

Using Microsoft SQL Server Express 2005 in AutoCAD P&ID 2009

Introduction

SQLite is embedded in AutoCAD P&ID 2009 and is the default database. When a database server is required, Microsoft SQL Server 2005 Express is supported in AutoCAD P&ID 2009.

This document presents the following topics:

- Enable SQL Server Express for AutoCAD P&ID 2009 in Windows
- Verify the creation of a SQL Server Express project database
- Configure AutoCAD P&ID 2009 using a database link file
- Configure SQL Server Express to allow remote connections
- Copy or Move a SQL Server Express Project to a new location

Install SQL Server Express 2005 in Windows

To start the installation, insert the AutoCAD P&ID 2009 installation CD and then do one of the following:

- To install the 32-bit version, run *sqlexpr.exe* from the *\x86\support\Miscellaneous\SQLExpress* directory.
- To install the 64-bit version, run *sqlexpr.exe* from the *\x64\support\Miscellaneous\SQLExpress* directory.

It is important that you use this supported version of SQL Server Express. During the installation, use the default options. Additional information regarding SQL Server Express can be found at Microsoft's website:

<http://msdn2.microsoft.com/en-us/express/bb410792.aspx>

Enable SQL Express 2005 for AutoCAD P&ID 2009 in Windows

Set the default database for a project in AutoCAD P&ID 2009 to SQL Server Express using the AutoCAD P&ID Command prompt.

1. At the AutoCAD P&ID Command prompt, enter:
PLANTCONFIGUREDATABASE
2. At the **Specify Database type [Default/SQLServer] <Default>**: prompt, enter:
SQLServer

The Command prompt displays the following:

Use a configuration file? [Yes/No] <No>:

3. If you want to use a configuration file, go to step 4. If you do not want to use a configuration file, press Enter to keep this setting.

The Command prompt displays the following:

Specify SQL Server and instance name in the format Server\Instance or . for the SQLExpress instance on the project machine <.>:

If the server is on the local machine, use a period (.) to denote the server name. For example, if SQLEXPRESS is running on the on the local machine, enter:

.\SQLEXPRESS

If SQL Server Express is running on the same server that hosts the project, you may enter a period (.) alone. This sets the instance to *PROJECTHOST\SQLEXPRESS*.

4. If you want to use a configuration file, enter **Y** at the **Use a configuration file? [Yes/No] <No>** prompt.

The Command prompt displays the following, where *<C:\Program Files\AutoCAD PID 2009\PnPSQLServer.dlk>* is the current path for the configuration file:

Specify file name <C:\Program Files\AutoCAD PID 2009\PnPSQLServer.dlk>:

5. Specify the location of your configuration file. For example:
C:\My Documents\My Project\ProcessPower2.dlk

To create your own configuration (.dlk) file, see steps 1 and 2 in the following section of this document: *"Configure AutoCAD P&ID 2009 using a database link file"*.

You are now configured to use SQL Express with a new P&ID project.

Verify the creation of a SQL Express 2005 Server project database

1. Open the Windows Command prompt.
2. At the Command prompt, enter:
cd C:\Program Files\Microsoft SQL Server\90\Tools\Binn
3. At the **C:\Program Files\Microsoft SQL Server\90\Tools\Binn>** prompt, enter:
osql -E -S LOCALHOST\SQLEXPRESS
4. At the **1>** prompt, enter:
sp_databases
5. At the **2>** prompt, enter:
go

The Command prompt displays a list of databases on the SQL Server Express instance. Verify that the database exists by checking the DATABASE_NAME list for an entry in the following format:

<MACHINENAME>_<DRIVE>_<FOLDER>_<PROJECTNAME>_ProcessPower_dcf

Following is an example in this format:

TESTMACHINE_C__My_Documents_projectfolder_project123_ProcessPower_dcf

Configure AutoCAD P&ID 2009 using a database link file

If the P&ID file server is different from the SQL Express server, perform this procedure to connect AutoCAD P&ID 2009 to a remote SQL Server database.

