Problem Statement

How to troubleshoot Aspen Properties Database (APED) connection issues.

Description: When running a product that uses Aspen Properties, such as HYSYS, Aspen Plus, and Exchange Design and Rating, you may receive an error that the databases failed to initialize. This happens when the connection from the Aspen application to Aspen Properties is lost. This solution will assist you with troubleshooting the error and re-establishing the connection.

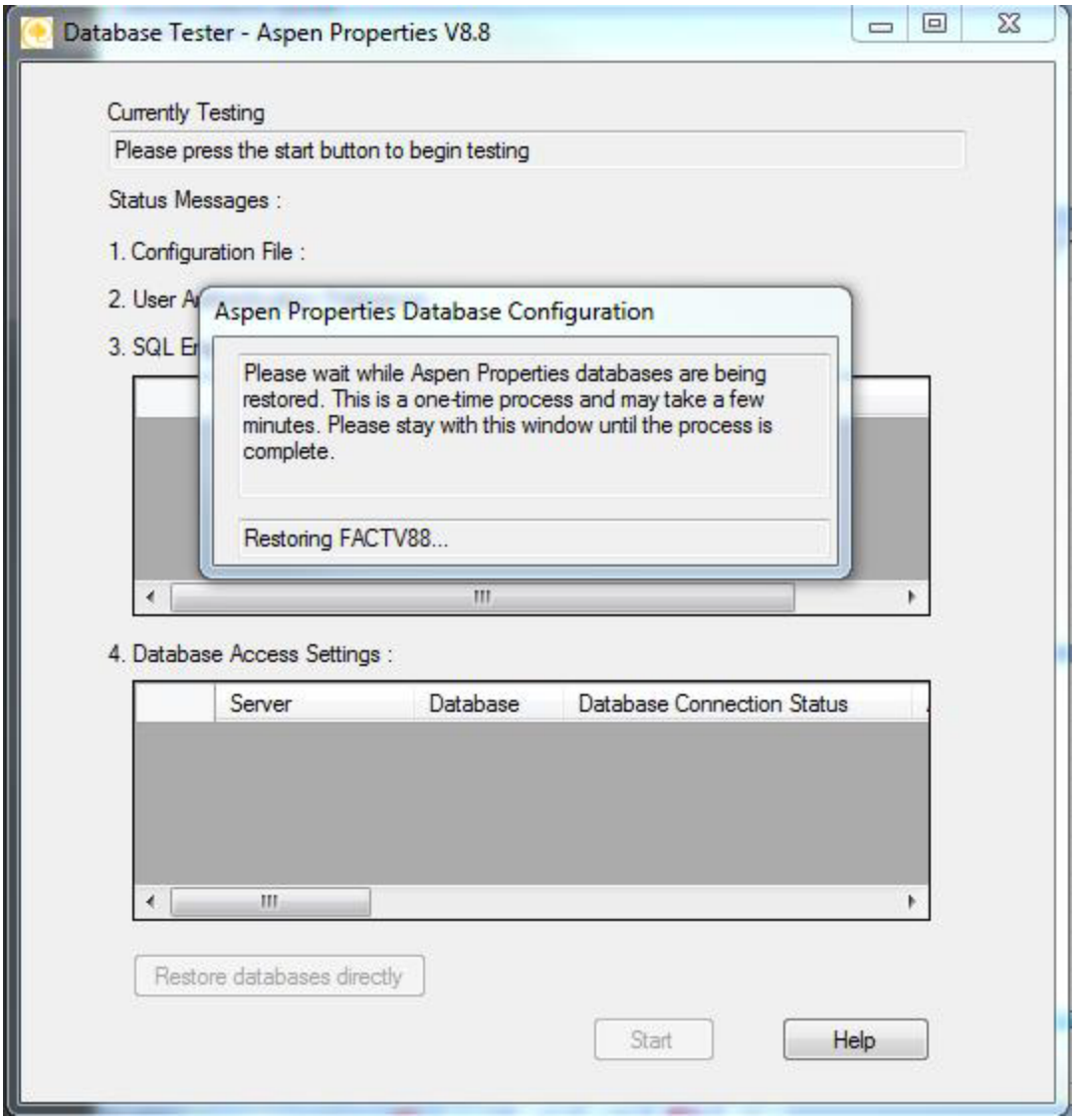
```
DATETIME Fri Jun 19 07:42:17 2015
Failed to initialize the Aspen Properties Enterprise Database.
Using the configuration file from C:\ProgramData\AspenTech\APED V8.8\jdoe\config.aem
Please use Database Tester to diagnose and fix the problem.
```

