BEGINNER'S GUIDE TO

NAGIOS XI 5

PRESENTED BY

Nagios®

MONITOR YOUR ENTIRE IT INFRASTRUCTURE WITH **NAGIOS XI**

Nagios® XI™ is the most powerful IT infrastructure monitoring solution on the market. Nagios XI extends on proven, enterprise-class open source components to deliver the best monitoring solution for today's demanding organizational requirements.

Designed for scalability and flexibility, XI is designed to make difficult IT monitoring tasks simple, while retaining the powerful attributes of its enterprise-class foundation blocks.

REQUEST A DEMO

COMPREHENSIVE MONITORING

ALERTING VIA EMAIL & MOBILE

GRAPHING & REPORTING

INCREASED VISIBILITY

PROACTIVE PLANNING

MULTI-TENANT CAPABILITIES

INTRODUCTION

So, what's Nagios all about?

For over 17 years, Nagios has been the industry standard in network monitoring. Nagios Enterprises was founded on the idea that your network shouldn't dictate your work.

That's why with Nagios XI, we've developed features, tools, and components that make managing your network faster, while giving you the control you need to get the job done, even when you can't make it into the office.

Nagios XI is used by organizations in nearly every industry including education, healthcare, government, and Fortune 100 corporations. XI's ability to both scale and adapt to surrounding network environments has been key to its success in countless countries and industries.

We don't think it is fair for your network monitoring solution to limit you and to determine how and what you monitor. XI is a full-featured, flexible monitoring framework that can be molded to your network and meet your organization's dreams, wishes, and desires. With the power of Nagios XI behind the scenes in your organization, the possibilities are endless!

This booklet is a short beginner's guide that we've developed to help you learn the basics, best practices, and key features of Nagios XI that are most useful in real-world situations. That said, the capabilities of XI stretch far beyond the examples mentioned in this guide, so take a look at the information we've provided and step outside the box of traditional network monitoring. Your organization is unique and we believe your monitoring solution should be too.

Nagios® XI

CONTENTS

OVERVIEW

Throughout this handout, we'll cover a few helpful areas: We'll walk you through the basics and best practices of Nagios XI, explain key terms, and get you familiar with monitoring, analysis and management.

CONFIGURE

Configuration is at the very heart of monitoring. Config Wizards make it easy to quickly begin monitoring your network while key organizational tools and topography diagrams provide the tools necessary to stay on top of network

VISUALIZE

See deep into the health of any device on your network and quickly take remedial action and manage individual devices right from within the XI interface. With XI, you have a central view of your entire IT operations, network, and business processes.

ORGANIZE

We provide a foundation for viewing your data, but you should see it in a way that's intuitive to you. Develop custom dashboards in seconds and tailor XI to your specific needs.

ANALYZE

Viewing current status data and reporting on historical performance are both key to maintaining the health of your infrastructure. A variety of tactical displays, customizable dashboards, and historical reports enable you to see what's happening on the network right now, and how it performed in the past.

MANAGE

Take full control of your network with powerful administrative tools designed to eliminate the hassle of managing a network infrastructure.
Manage users, notifications, and a myriad of other system settings and preferences right within XI.

CHAPTER ONE: CONFIGURING

Nagios XI is designed to provide the most flexible and powerful configuration foundation in monitoring. If it uses electricity, chances are, XI can monitor it. Easy-to-use Configuration Wizards allow you to enter information in a step-by-step dialogue and quickly monitor your network. Extend beyond out-of-box capabilities with custom plugins and wizards from the Nagios Exchange.

Now is a good time to determine what you want to gain from monitoring your network. It's important to have an idea of how your network is segmented, your organizational strategy, the metrics you NEED to monitor, and the metrics you WANT to monitor. Another thing to think about is HOW you want to monitor. Nagios XI provides a variety of active, passive, agent-based, and agentless options.

Agent-based

A lightweight client is installed on the monitored device (called a host), which enables Nagios XI to run plugins on it to check a variety of granular metrics (called services).

Agent-less

Without installing anything on the host, monitor services with XI. For example, using WMI on Windows machines, or SNMP on Linux machines can accomplish an agent-less setup.

Active Monitoring

A type of monitoring strategy where the Nagios XI server reaches out to the host device for information and actively checks to see if any problems are present.

Passive Monitoring

A monitoring strategy where XI does not actively reach out to the hosts for information, rather it listens for new information. This strategy can prove very efficient when monitoring large infrastructures by decreasing the load on the Nagios XI server.

Configuration Wizards

Configuration Wizards are simple, step-by-step dialogs that allow you to configure your network devices, servers, databases, etc. for monitoring in Nagios XI. Stay away from the command line and give these wizards a try!

Step One

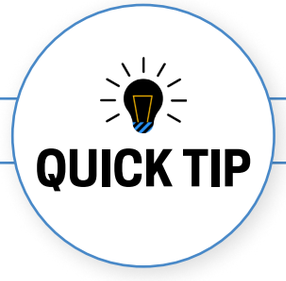
Find the wizard for you! With more than 40 pre-installed wizards, you can monitor nearly anything your network can throw at XI.

Step Two

Enter the device information and the wizards will do the rest!

