SCS Database Installation Supplementary

Date: Jan 12, 2013

1 SCS Database Installation

1.1 Installation Overview

1. Install prerequisites
   - Windows Installer 4.5
   - Windows PowerShell 1.0

2. Install SQL Server 2008, either Express Edition or SQL Server Standard Edition.

3. Install the SCS database schema.

4. Set parameter values in the SCS configuration file.

1.2 Install SQL Server 2008 Express Edition

1. Ensure the server you plan on installing the database on meets these minimum requirements:

Operating System
   - Windows Server 2003 Service Pack 2
   - Windows Server 2008; Windows Vista;
   - Windows Vista Service Pack 1;
   - Windows XP Service Pack 2;
   - Windows XP Service Pack 3

Hardware
   - Minimum of 512 MB of RAM (1 GB or more is recommended)
   - 1.9GB of free hard disk space
   - 32-bit systems
   - Computer with Intel or compatible 1GHz or faster processor (2 GHz or faster is recommended. Only a single processor is supported.)
   - 64-bit systems (NOT IA64)
   - GHz or higher processor (2 GHz or faster is recommended. Only a single processor is supported.)

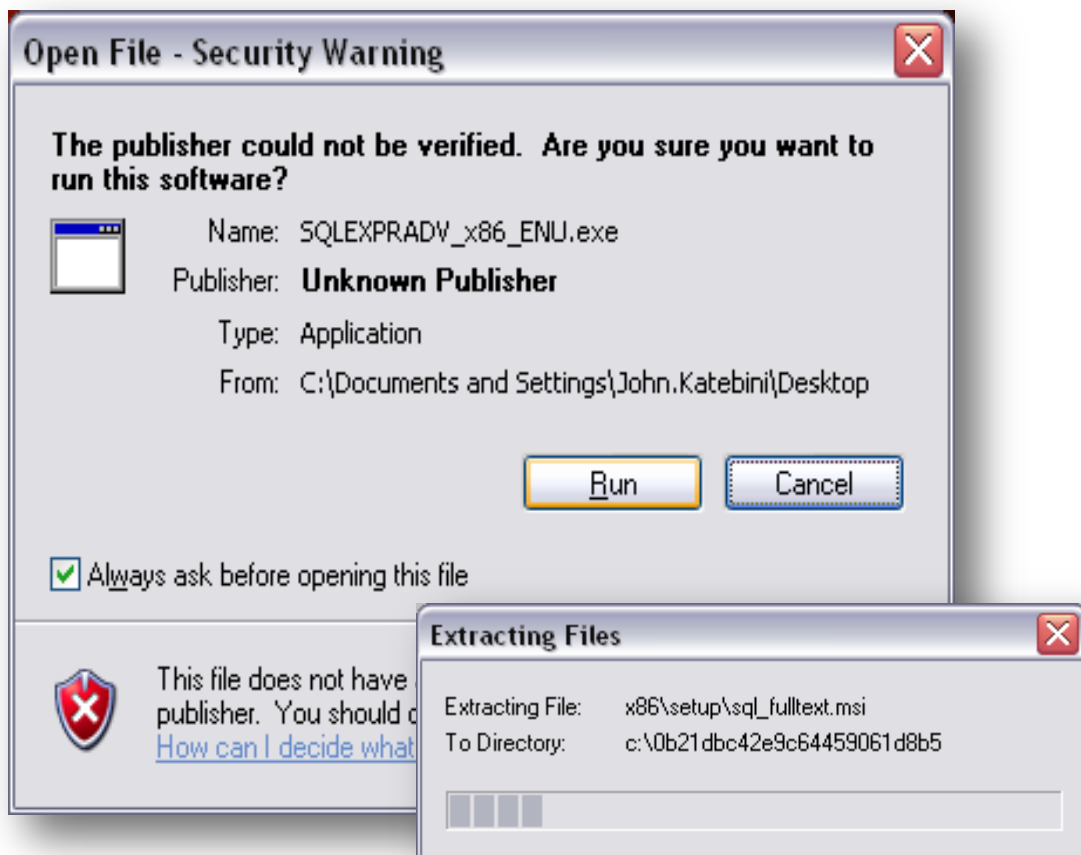Software Prerequisites (all products are included on the SCS install disk.
   - Microsoft .Net Framework 3.5 SP1
   - Windows Installer 4.5
   - Windows PowerShell 1.0

2. Obtain a copy of the database from the Microsoft website. It is also included on the SCS Install Disk.

   a. Browse to: http://www.microsoft.com/express/sql/download/

   b. Find the link for SQL Server 2008 Express with Advanced Services

   c. Download installation package (near bottom of page)

Files in This Download
The links in this section correspond to separate files available in this download. Download the files most appropriate for you.

File Name:	File Size	
SQLEXPRADV_x64_ENU.exe	546.5 MB	Download
SQLEXPRADV_x86_ENU.exe	502.7 MB	Download

3. Run installer for SQL Server 2008 Express

Open File - Security Warning

The publisher could not be verified. Are you sure you want to run this software?

    Name: SQLEXPRADV_x86_ENU.exe
    Publisher: **Unknown Publisher**
    Type: Application
    From: C:\Documents and Settings\John.Katebini\Desktop

[Run] [Cancel]

☑ Always ask before opening this file

This file does not have
publisher. You should
How can I decide what

Extracting Files

Extracting File: x86\setup\sql_fulltext.msi
To Directory: c:\0b21dbc42e9c64459061d8b5

