Introduction to Relational Databases

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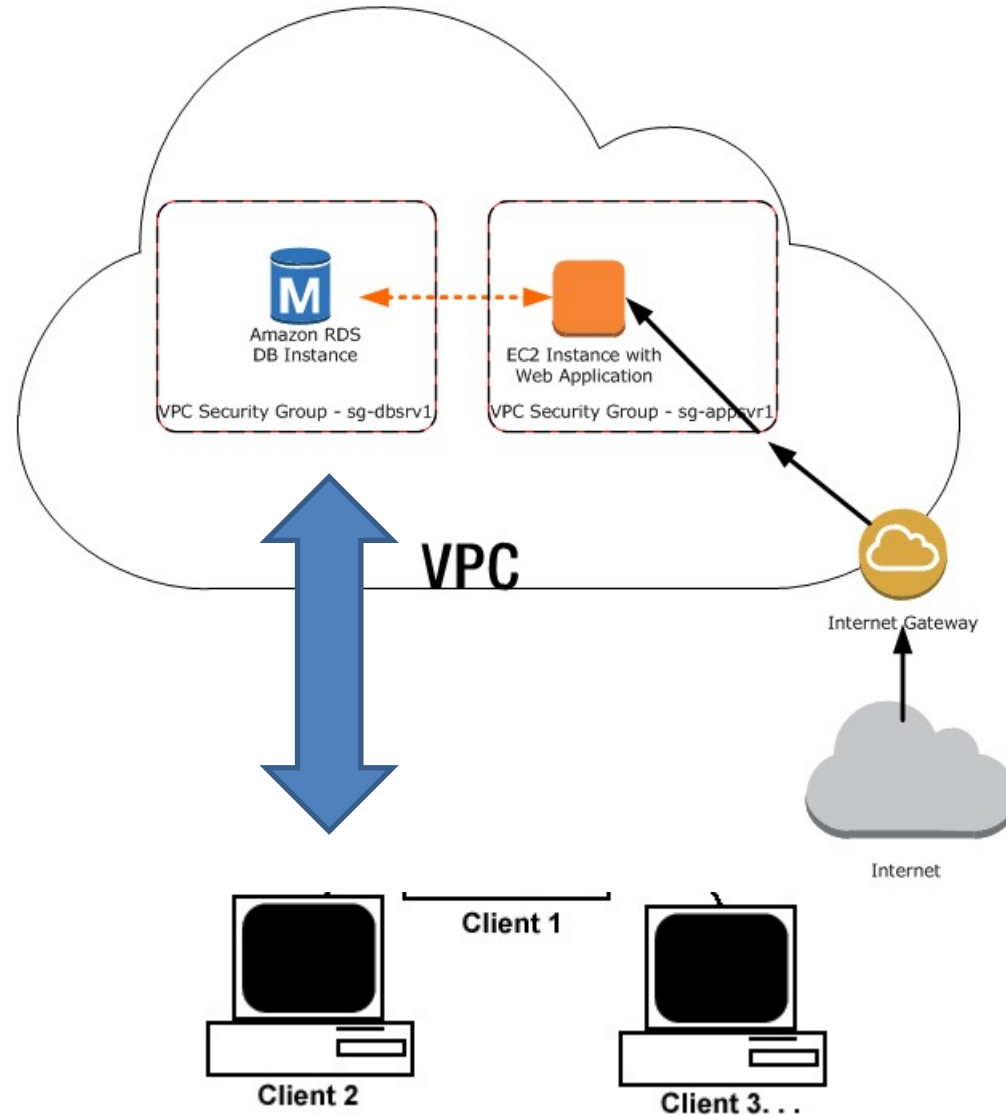
Software Installation and Database Access

Class Instructor: Bijoy Bora

The Way Things Work with AWS

Installing Microsoft SQL Management Studio

- Install SQL Server Management Studio ONLY

  Recommended version is SQL Server Management Studio version 2016 or later. Use the following link to download the latest General Availability (GA) version of SSMS 18.12.x

  – https://docs.microsoft.com/en-us/sql/ssms/download-sql-server-management-studio-ssms?view=sql-server-2017#download-ssms