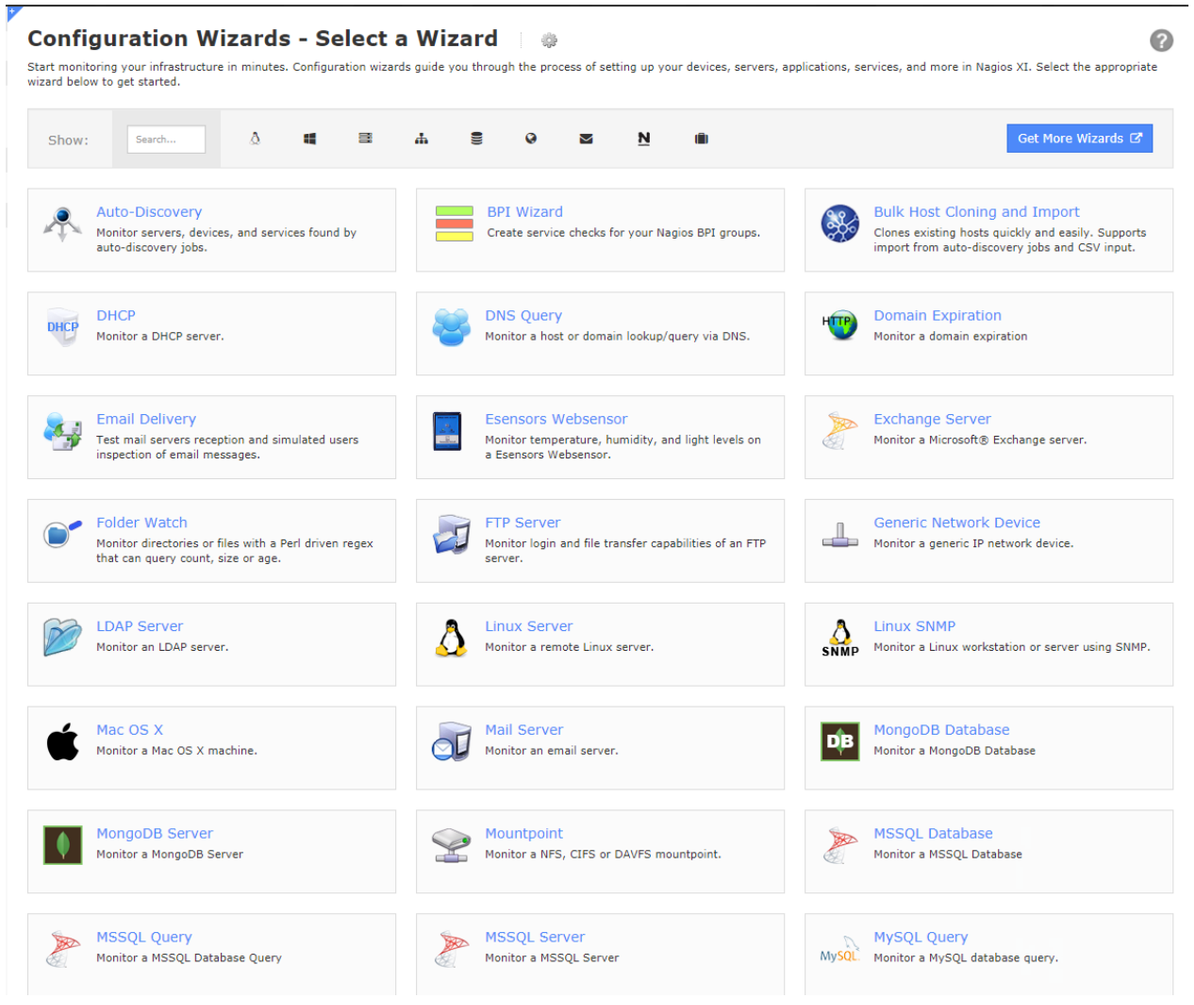
Step Three

Determine your desired notification settings and click apply. You are now monitoring.



Top 5 Configuration Wizards

1. Windows Server Wizard
2. Linux Server Wizard
3. Network Switch & Router Wizard
4. Database Wizards – MongoDB, MSSQL, MySQL, Oracle, Postgres
5. Website Monitoring Wizard

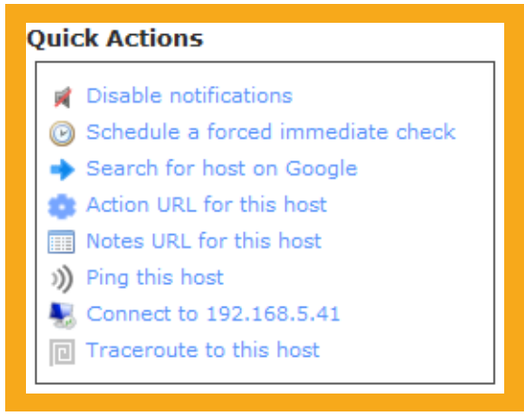


CHAPTER TWO: VISUALIZE

Viewing your devices and being able to take proactive remedial actions is extremely important in your monitoring solution. The host and service detail pages are great for drilling down into a device to see exactly what's going on and also to take action. Let's take a look!

Quick Actions

Quick Actions are customizable links that can be configured to execute remediation scripts and link users to customer URLs, such as internal knowledgebase entries. For example,you can schedule a check to make sure your host or service is truly up or down. You can take action on your remote devices right from Nagios XI.



Quick Actions are fully customizable. Add links to repair scripts, event handlers, or other custom scripts, to take remediation action.

Performance Graphs

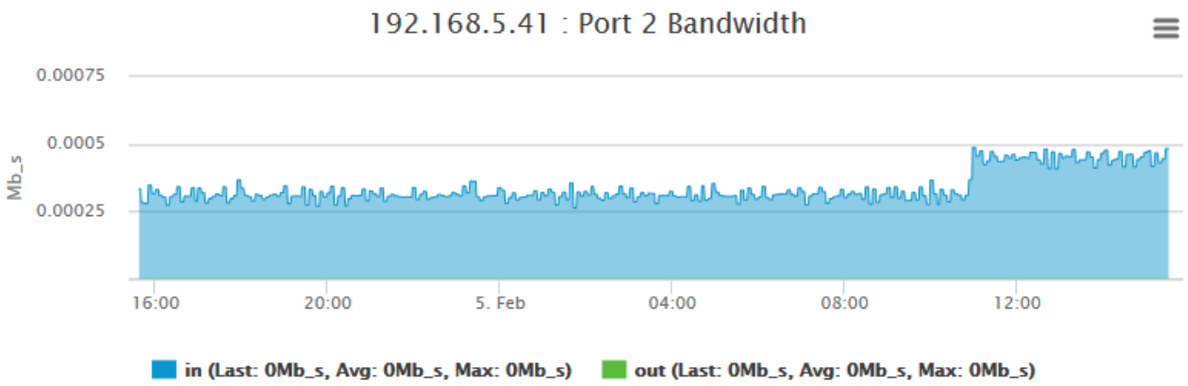
With our perfomance graphs, you can visualize the historical performance data collected by Nagios XI. These graphs enable you to customize the timeframe to reflect any period of time you'd like to focus on. Within the graph you can:

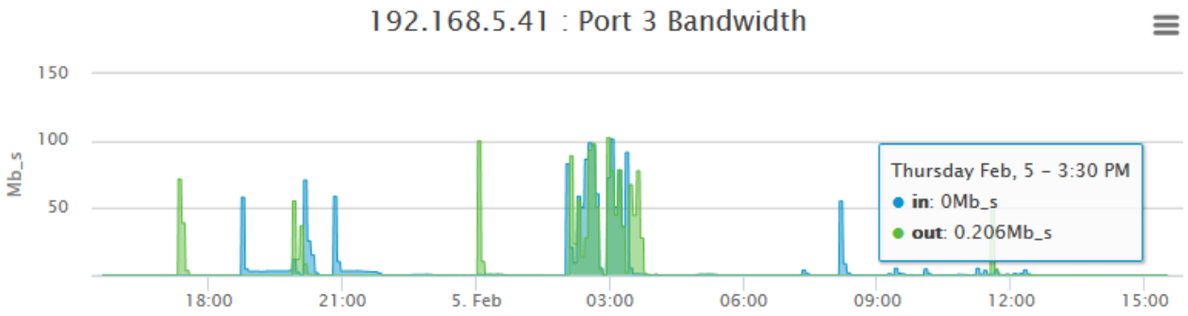
1. Zoom – Drill down to specific events to see what's going on

2. Stats – Hover over data points for more detailed information

3. Dashify – Add to your dashboards for a customized view.

Performance Graph Examples



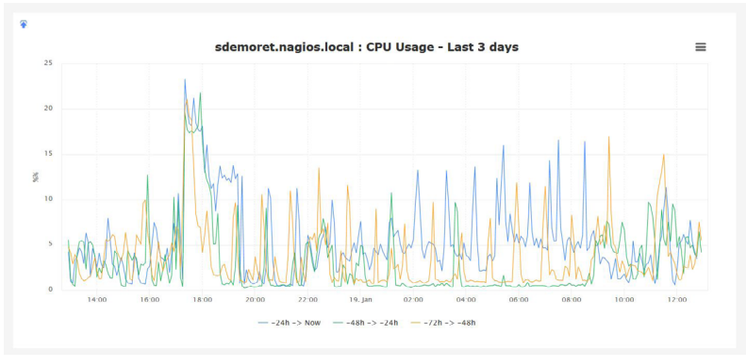


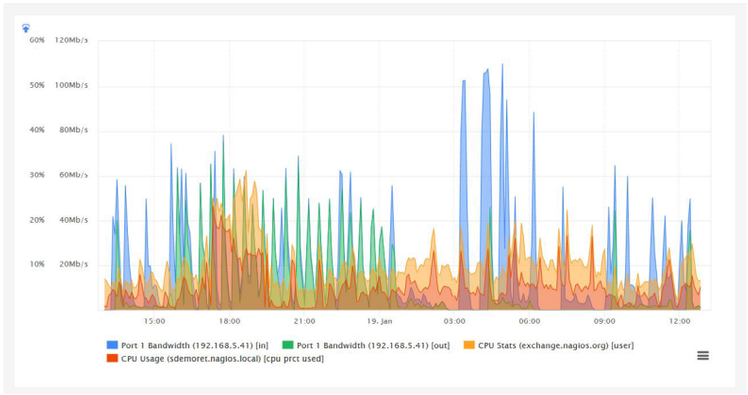
Graph Explorer: Drill down to specific Hosts/Services to see what's happening on your network. Get an overview of top alert producers, overall Host/Service health, and Multi-Metric performance graphs.