4. Start Database Server Installation
   a. Review the planning portion; ensure your system is up to par.
   b. Click the Installation tab
   c. Click the New SQL Server stand-alone installation or add features to an existing
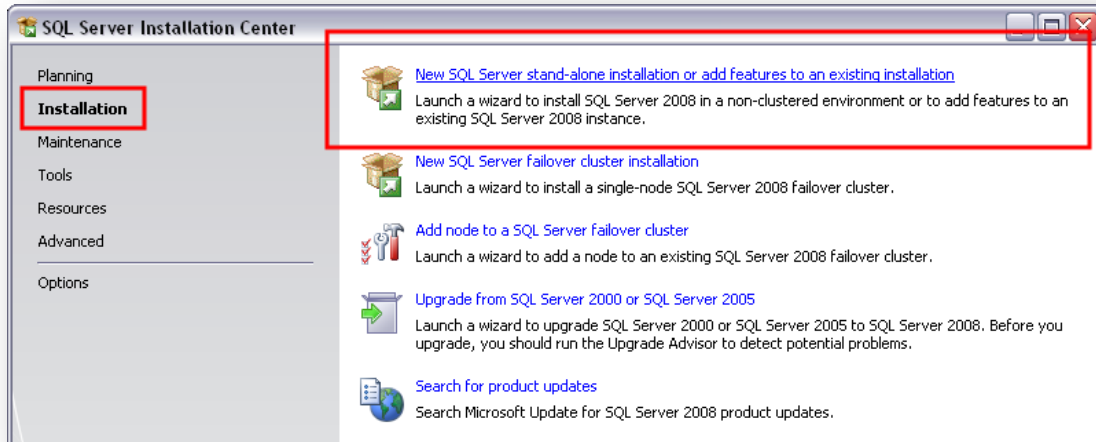
   d. Ensure all rules have a green check (Passed), then hit OK. You may have to click
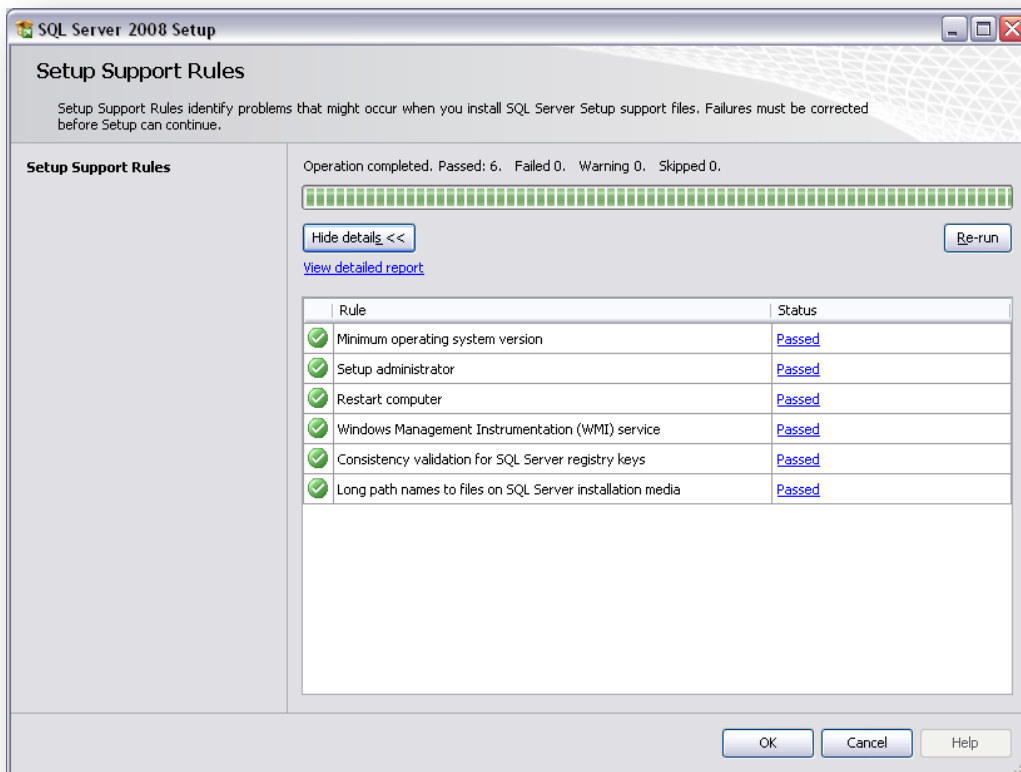
e. Even though it says 'Gathering user settings' and looks like it's doing something, it's not. You must click Install to start the installation…
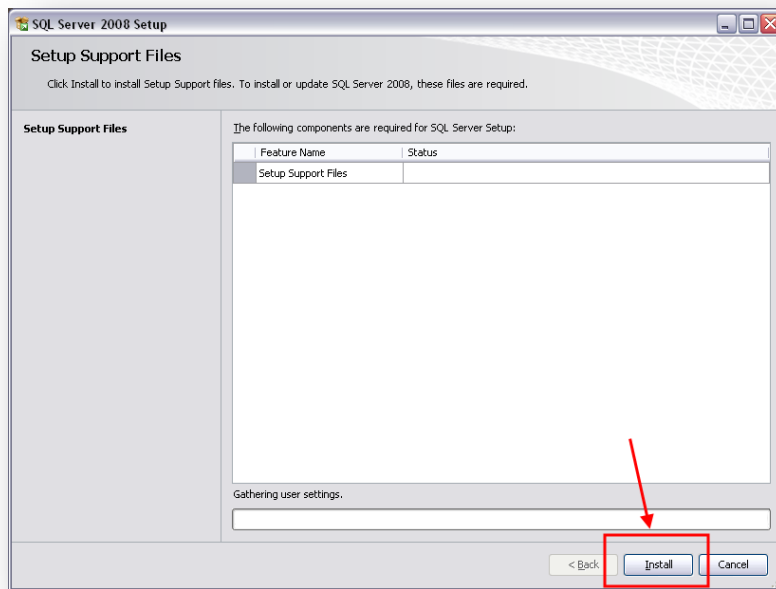
f. Ensure everything passes (Windows Firewall will cause a warning, you can ignore this) then click Next until the feature selection screen
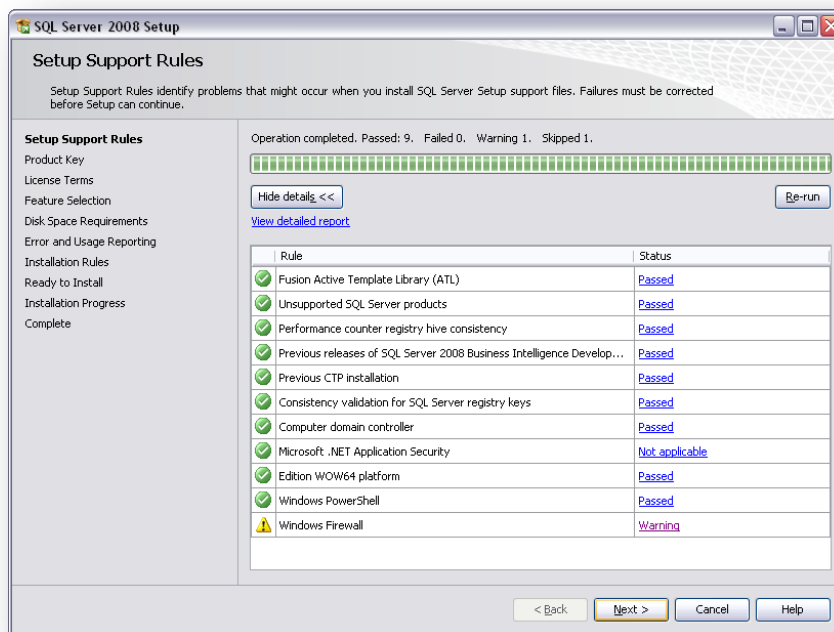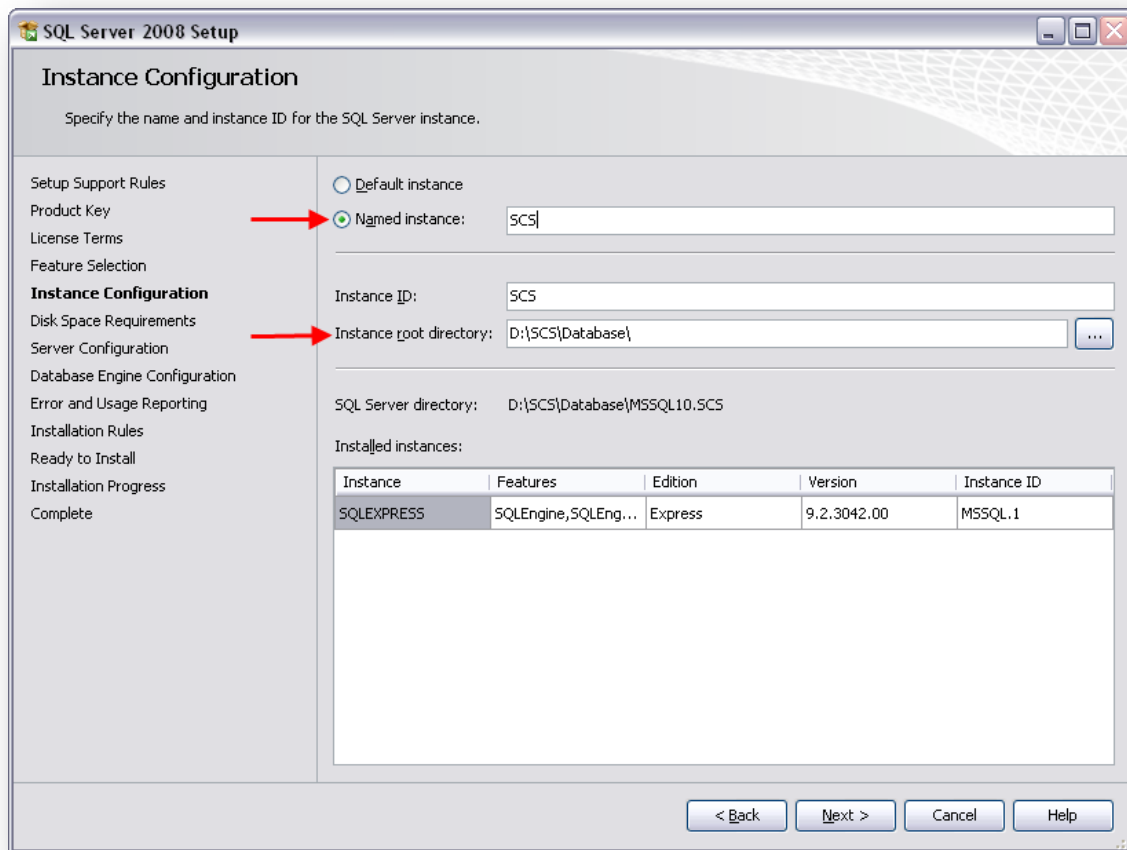
g. Check the boxes next to Database Engine Services, Full-Text Search, Management Tools – Basic, and SQL Client Connectivity SDK
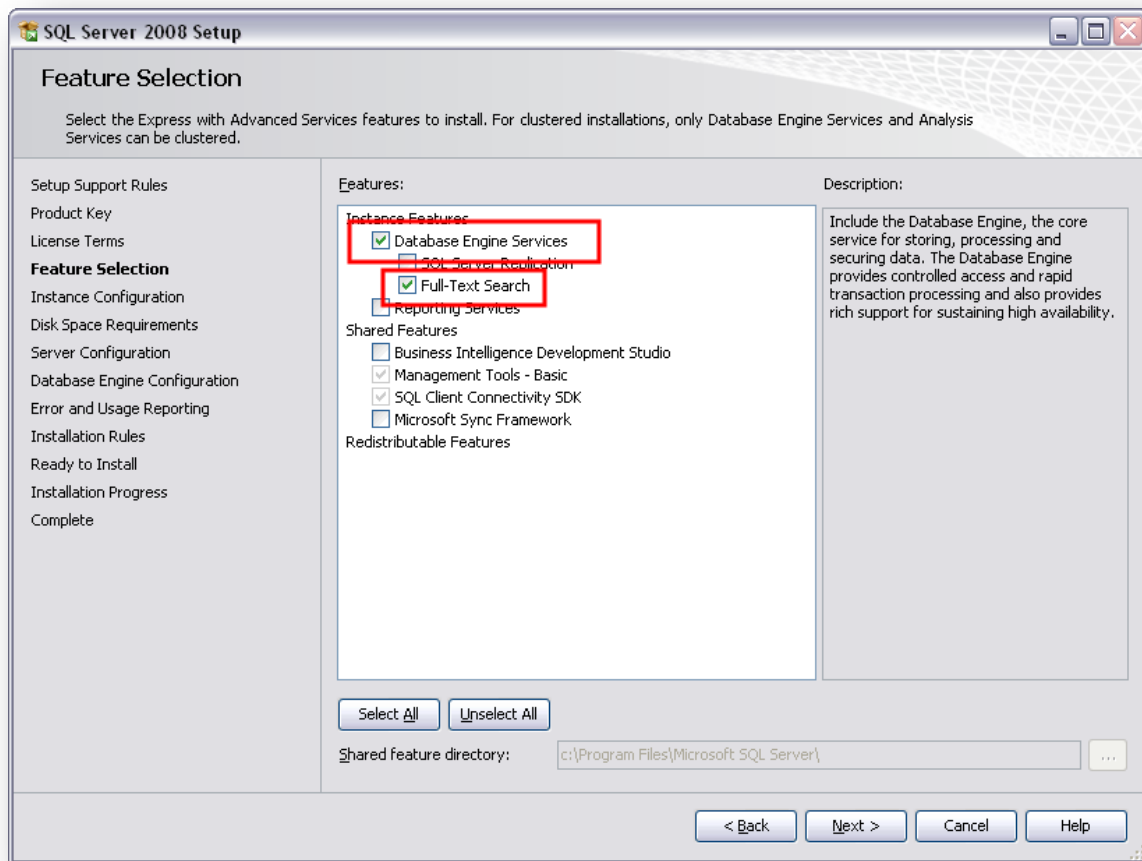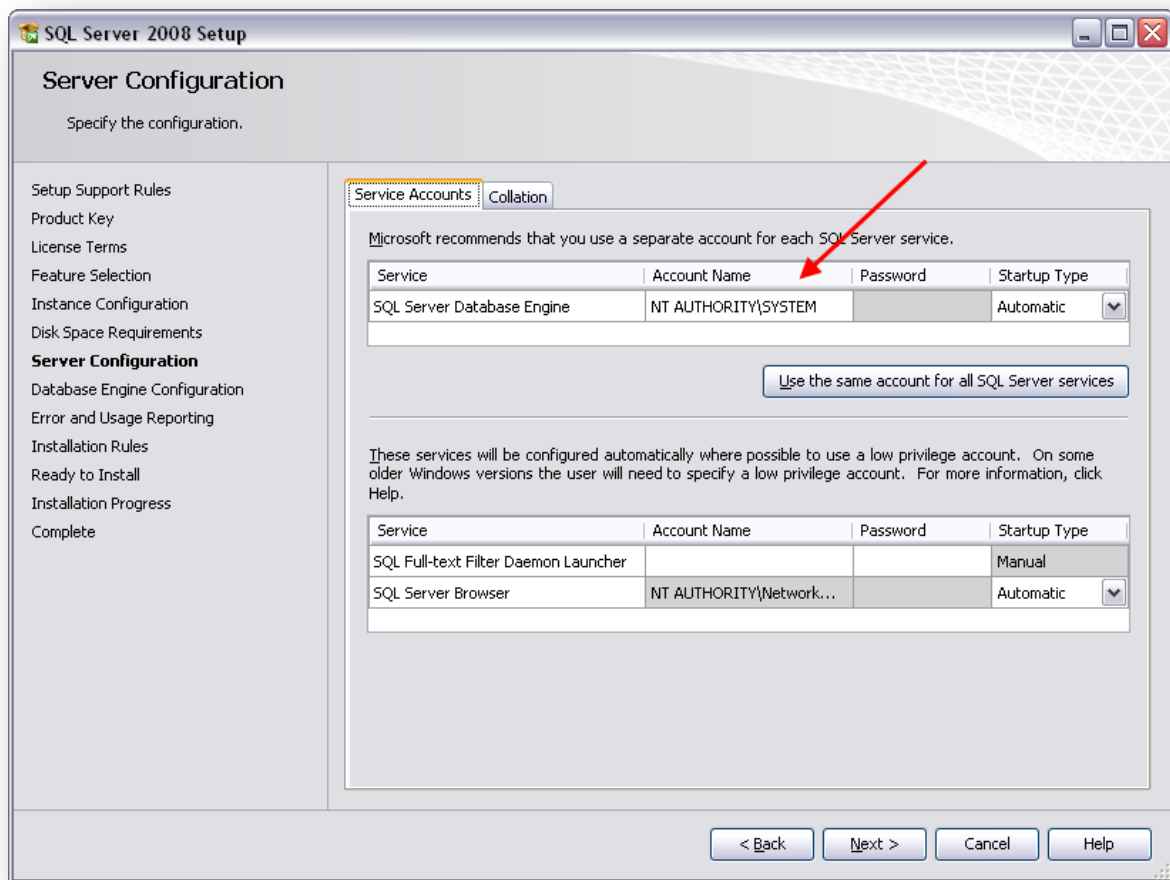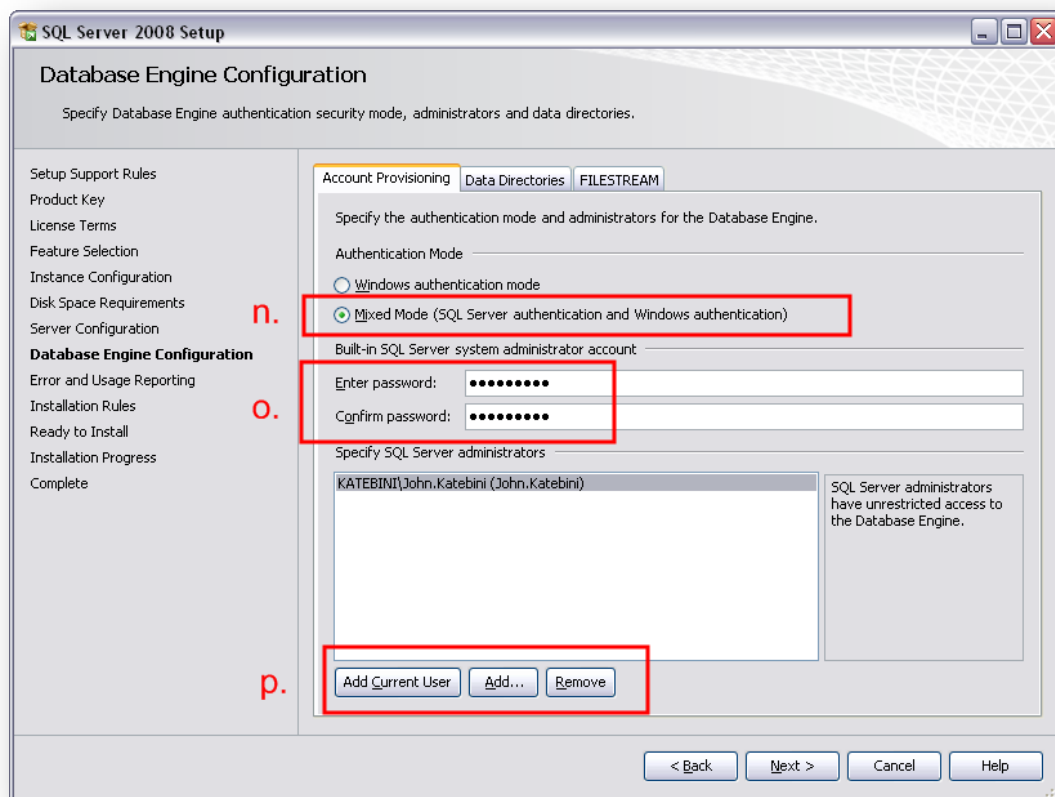

