



IPSWITCH

Failover Manager for WhatsUp Gold v16.0

Deployment and User Guide



Using the WhatsUp Gold Failover Manager

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CHAPTER 1

Using the WhatsUp Gold Failover Manager

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About this guide

Deploying and Using the WhatsUp Gold Failover Manager steps you through the process of installing, configuring, and using WhatsUp Gold Failover. The installation and upgrade scenarios are specific to WhatsUp Gold Failover for non-Distributed editions of WhatsUp Gold.

About the WhatsUp Gold Failover Manager

Failover is a mechanism with the capacity to automatically switch from a primary installation of WhatsUp Gold to a standby WhatsUp system when the primary system is not functioning normally. Failover differs from *switchover*, because it is an automatic switch, whereas switchover requires that a network administrator manually make the switch. The WhatsUp Gold Failover Manager reduces costly downtime by automatically taking action in the event of a primary system failure.

The Failover Manager utilizes user-configurable criteria to determine 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 is restored.

There are currently two scenarios supported by the WhatsUp Gold Failover Manager. Each scenario uses both a primary and secondary installation of WhatsUp Gold, with the database either existing on the secondary system or separately as its own system.

Failover Manager for WhatsUp Gold v16.0 Deployment and User Guide

In Scenario 1, the primary system uses a remote database located on the secondary system. This system is the more economical of the two, because it involves only two physical machines. While this first scenario is economical, it is riskier, as the solution is void if and when the secondary system goes down.

Primary system

Primary WhatsUp Gold system uses a remote dbase located on the secondary system.

Secondary system

Secondary WhatsUp Gold system uses a local dbase located on the secondary system.



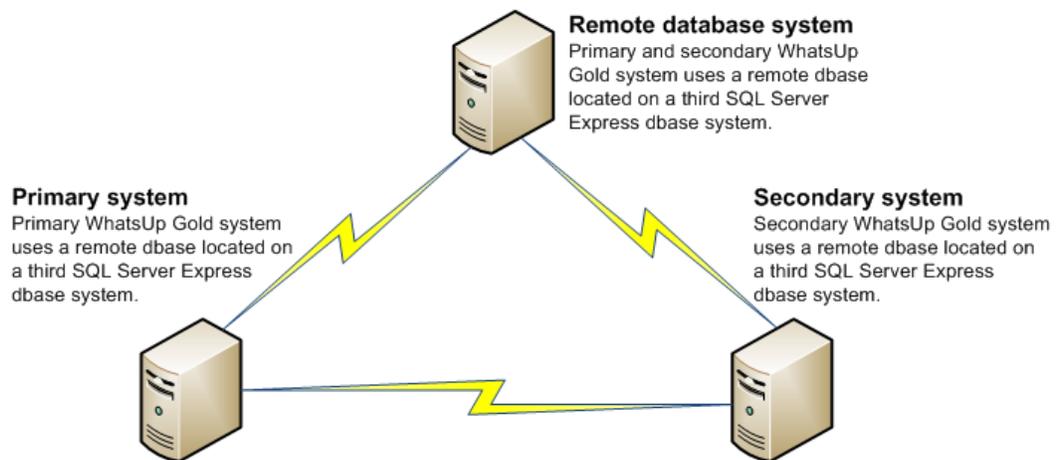
Failover scenario 1

The failover managers on the primary and secondary systems control each other.

In Scenario 2, both the primary and secondary systems use a remote database stored on a separate Microsoft SQL Server system. While this system is more expensive to implement because of its employment of three physical machines, it ensures greater, more secure coverage of your network.



Note: WhatsUp Gold supports Failover for SQL clusters with Failover Scenario 2.



Failover scenario 2

The failover managers on the primary and secondary systems control each other.

You can help increase your network's complete coverage by scheduling regular backups of your WhatsUp Gold database, as neither of the failover solutions support data redundancy.



Note: *Data redundancy* occurs when the primary system and/or secondary systems write data to two or more locations for backup and data recovery. In WhatsUp Gold's Failover Manager, data from either the primary or secondary system is written to one database.

System Requirements

For WhatsUp Gold system requirements, as well as information about the latest product features, editions, fixed in this release, and known issues, refer to the Ipswitch WhatsUp Gold *Release Notes* (<http://www.whatsupgold.com/WUG16releasenotes>).

Failover-specific requirements

TCP Ports 9501 and 9643 are used by the Failover Solution for communication between the primary and secondary machines, and for the `NmApi.exe` process. Please ensure that these ports are free for use by WhatsUp Gold.

Dependent upon the failover scenario you plan to implement, additional hardware and software may be required.

Scenario 1 hardware requirements:

- A primary WhatsUp Gold machine that meets all of the software and hardware requirements listed in the WhatsUp Gold system requirements.
- A secondary WhatsUp Gold machine that meets all of the software and hardware requirements listed in the WhatsUp Gold system requirements.

Scenario 2 hardware requirements:

- A primary WhatsUp Gold machine that meets all of the software and hardware requirements listed in the WhatsUp Gold system requirements.
- A secondary WhatsUp Gold machine that meets all of the software and hardware requirements listed in the WhatsUp Gold system requirements.
- A third machine that meets the disk space requirements listed the WhatsUp Gold system requirements. This machine will run a SQL Server Express database for remote use by both the primary and secondary WhatsUp Gold machines.



Important: We recommend that all machines in either scenario be on the same network subnet.

Finding 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/support/index.aspx>).

- **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/WUG16releasenotes>).
- **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.
- **Getting Started Guide.** This guide provides an overview of WhatsUp Gold, information to help you get started using the application, the system requirements, and information about installing and upgrading. The Getting Started Guide is available on the *WhatsUp Gold web site* (<http://www.whatsupgold.com/wug16gsg>).
- **WhatsUp Community.** WUGspace is an 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>).
- **Additional WhatsUp Gold resources.** For a list 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>).
- **Licensing Information.** Licensing and support information is available on the *WhatsUp Customer Portal* (<http://www.whatsupgold.com/wugCustPortal>). The web portal provides enhanced web-based capabilities to view and manage Ipswitch 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/support/index.aspx>).

Sending feedback

We value your opinions on our products and welcome your feedback.

To provide feedback on existing features, suggest new features or enhancements, or suggest ways to make our products easier to use, please fill out our *product feedback form* (<http://www.whatsupgold.com/wugfeedback>).

CHAPTER 2

Installing your Failover Solution

In This Chapter

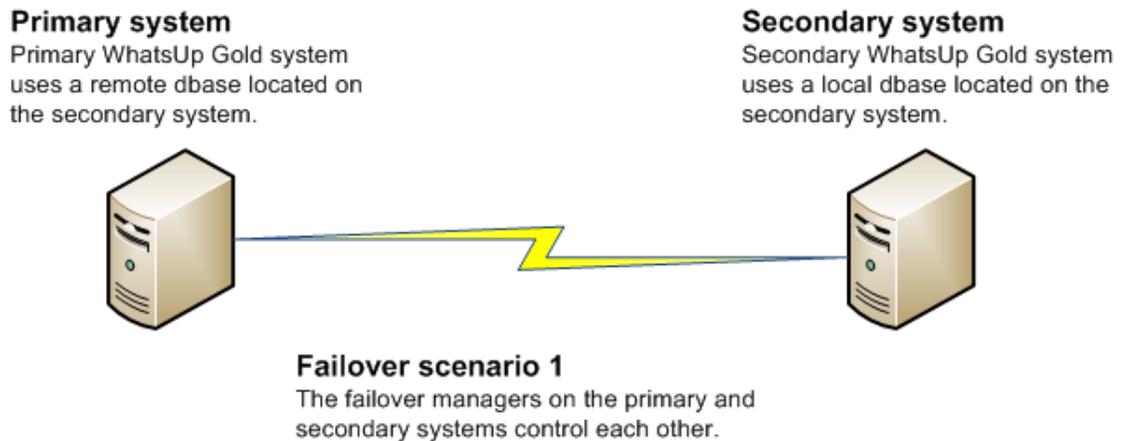
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About Failover Scenarios

There are two possible scenarios available for implementation as your Failover Solution.

- **Scenario 1** includes a primary and a secondary machine.
- **Scenario 2** includes a primary, a secondary, and a database machine.

Installing Failover Scenario 1



Scenario 1 includes:

- A primary WhatsUp Gold system that uses a remote database on the secondary system. The primary system is responsible for running WhatsUp Gold and monitoring the network day-to-day.

- A secondary WhatsUp Gold system that uses its local database. The secondary system is placed on standby, and in the event that the primary system goes down, takes over WhatsUp Gold duties for the network.

Because Scenario 1 uses a remote database on the secondary machine, you must install WhatsUp Gold on the secondary machine first. After a successful installation on the secondary WhatsUp Gold machine, you then install Ipswitch WhatsUp Gold on the primary machine.



Important: Failover Scenario 1 requires a local SQL database on the secondary machine; you cannot specify a remote database for use in Scenario 1. If you want to use a remote SQL database, you must use Failover Scenario 2.

A successful installation of Failover Scenario 1 requires that you complete the following steps in sequential order.

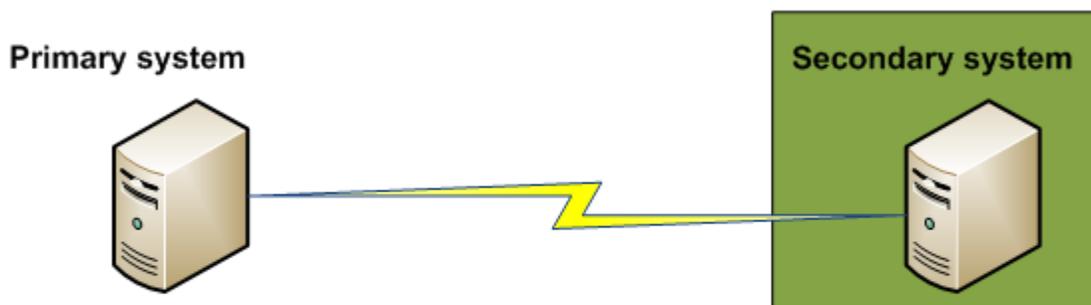
To install Failover Scenario 1:

- 1 *Install Failover Scenario 1 on the secondary machine* (on page 6)
- 2 *Install Failover Scenario 1 on the primary machine* (on page 14)
- 3 *Configure Failover Settings on the primary machine* (on page 17)

Step 1 - Install Scenario 1 on the secondary machine

You can install WhatsUp Gold Failover Scenario 1 on the secondary machine using either the *default Microsoft SQL Server 2008 R2 Express Edition instance* (on page 6) or using an *existing Microsoft SQL Server* (on page 11).

Installing Scenario 1 on the secondary machine using Microsoft SQL Server 2008 R2 Express Edition



Step 1: Failover scenario 1

To install Ipswitch WhatsUp Gold on the primary machine using the default Microsoft SQL Server 2008 R2 Express Edition instance:

- 1 Log in directly to Microsoft Windows using the *Administrator* account (if you do not have an account called Administrator, use an account that has full administrative privileges to the computer). This is the computer that will become the secondary server.



Caution: We do *not* recommend using Terminal Services or Remote Desktop to install WhatsUp Gold.

- 2 Start the WhatsUp Setup:
 - If you downloaded an electronic version of the WhatsUp Setup, double-click the downloaded file.
 - If you purchased a WhatsUp Setup CD-ROM, insert the CD-ROM into the appropriate drive. If it does not run automatically, click **Start**, select **Run**, then enter the CD path followed by `AutoRun.exe` (for example, `D:\AutoRun.exe`).
- 3 Read the Welcome screen and click **Next**. The License Agreement dialog appears.
- 4 Read the license agreement. If you accept the terms of the license agreement, select **I accept the terms of the license agreement**.
 - To print a copy of the license agreement, click **Print**. The license agreement is sent to the default printer.
 - If you do not accept the terms of the license agreement, click **Cancel** to exit the installation program.
- 5 Click **Next** to continue. The License Information dialog appears.
- 6 Enter your WhatsUp Gold Serial Number for the secondary server or select an alternative activation method.



Note: You must use the correct license for the secondary and primary servers. The primary license cannot be used to install the secondary system, and the secondary license cannot be used to install the primary system.