Solution

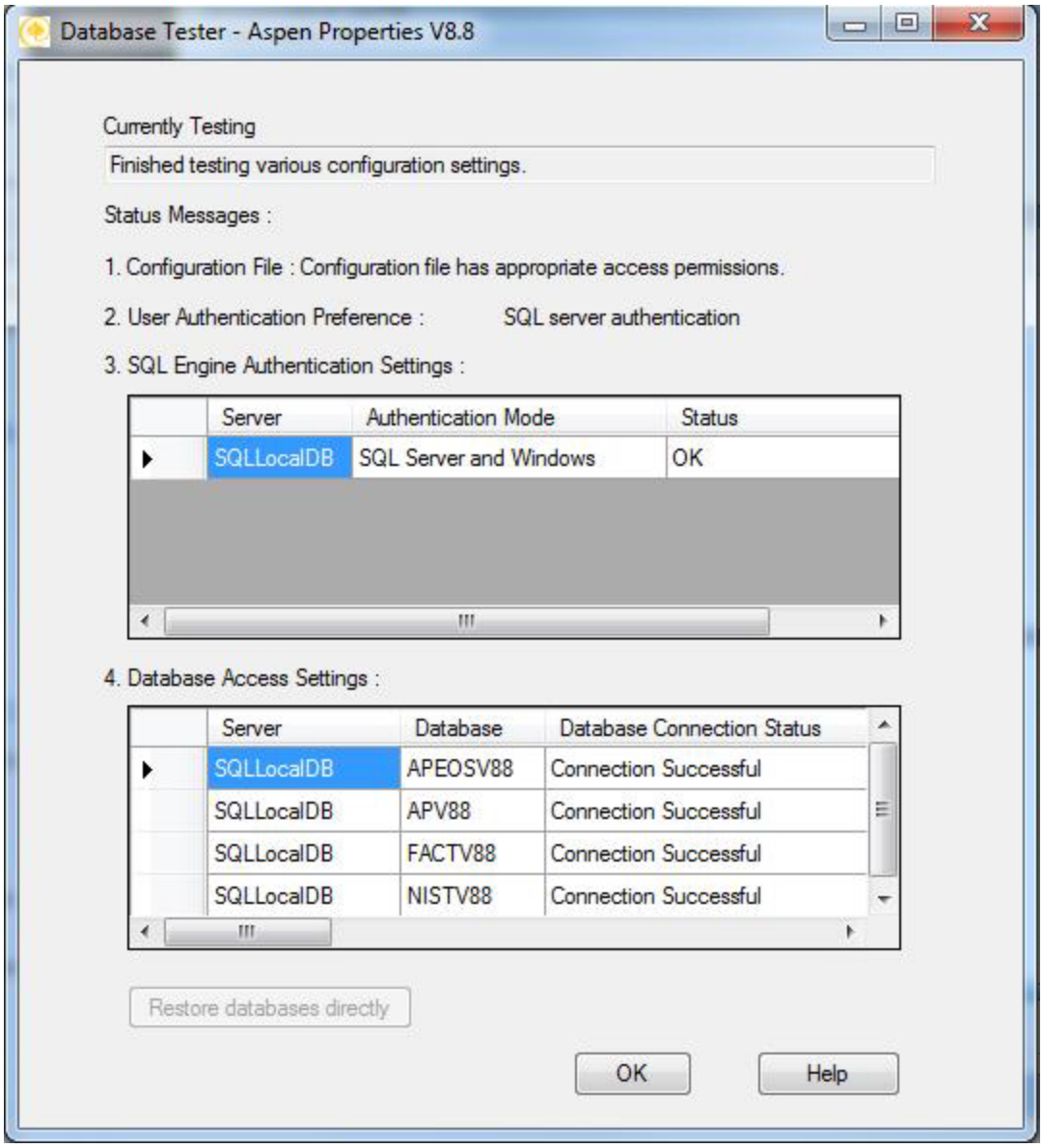
The link issue is associated with the installation of Aspen Properties and the SQL Server engine. Due to different security settings on different machines, the installation is not uniform and the user will get the above error message.