h. Click Next

i. Use the default

j. If you desire, change the Instance Root Directory to something more appropriate for your installation (i.e. D:\...). Click "Next" until you get to Server Configuration dialog.

k. Choose NT Authority\System as the account which will run the database service .

l. In the lower list of services, set the Startup Type of the SQL Server Browser service to Automatic, if necessary.

m. Click Next

n. Choose Mixed Mode for the authentication type.

o. Enter a respectable password for the built-in administrator's account. This will be used in Part Three to log in to SQL Server Manager using the SQL manager account.

p. Add appropriate Windows accounts/groups to the system. Note: These groups and users will have administrative access and control over the entire database. DO NOT hand this out casually! Recommend the ET accounts, Domain Admins, and (where applicable) SCS.ADMIN only…
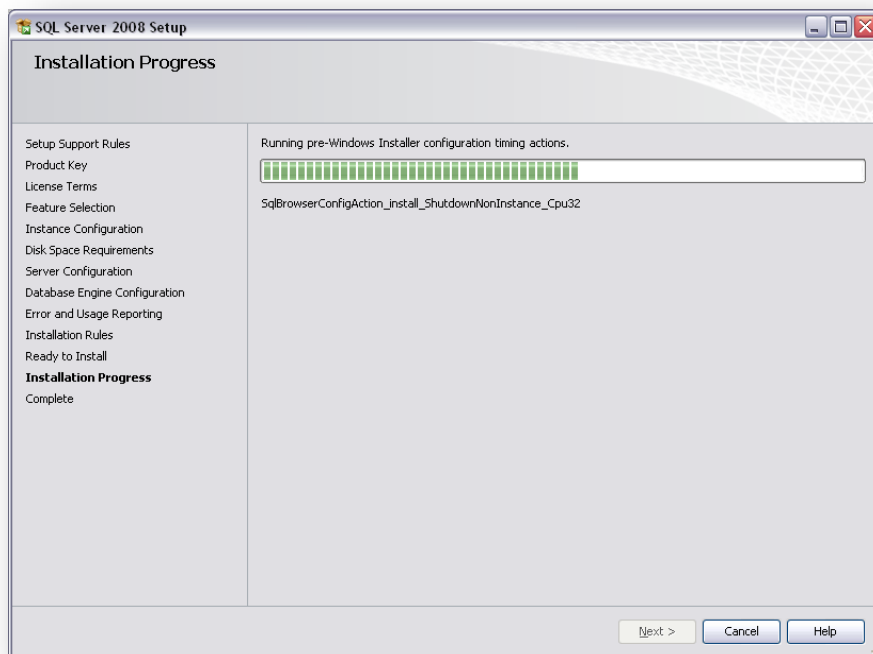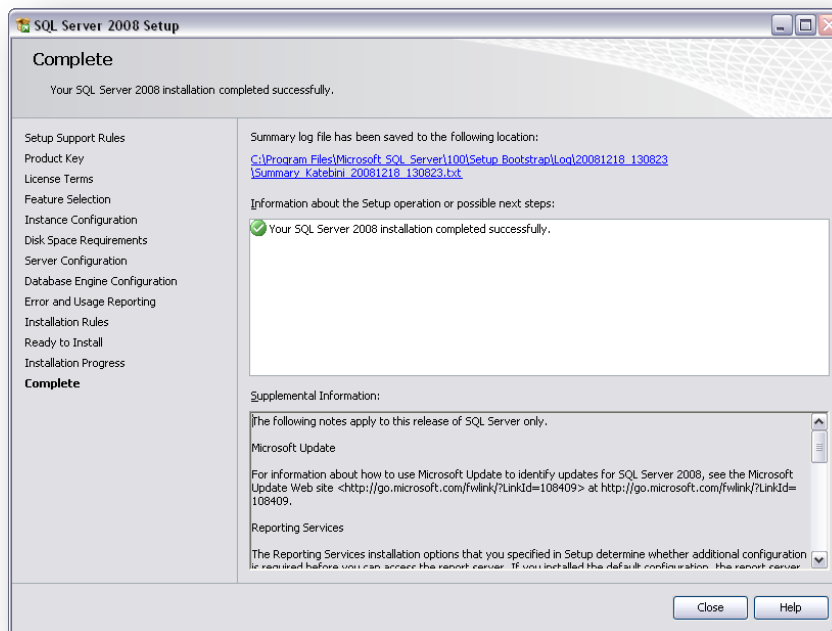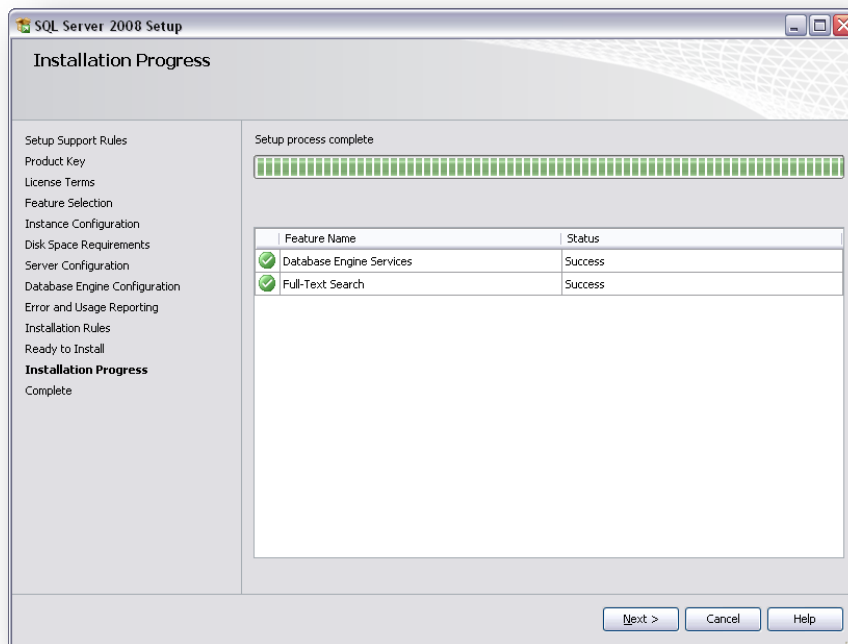
q. Click Next