1. In Notepad, open *ProcessPower.dcf*. This file is in your project directory and is created when you create a project in AutoCAD P&ID 2009.
2. Save the file as *PnPSQLServer.dlk* into the AutoCAD P&ID 2009 startup directory. This is the same directory where *acad.exe* is located.
3. To enter the server name, edit the **Parameter** value string. This value is *MYMACHINE* in the following XML example. The current value has the name of your local machine.

4. To enter the name of the remote database, edit the **Initial Catalog** value string. This value is *MyTestDB* in the following XML example.
5. Save *PNPMSQLServer.dlk*

Following is an example of the *PnPMSQLServer.dlk* file:

```
<?xml version="1.0" encoding="utf-8"?>
<DatabaseLink xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <Parameter>
    <Name>DatabaseEngine</Name>
    <Value
xsi:type="xsd:string">Autodesk.ProcessPower.DataObjects.DbEngine.PnPMSQLDbEngine</Value>
  </Parameter>
  <Parameter>
    <Name>Data Source</Name>
    <Value xsi:type="xsd:string">MYMACHINE\SQLEXPRESS</Value>
  </Parameter>
  <Parameter>
    <Name>Integrated Security</Name>
    <Value xsi:type="xsd:boolean">true</Value>
  </Parameter>
  <Parameter>
    <Name>Initial Catalog</Name>
    <Value xsi:type="xsd:string">MYTESTDB</Value>
  </Parameter>
</DatabaseLink>
```

Connection parameters are typical SQL Server Native Client parameters. See the following example for reference:

[http://msdn2.microsoft.com/en-us/library/system.data.sqlclient.sqlconnection.connectionstring\(vs.71\).aspx](http://msdn2.microsoft.com/en-us/library/system.data.sqlclient.sqlconnection.connectionstring(vs.71).aspx)

Following are the parameters used to specify a new database:

Initial Catalog – This is the database name. This parameter must be specified.

AttachDBFilename – SQL Server full path to database file name (optional).

For example:

C:\dbfiles\file.mdf.

Configure SQL Server Express 2005 to allow remote connections

This procedure needs to be performed on the server machine only.

Follow the instructions outlined in the Microsoft Knowledge Base article:

<http://support.microsoft.com/kb/914277>

See these sections: “Enable remote connections for SQL Server 2005 Express or SQL Server 2005 Developer Edition” and “Create exceptions in Windows Firewall.”

Copy or Move a SQL Server Express Project to a new location

The file *ProcessPower.dcf* is located in the project directory and contains a reference to the SQL Server database. If the database is copied or moved, the file must be modified to point to the new server. See Microsoft's Knowledge Base for complete information on how to move SQL Server databases:

<http://support.microsoft.com/?scid=kb%3Ben-us%3B224071&x=8&y=10>

1. In Notepad, open *ProcessPower.dcf*.
ProcessPower.dcf is in your project directory and is created when you create a project in AutoCAD P&ID 2009.
2. To enter the name of the new database and the path to the *ProcessPower.dcf* file, edit the **Initial Catalog** value string using this format:
<MACHINENAME>_<DRIVE>_<FOLDER>_<PROJECTNAME>_ProcessPower_dcf
3. If you need to enter a new server name, edit the **Data Source** value string.

Following is an example of *ProcessPower.dcf*:

```
<?xml version="1.0" encoding="utf-8"?>
<DatabaseLink xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <Parameter>
    <Name>DatabaseEngine</Name>
    <Value
xsi:type="xsd:string">Autodesk.ProcessPower.DataObjects.DbEngine.PnPMSQLDbEngine</Value>
  </Parameter>
  <Parameter>
    <Name>Data Source</Name>
    <Value xsi:type="xsd:string">MYSERVER\SQLEXPRESS</Value>
  </Parameter>
  <Parameter>
    <Name>Integrated Security</Name>
    <Value xsi:type="xsd:boolean">>true</Value>
  </Parameter>
  <Parameter>
    <Name>Initial Catalog</Name>
    <Value
xsi:type="xsd:string">MYMACHINE_PnPProjects_SQL_Server_sql_srv_AutoCAD_PID_2009_ProcessPow
er_dcf</Value>
  </Parameter>
</DatabaseLink>
```



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