

IPSWITCH

Application Performance Monitoring for WhatsUp Gold v16.1

Getting Started Guide



Introduction to WhatsUp Gold APM

Welcome to APM

APM monitors applications across multiple devices, servers, and systems, providing performance statistics and overall application health, while alerting on performance degradation and potential problems before they result in service outages. APM helps IT organizations measure and guarantee Service Level Agreements (SLAs) and assists in pinpointing application performance bottlenecks and points of failure.

Configuring APM to monitor an application is a simple process that starts with selecting a profile that captures the data points necessary to understand the performance, health, and status of a given type of application. The application profile combines the components, discrete applications, and associated thresholds necessary to capture the data points into a blueprint that can be used to create individual application instances. These instances actively monitor your applications.

Ipswitch provides a selection of profiles for use with APM which are available in the APM installation, or by download from the *WUGSpace Community* (http://www.whatsupgold.com/WUGProfilesInfo). You can also create your own application profiles which can be shared on the *WUGSpace Community* (http://www.whatsupgold.com/WUGProfilesInfo).

After you have the necessary profiles, you can use APM to automatically discover your applications and create instances for each discovered application, or you may choose to manually create and modify instances individually before you begin monitoring.

About this guide

This guide walks you through the processes necessary to begin monitoring your network applications with APM. The guide is broken down into 8 steps and uses a real-world example to illustrate each step. We encourage you to follow along with your own instance of APM.

For more in-depth information about APM and the features and processes introduced in this book, please see the *WhatsUp Gold Online Help* (http://www.whatsupgold.com/wug161webhelp).

Deploying APM

STEP 1: Configure application profiles

An application profile is a blueprint for monitoring a given type of application within APM. It defines the collection of components and distinct applications that reflect the health and status of a specific type of application. An application instance is created from the application profile by associating it with the actual devices that host the components of the application as defined by the application profile. Changes to the application profile are inherited by all of the instances created from the profile. Changes in the profile are not inherited by overridden fields within the application instance.

APM works seamlessly with the *WUGSpace Community* (http://www.whatsupgold.com/WUGProfilesInfo) to promote application profile sharing with members of the community. Importing adds the profile(s) directly to the WhatsUp Gold database and downloading stores the profile(s) on the local drive for future import or inspection. Profiles that are imported/downloaded into WhatsUp Gold are stored in an XML

file.

For more information, see *Working with application profiles* in the *WhatsUp Gold Online Help* (http://www.whatsupgold.com/wug161webhelp).

Example 1

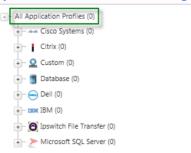
This example utilizes a template imported from the WhatsUp community.

Nick is a network manager that uses WhatsUp Gold to monitor his network. He wants to monitor his WhatsUp database using APM. He checks the WUGSpace site and sees a SQL profile that he can import. In this example, Nick imports the profile to create his application instance.

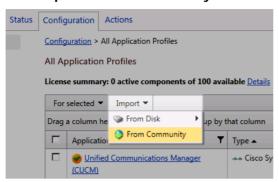
To import an application profile using the WhatsUp community:

- Open the WhatsUp Gold web interface and access the APM plug-in's Configuration page (APM > Configuration).
- 2 On the left side of the page, click **All Application Profiles**.

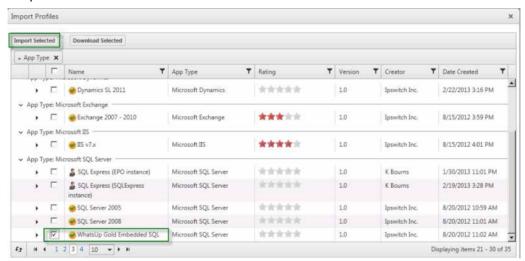
Application Performance Monitoring



3 Click Import > From Community.



- 4 If required, enter your WUGSpace credentials, then click **Sign In**. The Import Profiles page appears.
- 5 Find the WhatsUp Gold Embedded SQL profile, then click to select the check box next to the profile name.



