

Setting Up ALERE with Client/Server Data

TIW Technology, Inc.

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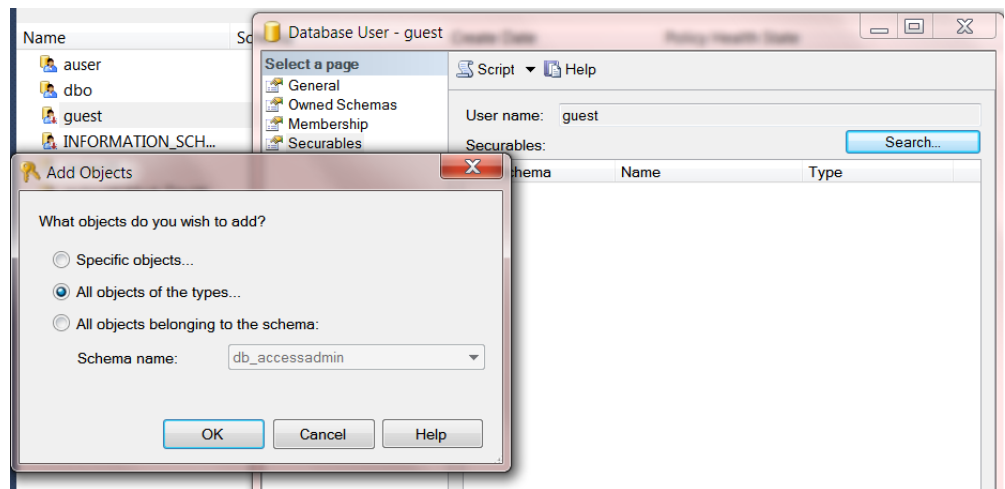
ALERE Accounting and Manufacturing can use either LAN (FoxPro) or Client/Server (SQL Server) data tables. The desired database type must be specified at the time that a new ALERE company is created. If you have an existing company that uses LAN tables, the data can be converted to client/server tables by adding a new empty CS company and importing the LAN data with the built-in data conversion program (LanToCS). It is important to note that client/server manufacturing data can only be linked to client/server accounting data. The client/server accounting and manufacturing tables must be stored in separate databases, but must be located on the same database server.

Adding a New Client/Server Company

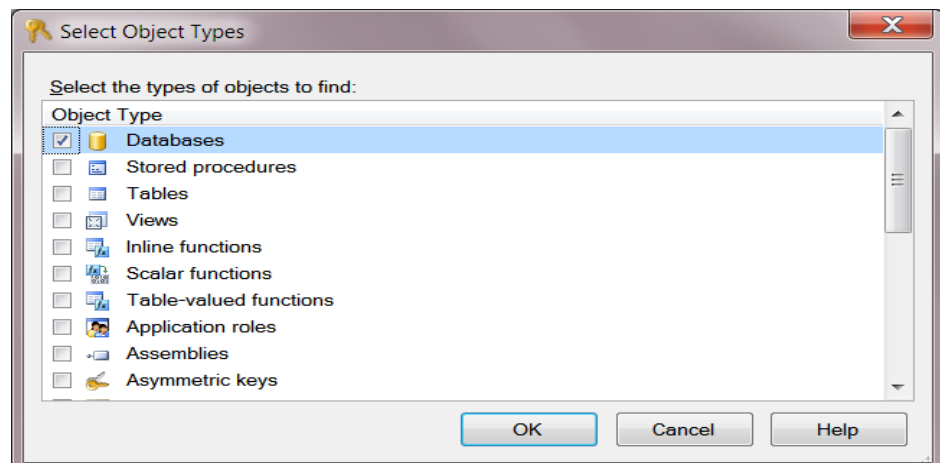
1. Click the New button on the Company Menu screen.
2. Enter the company name, set the Database Type to “Client/Server”. Select the connection type. If “Server” is selected (recommended), then enter the path to the database server. If “DSN” is selected, enter the name of a valid DSN that has been set up in the Windows ODBC Administrator. In the User ID and Password fields, enter a valid SQL Server login. Finally, enter the name of the SQL Server database to create. Click the Continue button.

The screenshot shows the 'Add New Company' dialog box. The 'New Company Name' field contains 'Mike's Bikes'. The 'Database Type' dropdown is set to 'Client/Server'. The 'Server' dropdown is set to 'Server', and the text field next to it contains 'MIKES\SQLEXPRESS'. The 'Database' field contains 'MYCSCO'. The 'User ID' field contains 'alere' and the 'Password' field contains '*****'. In the 'Import From' section, the 'None' radio button is selected, and the 'ALERE' radio button is unselected. The 'Imported Data Path' field is empty. At the bottom of the dialog box, there are three buttons: 'Exit' (with a house icon), 'Continue' (with a refresh icon), and 'Help' (with a question mark icon).

