

***ACT! Diagnostics User's Guide***  
**for use with**  
**ACT! by Sage 2010**  
**and**  
**ACT! by Sage Premium 2010**

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# **ACT! Diagnostics User's Guide for use with ACT! by Sage 2010 and ACT! by Sage Premium 2010**

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# Introduction

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The ACT! Diagnostics utility, or ACTDiag, is a program installed with ACT! by Sage 2010 and ACT! by Sage Premium 2010.

ACTDiag can be used to repair and maintain ACT! databases and to manage some aspects of the local Microsoft® SQL Server® instance for ACT!. ACTDiag only works on the local machine. You cannot connect to remote SQL Server machine instances. Since this utility primarily provides low-level physical diagnostic and corrective actions against the SQL Server instance and its databases, most features and tasks do not require a user logon to the ACT! Framework or application.

This document describes:

- The ACTDiag utility interface.
- The tasks you can perform relating to the SQL Server instance for ACT!
- The tasks you can perform relating to the database.
- Instructions for starting and stopping the SQL Server instance for ACT!.



# Chapter 1

## Using the ACTDiag Utility

---

The ACTDiag utility interface includes the following commands and menu items:

- Server
- Databases
- File
- Actions
- Tools
- Help

### To open the ACTDiag utility

1. Open the Windows® **Run** dialog box.

---

**Note:** If using Windows Vista®, you may have to access ACTDiag using the "Run as administrator" command. See Vista Help for more information.

---

2. In the **Run** dialog box, in the **Open** field, type **Actdiag.exe**. Click **OK**.

---

**Tip:** By default, ACTDiag.exe is installed to the same directory as ACT! 2010. You can create a shortcut on the desktop for easier access to the ACTDiag utility. You can also add the ACTDiag.exe to the ACT! toolbar as a custom command. See ACT! Help for more information.

---

When you start ACTDiag, the Server Information page appears. You can perform various tasks for viewing and managing the SQL Server instance for ACT! from this page. These tasks are described in [Chapter 2, "Managing the SQL Server Instance for ACT!."](#)

## ACTDiag Utility Menu Commands

In ACTDiag, the following menu commands are available.

**File** You can close the utility using the Exit command.

**Actions** The Actions menu is available only from the Databases List. The options for this menu are described in [Chapter 4, "Performing Database Maintenance."](#)

**Tools** The Tools menu has the following commands:

**Adjust ACT! Timeout Values** Select this command to adjust how long ACT! waits after attempting to execute a database command or connection before returning an error. The Timeout Property selections are:

**DatabaseCommandTimeOut.Default** Select this option to set the number of seconds each query can take before timing out and generating an error. Most commands in ACT! use this setting. The default is 60 seconds.

**DatabaseConnectionTimeOut.Default** Select this option to set the number of seconds allowed to connect to the SQL Server instance for ACT!. On a local or high-speed network, connection time is typically a second or two. You may need to increase the interval if you run on a dial-up or remote connection and begin having connection timeouts or other connection errors. The default is 30 seconds.

**DatabaseCommandTimeOut.Long** Select this option to set the number of seconds process-intensive or batch-oriented commands can take before generating a timeout error. Examples are database maintenance tasks and some synchronization operations. The default is 3600 seconds.

**SData.BigReadTimeOutMinutes** Select this option if you are importing records from an accounting application using an SData feed and the feed is slow. The default is 10 minutes.

**Delete Preferences** Select this command to delete the local ACT! Preferences files for the user currently logged on to the Windows operating system.

---

**WARNING:** Deleting local preferences also resets ACT! Email folder information for the local e-mail database. This may cause locally stored e-mail messages to be lost.

---

**Release ACT! Memory** Select this command to specify whether or not ACT! should attempt to release computer memory (RAM) to the Windows operating system at a specified interval. This option can affect overall system performance and ACT!'s response time. For optimal performance, set this value to zero and select the "Maintain ACT! response time..." option.

**Value in Minutes** Type a value (or use the up and down arrows to select a value) in minutes for releasing computer memory. This option is only available when the "Maintain ACT! response time" check box is cleared. The value must be between 1 minute and 1440 minutes (24 hours).

**Maintain ACT! response time** Select this option to not have ACT! release memory at set intervals. This option is checked by default. Clear it to have ACT! release memory at set intervals, and select the value in minutes.

**Collect all ACT!-related Log Files** Select this command to collect all files related to ACT!, such as error logs, configuration files, and other log files. This command consolidates all files into one .zip file that can be used for troubleshooting issues with ACT!. Included with the files is a manifest.txt file that records all files, with paths, included in the zip as well as error messages for those that were not included. The .zip file is named [Machinename]-ACT!Logs.zip and is placed on the desktop. The file is locked when ACT! is open, but you can use WinZip® to view the contents of it. You can e-mail the .zip file to Sage Technical Support for assistance.

---

**Tip:** You can also view the SQL Server error logs contained in the ACT!Logs.zip file. For more information about viewing SQL Server error logs, see "[Viewing SQL Server Error Logs](#)" on page 10.

---

**Help** Select this command to access the About ACT! Diagnostics page. The About ACT! page provides program and vendor information and a link to the ACT! by Sage Technical Support Web site.

The following items are also provided on the About ACT! Diagnostics page.

**Version** This may or may not match the version of your ACT! 2010 application; either is acceptable.

**Command Timeout (seconds)** The number of seconds an ACTDiag task or action can take before stopping on its own. By default, this is 600 seconds (10 minutes). You may need to increase the time for slower machines or if you have a very large database. If you receive timeout errors, close ACTDiag, open the ACTDiag.exe.config file with Notepad, and then increase the CommandTimeout.Default value:

```
<add key="CommandTimeout.Default" value="600"/>
```



# Chapter 2

## Managing the SQL Server Instance for ACT!

---

The ACT! 2010 installation program creates a named local SQL Server instance called ACT7. The ACTDiag utility Server command lets you view that SQL Server instance for ACT! and manage it, with limitations. The Server Information command lets you view information about the local SQL Server instance.

Management commands include:

- Server Security
- Server Settings
- SQL Error Logs
- SQL Diagnostics
- SQL Connections

This chapter explains the SQL Server commands and tasks you can perform using those commands.

