

# HOW TO CREATE INTELLIGENT ALERTS

## Manage Network Alerts Like a Pro

As a network becomes larger and more complex, the amount of alerts generated increases and in turn causes network managers to be bombarded with multiple notifications about all the activities and issues in their network. Having a robust alerting mechanism helps network engineers to troubleshoot key issues faster.

Intelligent alerting avoids unnecessary notifications so you can focus on those that are most important. In addition, intelligent alerts can be set in various ways. For example, to notify different people on different days, different times of the day, different people for different events, or any combination of times, events, and people.

## Rethink How Alerts Work: Step-by-Step Guide to Create Intelligent Alerts

Advanced network monitoring tools like **SolarWinds® Network Performance Monitor (NPM)** provide an easy way to set up and receive intelligent alerts when your network is acting up.

Follow these steps to create intelligent network alerts:

### #1 Manage Default Alerts

Once **SolarWinds NPM** is installed, you can see many common alerts. The most common alerts are enabled by default. Network engineers can enable or disable alerts in bulk, and out-of-the-box alerts can be duplicated and edited.

Step 1 – Click Settings on the home page.

Step 2 – Under Alerts & Reports, click Manage Alerts.

Step 3 – Under Alert Manager Tab, select 'Group by' field to filter alerts groups.

Step 4 – Select Alerts from the list to customize.

**Manage Alerts**  
All Alerts created for your environment are listed in the grid below.

**Alert Manager** | Action Manager

Group by: [No Grouping] | Add New Alert | Edit Alert | Duplicate & Edit | Enable/Disable | Export/Import | Delete | Search...

Alert Name	Enabl...	Alert Description	Property to ...	Trigger Action(s)	Owner	Type
Alert me and trigger an NCM action	OFF		Node	3 actions		User-Defined
Alert me when a component goes down	ON	This alert will write t...	Component	NetPerfMon Event...		User-Defined
Alert me when a component goes up	ON	This alert will write t...	Component	NetPerfMon Event...		User-Defined
Alert me when a group goes down	ON	This alert will write t...	Group	NetPerfMon Event...		User-Defined
Alert me when a group goes into maintenance	ON	This alert will write t...	Group	NetPerfMon Event...		User-Defined
Alert me when a location becomes unreachable	ON	This alert will write t...	Player Locat...	NetPerfMon Event...		User-Defined
Alert me when a managed node is unreachable	OFF	Alert me when a ma...	Node	0 actions		User-Defined
Alert me when a managed node is up	OFF	Alert me when a ma...	Node	0 actions		User-Defined
Alert me when a multicast routing protocol is down	OFF	Alert me when a mu...	Multicast Gr...	NetPerfMon Event...		User-Defined
Alert me when a multicast routing protocol is up	OFF	This alert is triggere...	Multicast Gr...	NetPerfMon Event...		User-Defined
Alert me when a multicast routing protocol is down	OFF	This alert is triggere...	Multicast Gr...	NetPerfMon Event...		User-Defined
Alert me when a neighbor goes down	ON	This alert is triggere...	Routing Nei...	NetPerfMon Event...		User-Defined
Alert me when a new MAC is added	OFF	User Device Tracke...	New MAC M...	0 actions		User-Defined

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Figure 1 – Manage Alerts



You will notice the Action Manager tab, which allows similar bulk management functionality for alert actions.

**Manage Actions**

The action manager is primarily used to modify multiple alert actions at once. Each alert action that is added to the system is listed below. Add more alert actions using the Add/Edit Alert Wizard.