Note: You must enter your Serial Number including the Username And Password (UAP) appended to the end of your Serial Number, which combined are a total of 23 characters.



Note: If you are installing using the installation application downloaded from the web link provided in the purchase confirmation email, the WhatsUp Gold Serial Number box will be pre-populated with your Serial Number and UAP.

The following is an example of a serial number, UAP and the complete serial number to be entered in **Serial Number**.

Serial Number (15 characters)	UAP (8 characters)	Complete Serial Number (23 characters)
01MTBDK5TN99NQ1	XKQKC966	01MTBDK5TN99NQ1XKQKC966

- 7 Click **Next** to continue. The WhatsUp Gold Welcome screen specific to the edition you are activating appears.
- 8 Clear **Hide advanced installation options**. This option must be cleared in order for you to use the advanced installation options.

- 9 Click **Next** to continue. The Installation Options dialog where the Failover Scenario is selected appears.
- 10 Select **Failover Scenario 1**.
- 11 Click **Next** to continue. The Installation Options dialog where you elect to install a new copy of Microsoft SQL Server or select an existing installation appears..
- 12 Select **Yes, install a local copy of Microsoft SQL Server 2008 R2 Express Edition named WHATSUP**.
- 13 Click **Next** to continue. The Installation Options dialog where the SQL Server is configured appears.
- 14 Select the install directories for Microsoft SQL Server 2008 R2 Express Edition. The application and data files are installed in default directories.



Important: Make sure that you have a large capacity drive selected for data storage. The data files for WhatsUp Gold can reach a maximum size of 22 GB.



Important: During installation, databases are created for WhatsUp Gold Flow Monitor. These basic databases are limited in size, but are increased the first time the Flow Monitor collector initializes. If at least 16 GB of disk space is available when the collector initializes, the maximum size of the Flow Monitor databases is increased to 4 GB each (16 GB total including transaction logs). If less than 16 GB is available, the maximum size of the Flow Monitor databases is limited proportionately to the amount of free disk space. If your license includes WhatsUp Gold Flow Monitor, we strongly recommend that you verify that you have at least 16 GB of free disk space before installing.

- 15 Click **Next** to continue. The Installation Options dialog where the 'sa' password is configured appears.



Important: If you want to change the SQL Server user account, the account you want to use must have the same permissions as the 'sa' account. The password you create must meet any password complexity rules enforced by the local server or domain.

- 16 Specify and confirm a **Password** for the account. You also have the option to **Keep the default password**.
- 17 Clear the **Keep default password** option. Select a password and type it in the **Password** field. Type it again in the **Confirm Password** field.



Important: If you want to change the Microsoft SQL Server user account, the account you want to use must have the same permissions as the 'sa' account.



Note: You need this information to connect to the database.

- 18 Click **Next** to continue. The Installation Options dialog where the WhatsUp and NetFlow database names are set appears.
- 19 Type any changes you want to make to the **WhatsUp database** and **Netflow database** names.



Note: The database names must be in English and must use alpha-numeric characters (A-Z,a-z,0-9 and the underscore character "_").



Note: You can only change the default database names during the initial WhatsUp Gold installation. You cannot change the names of these databases following the initial installation.



Note: The default database name for the WhatsUp Gold database is `WhatsUp`, and the default name for the Flow Monitor database is `Netflow`.



Note: The Netflow Archive database will use the Flow Monitor database name with the letters 'Ar' appended to the end. The default name for the Flow Monitor Archive database is `NFArchive`.

20 Click **Next** to continue. The Installation Options dialog where you select the installation directory appears.

21 Select the installation directory for the WhatsUp Gold application files.

The default path is `C:\Program Files\Ipswitch\WhatsUp`. We recommend that you use the default path.



Tip: The Program Files directory path may vary if on a 64 bit system (for example, `Program Files (x86)`). You can install WhatsUp Gold to a different location. To select a different location, click **Change**.



Note: If the installation program detects data from a previous installation of WhatsUp Gold, the Backup Web and Report Files dialog appears. We recommend that you select **Back up the existing Web and report files**, then click **Next**.



Tip: The Program Files directory name may vary if on a 64-bit system (for example, `Program Files (x86)`). You can install WhatsUp Gold to a different location. To select a different location, click **Change**.



Note: If the installation program detects data from a previous installation of WhatsUp Gold, the Backup Web and Report Files dialog appears. We recommend that you select **Back up the existing Web and report files**, then click **Next**.

22 Choose a TCP port for the WhatsUp Gold web site. The installation program creates an IIS web site using this port. The default port is 80.



Note: It is recommended that port 80 be used for the WhatsUp Gold web site. If another port number is used, the URL for the WhatsUp Gold web site will require that port number to be appended to the hostname or IP address when forming the URL. For example if you chose 8888 as the port number instead of 80 your URL for a WhatsUp Gold install on the local host would be: `localhost:8888/nmconsole`



Note: If port 80 is used by a current IIS web site, you must either allow WhatsUp Gold to disable that web site and take over port 80, or choose another port.

23 Click **Next** to continue. The Installation Options dialog where you set a User Name and Password for the new Windows account appears.

- 24 Specify a user name and password for the new Windows user account for use with WhatsUp Gold.
- 25 Click **Next** to continue. The Installation Summary dialog appears.
- 26 Click **Proceed**. The WhatsUp Gold install program begins the installation.
When the installation completes, the InstallShield Wizard Complete dialog appears. To view the steps required to configure WhatsUp Gold Failover, click **View Failover Deployment and User Guide**.
- 27 Click **Finish**. The Setup program closes. A browser window opens. Close the browser window and continue to *Installing Scenario 1 on the primary machine* (on page 14).

About Microsoft SQL Server with WhatsUp Gold Failover

You can use an existing Microsoft SQL Server 2005 or Microsoft SQL Server 2008 or 2008 R2 to store data collected by WhatsUp Gold Failover. To do this, these requirements must be met:

- Microsoft SQL Server 2005 or Microsoft SQL Server 2008 or 2008 R2 must be installed on the secondary machine in Failover Scenario 1 and on a remote machine for Failover Scenario 2.



Important: Make sure that the "master" database for the existing SQL Server database instance that is hosting the WhatsUp database is configured to use case-insensitive collation.

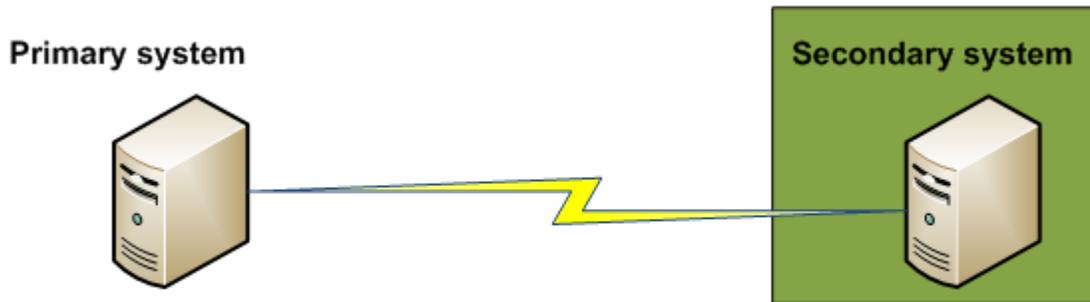


Important: WhatsUp Gold does not support non-English versions of Microsoft SQL Server 2005 or Microsoft SQL Server 2008 or 2008 R2.

- Microsoft SQL Server 2005 or Microsoft SQL Server 2008 or 2008 R2 must be configured to allow WhatsUp Gold to authenticate.
- If Microsoft SQL Server is installed on a remote computer (as in the case of Failover Scenario 2), remote connections must be allowed. For more information, see *How to configure Microsoft SQL Server to allow remote connections* (<http://blogs.msdn.com/b/walzenbach/archive/2010/04/14/how-to-enable-remote-connections-in-sql-server-2008.aspx>) on the Microsoft Web site.
- Use a Microsoft SQL Server user account to connect to the database.
- Microsoft SQL Server must be configured to have a user account that meets the following requirements:
 - Full administrator privileges to Microsoft SQL Server, not just the WhatsUp Gold databases. WhatsUp Gold only supports accessing the database via an account with full administrator rights. WhatsUp Gold does not support using a limited access database user account.
- User's language is set to (United States) English. This can be set in the properties for the login used by WhatsUp Gold.

If you need assistance configuring or verifying these prerequisites, contact your database administrator or refer to the *Microsoft SQL Server documentation* (<http://support.microsoft.com/ph/2855>).

Installing Scenario 1 on the secondary machine using an existing Microsoft SQL Server



Step 1: Failover scenario 1

To install Failover Scenario 1 on the secondary machine using an existing Microsoft SQL Server:

- 1 Log in directly to Microsoft Windows using the *Administrator* account (if you do not have an account called Administrator, use an account that has full administrative privileges to the computer). This is the computer that will become the secondary server.



Caution: We do *not* recommend using Terminal Services or Remote Desktop to install WhatsUp Gold.

- 2 Start the WhatsUp Setup:
 - If you downloaded an electronic version of the WhatsUp Setup, double-click the downloaded file.
 - If you purchased a WhatsUp Setup CD-ROM, insert the CD-ROM into the appropriate drive. If it does not run automatically, click **Start**, select **Run**, then enter the CD path followed by `AutoRun.exe` (for example, `D:\AutoRun.exe`).
- 3 Select the products you would like to install.



Note: The WhatsUp Setup program detects any currently installed Ipswitch WhatsUp branded software and determines which installation options are available (**New Installation**, **Upgrade**, **Repair** or **Un-install**). This information is displayed to the right of the product name and version.

- 4 Click **Next**. The License Information dialog appears.
- 5 Enter your WhatsUp Gold Serial Number for the secondary server or select an alternative activation method.



Note: You must use the correct license for the secondary and primary servers. The primary license cannot be used to install the secondary system, and the secondary license cannot be used to install the primary system.



Note: You must enter your Serial Number including the Username And Password (UAP) appended to the end of your Serial Number, which combined are a total of 23 characters.



Note: If you are installing using the installation application downloaded from the web link provided in the purchase confirmation email, the WhatsUp Gold Serial Number box will be pre-populated with your Serial Number and UAP.

The following is an example of a serial number, UAP and the complete serial number to be entered in **Serial Number**.

Serial Number (15 characters)	UAP (8 characters)	Complete Serial Number (23 characters)
01MTBDK5TN99NQ1	XKQKC966	01MTBDK5TN99NQ1XKQKC966

- 6 Read the product installation list to ensure that the products and versions you want to install are going to be installed by the WhatsUp Setup.
- 7 Click **Next**. The WhatsUp Setup closes and the products you selected for installation are installed.



Note: Each product's install program will be invoked and will run separately. For more information, see the install instructions for the products you selected for installation.



Read the Welcome screen and click **Next**.



Important: Clear **Hide advanced installation options**. This option must be cleared so that you can configure credentials for the database on the secondary server.

- 8 Click **Next**. The License Agreement dialog appears.
- 9 Read the license agreement. If you accept the terms of the license agreement, select **I accept the terms of the license agreement**.
 - To print a copy of the license agreement, click **Print**. The license agreement is sent to the default printer.
 - If you do not accept the terms of the license agreement, click **Cancel** to exit the installation program.
- 10 Click **Next**. A window appears, informing you that Microsoft SQL Server is installed on the system.
- 11 Click **Yes** to continue installing the current system as a Secondary in the Failover 1 scenario. The Database Names dialog appears.



Important: Make sure that the "master" database for the existing SQL Server database instance that is hosting the WhatsUp Gold database is configured to use case-insensitive collation.

- 12 Enter names for the WhatsUp and NetFlow databases, or keep the default names.
- 13 Click **Next**.
- 14 If the databases you named in the previous step already exist, WhatsUp Gold informs you that they will be upgraded. Click **Yes** to continue, or **No** to exit the installation.



Note: If you prefer, you can click **No**, exit the installation, back up the databases, and then restart the installation process.

- 15** The Choose Destination Location dialog appears. Select the installation directory for the WhatsUp Gold application files.

The default path is `C:\Program Files\Ipswitch\WhatsUp`. We recommend that you use the default path.



