

Getting Started Guide



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Welcome to WhatsUp Gold

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CHAPTER 1

Welcome

Welcome to WhatsUp Gold

Network and application infrastructures have become some of the most critical elements in business strategy. High reliance on network or application availability requires that all businesses—from SMBs to Enterprises—take a proactive approach to preventing or resolving outages with minimal impact to productivity and revenue. The Ipswitch WhatsUp Gold product family leverages a powerful, yet affordable, easy-to-deploy and use, network tools suite that ensures you always know the pulse of the network so you can respond quickly to changes. When combining your network hardware with the value of WhatsUp Gold, you can be confident that you have the tools to manage your network easily and reliably.

This WhatsUp Gold Getting Started guide steps through the overview process of deploying WhatsUp Gold products—WhatsUp Gold Premium, WhatsUp Flow Monitor, WhatsConnected, WhatsConfigured, and WhatsVirtual—and suggests other network tools to increase visibility and access to real-time network performance data.

About WhatsUp Gold

WhatsUp Gold monitors, reports, alerts, and takes action on the status of network devices, the system, and services. WhatsUp Gold installs, discovers, and maps network connected assets in minutes. Leveraging SNMP v1/2/3 and WMI, it enables monitoring in combination with powerful alerting and notification capabilities to keep the network infrastructure running and you informed when issues arise. Intuitive web-enabled workspace reports and dashboards provide quick navigation to over 200 reports, documenting all device, bandwidth and application-related activity. WhatsUp Gold ensures network managers have 360° visibility, actionable intelligence, and complete control to make smarter decisions faster. For more information about what's new in WhatsUp Gold, see the WhatsUp Gold release notes (http://www.whatsupgold.com/WUG144relnotes).

Available editions

WhatsUp Gold is available in four editions. Each edition tailors WhatsUp Gold's features to meet the diverse needs of WhatsUp users, from small networks to those spanning multiple geographic locations.

WhatsUp Gold Standard Edition manages devices and applications on a single-location network. Intuitive web-enabled workspace views provide drill-down access to alerts and issues in real-time, and access to more than 200 reports that document device, bandwidth, and application-related activity.

- WhatsUp Gold Premium Edition provides all of the network management capabilities of WhatsUp Gold Standard Edition, plus advanced management for Microsoft® Exchange™, Microsoft® SQL Server™, and SMTP email servers. Premium Edition also includes several features that let you monitor performance data in real time, as well as support for application monitoring using Microsoft's WMI™.
- WhatsUp Gold MSP Edition gives managed solution providers the ability to use all of the features of WhatsUp Gold Premium Edition to monitor their customers' remote networks from a central location in the managed solution provider's network operations center. Managing multiple companies' networks at once has never been easier.
- WhatsUp Gold Distributed Edition extends the features of WhatsUp Gold Premium Edition to companies whose networks are segmented across multiple geographic locations. WhatsUp Gold Distributed Edition can detect issues at any of the company's sites and can then report the issue to the effected site and to a central location.

WhatsUp Gold optional plug-ins

WhatsUp Gold optional applications are available for use with WhatsUp Gold editions. These plug-ins broaden your monitoring and reporting capabilities to give you a more complete picture of your network and its many components. For more information, see the *WhatsUp Gold web site* (http://www.whatsupgold.com/).

- WhatsConnected provides layer 2/3 network discovery and topology mapping to visually depict device connectivity down to the individual port. It also employs deep device scanning that provides detailed information about discovered devices in a simple device list view, a device category view, connectivity report view, asset/inventory report view, WMI (Windows) inventory information, bridge port utilization report view, a detailed topology view, and more. You can publish any of the network maps as a network diagram in Microsoft® Visio™ or export detailed device information to WhatsUp Gold to automate the creation of detailed network topology map views. WhatsConnected also includes Layer 2 Trace, IP/MAC Finder, polling and monitoring, and interface status and utilization tools to validate connection paths and report real-time availability data on devices. For more information, see the WhatsUp Gold web site (http://www.whatsupgold.com/products/WhatsConnected).
- WhatsVirtual plug-in provides additional capabilities to discover, map, monitor, alert, and report on virtual environments in WhatsUp Gold. With WhatsVirtual, one discovery scan can discover both virtual and physical devices. In Device View, virtual devices are displayed alongside physical devices. For each virtual host discovered, a group is created for the virtual host and all of its associated virtual machines. Leveraging the VMWare vSphere APIs, WhatsVirtual enables the same mapping, reporting, predictive monitoring, and powerful alerting and notification capabilities of WhatsUp Gold to keep you informed when issues arise and to keep the network infrastructure running smoothly. For more information, see the WhatsUp Gold web site http://www.whatsupgold.com/WhatsVirtual.