### SQL Server Instance Information for ACT!

When you select the Server command, the Server Information page displays pertinent local SQL Server instance properties for ACT!. These properties include:

- Server name, edition, and version (typically including the Service Pack level).
- Collation details (language and sorting).
- Service account (the Windows account context under which the SQL Server instance for ACT! is registered and runs).
- Connection and date and time the service was started.
- Server options of CLR Enabled or CLR Disabled to indicate whether user assemblies can be run by SQL Server (assemblies are required for the ACT! OLEDB Provider 2.0).

### Security and Connectivity Settings

You can view and specify security- and connectivity-related settings for the local SQL Server instance. By default, when ACT! installs the SQL Server instance, it is network-enabled (that is, it allows connection attempts from other machines). If this is not needed, you can disable network connections. For synchronization between databases, you do not need to network-enable the subscriber (child or remote) database and machine, but you must network-enable the machine(s) listening for synchronization requests and hosting the publisher (parent or main) database.

The Server Security panel lets you reset the SQL Server password and specify network connectivity configurations as explained in the following sections.

## Resetting the SQL Server Password

You, as the machine user, can reset the local SQL Server password (sa). You cannot see the current SQL Server password or specify it.

### To reset the SQL Server Password

1. Click **Server**. Click **Server Security**.
2. Click **Reset SQL Password**.
3. At the Warning message, click **Yes** to reset the password and close all applications.

## Viewing and Exporting SQL Server Account Actions

You can produce a report of actions taken to view, set, or reset the SQL Server login accounts, including the 'sa' and 'ActReader' accounts. (The 'sa' and 'ActReader' accounts are available to ACT! Premium and ACT! Premium for Web users only.)

This report includes the following information:

Column	Description
ACTIONDATE	Local datetime when the action was taken
SQLACCOUNT	SQL Server account on which the action was taken
ACTION	Action taken on the SQL Server login account
APPNAME	Name of the ACT! utility used
APPVERSION	Version of the ACT! utility used
WINUSER	Logged-on Windows user
DESCRIPTION	Description of action taken

### To view and export SQL Server account actions

1. Click **Server**. Click **Server Security**.
2. Click **SQL Account Audit**.
3. To export the report to an XML file and save it to the desktop, click **Export**.

## Specifying How the SQL Server Instance Works on a LAN

You can enable, disable, and configure your local SQL Server instance to participate on a Local Area Network with other computers. You can also specify how client connections are made to other non-local SQL Server instances.

The two server-side components for configuring and allowing connections to the local SQL Server instance for ACT! are:

- SQL Server (ACT7)
- SQL Server Browser

The SQL Server Browser program runs as a Windows service. SQL Server Browser listens for incoming requests for SQL Server resources and provides information about SQL Server instances installed on the computer, including the SQL Server instance for ACT!.

---

Stopping the SQL Server Browser service disables the ability of the SQL Server instance for ACT! (and any other installed SQL Server instances) to have other computers connect to it by machine and instance name. By default, the SQL Server Browser service is configured to start automatically.

**To disallow connections from other computers and assign a static port**

1. Click **Server**. Click **Server Security**.
2. Click **Server Configuration Manager**.
3. Expand the **SQL Server Network Configuration** item in the left pane. Select the **Protocols for ACT7** item.
4. To disallow connections from other computers, do the following:
  - a. In the **Protocol Name** list, in the right pane, right-click **TCP/IP**, and then select **Disable**. Click **OK**.
  - b. Right-click **Named Pipes**, and then select **Disable**. Click **OK**.

---

**Note:** For optimal connections to local databases, ensure the Shared Memory Protocol Name is Enabled.

---

5. To assign a static port for the SQL Server instance, do the following:
  - a. In the **Protocol Name** list, in the right pane, double-click **TCP/IP**.
  - b. In the **TCP/IP Properties** dialog box, click the **IP Addresses** tab.
  - c. Scroll down to the **IPAll** section. In **TCP Dynamic Ports**, enter **0**.
  - d. Under **TCP Port**, specify an available TCP port number.
  - e. Click **OK**.

---

**Note:** If you make changes, you must stop and restart the SQL Server instance for ACT!. When you change or set the Dynamic Ports value to zero (0), the display changes upon restart to the TCP Port number that was assigned when you restarted the SQL Server instance. For more information, see [Chapter 10, "Stopping or Starting the SQL Server Instance for ACT!."](#)

---

## Suppressing the Broadcast of the Local SQL Server Instance for ACT!

By default, when a user browses the network for available SQL Server instances, the ACT7 instance is shown. You can suppress the broadcasting and listing of this SQL Server instance from other machines on the network.

**To suppress the broadcast of the local SQL Server instance for ACT!**

1. Click **Server**. Click **Server Security**.
2. Click **Server Configuration Manager**.
3. Expand the **SQL Server Network Configuration** item in the left pane.
4. Right-click the **Protocols for ACT7** item. Select **Properties**.
5. On the **Flags** tab, change the **Hide Instance** value to **Yes**. Click **OK**.

## Specifying Connectivity from the ACT! Client to a SQL Server Database

You can specify a connection to a local or non-local database.

### To specify connectivity from the ACT! client to a SQL Server database

1. Click **Server**. Click **Server Security**.
2. Click **Server Configuration Manager**.
3. Expand the **SQL Native Client Configuration** item in the left pane. Select the **Client Protocols** item.
4. To specify a connection to a local database, do the following:
  - a. In the right pane, double-click the **Shared Memory** protocol.
  - b. Set it to **Enabled**. Click **OK**.
  - c. In the right pane, ensure the Order is set to 1.
5. To specify a connection to a non-local database, do the following:
  - a. Double-click the **TCP/IP** protocol.
  - b. Set it to **Enabled**. Click **OK**.
  - c. In the right pane, ensure the Order is set to 2.
  - d. Double-click the **Named Pipes** protocol.
  - e. Set it to **Enabled**. Click **OK**.
  - f. In the right pane, ensure the Order is set to 3.
6. Close the SQL Server Configuration Manager.

## Server Memory, Processor, and Database Warmup Settings

You can manage some aspects of how the SQL Server instance for ACT! is configured to use memory and the processor on the local machine. By default, the SQL Server instance is configured to self-manage with no upper or lower memory limitations or boundaries. Also, the SQL Server instance is configured to use all available processors (as supported by the edition of SQL Server). Microsoft recommends these configuration settings. However, you can change these settings to accommodate requirements on each machine.