Tip: The Program Files directory name may vary if on a 64-bit system (for example, `Program Files (x86)`). You can install WhatsUp Gold to a different location. To select a different location, click **Change**.



Note: If the installation program detects data from a previous installation of WhatsUp Gold, the Backup Web and Report Files dialog appears. We recommend that you select **Back up the existing Web and report files**, then click **Next**.

- 16** After you select the installation directory, click **Next**. The Choose Port dialog appears.
- 17** Choose a TCP port for the WhatsUp Gold web site. The installation program creates an IIS web site using this port. The default port is 80.



Note: We recommend that port 80 be used for the WhatsUp Gold web site. If another port number is used, the URL for the WhatsUp Gold web site requires that port number be appended to the hostname or IP address when forming the URL. For example if you choose 8888 as the port number instead of 80, the URL for a WhatsUp Gold install on the local host is: `localhost/nmconsole:8888`

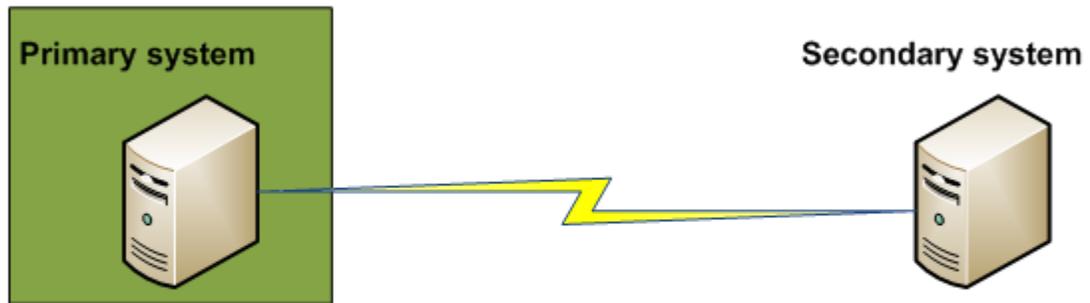
If port 80 is used by a current IIS web site, you must either allow WhatsUp Gold to disable that web site and take over port 80, or choose another port.



Note: If port 80 is currently being used by an IIS web site, a message appears that gives you the option to allow WhatsUp Gold to disable that web site and take over port 80.

- 18** Click **Next**. The Specify a Windows user account and password dialog appears. Enter the account that WhatsUp Gold will use to communicate with Windows.
- 19** Click **Next**. The Ready to Install the Program dialog appears.
- 20** Click **Proceed**. The WhatsUp Gold install program begins the installation.
When the installation completes, the InstallShield Wizard Complete dialog appears. To view the steps required to configure WhatsUp Gold Failover, select **View Failover Deployment and User Guide** and click **Finish**.
The Setup program closes.
- 21** Click **Finish**. The Installation wizard closes.
- 22** A browser window opens. Close the browser window and continue to *Installing Scenario 1 on the primary machine* (on page 14).

Step 2 - Install Scenario 1 on the primary machine



Step 2: Failover scenario 1

To install Ipswitch WhatsUp Gold on the primary machine:



Important: You must first successfully install Failover Scenario 1 on the secondary machine before attempting to install Scenario 1 on the primary machine.

- 1 Log in directly to Microsoft Windows using the *Administrator* account (if you do not have an account called *Administrator*, use an account that has full administrative privileges to the computer). This is the computer that will become the primary server.



Note: You must configure the secondary server first.



Caution: We do *not* recommend using Terminal Services or Remote Desktop to install WhatsUp Gold.

- 2 Start the WhatsUp Setup:
 - If you downloaded an electronic version of the WhatsUp Setup, double-click the downloaded file.
 - If you purchased a WhatsUp Setup CD-ROM, insert the CD-ROM into the appropriate drive. If it does not run automatically, click **Start**, select **Run**, then enter the CD path followed by `AutoRun.exe` (for example, `D:\AutoRun.exe`).
- 3 Select the products you would like to install.



Note: The WhatsUp Setup program detects any currently installed Ipswitch WhatsUp branded software and determines which installation options are available (**New Installation**, **Upgrade**, **Repair** or **Un-install**). This information is displayed to the right of the product name and version.

- 4 Click **Next**. The License Information dialog appears.
- 5 Enter your WhatsUp Gold Serial Number for the primary server or select an alternative activation method.



Note: You must use the correct license for the secondary and primary servers. The primary license cannot be used to install the secondary system, and the secondary license cannot be used to install the primary system.



Note: You must enter your Serial Number including the Username And Password (UAP) appended to the end of your Serial Number, which combined are a total of 23 characters.



Note: If you are installing using the installation application downloaded from the web link provided in the purchase confirmation email, the WhatsUp Gold Serial Number box will be pre-populated with your Serial Number and UAP.

The following is an example of a serial number, UAP and the complete serial number to be entered in **Serial Number**.

Serial Number (15 characters)	UAP (8 characters)	Complete Serial Number (23 characters)
01MTBDK5TN99NQ1	XKQKC966	01MTBDK5TN99NQ1XKQKC966

- 6 Click **Next**. The Installation Summary screen appears.
- 7 Read the product installation list to ensure that the products and versions you want to install are going to be installed by the WhatsUp Setup.
- 8 Click **Next**. The WhatsUp Setup closes and the products you selected for installation are installed.



Note: Each product's install program will be invoked and will run separately. For more information, see the install instructions for the products you selected for installation.



Read the Welcome screen and click **Next**.

- 9 Click **Next**. The License Agreement dialog appears.
- 10 Read the license agreement. If you accept the terms of the license agreement, select **I accept the terms of the license agreement**.
 - To print a copy of the license agreement, click **Print**. The license agreement is sent to the default printer.
 - If you do not accept the terms of the license agreement, click **Cancel** to exit the installation program.
- 11 Click **Next** to continue. The Failover Scenario dialog appears.
- 12 Select **Failover Scenario 1**.
- 13 Click **Next** to continue. The Database Server Login dialog appears. Complete the information for the database server:
 - a) Enter the secondary server in the **Database server that you are installing to** box. You can also click **Browse** to locate the server.



Note: If you are using a database instance other than the default instance, you must include the instance name using the format <Server_Name>\<Instance_Name>.



Important: Make sure that the "master" database for the existing SQL Server database instance that is hosting the WhatsUp database is configured to use case-insensitive collation.



Tip: If you cannot remember your database server hostname, click **Browse** to see a list of all database servers detected on the domain. Database servers to which you can connect but which are not configured on the same domain as the computer where you are installing WhatsUp Gold are not shown. The Browse dialog scans your entire domain, so it may take some time before showing you a list of database servers.

b) Enter the Login ID and Password that you configured for the secondary server in the **SQL Server Authentication** area.

14 Click **Next**. The Microsoft SQL Server 2008 R2 Express Edition Paths dialog appears. The necessary client and support files install in this location. Select custom installation directories for these files, or keep the default locations.

15 Click **Next**. The Choose Destination Location dialog appears. Select the installation directory for the WhatsUp Gold application files.

The default path is C:\Program Files\Ipswitch\WhatsUp. We recommend that you use the default path.



Tip: The Program Files directory name may vary if on a 64 bit system (for example, *Program Files (x86)*). You can install WhatsUp Gold to a different location. To select a different location, click **Change**.



Note: If the installation program detects data from a previous installation of WhatsUp Gold, the Backup Web and Report Files dialog appears. We recommend that you select **Back up the existing Web and report files**, then click **Next**.

16 Click **Next**. The Choose Port dialog appears.

17 Choose a TCP port for the WhatsUp Gold web site. The installation program creates an IIS web site using this port. The default port is 80.



Note: It is recommended that port 80 be used for the WhatsUp Gold web site. If another port number is used, the URL for the WhatsUp Gold web site will require that port number to be appended to the hostname or IP address when forming the URL. For example if you chose 8888 as the port number instead of 80 your URL for a WhatsUp Gold install on the local host would be: localhost:8888/nmconsole

18 Note: If port 80 is used by a current IIS web site, you must either allow WhatsUp Gold to disable that web site and take over port 80, or choose another port.

19 Click **Proceed**. The WhatsUp Gold install program begins the installation.

When the installation completes, the InstallShield Wizard Complete dialog appears. To view the steps required to configure WhatsUp Gold Failover, click **View Failover Deployment and User Guide**.

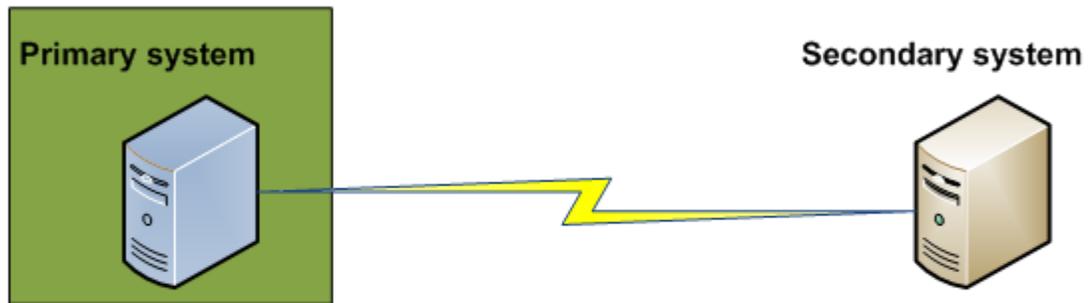
20 Click **Finish**. The Setup program closes.

21 Click **Finish**. The Installation wizard closes.

22 A browser window opens. Close the browser window and continue to *Step 3 Configure Failover Settings for the primary machine* (on page 17).

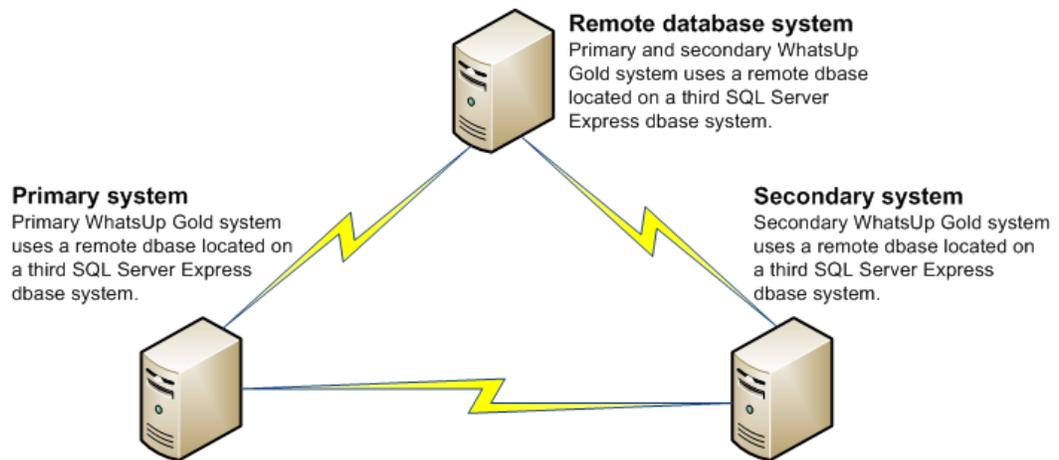
Step 3 - Configure Failover Settings for the primary machine

After installing WhatsUp Gold Failover Scenario 1 on the secondary and primary machines, you need to configure Failover Settings on the primary machine. For information on how to complete this step, see *Configuring WhatsUp Gold Failover* (on page 43).



Step 3: Failover scenario 1

Installing Failover Scenario 2



Primary system
Primary WhatsUp Gold system uses a remote dbase located on a third SQL Server Express dbase system.

Remote database system
Primary and secondary WhatsUp Gold system uses a remote dbase located on a third SQL Server Express dbase system.

Secondary system
Secondary WhatsUp Gold system uses a remote dbase located on a third SQL Server Express dbase system.

Failover scenario 2
The failover managers on the primary and secondary systems control each other.

Scenario 2 includes:

- A primary WhatsUp Gold system that uses a remote SQL database. This system is responsible for running WhatsUp Gold and monitoring the network day-to-day.
- A secondary WhatsUp Gold system that uses a remote SQL database. This system is placed on stand-by and, if the primary system goes down, takes over WhatsUp Gold duties for the network.

- A database system that houses the remote SQL database used by both the primary and secondary systems.