The following guidelines will help troubleshoot the linkage issue with Aspen Properties and registering the Aspen Properties databases.

- In the **Control Panel | Add Remove Programs** make sure that Microsoft SQL Server 2008 or 2012 and its components are installed.
- Make sure that the **Aspen Properties Enterprise Databanks** option is selected by going to **Start | All Programs | AspenTech | Process Modeling V8.x | Aspen Properties | Database Selector – Aspen Properties V8.x**.
- Run the **Aspen Properties Database Configuration Tester** from **Start | Programs | AspenTech | Process Modeling V8.x | Aspen Properties | Database Tester - Aspen Properties V8.x** to identify any issues.
    - The databases can be restored through the Aspen Properties Database Configuration Tester by clicking the **Restore databases directly** button.



- If the Installation of SQL Server and Aspen Properties goes as expected, the configuration tester results will be as shown in the screenshot below.

- 

  Here is a description of each of the items that the **Database Configuration Tester** checks:

1. **License Availability**: The tester will check the license availability for **Aspen Properties**. It will state that the license is either available or that it is not available. If the license is not available, then there is an issue with the license.
2. **Configuration File**: The tester verifies that the configuration file (**config.aem**) was installed with the correct permissions. If the **config.aem** file is not available, then you will get a status of ***Configuration file is missing***. If the **config.aem** file does not have the appropriate modify permissions, the tester will display a message stating so.
3. **SQL Engine Authentication Settings**: It will report all servers that have at least one **Aspen Properties** database registered on the computer. The **Authentication Mode** must be set to

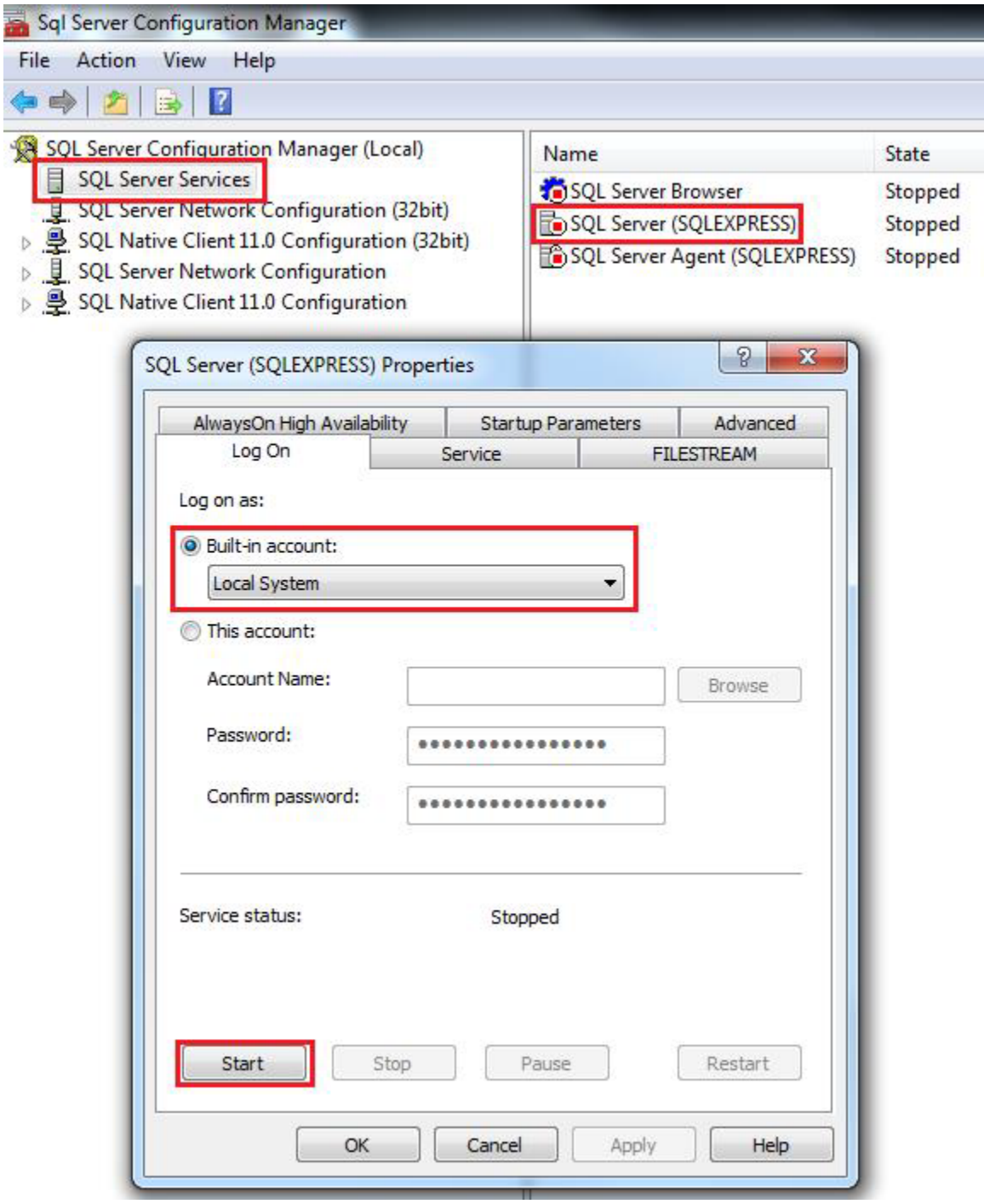
SQL Server and Windows (Mix Mode), and if it was set correctly then the status will show ***OK***. Otherwise, a message will appear stating that **Mix Mode** needs to be set. If there is an issue with the SQL Server, a message will appear in the **Status** column describing the issue.