  For the 18.3.1 release (also tested) use the following link

  – https://docs.microsoft.com/en-us/sql/ssms/release-notes-ssms?view=sql-server-2017#1831

Installing Microsoft SQL Management Studio

Installing Microsoft SQL Management Studio
Step 1 of 2 (2012 version)

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- Install SQL Server Management Studio ONLY
  - *Alternatively you can use 2012 version but not recommended*
  - http://www.microsoft.com/en-us/download/details.aspx?id=35579

Choose the download you want

File Name	Size
SQLEXPRADV_x64_ENU.exe	1.9 GB
SQLEXPRADV_x86_ENU.exe	1.8 GB
SQLEXPRWT_x64_ENU.exe	1.0 GB
SQLEXPRWT_x86_ENU.exe	1.0 GB
SQLManagementStudio_x64_ENU.exe	921.6 MB
SQLManagementStudio_x86_ENU.exe	939.8 MB

Select appropriate 32 or 64 bit version based on your OS

Microsoft® SQL Server® 2012 Service Pack 1 (SP1) Express

If your download does not start after 30 seconds, Click here

⊖ Install Instructions

Installation for the NEW users

Step 1: Enable Microsoft .Net Framework 3.5 SP1. and Download and install Microsoft .Net Framework 4.0.

Note: SQL Server Express (with database engine only) can work with either .NET 3.5 SP1 or .NET 4, there is no need to have both enabled.

Step 2: Download Microsoft® SQL Server® 2012 Express by clicking the appropriate link earlier, run it, and follow the instructions in the setup wizard to install.

Installation for the Existing Users

If you have an existing installation of Express with Tools, SQL Server Management Studio Express, or Express with Advanced Services, and want to add the complete SQL Server Management Studio feature to your Express instance, do the following:
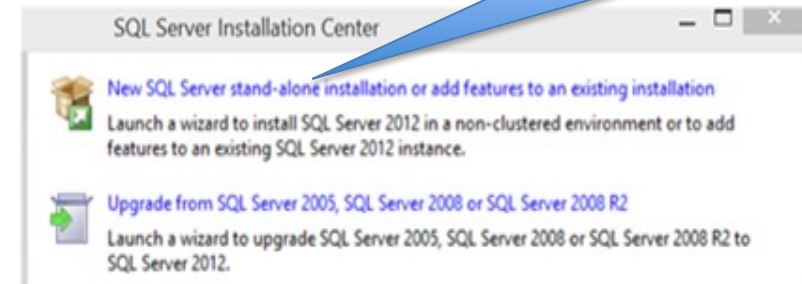
Step 1: Download the required Microsoft® SQL Server® 2012 Express SP1 file to update your current SQL Server 2012 Express installation by clicking the appropriate link earlier.

Step 2: Run the file, and follow the instructions in the setup wizard to install. On the Installation Type page, select Add features to an existing instance of SQL Server, and select the instance you would like to update.
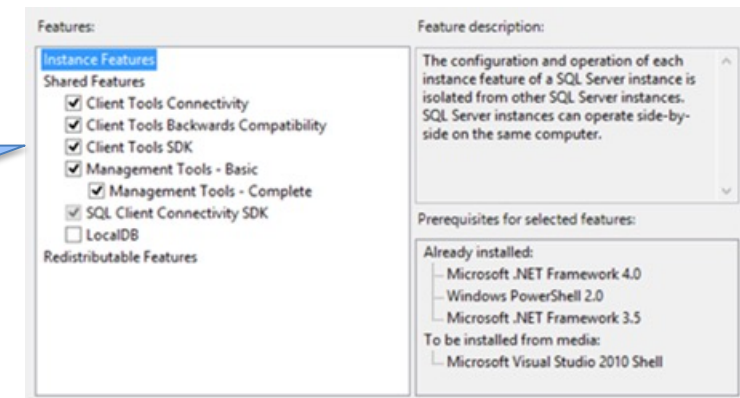
Step 3: On the Feature Selection page, select the Management Tools – Complete check box, and then proceed to complete the installation.