Note: WhatsUp Gold supports Failover with SQL clusters.

Because Scenario 2 uses a remote database for both the primary and secondary machines, you must first configure the database server. You can use an existing database server, or install a new server. See the *System Requirements* (on page 3) section for details on supported databases. After the database server is configured, you can install WhatsUp Gold on the secondary and primary machines.



Note: If you do not currently have a SQL database configured, you can download Microsoft SQL Server 2008 R2 Express Edition from the Microsoft site.



Important: Failover Scenario 2 requires a remote SQL database that is not installed on either the primary or secondary machines. If you want to use a local SQL database on the secondary machine, you must use Failover Scenario 1.

A successful installation of Failover Scenario 2 requires that you complete the following steps in sequential order.

To install Failover Scenario 2:

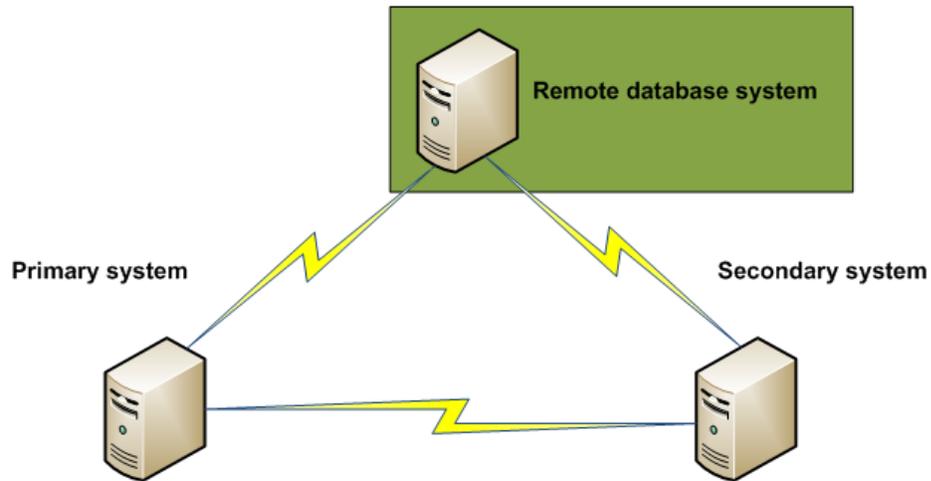
- 1 Install the database to be used remotely by the primary and secondary machines



Note: For more information on using an existing remote SQL database, see About Microsoft SQL Server with WhatsUp Gold Failover.

- 2 *Install Failover Scenario 2 on the secondary machine* (on page 19)
- 3 *Install Failover Scenario 2 on the primary machine* (on page 22)
- 4 Configure Failover Settings on the primary machine

Step 1 - Install Scenario 2 on the database machine



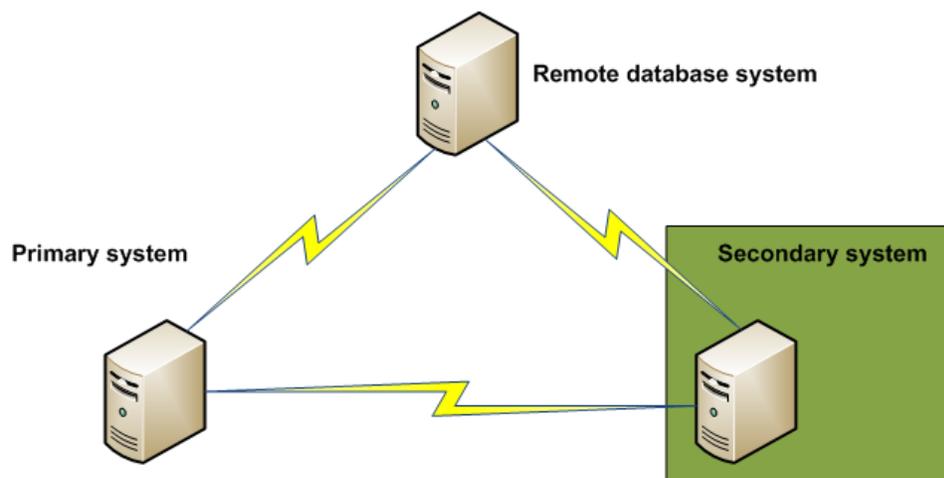
Step 1: Failover scenario 2

Configure the Microsoft SQL Server machine, if necessary. You must have an available remote database server for Failover scenario 2.

The first step in setting up Scenario 2 is to configure the database server. You can use a preexisting server, or download Microsoft SQL Server 2008 R2 Express Edition from the Microsoft web site and configure a new server.

When this step is complete, continue to *Install Scenario 2 on the secondary machine* (on page 19).

Step 2 - Install Scenario 2 on the secondary machine



Step 2: Failover scenario 2

To install Failover Scenario 2 on the secondary machine:

- 1 Log in directly to Microsoft Windows using the *Administrator* account (if you do not have an account called Administrator, use an account that has full administrative privileges to the computer). This is the computer that will become the secondary server.



Caution: We do *not* recommend using Terminal Services or Remote Desktop to install WhatsUp Gold.

- 2 Start the WhatsUp Setup:
 - If you downloaded an electronic version of the WhatsUp Setup, double-click the downloaded file.
 - If you purchased a WhatsUp Setup CD-ROM, insert the CD-ROM into the appropriate drive. If it does not run automatically, click **Start**, select **Run**, then enter the CD path followed by `AutoRun.exe` (for example, `D:\AutoRun.exe`).
- 3 Read the Welcome screen and click **Next**. The License Agreement dialog appears.
- 4 Read the license agreement. If you accept the terms of the license agreement, select **I accept the terms of the license agreement**.
 - To print a copy of the license agreement, click **Print**. The license agreement is sent to the default printer.
 - If you do not accept the terms of the license agreement, click **Cancel** to exit the installation program.
- 5 Click **Next** to continue. The License Information dialog appears.
- 6 Enter your WhatsUp Gold Activation Key or select an alternative activation method.



Note: You must enter your Activation Key made up of the Serial Number and the Username And Password (UAP) appended to the end of your Serial Number, which combined are a total of 23 characters.



Note: If you are installing using the installation application downloaded from the web link provided in the purchase confirmation email, the Activation Key box will be pre-populated with your Activation Key.

The following is an example of an activation key, which is made up of the serial number and UAP and the to be entered in **Activation Key**.

Serial Number (15 characters)	UAP (8 characters)	Activation Key (23 characters)
01MTBDK5TN99NQ1	XKQKC966	01MTBDK5TN99NQ1XKQKC966

- 7 Click **Next** to continue. The WhatsUp Gold Welcome screen specific to the edition you are activating appears.
- 8 Clear **Hide advanced installation options**. This option must be cleared in order for you to use the advanced installation options.
- 9 Click **Next** to continue. The Installation Options dialog where the Failover Scenario is selected appears.
- 10 Select **Failover Scenario 2**.

- 11 Click **Next** to continue. The Installation Options dialog where the SQL Server connection information is entered appears.
- 12 Enter the SQL Server database name and authentication credentials.
- 13 Click **Next** to continue. The Installation Options dialog where the WhatsUp and NetFlow database names are set appears.
- 14 Type any changes you want to make to the **WhatsUp database** and **Netflow database** names.



Note: The database names must be in English and must use alpha-numeric characters (A-Z,a-z,0-9 and the underscore character "_").



Note: You can only change the default database names during the initial WhatsUp Gold installation. You cannot change the names of these databases following the initial installation.



Note: The default database name for the WhatsUp Gold database is *WhatsUp*, and the default name for the Flow Monitor database is *Netflow*.



Note: The Netflow Archive database will use the Flow Monitor database name with the letters 'Ar' appended to the end. The default name for the Flow Monitor Archive database is *NEArchive*.

- 15 Click **Next** to continue. The Installation Options dialog where you select the installation directory appears.
- 16 Select the installation directory for the WhatsUp Gold application files.
The default path is `C:\Program Files\Ipswitch\WhatsUp`. We recommend that you use the default path.



Tip: The Program Files directory path may vary if on a 64 bit system (for example, `Program Files (x86)`). You can install WhatsUp Gold to a different location. To select a different location, click **Change**.



Note: If the installation program detects data from a previous installation of WhatsUp Gold, the Backup Web and Report Files dialog appears. We recommend that you select **Back up the existing Web and report files**, then click **Next**.

- 17 Click **Next** to continue. The Installation Options dialog where the TCP port is selected appears.
- 18 Choose a TCP port for the WhatsUp Gold web site. The installation program creates an IIS web site using this port. The default port is 80.



Note: It is recommended that port 80 be used for the WhatsUp Gold web site. If another port number is used, the URL for the WhatsUp Gold web site will require that port number to be appended to the hostname or IP address when forming the URL. For example if you chose 8888 as the port number instead of 80 your URL for a WhatsUp Gold install on the local host would be: `localhost:8888/nmconsole`



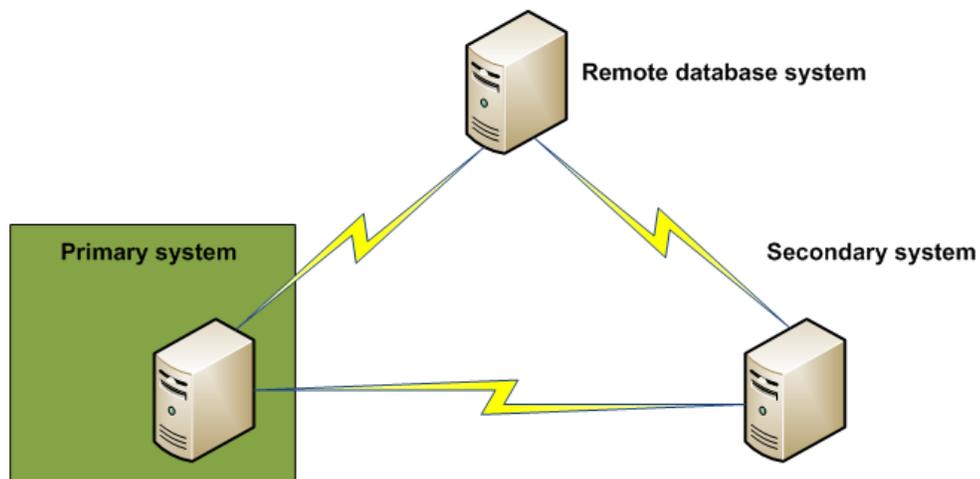
Note: If port 80 is used by a current IIS web site, you must either allow WhatsUp Gold to disable that web site and take over port 80, or choose another port.

- 19 Click **Next** to continue. The Installation Options dialog where you set a User Name and Password for the new Windows account appears.
- 20 Specify a user name and password for the new Windows user account for use with WhatsUp Gold.
- 21 Click **Next** to continue. The Installation Summary dialog appears.
- 22 Click **Proceed**. The WhatsUp Gold install program begins the installation.

When the installation completes, the InstallShield Wizard Complete dialog appears. To view the steps required to configure WhatsUp Gold Failover, click **View Failover Deployment and User Guide**.

- 23 Click **Finish**. The Setup program closes. A browser window opens. Close the browser window and continue to *Installing Scenario 2 on the primary machine* (on page 22).

Step 3 - Installing Scenario 2 on the primary machine



Step 3: Failover scenario 2

To install Failover Scenario 2 on the primary machine:

- 1 Log in directly to Microsoft Windows using the *Administrator* account (if you do not have an account called Administrator, use an account that has full administrative privileges to the computer). This is the computer that will become the primary server.



Note: You must configure the secondary server first.



Caution: We do *not* recommend using Terminal Services or Remote Desktop to install WhatsUp Gold.

- 2 Start the WhatsUp Setup:

- If you downloaded an electronic version of the WhatsUp Setup, double-click the downloaded file.
- If you purchased a WhatsUp Setup CD-ROM, insert the CD-ROM into the appropriate drive. If it does not run automatically, click **Start**, select **Run**, then enter the CD path followed by `AutoRun.exe` (for example, `D:\AutoRun.exe`).

3 Select the products you would like to install.



Note: The WhatsUp Setup program detects any currently installed Ipswitch WhatsUp branded software and determines which installation options are available (**New Installation**, **Upgrade**, **Repair** or **Un-install**). This information is displayed to the right of the product name and version.