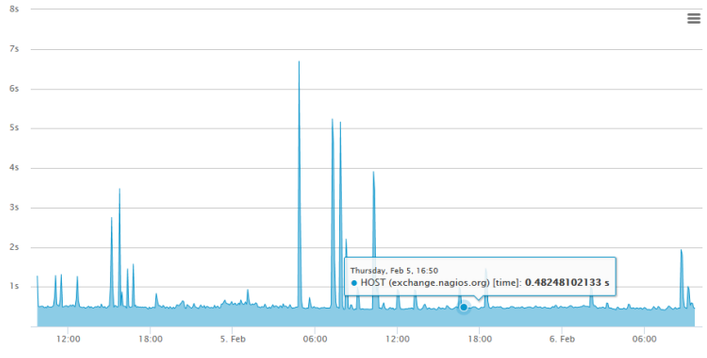
Top Alerts Last 24hrs | Host Health | Service Health | Scalable Performance Graph | Time Stacked Performance Graph | Multistacked Performance Graph

Time-Stacked & Multi-Stacked Performance Graphs

View service data over time, or compare and contrast multiple hosts and services in one easy to read graph.

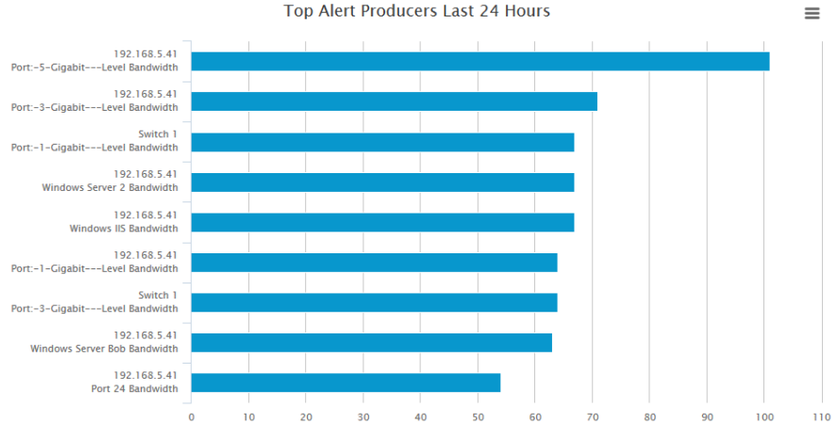






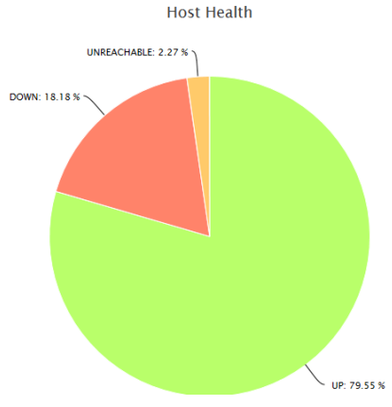
Top Alert Producers

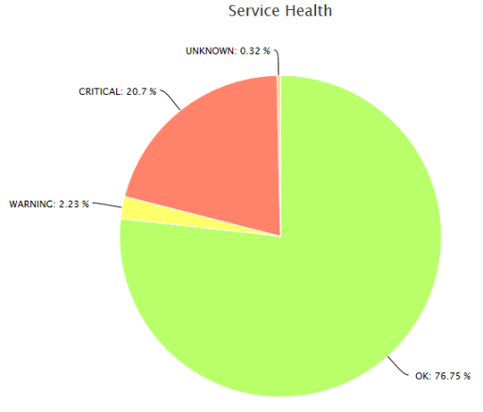
See which devices are causing the most alerts



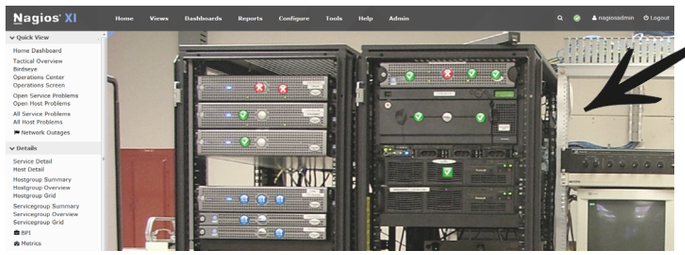
Host Health & Service Health

Quick pie charts showing the overall health of your network.



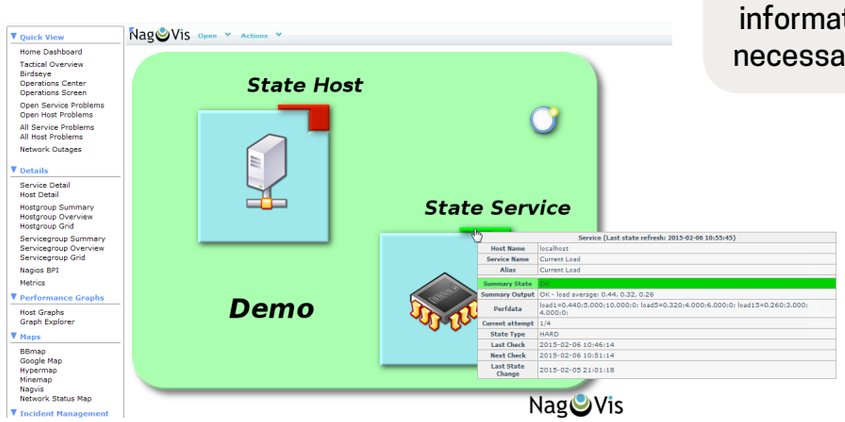


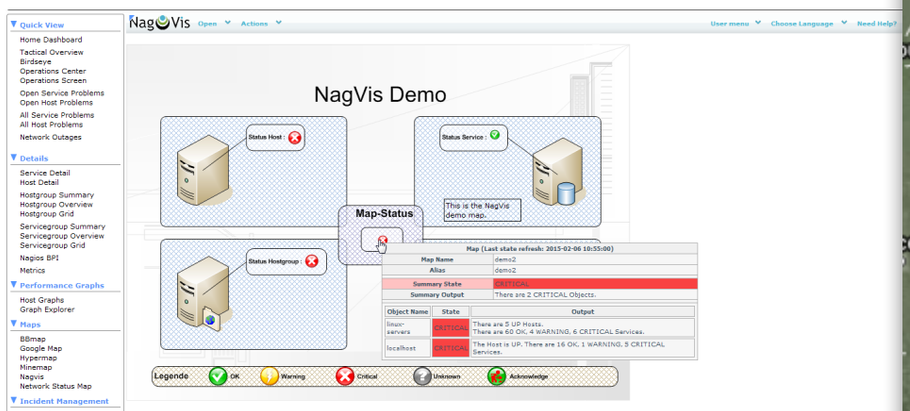
4. Maps: Being able to view your monitoring data & network performance on a map can be extremely beneficial. Maps can be customized to users' viewing preferences & give administrators the awareness necessary to maintain their network health, saving users time & allowing at-a-glance network visibility.