r. Ignore Error and Usage Reporting

s. Click Next

Ensure everything passes the rules, or is Not Applicable. You may have to click on Show Details to help resolve any problems.
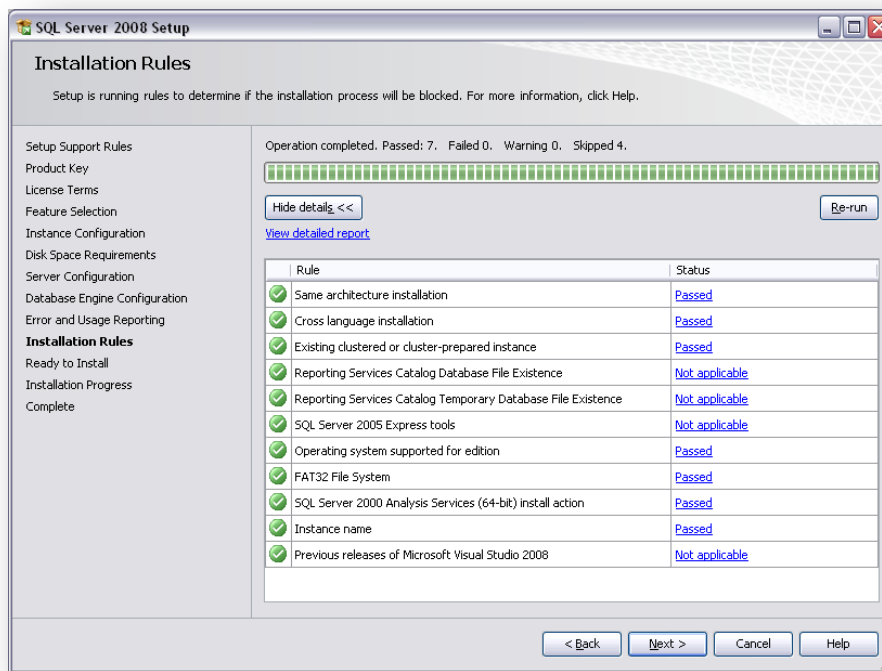
t. Click Next

u. Click Install. Install may appear to stall for a while. Be patient, grab some coffee.

v. Create a shortcut to SQL Server Manage on the desktop.

When installation finishes successfully install the SCS schema into the database
– See *SCS Schema Installation*

1.3 Install SQL Server 2008 Standard Edition

1. Ensure the server you plan on installing the database on meets the minimum requirements specified by Microsoft. (http://msdn.microsoft.com/en-us/library/ms143506.aspx)

2. Obtain the installation CD/DVD. This is a licensed product; it is not available for free download. If you do not own a license, consider using SQL Server 2008 Express Edition (see above). Note that Express is not meant to be used as a SCS logged data store, only for storing Sensor configurations.

3. Start Database Server Installation

   a. Review the planning portion; ensure your system is up to par.

   b. Click the Installation tab

   c. Click the New SQL Server stand-alone installation or add features to an existing installation link
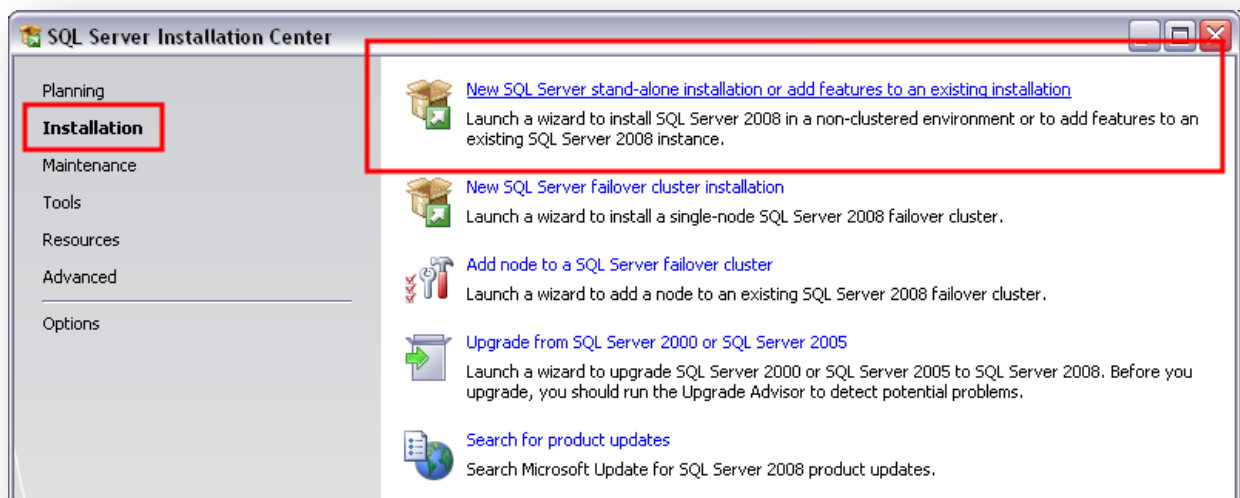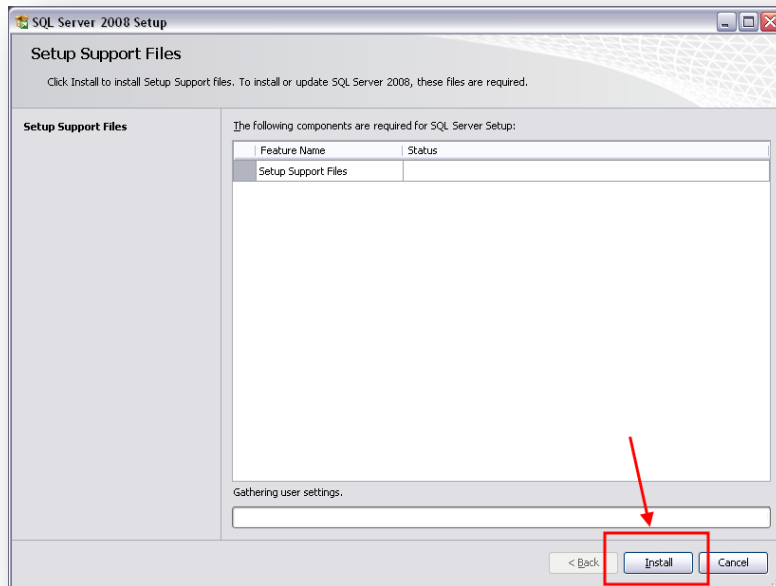
d. Ensure all rules have a green check (Passed), then hit OK. You may have to click Show Details in order to see the status of each rule
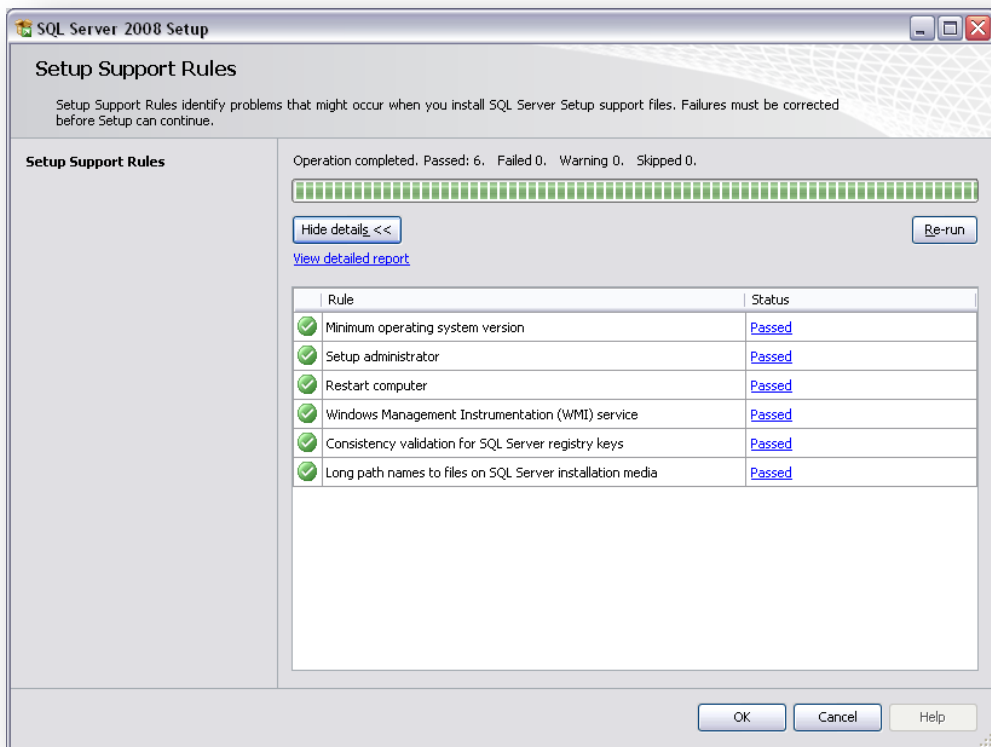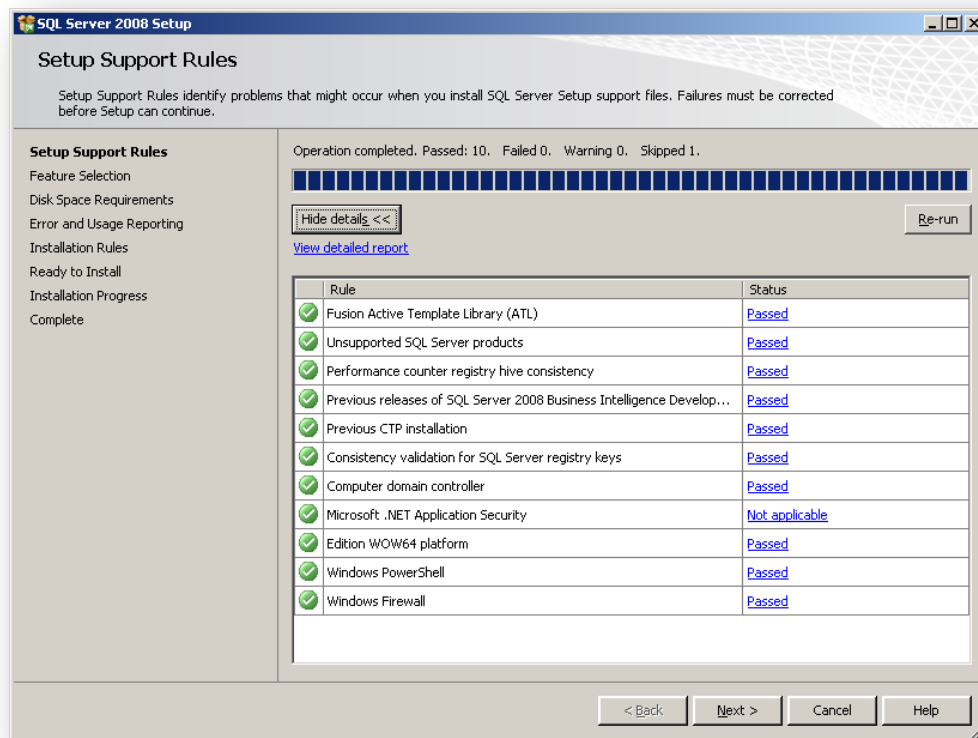