By default, the SQL Server instance for ACT! is enabled to allow automatic database warmup. You can disable database warmup and change the default settings for it. Database warmup may help improve performance when logging on to an ACT! database.

---

**Caution:** You should change these settings only when Sage Technical Support directs you to. These changes can affect performance of ACT! and other applications running on the machine. The SQL Server Error Log records these changes. For more information, see "[Viewing SQL Server Error Logs](#)" on page 10.

---

---

## Configuring SQL Server Memory

You can configure SQL Server to dynamically adjust the amount of memory based on demand. You can use Minimum(MB) to guarantee a minimum amount of memory to SQL Server. Or, use Maximum(MB) to prevent SQL Server from using more than the specified amount of memory, thus leaving remaining memory available to run other applications.

### General Guidelines:

- On non-server editions of Windows (such as Windows XP Professional or Windows Vista Home Premium), you might want to reduce the Maximum memory setting if many desktop applications are open simultaneously and Windows Task Manager shows a strain on available system memory.
- On server editions of Windows (such as Windows Server® 2003), you might want to increase the Minimum memory setting and leave the Maximum memory at the highest possible value if the SQL Server instance hosts many workgroup databases.

### To configure server memory

1. Click **Server**. Click **Server Settings**.
2. Click the **Server Memory** tab.
3. Move the sliders for **Minimum (MB)** or **Maximum (MB)** settings.
4. To save changes, click **Apply**. To cancel or undo a change, click **Cancel**.

## Specifying the Number of Server Processors

You can specify the number of processors to use for parallel execution of queries. By default, the option is set to use all available processors. For machines with hyper-threading, you should set this to the actual number of physical CPUs.

---

**Note:** On single-CPU systems, no options are available on this panel. You can run msinfo32 to view the number of physical processors (CPUs) for your machine.

---

### General Guidelines:

- On most newer hyper-threaded CPUs, such as Intel® Pentium® 4 processors that are 2.7GHZ and above, you should set the "Use n processor(s)" value to the number of actual physical CPUs installed in the machine. For example, the CPU Usage chart on the Performance tab of Windows Task Manager may show two graphs when only one physical CPU is installed.
- On most systems with non-hyper-threaded CPUs, you should leave the "Use all available processors" option checked.

### To specify the number of processors

1. Click **Server**. Click **Server Settings**.
2. Click the **Server Processor** tab.
3. Select the **Use n processor(s)** option and select or type a number.
4. To save changes, click **Apply**. To cancel or undo a change, click **Cancel**.

## Disabling Database Warmup or Changing Database Warmup Settings

By default, the ACT! database you access most is enabled to warm up or get partially “pre-loaded” into memory. This is set to occur upon startup of the SQL Server database engine. This feature allows the initial logon to that database to be faster. If you do not want a database to warm up, clear the option.

---

**Note:** To use database warmup, a database must reside on the same machine from which you run ACT!. Database examples include a synchronizing, remote (Subscriber) database, or any other local database.

---

With database warmup enabled, default values of three databases (if there are three databases attached to the SQL Server instance), and those accessed within the last 30 days, are also set. Each time a user, either local or from another workstation, accesses the database, ACT! keeps track of the date and time that the database was accessed. If database warmup is disabled, the other database warmup settings are not active.

---

**Note:** Database warmup may cause additional resource consumption (by memory and CPU) during machine and SQL Server startup. The amount of impact depends upon the machine hardware, as well as configuration settings for the number of local databases and days prior. Setting the number of most recently accessed databases to a number higher than three, and/or the last number of days higher than thirty may cause a longer startup time for your machine.

---

### To disable database warmup or change the default database warmup settings

1. Click **Server**. Click **Server Settings**.
2. Click the **Database Warmup** tab.
3. To change the default settings, clear or type new values.

---

**Note:** A value of zero (0) means no databases or no days. It does not mean “unlimited.”

---

4. To save changes, click **Apply**. To cancel or undo a change, click **Cancel**.

## Viewing SQL Server Error Logs

You can view the error logs generated by the SQL Server. These logs record both system- and user-defined errors and events. They can help you diagnose problems related to SQL Server. Each event is recorded with a timestamp, and the logs are cycled each time the SQL Server service is started.

---

**Note:** By default, SQL Server retains the current and last six error logs.

---

### To view a SQL Server error log

1. Click **Server**. Click **SQL Error Logs**.
2. Click **View Logs**.
3. Select the log file to view. Click **Open**.

---

The current log file is named ERRORLOG; earlier log files have a numeric extension. The log details appear in the pane. Use the scroll bars to view the details.

4. To clear the view, click **Clear**.

---

**Tip:** You can use the Collect All ACT!-related Log Files command from the Tools menu to consolidate all ACT!-related files, including the SQL Server error logs, into a compressed .zip file. For more information, see "[Collect all ACT!-related Log Files](#)" on page 2.

---

## SQL Server Diagnostic Tasks

You can perform diagnostic tasks specific to the SQL Server instance for ACT!. The SQLDiag Snapshot and SQLDiag Monitor utilities, both of which invoke the Microsoft SQLDiag utility, can interrogate the SQL Server environment and configuration and the Windows and machine environment (similar to msinfo.exe).

You can also verify failed operations for permissions of the SQL Server instance to read and write to files or folders.

### Running SQLDiag Snapshot and SQLDiag Monitor Tasks

You can run two processes to capture system and SQL Server diagnostics and trace files. These processes are:

**SQLDiag Snapshot** This process produces a full system and SQL Server diagnostic trace to a series of output files. You should run this process if you suspect problems or as directed by Sage Technical Support. This process automatically stops the trace when done.

**SQLDiag Monitor** This process allows a system and SQL Server diagnostic trace to be captured. You should start this task prior to reproducing an error as directed by Sage Technical Support. You will need to stop the trace when done.

Each process produces several text files containing information about the SQL Server configuration and environment, the machine, and the Windows operating system. The resulting files are placed on the Windows Desktop in a folder named: ACT!SQLDiag. You may be asked to supply this folder to Sage Technical Support to assist in diagnosing a problem.

---

**Tip:** If you experience an error when performing a certain action in ACT!, and you can reproduce that error, start the SQLDiag Monitor task first. After reproducing the error, stop the SQLDiag Monitor task and follow the instructions.