3. If prompted to verify that you are connecting with an administrative login, click Continue.
4. If prompted for a data source, select the DSN specified in step 2 and click OK.
5. Creating a new database requires using a SQL Server login that is a member of either the **sysadmin** or **dbcreator** role. This level of access is required to create the application role described in step 9. If the current login does not have these privileges, uncheck the “Use Trusted Connection” box and enter a different login. Click OK.
6. When prompted to create blank tables in the new database, click OK.
7. If you are creating a manufacturing database, go into the SQL Server Management Console and assign permissions to the Guest account in the new database. This is necessary in order for the separate accounting and manufacturing databases to communicate. In the database, go to Security\Users\guest. Right-click “guest” and select “Properties”. Click on “Securables” and then click the “Search...” button. Select “All objects of the types...” and click “OK”.





Check the box next to “Databases” and click “OK”.



In the list at the bottom of the screen, check the box in the “Grant” column next to the following permissions: Connect, Delete, Execute, Insert, Select, Update. Click “OK” to save permissions.

User name:

Securables:

Schema	Name	Type
	mycsco	Database 

Permissions for mycsco:

Explicit Effective

Permission	Grantor	Grant	With Gr...	Deny
Delete		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Execute		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insert		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
References		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Select		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Show plan		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Subscribe que...		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Take ownership		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Update		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
View database		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. In ALERE, enter the company default information. If linking a manufacturing company to accounting, select either “TIW ALERE CS” or “AccountMate SQL” for the Accounting System.

The screenshot shows the 'Company Defaults' window with the following data:

Field	Value
Company Name	Mike's Bikes
Index	0
Date	AMERICAN mm/dd/yyyy
Database Type	Client/Server
Time	99:99:99
Server	MIKES\SQLXPRESS
User ID	alere
Database	MYCSCO
Password	*****
System Mgr	
Purchased	//
Email Type	Simple MAPI
SMTP Host	
User ID	
Email Rule ID	
Email Address	
Password	*****
Global Lingo	Standard
Local Lingo	Standard
Accounting System	TIW ALERE CS
Company ID	MIKES
Report Qty	3 99999999.999
BOM Qty	4 9999999.9999
Rounding Qty	0
FG Costing	Based on Standard Costs

On the “Accounting” tab, enter the specific settings to link to the accounting system, such as accounting version, company ID, accounts and locations. ALERE Accounting requires a path to the accounting program installation, while AccountMate requires database connection information similar to what is required for the ALERE Manufacturing database. When finished entering the company default information, click Save and then Exit.

Connecting ALERE Manufacturing CS to ALERE Accounting CS

The screenshot shows the 'Company Defaults' window with the following data:

Field	Value
System	TIW ALERE CS
Version	TIWS
SYS Path	T:\ALERE\
My Company ID	MBIKES
GL Accounts	WIP 11070-STD
	VAR 11075-STD
	LAB 51090-STD
	FOH 51091-STD
	VOH 51092-STD
	MAINT 51095-STD
Default Warehouse Location	Finished Goods LOC1
	Material Issue LOC1

Connecting ALERE Manufacturing CS to AccountMate SQL

The screenshot shows the 'Company Defaults' dialog box with the following fields and values:

- System: AccountMate (SQL)
- Version: VAMS9
- Server: MIKESISQLEXPRESS
- User ID: tiw_am
- Password: (empty)
- Remote Database: sample999
- My Company ID: 999
- GL Accounts:
 - WIP: 130310-140-00
 - VAR: 605150-140-00
 - LAB: (empty)
 - FOH: (empty)
 - VOH: (empty)
 - MAINT: (empty)
- Default Warehouse Location:
 - Finished Goods: MAIN
 - Material Issue: MAIN
- Default Bin: A1

9. Run the TIW File Update on the company when prompted.
10. An Application Role will be created in the new database. This role will have all of the privileges necessary to run ALERE. Therefore, there will be no need to assign individual user privileges with the exception of basic database access. Additional access may be granted to individual users, although it is not required by ALERE.
11. After the company has been created, each user will need to be granted access to the new company database in SQL Server. (See *Granting Database Access in SQL Server* section.)