- WhatsUp Gold Flow Monitor plug-in for WhatsUp Gold leverages Cisco NetFlow, sFlow, and J-Flow data from switches, routers, and Adaptive Security Appliances (ASA) to gather, analyze, report, and alert on LAN/WAN network traffic patterns and bandwidth utilization in real-time. It highlights not only overall utilization for the LAN/WAN, specific devices, or interfaces; it also indicates users, applications, and protocols that are consuming abnormal amounts of bandwidth, giving you detailed information to assess network quality of service and quickly resolve traffic bottlenecks. WhatsUp Flow Monitor protects network security by detecting virus and worm activity on the network. Comprehensive reporting takes the raw real-time network traffic data from routers and switches and presents you with useful information to understand trends, utilization, and where network bandwidth is consumed. For more information, see the WhatsUp Gold web site (http://www.whatsupgold.com/NetFlowMonitor).
- WhatsConfigured plug-in enables effective management of one of the most critical assets on your network—device configurations. It automates the key configuration and change management tasks required to backup, compare, and upload configuration files for networking devices. WhatsConfigured maintains and controls configuration files and alerts when any configuration changes are detected.
 - The WhatsConfigured plug-in reduces the time and effort spent maintaining device configurations and changes while providing increased security, compliance, and visibility. For more information, see the *WhatsUp Gold web site* (http://www.whatsupgold.com/WhatsConfigured).
- WhatsUp Gold VoIP Monitor plug-in for WhatsUp Gold measures your network's ability to provide the quality of service (QoS) necessary for your VoIP calls on your LAN and WAN links. After a simple setup, the VoIP Monitor accesses Cisco IP SLA (service level agreement) enabled devices to monitor VoIP performance and quality parameters including jitter, packet loss, latency, and other performance values. The plug-in's full integration with WhatsUp Gold allows you to easily view graphs and metrics for bandwidth and interface utilization and troubleshoot network issues that affect VoIP performance. For more information, see the WhatsUp Gold web site (http://www.whatsupgold.com/products/Voip Monitor).
- WhatsUp Gold Failover Manager provides user-configurable criteria to determine if WhatsUp Gold is in a failed state. You can choose to have the primary system go down if *all* services are disabled, or if *any* specified service is disabled. For example, if you select all services, the services used by WhatsUp Gold must go down on the primary service for the secondary system to take over. If you select only the Polling Engine and Web Server, and both are disabled on the primary system for any reason, the secondary system takes over WhatsUp Gold network management duties until the primary system has been restored. The WhatsUp Gold Failover Manager ensures a high availability operation for WhatsUp Gold. For more information, see the *WhatsUp Gold web site* (http://www.whatsupgold.com/products/FailoverMgr).

CHAPTER 2

Deploying

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Deploying WhatsUp Gold

WhatsUp Gold makes it easy to deploy and be running quickly so you can get started monitoring and managing your network. Use the following guideline to deploy WhatsUp Gold and WhatsUp Gold plug-ins, then begin managing your network.



STEP 1: Prepare the network

Download and install WhatsUp Gold

Download WhatsUp Gold and any WhatsUp Gold plug-ins from WhatsUpGold.com. If you are evaluating, the installation program includes the evaluation license and activates automatically.

The WhatsUp Gold installation program bundles and delivers prerequisites for the application, including Microsoft .NET Framework 4.0 and Microsoft SQL Server 2005 Express Edition. Because of the need for a more robust and feature rich web platform, Microsoft IIS 6 or Microsoft IIS 7 has become the recommended web server for supporting the WhatsUp Gold Web Interface and its associated web services. The installation program automatically configure IIS 7; however, IIS 6 must be enabled prior to the WhatsUp Gold installation. The legacy WhatsUp Gold Web Server is provided only as a fall-back option.

For more information on specific installation steps, consult the *Installing and Configuring WhatsUp Gold v14.4* (http://www.whatsupgold.com/wugiis_144). The *Release Notes*

(http://www.whatsupgold.com/WUG144relnotes) are also available from the installation program.

