SQL Server Login Role

SQL Server requires a security login, also called an Application Role, in order to allow its users to open, use and create a SQL database. All users must have network access to the SQL Server (physical access), then the following steps must be done by a SQL Server administrator using Microsoft SQL Server Management Studio.

Please note that the screen prints below demonstrate these steps using SQL Server 2014; however the steps are going to be similar for any newer version.

Open Microsoft SQL Server Management Studio and log into the server using the authentication method you setup when installing SQL.
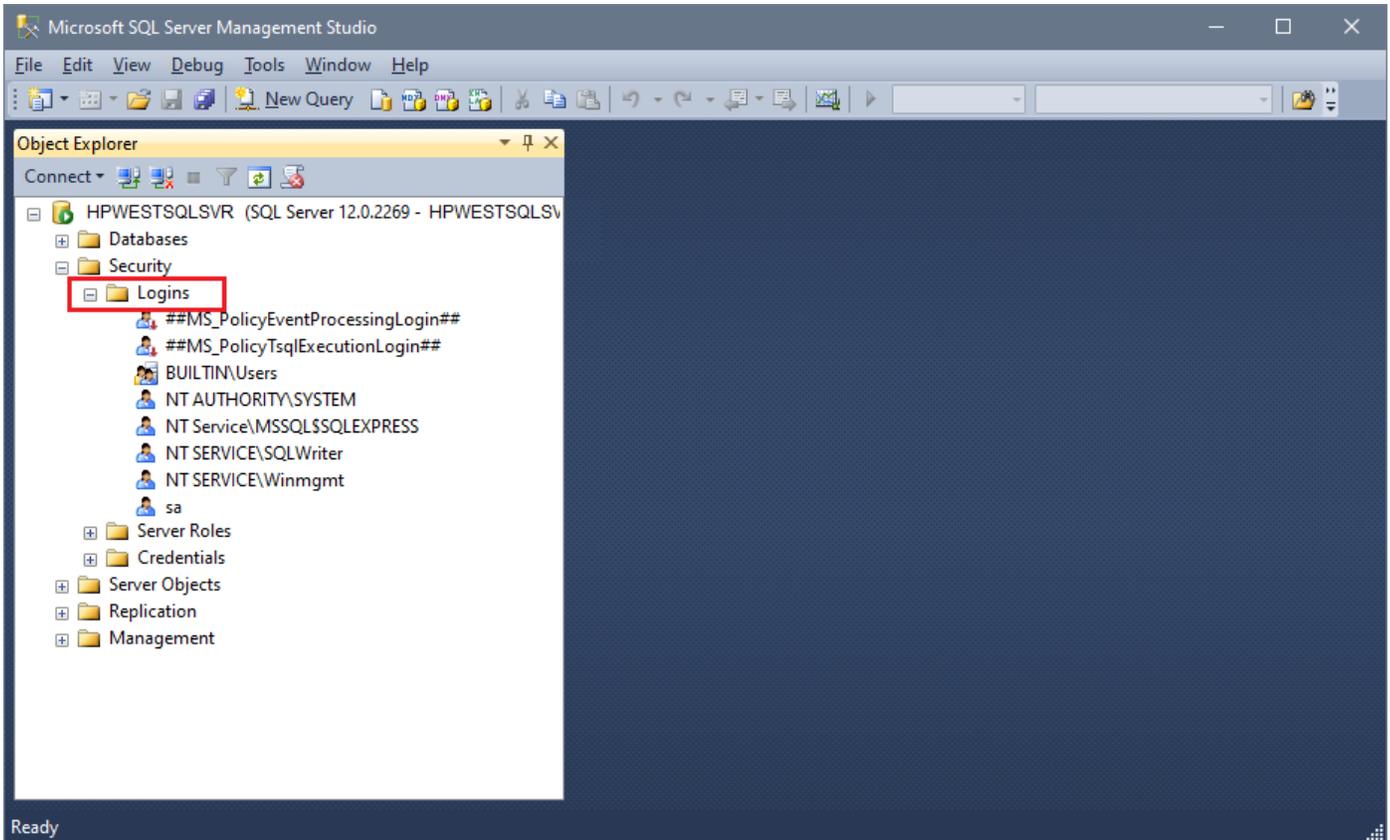
In the Object Explorer window on the left, expand the "Security" folder, then right-click on the "Logins" folder and choose "New Login" to display the dialog on the next page.