- 6 Click **Import Selected**. The SQL Embedded profile imports into APM and is visible in the Applications tree on the configuration page.
- 7 Click Close to close the Import Profiles page.

After the application profile imports successfully, Nick can create an application instance. We go over this process in Step 2.

Example 2

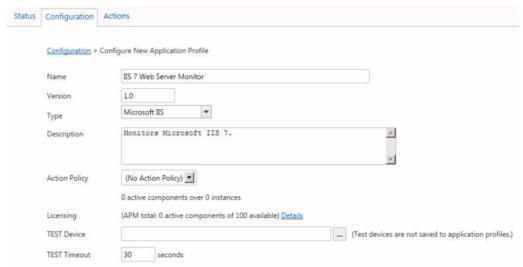
This example creates an application profile from scratch.

Nick also wants to monitor his organization's web server. He decides to create his own IIS application profile using the APM Configuration page.

To create an application profile using the APM configuration page:

1 Open the WhatsUp Gold web interface and access the APM plug-in's Configuration page (APM > Configuration).

2 Click Add Application Profile. The Configure New Application Profile page appears.



- 3 Enter the following information for the IIS application profile:
 - **§ Name**. Enter a unique name for the IIS application profile, such as IIS 7 Web Server Monitor.
 - **Version**. Enter a version for the profile. Since this is a brand new profile, enter 1.0.
 - **§** Type. Select *Microsoft IIS* from the application list.
 - § (optional) **Description**. Enter additional information about the profile that indicates what the monitor is watching. For this example, enter Monitors Microsoft IIS 7.
 - **§** Action Policy. We will cover action policies in Step 5.
 - **§ TEST device**. Click browse (...) to choose a device to test the application profile settings. In this example, Nick selects the server hosting IIS.
 - **§ TEST Timeout**. Leave the timeout as the default of 30 seconds.

It's important to note that application profiles must contain at least one component to be saved. For the sake of the flow of this guide, we are skipping that part of the first step and covering adding components to this application profile in STEP 3: Configure components (on page 7). If you are following along with your own instance of APM, before going to STEP 2, make sure that you skip to STEP 3, Example 2 to configure components for this application profile, then return to STEP 2 to continue.

STEP 2: Create application instances

An application instance is a running copy of an application profile that monitors the defined collection of components, distinct applications, and thresholds necessary to define the health and performance of a given type of application. An application instance can *extend* the application profile by adding components, component groups, critical component groups, or discrete applications. The application profile is *not* changed when an application instance is extended.

Application instances can focus on specific components or specific devices. For example, you can have an application instance with differing components on the same device, or an application with the mirroring components on different devices.

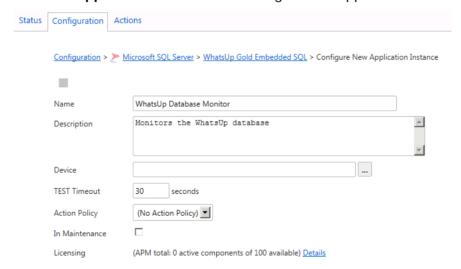
For more information, see *Working with application instances* in the *WhatsUp Gold Online Help* (http://www.whatsupgold.com/wug161webhelp).

Example 1

In the first step, we met Nick who wanted to create a Microsoft SQL Server application profile to monitor his WhatsUp database. We imported the application profile from WUGSpace and are ready to create an application instance for the device that stores the WhatsUp database.

To create an application instance for a WhatsUp Gold SQL Embedded application profile:

- 1 Ensure that the WhatsUp Gold Embedded SQL profile configuration page is displayed. (In the All Application Profiles navigation tree, expand Microsoft SQL Server, then click WhatsUp Gold Embedded SQL.)
- 2 Click Add Application Instance. The Configure New Application Instance page appears.



