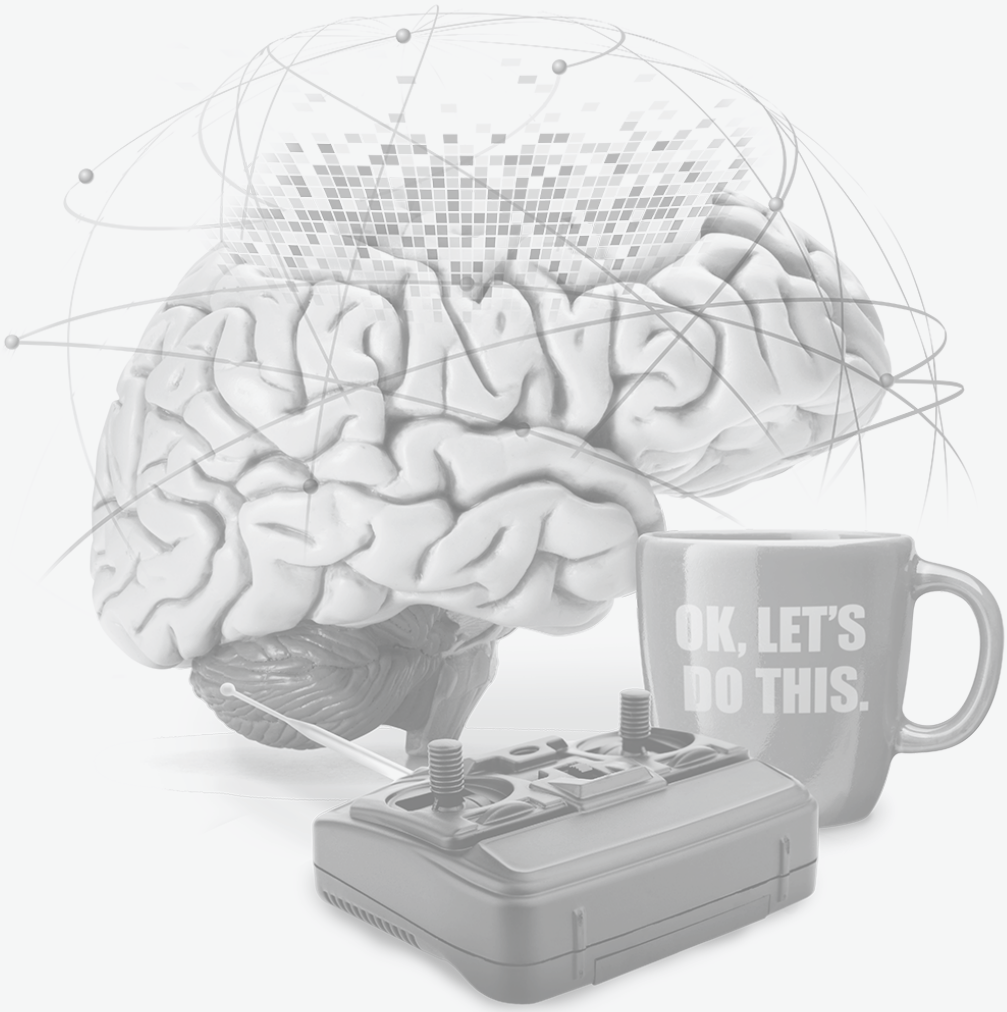
solarwinds



EVALUATION GUIDE

Network Performance Monitor

Table of Contents

1 PURPOSE OF THE DOCUMENT 3

2 WHY YOU MAY NEED A (NEW) NETWORK MONITORING SOLUTION 4

3 EVALUATORS' GUIDE 6

Install and configure 6

Planning and prerequisites 6

Installation 6

Discovery 7

Add discovered devices to SolarWinds NPM 9

Explore SolarWinds NPM Features 10

Orion® Web Console 10

Alerts 12

NetPath™ 15

Reports 18

PerfStack™ 19

More features and functionalities 20

4 VALUE OF A NETWORK MONITORING SOLUTION 22

5 HOW IS NPM LICENSED? 25

6 CONTACTS US 26

7 ADDITIONAL RESOURCES 27

8 ABOUT SOLARWINDS 28

Purpose of the document

We're glad you decided to evaluate SolarWinds® Network Performance Monitor (NPM) for your network monitoring needs. You can download the free trial here. The trial version is a fully featured version of the product, functional for 30 days. After the evaluation period, you can easily convert your evaluation license to a production license by obtaining and applying a license key.

This document will get you started with Network Performance Monitor and help you explore for yourself how SolarWinds NPM's features work in your environment. It will guide you through installation, initial discovery, and provide an overview of key features and functionalities.

To get a peek at a live install of NPM (and other SolarWinds products) without introducing it to your environment, take a look at our live demo. It includes guided tours of NPM, where you can experience the workflow for debugging a node reported down, monitor an interface, schedule a report, and more.

If at any time you would require further information or troubleshooting, do not hesitate to contact sales@solarwinds.com or visit our Success Center, especially the Installation Guide and Getting Started Guide.

Why you may need a (new) network monitoring solution

Common symptoms indicating that you might need to consider a (new) network monitoring tool:

- Unexpected traffic bottlenecks preventing access to key network services
- Reactive problem resolution taking up time from more systematic development
- You use multiple tools for monitoring that provide a single meaningful and actionable information source
- Alert noise
- You don't see the return of investment of your current solution
- Your current solution is cumbersome to use and set up, and doesn't cover all your monitoring needs

> *"Network Performance Monitor is stupid simple to use, yet very powerful and in-depth."*
>
> — IT/Systems Administrator, Large Enterprise Transportation Services Company

NPM FEATURES	NPM BENEFITS
Fault, performance, and availability monitoring	Quickly detect, diagnose, and resolve network performance issues and avoid downtime.
NetPath critical path hop-by-hop analysis	Detailed visibility into nodes both on-premises and in the cloud to troubleshoot application availability even over vendor or ISP nodes.
PerfStack cross-stack network data correlation	Accelerate identification of root cause by dragging and dropping network performance metrics on a common timeline for immediate visual correlation across all of your network data.
Drag-and-discover network performance charts	Real-time network performance metrics with interactive charts and graphs.
Customizable topology and dependency-aware intelligent alerts	Respond to multiple condition checks, correlated events, network topology, and device dependencies.
Automated capacity forecasting, alerting, and reporting	Automatically calculate exhaustion dates using customizable thresholds based on peak and average usage. Plan for critical resources such as memory, CPU, and interfaces.
Dynamic statistical network performance baselines	Dynamically calculate baseline thresholds from historical network performance data.