Enable SNMP on key devices

WhatsUp Gold uses SNMP to determine the manufacturer and model, components (such as fans, CPUs, and hard disks), operating system, and specific services (such as HTTP or DNS) of each device. We recommend configuring important devices to respond to SNMP requests. You can use the Welcome Center Quick Setup Assistant to configure SNMP credentials for network devices. The Quick Setup Assistant starts immediately following the WhatsUp Gold installation. You may also want to view the WUG Guru video about *enabling SNMP on your network devices* (http://www.whatsupgold.com/wug123snmpvideo).

Configure Flow Monitor on key devices (optional for Flow Monitor users)



Important: The following information is an overview example. The process for configuring a device to export Flow data varies widely from device to device and is dependent upon your network configuration. Please see your router or switch documentation to determine the correct steps for configuring your device.

WhatsUp Flow Monitor collects NetFlow, sFlow, or J-Flow data exported from network routers and switches. If you use the WhatsUp Gold plug-in, Flow Monitor, to monitor network bandwidth utilization, the following example shows the command line interface commands required to enable NetFlow exports for devices on which you want to enable network bandwidth monitoring:

```
ip flow-export version 9
ip flow-export destination 192.168.28.4 9999
```



Tip: Instead of 192.168.28.4 9999, use the IP address of your WhatsUp Gold server.

In addition, configure each interface to export data to WhatsUp Flow Monitor.

```
ip flow ingress
-or-
ip flow egress
```

If the device exporting flow data is also performing network address translation (NAT), we recommend exporting egress data from the internal interface so that private network addresses are displayed in Flow Monitor reports. Any other configuration results in all private addresses reporting as the public addresses of the device performing the network address translation.

WhatsUp Flow Monitor automatically begins tracking network bandwidth utilization when it receives flow data. For more detailed Flow Monitor configuration information, see the

WhatsUp Gold Flow Monitor Help and the documentation for the router/switch that is exporting data to WhatsUp Flow Monitor.

STEP 2: Discover and map the network

Run the Quick Setup Assistant

The Quick Setup Assistant guides you through the initial configuration that is necessary for WhatsUp Gold to discover network devices. You can use the Quick Setup Assistant to configure the connection to your mail server and set up the default email address for email notifications. Click the **Start Here** button to launch the Quick Setup Assistant.

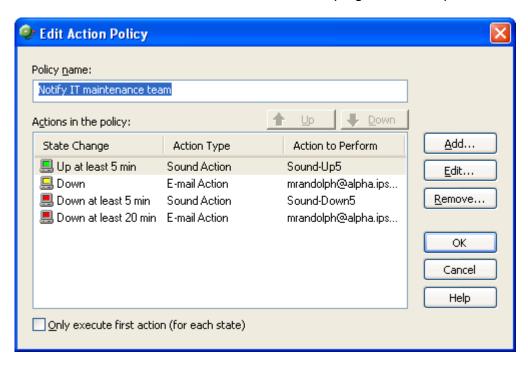


Most importantly, the Quick Setup Assistant collects information about your SNMP communities and other credential types, such as VMware for the WhatsVirtual plug-in, and TFTP and SSH credentials for the WhatsConfigured plug-in. The Quick Setup Assistant automatically generates SNMPv1 and SNMPv2 credentials for each community entered.

Configure action policies

Action policies are sets of rules that WhatsUp Gold uses to determine what actions it takes when it detects network issues. By default, WhatsUp Gold creates an action policy that sends email notifications to the address you specified in the Quick Setup Assistant and applies it to all discovered devices.

If you want WhatsUp Gold to take other actions when issues are detected on devices, you can configure additional action policies. Action policies are primarily used to send notifications via email, SMS, and pager, but actions can also be used to write events to common logs, restart Windows services, set SNMP values, and run custom programs and scripts.



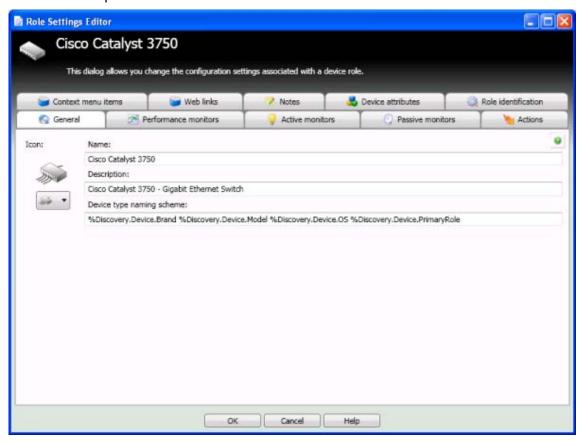
Action policies can be applied to specific devices automatically assigned to devices that match a device role (such as an action policy that is applied automatically to all routers).