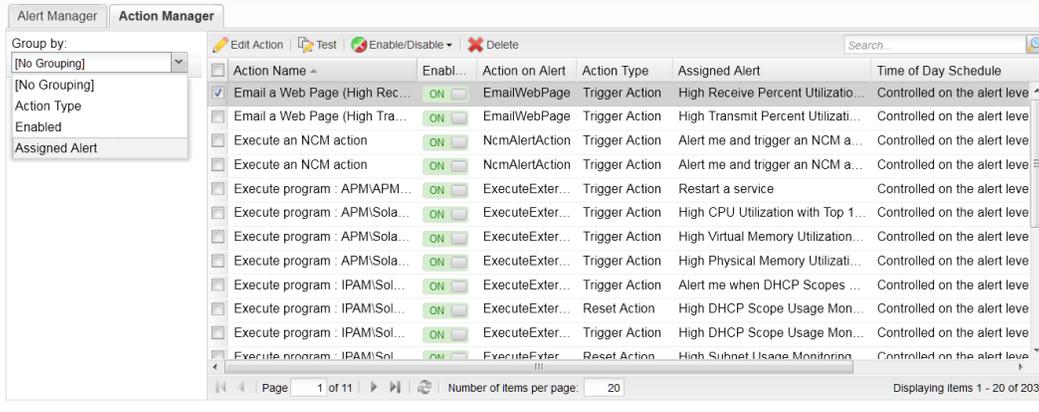


Figure 2 - Action Manager

**#2 Add New Network Alerts**

Click Add New Alert under the Alert Manager Tab to open the wizard. Start by entering alert properties, such as name, description, frequency, severity, and any limitations, if any.

In the example below, you can see how alert notifications can be created when a component goes down in your network. Once alert properties are entered, click Next to customize trigger conditions.

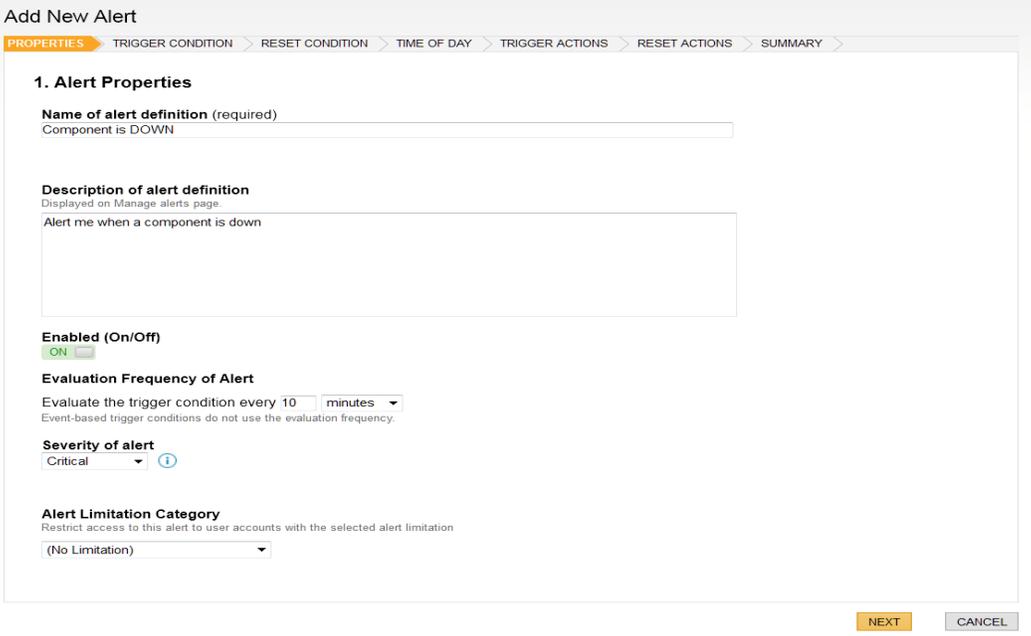


Figure 3 – Add New Alerts



### #3 Establish Trigger Condition for Alerts

A trigger condition is a simple condition or a set of multiple nested conditions which must be met before the alert is triggered. Select the component that you want to alert on and choose the scope of the alert. You can customize by adding instances in trigger condition for one or more objects, and choose how long the condition must exist to trigger an alert. The trigger condition will be evaluated on the interval specified in the previous step to see if the condition is true. By default, all objects of the specified type in your environment will be evaluated, but you can restrict scope to objects matching specific criteria.