[1]https://www.techvalidate.com/tvid/D9E-EF2-7D3

Hardware health monitoring	Monitor, alert, and report on key device metrics, including temperature, fan speed, and power supply.
Dynamic wired and wireless network discovery and mapping	Automatically discover and map devices, performance metrics, link utilization, and wireless coverage.
Customizable performance and availability reports	Schedule and generate custom network performance reports with one of over 100 out-of-the box templates.
Network Insight™ for Cisco® ASA firewalls	Complete visibility into Cisco's next generation firewalls: Adaptive Security Appliance (ASA).
Cisco SwitchStack®	View the health of individual Cisco SwitchStack members, monitor power and data connections between the members, and quickly locate a switch with issues.
Comprehensive monitoring of F5® BIG-IP® family of products	Visualize and gain insight into the health and performance of your F5 service delivery environment.
End-user quality of experience with packet capture and analysis	Quickly and accurately identify network and application reliability with deep packet analysis.
Wireless network monitoring and management	Retrieve performance metrics for autonomous access points, wireless controllers, and clients.
Consultant and services-free deployment	Install and deploy in generally as little as an hour, with out-of-the-box monitors, alerts, and reports.

"NPM is a fantastic tool for network monitoring and probably the best Windows-based platform available. As with any highly flexible, feature-rich software, there is a bit of a learning curve, but the benefits are well worth the time / effort investment."

— Network Administrator, Medium Enterprise Industrial Manufacturing Company

[7] https://www.techvalidate.com/tvid/616-54A-5AA

Evaluators' guide

INSTALL AND CONFIGURE

PLANNING AND PREREQUISITES

Before you install SolarWinds NPM, refer to the Plan your NPM production deployment section of the Getting Started Guide.

Your NPM server sizing is impacted by:

» Number of monitored elements (nodes, interfaces, and volumes)

» Polling frequency: If you plan to collect statistics more frequently than the default nine-minute interval, system requirements will increase

» Number of simultaneous users: Add 1 GB of RAM for every 25 simultaneous users

NPM installations on VMware® Virtual Machines and Microsoft® Virtual Servers are supported. The virtual machine requirements are identical to the physical server requirements.

For evaluation installations only, installation on a desktop operating system is possible but not supported. This product is intended for use in a production environment that meets system requirements.

INSTALLATION

A detailed walkthrough through the installation can be found in the NPM Installation Guide. For evaluation purposes only, use the Evaluation Installation Guide. In short, follow these three steps:

1. If you haven't yet downloaded the free trial of NPM, you can get the latest version at this link.

2. Follow the standalone installation instructions, including the installation and configuration wizard.

» Select Network Performance Monitor as the product to install.

» To use the Microsoft SQL Server® Express database that installs with the product, click Express Install. To use your own Microsoft SQL Server database, click Advanced Install.

» Select product language and destination location.

» Review and agree with the License Agreement.

» Optionally choose to install Quality of Experience (QoE) Traffic monitoring. You can always enable this later.

> *"As an overall visual insight into the current network, SolarWinds is an awesome suite. The customizable alert system makes it convenient to alert those who need to know without causing alert fatigue."*
>
> — Network Administrator, Medium Enterprise Health Care Company

[7]https://www.techvalidate.com/tvid/19D-DBF-853

3. If the login page does not open automatically, launch the Orion Web Console in your SolarWinds Orion program folder. Log in with the username admin and leave the password field blank. For security purposes, SolarWinds recommends that you change the password to your admin account.

DISCOVERY

Discovery is the term used to describe the process NPM uses to identify network elements. During discovery, NPM scans the network for nodes, and when a node and associated elements are found, you can add them to the SolarWinds database for monitoring.

Preparation

For a first evaluation, starting with a limited range of IP addresses should be sufficient to try out NPM features. For a more in-depth look into the monitoring capabilities, you can at any time run the Discovery Wizard to look for IP ranges, subnets, IP addresses, and Active Directory® Domain Controllers.

You may need to enable devices you want to monitor for SNMP, if they're not enabled already. For Windows devices, we recommend monitoring via the WMI protocol, which also may need to be enabled beforehand.

When you run the Discovery Wizard, you will be asked to provide IP addresses and credentials for the devices you want to monitor. SolarWinds recommends that you gather this information before running the Discovery Wizard.

Discover your network checklist

» Ensure that you determine what to monitor

» Enable the networking devices you want to monitor for SNMP

» Enable Windows devices for WMI

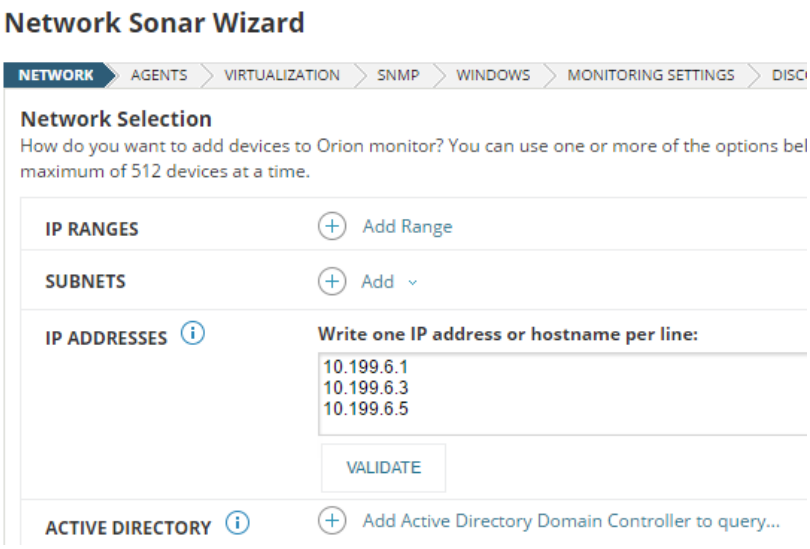
» Gather credentials for the devices

Discovery process

1. Run the **Discovery Wizard**. If it does not start automatically after configuration, click Settings ➔ Network Discovery.