Customize device roles

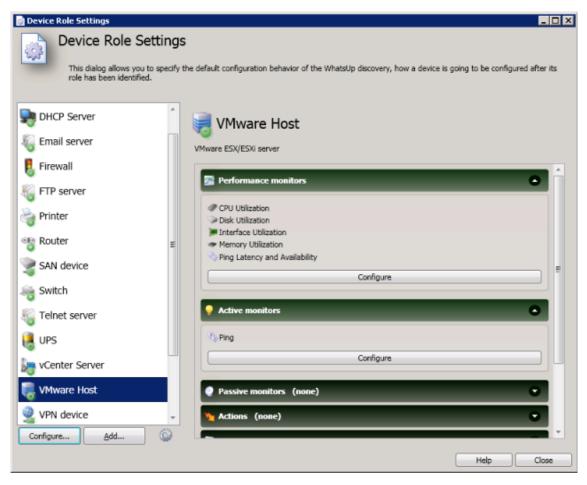
When WhatsUp Gold discovers devices, it tries to determine the type of device so that it can monitor devices appropriately. To determine the type of device, WhatsUp Gold compares the discovered attributes of the device to a set of criteria called a device role.

Device roles do two things:

- Specify the criteria that a device must match to be identified as the device role.
- Specify the monitoring configuration that is applied to the device when it is added to WhatsUp Gold.



WhatsUp Gold provides several default device roles that are used to identify most common network devices. These default roles should correctly identify the majority of devices on the network, but you can modify the device roles to customize what is monitored on each device and what action policy is applied.

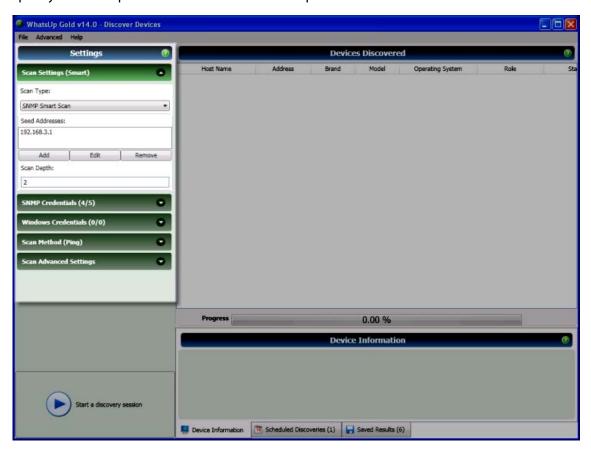


In addition, you can create new device roles to specify how WhatsUp Gold monitors and reports on devices it does not natively recognize.

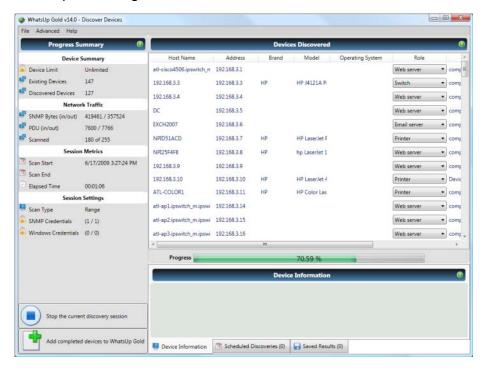
Discover the network

After you have completed the configuration of network devices and the customization of device roles, you can discover the network using WhatsUp Gold.

We recommend using the SNMP Smart Scan option to discover the network. Enter an IP address of the Core router and an IP address of each Branch router as seed addresses, and specify a Scan Depth. We recommend a Scan Depth of 2.



When you start the discovery session, WhatsUp Gold begins scanning the network and identifying physical devices and virtual devices (if WhatsVirtual is installed). Discovered devices are added to the list in the Devices Discovered pane. As each device is scanned, additional information about it becomes available, such as the device brand, model, and operating system. Based on the network device attributes discovered about each device, WhatsUp Gold designates a device role.



After all devices are discovered, click **Add completed devices to WhatsUp Gold** to add the discovered devices to a device group and map.