4. **Database Access Settings**: It attempts to access each registered database and performs three tests.
5. It verifies that it can connect to the database. The result will either be a ***Connection Successful*** message or a message indicating the error that occurred.
6. It attempts to read the database as **Aspen Properties** would. This should report ***Granted/Successful*** if the database is configured for access from these programs or ***Denied/Failed*** if the database is not configured correctly.
7. It attempts to read the database as the **Database Manager** would. This should also report ***Granted/Successful*** or ***Denied/Failed*** based on the security options.If all the connections are appropriate, then the status will be as shown above in the screenshot. If it cannot access the databases or cannot find them, then an error saying ***Login Failed*** or ***Exception has thrown*** will appear.

   The following steps will assistance you with diagnosing issues from the **Database Configuration Tester**:

8. Make sure the **SQL Server 20xx (2008 or 2012)** is running and the appropriate protocols are enabled.
    1. Go to **Start | Programs | Microsoft SQL Server 20xx | Configuration Tools | SQL Server Configuration Manager.**
    2. In the left side pane, check if the **SQL Server 20xx Services (ie: SQLEXPRESS)** is running.
        1. If not, in the right side panel, right-click on the **SQL Server** service **(ie: SQL Server (SQLEXPRESS))** and select **Properties** from the context menu.

2. In the **SQL Server Properties** window, click the **Start** button. (**Note:** The **Log on as** has to be set to **Built-in account: Local System**, as shown below.)