Configuring SQL Server Application Role - continued

Please note that your application has a default value for each of these fields; however choosing a different Login Name and Password than the default greatly increases security for the SQL Server. It also means you will need to update your SQL settings in your application. Please see the section later in this document for more information.

On the "General" page, enter the login name.

Then check the "SQL Server authentication" option and enter and confirm the password.

Click on the "Server Roles" page and check the "sysadmin" checkbox on the right to give full access rights to this role.

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Configuring SQL Server Application Role - continued

Click on the "User Mapping" page and check the "master" Map checkbox in the upper list.

The Database Role Membership setting for master will be enabled; the "public" option should already be checked; check the "db_owner" option as well.

Click "OK" to save these settings and create the new login.
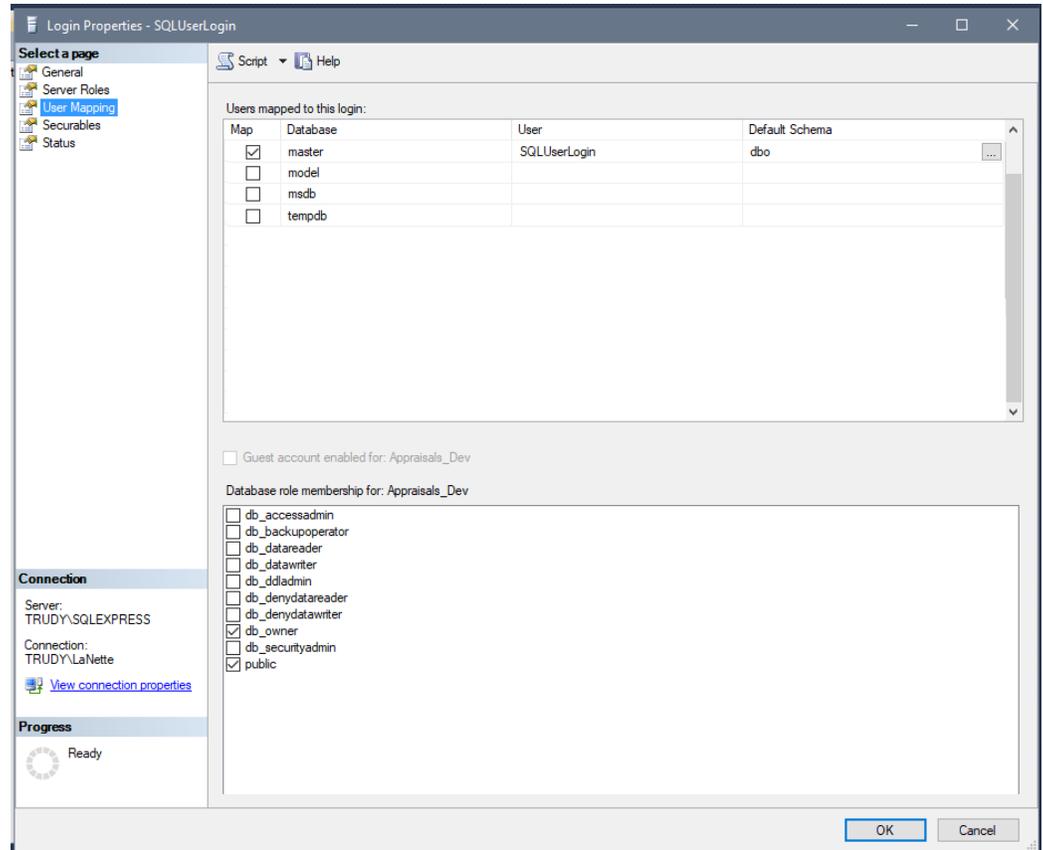
The client login will be displayed in the Login list.