2. Click **Add New Discovery** and then click **Start**.

3. On the **Network** panel, if this is your first discovery, add a limited number of IP addresses.



4. If the **Agents** panel appears, you enabled the Quality of Experience (QoE) agent during installation. The QoE agent monitors packet-level traffic. If there are any nodes using agents, select the **Check all existing nodes** check box.

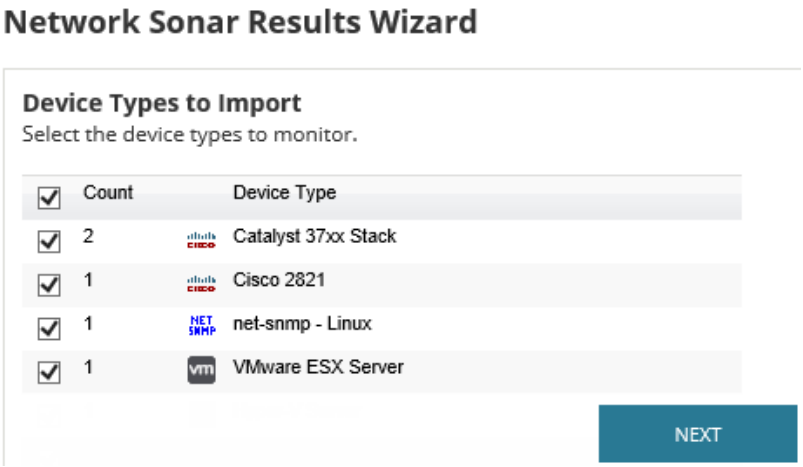
5. On the following panels – **Virtualization, SNMP,** and **Windows**, add credentials or community strings to your devices.

6. On the **Monitoring Settings** panel, SolarWinds recommends manually setting up monitoring the first time you run discovery. This allows you to review the list of discovered objects and select the ones you want to monitor.

7. Go through the **Discovery Settings** and **Discovery Schedule** panels. You can use the defaults for now. Opt for running the discovery immediately and proceed. Discovery can take anywhere from a few minutes to a few hours, depending on the number of network elements the system discovers.

ADD DISCOVERED DEVICES TO SOLARWINDS NPM

After the Network Sonar Wizard discovers your network, the Network Sonar Results Wizard opens, allowing you to import network elements into the SolarWinds database.



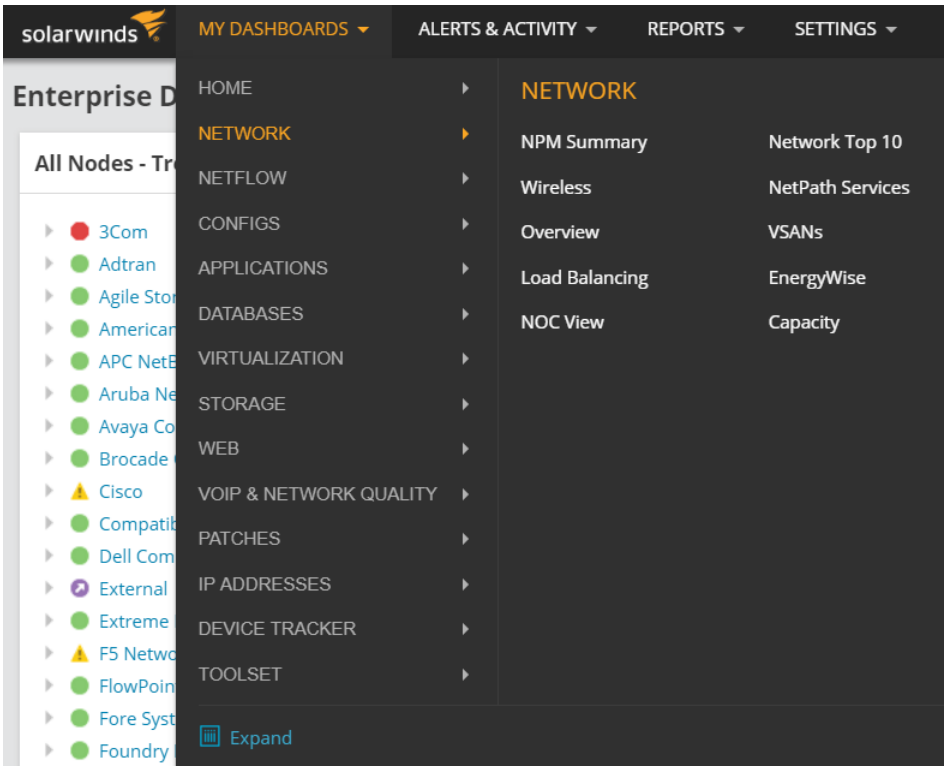
Discovered elements do not count against your license count; **only elements that you import into the Orion database count against your license**.

- Ensure that only the device types you want to monitor are selected, and click Next.
- Ensure the interfaces you want monitor are selected, and click Next.
- Ensure the volume types you want to monitor are selected, and click Next.
- Review the list of elements to be imported, and click Import.
- When the import completes, click Finish.
- Click the Home tab to begin exploring your network.

EXPLORE SOLARWINDS NPM FEATURES

ORION WEB CONSOLE

After a successful installation, you will be sent to the homepage of the Orion Web Console, which will be filling up with monitoring data. While waiting for it to complete, explore the interface:



The top menu, common to all SolarWinds products running on the Orion Platform, presents the starting point to drill deep into SolarWinds products. The tab My Dashboards Network contains various views to explore NPM; all of them are customizable and you can create your own. At first, we recommend highlighting the following:

- **NPM Summary** – An overview of NPM data in a single pane of glass
- **Top 10** – Selected metrics of your network in a top 10 view
- **NetPath Services** – A "visual traceroute" with which you can view hop-by-hop traffic across your network and into hybrid and cloud environments
- **Overview** – Your monitored nodes and their up/down status
- **NOC View** – Highly customizable Network Operations Center view

These are starting points that allow you to drill down into specific nodes, view any issues, respond to alerts, and create reports.

The following terms will help as you explore SolarWinds NPM:

- **Orion Web Console:** The web interface you see when you log on to Orion that is used to view, configure, and manage all of your monitored objects. You can access the Orion Web Console from any computer connected to the internet.
- **View:** An individual page in the web console.
- **Resource:** The widgets or informational blocks that make up a view.
- **Element:** Anything that can be monitored by the Orion Platform.