- **3** Enter the following information for the instance:
 - **Name**. Enter a unique name for the instance. For this example, enter WhatsUp Database Monitor.
 - § (optional) **Description**. Enter additional information about the instance. For this example, enter Monitors the WhatsUp database.
 - **Device**. Click browse (...) to select a device to save to the application instance. In this example, Nick selected the device on which his instance of WhatsUp Gold is installed.



Note: The device Nick selected had WMI and SNMP credentials assigned to it before he selected it for the application instance. Be sure the devices you select for application instances have the necessary credentials assigned.

TEST Timeout. Enter a number to indicate how long a component test should run before timing out. For this example, leave the default of 30 seconds.

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4 Click **Save**. The application instance is saved and displayed in the All Application Profiles navigation tree.



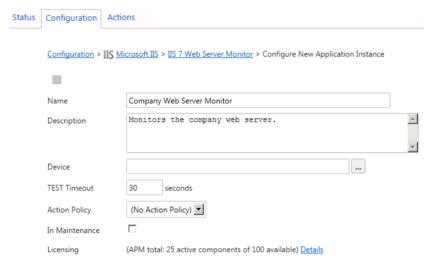
After the application instance is created, Nick is ready to configure the instance's components.

Example 2

In Step 1, Nick also created an IIS application profile to monitor his company web server. In this example, we create an application instance of this profile for his company's web server device.

To create an application instance for an IIS 7 Web Server Monitor application profile:

- 1 Ensure that the IIS 7 Web Server Monitor profile configuration page is displayed.
- 2 Click Add Application Instance. The Configure New Application Instance page appears.



- **3** Enter the following information for the instance:
 - **§ Name**. Enter a unique name for the instance. For this example, enter Company Web Server Monitor.
 - § (optional) **Description**. Enter additional information about the instance. For this example, enter Monitors the company web server.
 - **Solution** Device. Click browse (...) to select a device to save to the application instance. In this example, Nick selected the network web server device.



Note: The device Nick selected had WMI and SNMP credentials assigned to it before he selected it for the application instance. Be sure the devices you select for application instances have the necessary credentials assigned.

TEST Timeout. Enter a number to indicate how long a component test should run before timing out. For this example, leave the default of 30 seconds.

4 Click **Save**. The application instance is saved and displayed in the All Application Profiles navigation tree.



After the application instance is created, Nick is ready to configure the instance's components.

Discrete applications

Certain applications cannot run without other applications, these types of applications are considered complex applications because they have dependencies on other applications. The applications that complex applications depend on are referred to as discrete applications. You can add discrete applications to application profiles and instances. For more information about adding discrete applications to application profiles and instances, see Working with discrete applications in the *WhatsUp Gold Online Help* (http://www.whatsupgold.com/wug161webhelp)

STEP 3: Configure components

A component is a single data point that is collected as part of an application profile. For example, CPU utilization or User connections (the number of currently connected users).

When you import application profiles, profile components are imported along with the profile. Also, when you create an application instance from a profile, the profile components are inherited. In most cases, these inherited components cannot be modified and cannot be removed from application instances. Though you cannot remove a component, you can override certain values for components and/or disable components that you do not find valuable. Additionally, you can add new components to an application instance and configure as desired. Moreover, as a workaround, you can copy a profile or application instance and modify and remove components as you please.



Note: You cannot change values that change the purpose of the component.

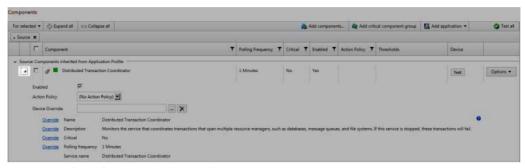
For more information about components, see *Working with components* in the *WhatsUp Gold Online Help* (http://www.whatsupgold.com/wug161webhelp).