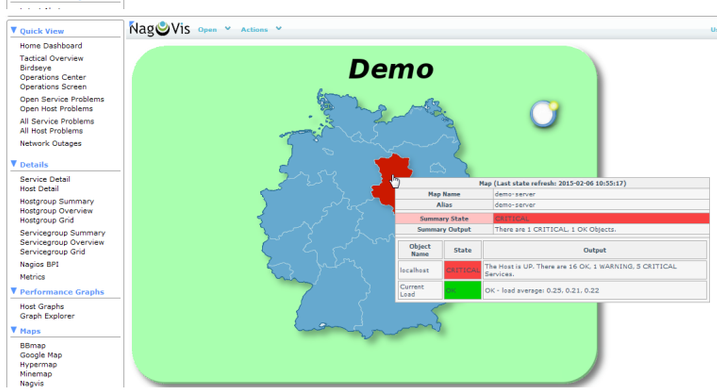


NagVis

Don't limit your creativity! NagVis allows users to create custom maps to represent their network visualization preferences. The server room visualization shows a real-world image of a server room and plots device information on the exact server blade. View detailed information about the server and take action when necessary.

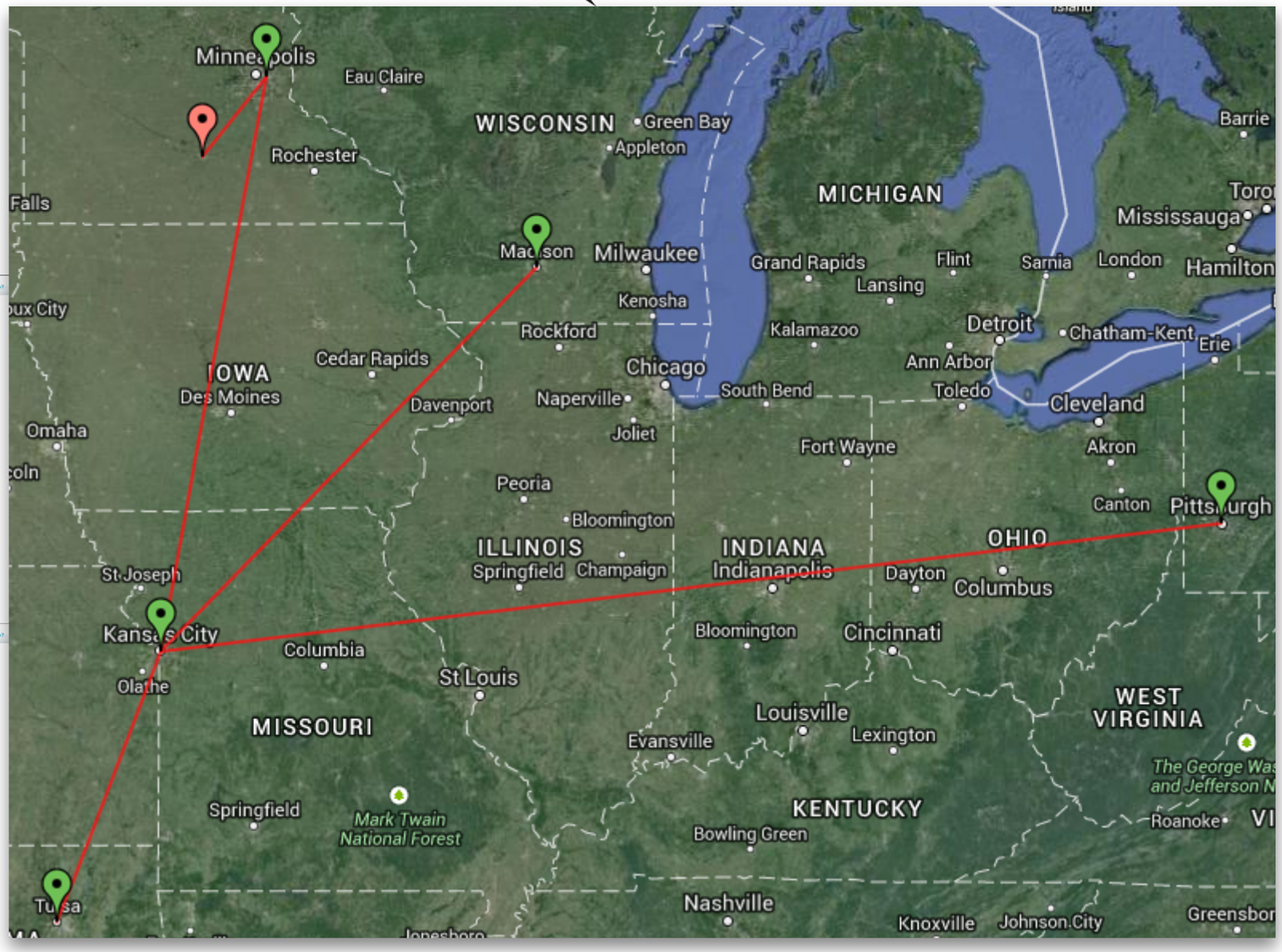






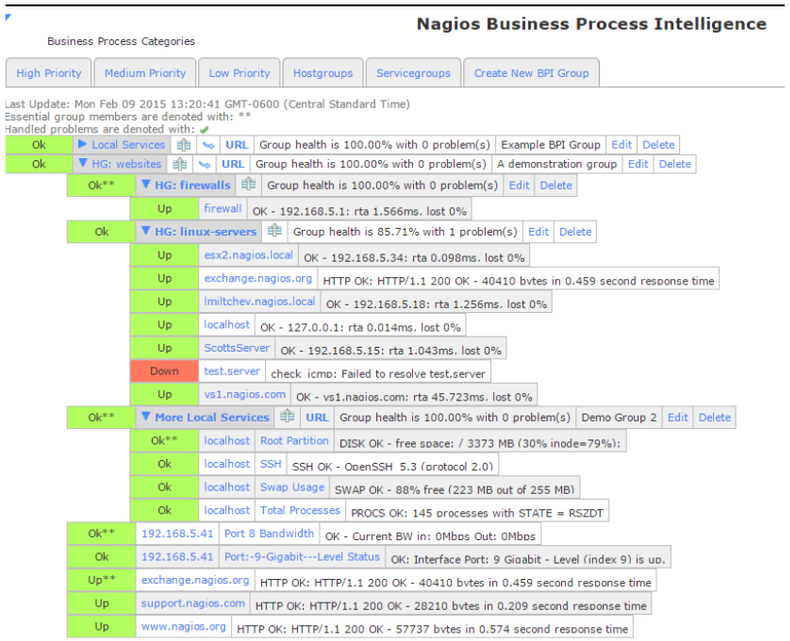
Google Map

Visualize your network across any geographical region. Perfect for service providers or large organizations, the Google Map feature allows users to quickly spot the problem areas and regions of their network. Segment your network based on office location, datacenter, or client location and plot the geo-coordinates on the map. Drill down to the details of a particular location and quickly react to network incidents.



CHAPTER THREE: ORGANIZE

Nagios XI provides you with a lot of tools and options for segmenting, viewing, and mapping your network. We know your data needs to make sense to you. Use the Hostgroups and Servicegroups as well as Nagios BPI to keep track of device groupings and organize complex business processes. The Hypermap feature auto-generates a network topography map based on the parent-child relationships you define when you configure each host so you can see a quick overview of your networking environment.