e. Enter your product key and hit Next
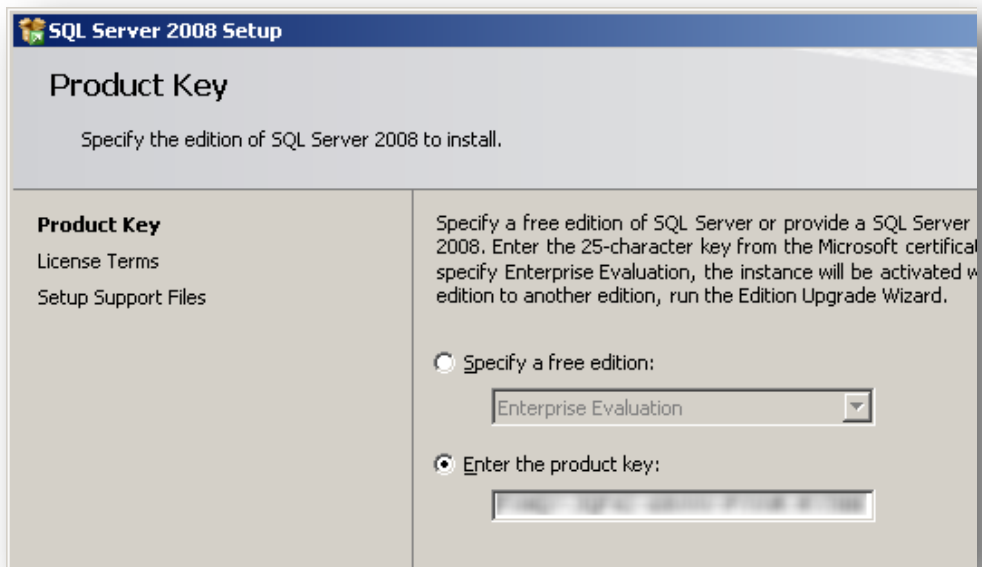
f. Accept the License Terms, hit Next

g. Even though it says 'Gathering user settings' and looks like it's doing something, it's not. You must click Install to start the installation…
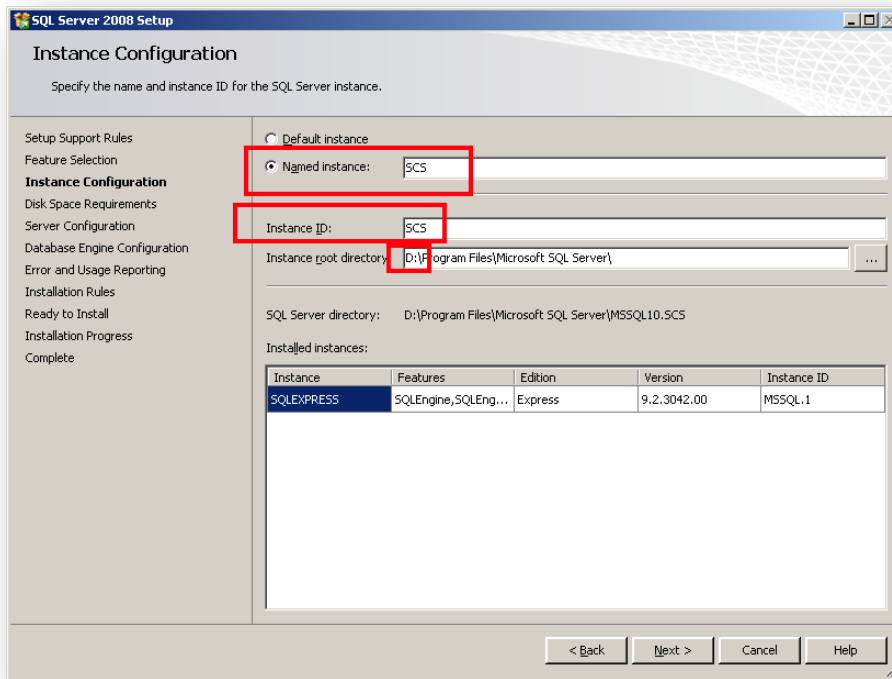

h. Ensure everything passes, click Next until the feature selection screen

i. Install the following features:
   - Database Engine Services
   - Full-Text Search
   - Management Tools – Basic
   - Management Tools – Complete
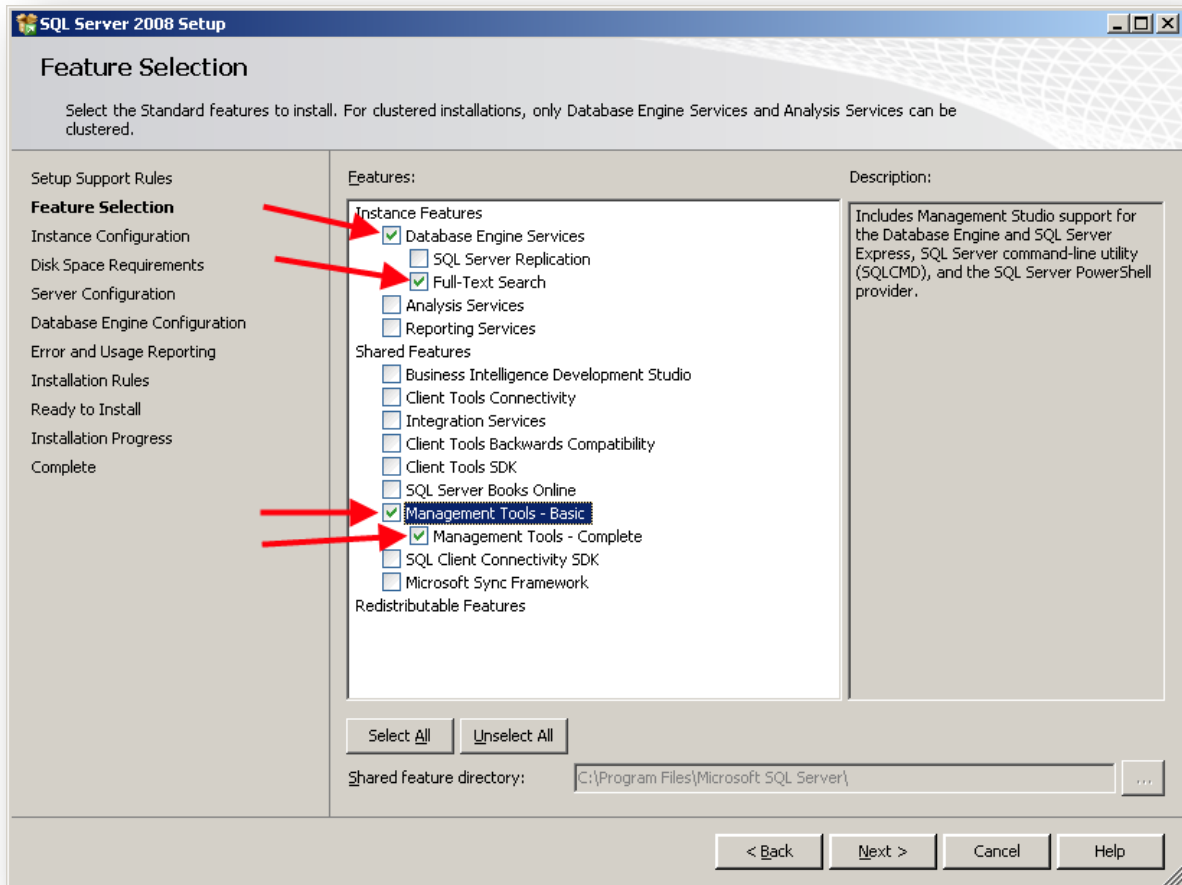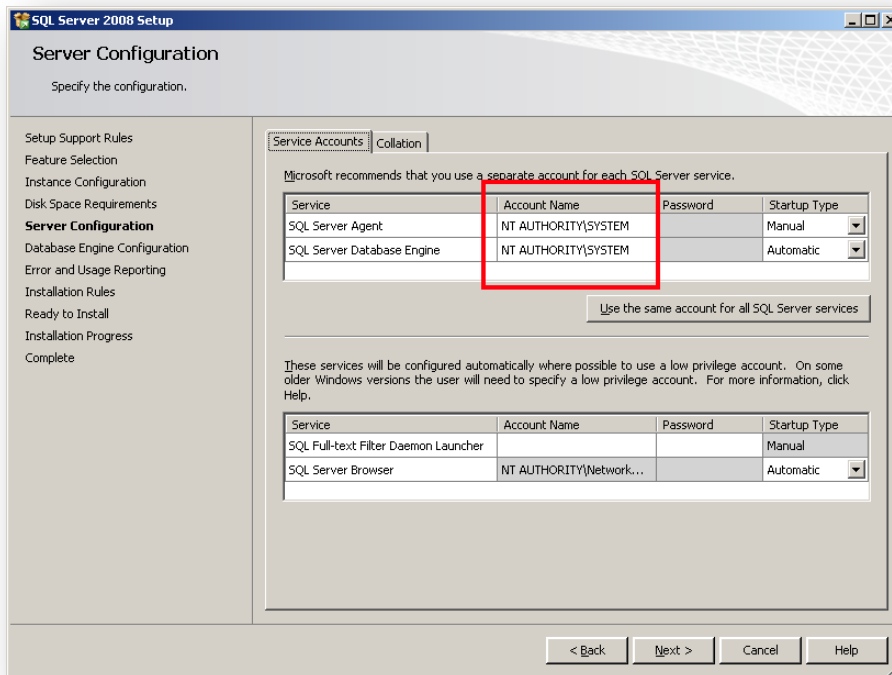