Other menu items we would like to highlight for first evaluation are:

Alerts & Activity ➔ Alerts – Starting area for managing and creating alerts, with hundreds of out-of-the-box ones available for you to try.

Reports ➔ All reports – Manage and schedule your reports.

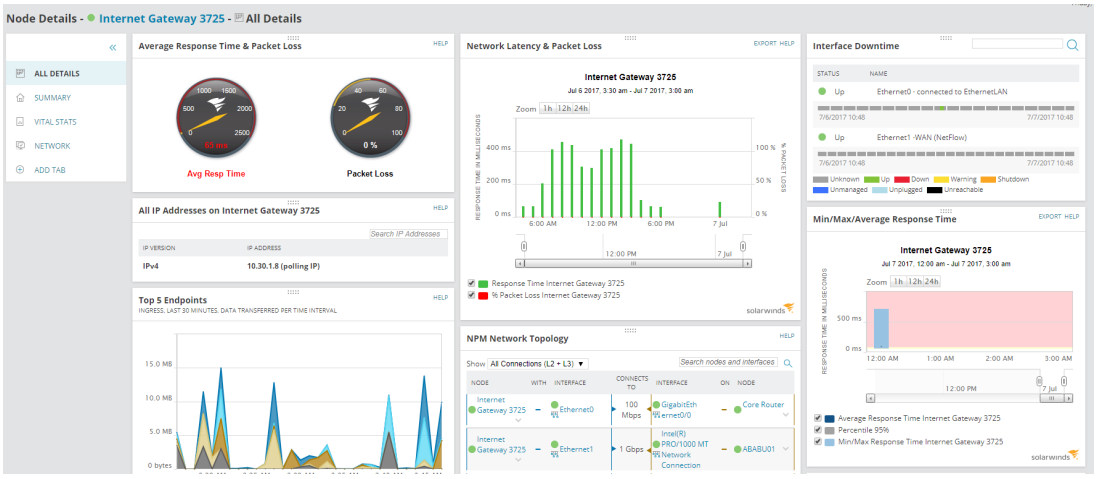
My Dashboards ➔ Home ➔ Performance Analysis – Houses **PerfStack**.

Features of the user interface

- You can rearrange resource widgets with drag and drop on any view, indicated by the dots at the top of the box.
- Hovering over a resource, link, or a detail changes the cursor, allowing you to drill deeper into the node details and generating a new view or a customizable report. On hover, you can view more details without clicking.
- All pages offer the option to export to a PDF file, via the link in the upper-right corner.

Drilling down into a resource

Exploring the details of a node in your network—a router, switch, interface etc.—is as simple as clicking on its name from whatever view you are on. Whether it's on a NPM Summary page, alert console, or overview of all you network devices, you can access a dashboard with all the details about the node, the monitored data, current and historical charts, and forecasts when available.



On the left menu, you can view All Details, a summary, listing of vital stats, info about the network, and you can add a tab of your own with your custom details.

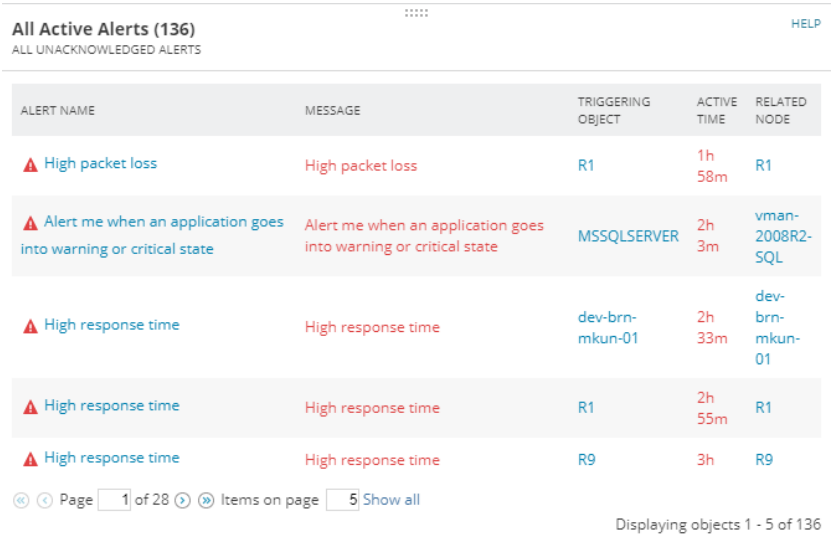
ALERTS

The most common task of a monitoring product is to draw the user's attention to a problematic area of their network that requires action. Alerts, when set up correctly, are the best way to go about it.

NPM comes with hundreds of predefined alerts for common problems such as a nodes going down, high interface utilization or packet loss, and many more.

Many predefined alerts are enabled by default, so if there are problems, you are alerted as soon as you discover your network and add discovered devices to SolarWinds NPM.

By default, alerts appear in the Active Alerts resource on the Orion home page.



All Active Alerts (136)
ALL UNACKNOWLEDGED ALERTS

HELP

ALERT NAME	MESSAGE	TRIGGERING OBJECT	ACTIVE TIME	RELATED NODE
High packet loss	High packet loss	R1	1h 58m	R1
Alert me when an application goes into warning or critical state	Alert me when an application goes into warning or critical state	MSSQLSERVER	2h 3m	vman-2008R2-SQL
High response time	High response time	dev-brn-mkun-01	2h 33m	dev-brn-mkun-01
High response time	High response time	R1	2h 55m	R1
High response time	High response time	R9	3h	R9

Page 1 of 28 Items on page 5 Show all

Displaying objects 1 - 5 of 136

To see all alerts, you can click the All Active Alerts button in the Active Alerts resource, or you can go to **Home ➔ Alerts**. On this page, you can:

- Acknowledge an alert that you are working on
- Click on any alert to go to the **Alert Details** page for more information
- Click **Manage Alerts** to enable/disable, add or edit any alert

Viewing and responding to an alert

When an alert triggers, any associated alert actions also trigger, and the alert appears on the All Active Alerts page. On the All Active Alerts page, you can view the details of alert by clicking on it. You can click on the network object that triggered the alert to directly view it. You can also acknowledge the alert—this prevents all associated actions (e.g., sending an email) from firing.