---

#### To run SQLDiag Snapshot or SQL Diag Monitor tasks

1. Click **Server**. Click **SQL Diagnostics**.
2. Click **SQLDiag Snapshot** or **SQLDiag Monitor**.
3. Read message prompts. Click **Yes** or **OK** to continue.

If you click No or Cancel, the task is cancelled.

4. At the prompt, enter the SQL Server "sa" password.

---

**Note:** If you do not have the password, press Enter, and the process continues. However, if you do not enter a password, the process will not capture the SQL Server diagnostics.

---

5. To view the output folder of the results, click **Yes**.

## Checking SQL Server Permissions

Some ACT! tasks, such as saving a file with a different name or creating a remote database for synchronization, require interaction between the SQL Server and files or folders in the Windows operating system. You can check and verify the permissions of the SQL Server instance to read and write to these files and folders. Test files and folders are created and deleted to verify SQL Server permissions.

### To check SQL Server permissions

1. Click **Server**. Click **SQL Diagnostics**.
2. Click **Check SQL Permissions**.
3. In the **Check SQL Server Permissions** dialog box, select a folder. Click **Check**.
4. Ensure that the **Environment Path** value includes the default system information.
5. Ensure that each line in the **Permission Results** list displays **Successfully created** and **Successfully deleted** for the test file and folder.

---

**Note:** If other results appear, you may have Windows permissions issues, or you may need to restart your system. A system restart is most likely if you are running VMware®. Contact Sage Technical Support if you continue to get other results.

---

## Viewing SQL Server Connection Information

You can view the information for all connections to the local SQL Server instance for ACT!. You can see the name of each computer, database, program, last activity, and more.

---

**Note:** Note: The current connection used by the ACTDiag utility *does not* display in this grid.

---

### To view SQL Server connections

- Click **Server**. Click **SQL Connections**.

---

**Tip:** Click the Refresh button to refresh the connection information.

---

# Chapter 3

## Viewing Database Information

---

You can view database information for all databases registered to the SQL Server instance for ACT!. The Database List includes the default SQL Server system databases (master, model, msdb, and tempdb) and ACT! databases.

---

**Note:** Generally, you will not need to take any action with the SQL Server system databases, but they are critical to the operation of the SQL Server instance for ACT!.

---

This chapter explains the database information and how to view it.

The Database Grid of the Database List includes the following columns:

Column	Description
DATABASE	Physical name of the SQL Server database.
STATUS	Usually shows ONLINE. If the SQL Server cannot bring a database online (for example, when the database's ADF file has been deleted), the value is SUSPECT.
DB SIZE	Approximate size in megabytes (MB) of the database file (ADF).
DB VERSION	Schema version of the ACT! database.
SYNCING	Displays information as follows: No - Database not currently set up to synchronize N/A - Synchronization not applicable Publisher - Database is main database Subscriber - Database is a remote database Publisher/Subscriber - Database is a remote subscriber that synchronizes with handheld devices
LOCK	Indicates a database lock is set in ACT!. Displays Locked or Unlocked for an ACT! database and nothing for a non-ACT! database.
CREATE DATE	Date and time the database was created.
DATABASE FILE LOCATION	Location of the folder containing the database's ADF or MDF file.
DATABASE OPTIONS	SQL Server database options currently set. For informational purposes only and may be used by Sage Technical Support.

---

### To view and refresh the list

1. Click **Databases**.

Use the bottom scroll bar to view all the columns

2. Click **Refresh** to show changes made on other machines and this machine.



# Chapter 4

## Performing Database Maintenance

---

With ACTDiag, you can perform maintenance tasks for the databases listed in the Database List.

This chapter describes the available maintenance tasks and explains how to select them.

### Database Maintenance Tasks

ACTDiag commands let you externally perform database maintenance tasks on the local ACT! database.

#### Check, Repair, or Reindex Database

You can use the following commands to check, repair, or reindex an ACT! database:

**Check Database** The Check Database command verifies the physical structure of the database for damage. Items verified include data, indexes, and procedural objects within the database. You should use the Check Database task regularly to ensure the integrity of the database. If the task finds errors, run the Repair Database command.

**Repair Database** The Repair Database command attempts to repair any physical damage or inconsistency found in the internal structure of the ACT! database. If the Check Database task (or Database Maintenance, Check & Repair command in ACT!) returns an error, run the Repair Database command.

**Reindex Database** The Reindex Database command performs a comprehensive re-index of all tables and indexes in the database. You would do this maintenance task if query performance has degraded or after a large data operation, such as Import. Also, if the database participates in synchronization and has very large data changes and long synchronization times, running Reindex Database may improve performance.

#### Unlock Database

The Unlock Database command unlocks an ACT! database that was locked through the ACT! application. This command is useful if you cannot unlock a local database in ACT!.

#### Clear Procedural Cache

The Clear Procedural Cache command is useful when performance has degraded. This task allows for the SQL Server query plans which currently are held in memory to be removed from cache. It forces SQL Server to base subsequent queries on current data statistics. This can improve performance.

---

**Caution:** You should only run this task if query performance has decreased unexpectedly or if you perform a large data operation (such as a large data import) and cannot stop and start the SQL Server service (or reboot the machine). The ACTDiag utility Reindex Database command also clears the cache automatically.

---

## Attach ACT! Database

The Attach ACT! Database command lets you attach an ACT! by Sage 2007 (9.x), ACT! by Sage 2008 (10.x), or ACT! by Sage 2009 (11.x) database, comprised of ADF and ALF files, to the local SQL Server instance for ACT!. You would perform this operation if you want to attach one of those version databases to the local instance without forcing a current schema update.

---

**Note:** To attach an ACT! 2007 (9.x), ACT! 2008 (10.x), or ACT! 2009 (11.x) database, and force a schema update, open the database using the ACT! 2010 application on the local machine.

---

## Detach Database

The Detach Database command lets you detach a database from the SQL Server instance for ACT!. This Detach Database task is an option to use when you want to move the database to a new location (drive and/or folder) on the current machine or to a different machine. Also, Sage Technical Support may ask you to detach a database which is experiencing errors, since opening a detached database forces a database validation process.

---

**Tip:** To re-attach an ACT! 2010 database to the SQL Server instance for ACT!, open the database in ACT! 2010 or double-click the ADF file. To re-attach a database from a version prior to ACT! 2010, use the Attach ACT! Database command.