j. Click Next

k. Change the instance to SCS

l. Optionally change the install directory to a non-C/root partition

m. Hit Next until Server Configuration

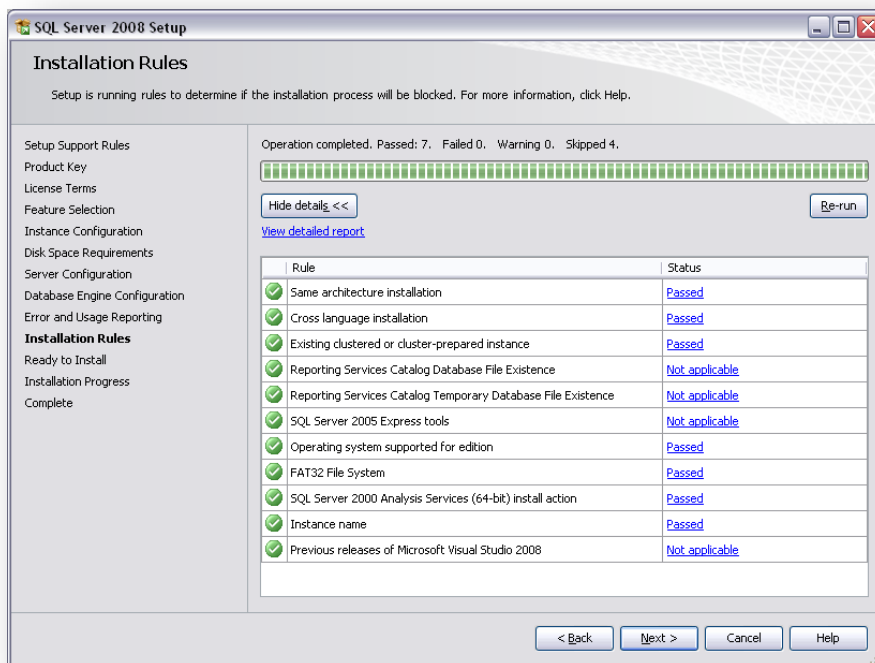n. Use the local system account for each of the services

o. Choose Mixed Mode for the authentication type

p. Enter a respectable password for the built-in administrator's account

q. Add appropriate Windows accounts/groups to the system. Note: These groups and users will have administrative access and control over the entire database. DO NOT hand this out casually! Recommend the ET accounts, Domain Admins, and (where applicable) SCS.ADMIN only…
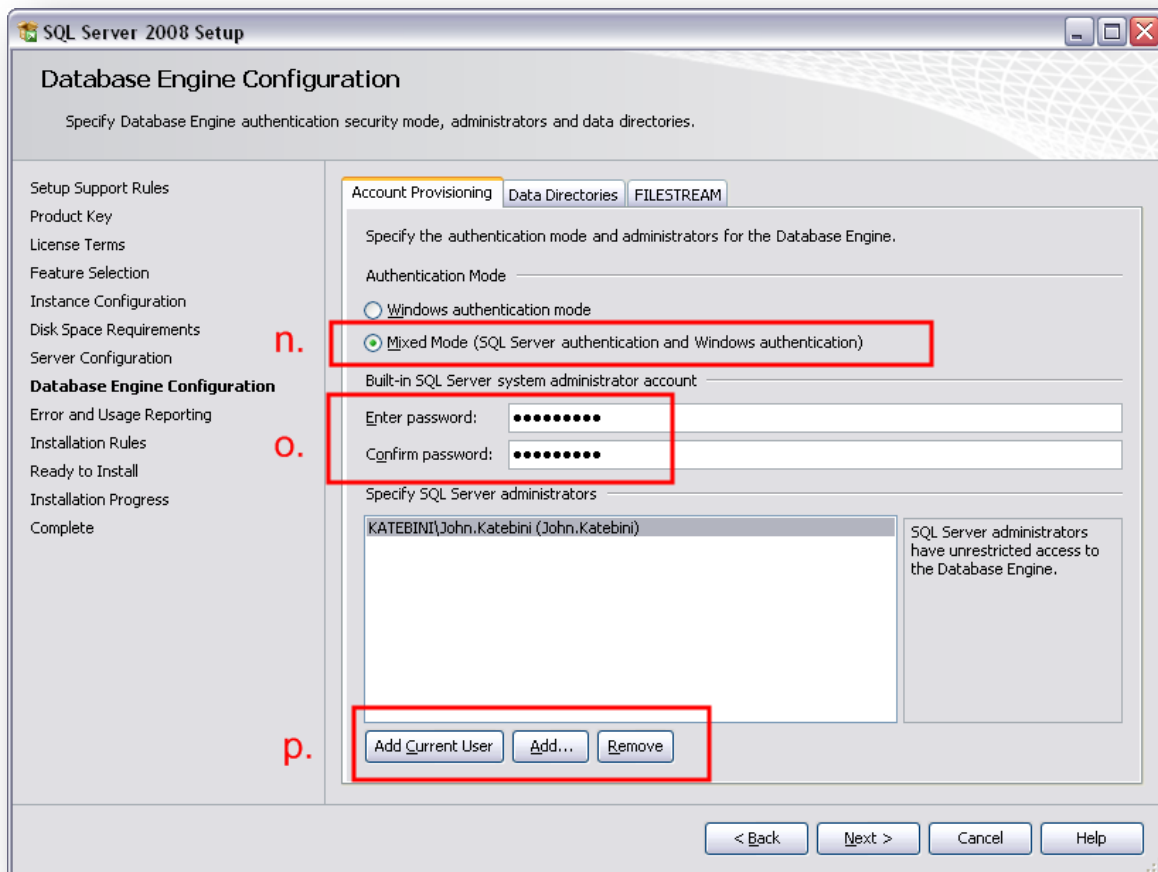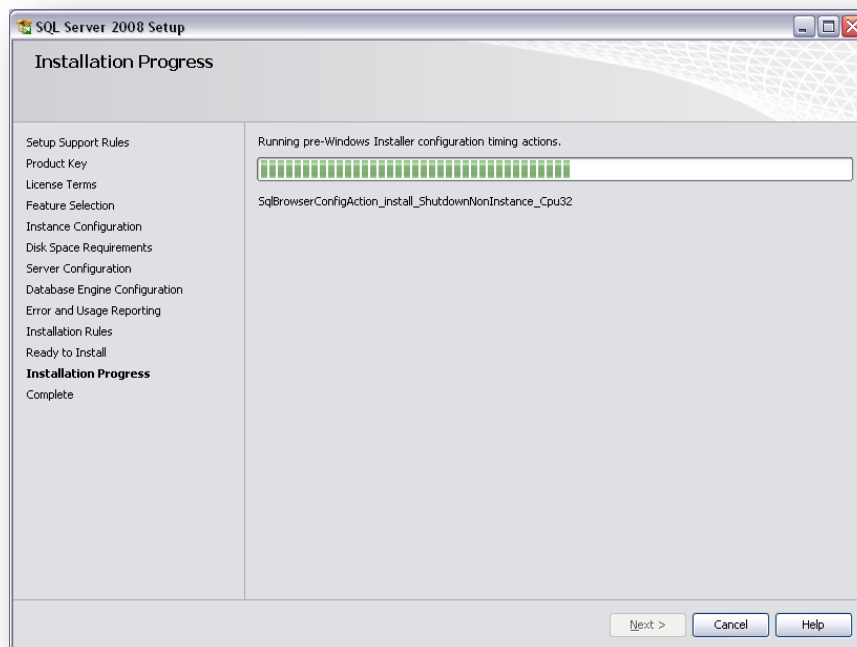

r. Click Next

s. Ignore Error and Usage Reporting
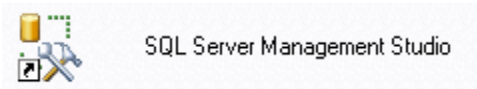
t. Click Next

u. Ensure everything passes the rules

v. Click Next

w. Click Install

SQL Server 2008 Setup

Installation Progress

Setup Support Rules
Feature Selection
Instance Configuration
Disk Space Requirements
Server Configuration
Database Engine Configuration
Error and Usage Reporting
Installation Rules
Ready to Install
Installation Progress
Complete

Setup process complete

Feature Name	Status
✅ Database Engine Services	Success
✅ Full-Text Search	Success
✅ Management Tools - Complete	Success
✅ Management Tools - Basic	Success

[Next >] [Cancel] [Help]

SQL Server 2008 Setup

Complete

Your SQL Server 2008 installation completed successfully.

Setup Support Rules
Feature Selection
Instance Configuration
Disk Space Requirements
Server Configuration
Database Engine Configuration
Error and Usage Reporting
Installation Rules
Ready to Install
Installation Progress
Complete

Summary log file has been saved to the following location:

C:\Program Files\Microsoft SQL Server\100\Setup Bootstrap\Log\20090105_210306\Summary_PISCES_20090105_210306.txt

Information about the Setup operation or possible next steps:

✅ Your SQL Server 2008 installation completed successfully.

Supplemental Information:

The following notes apply to this release of SQL Server only.

Microsoft Update

For information about how to use Microsoft Update to identify updates for SQL Server 2008, see the Microsoft Update Web site <http://go.microsoft.com/fwlink/?LinkId=108409> at http://go.microsoft.com/fwlink/?LinkId=108409.