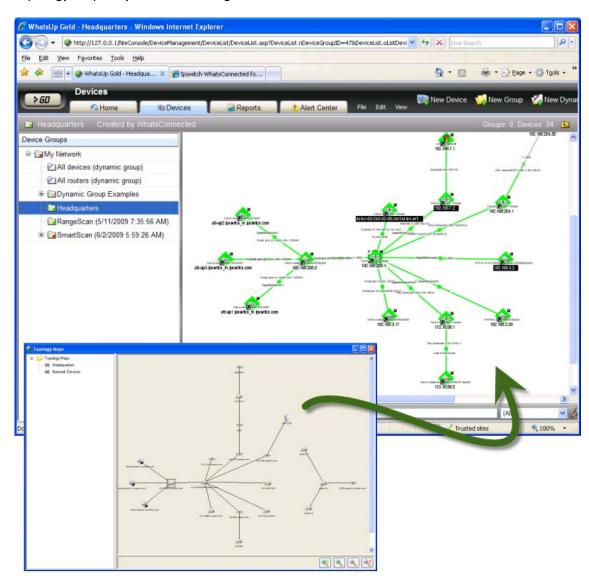
Tip: You can add devices to the WhatsUp Gold database as they are discovered and before the discovery has finished identifying all devices.



Tip: When VMWare hosts are discovered with the WhatsVirtual plug-in, after you click **Add completed devices to WhatsUp Gold**, the VMWare hosts are listed in the Device View, VMWareScan folder. Double-click a VMWare Host to view the associated virtual machines.

Map the network (optional for WhatsConnected users)

After device discoveries are complete in WhatsUp Gold, you can discover topology maps with WhatsConnected. WhatsConnected is available as a stand-alone application and you can export data to WhatsUp Gold when WhatsUp Gold servers are configured as endpoints for exchange data with WhatsConnected. Unlike other topology mapping solutions that overlay devices on a topology bitmap or Visio drawing, WhatsConnected scans your network using industry-standard protocols (such as ICMP, SNMP and LLDP) to automatically create Layer 2 topology maps of your network segments.



First, run a layer 2 discovery in WhatsConnected, then right-click the topology map to export the map to WhatsUp Gold and monitor the mapped devices. You can use filters to manage devices that display on WhatsConnected maps and you can schedule discoveries to dynamically update map and export to WhatsUp Gold. After exporting maps from WhatsConnected to WhatsUp Gold, you can actively monitor network devices from a topology map view. Network topology maps provide an easy and fast way to browse the network infrastructure and display physical connections between devices, simplifying the

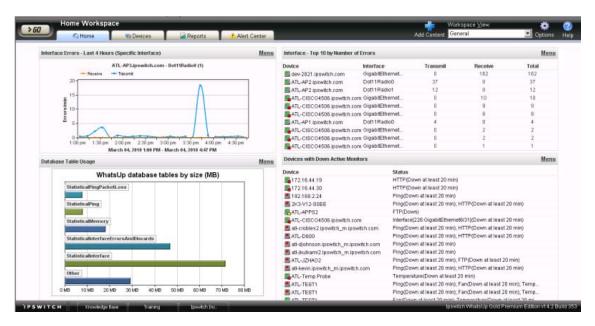
day-to-day complexities of managing and quickly resolving network issues. Additionally, you can export the topology maps to Microsoft Visio, making documenting your network topology nearly effortless.

WhatsConnected also provides a variety of map-level user tools to test and monitor device performance. Real-time polling and monitoring tools, such as Interface Status/Utilization, Ping Status/Latency, and other tools help you test, analyze, and troubleshoot network device performance.

STEP 3: Explore and customize reports

Set up workspace views

From the WhatsUp Gold web interface, you can group collections of reports into pages called Workspace Views. Workspace Views provide easily accessible and personalized dashboard-style overviews of the health of portions of your network.

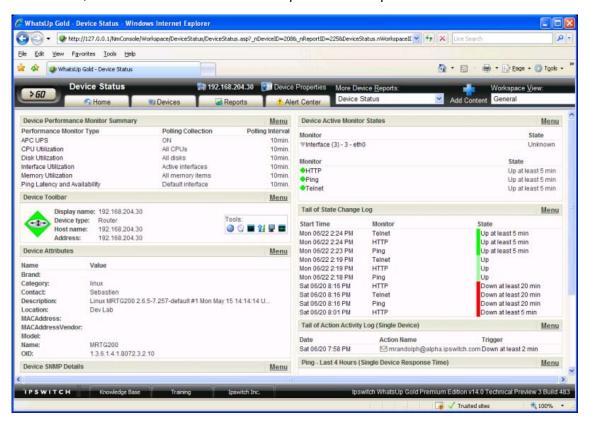


We recommend creating Workspace Views to show the health of the network; for example the server room, access points, the core network, and branch offices. In addition, you may want to create Workspace Views that show the statuses of devices of different types, such as a *Routers, Switches, Virtual Machines*, or *VoIP devices* Workspace View.