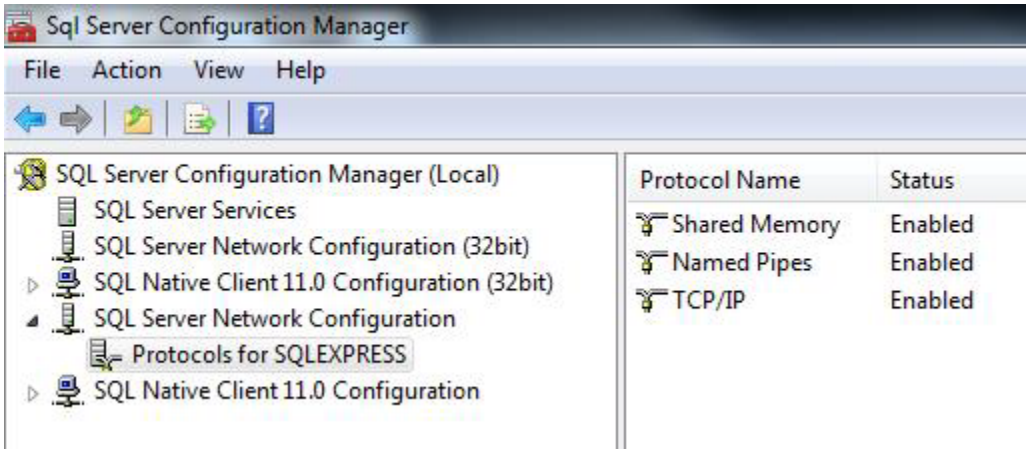


3. In the left side panel, expand both **SQL Server 20xx Network Configuration** and **SQL Native Client Configuration.**

4. Under **SQL Server Network Configuration,** highlight **Protocols for <the name of the SQL Service> (ie: SQLEXPRESS)** and **Enable** the first three protocols shown below.

1. To enable them, right-click the protocol and select **Enable** from the context menu.

5. After Enabling the protocols, **Restart** the **SQL Server (ie: SQLEXPRESS)** using **Stop and Start** or **Restart** options.



6. Once this is done, run the **Aspen Properties Database Configuration Tester** again and check if the issues have been fixed.

9. If the tester fails at **Step 3 - SQL Engine Authentication Settings**, then **SQL Server and Windows (Mix Mode)** is not set. The tester will display a message asking to turn **Mix Mode** on. If not, it needs to be turned on manually. The easiest way is to use **SQL Server Management Studio 2008 or 2012,** which is not installed by default.

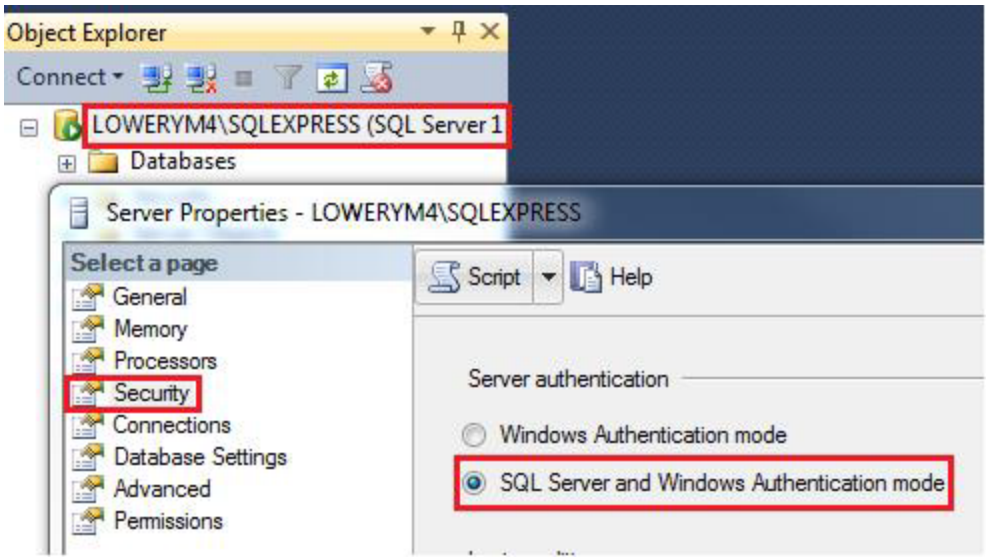
    1. Go to **Microsoft.com** and download the **SQL Server Management Studio 2008 or 2012** (NOTE: Download the version that matches your SQL Server).

    2. Install **SQL Server Management Studio**.

    3. Follow these steps:

        1. Go to **Start | All Programs | Microsoft SQL Server 20xx | SQL Server Management Studio**.

        2. The **Connect to Server** window will display. Select the **Server Name** and **Windows Authentication**. Click **Connect**.iii.The **Microsoft SQL Server Management Studio** window will display. In the tree on the left, right-click the **name of the server** and select **Properties**.
        iv.The **Server Properties** dialog box will display. At the left, click **Security**.
        v. Under **Server authentication**, select **SQL Server and Windows Authenticationmode**, and click **OK**.



