



IPSWITCH

## Database Migration Guide

Learn how to migrate a WhatsUp Gold database from Microsoft® SQL Server® 2005 Express Edition to Microsoft® SQL Server® 2005 Enterprise, Standard, or Workgroup Editions.



# Database Migration Guide

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## Overview

This document explains how to migrate the WhatsUp Gold v12.3 database from an instance of Microsoft® SQL Server® 2005 Express Edition installed on the same computer as WhatsUp Gold to a local or remote instance of Microsoft® SQL Server® 2005.

To migrate a database from a previous version of WhatsUp Gold, you can:

- Upgrade to WhatsUp Gold v12.3 and follow these instructions.
- Consult the user guide for the previous version of WhatsUp Gold for instructions specific to that version.

## Step 1: Verify Microsoft® SQL Server® meets requirements

You can use an existing Microsoft® SQL Server® 2005 server to store the data collected by WhatsUp Gold. To do this, these requirements must be met:

- Microsoft® SQL Server® 2005 English must be installed on the WhatsUp Gold host computer or another computer.



**Important:** WhatsUp Gold does not support non-English versions of Microsoft® SQL Server® 2005.

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- Microsoft® SQL Server® 2005 must be configured to allow WhatsUp Gold to authenticate.
  - If Microsoft® SQL Server® 2005 is installed on a remote computer, remote connections must be allowed. For more information, see *How to configure Microsoft® SQL Server® 2005 to allow remote connections* (<http://support.microsoft.com/kb/914277>).
  - We recommend using a Microsoft® SQL Server® user account to connect to the database. However, if the Microsoft® SQL Server® database exists on the same computer or both computers are members of the same domain, you may use Windows authentication. For more information about enabling mixed mode authentication in Microsoft® SQL Server® 2005, see the Microsoft article about *Authentication Mode* (<http://msdn2.microsoft.com/en-us/library/ms144284.aspx>).



**Note:** When using Windows Authentication, the WhatsUp Gold services and applications must run as the database user.

- Microsoft® SQL Server® 2005 must be configured to have a user account that meets the following requirements:
  - Full administrator privileges to Microsoft® SQL Server® 2005, 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® 2005 documentation* (<http://support.microsoft.com/ph/2855>).



**Note:** WhatsUp Gold no longer supports Microsoft® SQL Server® 2000.

## Step 2: Back up the database

Execute this procedure on the computer where WhatsUp Gold is installed.

- 1 From the WhatsUp Gold console, back up the WhatsUp and NetFlow databases.



**Note:** When you back up a database, you are prompted for a file name for the backup file and a folder to save it in.

- To back up the WhatsUp database, select **Tools > Database Utilities > Back Up WhatsUp SQL Database**.
- To back up the NetFlow database, select **Tools > Database Utilities > Back Up NetFlow SQL Databases > Back Up NetFlow Current Database**.
- To back up the NFArchive database, select **Tools > Database Utilities > Back Up NetFlow SQL Databases > Back Up NetFlow Archive Database**.

- 2 Close or shut down all programs and services that interact with WhatsUp Gold.
  - Close the WhatsUp Gold console.
  - Stop the Ipswitch WhatsUp Engine service. For more information, see *Stopping and starting the Ipswitch WhatsUp Engine* in the WhatsUp Gold User Guide.
  - Stop the Ipswitch NetFlow Collector service. For more information, see *Stopping or restarting the collector* in the WhatsUp Gold User Guide.
  - Stop the Web server.
    - If you are using the WhatsUp Gold Web server, stop the Ipswitch Web Server\$WhatsUp service. For more information, see *Stopping and starting the internal web server* in the WhatsUp Gold User Guide.
    - If you are using IIS as your web server, stop the IIS service.
  - Close the Ipswitch Task Tray application and the WhatsUp Gold Desktop Actions task tray application. For each, right-click the icon and select **Close**.
- 3 If the Microsoft® SQL Server® 2005 server to which you are migrating the database is installed on another computer, copy the .dat files created during the backup process to the remote computer. These files are located in the locations you specified during step 1.