Example 1

Because the WhatsUp Gold Embedded SQL application profile is an official Ipswitch released application profile, identified by the icon, Nick cannot modify or delete the WhatsUp database monitor instance components. As such, he can only minimally configure the application instance components. He can enable/disable components and designate an override device to replace the device to which the application profile is assigned. He can also designate override values for component criteria that can be modified. Moreover, he can create new components for the application instance.

To configure components for application instances with inherited components:

- 1 Ensure the WhatsUp Database Monitor application instance's configuration page is displayed. (In the All Application Profiles navigation tree, expand Microsoft SQL Server, then expand WhatsUp Gold Embedded SQL. Click the WhatsUp Database Monitor.)
- 2 In the components list, click (*) next to a component to expand its component information.



- 3 Enter or select the appropriate information:
 - **§ Enabled**. Select this option to enable or disable the component in the application instance.
 - **Device Override**. Click browse (...) to override the device associated with the instance and designate a specific device to assign to the component.
 - § If applicable, click **Override** next to the values you want to configure, and then designate a new value.
- 4 Click Save.

Example 2

Because Nick created the IIS Web Server Monitor from scratch, he must add components to the application profile.

To configure new components for an application profile:

- 1 Ensure the IIS 7 Web Server Monitor application profile configuration page is displayed.
- 2 In the Components section, click **Add components**. The Component Library appears.

3 Click the arrow next to Network Port Check to expand the dialog controls used to add the component.



4 Specify the number of components you want to add by clicking the up and down arrows next to HTTP. Click to add one HTTP port check.



Note: You can add up to 10 components at a time to an application instance. If you need more than 10 components, click **Add components** again to add more components.

- 5 Click **Add Selected**. One HTTP port check component is added to the application profile.
- **6** If desired, change the default component specifications. For this example, leave all default specifications.
- 7 Click **Test** to test the component on the web server device.
- 8 After a successful test, click Save.

Now that you have configured components for the the application profile, you can create an application instance of the IIS 7 Web Server Monitor profile. These steps are covered in Step 2, Example 2.

Critical component groups

Non-critical components can be grouped together in critical component groups. These groups act similar to WhatsUp Gold device dependencies. For more information on creating critical component groups, see *Working with critical component groups* in the *WhatsUp Gold Online Help* (http://www.whatsupgold.com/wug161webhelp).

STEP 4: Configure actions

APM allows you to designate specific actions to execute when an application instance or component changes state. For example, you may designate that an email is sent to your company email address each time an application changes state. We suggest that you configure your actions before configuring your action policies to simplify the process of configuring action policies.

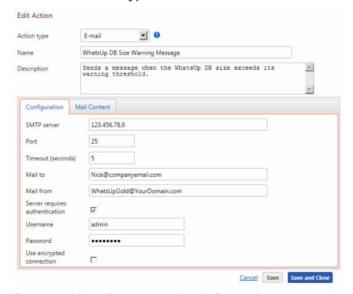
For more information, see *Working with actions in APM* in the *WhatsUp Gold Online Help* (http://www.whatsupgold.com/wug161webhelp).

Example

Nick wants to receive an E-mail notification when the WhatsUp database exceeds its warning threshold so that he knows its time to do some database maintenance tasks. In order to do this, he must create an action policy. But first, he configures the action that the policy will fire when the warning state occurs.

To create an email action in APM:

- 1 Go to the APM Actions Management page (APM > Actions). The Action Policies page appears.
- 2 On the left side of the page, in the Actions Management menu, click **Actions**. The Actions page appears.
- 3 Click **Add Action**. The Edit Action page appears.
- 4 From the Actions Type list, select **E-mail**. The boxes for the E-mail action appear.



- **5** Enter or select the appropriate information.
 - **§ Name**. Enter a unique name for the action. For this example, enter WhatsUp DB Warning Message.
 - **9 Description**. (Optional) Enter additional information about the action. For this example, enter Sends a message when the application state changes.
- **6** Complete the information on the **Configuration** tab. This tab contains options pertaining to the action e-mail destination.