In the example below, you can see how trigger conditions are set to alert when a component goes down in your network. Once trigger conditions are entered, click Next to customize reset conditions for alerts.



**Add New Alert - "Component is DOWN"**

PROPERTIES > **TRIGGER CONDITION** > RESET CONDITION > TIME OF DAY > TRIGGER ACTIONS > RESET ACTIONS > SUMMARY >

#### 2. Trigger Condition

Trigger condition is simple condition or set of multiple nested conditions which must be met before the alert is triggered. [»Learn more](#)

**I want to alert on:**  
 Component

---

**The scope of alert:** ⓘ  
 All objects in my environment ([Show List](#))  
 Only following set of objects

---

**The actual trigger condition:**

Trigger alert when: All child conditions must be satisfied (AND)

⋮

⋮	Component	Instance	is	1 Object	✕
---	-----------	----------	----	----------	---

AF  
 must exist for more than 10 minutes

Condition must exist for more than  minutes

Advanced options

Figure 4 – Trigger Conditions

### #4 Set Reset Condition for Alerts

An alert is removed from active alerts when the reset condition is met. Several reset conditions are available:

- a. Reset when the condition is no longer true
- b. Reset after a period of time
- c. No reset - but trigger every time the condition is met
- d. No reset - but remain active and don't clear automatically

You can also create a reset condition with logic identical to the trigger condition.

Add New Alert - "Component is DOWN"

PROPERTIES > TRIGGER CONDITION > **RESET CONDITION** > TIME OF DAY > TRIGGER ACTIONS > RESET ACTIONS > SUMMARY >

### 3. Reset Condition

When the reset condition is met the alert is removed from active alerts. »[Learn more](#)

- Reset this alert when trigger condition is no longer true (Recommended)
- Reset this alert automatically after  minutes
- No reset condition – Trigger this alert each time the trigger condition is met
- No reset condition
- Create a special reset condition for this alert

BACK NEXT CANCEL

Figure 5 – Reset Conditions



### #5 Specify Time of day for Alerts

Unwanted alerts can be avoided by specifying when network objects should be monitored. For example, you can avoid alerts generated when you have a scheduled downtime. By default, the alert is always active, but a custom alert schedule or schedules can be specified.

Add New Alert - "Component is DOWN"

PROPERTIES > TRIGGER CONDITION > RESET CONDITION > **TIME OF DAY** > TRIGGER ACTIONS > RESET ACTIONS > SUMMARY >

#### 4. Time of Day

Time of Day controls when specified network objects should be monitored. This helps to avoid unwanted alerting noise during the expected outage or maintenance of your network. (e.g. Your server reboot time is scheduled every Friday at 11:00 PM). [»Learn more about Time of Day usage](#)

- Alert is always enabled, no schedule needed
- Specify time of day schedule for this alert

BACK NEXT CANCEL

Figure 6 – Time of Day



## #6 Enable Trigger Action for Alerts

Set up trigger actions to make alerts more intelligent. When the trigger condition is met the actions will be executed. You can also configure messages that will be displayed when this alert is triggered.



**Add New Alert - "Component is DOWN"**

PROPERTIES > TRIGGER CONDITION > RESET CONDITION > TIME OF DAY > **TRIGGER ACTIONS** > RESET ACTIONS > SUMMARY >

### 5. Trigger Action

When the trigger condition is met the following actions in following order will be executed. You can also specify the escalation behavior if the alert is not being acknowledged in certain time.  
[»Learn more about Actions and Escalation](#)

**Message displayed when this alert is triggered**  
 Displayed on All active alerts page/resource and on Alert details page. This message can be reused also for email action.