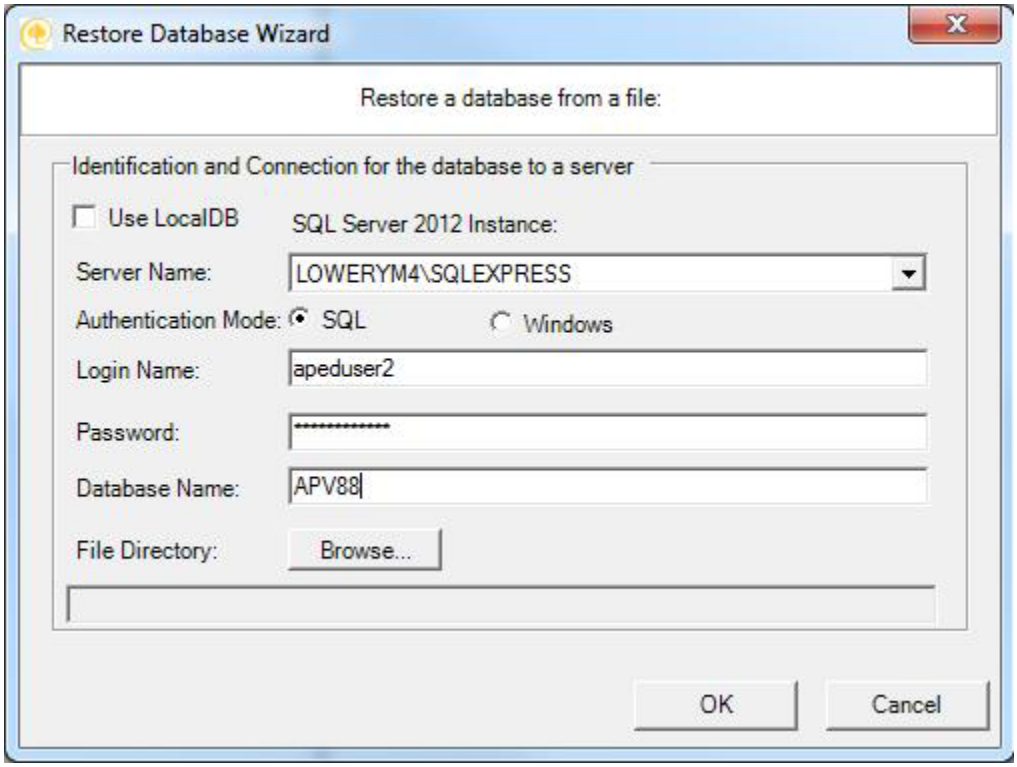
4. After this change, run the **Aspen Properties Database Configuration Tester** again and check if the issue is fixed.

1. If the configuration files or database definition files (*.LDF and *.MDF) are missing at the **APED folder** on the computer's local drive (**Note:** The **APED folder** location is different between **aspenONE** versions) or fails at the **Database Access Settings (Step 4),** then the databases have to be manually restored with the appropriate login name and password. **APED Folder** Location:

- V7.3.2 – V8.x: **C:\Program Data\AspenTech\APED Vx.x (V7.3.2 or V8.x).**
- V7.0-V7.3: **C:\Program Files or Program Files (x86)\AspenTech\APrSystem V7.X\PropertiesDatabase\Database**

    1. To restore the database(s) manually, go to **Start | All Programs | AspenTech | Process Modeling V8.x | Aspen Properties | Database Manager - Aspen Properties V8.x**. Click **OK** on the warning message and the **Aspen Properties Database Manager** will open.
        1. In the **Aspen Properties Database Manager**, on the left side, right-click on **Aspen Physical Properties Databases** and go to **All Tasks | Restore Database**.
        2. At the **Restore Database Wizard**, fill in the following information:
            1. Uncheck **Use LocalDB** if you have SQL Server installed.
            2. **Server Name: <SQL Server Service Path> (**Example: **Server1\SQLEXPRESS)**