Now the application has permissions to manage its own databases on the SQL Server.
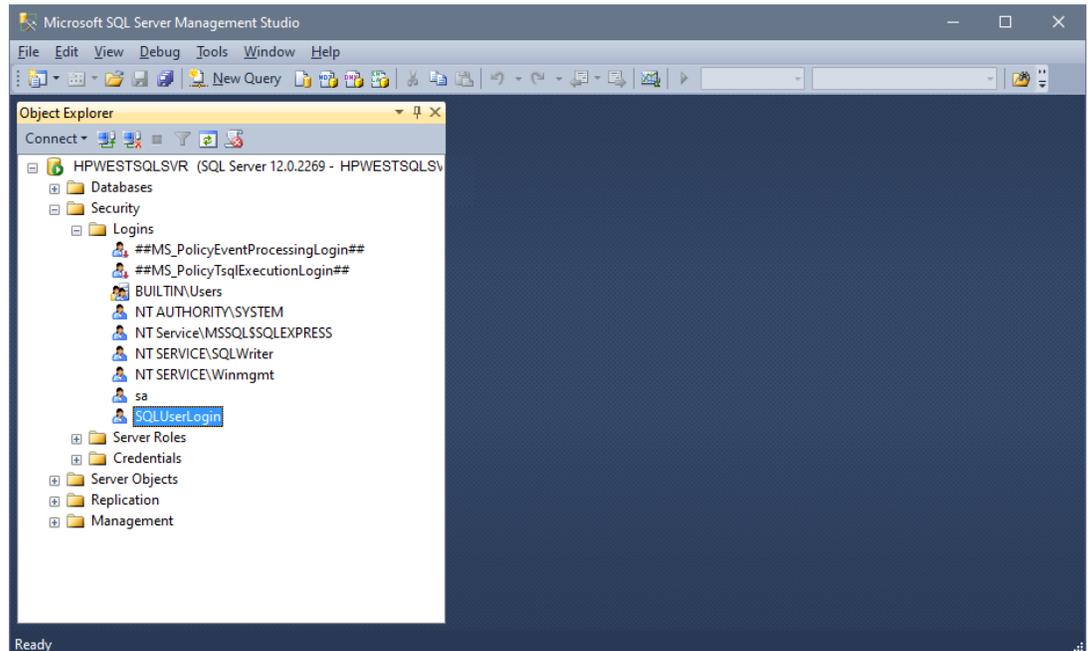
Configuring SQL Server Express

Out of the box, SQL Server Express's network connectivity settings aren't enabled. The reasoning behind this config-uration is simple: If users were to use SQL Server Express in a standalone installation with the network settings ena-bled, malicious outside users would be able to access the PC--this is how the SQL Slammer worm made such a big impact on Microsoft Data Engine (MSDE) installations. Many MSDE systems that were servicing standalone applica-tions didn't download the latest Microsoft bug fixes, which left them open to network connections and allowed the worm to gain access. SQL Server Express prevents this type of attack by leaving the network connectivity settings off by default.

Enabling the network settings is easy; you select Microsoft SQL Server 2008, then Configuration Tools from the Start menu. Select SQL Server Surface Area Configuration to launch the SQL Server Surface Area Configuration tool. Select Surface Area Configuration for Services and Connections, use the Remote Connections option, and click Local and remote connections. This process makes SQL Server Express network-enabled and capable of servicing multiple network users.

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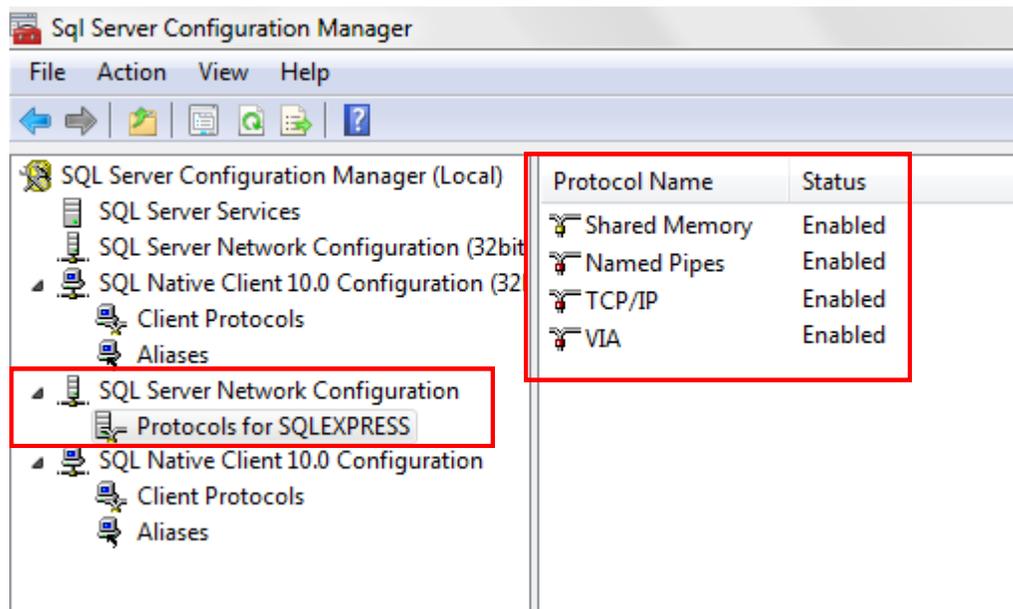
basic Software SQL Logins