Alert me when a component goes down Insert Variable

---

**Trigger Actions:**

**Escalation Level 1** (When the alert is triggered, all actions in this level fire.) ✕

ACTION TITLE	EDIT	COPY	SIMULATE	DELETE
NetPerfMon Event Log : NetPerfMon Event Log: Component \${N=SwisEntity;M=ComponentAlert.ComponentName} on Application \${N=SwisEntity;M=Application.ApplicationAlert.ApplicationName} on Node \${N=SwisEntity;M=Application.Node.Caption} is \${N=SwisEntity; M=ComponentAlert.ComponentAvailability}	✎	📄	⚡	✕
<span>Add Action</span>				

Add Escalation Level

Copy Actions To Reset Actions Tab

BACK NEXT CANCEL

Figure 7 – Trigger Action

### #7 Configure Reset Action for Alerts

When the reset condition is met the actions will be executed in pre-defined order. You can select any action shown in the table below. Several new actions are available in the web-based alerting engine as well. You can change custom property and set custom status. There is also a desktop notification client available for download under the “play sound” action. The most common action “Send email” is selected by default.

Action	Description
Change Custom Property	Changes a Custom Property of Network Object when the Alert is Triggered or Reset
Dial Pager	Send a Page, SMS or Beeping message via NotePage
Email a Web Page	Send an Email message that contains a Web Page
Execute an External Program	Execute a program when the Alert is Triggered or Reset
Execute an External VB Script	Execute a VB Script file when the Alert is Triggered or Reset
Execute an NCM action	Backup running config, execute config script and show last config changes
Log the Alert to a File	Logs the Alert to a text file
Log the Alert to the NetPerfMon Event Log	Log the Alert in the Network Performance Monitor Event Log
Play a Sound	Play a Sound when an Alert is Triggered or Reset
Restart IIS Site/Application Pool	Start, Stop or Restart/Recycle an IIS Site or Application Pool
Send Net Message	Send a Windows Net Message
Send SNMP Trap	Send SNMP Trap when the Alert is Triggered or Reset
Send a GET or POST Request to a Web Server	Interface with other applications via HTTP GET or POST
Send a Syslog Message	Send a Syslog Message when Alert is Triggered or Reset.
Send an Email/Page	Send an E-Mail message via an SMTP Server
Set Custom Status	Set a Custom Status for a Node Object (advanced)
Text to Speech Output	Speak a phrase using Text-to-Speech when an Alert is Triggered or Reset
Windows Event Log	Log an entry in the Windows Event log



Figure 8 – Types of Action

In the example below, the alert is configured for the reset action – ‘Send an Email/Page’ and add through the wizard. You can edit, copy, simulate, or delete the alert.

**6. Reset Action**

When reset condition of the alert is met the following actions and in following order will be executed...

ACTION TITLE	EDIT	COPY	SIMULATE	DELETE
NetPerfMon Event Log : NetPerfMon Event Log: Component \${N=SwisEntity; M=ComponentAlert.ComponentName} on Application \${N=SwisEntity; M=Application.Alert.ApplicationName} on Node \${N=SwisEntity;M=Application.Node.Caption} is \${N=SwisEntity;M=ComponentAlert.ComponentAvailability}				

Buttons: Add Action, Copy Actions From Trigger Actions Tab, BACK, NEXT, CANCEL

Figure 9 – Reset Action

## #8 Summary of Alert Configuration

Once reset action is configured, you can review and validate all the values entered in the wizard—before creating the alert. Before saving the alert, the alert engine will evaluate the condition and warn you if the alert would fire right away. If not, go ahead and save the alert.



**Add New Alert**

PROPERTIES > TRIGGER CONDITION > RESET CONDITION > TIME OF DAY > TRIGGER ACTIONS > RESET ACTIONS > **SUMMARY**

### 7. Summary of Alert Configuration

Please review the alert configuration before saving...