Reporting Services

The Reporting Services installation options that you specified in Setup determine whether additional configuration is required before you can access the report server. If you installed the default configuration, the report server

[Close] [Help]

## 1.4 Install the SCS Database

SQL Server Management Studio

1. Start SQL Server Management Studio

2. If you're logged into the system with an account you specified as administrator during the install, use Windows Authentication, otherwise use SQL Authentication (SQL user name is sa, use the password specified for the administrator during the install)
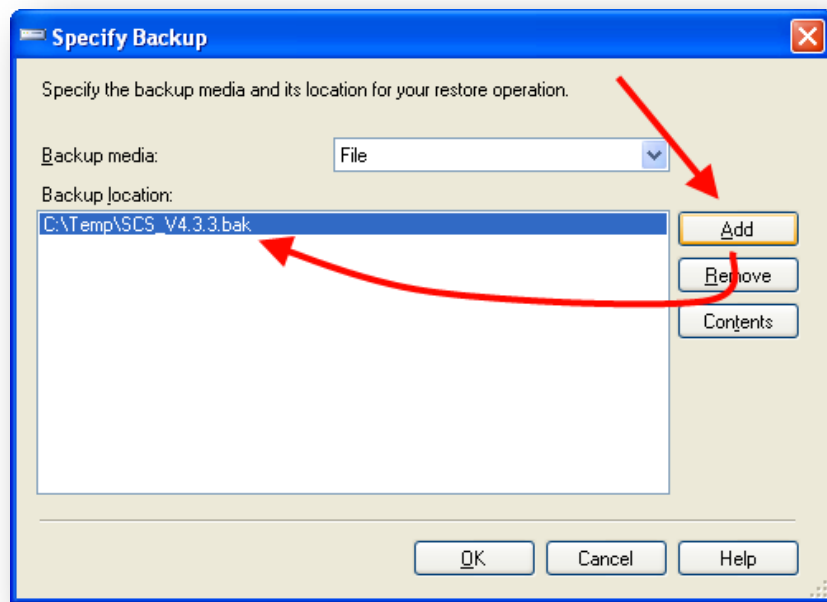

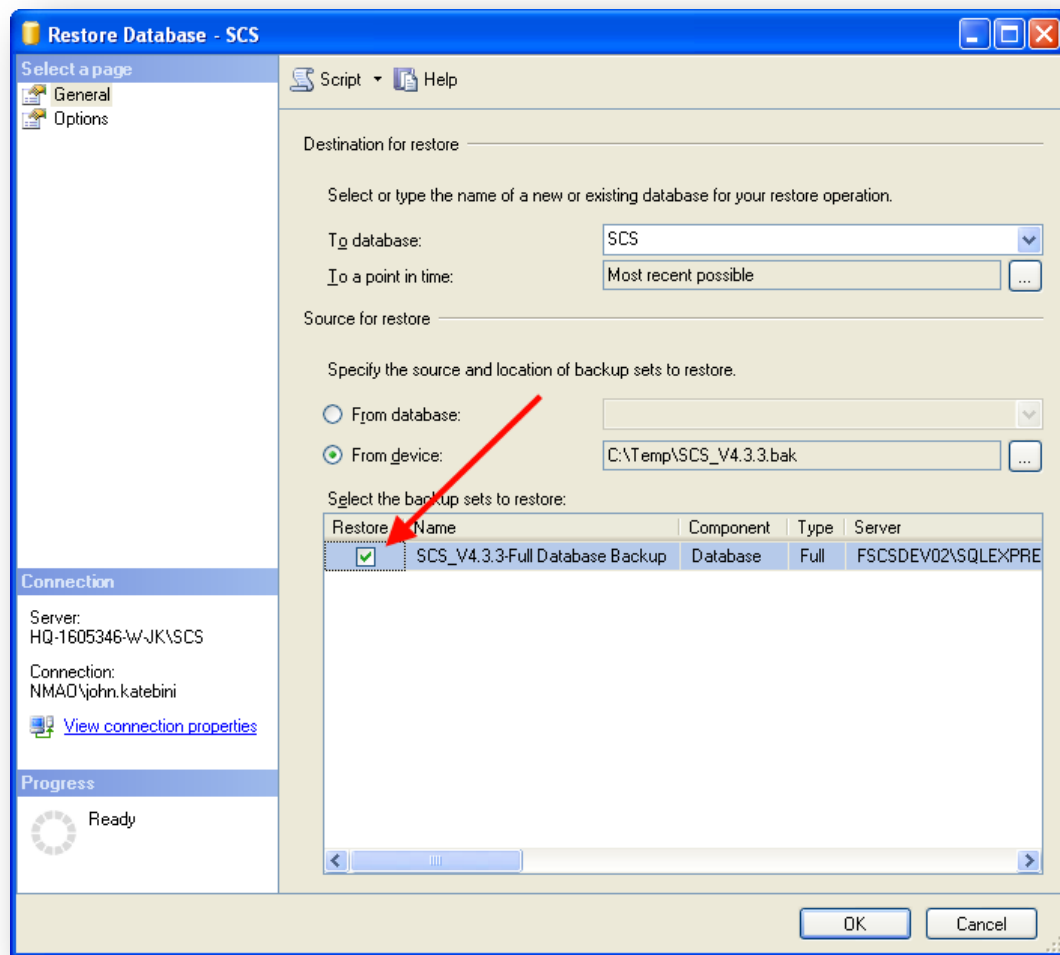3. Right click on the Databases tree node. And click *Restore Database*……….
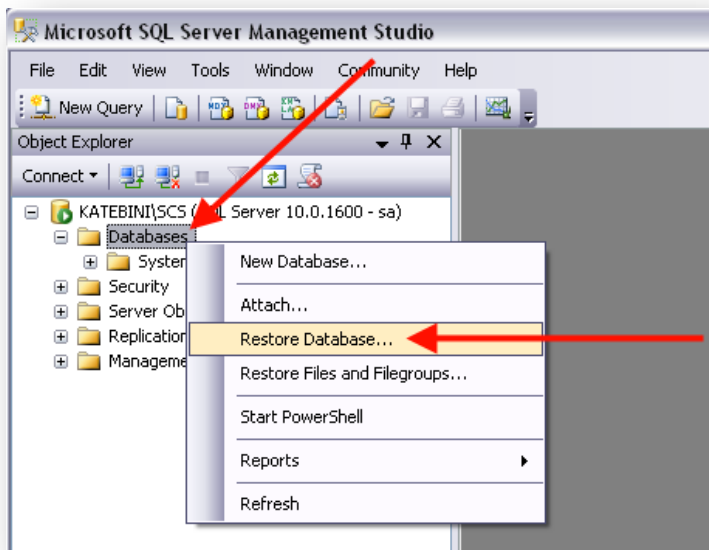
4. Restore to database SCS (this field may come up blank)

5. Restore from device (file), click the browse button to choose the SCS_Empty.bak file supplied on your SCS Installation CD.
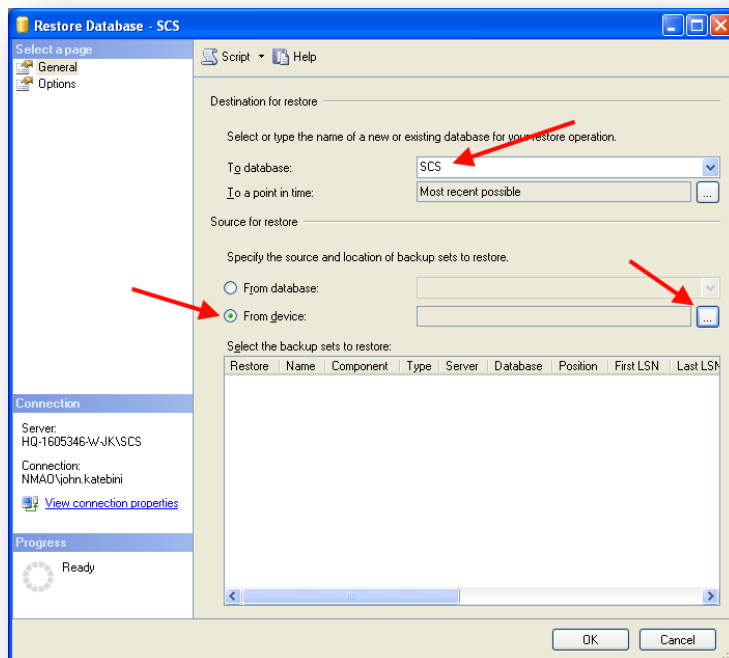
6. Choose Add and select the appropriate database backup

7. Select the database you want to restore

8. Click OK
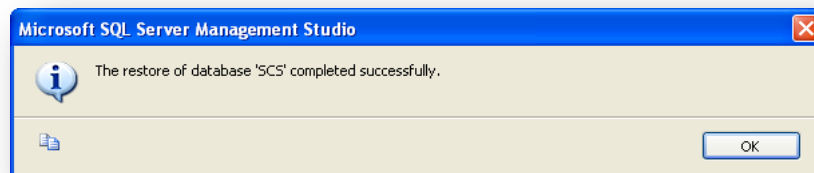
9. Add a SQL account for SCS to use

   a. In the left window pane, select Databases -> SCS -> Security -> Users. If the user SCS appears there, then delete it.

   b. In SQL Management Studio, right click Security→ Logins

   c. Click on option to create New Login…
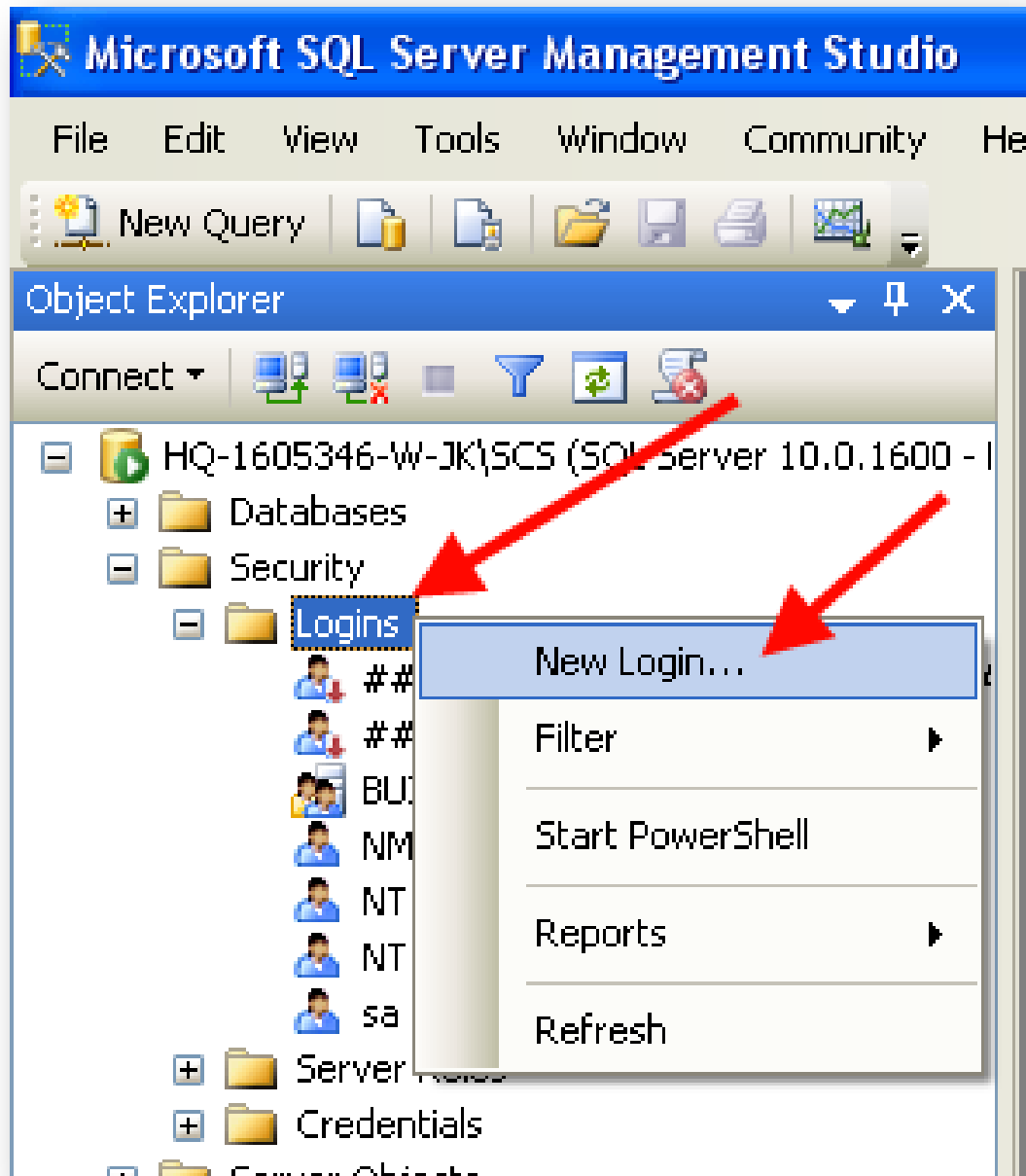
10. Set the login name to SCS
    a. Use SQL Server Authentication
    b. Do NOT Enforce Password Expiration (functional account)
    c. Set the Default Database to SCS