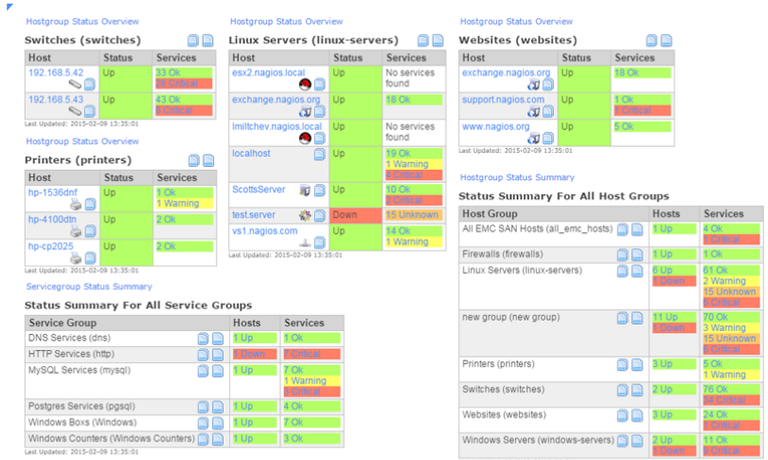


Nagios Business Process Intelligence (BPI)

Nagios Business Process Intelligence is a simple way to monitor the overall health of complex processes in your network.

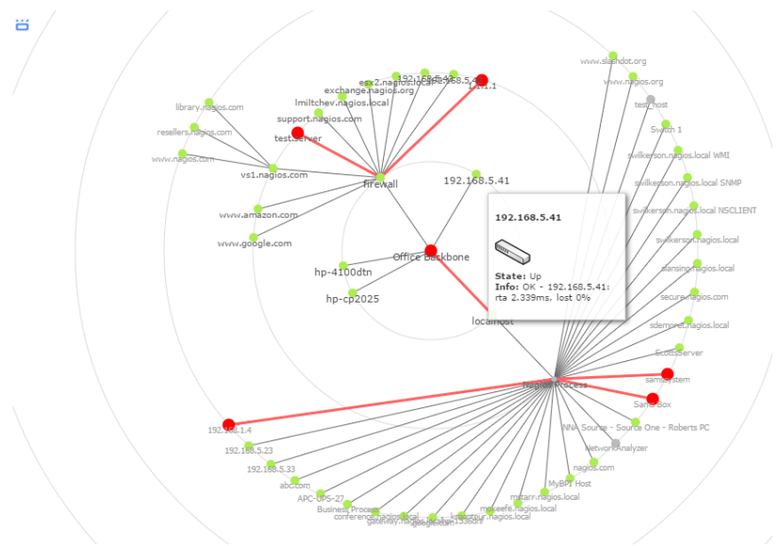
- Determine essential group members in the process. When an essential member goes down, you'll receive an alert, regardless of the overall health of the process.

- Receive alerts on overall health % thresholds.



Hostgroups & Servicegroups

Segment your network into logical groupings and easily view breakdowns of host health and service health. Groups can also be used to simplify and speed up the configuration process by applying a single service to an entire group of hosts at once.



Hypermap

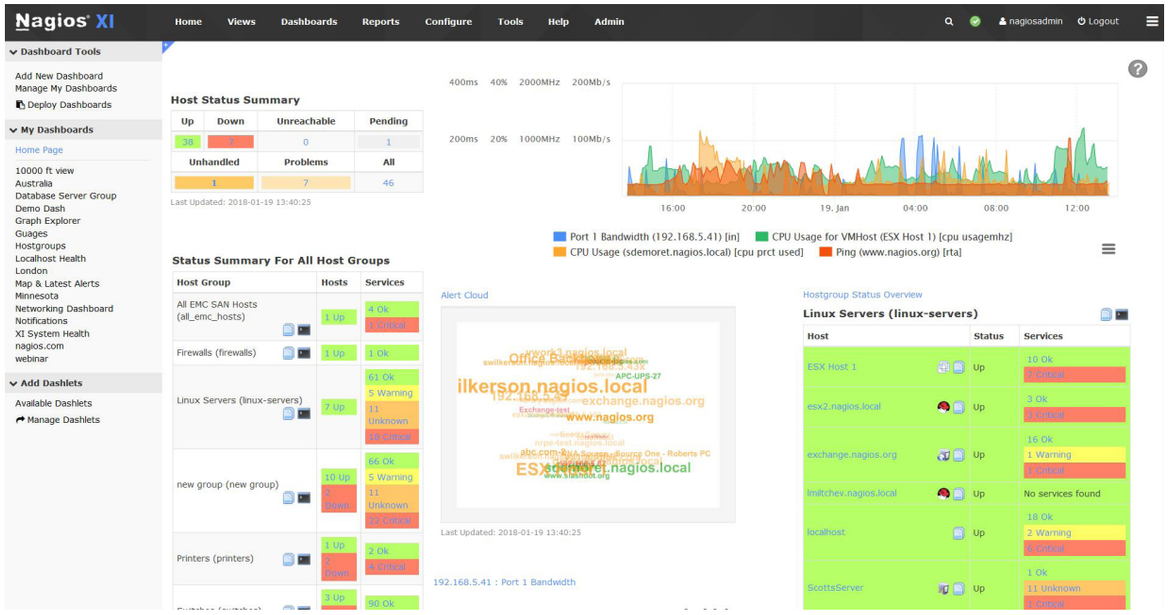
Auto-generated by the parent-child relationships you configure, this network topography visualization lets you see exactly how things are connected in your network infrastructure.

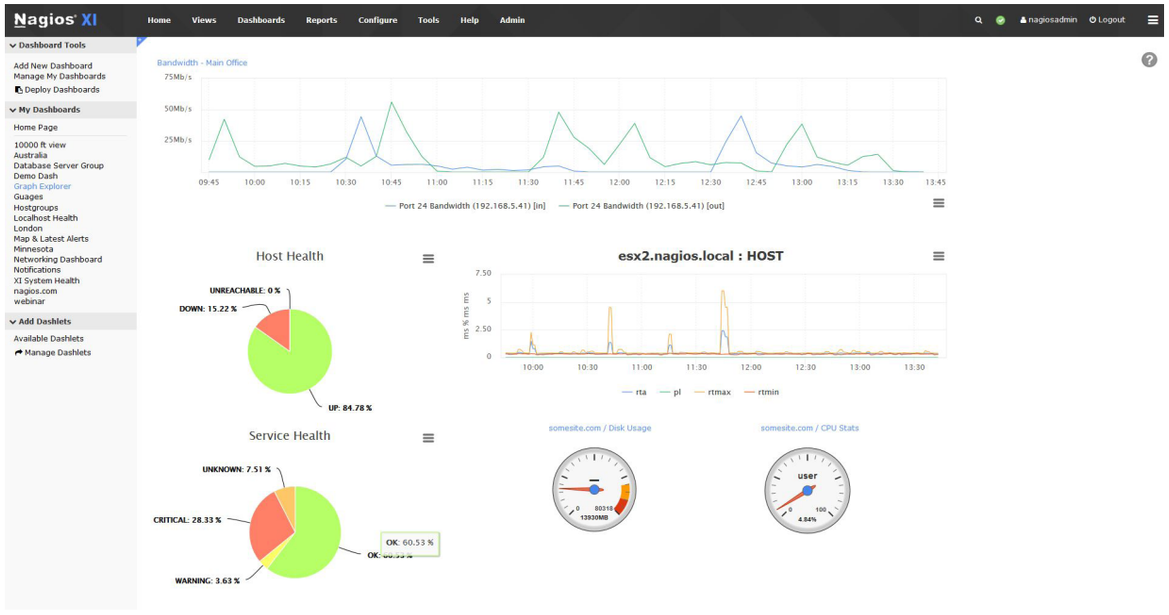
QUICK TIP

To get the most out of XI and the Hypermap, make sure you define the proper parent-child relationships for each device you're monitoring. This will minimize false positive alerts, and mitigate alert fatigue.