- 4 Click **Next**. The License Information dialog appears.
- 5 Enter your WhatsUp Gold Serial Number for the primary server or select an alternative activation method.



Note: You must use the correct license for the secondary and primary servers. The primary license cannot be used to install the secondary system, and the secondary license cannot be used to install the primary system.



Note: You must enter your Serial Number including the Username And Password (UAP) appended to the end of your Serial Number, which combined are a total of 23 characters.



Note: If you are installing using the installation application downloaded from the web link provided in the purchase confirmation email, the WhatsUp Gold Serial Number box will be pre-populated with your Serial Number and UAP.

The following is an example of a serial number, UAP and the complete serial number to be entered in **Serial Number**.

Serial Number (15 characters)	UAP (8 characters)	Complete Serial Number (23 characters)
01MTBDK5TN99NQ1	XKQKC966	01MTBDK5TN99NQ1XKQKC966

- 6 Click **Next**. The Installation Summary screen appears.
- 7 Read the product installation list to ensure that the products and versions you want to install are going to be installed by the WhatsUp Setup.
- 8 Click **Next**. The WhatsUp Setup closes and the products you selected for installation are installed.



Note: Each product's install program will be invoked and will run separately. For more information, see the install instructions for the products you selected for installation.



Read the Welcome screen and click **Next**.

- 9 Click **Next**. The License Agreement dialog appears.
- 10 Read the license agreement. If you accept the terms of the license agreement, select **I accept the terms of the license agreement**.

- To print a copy of the license agreement, click **Print**. The license agreement is sent to the default printer.
- If you do not accept the terms of the license agreement, click **Cancel** to exit the installation program.

11 Click **Next** to continue. The Failover Scenario dialog appears.



Important: If the machine on which you are installing WhatsUp Gold Failover contains an existing WhatsUp database from a previous installation of WhatsUp Gold, the installation utility automatically installs a secondary system instance for Failover Scenario 1.

12 Select **Failover Scenario 2**.

13 Click **Next** to continue. The Database Server Login dialog appears.



Important: Make sure that the "master" database for the existing SQL Server database instance that is hosting the WhatsUp database is configured to use case-insensitive collation.



Tip: If you cannot remember your database server hostname, click Browse to see a list of all database servers detected on the domain. Database servers to which you can connect but which are not configured on the same domain as the computer where you are installing WhatsUp Gold are not shown. The Browse dialog scans your entire domain, so it may take some time before showing you a list of database servers.

14 Complete the information for the database server:

- a) Enter the name of the remote database server from *Step 1* (on page 19) in the **Database server that you are installing to** box. You can also click **Browse** to locate the server.



Note: If you are using a database instance other than the default instance, you must include the instance name using the format <Server_Name>\<Instance_Name>.

- b) Enter the Login ID and Password that you configured for the database server in the **SQL Server Authentication** area.



Important: If you want to change the SQL Server user account, the account you want to use must have the same permissions as the "sa" account.

15 Click **Next**. The Microsoft SQL Server 2008 R2 Express Edition Paths dialog appears. The necessary client and support files install in this location. Select custom installation directories for these files, or keep the default locations.

16 Click **Next**. The Choose Destination Location dialog appears. Select the installation directory for the WhatsUp Gold application files.

The default path is C:\Program Files\Ipswitch\WhatsUp. We recommend that you use the default path.



Tip: The Program Files directory name may vary if on a 64 bit system (for example, Program Files (x86)). You can install WhatsUp Gold to a different location. To select a different location, click **Change**.



Note: If the installation program detects data from a previous installation of WhatsUp Gold, the Backup Web and Report Files dialog appears. We recommend that you select **Back up the existing Web and report files**, then click **Next**.

- 17** After you select the installation directory, click **Next**. The Choose Port dialog appears.
- 18** Choose a TCP port for the WhatsUp Gold web site. The installation program creates an IIS web site using this port. The default port is 80.

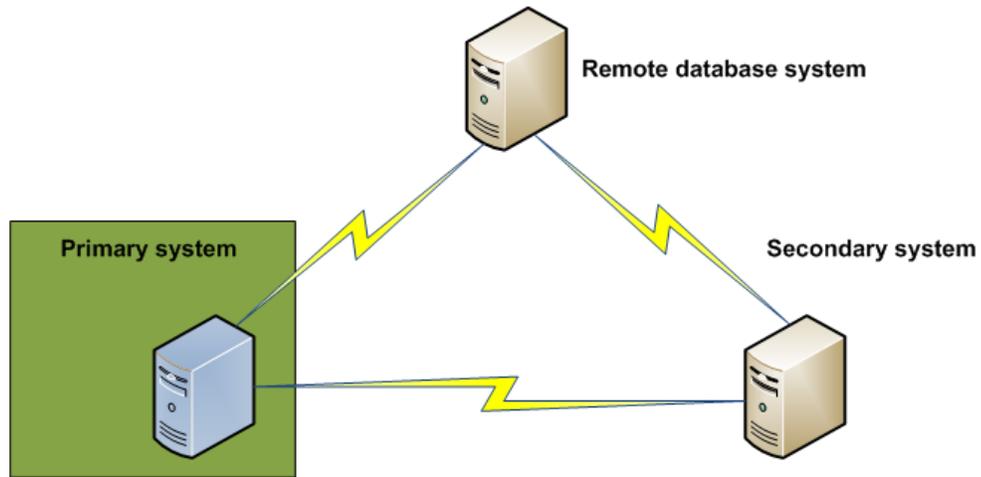


Note: It is recommended that port 80 be used for the WhatsUp Gold web site. If another port number is used, the URL for the WhatsUp Gold web site will require that port number to be appended to the hostname or IP address when forming the URL. For example if you chose 8888 as the port number instead of 80 your URL for a WhatsUp Gold install on the local host would be: localhost:8888/nmconsole

- 19 Note:** If port 80 is used by a current IIS web site, you must either allow WhatsUp Gold to disable that web site and take over port 80, or choose another port.
- 20** Click **Proceed**. The WhatsUp Gold install program begins the installation.
When the installation completes, the InstallShield Wizard Complete dialog appears. To view the steps required to configure WhatsUp Gold Failover, click **View Failover Deployment and User Guide**.
- 21** Click **Finish**. The Setup program closes.
- 22** Click **Finish**. The Installation wizard closes.
- 23** A browser window opens. Close the browser window and continue to *Step 4 Configure Failover Settings on the primary machine* (on page 26).

Step 4 - Configure Failover Settings on the primary machine

After installing WhatsUp Gold Failover Scenario 2 on the database, secondary, and primary machines, you need to configure Failover Settings on the primary machine. For information on how to complete this step, see *Configuring WhatsUp Gold Failover* (on page 43).



Step 4: Failover scenario 2

Upgrading and Restoring

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Upgrading a non-Failover edition of WhatsUp Gold that is using a local database

If the machine you want as your **primary machine in Scenario 1** is currently using a local SQL database, you need to:

- 1 Backup the WhatsUp databases and any custom data files (such as sound files, etc.) (see *Backing up the WhatsUp databases* (on page 38))
- 2 Completely uninstall the previous version of WhatsUp Gold



Note: During the uninstall process, you have the choice to remove WhatsUp Gold, but keep the configuration data; to remove configuration data and uninstall WhatsUp Gold; and to remove the WhatsUp instance of Microsoft SQL Server 2008 R2 Express Edition. In this situation, select the **Remove my configuration data and unistall WhatsUp Gold** and **Also remove the WhatsUp instance of Microsoft SQL Server 2008 R2 Express Edition** options.

- 3 Install WhatsUp Gold Failover on the secondary machine
- 4 Restore the previously backed up databases to the secondary machine (see *Restoring databases to Failover Scenario 1* (on page 39))
- 5 Install WhatsUp Gold Failover on the primary machine
- 6 Copy over the previously backed up custom data files

If the machine you want as your **database machine in Scenario 2** is currently using WhatsUp Gold with a local SQL database, you need to:

- 1 Backup the WhatsUp databases and any custom data files (such as sound files, etc.) (see *Backing up the WhatsUp databases* (on page 38))
- 2 Uninstall WhatsUp Gold, but leave Microsoft SQL Server 2008 R2 Express Edition as well as any data collected by WhatsUp Gold



Note: During the unistall process, you have the choice to remove WhatsUp Gold, but keep the configuration data; to remove configuration data and uninstall WhatsUp Gold; and to remove the WhatsUp instance of Microsoft SQL Server 2008 R2 Express Edition. In this situation, select the **Keep my configuration data, but unistall WhatsUp Gold** option.

- 3 Install WhatsUp Gold Failover on the secondary machine
- 4 Copy over the previously backed up custom data files
- 5 Install WhatsUp Gold Failover on the primary machine
- 6 Copy over the previously backed up custom data files

If the machine you want as either your **primary or secondary machine in Scenario 2** is currently using WhatsUp Gold with a local SQL database, and you want to keep the database data for use on the database machine, you need to:

- 1 Backup the WhatsUp databases and any custom data files (such as sound files, etc.) (see *Backing up the WhatsUp databases* (on page 38))
- 2 Completely uninstall WhatsUp Gold, including the local instance of Microsoft SQL Server 2008 R2 Express Edition and any data that has been collected



Note: During the unistall process, you have the choice to remove WhatsUp Gold, but keep the configuration data; to remove configuration data and uninstall WhatsUp Gold; and to remove the WhatsUp instance of Microsoft SQL Server 2008 R2 Express Edition. In this situation, select the **Remove my configuration data and unistall WhatsUp Gold** and **Also remove the WhatsUp instance of Microsoft SQL Server 2008 R2 Express Edition** options.

- 3 Install WhatsUp Gold Failover on the database machine
- 4 Create the databases using CMD line (see *Creating and restoring databases* (on page 40))
- 5 Restore the database backups to the database machine (see *Creating and restoring databases* (on page 40))
- 6 Install WhatsUp Gold Failover on either the primary or secondary machine
- 7 Copy over the previously backed up custom data files

Upgrading to a secondary machine for Scenario 1



Important: Because Scenario 1 is the only Failover Scenario that uses a local database, and because the local database must exist on the secondary machine in Scenario 1, if you plan to upgrade a non-Failover version of WhatsUp Gold that is using a local database, it can only be upgraded to a secondary machine for Failover Scenario 1.



Important: We recommend that you backup any custom data files prior to upgrading the machine to WhatsUp Gold Failover.

To upgrade a non-Failover version of WhatsUp Gold using a local SQL database to a secondary machine for Failover Scenario 1:

- 1 Log in directly to Microsoft Windows using the *Administrator* account (if you do not have an account called Administrator, use an account that has full administrative privileges to the computer).



Caution: We do *not* recommend using Terminal Services or Remote Desktop to install WhatsUp Gold.

- 2 Start the WhatsUp Setup:
 - If you downloaded an electronic version of the WhatsUp Setup, double-click the downloaded file.
 - If you purchased a WhatsUp Setup CD-ROM, insert the CD-ROM into the appropriate drive. If it does not run automatically, click **Start**, select **Run**, then enter the CD path followed by `AutoRun.exe` (for example, `D:\AutoRun.exe`).
- 3 Select the products you would like to install.



Note: The WhatsUp Setup program detects any currently installed Ipswitch WhatsUp branded software and determines which installation options are available (**New Installation**, **Upgrade**, **Repair** or **Un-install**). This information is displayed to the right of the product name and version.

- 4 Click **Next**. The License Information dialog appears.
- 5 Enter your WhatsUp Gold Serial Number for the secondary server or select an alternative activation method.



Note: You must use the correct license for the secondary and primary servers. The primary license cannot be used to install the secondary system, and the secondary license cannot be used to install the primary system.



Note: You must enter your Serial Number including the Username And Password (UAP) appended to the end of your Serial Number, which combined are a total of 23 characters.



Note: If you are installing using the installation application downloaded from the web link provided in the purchase confirmation email, the WhatsUp Gold Serial Number box will be pre-populated with your Serial Number and UAP.

The following is an example of a serial number, UAP and the complete serial number to be entered in **Serial Number**.