The alert status view has several resources:

Alert Status Overview: Tells you when the alert happened, its importance, and whether or not it was acknowledged.

Alerts are great, as long as they work with you and not against you! Here are some examples of common alert problems:

- Too many alerts; they just become background noise
- Too few alerts; you miss critical events that you should pay attention to
- Alerts on the wrong parameters don't give you meaningful and actionable information

Download the free eBook, Monitoring 201, to see how smart alerting saves time and provides the right information at the right time.

If you're new to monitoring or want to refresh the key concepts, we very much recommend Monitoring 101—again, it's free!

History: If the same alert is triggered repeatedly, there may be a systemic problem. For example, if a device frequently goes up and down, it may be a sign of a flapping route.

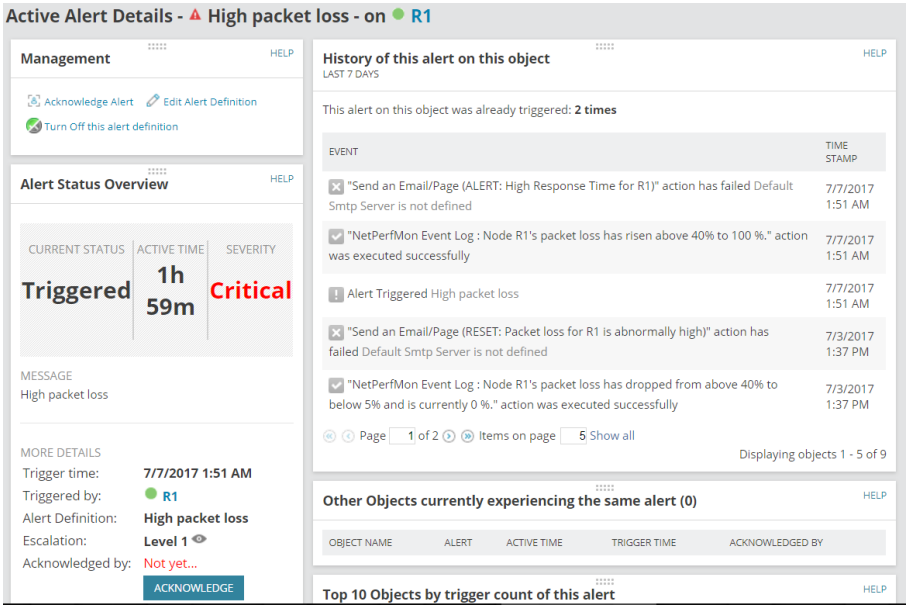
Other Objects: Sometimes the same alerts occur on multiple nodes because of a single trigger. For example, if an edge device is having problems, any devices that are dependent on the edge device might also report problems.

Acknowledge: Acknowledging an alert indicates that you are aware of the issue and the problem is being investigated.

Alert Notes: Each person troubleshooting an issue can enter notes about their activities and any discoveries. The Acknowledge and Notes features are helpful when multiple people are troubleshooting a problem.

"SolarWinds' easy-to-use web interface can detect problems before users can even report the issue. NPM takes support from a reactive mode to proactive."

— Brian Gorham, IT Director, Hillco



Setting up an alert

You can create your own alerts by modifying a predefined alert or creating a custom alert. Alerting is very powerful and can be complex, with multiple trigger conditions, reset conditions, and actions. The trigger condition defines the event that must occur to activate an alert. Trigger conditions are built using child conditions, which are evaluated in order.

To set up an alert, go to **Alerts & Activity → Alerts** and click on **Manage Alerts** on the right. There you can add a new alert or select an existing one and edit it.

[i]https://www.techvalidate.com/tvid/D0D-39F-05C

The Alert Wizard will guide you through the steps of the alert-creating process:

» Properties – Name, description, evaluation frequency, severity, and others.

» Trigger Wizard – Condition or conditions to be met before an alert can be triggered. Allows simple or very complex trigger rules.

» Reset condition – Default is to clear the alert after its trigger condition is no longer true, but you have the option to change this.

» Time of Day – Either set as Always enabled or specify the schedule for the monitoring of the alerts' conditions.

» Trigger Actions – What's supposed to happen when the alerts' conditions are met? You can choose from a plethora of actions.

» Reset Action – Set up actions (if any) that are to be run when the alerts' reset condition is met.

» Summary – See and confirm the overview of the alert.

More Resources on Alerts

» Work with preconfigured alerts

» Create a custom alert

» How thresholds work

» Edit a global threshold

» Complex trigger conditions

» Alerts with multi-element triggers

» Use duration in a SolarWinds NPM alert trigger

» The "Do Not Alert" alert

» Send alerts to specific contacts using SolarWinds NPM

» Alerts with device-specific thresholds

» Single alert when multiple devices go down

» Define object dependencies

» Event correlation alerts (Y after X)

> *"I have tried a few network monitoring systems and nothing comes close to NPM in terms of ease of setup and data visualization."*
>
> — Network Engineer, Educational Institution

[5] https://www.techvalidate.com/tvid/595-51C-225

NETPATH

NetPath answers the following questions:

» How well is my network delivering applications to my users?

- NetPath discovers the node-by-node network path.

» Are the paths to key applications or users down?

- NetPath quantifies the performance of each link and node along the path.

» Where is the network problem and who is responsible for it?

- NetPath isolates the node or connection that is decreasing end-to-end performance.
  - If the issue is external, NetPath identifies the name of the company that owns the node and displays their contact information.
  - If the issue is internal, NetPath incorporates data from SolarWinds Network Performance Monitor, as well as Network Configuration Monitor and NetFlow Traffic Analyzer (sold separately) about your on-premises gear.

How does NetPath work?

NetPath uses distributed monitoring and path analysis to discover how applications are delivered through the network to your users. To use NetPath:

1. You deploy agents on Windows computers that act as synthetic users. The agents use advanced probing to discover and test the network path that traffic takes to any network endpoint, such as your local file print server, your website, or external websites.
2. After discovering the path and quantifying the performance of each node and connection, NetPath enriches the picture with additional data about internet nodes. If you are monitoring non-internet nodes with the Orion Platform, NetPath incorporates that data too.
3. The result is a clear end-to-end map of how applications are delivered to your users, including your network, the network of your provider, and any other networks you depend on.