---

## Delete Database

The Delete Database command deletes the selected database. This option is available only if the database is listed as SUSPECT.

---

**Note:** A database can be marked SUSPECT for many reasons. If you use the SQL Server Error Logs command and view the error logs generated by the SQL Server, you may find an indication as to why the database has been marked SUSPECT.

---

To delete an online, non-Suspect database, you can do one of the following:

- From the **ACT! Tools** menu, point to **Database Maintenance**, and then click **Delete Database**.
- Detach the database using the Detach Database Command. Delete the database's ADF and ALF files.

---

**Caution:** Back up the database before detaching or deleting it. See ACT! Help for more information.

---

---

## Selecting Database Maintenance Tasks

Except for the Attach Database command, there are two ways to access the database maintenance tasks. The Attach Database command is only available from the Actions menu.

---

**Caution:** Several database maintenance tasks require exclusive use of the ACT! database. Selecting a task disconnects (stops) all connections to the database.

---

### To select a database maintenance task

1. Click **Databases**. Click **Database List** to open the Database Grid.
2. Select the database.
3. Do one of the following:
  - Right-click, and then select a command from the shortcut menu. (Not available for the Attach Database item.)
  - From the **Actions** menu, select a command.
4. If required, at the disconnect message, click **Yes**.
5. At the task completed message, click **OK**.



# Chapter 5

## Database Reporting

---

ACTDiag offers various reports relating to database structure, synchronization, and so on. You can use these reports for informational or troubleshooting purposes. Sage Technical Support may request that you run one or more of these reports to help resolve issues.

The following sections describe the database reports and how to run them.

### Database Structure, Synchronization, and Other Reports

All database reports open in an associated program, such as Windows Notepad or Microsoft Excel®. Using the File menu, you can save or print the report.

#### Fields Summary

The Fields Summary report displays one line for each field in the selected database.

#### Fields Detail

The Fields Detail report displays details, such as field attributes, for fields in the selected database. This report is more comprehensive than the Fields Summary Report.

#### Fields List to CSV File

The Fields List to CSV File report creates a comma-separated value file for the current fields in the database. Each field appears on one line and contains approximately the same level of information as the Fields Detail Report.

#### Company Linked Fields

The Company Linked Fields Report displays the linked company and contact fields in the selected database. The linked fields' attributes, such as data type and length, are also detailed in the report.

#### Fields Usage Analysis

The Fields Usage Analysis Report displays column usage and sizing for each table within the ACT! Recordtypes (Entities) including contacts, groups, and companies. This report assists the user in identifying the database structure and patterns in data usage. From this information, the user can take actions, such as reducing column lengths or removing unused columns, to improve performance and storage requirements.

The key components of this report include:

- The number and percentage (density) of records containing data in each column.
- The minimum, maximum, and average data lengths of values found in each column.
- A recommendation for each column based on the density and defined column length vs. values.

## Table Row(Record)counts

The Table Row(Record)counts Report displays, by ACT! Recordtype (Entity), the number of records contained in each table, either comprising the record itself and/or supporting the record. Each table is shown with the name the user sees in the application and the physical database name. In addition to ACT! Entities, other database tables are shown categorized by subject area (Domain). This report helps the user understand or verify the contents of database tables.

## Sync Configuration

This report provides an overview of all synchronization-related configurations, metadata, and structure within the synchronization family. The report includes the following sections:

**SYNC ROLE** Indicates whether the current database is a Publisher, Subscriber, or both.

**SYNC-RELATED DATABASE SETTINGS** Provides the current synchronization-related configurations and settings for this database.

**SYNC TABLES ANALYSIS** Provides a current usage count for all synchronization-related tables.

**SYNC DATABASES** Lists all databases within the current synchronization family, including handheld devices (Palm or Pocket PC). Provides the general synchronization-related configuration settings and values, including Status and Syncset used.

**DIRECT SYNC RELATIONSHIPS** Lists the databases directly related to the current database, including (as applicable) its parent (publisher) database and any child (subscriber) databases, including handheld devices.

**SYNCSETS** Lists all Sync Sets defined for this synchronization family, including those designated for handheld devices. Also provides the number of databases currently using the Sync Set.

## Sync Preview

The Sync Preview report gives an overview of the changes that have occurred since the last successful database synchronization. This report only lists *direct* remote (subscriber) databases as well as itself (if the current database is a remote database). The report provides totals of data by table domain and by the physical table in that domain (to assist with troubleshooting).

---

**Tip:** When troubleshooting, you can use the Sync Preview Report to look for large data counts in tables and totals. If data counts are high, and your synchronization session is timing out, you may need to extend the database timeout value in the Sync config file.

---

## Sync Database History

The Sync Database History report provides current and historical information for each synchronizing database. A Field Legend at the top of the report explains the columns used. This report includes the current subscriber database information and all direct subscriber databases and contains sections including:

**SYNC DATABASE HISTORY SUMMARY** For each database, the current status and date through which the report shows data, as well as the number of synchronization attempts since the earliest date in the Sync Logs.

**SYNC DATABASE HISTORY DETAIL** A detailed list containing a row for each historical synchronization attempt or session since the earliest date in the Sync Logs.

---

**Tip:** You can also view the database audit logs related to synchronization. For more information, see [Chapter 8, "Viewing and Exporting Database Audit Logs."](#)

---

## Objects

The Objects report is available as a Summary and Detail report. Both versions provide a high-level inventory of items in the database. These reports may help Sage Technical Support troubleshoot other database issues. The Detail Report also provides a list of every item by type (Table, Procedure, and so on). This list could be quite long and generally would only be needed if requested by Sage Technical Support to help diagnose a problem.

## Missing Attachments

Use the Missing Attachments Report to identify broken links for attachments that display in the database. A broken link can occur for many reasons, for example, if a user has manually deleted a file in the database's supplemental Attachments folder without deleting the attachment reference (or the History item itself) in ACT!. Another example of a broken link is a remote database user may delete an attachment to a contact record and when the record synchronizes to the main database, the link becomes broken.

The report lists each file and indicates if it is referenced on a History, Notes, Activities, or Documents tab. If applicable, the report also indicates the synchronizing database that created the attachment.

## SQL Trace Report

Use the SQL Trace Report to identify problems with the ACT! OLE DB Provider for Reporting 2.0, which has additional and extended views from those in the earlier version of the ACT! OLE DB Provider.