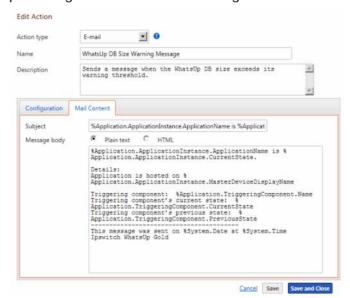
- **\$ SMTP Server**. Enter the IP address or Host (DNS) name of your e-mail server (SMTP mail host).
- **§** Port. Enter the port number on which the SMTP server is listening on.
- **Timeout (sec)**. Enter the length of time WhatsUp Gold attempts to connect to the selected device. When the time you enter is exceeded without connecting, a timeout occurs and WhatsUp Gold stops trying to connect to the SMTP server. This is considered a failed connection.
- **§** Mail To. Enter the email addresses to which you want to send the alert. Email addresses must be fully qualified. You can enter multiple addresses, separated by commas (but no spaces). The address should not contain brackets, braces, quotes, or parentheses.
- **§ Mail From**. Enter the email address you want to appear in the From field of the e-mail that is sent by the Email action.
- **\$ SMTP server requires authentication**. Check this option if your SMTP server uses authentication. This enables the Username and Password boxes.

The Email action supports three authentication types:

- **S** CRAM-MD5
- § login
- § plain

The authentication type is not configurable. It is negotiated with the SMTP server automatically.

- **§** Username. Enter the username for SMTP authentication.
- **§** Password. Enter the password of the username for authentication.
- **Solution Use an encrypted connection (SSL/TLS)**. Check this option if your SMTP server requires the data to be encrypted over a TLS connection (formerly known as SSL).
- 7 Complete the information on the **Mail Content** tab. This tab contains options pertaining to the action email message content.



- **Subject**. Enter a text message or edit the default message. You can use percent variable codes to display specific information in the subject.
- **Message body**. Enter a text message or modify the default message. You can use percent variable codes to display specific information in the message body. For information about percent variables, see *Percent variables for APM actions* in the *WhatsUp Gold Online Help* (http://www.whatsupgold.com/wug161webhelp).
- 8 Click Save and Close.

STEP 5: Configure action policies

APM allows you to configure action policies that can be applied to application instances and components that you are monitoring with APM.

An action policy determines actions to take when a application instance or component transitions from one state to another. The transition to states are up, down, warning, and maintenance. You must create one or more actions before creating an action policy. You may also apply a blackout policy to the action policy. The blackout policy determines when to apply the action policy and when it should be ignored due to routine activities, such as maintenance periods and business hours.

For more information, see *Working with action policies in APM* in the *WhatsUp Gold Online Help* (http://www.whatsupgold.com/wug161webhelp).

Example

Nick wants to receive an E-mail notification when the WhatsUp database exceeds its warning threshold so that he knows its time to do some database maintenance tasks. In order to do this, he must create an action policy that fires the E-mail action.

To create an action policy that fires an E-mail action when a component warning threshold is exceeded:

1 Go to the Action Policies page (APM > Actions).

2 Click **Add Action Policy**. The Edit Action Policy page appears.

- 3 In the Name box, enter a unique name for this policy. For this example, enter WhatsUp DB Policy.
- 4 In the State Transition Rules section of the page, click the **Warning** tab to create the state transition rules for the Warning state. This tab initiates policies when a component source goes into a warning state. For this example, Nick wants the policy to fire an E-mail notification when the WhatsUp DB goes into the warning state after being in an up, unknown, or maintenance state. Ensure the **Maintenance**, **Up**, and **Unknown** check boxes are selected.
- 5 In the **For at least** box, leave the default time of 0 minutes for each of the state transitions.
- 6 In the Action Rules section of the page, click **Add action rule**. The Action Rule boxes appear.
- 7 Select the WhatsUp DB Warning Message action from the **Action** list.
- 8 In the Fire after (minutes) box, enter the number of minutes to wait after entering the Warning state before firing the action. For this example, enter 5 minutes.
- Click Save and Close.