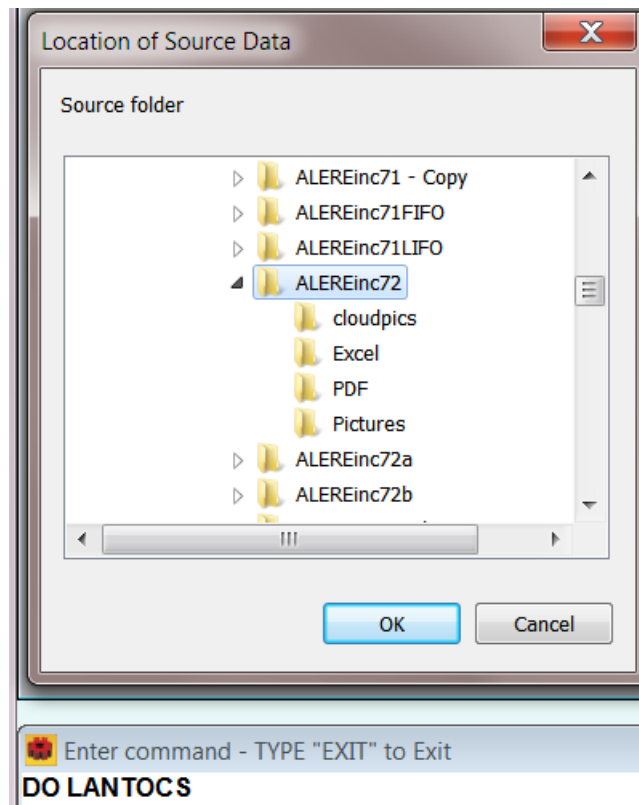
Connecting to an Existing Client/Server Company

1. Be sure that the current user has the proper access privileges set up for the database in SQL Server.
2. Click the New button on the Company Menu screen.
3. Enter the company name, set the Database Type to “Client/Server”. Select the connection type. If “Server” is selected (recommended), then enter the path to the database server. If “DSN” is selected, enter the name of a valid DSN that has been set up in the Windows ODBC Administrator. In the User ID and Password fields, enter a valid SQL Server login. Finally, enter the name of the SQL Server database to create. Click the Continue button.
4. If prompted to verify that you are connecting with an administrative login, click Continue.

5. If prompted for a data source, select the DSN specified in step 3 and click OK.
6. Leave the “Use Trusted Connection” box checked and click OK.
7. Enter the company default information, click Save and then Exit.
8. Press the Exit button to skip the TIW File Update.

Converting LAN data to Client/Server

1. Run ALERE and select the new (empty) client/server company.
2. From the menu, select Manager\System Tools\Developer Portal.
3. Execute the following command:
DO LanToCS



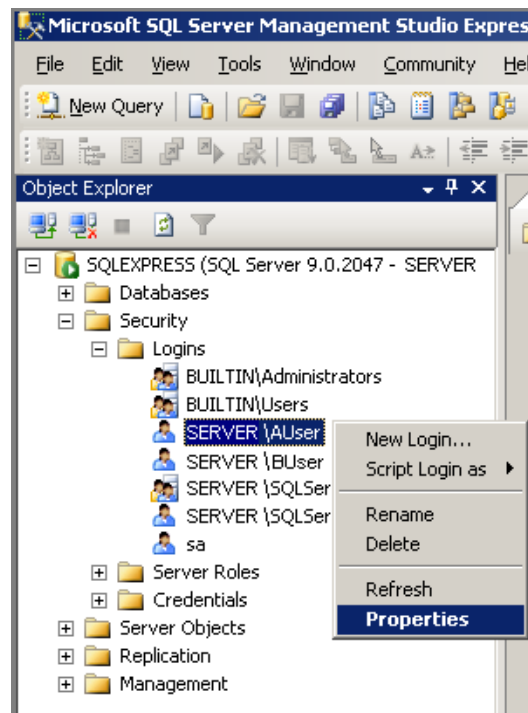
4. When the Location of Source Data dialog pops up, select the directory containing the LAN company (FoxPro) files. Note that non-TIW tables defined in WsData will also be converted. If any errors occur in the conversion process, they will be logged in a file called “LanToCS.log” in the ALERE program folder.
5. When the conversion is finished, enter the EXIT command to leave Developer Portal.