## Step 3: Migrate the database to Microsoft® SQL Server® 2005

Execute this procedure on the computer where Microsoft® SQL Server® 2005 is installed.

- 1 Open a command prompt on the computer where Microsoft® SQL Server® 2005 is installed.
- 2 Create three databases on Microsoft® SQL Server® 2005. These are the databases into which you will restore the backups from Microsoft® SQL Server® 2005 Express Edition. To create the databases, execute the following case-sensitive commands:



**Note:** In the following commands, substitute `<SQL server name>` with the host name of Microsoft® SQL Server® 2005. If Microsoft® SQL Server® 2005 uses a named instance (rather than the default instance), enter `SQL_server_name\Instance_name` for `<SQL server name>`.

- To create the WhatsUp database:

```
sqlcmd -E -S "<SQL server name>" -Q "CREATE DATABASE WhatsUp"
```
- To create the NetFlow database:

```
sqlcmd -E -S "<SQL server name>" -Q "CREATE DATABASE NetFlow"
```
- To create the NFArchive database:

```
sqlcmd -E -S "<SQL server name>" -Q "CREATE DATABASE NFArchive"
```

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**Note:** Database names must exactly match the database names from Microsoft® SQL Server® 2005 Express Edition: *WhatsUp*, *NetFlow*, and *NFArchive*.



**Note:** If Microsoft® SQL Server® 2005 is configured with non-default collation standards, you must set collation for each database to *SQL\_Latin1\_General\_CP1\_CI\_AS*.

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



**Note:** 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 migrating 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 default instance on a Microsoft® SQL Server® 2005 with a host name of *SQLServer*, and that the paths to data and log files follow Microsoft defaults.

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

```
sqlcmd -E -S "SQLServer"  
-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 NetFlow database, enter the following command **on a single line** in the command prompt:

```
sqlcmd -E -S "SQLServer"  
-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 "SQLServer"  
-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.

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

## Step 4: Update the database connections

Execute this procedure on the computer where WhatsUp Gold is installed.

- 1 Specify a username and password for WhatsUp Gold to use when connecting to the database.
  - a) From the Windows Start menu, select **Control Panel > Administrative Tools > Data Sources** and select the **System DSN** tab.
  - b) Select the `WhatsUp` DSN and click **Configure**. The Configuration wizard appears.
  - c) Verify that the fields in the first dialog are correct for your SQL Server authentication preferences, then click **Next**.
  - d) On the second dialog, verify that the **With SQL Server authentication using login ID and password entered by the user** option is selected. In the **Login** field, enter the SQL username. In the **Password** field, enter the SQL user's password. Click **Next**.
  - e) On the third dialog, verify that **Change the default database to** is selected and that the WhatsUp database appears in the drop-down menu. Click **Next**.
  - f) Continue to click **Next** until you come to the final dialog, then click **Finish**. The ODBC Microsoft SQL Server Setup dialog opens. You can click **Test Data Source** to test the configuration or click **OK**.
  - g) Repeat steps b-f for the `NetFlow` DSN.
- 2 Configure WhatsUp Gold and its plug-ins to use the updated username and password for the database.
  - a) Browse to the WhatsUp Gold install directory and run `NmConfig.exe`.
  - b) Select **Use SQL Server Authentication**.
  - c) Enter the **Username** and **Password** that you entered in the DSN, then click **Connect**. The utility verifies the connection information. If the information is correct, the Update Registry dialog appears.
  - d) Verify that **Restart the WhatsUp service after the update** is selected.



**Note:** `NmConfig.exe` can only restart services that are already running when the utility is launched. If the services are not started when `NmConfig.exe` is run, you must manually start them after `NmConfig.exe` closes.

- e) Click **Save**. The utility updates the database connection settings and restarts effected services. The Finished dialog appears.
- f) Click **Finish**. The `NmConfig.exe` utility closes.