---

**Note:** This report requires the Crystal Reports® runtime engine. If you do not have the runtime engine installed, you are prompted to install and provided a link to download the file. You will need the runtime files for Crystal Reports Basic for Visual Studio .NET 2008.

---

The Database Setting - Enable Procedure Tracing - must be enabled to provide information in this report. For more information, see ["Enable Procedure Tracing" on page 31](#).

## Running Database Reports

You can run a database report, and then print or save it.

### To run a database report

1. Click **Databases**.
2. Click **Database List** to open the Database Grid.
3. Right-click the database, and then do one of the following:
  - To run a database structure report, point to **Database Structure**, and then click the report name.
  - To run other database reports, point to **Database Reports**, and then click the report name (point to the item to expand the list and select a report).

---

**Tip:** You can also select a database report using the Actions menu.

---

4. To view the report, at the report completed message, click **Yes**.

# Chapter 6

## Rebuilding Databases

---

ACTDiag provides several database rebuild actions to help you rebuild and repair various areas of foundational ACT! data, objects, and other metadata to support the ACT! Framework and/or application.

In this chapter, you will learn about the database rebuild actions and how to select them.

### Database Rebuild Actions

You can run these database rebuild actions as reactive (not proactive) corrective measures. They are generally safe to run at any time and do not offer choices or require user intervention.

#### Rebuild Schema

The Rebuild Schema action rebuilds the representational schema metadata of the database. Schema refers to the layout of the database and allows proper and consistent viewing from ACT! and other supported areas. You might run this action if errors appear indicating that a column cannot be found, or if you believe a column to be missing or showing incorrect attributes.

#### Rebuild Security

The Rebuild Security action rebuilds the Users and Teams tables in the database based on defined data security rules. You might run this action if data security access appears to be incorrect. For example, ACT! Administrator or Manager users might not be able to view public or limited access contacts or a user has access to a field that is set to No Access.

#### Rebuild OLE/DB Report Objects

The Rebuild OLE/DB Report Objects action rebuilds the read-only SQL Server views of the ACT! database used by the earlier version of the ACT! OLE/DB Provider. You might run this action when View tables do not appear on the field list or tables do not appear to be correct. The database may be missing customized fields.

#### Rebuild OLE/DB v2.0 Report Objects

The Rebuild OLE/DB v2.0 Report Objects action rebuilds the SQL Server views of the ACT! database used by the new ACT! OLE DB Provider for Reporting 2.0. You might run this action when View tables do not appear on the field list or tables do not appear to be correct.

## Rebuild Sync Objects

The Rebuild Sync Objects action rebuilds the synchronization logging triggers and other configuration and reporting data. This action corrects any logs or data, as required. The action also purges Sync logs and advances the Sync Log Retain Date, if possible. You might run this action if it appears that some data is not synchronizing properly or you receive error messages during synchronization. This also is useful if the Sync Log Retain Date does not appear to be resetting properly (based on normal operation and with consideration of the related database expiration days).

Specifically, the Rebuild Sync Objects action performs these tasks:

- Rebuild and maintain synchronization schema metadata.
- Regenerate all synchronization logging triggers on all synchronization-eligible tables.
- Re-enable or disable all synchronization logging triggers (based on whether or not the database is synchronization-enabled).
- Purge all aged synchronization transaction log records (based on synchronization expiration days and the last synchronization dates of all active directly-related databases).
- Detect and correct any data inconsistencies found in the synchronization transaction logs.
- Reset sync performance optimization tables.

## Remove Accounting Link IDs

The Remove Accounting Link IDs action removes (deletes) all Accounting Framework Links in the database. This action removes the links to all contacts from accounting programs that were implemented using the ACT! Accounting Link (e.g., Peachtree by Sage).

---

**Note:** You must be an Administrator user in the ACT! database to perform this action. Type your ACT! user name and password, if applicable, in the ACT! database logon dialog box.

---

## Selecting Database Rebuild Actions

This section explains how to select a database rebuild action.

**To select a database rebuild action**

1. Select the **Database List** command.
2. From the list, select a database.
3. Right-click, select **Database Rebuild**, and then select an action.

---

**Tip:** You can also select a Database Rebuild action from the Actions menu.

---

# Chapter 7

## Fixing Databases

---

ACTDiag contains several actions that help you fix (correct) various database problems.

---

**Caution:** You should read and understand the effects of each setting change and make changes only when directed by Sage Technical Support.

---

This chapter describes the types of database fixes and how to select them.

### Database Fixes Commands

You can fix issues for contacts, groups and companies, phone formatting, activities, opportunities, preferences, datastore location, and schema update. Some selections require an ACT! user logon.

#### Remove Multi-Linked Secondary Contacts

The Remove Multi-Linked Secondary Contacts command (on the Contacts menu) identifies secondary contact records that are linked (associated) to more than one contact record. The task identifies the first (earliest) association and retains it, and then deletes all other associations. A text file is created, showing the results. You can view the file now or save it to view later.

You might run this fix if you attempted to create a new database by selecting the Save Copy As command from the File menu or the Create New Sync Remote database command and received an error message such as "...attempting to create unique index/constrain...duplicate key".

#### Recover Untitled Group and Company Records

By default, each new ACT! database contains one group and one company record, named Untitled. These two records are owned by the first user, which is ACT! System, in the ACT! database. If a user accidentally makes either of these records private, the record disappears and is not retrievable. The Recover Groups command (on the Groups and Companies menu) changes the initial group and company records to public access. The user can then set the Record Manager accordingly.

You might run this if no users are able to view that group or company record. For example, you made the Untitled Group or Company record private without changing the Record Manager to someone other than ACT! System.

#### Identify and Reset Invalid Group and Company Criteria Records

The Invalid Query Criteria command (on the Groups and Companies menu) has two options: Identify Invalid Criteria Records and Reset Invalid Criteria Records. The Identify option lets you view group or company records containing query criteria that is not valid. You can then edit the criteria manually to rebuild the query, or choose the Reset option to remove all criteria. The Reset option requires the user to rebuild the query.

You might run this if you have group or company records that are not showing contacts or opportunities on their respective tabs and you know that they should be. Another example is when attempting to view or report on group or company contacts and opportunities.