Serial Number (15 characters)	UAP (8 characters)	Complete Serial Number (23 characters)
01MTBDK5TN99NQ1	XKQKC966	01MTBDK5TN99NQ1XKQKC966

- 6 Read the product installation list to ensure that the products and versions you want to install are going to be installed by the WhatsUp Setup.
- 7 Click **Next**. The WhatsUp Setup closes and the products you selected for installation are installed.



Note: Each product's install program will be invoked and will run separately. For more information, see the install instructions for the products you selected for installation.



Read the Welcome screen and click **Next**.

- 8 Click **Next**. The License Agreement dialog appears.
- 9 Read the license agreement. If you accept the terms of the license agreement, select **I accept the terms of the license agreement**.
 - To print a copy of the license agreement, click **Print**. The license agreement is sent to the default printer.
 - If you do not accept the terms of the license agreement, click **Cancel** to exit the installation program.
- 10 Click **Next**. A window appears, informing you that Microsoft SQL Server is installed on the system. Click **OK** to acknowledge the message.
- 11 Click **Next**. The Back Up Existing Database dialog appears.



Important: At this point in the upgrade, the installation program displays a warning box that states because the machine on which you are installing the WhatsUp Gold upgrade is using a local SQL database, WhatsUp Gold is automatically upgrading the machine to a Secondary machine in Failover Scenario 1. Click **OK** to proceed.

- 12 Since the installation program makes changes to the WhatsUp Gold database, we strongly recommend that you select **Yes, back up the existing database**.



Note: If you are upgrading from an installation of WhatsUp Gold 11.x that uses Microsoft SQL Server Desktop Edition as its database, you can select the location where you want to store the backup. For all other upgrades, the backup is made in the default backup location for the database server.

- 13 Click **Next**. The Back Up Web and Report Files dialog appears.

- 14 If you have modified any of the Web or Report files, select **Back up the existing Web and report files**. If this option is selected, the existing Web and report files are copied to a backup folder before the upgrade begins. We recommend that you select this option.
- 15 Click **Next**. The Setup Type dialog appears.
- 16 To change the current IIS settings select **Repair IIS configuration**. To keep the current IIS settings, select **Don't change current IIS configuration**.
- 17 Click **Next**. The Ready to Install the Program dialog appears.
- 18 Click **Proceed**. The WhatsUp Gold install program begins the installation.
- 19 When the installation completes, the InstallShield Wizard Update Complete dialog appears.
- 20 Click **Finish**. The setup program closes.
- 21 Click **Finish**. The Installation wizard closes.

Upgrading a non-Failover edition of WhatsUp Gold that is using a remote database

Both the primary and the secondary machines in Failover Scenario 2 use a remote SQL database, so you can upgrade any non-Failover edition of WhatsUp Gold to either the primary or secondary machine in Failover Scenario 2. In this situation, you need to upgrade the machine to either the primary or secondary machine and do a clean install for the other machine. For example, if you upgraded to the primary machine, you need to do a clean install for the secondary machine on another computer.

Upgrading a non-Failover edition of WhatsUp Gold using a remote database (primary machine)

To upgrade a non-Failover edition of WhatsUp Gold using an existing remote database to a primary machine for Failover Scenario 2:

- 1 Log in directly to Microsoft Windows using the *Administrator* account (if you do not have an account called Administrator, use an account that has full administrative privileges to the computer).



Caution: We do *not* recommend using Terminal Services or Remote Desktop to install any WhatsUp product.

- 2 Start the WhatsUp Setup:
 - If you downloaded an electronic version of the WhatsUp Setup, double-click the downloaded file.
 - If you purchased a WhatsUp Setup CD-ROM, insert the CD-ROM into the appropriate drive. If it does not run automatically, click **Start**, select **Run**, then enter the CD path followed by `AutoRun.exe` (for example, `D:\AutoRun.exe`).
- 3 Select the products you would like to install.



Note: The WhatsUp Setup program detects any currently installed Ipswitch WhatsUp branded software and determines which installation options are available (**New Installation, Upgrade, Repair** or **Un-install**). This information is displayed to the right of the product name and version.

- 4 Click **Next**. The License Information dialog appears.
- 5 Enter your WhatsUp Gold Serial Number for the primary server or select an alternative activation method.



Note: You must use the correct license for the secondary and primary servers. The primary license cannot be used to install the secondary system, and the secondary license cannot be used to install the primary system.



Note: You must enter your Serial Number including the Username And Password (UAP) appended to the end of your Serial Number, which combined are a total of 23 characters.



Note: If you are installing using the installation application downloaded from the web link provided in the purchase confirmation email, the WhatsUp Gold Serial Number box will be pre-populated with your Serial Number and UAP.

The following is an example of a serial number, UAP and the complete serial number to be entered in **Serial Number**.

Serial Number (15 characters)	UAP (8 characters)	Complete Serial Number (23 characters)
01MTBDK5TN99NQ1	XKQKC966	01MTBDK5TN99NQ1XKQKC966

- 6 Click **Next**. The Installation Summary screen appears.
- 7 Read the product installation list to ensure that the products and versions you want to install are going to be installed by the WhatsUp Setup.
- 8 Click **Next**. The WhatsUp Setup closes and the products you selected for installation are installed.



Note: Each product's install program will be invoked and will run separately. For more information, see the install instructions for the products you selected for installation.



Read the Welcome screen and click **Next**.

- 9 Click **Next**. The License Agreement dialog appears.
- 10 Read the license agreement. If you accept the terms of the license agreement, select **I accept the terms of the license agreement**.
 - To print a copy of the license agreement, click **Print**. The license agreement is sent to the default printer.
 - If you do not accept the terms of the license agreement, click **Cancel** to exit the installation program.
- 11 Click **Next** to continue. The Failover Scenario dialog appears.
- 12 Select **Failover Scenario 1**.

- or -

Select **Failover Scenario 2**.



Important: If the machine on which you are installing WhatsUp Gold Failover contains an existing WhatsUp database from a previous installation of WhatsUp Gold, the installation utility automatically installs a secondary system instance for Failover Scenario 1.

- 13 Select **Yes, back up the existing database** to back up a copy of WhatsUp Gold data before upgrading the database, or select **No, do not back up the existing database** to continue without backing up.



Note: Backing up the existing data is recommended. If you choose to back up the database, be sure to allow extra time for the backup process to complete.

- 14 Click **Next**. The Back Up Web and Report Files dialog appears. If you have modified any of the Web or Report files, select **Back up the existing Web and report files**. If this option is selected, the existing Web and report files are copied to a backup folder before the upgrade begins. We recommend that you select this option.
- 15 Click **Next**. The Setup Type dialog appears.
- 16 To change the current IIS settings select **Repair IIS configuration**. To keep the current IIS settings, select **Don't change current IIS configuration**.
- 17 Click **Next**. The Ready to Install the Program dialog appears.
- 18 Click **Proceed**. The WhatsUp Gold install program begins the installation.
When the installation completes, the InstallShield Wizard Complete dialog appears. To view the steps required to configure WhatsUp Gold Failover, select **View Failover Deployment and User Guide** and click **Finish**.
The Setup program closes.
- 19 Click **Finish**. The Installation wizard closes.
- 20 Continue *configuring WhatsUp Gold Failover* (on page 43).

Upgrading a non-Failover edition of WhatsUp Gold using a remote database (secondary machine)

To upgrade a non-Failover edition of WhatsUp Gold using an existing remote database to a secondary machine for Failover Scenario 2:

- 1 Log in directly to Microsoft Windows using the *Administrator* account (if you do not have an account called Administrator, use an account that has full administrative privileges to the computer).



Caution: We do *not* recommend using Terminal Services or Remote Desktop to install any WhatsUp product.

- 2 Start the WhatsUp Setup:
 - If you downloaded an electronic version of the WhatsUp Setup, double-click the downloaded file.

- If you purchased a WhatsUp Setup CD-ROM, insert the CD-ROM into the appropriate drive. If it does not run automatically, click **Start**, select **Run**, then enter the CD path followed by `AutoRun.exe` (for example, `D:\AutoRun.exe`).

3 Select the products you would like to install.



Note: The WhatsUp Setup program detects any currently installed Ipswitch WhatsUp branded software and determines which installation options are available (**New Installation**, **Upgrade**, **Repair** or **Un-install**). This information is displayed to the right of the product name and version.

4 Click **Next**. The License Information dialog appears.

5 Enter your WhatsUp Gold Serial Number for the secondary server or select an alternative activation method.



Note: You must use the correct license for the secondary and primary servers. The primary license cannot be used to install the secondary system, and the secondary license cannot be used to install the primary system.



Note: You must enter your Serial Number including the Username And Password (UAP) appended to the end of your Serial Number, which combined are a total of 23 characters.



Note: If you are installing using the installation application downloaded from the web link provided in the purchase confirmation email, the WhatsUp Gold Serial Number box will be pre-populated with your Serial Number and UAP.

The following is an example of a serial number, UAP and the complete serial number to be entered in **Serial Number**.

Serial Number (15 characters)	UAP (8 characters)	Complete Serial Number (23 characters)
01MTBDK5TN99NQ1	XKQKC966	01MTBDK5TN99NQ1XKQKC966

6 Read the product installation list to ensure that the products and versions you want to install are going to be installed by the WhatsUp Setup.

7 Click **Next**. The WhatsUp Setup closes and the products you selected for installation are installed.



Note: Each product's install program will be invoked and will run separately. For more information, see the install instructions for the products you selected for installation.



Read the Welcome screen and click **Next**.

8 Click **Next**. The License Agreement dialog appears.

9 Read the license agreement. If you accept the terms of the license agreement, select **I accept the terms of the license agreement**.

- To print a copy of the license agreement, click **Print**. The license agreement is sent to the default printer.

- If you do not accept the terms of the license agreement, click **Cancel** to exit the installation program.

10 Click **Next** to continue. The Failover Scenario dialog appears.

11 Select **Failover Scenario 2**.



Important: If the machine on which you are installing WhatsUp Gold Failover contains an existing WhatsUp database from a previous installation of WhatsUp Gold, the installation utility automatically installs a secondary system instance for Failover Scenario 1.

12 Click **Next**. The Back up Existing Database dialog appears.

13 Select **Yes, back up the existing database** to back up a copy of the WhatsUp Gold data before upgrading the database, or select **No, do not back up the existing database** to continue without backing up.



Note: Backing up the existing data is recommended. If you choose to back up the database, be sure to allow extra time for the backup process to complete.

14 Click **Next**. The Back Up Web and Report Files dialog appears.

If you have modified any of the Web or Report files, select **Back up the existing Web and report files**. If this option is selected, the existing Web and report files are copied to a backup folder before the upgrade begins. We recommend that you select this option.

15 Click **Next**. The Setup Type dialog appears.

16 To change the current IIS settings select **Repair IIS configuration**. To keep the current IIS settings, select **Don't change current IIS configuration**.

17 Click **Next**. The Ready to Install the Program dialog appears.

Click **Proceed**. The WhatsUp Gold install program begins the installation.

When the installation completes, the InstallShield Wizard Complete dialog appears.

To view the steps required to configure WhatsUp Gold Failover, click **View Failover Deployment and User Guide**.

Click **Finish**. The Setup program closes.

18 Click **Finish**. The Installation wizard closes.

Upgrading an edition of WhatsUp Gold Failover

Upgrading an existing WhatsUp Gold Failover installation is accomplished using the latest release of the Failover version of the WhatsUp Gold installation program for the installation type (Distributed, Professional, or Standard) you initially installed on the server. The WhatsUp Gold Failover upgrade must be performed on both the primary and secondary server in any order. When you run the upgrade, the program stops all WhatsUp Gold services on the local server. When the upgrade is complete, the installation program restarts the services on the local server. Services on the remote server must be started manually using the Services Manager (**Start > Services Manager**).



Important: When you upgrade an existing edition of WhatsUp Gold Failover, the remote machine remains completely stopped after the upgrade and you must manually restart its Failover Service. For example, if you upgrade a Secondary installation of WhatsUp Gold Failover, the Primary installation's Failover Service remains stopped after the Secondary upgrade completes. In this situation, the Secondary installation takes over polling duties until you manually restart the Primary installation's Failover Service (**Start > Services Manager**).

When you upgrade WhatsUp Gold Failover, the upgrade retains the current Failover scenario specifications. For example, if you upgrade a primary machine for Failover Scenario 1, the machine remains the primary machine for Failover Scenario 1 after the upgrade.