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- 3 Remove the Microsoft® SQL Server® 2005 Express Edition service dependencies from Ipswitch WhatsUp Engine and Ipswitch Netflow Collector services.
  - a) Open the Windows command prompt. Select **Start > Run**, then enter `cmd.exe`.
  - b) Enter the following commands:
    - `sc config "Ipswitch WhatsUp Engine" depend= "RPCSS"`
    - `sc config "Ipswitch Netflow Collector" depend= ""`



**Note:** There is a space after `depend=` and before `"RPCSS"` and `""`. This space is required!

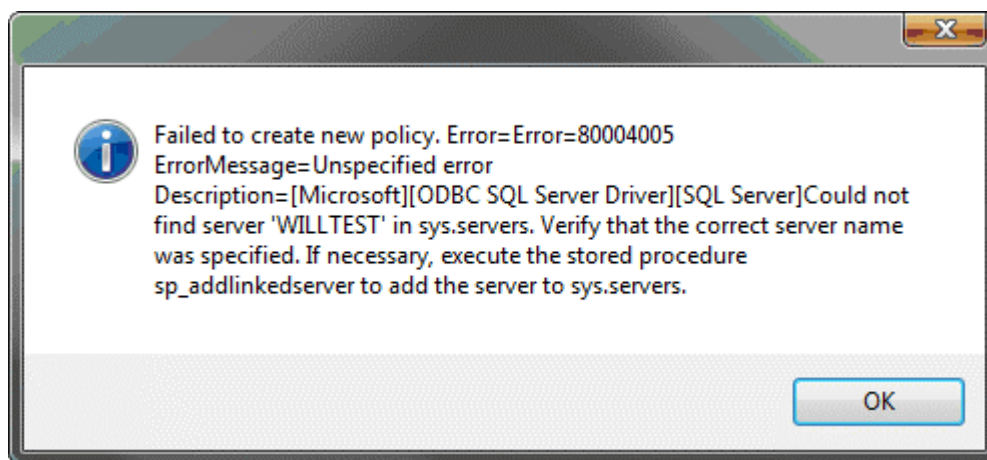
These commands remove the dependency on Microsoft® SQL Server® 2005 Express Edition from the Ipswitch WhatsUp Engine and Ipswitch Netflow Collector services.

- 4 Start the following services:
  - Start the Ipswitch WhatsUp Engine and the Ipswitch NetFlow Collector services.
  - Start the Web server. If you are using the WhatsUp Gold Web server, start the Ipswitch Web Server\$WhatsUp service. If you are using Microsoft Internet Information Services (IIS) as your web server, start the IIS service.
  - Start the Desktop Actions Application and the Task Tray Application. Select each application on the Start menu at **Start > Programs > Ipswitch WhatsUp Gold > Utilities**.

After completing these steps, WhatsUp Gold resumes polling and writes all new data to the Microsoft® SQL Server® 2005 database.

## Troubleshooting migration issues

### Error: "Could not find '<SQL server name>' in sys.servers."



If you encounter this error after migrating to Microsoft® SQL Server® 2005, the host name of the Microsoft® SQL Server® 2005 server may have been changed after Microsoft® SQL Server®

was installed. This causes a disconnect between the actual host name of the server and what Microsoft® SQL Server® 2005 believes the host name to be.

There are two ways to correct this:

- Change the host name of the Microsoft® SQL Server® 2005 back to what the host name was when Microsoft® SQL Server® was installed.
- Update the sys.servers table to reflect the correct information.
  - 1 Execute these commands in the command prompt:
    - `sqlcmd -E -S <SQL server name> -d master -Q "EXEC sp_dropserver '<old host name>'"`
    - `sqlcmd -E -S <SQL server name> -d master -Q "EXEC sp_addserver '<new host name>', 'local'"`
  - 2 Restart Microsoft® SQL Server® 2005.

## For more information

For more information on migrating from Microsoft® SQL Server® 2005 Express Edition to Microsoft® SQL Server® 2005, or for help with troubleshooting migration problems, visit the *WhatsUp Gold support site* (<http://www.whatsupgold.com/support/index.asp>) or the *WhatsUp Gold user forums* (<http://forums.ipswitch.com/>).

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