Dashboards

Dashboards are a powerful feature in Nagios XI designed to provide individual users with customized information they find useful. Dashboards are often used to display important, relevant information where it is needed most. Dashboards are specific to individual Nagios XI users. Each user can create their own unique set of dashboards to customize Nagios XI to fit their own needs, and administrators can share dashboards with other users.





Adding Dashboards

Nagios XI allows users to create multiple customized dashboards. To add a new dashboard, select the **Add New Dashboard** link under the **Dashboard Tools** Menu.

This will open a dialog box where users can enter a title and background color for their new dashboard. Once you have named your dashboard and selected a background color, click **Submit**. This new dashboard can be accessed from the **My Dashboards** menu on the left side of the page.

Adding Dashlets

Select the **Add Dashlets** link on the left side of the page to expand the menu. To add a dashlet, click on the **Add This To A Dashboard** icon located to the left of each of the list items.

Nagios XI also allows you to add dashlets to your dashboard from other pages within the site. Any summary, graph, or chart that has the **Add To Dashboard** icon can be added to your custom dashboard.

Manipulating Dashlets

Dashlets can be moved and resized within the dashboard to create a custom layout to fit a user's particular needs. To manipulate a dashlet, move your mouse over it to reveal a blue border and a set of icons.

The **Pin/Float Dashlet** icon controls whether the dashlet is fixed to the page, or if it can be moved.

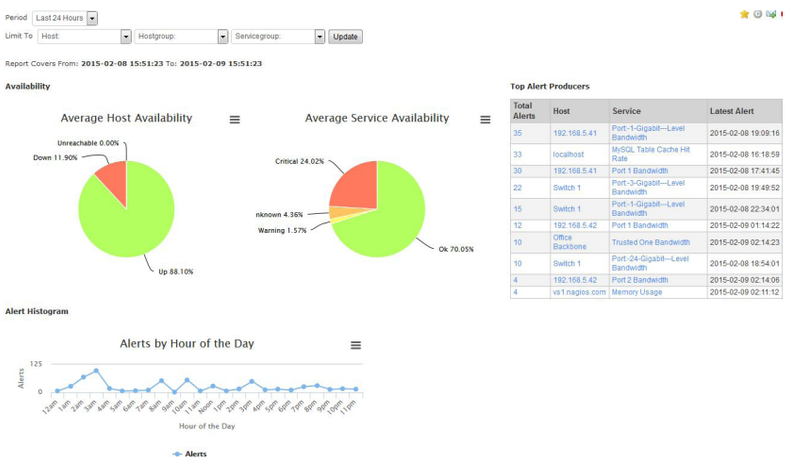
The tab located at the bottom right corner of the dashlet controls the size. To re-size your dashlet, click & drag the tab.

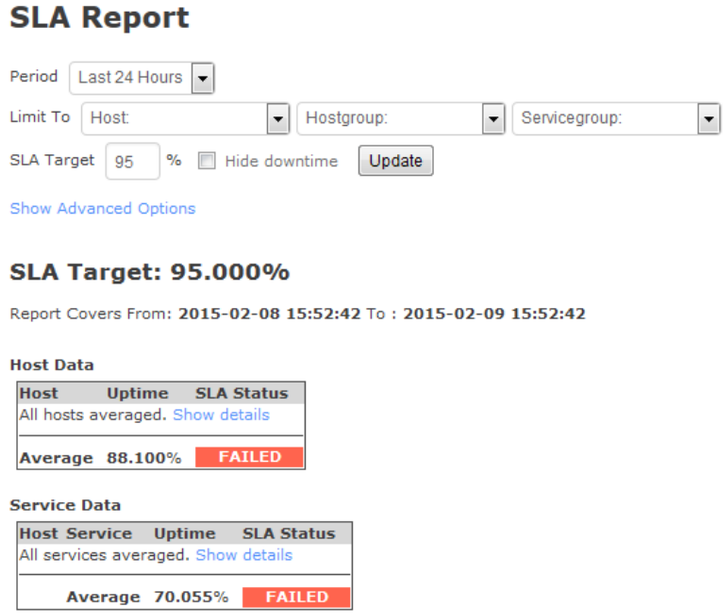
Home Page Dashboard

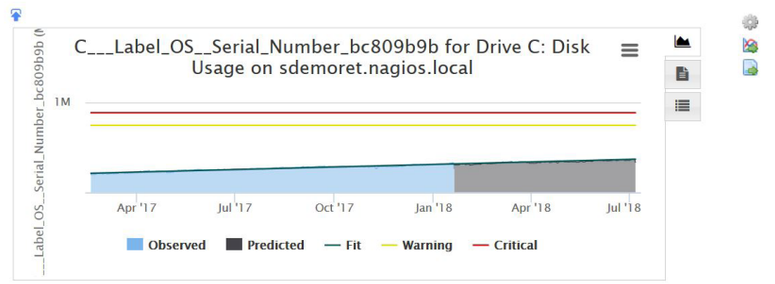
Each user has a special home page dashboard that is shown to them when they login. This dashboard can be modified from the dashboards page, and dashlets can be added, manipulated, or removed using the methods described above.
To make your Home Dashboard the first thing you see when you access the interface, simply click your username on the upper-right of the interface, go to the Home Page Options section on the left, and select Home Dashboard in the Home Page Destination dropdown.

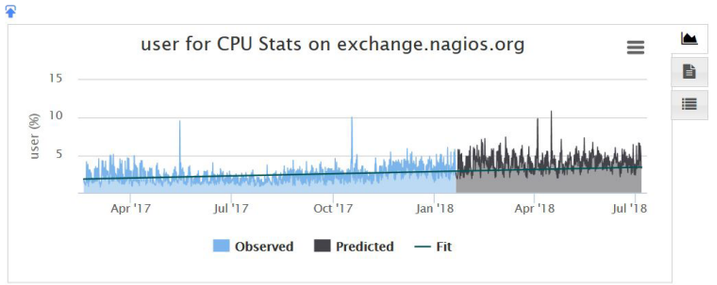
CHAPTER FOUR: ANALYZE AND MANAGE

Nagios XI's powerful reporting features allow you to not only view your data, but make informed business decisions for your organization. Reports are essentially static dashboards that contain summarized monitoring data that can be scheduled, exported, saved, and shared.









Executive Summary

An overview of some of the most useful pieces of information to help you determine the overall state of the network. Availability, Top Alert Producers, Alert Histogram, and Latest Alerts make this report perfect for C-level executives.

Service Level Agreement (SLA)*

Service Level Agreements are important for every organization to maintain. Whether you're a service provider, or you have a strict IT budget, the SLA Report in Nagios XI is perfect for determining if you're meeting your SLA or not. Just select a host, hostgroup, or servicegroup, determine your timeframe and SLA, and click 'Run'.