Granting Database Access in SQL Server

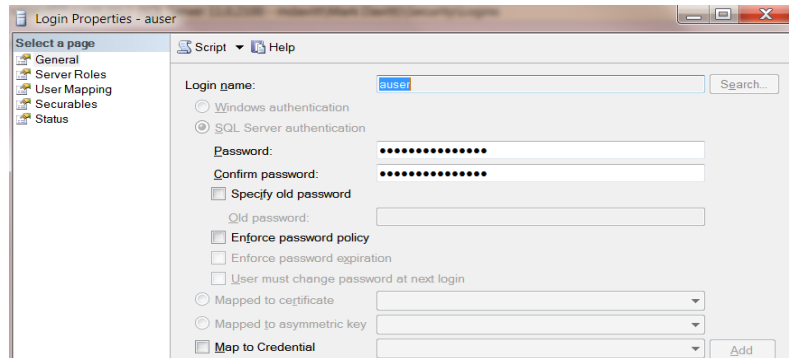
When creating a new client/server company in ALERE, the user is temporarily given administrator level privileges which are required to create the database, tables, indexes and other objects that define the company. After logging off, when the user tries to re-enter the new company, they might be refused access if the SQL Server database administrator has not granted them privileges to view the newly created database. This is a step that must be completed on the SQL Server by a user with administrator level privileges. Each SQL Server user who will be running ALERE must be granted access to the company database.

Follow these steps to grant database access to a user:

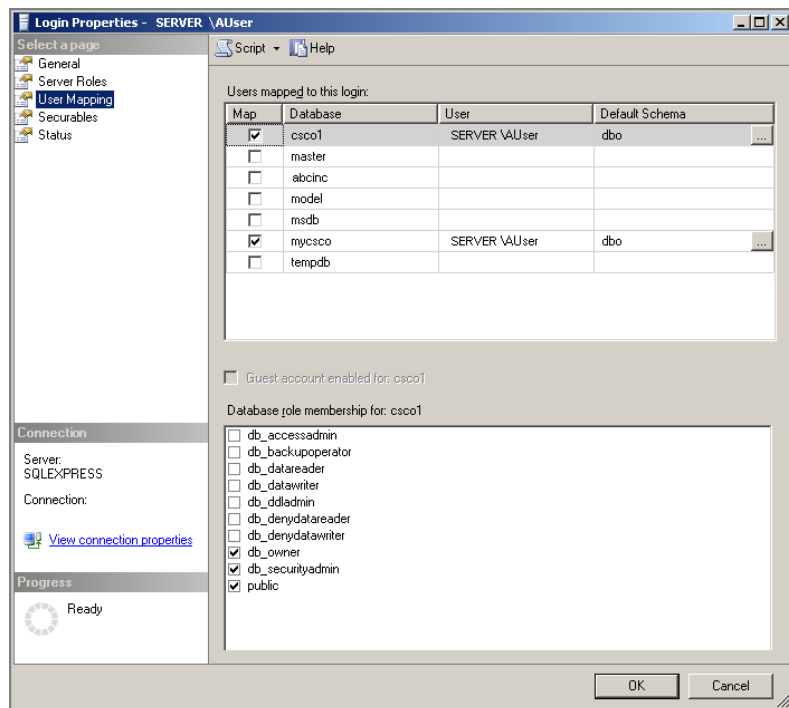
1. Run SQL Server Management Studio from the Windows Start menu.
2. Log in to the SQL Server with an administrator level user ID.
3. In the Object Explorer window, open the Security folder under the appropriate SQL Server name (if more than one).
4. Under the Security folder, open the Logins folder to display a list of the currently defined user logins on the SQL Server.
5. Make sure that each potential ALERE user has a SQL Server login. Logins are typically set up to be the same as the user's Windows login. If a user login is missing, right-click the Logins folder and select 'New Login...' from the menu. Fill in the Login Name and proceed to step 7.
6. In the list of logins, right-click the user requiring database access. Select Properties from the right-click menu.



- There is a list in the upper left corner of the Login Properties screen with the heading 'Select a page'. Click on 'User Mapping' in this list.



- In the upper right of the screen there will be a grid that lists all of the databases on the server. Check the box in the Map column next to the ALERE company database(s) that the user will need to access.



- In the bottom right of the screen there will be a list of database roles. All ALERE users need at least **db_securityadmin** selected. Users who will run the TIW File Update utility will need **db_owner** selected.
- Click the OK button to save the settings.
- Repeat steps 6 through 9 for each user requiring database access.
- Exit SQL Server Management Studio.

Microsoft SQL Server Express Edition

Microsoft SQL Server Express Edition is the free, redistributable version of SQL Server that is ideal for client applications requiring an embedded database, new developers learning how to build data-driven applications, and Web sites serving up to 25 concurrent users.