Once File Downloads, launch installer

Choose the New option

SQL Server Installation Center

New SQL Server stand-alone installation or add features to an existing installation
Launch a wizard to install SQL Server 2012 in a non-clustered environment or to add features to an existing SQL Server 2012 instance.

Upgrade from SQL Server 2005, SQL Server 2008 or SQL Server 2008 R2
Launch a wizard to upgrade SQL Server 2005, SQL Server 2008 or SQL Server 2008 R2 to SQL Server 2012.

Default options should be OK

Features:
Instance Features
Shared Features
☑ Client Tools Connectivity
☑ Client Tools Backwards Compatibility
☑ Client Tools SDK
☑ Management Tools - Basic
  ☑ Management Tools - Complete
☑ SQL Client Connectivity SDK
☐ LocalDB
Redistributable Features

Feature description:
The configuration and operation of each instance feature of a SQL Server instance is isolated from other SQL Server instances. SQL Server instances can operate side-by-side on the same computer.

Prerequisites for selected features:

Already installed:
- Microsoft .NET Framework 4.0
- Windows PowerShell 2.0
- Microsoft .NET Framework 3.5
To be installed from media:
- Microsoft Visual Studio 2010 Shell

Logging into DB with Management Studio

Visual Query Builder

FlySpeed SQL Query - http://www.activedbsoft.com/overview-querytool.html

Use native client option. Use same server name and login information

Name the connection

Building a Query

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Connections
- Intro SQL Class
- Rolling Thunder DB
- TestStudent
  - Queries
  - RollingThunder2013
    - dbo
      - Tables
        - Bicycle
        - BicycleTubeUsage
        - BikeParts
        - BikeTubes
        - CensusDivision
        - CensusRegion
        - City
        - CommonSizes
        - Component
        - ComponentName
        - Customer
        - CustomerTransaction
        - Employee
        - GroupComponents
        - Groupo
        - LetterStyle
        - Manufacturer
        - ManufacturerTransaction
        - ModelSize
        - ModelType
        - Paint
        - Preference
        - PurchaseItem
        - PurchaseOrder
        - RetailStore
        - RevisionHistory
        - SampleName
        - SampleStreet
        - States
        - StateTaxRate
        - TubeMaterial
        - WorkArea

Right Click on table. Add to New Query

SQL Text | Query Builder | Query Info | History

Add CTE

Main

Bicycle
- *
- **SerialNumber** Int
- CustomerID Int
- ModelType Nvarc
- PaintID Int
- FrameSize Real
- OrderDate Smalld
- StartDate Smalld
- ShipDate Smalldat
- ShipEmployee Int
- FrameAssembler
- Painter Int
- Construction Nvar
- WaterBottleBraze
- CustomName Nv
- LetterStyleID Nva
- StoreID Int
- EmployeeID Int
- TopTube Real

Click on query properties

Choose Top 100

Query Properties

SELECT
- ○ Default
- ○ DISTINCT
- ○ ALL

☑ TOP 100   ☐ PERCENT   ☐ WITH TIES

☐ INTO

GROUP BY ☐ ALL (none)

OK   Cancel

Press Execute

TestStudent   ⚡ Execute ⚡ Execute in new window

Other Software Options
for Mac, Linux, and Windows

- SQuirreL - http://squirrel-sql.sourceforge.net/ (open source)

- DB Visualizer - http://www.dbvis.com/ (freemium)

- Database Beaver - http://dbeaver.jkiss.org/ - (Open source)

- Adminer - http://www.adminer.org/ - (linux oriented)

- Valentina Studio - https://valentina-db.com/en/studio/download - Easy install on Mac

Valentina Studio Mac Install

- Download Mac version
- Double click on disk image
- Choose get a free serial and enter it. Provide a valid email account. The serial # will be sent to this email account
- Copy and paste the serial number
- Click on Connect To. Select MSSQL as the server type
- Specify
  - Hostname = ec2-54-148-238-113.us-west-2.compute.amazonaws.com
  - Port = 1433
  - UserID = studentxx (studentxx (xx = use any id from '01' to '60'))
  - Password = uop123
  - Database = PetStore