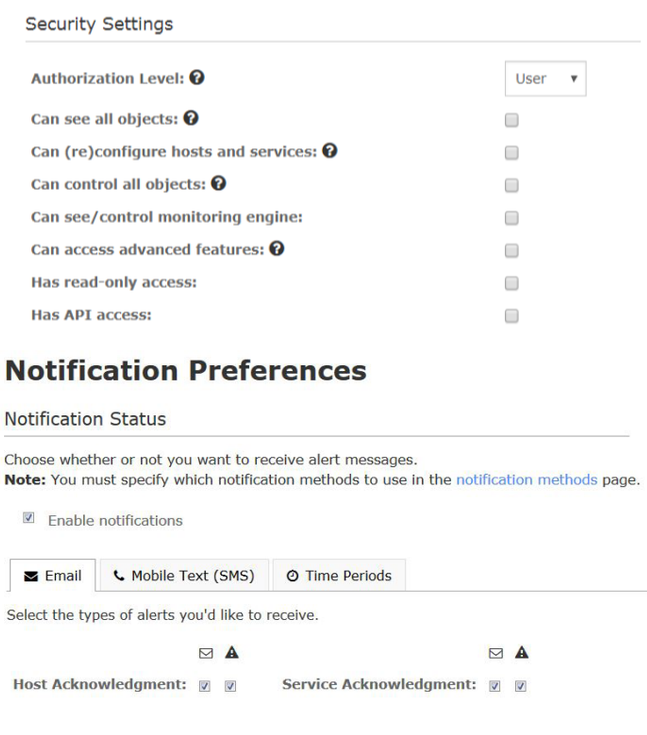
Capactiy Planning*

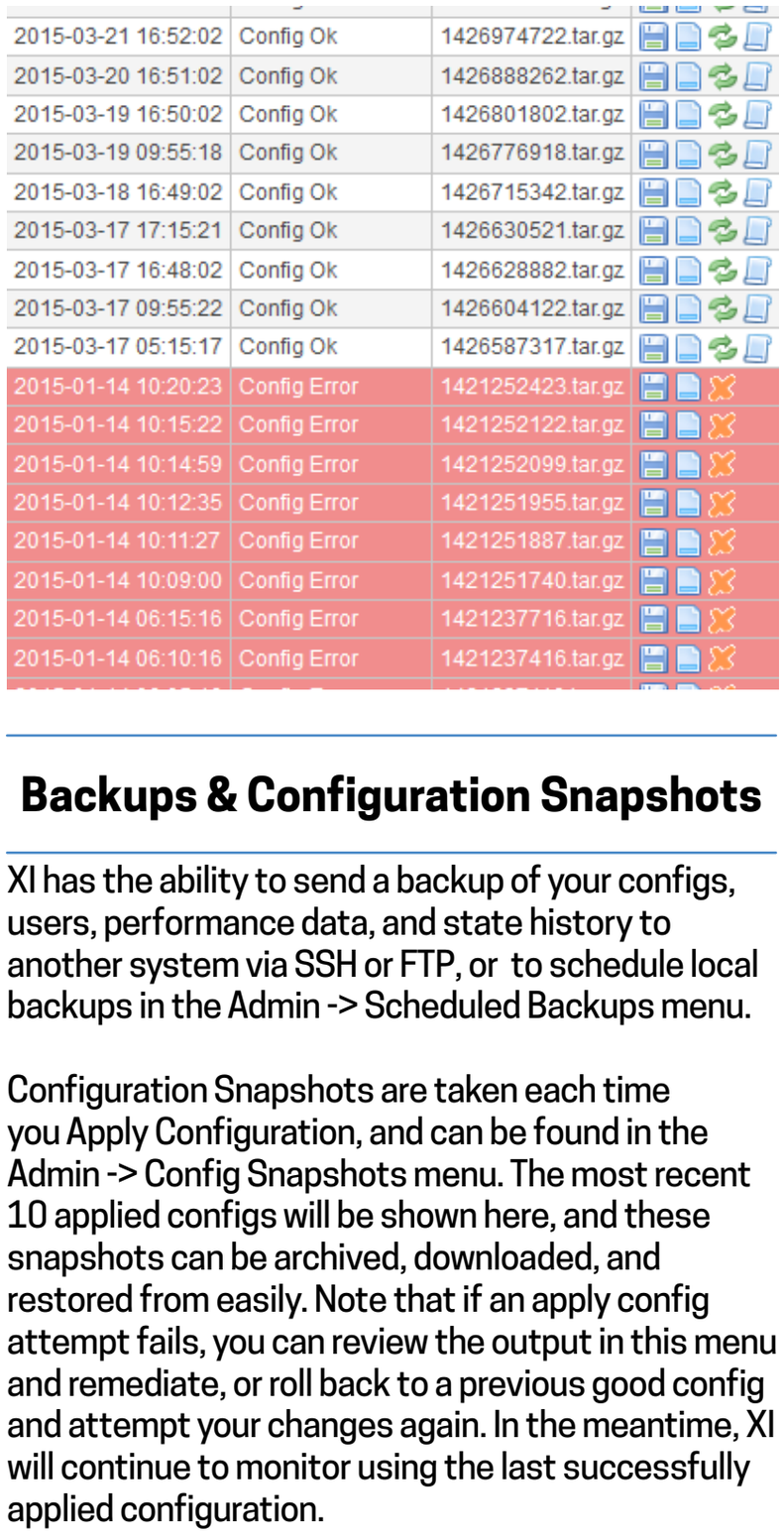
Designed to provide you with the ability to predict when network incidents will occur, the capacity planning report allows users to plan for hardware upgrades, future outages, and more. Stay ahead of the curve with four prediction methods. Add the report to a dashboard to keep an eye on a specific host or service.

