

## Introduction

EASYLABEL 6 has several new features for saving the history of label formats. This history can include information about when label formats were edited and printed. In order to save this history, EASYLABEL needs a connection to an SQL Database Server. The most common setup is a group of networked computers that update a central database. Authorized users can then view the history from any computer that can access the database. The EASYLABEL history database can be created on an existing Microsoft SQL Server or Microsoft SQL Server Express installation. You will need Administrator privileges to create the EASYLABEL database tables and users. The following instructions detail how to setup the history database and how to setup EASYLABEL to update the history database.

## Microsoft SQL Server

Tharo Systems cannot give instructions on installing Microsoft Windows Server or Microsoft SQL Server. Talk with your IT Department or Network Administrator for help in getting the EASYLABEL History Database setup and accessible in your environment. Tharo provides an SQL script in the SQL folder on the CD-ROM that can be used to setup the initial database and users. Network and user security for the EASYLABEL history database depends on your network environment, so this document only provides the basic information needed to perform the initial setup.

## Installing Microsoft SQL Server Express

The EASYLABEL CD-ROM contains an installer for Microsoft SQL 2005 Server Express Edition. The installer, which is named SQLEXPRESS.EXE can be found in the SQL folder on the CD-ROM. You may choose to install a newer version of Microsoft SQL Server Express. Newer versions are available at [download.microsoft.com](http://download.microsoft.com). Search for “sql server express” to see the list of available versions. These instructions are for the SQL 2005 Express included on the CD-ROM. Other versions may have different sequences of steps during installation.

- 1) Start the installer executable SQLEXPRESS.EXE. You may see an “Open File – Security Warning” or similar message (depending on the operating system, this example uses Windows XP), click the “Run” button to continue. You should then see the “Extracting Files” message. When file extraction is complete, you will see the “End User License Agreement” screen. Click the “I accept...” checkbox and then click the “Next” button.
- 2) You may see an “Installing Prerequisites” screen, click “Install” to continue. After the prerequisites are installed, click the “Next” button to continue.
- 3) At the “Welcome to the Microsoft SQL Server Installation Wizard” screen, click the “Next” button. The installer will do a system configuration check and will report “success” if your system meets the requirements. Click the “Next” button to continue.
- 4) Enter the requested registration information and then click “Next”.

- 5) At the “Feature Selection” screen, you need to make sure to install the “Client Components”, so click the drive icon and select the “Will be installed on local hard drive”. Then click the “Next” button.
- 6) At the “Instance Name” screen, choose “Named instance” and keep the default name of “SQLExpress”, then click “Next”.
- 7) At the “Authentication Mode” screen, select “Mixed Mode” and then enter a password for the “sa logon”, and then click “Next”.
- 8) At the “Configuration Options” screen click “Next”.
- 9) At the “Error and Usage Reporting” screen again click “Next”.
- 10) At the “Ready to Install” screen, click the “Install” button to install SQL Express. Once setup is finished, click the “Next” button, and then finally click the “Finish” button.

The next steps will install the SQL Server Management Studio Express Edition. On the CD-ROM in the SQL folder is a Microsoft Installer file SQLServer2005\_x86\_SSMSEE.msi (for 32-bit systems) or SQLServer2005\_x64\_SSMSEE.msi (for 64-bit systems) which will install the SQL server management tools.

- 1) After starting the installer, you will see the “welcome” screen, click “Next” to continue.
- 2) At the “License Agreement” screen, select “I accept...” and then click “Next”.
- 3) Enter the requested registration information and then click “Next”.
- 4) At the “Feature Selection” screen click “Next”.
- 5) The next screen is the “Ready to Install” screen, click the “Install” button to begin installation.
- 6) At the final screen, click “Finish” to complete the installation.

## Creating the History Database

To create the EASYLABEL history database and associated tables, start the Microsoft SQL Server Management Studio. At the “Connect to Server” screen, choose the correct server name for your SQL Express server instance. Then choose either “Windows Authentication” or “SQL Server Authentication”. If using Windows authentication, the current user should have admin permissions. If using SQL authentication, enter an existing login like “sa” (with admin permissions) and the password. Then click the “Connect” button to connect to the SQL Server instance.

From the “File” menu choose “Open” and then “File...”. Browse to the SQL folder on the CD-ROM and select the CreateEASYLABELTables.sql file. This will open the script to create the EASYLABEL history database and associated tables and user. From the “Query” menu select “Execute” or simply press the F5 key to run the setup script. Once this has completed successfully, the EASYLABEL history database is ready for use. The default history database user is named “tseasyuser” and the default login for that user is “tseasylogin” and the password is “tseasypass”.

## EASYLABEL Setup

The EASYLABEL history configuration is done through the “Settings” menu in EASYLABEL. Choose “Program Options...” from the “Settings” menu. Then click on the “History” tab in the configuration screen. The “History” screen has the option of enabling history logging, selection of the database to be updated, and several options that control the types of information that are logged. The logging selections are stored so that if history logging is disabled and then later re-enabled, all of the previous settings remain and do not have to be reentered.