To use a SQL database with any basic Software application, you must use the Login Name and Password you defined on Page 3 of this document the first time you open the database or to create a new database on a SQL Server.

To create a new SQL or SQL Express database, click on the "Data Utilities" on the Main Page, then choose "New Database" from the menu.

NOTE: *If you decide to use a different SQL Login name & password, you must re-open the database in the basic Software application and enter the new values in the login dialog (see below).*

Also, all users to the SQL database will need to use the login information the first time the database is opened. Thereafter, the application will automatically open to that database.
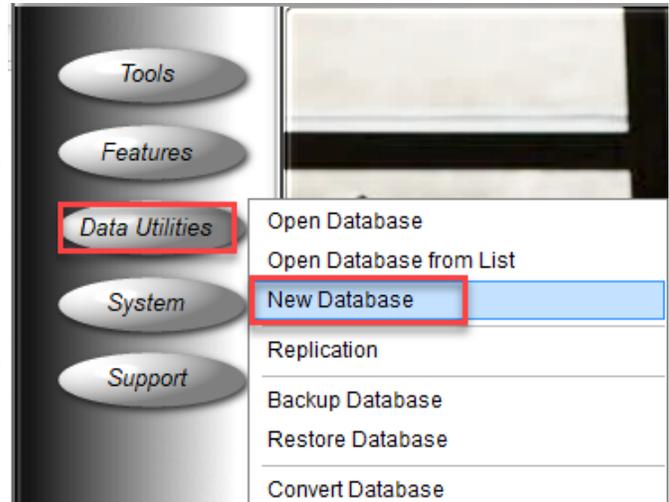
Choose the correct SQL Type from the next prompt and click "Continue".
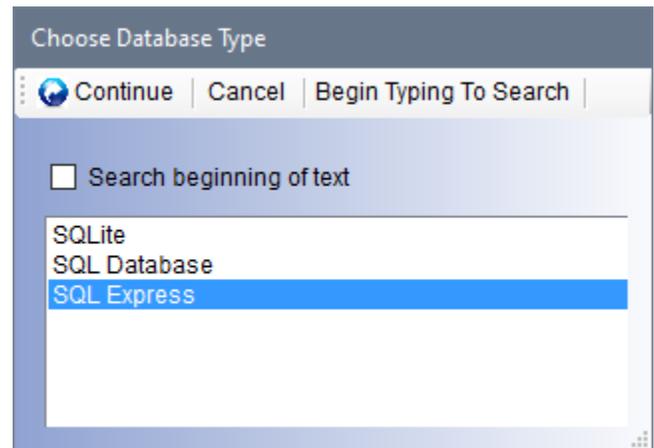
Enter the name of the SQL Server. NOTE: If using SQL Express, the text "\SQLEXPRESS" must be appended to the actual server name.

Enter the name of your database. It's best to use standard upper and lower case characters, no symbols ($?#, etc.) and an underscore instead of a space.

Enter the Login name and password you defined on Page 3 of this document. NOTE: The information displayed at the right are the default values used by all basic Software applications.

Click "Continue" to validate the server login information. If successful, you will see the progress bar flash quickly, which copies the default reports, etc., to your new database, and then the Main Page will open, displaying the SQL Server & database name at the bottom.

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