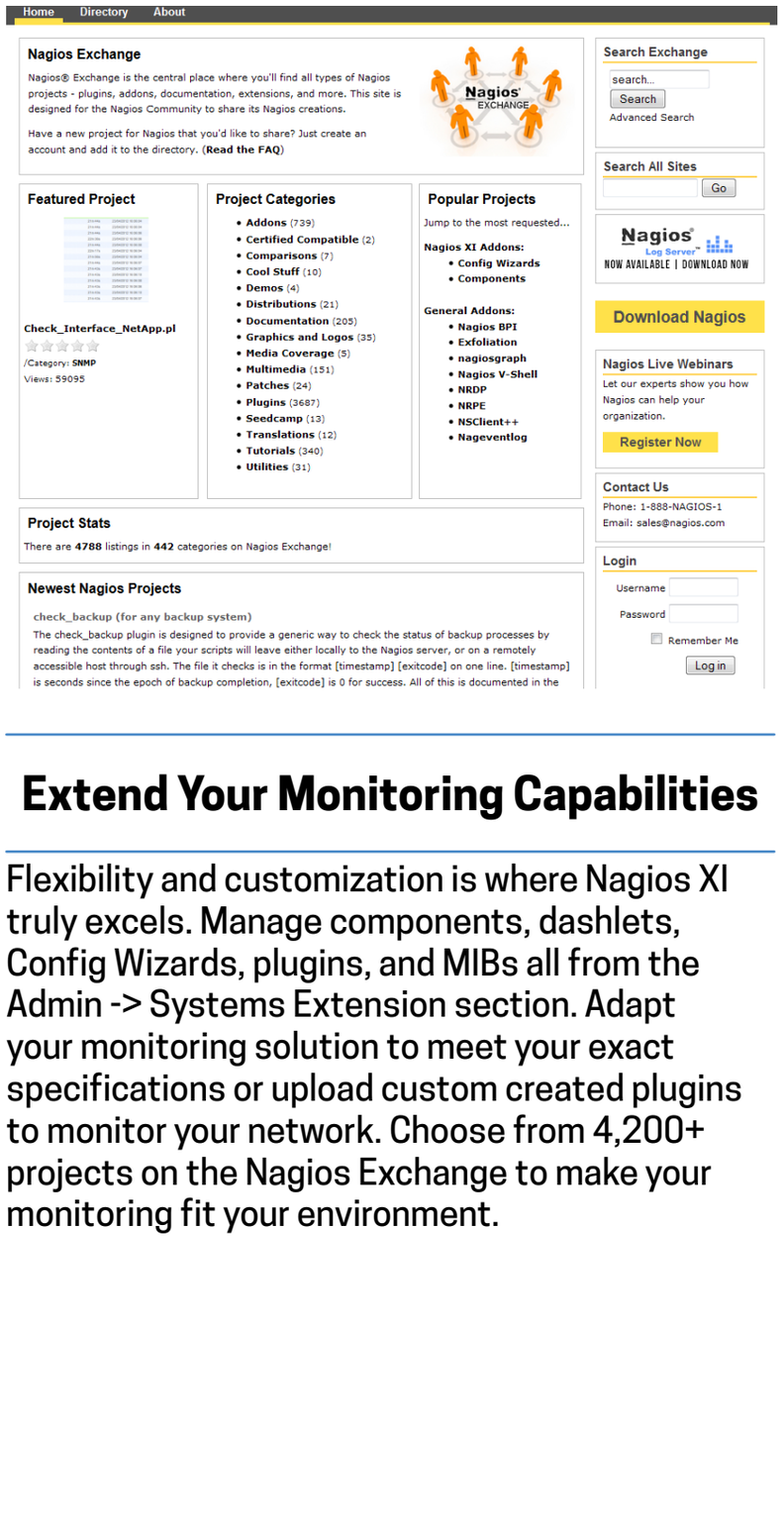
QUICK TIP

Clicking the 'Advanced' dropdown at the top of any report will display a variety of additional options, enabling you to do things like hiding scheduled downtime, Warning, and Unreachable states.

*Enterprise Edition features







Manage Users & Notifications

Sending notifications when things go wrong on your network is extremely important, and making sure the people responsible for hosts receive notifications is crucial. In the Admin -> Manage Users menu new users can be created, and existing users can be edited. By logging in or masquerading as a user and clicking your username on the upper right of the interface, you can view and edit important notification settings.

Backups & Configuration Snapshots

XI has the ability to send a backup of your configs, users, performance data, and state history to another system via SSH or FTP, or to schedule local backups in the Admin -> Scheduled Backups menu.

Configuration Snapshots are taken each time you Apply Configuration, and can be found in the Admin -> Config Snapshots menu. The most recent 10 applied configs will be shown here, and these snapshots can be archived, downloaded, and restored from easily. Note that if an apply config attempt fails, you can review the output in this menu and remediate, or roll back to a previous good config and attempt your changes again. In the meantime, XI will continue to monitor using the last successfully applied configuration.

Extend Your Monitoring Capabilities

Flexibility and customization is where Nagios XI truly excels. Manage components, dashlets, Config Wizards, plugins, and MIBs all from the Admin -> Systems Extension section. Adapt your monitoring solution to meet your exact specifications or upload custom created plugins to monitor your network. Choose from 4,200+ projects on the Nagios Exchange to make your monitoring fit your environment.

CHAPTER FIVE: GLOSSARY

If you are new to Nagios, some of the terms used here might not be familiar to you yet. We've compiled a glossary to help you navigate some of the new vernacular.

A

Active Check
A check that is initiated and performed by Nagios XI on a check interval which you define. Active checks can be agent-based, or agentless using native protocols such as SNMP or WMI.

Agent
Software that is installed on a host to enable Nagios XI to execute plugins on the host to check granular metrics (known as 'services' in Nagios). Agents are availabe for a wide variety of operating systems.

Alert
An alert is generated when a problem is found. When XI detects a problem state, it can send an email, send a text, send an SNMP trap upstream, or execute a custom script.

Apply Config
Each time configuration changes are made via a wizard, or in the Core Config Manager (CCM), it is necessary to Apply Config. This promts Nagios XI to do a sanity check of the new configs, and either write them if they are functional, or produce an error if a problem is found with the new configs.

Auto-Discovery Wizard
Nagios XI has a built-in Auto-Discovery wizard. When running an Auto-Discovery job the user will enter a subnet they would like to scan and a job is created, which utilizes fping and nmap to scan the network defined for alive machines and then performs an nmap scan on the host to determine which ports it is listening on. The results of the Auto-Discovery scan additionally report the OS of the machine discovered as well as all of the ports the host is listening on. A user can then optionally pass these results into a wizard that will monitor to make sure all of these ports continue to be responsive.

C

Config Snapshots
Configuration Snapshots are taken each time you Apply Configuration, and can be found in the Admin -> Config Snapshots menu. The most recent 10 applied configs will be shown here, and these snapshots can be archived, downloaded, and restored from easily. Note that if an apply config attemp fails, you can review the output in this menu and remediate, or roll back to a previous good config and attempt your changes again. In the meantime, XI will continue to monitor using the last successfully applied configuration.

Config Wizards
Configuration wizards guide users through the process of monitoring new devices, services, and applications – all without having to understand complex monitoring concepts. You can download additional Config Wizards at the Nagios Exchange.

D

Dashboard
A customizable page on which dashlets can be placed. Nagios XI offers each user the ability to have multiple dashboards for customized views of important data. Dashboards can also be shared with other users by Admins.

Dashlet
A customizable container that can be placed on a custom dashboard. Examples of different dashlets include performance graphs, group status summaries, maps, custom URLS, and other data.

H

Host
A host is anything with an IP, URL, or FQDN, such as a physical server, a VM host or guest, a router, or a webpage.

Host Group
Hostgroups enable you to logically group sets of hosts for display, configuraion, and reporting purposes.

N

Nagios Exchange
Nagios Exchange is the central place where you'll find all types of Nagios projects - plugins, addons, documentation, extensions, and more. Nagios Exchange is designed for the Nagios Community to share its Nagios creations. Have a new project for Nagios that you'd like to share? Just create an account and add it to the directory at http://exchange.nagios.org.

Nagios Knowledgebase
The Nagios Knowledgbase is a centralized collection of hundreds of articles, tutorials, and documentation links to help you configure and use the entire suite of Nagios solutions at http://support.nagios.com/kb.

Notification
A notification is an email or text that is sent when state changes are detected on monitored objects.

NCPA
NCPA is the Nagios Cross Platform Agent. This agent works on Linux, Windows, OSX, and AIX, and supports both active and passive monitoring. NCPA includes a web GUI, real-time server data graphing, and an advanced check API.

P

Passive Check
A check that is performed by an external application, operating system, or device and is submitted to Nagios Core or Nagios XI for processing. Some monitoring agents - including NSCA, NCPA, and NRDP can be used to send passive checks to Nagios. An SNMP trap is also considered a passive check.

Plugins
Plugins allow you to monitor just about anything and everything with Nagios - databases, operating systems, applications, network equipment, protocols and more. A variety of plugins are available in Nagios XI by default, and thousands more can be found on the Nagios Exchange. It is also possible to write your own custom plugins using the Nagios Plugin Development Guidelines.

R

Report
Nagios XI includes a variety of reports which enable you to review the historical performance of your monitored objects. Reports can be customized to focus on specific timeperiods, hosts, and groups, and also support negating things like scheduled downtime and unreachable states. Reports can be exported, emailed, and (in the Enterprise edition of XI) scheduled for automatic delivery.

S

Service
A granular metric being monitored on a host, such as CPU and memory usage, drivespace, interface bandwidth, or the status of a system service or process.

Servicegroup
Servicegroups enable you to logically group sets of services for display and reporting purposes.

SNMP/SNMP Trap
Simple Network Management Protocol (SNMP) is a native protocol available on a variety of operating systems and devices which enables monitoring of specific metrics. SNMP can be checked actively by Nagios, or data can be sent passively to Nagios from the device using SNMP Traps.