## Fix Incorrect Phone Formatting

The Apply Phone Masks command (on the Phone Formatting menu) attempts to correct incorrectly formatted phone record values. It applies the correct format to each phone number in the database whose format does not appear to match the specified Phonemask. This process does not affect phone numbers input as "freeform." The number of records fixed appears in the DBFix message.

You might run this if you updated ACT! 2005 (7.x) or ACT! 2006 (8.x) databases and phone values are not properly formatted. You can also use this command if you entered phone data using a particular mask, then changed that mask to a different format.

## Fix Activities Appearing at Incorrect Times

The Change Time Zone command (on the Activities menu) lets you change the time zone in activity records for selected user(s), using the Organizer field to determine activity ownership. This command corrects activity data whose time zone information and handling changed in ACT! 2005 (7.0.1). This command requires an ACT! Administrator user logon.

---

**Caution:** These changes affect all activities, both cleared and uncleared, in which the selected user is the Organizer. The changes cannot be undone.

---

You might run this if you updated an ACT! 2005 (7.x) database to a newer version and some activities now appear at an incorrect time.

## Fix Activity End Dates, Duration Errors, and Missing Activities

The Fix Known Activity Data Issues command (on the Activities menu) automatically runs several fixes to repair activity data. When each fix is finished, a message displays the number of records that were affected.

**Fix Recurring Enddate** This fix addresses issues relating to converted recurring activities. This applies to users whose Windows time zone is set to a positive GMT time zone, such as users in Russia, Germany, or France. When these users converted an ACT! 3.x, 4.x, 5.x (2000), 6.x (2004) database to an ACT! 2010 database, some recurring (and non-recurring) activities may not have converted properly. The user may have received an error message similar to "The maximum end date for a (none) recurring activity starting on 16.07.2002 is 01.06.2073" or had some activities not show on the calendar. This fix resets the recurring end value.

**Fix Negative Duration Activities** This fix resets any activity records with a negative Duration (i.e., where the Endtime is earlier than the Starttime). It sets the Endtime to the Starttime + Five minutes of the activity.

**Fix Zero-Recurrent Activities** This fix addresses issues when activities are missing from calendars or the Task List. It sets activities to a single occurrence so users can view and modify them.

You might select the Fix Known Activity Data Issues command if users notice that activities seem to be missing from the calendar or ACT! freezes when attempting to display a calendar or the Task list.

## Fix Opportunity EditDate Errors

The Fix EditDates command (on the Opportunities menu) addresses issues with converted opportunity records. This applies to users whose Windows time zone is set to a positive GMT time zone, such as users in Russia, Germany, or France. When these users converted an ACT! 3.x, 4.x, 5.x (2000), 6.x (2004) database to an ACT! 2010 database, the record editdate value in some opportunity records may not have converted properly. The user may have seen an error message similar to "Ticks must be between DateTime.MinValue.Ticks and DateTime.MaxValue.Ticks. Parameter Name: Ticks" or had opportunity records not load properly. This task sets the Edit Date to the same value as the Create Date for records which have no Edit Date (they are NULL).

## Fix Allow History Editing Preference Setting

The Fix "Allow Edit History" Preference setting command (on the Preferences menu) addresses an issue related to updating ACT! 2005 (7.x) databases. When users update an ACT! 2005 (7.x) database to the current version, the Allow history editing setting on the General tab of the Preferences dialog box may have changed. All global ACT! user preferences settings should convert, but the Allow history editing setting may not convert.

## Select a Naming Method for Shared Datastores

The Datastore Location action lets you select a naming method for a database's Shared Datastore. By default, when an ACT! database is created as shared, a Windows Sharename is created on the local machine in the format of: "Machinename\databasename-database files". For a non-local user to access and connect to this shared database, the PAD file the user opens must specify the database machine name in the "host=" attribute.

In some network environments, both the PAD file and Datastore Location (as stored in the database) must be changed to reflect the TCP/IP address instead of the machine name. This may occur when a client machine cannot connect to the database machine using its machine name (i.e., cannot resolve via DNS) but can connect by using its TCP/IP address.

In the IP Address box, in the Datastore Management dialog box, more than one TCP/IP address may appear. This happens when the machine has more than one network card and/or a wireless adapter. Choose the one suitable for your configuration.

---

**Note:** Many machines on a Windows network are controlled by a DHCP server and are assigned dynamic TCP/IP addresses, usually with a lease time of 30 days or so. If you choose to use the TCP/IP addressing method, you should periodically check the IP address of the machine or change the machine to have a static IP address.

---

## Fix Known Schema Update Issues

The Fix Known Schema Update Issues command (on the Schema Update menu) addresses *known* data conditions that may cause the ACT! schema update process to fail. This generally includes data changes and/or corrections which may prevent the database from being updated. This task does not correct all issues preventing the database Schema from being successfully updated, just those issues which are known.

You would run this task when upgrading an ACT! database from a previous version, and the upgrade fails with an error. After running this task, you should attempt to update the database Schema again.

## Selecting Database Fixes Commands

You can access the Database Fixes command and corresponding items.

---

**Caution:** Contact Sage Technical Support before attempting to run database fixes.

---

### To select a database fix command

1. Click **Databases**.
2. Click **Database List** to open the Database Grid.
3. Select the database, and then do one of the following:
  - Right-click, point to **Database Fixes**, point to an item, and then select a command.
  - From the **Actions** menu, point to **Database Fixes**, point to an item, and then select a command.

# Chapter 8

## Viewing and Exporting Database Audit Logs

---

Each ACT! database contains an internal Event Log that can capture many actions that occur in ACT!. For example, the Database Schema - Table Definition event log captures adds, updates, and deletes for the database schema. This event is a good audit trail. It provides visibility of changes to the database schema when using the Define Fields tool in ACT!.

For many actions, such as administrative tasks and actions that affect the entire database, it is often best to review those events chronologically.

The Audit Logs command opens the panel that lets you view events by Event Type and shows:

- Who performed the action (for a system event that is not user-specific, the USER is ACT! System).
- When the event occurred.

---

**Note:** Not all Event Types are logged. Some are reserved for future use. In the future, Event Types may be added or removed.

---

As part of Database Maintenance, Event Log records for events over 45 days old are purged from the database. This is not configurable.

Sage Technical Support may ask you to export the Event Log records to an XML file.