SQL Server Express is a database engine provided by Microsoft that is based on the core SQL Server technology and supports single- and dual-processor desktop computers. In other words, it is a scaled down copy of SQL Server. SQL Server Express was introduced to provide application developers a database engine that is more powerful than the Jet engine and at the same time expandable to SQL Server.

The common technology base shared between SQL Server and SQL Server Express enables developers to build applications that can scale seamlessly from desktop solutions to multiprocessor enterprise clusters. Because it is fully compatible with SQL Server, ALERE is able to easily target both SQL Server and SQL Server Express database objects with the same application code base. This allows VARs to run the same ALERE product on both a laptop computer for demonstrations using SQL Server Express and on a full SQL Server system using SQL Server.

Downloading SQL Server Express

SQL Server Express can be downloaded from the following location:

<http://www.microsoft.com/downloads/>

Installing SQL Server Express

Before installing SQL Server Express, it is recommended that you review the Installation Requirements and Readme documents that are provided on the Microsoft website for this product.

The setup file for SQL Server Express can be downloaded to your computer and then run, or the installation can be started from the web page listed above. A graphical interface will guide you through the setup process.

SQL Server Tools

Microsoft SQL Server includes many graphical and command prompt utilities that allow users, programmers, and administrators to design and test queries for retrieving data; copy, import, export, and transform data; and provide diagnostic information. The most useful is the SQL Server Management Studio. In addition to this utility, TIW provides an external command utility (SqlCmdEx) that allows users to execute many standard FoxPro SQL statements on SQL Server data.

Note: Microsoft provides SQL Server Management Studio Express as a free download in addition to SQL Server Express.

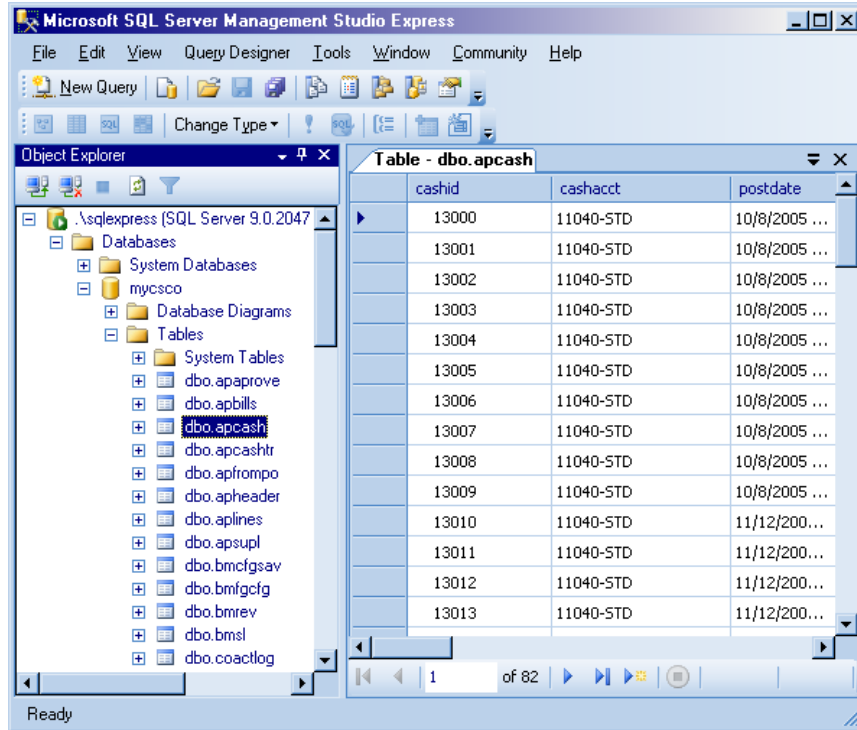
SQL Server Management Studio

SQL Server Management Studio is a graphical tool that allows the user to:

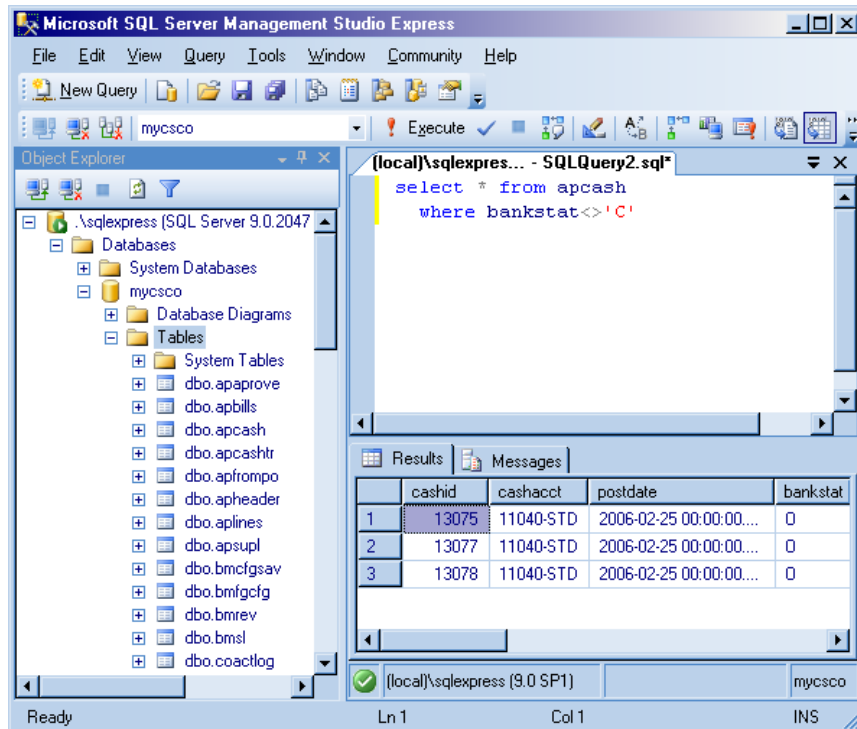
- Create queries and other SQL scripts and execute them against SQL Server databases. (Query Designer)
- Quickly copy existing database objects. (Object Explorer scripting feature)
- Locate objects within databases (object search feature), or view and work with objects. (Object Explorer)
- Quickly insert, update, or delete rows in a table. (Open Table window)
- Configure all SQL Server options for each registered server.
- Create and administer all SQL Server databases, objects, logins, users, and permissions in each registered server.
- Define and execute all SQL Server administrative tasks on each registered server.
- Design and test SQL statements, batches, and scripts interactively .

You can run SQL Server Management Studio directly from the Windows **Start** menu.

Example of the Object Explorer's "Edit" feature



Example of using the SQL Server Management Studio to run a query



SqlCmdEx Utility

TIW provides an external command utility called SqlCmdEx with the Developers Kit. This utility allows the user to directly view the SQL Server database using standard FoxPro SQL Syntax. Whereas the SQL Server Management Studio requires the user to employ Microsoft SQL Server compliant commands, the SqlCmdEx program accepts standard FoxPro SQL commands. Therefore, it is NOT necessary to know the Microsoft SQL Server syntax when using this utility.

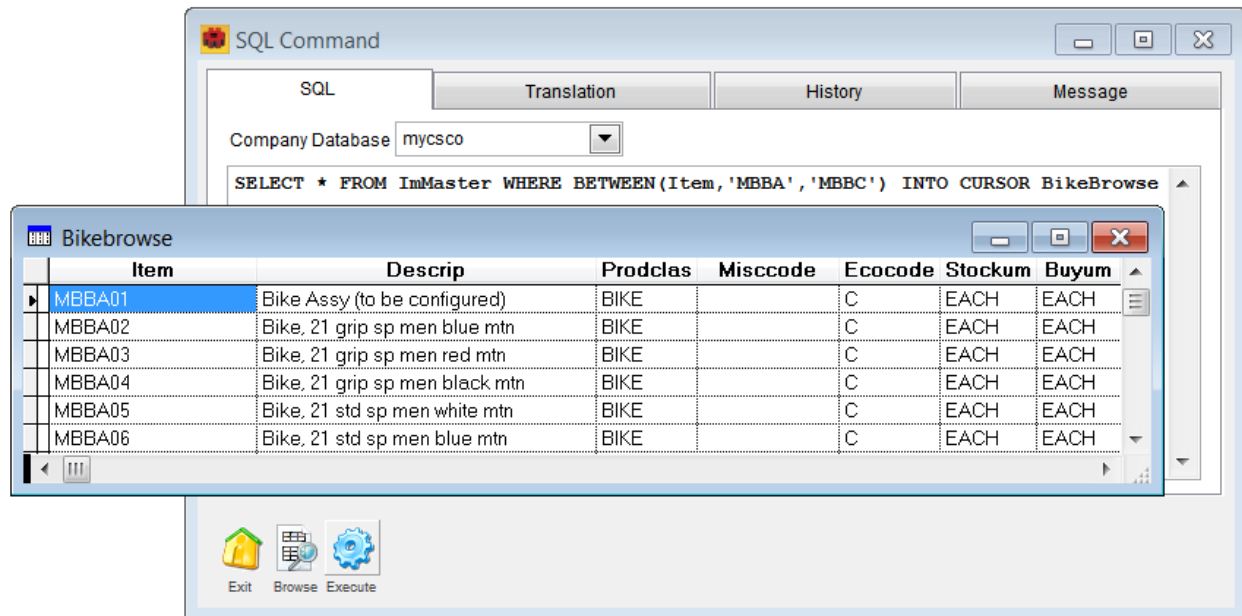
The SqlCmdEx executable file must be located in the ALERE program directory in order to function correctly. Before running the utility for the first time, it is necessary to set up a DSN in the Windows ODBC Administrator. (See *Adding the TIWSQL Data Source to ODBC* section.) To run the utility, set up a shortcut or double click the file SqlCmdEx.exe in Windows Explorer. It is not designed to run inside of ALERE (i.e. in Developer Portal).