STEP 6: Configure blackout policies

Blackout policies allow you to designate specific days of the week and times that APM does not alert you on the health of the components monitored with APM.

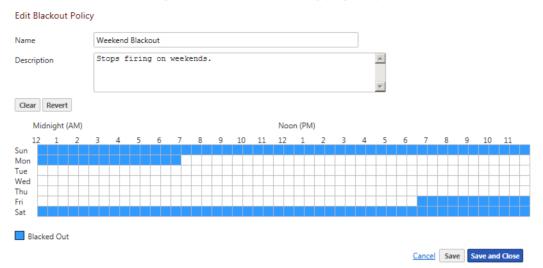
For more information, see *Working with blackout policies in APM* in the *WhatsUp Gold Online Help* (http://www.whatsupgold.com/wug161webhelp).

Example

Nick doesn't want to receive any non-emergency work emails over the weekends. He creates a blackout policy to suspend emails from the WhatsUp DB Policy from 7 p.m. Friday until 7 a.m. Monday.

To create a weekend blackout policy:

- 1 Go to the Blackout Policies page (APM > Actions > Blackout Policies).
- 2 Click Add Blackout Policy. The Edit Blackout Policy page appears.



- 3 Enter a Name for the policy. For this example, enter Weekend Blackout.
- **4** (Optional) Enter additional information about the policy. For this example, enter Stops firing on weekends.
- 5 Click and drag to select the blackout periods you want to create. For this example, click on 7 p.m. Friday and drag to 7 a.m. Monday.
- 6 Click Save and Close.

STEP 7: Assign action policy to an instance or component

After APM actions, action policies, and blackout policies are created, you can assign an action policy to an application instance or component.

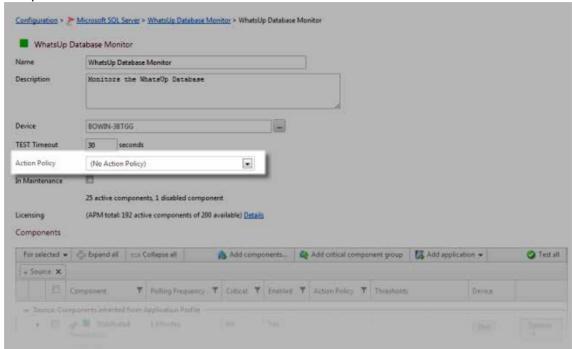
To assign an action policy to an application instance or component:

- 1 From the APM Configuration tab, in the Application Profiles navigation tree, select the application profile component for which you want to add an action policy. The Application Instances appear.
- 2 Select the instance for which you want to add an action policy, then clcik Edit.

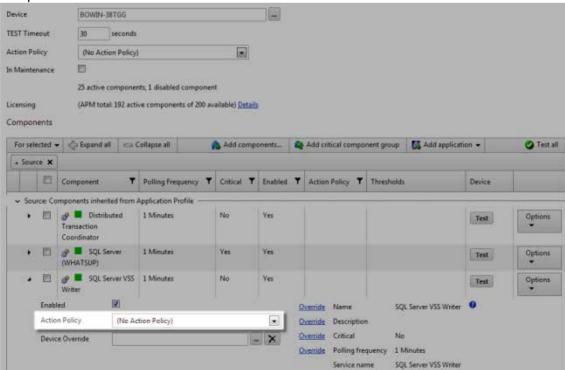


The Components page appears.

3 In the Action Policy box, select the Action Policy you want to apply to all of the components in the instance.



- or - In the Components section below, expand a component you want to apply to a specific component.



STEP 8: View APM data

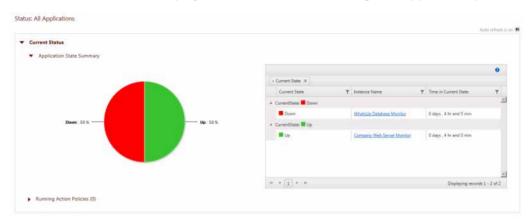
You can view APM data on the APM Status page and in several WhatsUp Gold dashboard reports.