### To view and export an audit log

1. Click **Databases**. Click **Audit Logs**.
2. From the **Database** list, select the database.
3. In the **Event Types** field, select an event type from the list.
4. To export the log to an XML file, click **Export**.
  - a. In the **Event Log Filtering** dialog box, select a date to filter the event log by. Click **OK**.
  - b. At the **Export Audit Logs** message box, click **Yes** to save the XML file to your desktop.
  - c. To view the XML file, click **Yes**.
  - d. If necessary, limit the scope of log entries by date to help reduce the number of resulting entries and file size.

The resulting file is placed on the desktop with the name: [database\_name] - Database Audit Logs.XML.



# Chapter 9

## Specifying Database Performance Settings

---

The Database Settings panel contains two tabs: ACT! Settings and SQL Server Settings. These tabs let you view and configure performance behavior setting values for the ACT! database and SQL Server database.

---

**Caution:** As with all other settings, changes made here affect all other users who connect to the database. You should read and understand the effects of each setting change and make changes only when directed by Sage Technical Support.

---

This chapter explains each tab and its default options and tells you how to change the options.

### ACT! Settings Tab Options

Each ACT! database may contain configuration settings that you can modify if directed to by Sage Technical Support. The settings affect performance and product behavior or capacities. A tooltip provides acceptable Value settings.

#### Contact Membership Recordlimit

The Contact Membership Recordlimit option lets you set the maximum number of group or company records to which a contact belongs. You might change this value on databases that have many group or company records that use dynamic membership (queries). Setting this value lower helps reduce the workload on the database server by stopping the search once the number of matches has been reached.

The default value is 250000.

#### Enable OLE/DB Reporting

The Enable OLE/DB Reporting option lets you turn off or on (0 = disable, 1 = enable) the generation/maintenance of the OLE/DB Reporting Views for the older version of the ACT! OLE DB Provider for Reporting v1.0. (This does not apply to the ACT! OLE DB Provider for Reporting v2.0). You might change this setting to override the join limitation with more than 75 virtual fields.

By default, OLE/DB reporting is enabled (1).

#### Enable Procedure Tracing

The Enable Procedure Tracing option lets you turn off or on (0 = disable, 1 = enable) the tracing of certain SQL Server procedural objects.

By default, tracing is disabled (0).

## Reindex Threshold

This option specifies the fragmentation threshold (tolerance) value at which a table Reindex or Defrag is recommended. A greater value represents very minimal fragmentation tolerance and a lesser number represents a greater degree of acceptable fragmentation. You might decrease the value if the database is very large and takes a long time to perform reindexing.

The default value is 90.

## Statistics Sample Percentage

This option is the sampling size (in percent) to use when performing UPDATE STATISTICS operations for database tables and indexes. You might decrease this value by a small amount if the database is very large and takes a long time to perform checking and repairing. Increasing the value ensures that a greater amount of actual data is evaluated and considered for query plan optimization.

The default value is 75.

## SQL Server Settings Tab Options

This tab lets you change settings to the SQL Server database (and underlying ADF & ALF files). These settings can alter the behaviors or performance of the database.

---

**Note:** Changes made on this tab are recorded and viewable in the Database "Audit Logs" panel under the "SQL Server Configuration - Database Configuration" Event Type. For more information, see [Chapter 8, "Viewing and Exporting Database Audit Logs."](#)

---

### Auto Shrink

This option determines whether or not the database files (ADF & ALF) are candidates for automatic periodic shrinking by SQL Server. If checked, this option automatically attempts to compact and reclaim unused space by the database files. The compaction task is performed in the background as necessary. However, on larger, multiuser workgroup databases with highly volatile data operations (such as large import operations or Purge History), this task may interfere with database availability. This could cause momentary delays or disruptions in connections for ACT! users. If cleared, the task will only be performed when you run database maintenance tasks (and Reindex in ActDiag).

The default value is checked.

### Auto Close

This option determines whether or not the database is shut down and resources are cleared when the last user exits. If this option is checked, the database is shut down cleanly and resources are freed. This enables the database files (ADF & ALF) to be copied when no users are logged into the database. If this option is cleared, the database remains open after the last user exits. In this mode, a user will receive a "file in use" error if the database files are attempted to be copied, moved or renamed. Also, when cleared, the SQL Server instance protects the database files from viruses or from tampering or copying by other users.

The default value is cleared.

## Viewing or Changing Performance Settings

You can view or change the database performance settings.

### To view or change a performance setting

1. Click **Databases**. Click **Database Settings**.
2. From the **Database List**, select a database.
3. On the **ACT! Settings** tab, to view the settings, position the pointer over the Configuration drop-down box.

---

**Note:** In some ACT! databases, no Configuration settings may be available. This may be because of the database version.

---

4. To change the value, type in the **Value** box. Click **Apply**.
5. On the **SQL Server Settings** tab, select or clear an option. Click **Apply**.

---

**Tip:** To cancel or undo a change, click the Cancel button.

---

Once Apply is clicked, these changes are applied immediately and do not require a restart of the SQL Server instance or your operating system. Users do not need to close and re-open the database.



# Chapter 10

## Stopping or Starting the SQL Server Instance for ACT!

---

During ACT! installation, the local SQL Server instance for ACT! is configured to start automatically when the Windows operating system starts. Running the local SQL Server instance is required to:

- Create a new database.
- Open and use a local database.
- Run ACT! E-mail and store POP3 account items locally.

If none of these scenarios apply, you can configure the Windows operating system to skip starting the SQL Server instance for ACT! on start-up. This can improve overall system performance by using less memory and resources.

There are several ways to stop or start the local SQL Server instance for ACT!:

- From the Windows Services page.
- In SQL Server Configuration Manager.

### To stop or start the service using the Windows Services page

1. Open the **Run** dialog box.
2. Type **services.msc**. Click **OK**.
3. If prompted for permission to continue, click **Continue**.
4. Right-click the **SQL Server (ACT7)** row. Click **Stop** or **Start**.

### To stop or start the service using the SQL Server Configuration Manager

1. Open the SQL Server Configuration Manager. (See [Chapter 2, "Managing the SQL Server Instance for ACT!"](#)).
2. Click the **SQL Server Services** item in the left pane.
3. In the right pane, select **SQL Server (ACT7)**.
4. On the toolbar, select the **Stop Service** or **Start Service** tool, as appropriate.



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