To upgrade an existing WhatsUp Gold Failover installation:

- 1 Log in directly to Microsoft Windows using the *Administrator* account (if you do not have an account called Administrator, use an account that has full administrative privileges to the computer).



Caution: We do *not* recommend using Terminal Services or Remote Desktop to install WhatsUp Gold.

- 2 Start the WhatsUp Setup:
 - If you downloaded an electronic version of the WhatsUp Setup, double-click the downloaded file.
- 3 If you purchased a WhatsUp Setup CD-ROM, insert the CD-ROM into the appropriate drive. If it does not run automatically, click **Start**, select **Run**, then enter the CD path followed by `AutoRun.exe` (for example, `D:\AutoRun.exe`).
- 4 Select the products you would like to install.



Note: The WhatsUp Setup program detects any currently installed Ipswitch WhatsUp branded software and determines which installation options are available (**New Installation**, **Upgrade**, **Repair** or **Un-install**). This information is displayed to the right of the product name and version.

- 5 Click **Next**. The License Information dialog appears.
- 6 Enter the appropriate license for the server you are upgrading. Use the primary license on the primary server, and the secondary license for the secondary server.
- 7 Click **Next**. The Installation Summary screen appears.
- 8 Read the product installation list to ensure that the products and versions you want to install are going to be installed by the WhatsUp Setup.
- 9 Click **Next**. The WhatsUp Setup closes and the products you selected for installation are installed.



Note: Each product's install program will be invoked and will run separately. For more information, see the install instructions for the products you selected for installation.

- 10 Click **Proceed**. The WhatsUp Gold install program begins the installation.



Read the Welcome screen and click **Next**.

- 11** Click **Next**. The License Agreement dialog appears.
- 12** Read the license agreement. If you accept the terms of the license agreement, select **I accept the terms of the license agreement**.
 - To print a copy of the license agreement, click **Print**. The license agreement is sent to the default printer.
 - If you do not accept the terms of the license agreement, click **Cancel** to exit the installation program.
- 13** Click **Next**. The Back Up Existing Database dialog appears. Since the installation program makes changes to the WhatsUp Gold database, we strongly recommend that you select **Yes, back up the existing database**.



Important: At this point in the upgrade, the installation program displays a warning box that states because the machine on which you are installing the WhatsUp Gold upgrade is using a local SQL database, WhatsUp Gold is automatically upgrading the machine to a Secondary machine in Failover Scenario 1. Click **OK** to proceed.



Note: If you are upgrading from an installation of WhatsUp Gold 11.x that uses Microsoft SQL Server Desktop Edition as its database, you can select the location where you want to store the backup. For all other upgrades, the backup is made in the default backup location for the database server.

- 14** Click **Next**. The Back Up Web and Report Files dialog appears.
- 15** If you have modified any of the Web or Report files, select **Back up the existing Web and report files**. If this option is selected, the existing Web and report files are copied to a backup folder before the upgrade begins. We recommend that you select this option.



Note: If you are upgrading from an installation of WhatsUp Gold 11.x that uses Microsoft SQL Server Desktop Edition as its database, you can select the location where you want to store the backup. For all other upgrades, the backup is made in the default backup location for the database server.

- 16** Click **Next**. The Choose Port dialog appears.
- 17** Choose a TCP port for the WhatsUp Gold web site. The installation program creates an IIS web site using this port. The default port is 80.



Note: It is recommended that port 80 be used for the WhatsUp Gold web site. If another port number is used, the URL for the WhatsUp Gold web site will require that port number to be appended to the hostname or IP address when forming the URL. For example if you chose 8888 as the port number instead of 80 your URL for a WhatsUp Gold install on the local host would be: *localhost:8888/nmconsole*.

If port 80 is used by a current IIS web site, you must either allow WhatsUp Gold to disable that web site and take over port 80, or choose another port.



Note: If port 80 is currently being used by a IIS web site, a message appears that will give you the option to allow WhatsUp Gold to disable that web site and take over port 80.

18 Click **Next**. A dialog appears which prompts you to upgrade your database.



Important: Do not interrupt the database upgrade process once it has begun.



Note: The database upgrade process only occurs once for every failover configuration. For example, if you are upgrading either the primary or the secondary in Failover Scenario 1, the database will be upgraded during that process. When you upgrade the other Failover server, you will see the dialog again, but the installation wizard will detect that the database has already been upgraded and it will not upgrade the database again. Similarly, in Failover Scenario 2, the remote database will be upgraded when you upgrade either the primary or secondary server, and will not be upgraded a second time when the other server is upgraded.

19 Click **Yes** to upgrade the database and continue, or click **No** to exit the installation wizard.



Note: The upgrade process may take a long time if the database is very large.

20 Click **Next**. The Ready to Install the Program dialog appears.

21 Click **Install**. The installation program begins upgrading WhatsUp Gold.

When the installation completes, the InstallShield Wizard Complete dialog appears. To view the steps required to configure WhatsUp Gold Failover, click **View Failover Deployment and User Guide**.

22 Click **Finish**. The Setup program closes.

23 Click **Finish**. The Installation wizard closes.

24 If you are prompted to do so, change the Admin password. Check the *Failover settings* (on page 43) using the console, and continue upgrading any additional servers in the Failover configuration.

Backing up the WhatsUp databases



Caution: Any data collected from the time you back up the databases to when you restore them on the new server will be lost. We recommend executing these steps during non-peak times, when minimal downtime can be tolerated.

To back up the databases:

1 Back up the WhatsUp Gold database.

- a) From the WhatsUp Gold console, select **Tools> Database Utilities > Back Up WhatsUp SQL Database**. The Save Database As dialog appears.
- b) Enter a name for the database backup file, such as `whatsup_backup.bak`, then click **Save**.
- 2 Back up the Flow Monitor database.
 - a) From the WhatsUp Gold console, select **Tools> Database Utilities > Back Up Flow Monitor SQL Databases > Back Up Flow Monitor Current Database**. The Save Database As dialog appears.
 - b) Enter a name for the database backup file, such as `nf_backup.bak`, then click **Save**.
- 3 Back up the Flow Monitor archive database.
 - a) From the WhatsUp Gold console, select **Tools> Database Utilities > Back Up Flow Monitor SQL Databases > Back Up Flow Monitor Archive Database**. The Save Database As dialog appears.
 - b) Enter a name for the database backup file, such as `nfarchive_backup.bak`, then click **Save**.
- 4 Close the WhatsUp Gold console.



Note: These operations may take some time depending on the size of your database.



Note: Even if you do not use the WhatsUp Gold Flow Monitor plug-in, you need to back up the Flow Monitor databases.

Restoring databases to Failover Scenario 1



Note: You can only restore the database from a local drive; you cannot restore a database from a network drive.

To restore the backed-up databases over the new server's default databases:

- 1 Restore the WhatsUp Gold database.
 - a) From the WhatsUp Gold console, select **Tools> Database Utilities > Restore WhatsUp SQL Database**. The Restore Database From dialog appears.
 - b) Locate and select the database backup file that you moved from the existing WhatsUp Gold server, then click **Open**.



Note: If a dialog appears informing you that the WhatsUp service must be stopped and restarted during a database restore, click **Yes**.

- 2 Restore the Flow Monitor database.
 - a) From the WhatsUp Gold console, select **Tools> Database Utilities > Restore Flow Monitor SQL Databases > Restore Flow Monitor Current Database**. The Restore Database From dialog appears.

- b) Locate and select the database backup file that you moved from the existing WhatsUp Gold server, then click **Open**.



Note: If a dialog appears informing you that the Flow Monitor service must be stopped and restarted during a database restore, click **Yes**.

- 3 Restore the Flow Monitor Archive database.
 - a) From the WhatsUp Gold console, select **Tools > Database Utilities > Restore Flow Monitor SQL Databases > Restore Flow Monitor Archive Database**. The Restore Database From dialog appears.
 - b) Locate and select the database backup file that you moved from the existing WhatsUp Gold server, then click **Open**.



Note: If a dialog appears informing you that the Flow Monitor service must be stopped and restarted during a database restore, click **Yes**.

Creating and restoring databases for use in WhatsUp Gold Failover Scenario 2

To restore a previously backed up database, execute this procedure on the computer on which you have installed the **database machine for Failover Scenario 2**:



Note: If your WhatsUp database has a name other than the default, use your custom database name where the database called "WhatsUp" is indicated in the following command line steps.

- 1 Open a command prompt.
- 2 Create the three databases into which you will restore the backups from your previous non-Failover installation of WhatsUp Gold. To create these databases, execute the following case-sensitive commands:

- To create the WhatsUp database:

```
sqlcmd -E -S "(local)\whatsup" -Q "CREATE DATABASE WhatsUp"
```

- To create the Flow Monitor database:

```
sqlcmd -E -S "(local)\whatsup" -Q "CREATE DATABASE NetFlow"
```

- To create the NFArchive database:

```
sqlcmd -E -S "(local)\whatsup" -Q "CREATE DATABASE NFArchive"
```



Important: The database names must exactly match the database names from the backups you made of your previous installation of WhatsUp Gold. By default, these names are: WhatsUp, NetFlow, and NFArchive.

- 3 For each of the three databases, import the backup file into the new database. Use this case-sensitive command:



Important: The entire command should be entered on a single line in the command prompt.

```
sqlcmd -E -S "<SQL server name>" - Q "RESTORE DATABASE <database name> FROM DISK='<location of .dat file>' WITH REPLACE, MOVE '<database name>' TO '<location of data file for SQL database>', MOVE '<database log>' TO '<location of log file for SQL database>'"
```



Note: The value of <database name> for the WhatsUp database is usually WhatsUp. However, if you are upgrading a database created by WhatsUp Gold v12.0.2 or earlier, use WhatsUp_dat. For <database log>, always use WhatsUp_log.



Note: If you do not know the location of the data and log files for the databases, you can use SQL Server Management Studio to find this information. In SQL Server Management Studio, right-click the database, select Properties, then select the Files page. You can identify which file is the data file by the value in the File Type column. The locations for the data and log files are under the Path column.

For example:



Note: These examples assume that you are restoring to the named "WhatsUp" instance created within Microsoft SQL Server Express Edition 2005 during the WhatsUp Gold Failover installation, and that the paths to data and log files were not changed from the default values.

To import the WhatsUp database, enter the following command on a **single line** in the command prompt:

```
sqlcmd -E -S "(local)\whatsup"  
  
-Q "RESTORE DATABASE WhatsUp  
  
FROM DISK='D:\database.dat' WITH REPLACE,  
  
MOVE 'WhatsUp_dat'  
  
TO 'C:\Program Files\Microsoft SQL Server\  
  
MSSQL.1\MSSQL\Data\WhatsUp.mdf',  
  
MOVE 'WhatsUp_log'  
  
TO 'C:\Program Files\Microsoft SQL Server\  
  
MSSQL.1\MSSQL\Data\WhatsUp_log.ldf'"
```



Note: If you are migrating a database created by WhatsUp Gold v12.3 or later, replace `WhatsUp_dat` with `WhatsUp` in the example above.

To import the Flow Monitor database, enter the following command on a **single line** in the command prompt:

```
sqlcmd -E -S "(local)\whatsup"  
  
-Q "RESTORE DATABASE NetFlow  
  
FROM DISK='D:\NetflowCurrentDatabase.dat' WITH REPLACE,  
  
MOVE 'NetFlow'  
  
TO 'C:\Program Files\Microsoft SQL Server\  
MSSQL.1\MSSQL\Data\NetFlow.mdf',  
  
MOVE 'NetFlow_log'  
  
TO 'C:\Program Files\Microsoft SQL Server\  
MSSQL.1\MSSQL\Data\NetFlow_log.ldf'"
```

To import the NFArchive database, enter the following command on a **single line** in the command prompt:

```
sqlcmd -E -S "(local)\whatsup"  
  
-Q "RESTORE DATABASE NFArchive  
  
FROM DISK='D:\NetflowArchiveDatabase.dat' WITH REPLACE,  
  
MOVE 'NFArchive'  
  
TO 'C:\Program Files\Microsoft SQL Server\  
MSSQL.1\MSSQL\Data\NFArchive.mdf',  
  
MOVE 'NFArchive_log'  
  
TO 'C:\Program Files\Microsoft SQL Server\  
MSSQL.1\MSSQL\Data\NFArchive_log.ldf'"
```



Important: You must import all three databases.