View the APM Status page

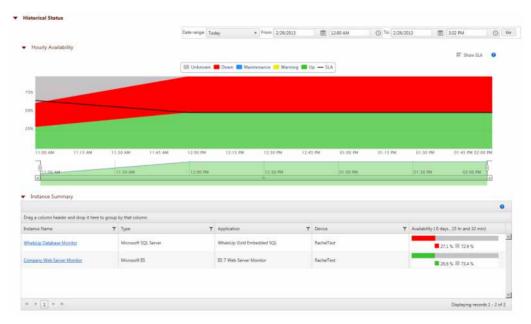
The APM Status page allows you to view the performance status for the applications you are currently monitoring with APM.

The Status page is broken into two sections:

The **Current Status** section displays the overall status of configured application profiles.

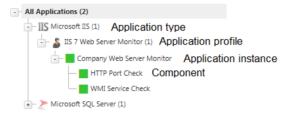


The **Historical Status** section displays historical information about configured application profiles, including their hourly availability, a summary of their instances, and a log of state changes on the devices they monitor.



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Each section displays status information according to the current selection in the navigation tree on the left side of the page. It displays information for application types, application profiles, application instances, and application components.

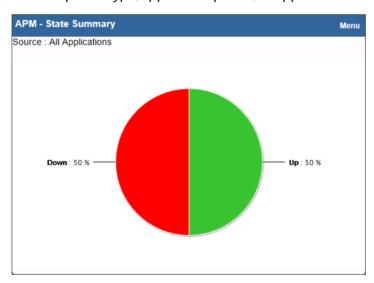


For more information, see *Viewing APM status* in the *WhatsUp Gold Online Help* (http://www.whatsupgold.com/wug161webhelp).

View APM dashboard reports

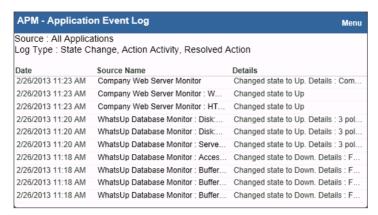
You can add several APM dashboard reports to WhatsUp Gold dashboard views.

The State Summary dashboard report displays a pie chart depicting the application state of the selected profile type, application profile, or application instance.



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The Application Event Log dashboard report displays state change, source, and date information for state change events.



We recommend that you create an APM dashboard view on your Home dashboard to quickly view information for your critical applications. An APM dashboard view allows you to view summary information for multiple application aspects at one time. You can add dashboard reports to display information for all application profiles, specific application profiles, application instances, and components.



Note: You can add up to 15 dashboard reports in one dashboard view.

For more information, see the APM Dashboard reports section of the WhatsUp Gold Online Help (http://www.whatsupgold.com/wug161webhelp).

Finding more information and updates

For more information and updates

The following are information resources for APM. This information may be periodically updated and available on the WhatsUp Gold website.

- **§** Release Notes. The release notes provide an overview of changes, known issues, and bug fixes for the current release. The release notes are available on the *WhatsUp Gold web site* (http://www.whatsupgold.com/WUG161releasenotes).
- **S** Application Help. The console help contains dialog assistance, general configuration information, how-to's that explain how to use APM's features. The Table of Contents is organized by functional area, and can be accessed by clicking the Application Settings icon in the upper-right corner of the page and clicking Help, and by clicking Help in APM dialogs.
- **§** WUGSpace community. WUGspace is a WhatsUp Gold IT community centered around valuable technical content for network engineers, IT managers, Architects, and System Administrators. Visit the community for additional product information and help, learn from other users, submit product ideas, and more. Visit the WhatsUp Gold forum on the WUGspace community site (http://www.whatsupgold.com/wugspace).
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- **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/support/index.aspx).

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