**Name of alert:** **Component is DOWN** Edit

**Description of alert:**  
Alert me when a component is down

**Type of Property to monitor**  
Component

**Enabled(On/Off):**  
ON

**Evaluation Frequency of alert:**  
Every 10 minutes

**Severity of alert:**  
Critical

**Alert Custom Properties: (0)**  
No Alert Custom Properties defined

**Alert Limitation Category**  
No Limitation

Figure 11 – Active Alerts

From within the web console, the Orion® alerting engine enables you to quickly and easily configure powerful network alerts to respond to hundreds of different network scenarios, including multiple condition checks. These network alerts help you recognize and correct issues before your users experience performance degradation or availability issues. With alerting support for correlated events and sustained conditions, you are ensured that you don't get calls at 3:00 am unless there is a critical issue.

**All Active Alerts** Manage Alerts Show in NOC mode More

Group by: All (58) Critical (34) Warning (24)

Alert name	Message	Object that t...	Active time	Trigger time	Acknowledg...	Acknowledg...
Installed upda	Installed updates	Active Direct	1d 21h 43m	1/28/2015 2:41 AI	Not yet...	
Available hidd	Available hidden t	Active Direct	1d 21h 49m	1/28/2015 2:35 AI	Not yet...	
High DHCP S	High DHCP Scop	Cur1	1d 21h 56m	1/28/2015 2:28 AI	Not yet...	
High DHCP S	High DHCP Scop	Cur3	1d 21h 56m	1/28/2015 2:28 AI	Not yet...	
Available critic	Available critical u	Active Direct	1d 22h	1/28/2015 2:24 AI	Not yet...	
Windows Upd	Windows Update	Active Direct	1d 22h 2m	1/28/2015 2:22 AI	Not yet...	
Page me whe		Lab/ Samsun	2d 5h 57m	1/27/2015 6:28 PI	Not yet...	
Alert me wher	Alert me when a r	00:0E:D7:58	2d 16h 19m	1/27/2015 8:06 AI	Not yet...	
Alert me wher	Alert me when the		2d 20h 11m	1/27/2015 4:13 AI	Not yet...	
Alert me wher	Alert me when a t	Windows XI	2d 20h 53m	1/27/2015 3:31 AI	Not yet...	
Alert me wher	Alert me when a t	JCell	2d 21h	1/27/2015 3:24 AI	Not yet...	
Alert me wher	Alert me when a c	All Databas	3d 26m	1/28/2015 11:59 F	Not yet...	
Alert me wher	Alert me when a c	Top Indexe	3d 26m	1/28/2015 11:59 F	Not yet...	

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## TOP 5 REASONS TO TRY SOLARWINDS NETWORK PERFORMANCE MONITOR

SolarWinds Network Performance Monitor (NPM) provides an at-a-glance summary of network and application performance metrics using deep packet inspection, and helps to quickly & accurately identify network & application reliability. With Quality of Experience (QoE), SolarWinds NPM:

- Speeds troubleshooting, increases service levels, and reduces downtime
- Monitors & displays response time, availability, and performance of network devices
- Analyzes user quality of experience using deep packet inspection and analysis
- Improves operational efficiency with out-of-the-box dashboards, alerts, and reports
- Automatically discovers network devices and typically deploys in less than an hour



Fully Functional for 30 Days

[LEARN MORE](#)

## ABOUT SOLARWINDS

SolarWinds (NYSE: SWI) provides powerful and affordable IT management software to customers worldwide. Focused exclusively on IT Pros, we strive to eliminate the complexity in IT management software that many have been forced to accept from traditional enterprise software vendors. SolarWinds delivers on this commitment with unexpected simplicity through products that are easy to find, buy, use, and maintain, while providing the power to address any IT management problem on any scale. Our solutions are rooted in our deep connection to our user base, which interacts in our online community, thwack®, to solve problems, share technology and best practices, and directly participate in our product development process. Learn more at <http://www.solarwinds.com>.