Prefer to watch? Look at a video overview of NetPath - how to configure and use it

Setting up NetPath

First, review the requirements and make sure you have the resources available—OS, CPU, RAM, database, ports, and settings for probing public cloud environments.

Next, create a service—that is the destination to which you are mapping. This can be any TCP-based network service, such as salesforce.com®, Microsoft Exchange™, Office 365®, or a file server.

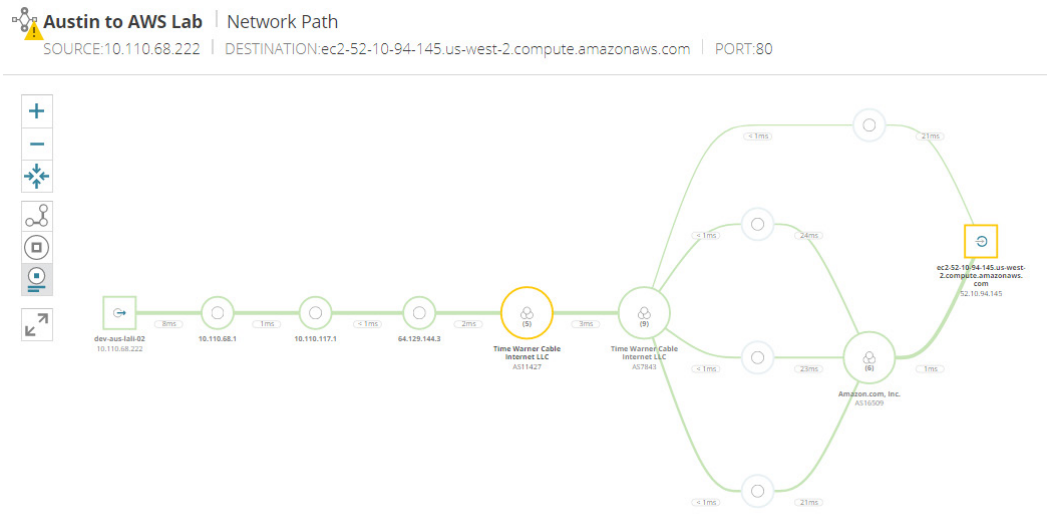
Go to **My Dashboards → Network → NetPath Services**, click on **Create New Service**, and enter the target destination (hostname or IP address and port) and the probing interval.

Click on Next and assign a probe to the service, or create a new one to be assigned. Click on **Create New Probe**, enter the address and credentials, and click Create. You can create and assign multiple probes.

Using NetPath

Now data has started to collect at your specified interval. To explore the results, click **My Dashboards → Network → NetPath Services**. This view displays a list of created network services. Expand a service and click one of the associated probes to see the network path from that probe to the expanded service.

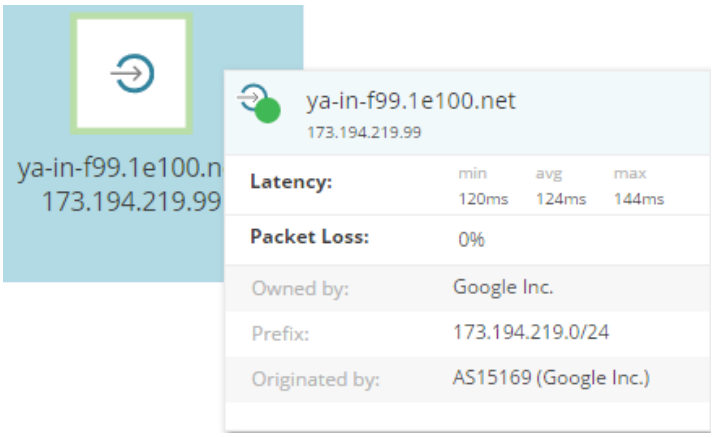
You can now see a visual network path from the source (on the left), through all its network hops right to the destination (on the right).



Objects in the network path include nodes, connections, and interfaces. Point to an object for a summary, and click it for details.

> *"One word – NetPath. I love this new functionality!"*
>
> — Larry Herzog, IT Manager, Standard Distribution

[6]https://www.techvalidate.com/tvid/3D5-C87-118

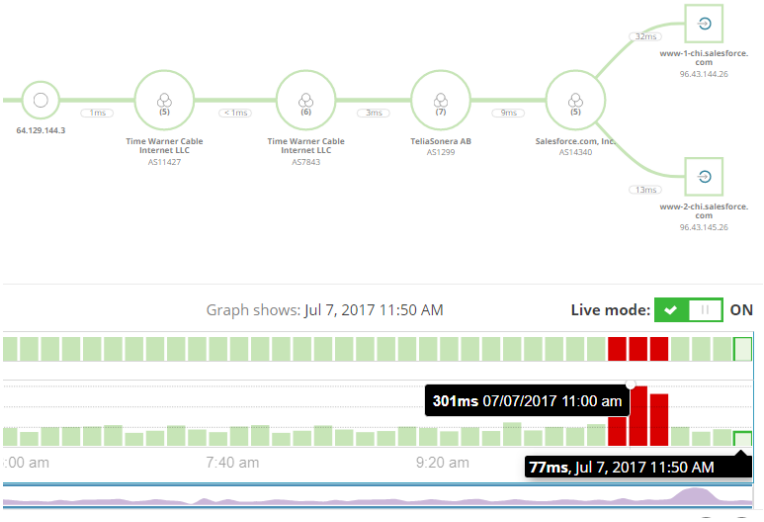


The node information is cumulative from the source to that node. When you point to or click a node, the metrics display the performance between the source, along the path, up to this node.

A connection between nodes shows latency and packet loss between its two nodes. When you point to or click a link, the metrics display the performance of the specific link.

Use the green, yellow, and red color coding to identify the nodes and connections that may be performing poorly and affecting the end-to-end connection. If you confirm that a service provider is responsible for the outage, you can contact them to resolve the issue.

The chart on the bottom shows metrics for the end-to-end performance. Select an interval to see the network path and its performance that resulted in that end-to-end performance.



Think of this as your network time machine. You can compare performance metrics from today or a previous time.

"For the cost, SolarWinds monitors your network better than any other tool."