Customize device status reports

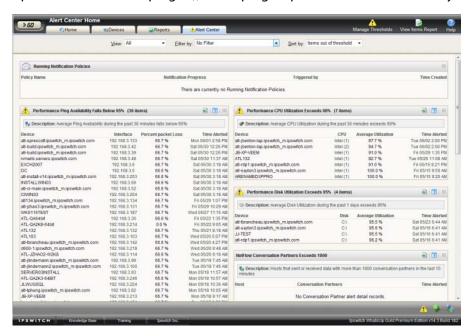
The Device Status Report gives you a detailed look at the health of a single device by aggregating multiple reports that apply to that device. You can view the Device Status Report for any device you are managing using WhatsUp Gold.

The Device Status Report is automatically configured to display the most commonly viewed information about a device, but you can customize it to your specific requirements. For more information, see *About the Device Status workspace* in the Help.

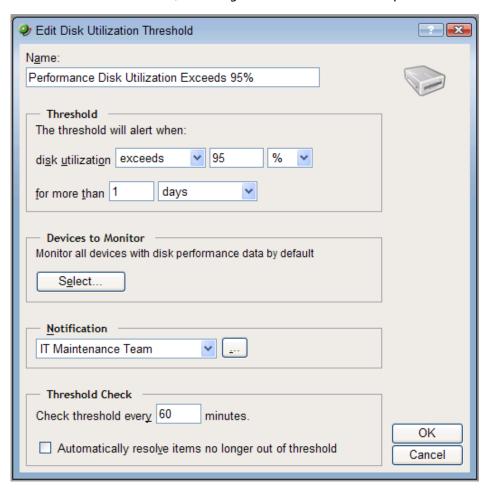


Configure Alert Center Thresholds

As soon as WhatsUp Gold is installed and your network is discovered, Alert Center begins monitoring and alerting on a variety of thresholds for devices across the network. Disk, CPU, interface, and memory utilization are tracked for all devices and virtual devices (with the optional WhatsVirtual plug-in), as are ping response time and availability.



You can create myriad of other thresholds to monitor other types of Performance, Passive, and System alerts which can be applied to all devices or device groups collecting that type of data. For more information, see *Using the Alert Center* in the Help.



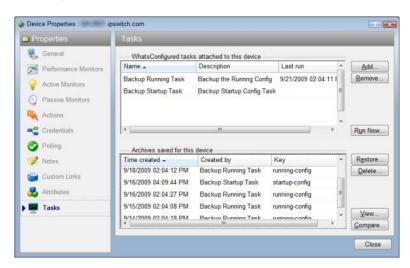
If you use WhatsUp Gold Flow Monitor, WhatsConnected, or WhatsConfigured plug-ins, additional thresholds are available to expose and alert on network traffic that could indicate a problem.

STEP 4: Manage the network

Configure network devices (optional for WhatsConfigured users)

If you use the WhatsConfigured plug-in, you need to configure and assign credentials to communicate with devices you plan to manage on your network, configure task scripts and tasks, and assign tasks to the appropriate devices.

WhatsConfigured enables effective management of one of the most critical assets on your network—device configurations. As a fully integrated plug-in available for WhatsUp Gold, WhatsConfigured automates the key configuration and change management tasks required to maintain and control configuration files for networking devices, reducing the risk of network outages caused by misconfigured devices. You can leverage this automated configuration to reduce the amount of time spent ensuring network devices are configured correctly, freeing valuable time.