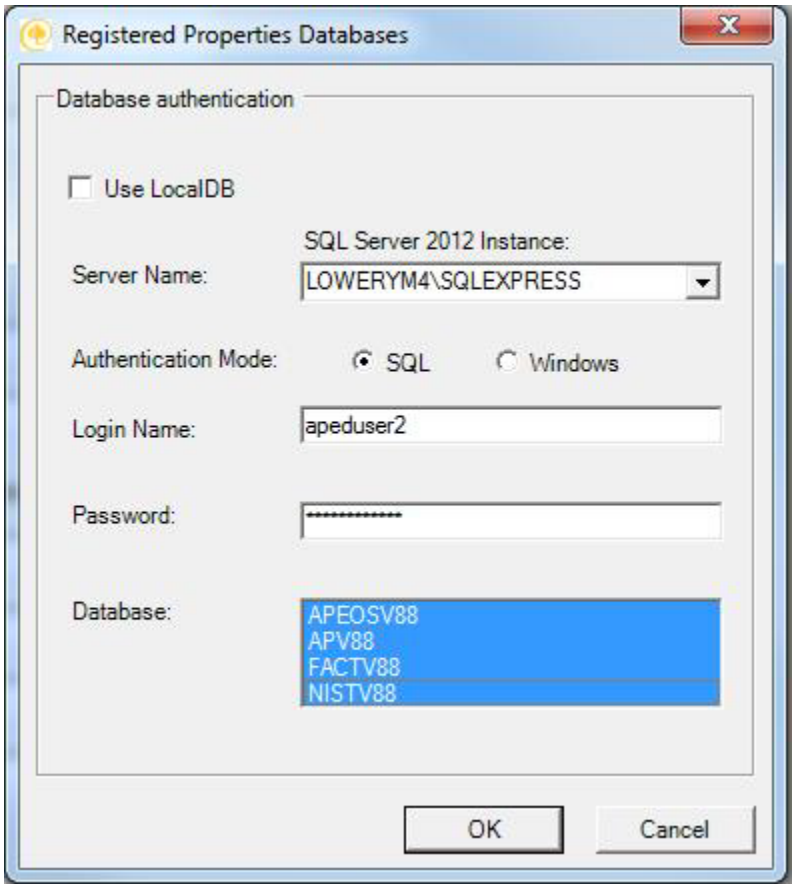
3. **Authentication Mode: SQL**
4. **Login Name: apeduser2** (v7.3.2 – V8.x) or **apeduser** (v7.0-7.3)
5. **Password: Aproperty88#** (v7.3.2 – V8.x) or **Aprop100** (v7.0-7.3)
6. **Database Name: <NISTV8x, FACTV8x, APV8x, or APEOSV8.x (V8.8 and higher)> or <NISTV7x, FACTV7x,** or **APV7x>**
7. Click **Browse.**
8. Go to the **APED folder** on the computer's local drive and select the ***.LDF** file that corresponds with the **Database Name** entered. Click **Open**.
9. Click **OK.**
10. Repeat the restoration for the other databases if necessary.
11. Run the **Aspen Properties Database Configuration Tester** again and check if the issue is fixed.



1. In some instances only the database registration will be missing. The configuration file and the database definitions files have been created and available, but they were not registered. This may happen due to a login failure because of an incorrect user name or password while installing the Aspen Properties. Usually the installation will set this up correctly, but if your company has certain password requirements, this may cause the issue. In those instances,

the database(s) will need to be registered through the **Aspen Properties Database Manager**.

1. In the **Aspen Properties Database Manager** window, on the left side, right-click on **Database Manager – Aspen Properties V8.x** and select **Register a Database.**
2. In the **Registered Properties Databases** window**,** enter the same information that was done on the **Restoring the Database Step**. (NOTE: uncheck **Use LocalDB** if SQL Server is installed)
3. Once the Login Name and Password has been entered, select the **Database** box and the available databases will appear. Select a database from the **Database** list and click **OK**. (Hold the **SHIFT key** to select multiple databases at once.)



4. Run the **Aspen Properties Database Configuration Tester** again and check if the issue is fixed. Once it is fixed, the user can open the HYSYS, AspenPlus or EDR applications and connect them to the Aspen Properties without any issues. This is a one-time process and will need to be performed if the issue mentioned in the problem statement appears.