— Chad Fogg, Network Engineer, Research Now

[7] https://www.techvalidate.com/tvid/B0B-AE9-DEB

More Resources on NetPath

» View a network path

» Troubleshoot a service with external path data

» Troubleshoot my network with Orion path data

» Orion integration with NetPath

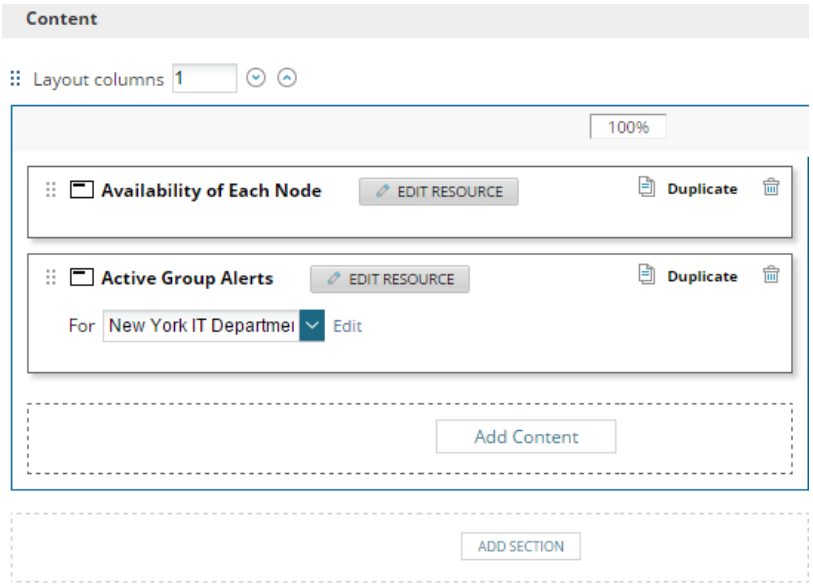
REPORTS

Reports for all Orion Platform products are located on the main menu under Reports. There, you can view a list of predefined reports, customize the predefined reports or create your own reports. This is the place to manage their delivery schedule.

To create a new report, go to: **Reports ➔ All Reports ➔ Manage Reports**. The easiest way is to select an existing one. SolarWinds products on the Orion Platform come with a plethora of predefined reports for you to customize. Click on Edit Report, or Duplicate & Edit to create a copy and keep the original predefined report. You always can also start fresh with Create New Report.

The Report Building Wizard will guide you through the process:

» In Layout Builder, you define the contents of the report—what data gets reported, the time period of the resources you're reporting on, and objects you're reporting on. You can edit all properties of the tables and charts in the report.



» Once you have the contents defined, you can move and position them on the layout builder. You can then preview the look of the reports layout with data by clicking **Preview**.

» In **Properties**, you can describe, categorize, and favorite the report, as well as set a limitation on who can view, run or change it.

» Next step in the wizard is **Schedule Report**, which allows you to add a frequency for the report to be run and assign actions on what to do with the output—email, print, or save it. Of course, you can set no schedule and run the report manually at your convenience.

» In **Summary**, you see all the report details for you to verify and submit.

Check out our THWACK® community for a conversation on reports other users have created

Resources:

» Modify an existing web-based report

» Create a web-based report

» Customize a web-based report layout

» Add content to a web-based report

» Add a custom chart or table to a web-based report

» Restrict who can access reports

» Export and import reports

» Generate reports on a schedule

» Schedule a report when creating or editing it

» Create, assign, and edit report schedules

» Schedule reports from the Schedule Manager

"SolarWinds NPM offers simplicity out of the box for most, but limitless deep dives into low-level customization for those that dare. It's open, unobstructed, and encouraged on THWACK. Good stuff."

— Mitch Hirsch, Senior Infrastructure Engineer, Kennards Hire

PERFSTACK

We'll mention this briefly, as this feature is not exclusive to NPM, but works across most Orion Platform products and its capabilities are peerless in the monitoring industry.

When it comes to troubleshooting performance issues within your IT environment, your data is more than likely going to have different data types and come from different sources. Correlating the various data sources is a key step in finding a root cause analysis for problems.

The Performance Analysis dashboard, **PerfStack**, allows you to get all the different data sources from your monitoring environment on a common timeline and compare them side by side. Using a drag-and-drop feature, you can go back in time to see and analyze issues that may have caused or cascaded into issues, and make data-driven decisions on infrastructure changes.

[9]https://www.techvalidate.com/tvid/37A-A33-754

PerfStack works perfectly with NPM alone, but its power truly shines when using other Orion Platform products: NetFlow Traffic Analyzer, Server & Application Monitor, Virtualization Manager, Storage Resource Monitor, and Web Performance Monitor.

Explore the PerfStack dashboard by yourself in your trial install by going to **My Dashboards ➔ Home ➔ Performance Analysis**. To see its full power, we recommend playing with it in our demo or watching our Head Geeks™ solve real-life issues in an in-depth look into PerfStack.

MORE FEATURES AND FUNCTIONALITIES

The above features are just a taste of what SolarWinds NPM has to offer. We invite you to delve deeper into the Administrator's Guide, Getting Started Guide, or directly explore some of the following guides in the SolarWinds Success Center:

» Monitor devices with SolarWinds Orion agents

» Monitor fibre channel devices and virtual storage area networks (VSANs)

» Monitor wireless networks

» Network Insight for F5 BIG-IP load balancers

» Monitor Meraki® infrastructure

» Monitor Cisco SwitchStack

» Monitor EnergyWise® devices

» Integrate NPM with ServiceNow®

» Monitor Quality of Experience metrics with Packet Analysis

» Monitor SNMP traps

- Monitor Syslog messages
- Create network maps
- Create wireless heat maps
- Ensure failover protection with SolarWinds High Availability
- Monitor capacity usage trends on the network and forecast capacity issues
- Manage user accounts and access level to SolarWinds NPM

If you have more questions about NPM's features, capabilities, and limitations, we will gladly answer them on sales@solarwinds.com, or you can look for answers by searching the Success Center or asking in the NPM THWACK community.

Are you looking to evaluate the added value of a network monitoring solution to your enterprise? It's not a straightforward task, as the benefits are often not directly quantifiable and need to be approximated.

Value of a network monitoring solution

Benefits ultimately come down to:

» Cost savings

» Avoiding unexpected remediation efforts

For a more detailed view on quantifying the ROI of a network monitoring solution, take a look at our white paper on this topic. Below you can find a list of areas where the benefits and costs of network monitoring come into play.