The combo box located at the top of the screen on the SQL tab contains a list of the available SQL Server company databases. Select the database that you wish to manipulate. Enter the standard FoxPro SQL command in the area below the combo box and press the execute button when you are ready to run it. The statement will be executed and the other tabs of the utility will be updated.

The translation tab contains the translation of the last executed SQL command entered on the SQL tab in valid SQL Server syntax. The history tab shows the SQL commands entered on the SQL tab since starting the utility. Finally, the message tab contains any error messages from the last SQL command executed or shows that the command was executed successfully, which indicates that there were no errors.

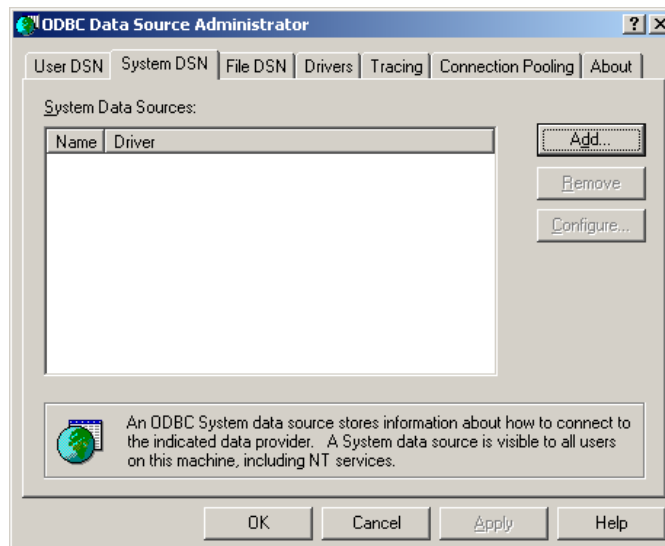
If you simply want to browse the records in a table, click the “Browse” button. You will be presented with a list of available tables in the selected database. Select the desired table and press Enter to open a read-only browse window.