After you receive the response that the database was successfully restored for each of the three databases, close the command prompt.

Configuring your Failover Solution

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Configuring WhatsUp Gold Failover

WhatsUp Gold Failover edition is an optional WhatsUp Gold product and differs from non-Failover editions in the way that it delivers the `app.config` file to the Ipswitch Services Controller. In non-Failover editions of WhatsUp Gold, all services are set to automatically start after installation and activation. In WhatsUp Gold Failover edition, all services except for the Failover Service are set to be manually started. The Failover Service is set to automatically start because it is the mechanism responsible for setting the active machine in your Failover solution. When the Failover Service sets a machine to active, it manually turns on the services you specify as necessary for the machine to successfully poll and manage your network.

In order for WhatsUp Gold Failover to begin polling and verifying the up state of the Primary machine, you must:

- 1 Configure the Failover Service for the Primary machine
- 2 Verify and/or modify WhatsUp Gold Failover advanced settings
- 3 Create and apply the Windows Credentials that are used for communication between the Primary and Secondary machines

After you have completed all three requirements, the primary machine becomes active, with necessary WhatsUp services started and available for use. Subsequently, any time the primary machine is rebooted, the Failover Service again considers if the machine should be active, and has the ability to start the required WhatsUp services automatically.



Note: In order for the required WhatsUp services to be started automatically, you must select the **Primary Automatic Restart** option on the Failover Advanced Configuration dialog.

Configuring the Failover Service

The Failover Service watches over the services running on the Primary WhatsUp Gold machine. If any of the services that you include in the Failover Service fails unexpectedly, the Primary WhatsUp Gold machine is considered to be in a failed state and Failover is initiated. You can set the active WhatsUp Gold installation from the WhatsUp Gold console (**Start > Ipswitch WhatsUp Gold > WhatsUp Gold**) using the Failover Console dialog (**Tools > Failover Console**). Click **Configure** and configure the Failover Service as follows:

- 1 Enter or select the appropriate information:
 - **Use ALL selected services.** Selecting this option tells Failover that unless *all* of the services selected go down, the primary Whats Up Gold machine continues to perform network polling duties. In the event that all of the selected services go down, the primary WhatsUp Gold machine is considered to be in a failed state and the secondary WhatsUp gold machine takes over network polling duties.
 - **Use ANY selected services.** Selecting this option tells Failover that if *any one* of the selected services goes down, the primary WhatsUp Gold machine is considered to be in a failed state and the secondary WhatsUp Gold machine takes over network polling duties.
- 2 Select the service(s) that you want to apply to the Failover Service.

WhatsUp Gold services:

- Polling Engine (`nm-service.exe`)
- Flow Collector (`bw-collector-net.exe`)
- Alert Center (`alert-center-service.exe`)
- Configured (`network-config-service.exe`)
- Discovery (`discovery-service.exe`)
- Failover Manager (`nm-failover.exe`)
- API (`nm-api.exe`)
- Connected Data Service (`network-viewer-data-service.exe`)
- Virtual Service (`what-virtual-service.exe`)
- Service Bus (`nm-service-bus.exe`)
- Polling Controller (`nm-polling-controller.exe`)
- Data Collector (`nm-data-collector.exe`)
- Active Monitor Manager (`nm-managers.exe`)
- Poller (`nm-poller.exe`)
- Task Controller (`nm-task-controller.exe`)
- Wireless (`nm-wireless.exe`)
- WhatsUp Configuration API (`nm-configuration-manager.exe`)
- WhatsUp Message Server (`nm-message-server.exe`)



Note: The Flow Collector, WhatsConnected, WhatConfigured, and WhatsVirtual services only appear if you have a license for the Flow Monitor, WhatsUp Gold WhatsConnected, WhatsUp Gold WhatsConfigured, or WhatsVirtual plug-in.

The description at the bottom of the dialog explains how the services you choose relate to your configuration of WhatsUp Gold Failover.



Important: Click **Advanced** to configure the Failover Service's advanced settings, including whether the primary machine is automatically restarted when it returns to a normal state.

- 3 Click **OK** to save changes.

Configuring Advanced Settings

To configure Advanced Failover Settings:

- 1 Enter or select the appropriate information:
 - **Primary Automatic Restart.** When this option is selected and the primary machine returns to a normal state after a previous failed state, WhatsUp Gold starts the required WhatsUp services and the primary machine automatically resumes network polling duties. If this option is not selected and polling switches to the secondary machine, when the primary machine returns to a normal state, you must manually enable the Primary machine with the **Set Active** option, located on the Failover Console's main dialog.
 - **Failure duration (minutes).** Enter the amount of time in minutes that the Primary WhatsUp machine should be considered in a failed state before Failover switches network polling duties to the Secondary machine.
 - **Status Query Interval (minutes):** Specify the amount of time in minutes that indicates how often the Primary and Secondary WhatsUp Gold machines ping one another for a heartbeat status.
 - **Primary Credentials.** Select the set of Windows credentials the secondary machine will use to communicate with the primary WhatsUp Gold machine. If you do not see the appropriate credentials, browse (...) to the Windows Credentials Library to configure a set of Windows credentials.
 - **Secondary Credentials.** Select the set of Windows credentials the primary machine will use to communicate with the secondary WhatsUp Gold machine. If you do not see the appropriate credentials, browse (...) to the Windows Credentials Library to configure a set of Windows credentials.
- 2 Click **OK** to save changes.

Configuring Windows credentials

The Windows Credential Library stores login information necessary for heartbeat communications between the primary and secondary Failover machines. You need to configure appropriate Windows credentials for both the primary and secondary machines in order for WhatsUp Gold Failover to successfully implement your Failover solution.

To configure Windows Credentials:

- 1 Open the Windows Credentials Library:
 - a) From the main menu of the WhatsUp Gold console, select **Tools > Failover Console**. The WhatsUp Gold Failover Console appears.
 - b) Click **Configure**. The Failover Service Configuration dialog appears.
 - c) Click **Advanced**. The Advanced Failover Settings dialog appears.
 - d) Next to **Primary credentials**, click the browse (...) button. The Windows Credentials Library appears.
- 2 Click **New** to create a new Windows credential to add to the library. The Windows Credential dialog appears.
- 3 Enter or select the appropriate information:
 - **Name**. Enter a name for the set of credentials. This name appears in the Windows Credentials Library.
 - **Description**. Enter a short description for the set of credentials. This description is displayed next to the credential name to help you differentiate credential sets.
 - **Domain\User ID**. Enter the domain or user ID associated with the machine to which you want to connect.
 - **Password**. Enter the password associated with the domain or user ID listed above.
 - **Confirm Password**. Re-enter the password.
- 4 Click **OK** to save changes.

CHAPTER 5

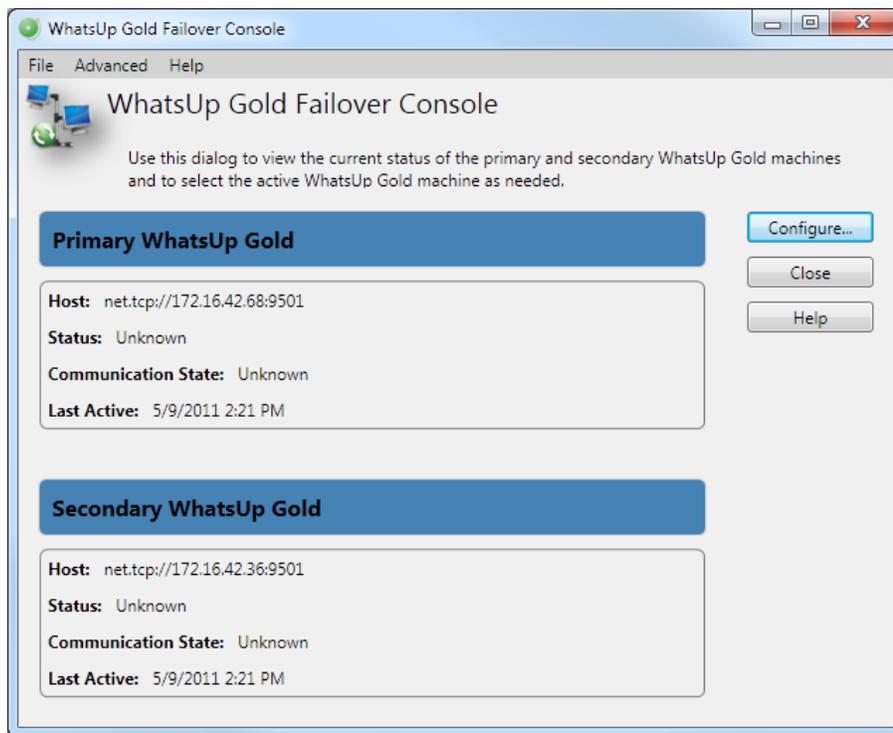
Viewing Failover Data

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About the Failover Console

The main dialog of the Failover Console displays important status information for both the primary and secondary WhatsUp Gold machines.



The dialog displays the following information for the primary and secondary WhatsUp Gold machines:

- **Host.** The machine's host address.
- **Status.** The machine's current status. Can either be:
 - Active* - currently polling the network.
 - Standby* - ready to assume network polling duties if/when the active machine goes down.

Down - unable to perform network polling duties.

Unknown - status is not known to Failover.

- **Communication State.** The communication state is listed from the point of view from the other machine. For example, if the primary machine has attempted to communicate with the secondary machine and is unable to for some reason, the communication state is listed as *Unknown*. Can either be:

Unknown - a machine is unable to communicate with the other machine for an unknown reason.

Connection failed - a machine is unable to communicate with the other machine because the other machine is not known to exist from the machine's standpoint (no known host, etc.).

Service running - a machine has communicated with the other machine and finds that the Failover service is running.

Good credential - a machine has communicated with the other machine and finds a good credential for further heartbeat communication.

Bad credential - a machine has communicated with the other machine and while the machine does in fact exist, the credentials provided for communication are bad.

- **Last Active.** The last time the machine successfully sent a heartbeat message to the other machine.



Tip: In addition to viewing status information, you can use the Failover Console's main dialog to access Failover Service configuration dialogs and to set the active WhatsUp Gold machine.

About the Alert Center Failover Threshold report

The Alert Center includes a default Failover Threshold that notifies you of any Failover Service events that occur. A dashboard report for the threshold displays on the Alert Center Home page.

Source	Category	Message	Time Alerted
Secondary	error	Secondary is taking over for the Primary. Reason=The 'Primary' h...	Thu 05/12 8:30 AM

Secondary is taking over for the Primary. Reason=The 'Primary' has been down for 5.41 minutes. Last Activity time in the database is 5/12/2011 8:24:57 AM.

The report includes the following Failover event data:

- **Source.** The machine on which the failover event took place.



Tip: Click a source to view the Alert Center Item Details for that device.

- **Category.** The category of activity and message; either *information* or *error*.
- **Message.** The message generated as a result of the failover event.



Tip: Hover over a message with your mouse to view the message in its entirety.



Tip: Click an entry in the Message column to view the General Error Log.

- **Time Alerted.** The time the Alert Center discovered the failover event.



Note: While WhatsUp Gold Failover includes a default Alert Center threshold, it does not include a default notification policy. If you want to receive notifications for this threshold, configure and/or associate a notification policy with the threshold from the New/Edit Failover Threshold dialog.

The screenshot shows a dialog box titled "New Failover Threshold". It has a standard Windows-style title bar with a question mark and a close button. The dialog is divided into three main sections. The first section, "Name", has a text input field containing "Monitoring for Failover" and a red flag icon to its right. The second section, "Threshold", has a text area containing the text "The threshold will alert when any event has occurred in Failover.", where "any" is in a dropdown menu. The third section, "Notification", has a dropdown menu currently set to "(No policy)" and a small "+" button to its right. The fourth section, "Threshold Check", has a text area containing "Check threshold every 5 minutes.", where "5" is in a text input field. At the bottom of the dialog are two buttons: "OK" and "Cancel".

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