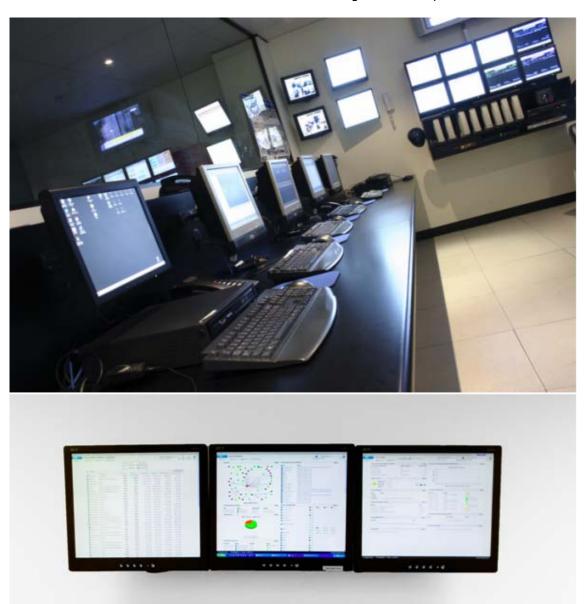


First, assign credentials for each device that you plan to manage through WhatsConfigured. Next, configure Task scripts that login to devices via SSH or Telnet to run command-line interface (CLI) commands on managed devices. Tasks can use pre-configured task scripts or you can configure your own custom task scripts with the WhatsConfigured Custom Script Language. Task scripts can perform a number of operations, such as uploading, restoring, or backing up a running or startup configuration, or changing an application password. After tasks are configured and assigned, they either run on the schedule you configure, or can be run as needed from the WhatsConfigured Task Library and the WhatsUp Gold Device Properties Tasks dialog. Task scripts are stored and managed in the Task Script Library and associated to WhatsConfigured in the WhatsConfigured Task dialog. For more information, see the WhatsUp Gold WhatsConfigured Help.

Configure a NOC display

After you have discovered your network, configured WhatsUp Gold and other plug-ins, you can optionally extend the visibility WhatsUp Gold provides to your Network Operations Centers (NOC) using Dashboard.

Dashboard is a standalone application included with WhatsUp Gold Premium, Distributed, and MSP editions. Dashboard cycles through report pages on the WhatsUp Gold web interface, providing network administrators with constant insight into network health. For more information, see *About the Dashboard Screen Manager* in the Help.

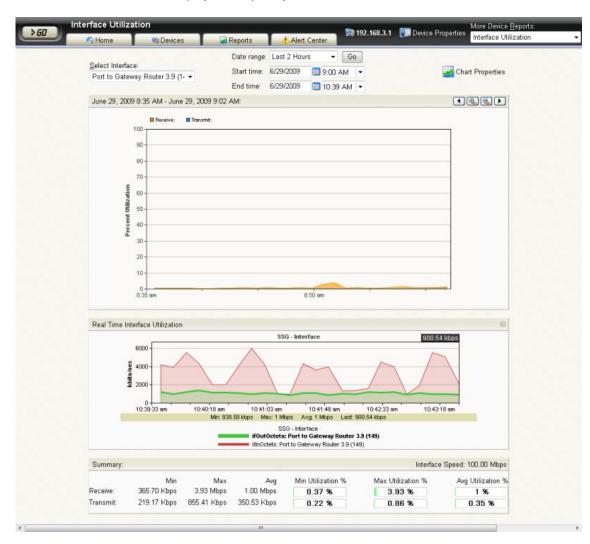




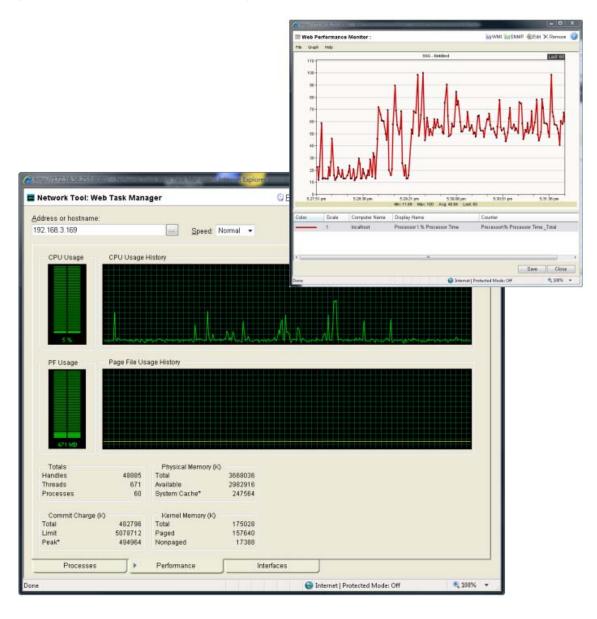
Tip: If your network contains more than a couple of branch offices, consider using WhatsUp Gold Distributed Edition. WhatsUp Gold Distributed Edition extends the full functionality of WhatsUp Gold Premium Edition to each branch office, sharing network health information between a central NOC and any number of remote sites—no matter where they're located or how they're connected.