The following options are available for the history logging:

- **Enable History Logging**  
If this option is set to “No” then no history is logged. Nothing will be written to the selected SQL database. Set this option to “Yes” to enable history logging. Then use the following options to control the types of history you want to be logged.
- **Primary History Database**  
Enter a connection string that points to the database containing the EASYLABEL history tables. If the Primary History Database is unavailable (because of server outage or network errors) then EASYLABEL will log history to the backup history database if one is defined. Use the “Prompt” button to bring up the database connection dialog. Follow the database connection dialog to select a database server, database name, and user name and password. Test the connection to make sure all of the information is correct. To make future connections easier, so that you do not have to reenter the password, select the “Allow saving password” option.
- **Backup History Database**  
Enter a connection string that points to a secondary database containing the EASYLABEL history tables. If a Backup History Database is defined then EASYLABEL will log history data here when the Primary History Database is not available. If the primary database is on a network server it may make sense to have the backup database local on the computer running EASYLABEL. See the “Backup Server Settings” section below for an explanation of how to set this up.
- **Log Job Details**  
Set this option to “Yes” to log the information for all print jobs. This includes information such as: format name, date, time, user name, computer name, etc. This option is required before setting other print job logging options.
- **Log Job Status**  
Set this option to “Yes” to log the status updates for print jobs. This will log when the job is queued, when printing is started and ended, and any errors that may occur during the printing process.
- **Log Label Data**  
Set this option to “Yes” to log the label data for every printed batch of every print job. When this is used in conjunction with the “Log Label Format” option, it is possible to view and reprint any batch of any print job.

- **Log Label Format**  
Set this option to “Yes” to save a copy of the label format file for each print job. This will allow the Print History Console to display an image for a printed label. The label format file can also be saved if the original version is accidentally lost.
- **Log Saving of Formats**  
Set this option to “Yes” to log information about every save of a label format file. This allows for viewing the history of all changes to the label format.
- **Log User Changes**  
Set this option to “Yes” to log changes to EASYLABEL user profiles, such as the user description, access rights, etc.

## Database Connection Strings

If you use the “Prompt” button for the Primary History Database or Backup History Database setting in the EASYLABEL history configuration, this will bring up a “Data Link Properties” window to create a database connection. This example we will show how to setup a connection to Microsoft SQL Server Express.

- 1) In the “Provider” window select “Microsoft OLE DB Provider for SQL Server” and then click the “Next” button.
- 2) In the “Connection” window part 1, enter the server name. As an example we use “VMWINXP\SQLEXPRESS”, but you should enter your machine name to replace the VMWINXP part.
- 3) In part 2, select “Use a specific user name and password”. The user name should be “tseasylogin” and the password is “tseasypass”. These are the default user name and password created by the “CreateEASYLABELTables.sql” described above. Make sure to select “Allow saving password”.
- 4) In part 3, select “TSEASYLABELHistory” as the database on the server. Click the “Test Connection” and you should see a message “Test Connection Succeeded”. Then click the “OK” button.

## Backup Server Settings

The backup SQL server is used in cases where the primary (usually centralized) SQL server is unavailable. A backup server will contain all of the history that could not be logged to the primary server. The backup database is automatically synchronized with the primary database the next time the connection to the primary is available. This generally happens the next time EASYLABEL is started. Once synchronization is complete, the backup database is cleared of any history. Please remember that the backup database DOES NOT contain a copy of all of the data in the primary database, it is simply a place to log history when the primary database cannot be accessed. The most common setup is a centralized network

database server as the primary, and a local (on each client machine) backup database server. This section will describe the setup using a local SQL Express as the backup.

Install SQL Express as described in the section “Installing Microsoft SQL Server Express” above. Once the database server is installed and the EASYLABEL history database is created, several more steps need to be done before it can be used as a backup database. These changes are needed so that the primary and backup database servers can connect in order to perform the database synchronization.

- 1) In the Windows Firewall (or other firewall software installed), add exceptions for the these ports: SQL Server port# 1433 TCP, and SQL Browser Service port# 1434 UDP.
- 2) Start the SQL Server Configuration Manager. In the Network Configuration select “Protocols for SQLEXPRESS”. Under “Protocol Name” select “TCP/IP” and then select “Properties”.
- 3) Make sure that the protocol is “Enabled”.
- 4) Select “IP Addresses” and scroll down to the bottom to show “IP All”. Set the “TCP Dynamic Ports” entry to be blank, this disables dynamic IP port assignment.
- 5) Then set the “TCP Port” to be 1433 and then click “OK”.
- 6) Choose “SQL Server 2005 Services”, and in then right-click on “SQL Server (SQLEXPRESS) and choose “Restart”. Then right-click on “SQL Server Browser” and choose “Restart”. Close the SQL Server Configuration Manager.
- 7) Start the SQL Server Management Studio Express and connect to the local database server. Select the server name, for example “VMWINXP\SQLEXPRESS” and then right click and then select “Properties”.
- 8) In the properties of the server, select “connections” and make sure to “allow remote connections to this server”. Click “OK” and then close the management studio.

One issue that needs mentioning is the fact that both the primary and backup database should have the same collation option. The collation for the history database defaults to the collation option for the server. The server collation is set when the server is installed, and depends on the regional and language options of the host operating system. The collation option for the database can be checked by using the server management studio. Select the TSEASYLABELHistory database, right-click on it and select “Properties”. In the database properties, click on “Options” and verify that the “Collation” selected is the same for both the primary and backup databases.

This completes the configuration of the backup server to allow synchronization to the primary server. Make sure that the EASYLABEL configuration has connections for both the primary and backup servers, see the section “EASYLABEL Setup” above for instructions on configuring the databases in EASYLABEL.