Example of using the SQLCmdEx Utility to select items from the inventory table

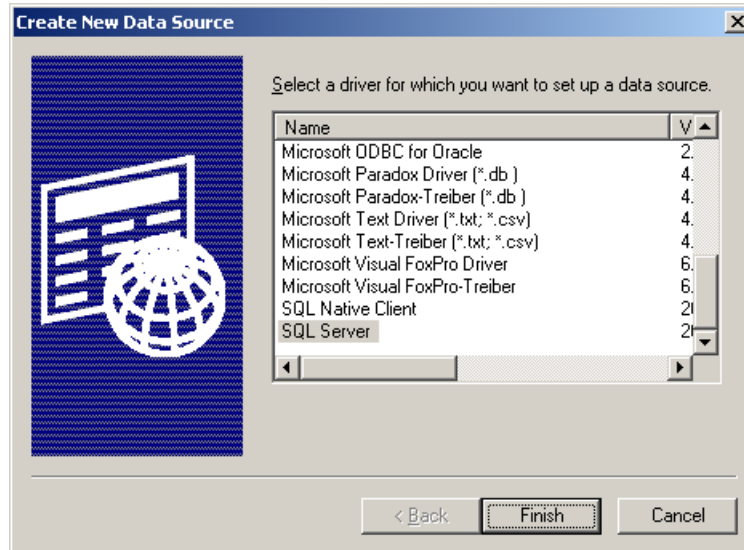


Adding the *TIWSQL* Data Source to ODBC

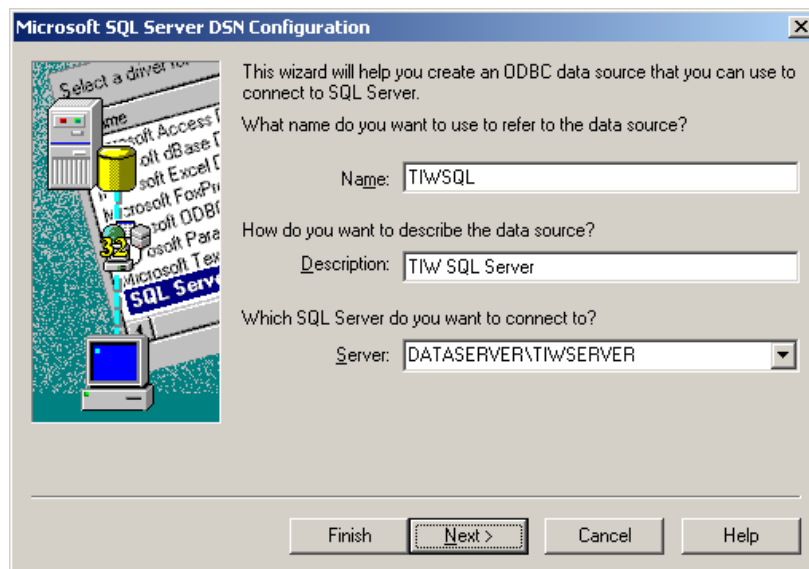
1. In Windows Control Panel or Administrative Tools run Data Sources (ODBC).
Note: if running a 64-bit version of Windows the Data Source must be set up with the 32-bit ODBC Administrator application (ODBCAD32.EXE) which can be found in the Windows\SysWow64 folder.
2. Click the System DSN tab on the ODBC Data Source Administrator screen then click the Add button.



3. Select the “SQL Server” driver from the list and click the Finish button.

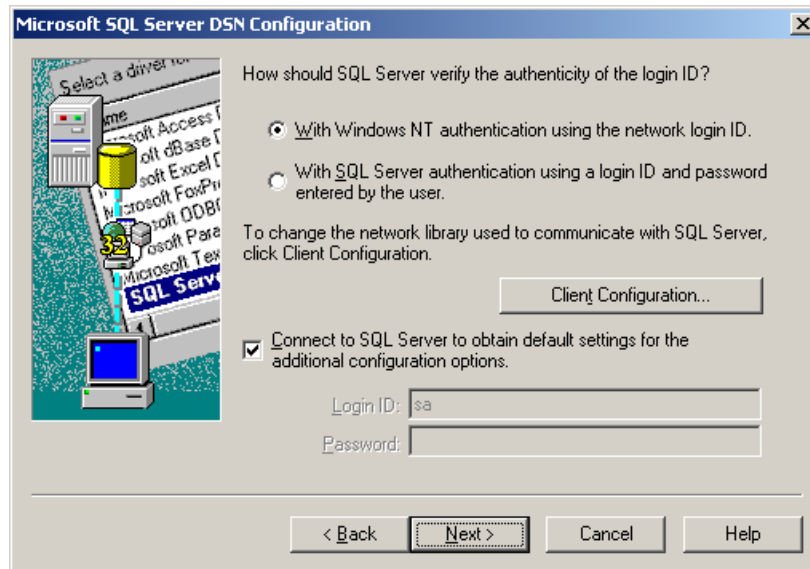


4. On the first screen of the DSN Configuration wizard enter “TIWSQL” in the Name field, “TIW SQL Server” in the Description field, and enter the name of the SQL Server that will contain ALERE data in the Server field. (Note that the default server name for an SQL Server Express installation is “SQLEXPRESS”.) Click Next.



5. The second screen of the wizard asks you to specify how you will connect to the SQL Server. If your SQL Server login has been linked to a Windows Server login, you can choose the first option which will allow you to connect to the server without entering another login. If you choose to connect with SQL Server authentication, you will be required to enter a

SQL Server login each time you establish a new connection to the SQL Server. Click the Client Configuration button to specify which network library will be used to communicate with the server. This setting will depend on your network environment. Click Next.



6. The third screen of the wizard contains options for your connection. Make sure the “Use ANSI quoted identifiers” and “Use ANSI nulls, paddings and warnings” options are selected. The remaining options are not required for ALERE. Click Next.
7. The fourth screen of the wizard contains another set of options for the connection. The only option required to be checked for ALERE is “Perform translation for character data.” The remaining options can be selected but are not required. Click Finish.
8. Click Test Data Source to make sure the connection is functional. If the test is successful, click OK. If the test is unsuccessful, check the server name, login options and client configuration options. Consult a network or database administrator if necessary.