Assess issues with real-time tools

Throughout reports in WhatsUp Gold, you can view InstantInfo popups, which let you see, in real-time, how the metric shown on a report is performing. For example, if you're viewing an interface utilization report for a device, InstantInfo popups allow you to see the real-time interface utilization. This helps you to quickly evaluate the health of the device.



Similarly, you can use two network tools to view real-time data on network devices: the Web Task Manager and Web Performance Manager. Bringing the power of the Microsoft Windows Task Manager and Microsoft Windows Performance Monitor tools to the Web, these tools let you view real-time device data directly from the web interface.



View reports on the go

With many network management solutions, the most information you can get from your cell phone is a notification of an issue. With WhatsUp Gold's mobile interface, you don't have to run to the computer every time you get a message about network health. The mobile web interface lets you view thirty-five WhatsUp Gold and Flow Monitor reports from virtually any modern mobile device, so you can troubleshoot issues as soon as you find out about them. For more information, see *Using WhatsUp Gold Mobile Access* in the Help.



CHAPTER 3

More information

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Common network management tasks

Use the information below to learn more about common network management tasks in WhatsUp Gold and the sections in the Help that pertain to those tasks.

To:	See:
Use network discovery scans to discover devices you want to monitor on the network.	Discovering network devices
Use Device Roles to specify the criteria devices must match to be identified as the device role and specify the monitoring configuration applied to devices added to WhatsUp Gold.	Using Device Roles
Monitor performance (CPU, disk, memory, and interface use) for critical devices	Using Performance Monitors
Monitor standard IP services on a device, such as HTTP, FTP, or SMTP	Using Active Monitors
Listen for device events, such as authentication failures and Syslog messages.	Using Passive Monitors
Use reports to troubleshoot and monitor performance and historical data collected in WhatsUp Gold.	Using Full Reports
Set up workspace views for your users.	Understanding and Using Workspaces
Set up users and role-based security access.	Using the WhatsUp Gold Web Interface
Set up and route alerts to the appropriate network administrator.	Using Actions
Customize network maps to reflect your company's network topology.	Using Maps

То:	See:
Group devices by type, location, services, or some other attribute.	Managing Devices, Dynamic Groups
Set up user-configured thresholds and notification policies on performance monitors, passive monitors, WhatsUp Gold system health, the Flow Monitor plug-in, and the WhatsConfigured plug-in.	Using the Alert Center

For more information and updates

Following are information resources for WhatsUp Gold. This information may be periodically updated and available on the *WhatsUp Gold web site* (http://www.whatsupgold.com/wugtechsupport).

- Release Notes. The release notes provide an overview of changes, known issues, and bug fixes for the current release. The notes also contain instructions for installing, upgrading, and configuring WhatsUp Gold. The release notes are available at Start > Programs > Ipswitch WhatsUp Gold > Release Notes or on the WhatsUp Gold web site (http://www.whatsupgold.com/WUG144relnotes).
- Application Help for the console and web interface. The console and web help contain dialog assistance, general configuration information, and how-to's that explain how to use the features. The Table of Contents is organized by functional area, and can be accessed from the main menu or by clicking Help in the console, or the ? icon in the web interface.
- Additional WhatsUp Gold resources. For a listing of current and previous guides and help available for WhatsUp Gold products, see the WhatsUp Gold web site (http://www.whatsupgold.com/support/guides.aspx).
- WhatsUp Gold optional plug-ins. You can extend the core features of WhatsUp Gold by installing plug-ins. For information on available plug-ins and to see release notes for each plug-in, see WhatsUp Gold plug-ins documentation (http://www.whatsupgold.com/support/guides.aspx).
- Licensing Information. Licensing and support information is available on the Mylpswitch licensing portal (http://www.myipswitch.com/). The web portal provides enhanced web-based capabilities to view and manage lpswitch product licenses.
- **Technical Support**. Use the WhatsUp Gold Support Site for a variety of WhatsUp Gold product help resources. From here you can view product documentation, search Knowledge Base articles, access the community site for help from other users, and get other Technical Support information. The Support Site is available on the *WhatsUp Gold web site* (http://www.whatsupgold.com/wugtechsupport).

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