BENEFITS:

Salary/Staff Time Savings

Today's complex networks require highly trained network professionals to maintain the network, configure new users, respond to support calls, and plan and support network expansions and changes. Automated technology that helps maintain or even reduce headcount offers a directly quantifiable return. In most cases, network management and monitoring solutions free network professionals to work on more strategic projects, which can help to reduce costs and drive increased revenue.

Reduced Network Downtime

Network downtime can be directly quantified by simply calculating the cost of the time a network professional spends troubleshooting and resolving the cause of the downtime. This cost, however, is simply the tip of the iceberg as far as the total cost of network downtime is concerned. Lost employee productivity, lost revenue, and lost customer goodwill are all examples of costs that are harder to calculate but have a much greater impact.

Reduction in Support Calls

Network management and monitoring solutions alert network management and support teams to potential problems before users start to complain and generate support calls. The cost of support calls can be easily calculated by looking at the number of calls per week, the time to resolve a support call, and the cost per hour of support time. By reducing the number of support calls through proactive monitoring and management of the network, you will be able to directly quantify the cost savings.

Decreased Time to Resolution

Time to resolution is the amount of time that it takes to resolve an issue once the network professional is notified. Network monitoring and management systems with real-time diagnostic data that is viewable through dynamic network maps can greatly reduce the amount of time required to troubleshoot and pinpoint the source of the issue.

Managing Service Level Agreements

Network operations teams are typically held to or measured against a quantifiable service level agreement (SLA) that is typically a percent of network uptime. This SLA can be an internal SLA or an external SLA with your service provider, for example. If network availability is directly attributable to a company's revenue, then the cost of downtime can be easily measured based on the average revenue that would have been generated during the downtime.

COSTS:

License Cost

Monitoring and management solutions can be licensed perpetually (one-time license fee) or on a subscription basis (monthly or annual fee). The number of devices, nodes, interfaces, elements, or applications that are being monitored and managed typically determines licensing costs.

NPM, like all SolarWinds products, has transparent and readily available price lists and licensing tiers, allowing you to quickly assess the license costs. Read about licensing tiers for NPM below.

Product Maintenance, Support, and Upgrades

These costs are typically optional but need to be factored into the TCO. What level of customer support is offered? Are product upgrades included or are they separate?

SolarWinds automatically includes one year of maintenance with the purchase of our licensed products. This allows our customers to experience the SolarWinds difference, including frequent product releases and 24/7 support for a full year without an additional charge. After the first year, your annual renewal preserves access to SolarWinds world-class software updates, support, and virtual instructor-led product training.

There are three easy ways to renew: via the Customer Portal, email, or a SolarWinds reseller. Read more on product maintenance and renewals here.

Dedicated Hardware or Software

This is the price of the hardware, such as a server or appliance that is required to run the solution. There may also be additional software components, such as database software (SQL), virtualization software, or Windows licenses.

Installation/Implementation/Consulting

In some cases, the cost of installation, implementation, and fine-tuning of the solution can be as high (or higher) than the cost of the upfront license.

SolarWinds products are famous for their ease of install, not requiring any outside consulting. A NPM install can be up and running typically within an hour.

TRAINING

Determine if there are any training costs required to implement or operate the solution. Training costs need to include both the initial training costs, as well as any ongoing instruction that will be required as staff is turned over.

SolarWinds Orion Platform's intuitive user interface lends itself to discovery. Even without training, network administrators can start monitoring and creating alerts and reports almost immediately. NPM's feature depth and customization options allow for great fine tuning—all the nuances are well-documented in the Success Center. The very active THWACK community has over 130,000 members sharing ideas and best practices. On top of this, we offer a SolarWinds Certified Professiona® program.

How is NPM licensed?

SolarWinds NPM is licensed by the largest number of the three following object types:

INTERFACES

Interfaces include switch ports, physical interfaces, virtual interfaces, sub-interfaces, VLANs, and any other single point of network traffic.

NODES

Nodes include entire device, such as routers, switches, virtual and physical servers, access points, and modems.

VOLUMES

Volumes are equivalent to the logical drives that you monitor.

The following list provides the different types of NPM licenses that are available:

LICENSE	NUMBER OF MONITORED ELEMENTS
SL100	Up to 100 nodes, 100 interfaces, and 100 volumes
SL250	Up to 250 nodes, 250 interfaces, and 250 volumes
SL500	Up to 500 nodes, 500 interfaces, and 500 volumes
SL2000	Up to 2000 nodes, 2000 interfaces, and 2000 volumes
SLX	Unlimited elements. With the default polling intervals, the main polling engine can monitor approximately 12,000 elements. To monitor over 12,000 elements, you will need to deploy an additional polling engine (APE)

Contact us

Generate a quote online—easy and fast!

On our Contact Us page, you can find a listing of toll-free numbers for a number of countries, as well as a web form to contact our sales team. We will be more than happy to answer any of your questions.

For direct technical support with installation, configuration, setup, operation or other product-related issues, you can directly Submit a Ticket via our Customer Portal (even without a SolarWinds Customer ID).

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Additional resources

Getting Started Guide

Release notes – latest, historical

Administrator's guide

NPM Success Center

NPM section on THWACK

» Product roadmap

» Product blog

» User content exchange

» NPM discussion forums

NPM Customer Resources

TrustRadius® Reviews

IT Central Station Reviews

ABOUT SOLARWINDS

SolarWinds provides powerful and affordable IT management software to customers worldwide, from Fortune 500® enterprises to small businesses, managed service providers (MSPs), government agencies, and educational institutions. We are committed to focusing exclusively on IT, MSP, and DevOps professionals, and strive to eliminate the complexity that our customers have been forced to accept from traditional enterprise software vendors. Regardless of where the IT asset or user sits, SolarWinds delivers products that are easy to find, buy, use, maintain, and scale while providing the power to address key areas of the infrastructure from on-premises to the cloud.

Our solutions are rooted in our deep connection to our user base, which interacts in our THWACK® online community to solve problems, share technology and best practices, and directly participate in our product development process.

According to the IDC Worldwide Semi-Annual Software Tracker 1H 2016 release, SolarWinds leads the network management software market with a more than 20 percent share of total market revenue for the first half of 2016. Strong demand for its network management products fueled 14.2 percent year-over-year revenue growth during the same period.

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