11. Under the User Mappings tab
    a. Select the *SCS database*
    b. Check *db_datareader, db_datawriter, db_owner*
   c. Check *public*
    d. Hit OK
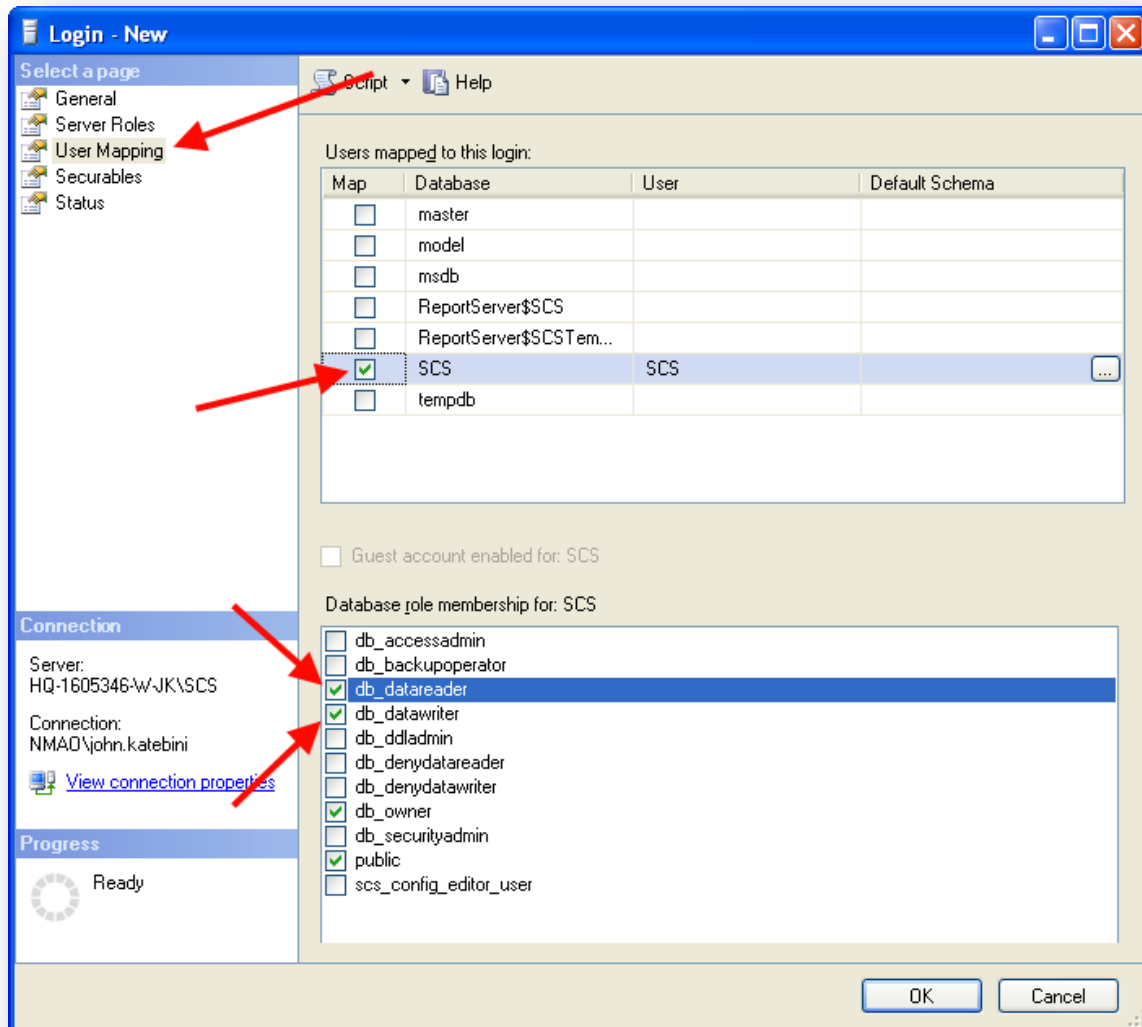
12. Verify SCS database setup

    a. Log in using new SCS credentials
- Click Connect
- Click Database Engine…
    - Choose SQL Authentication
    - Enter the SCS account name and password; Click on "Connect"
    - Click Connect
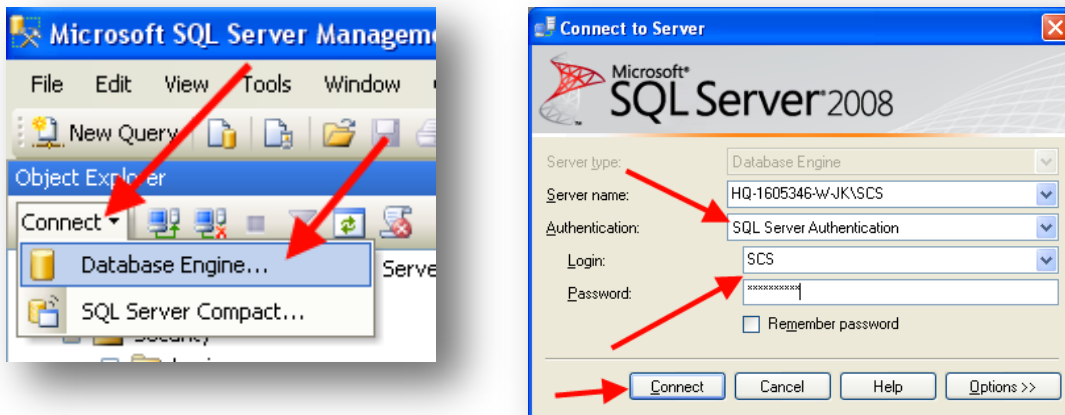
    b. With the new connection (ends with - SCS) expand the Databases node
    c. Find the SCS database and expand it
    d. Expand the Tables node
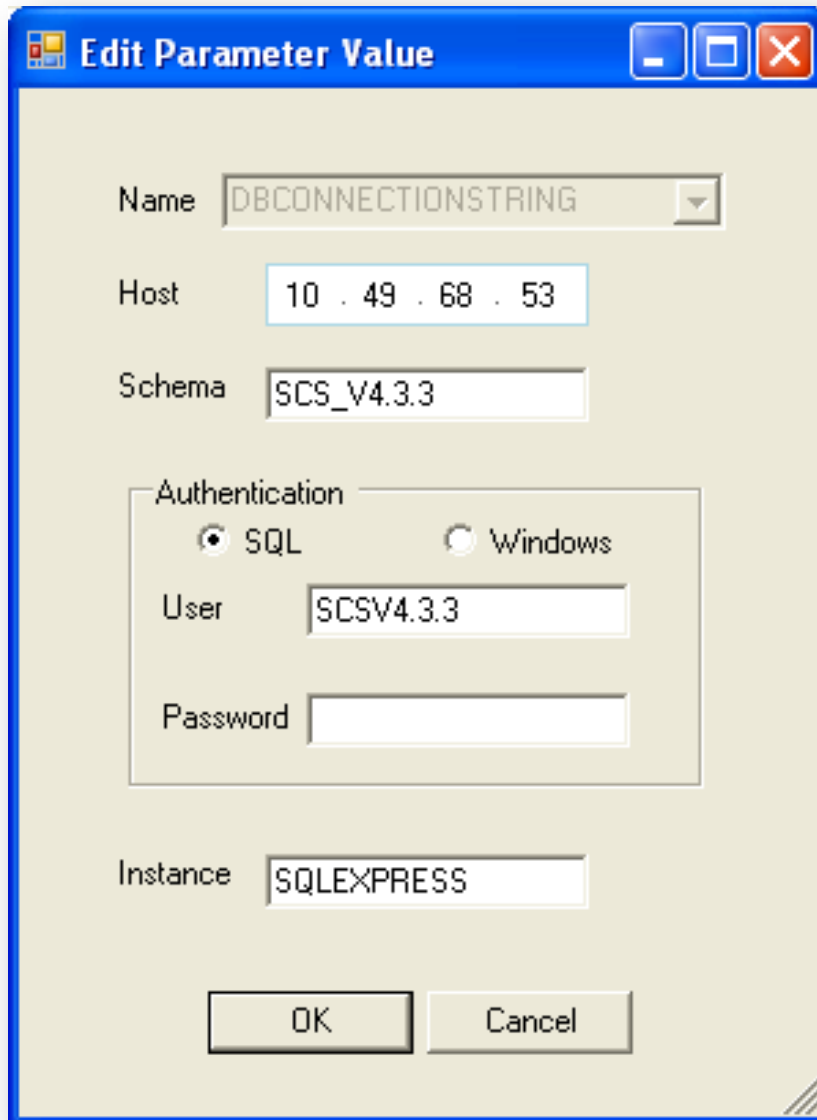   e. Verify that the SCS tables exist…
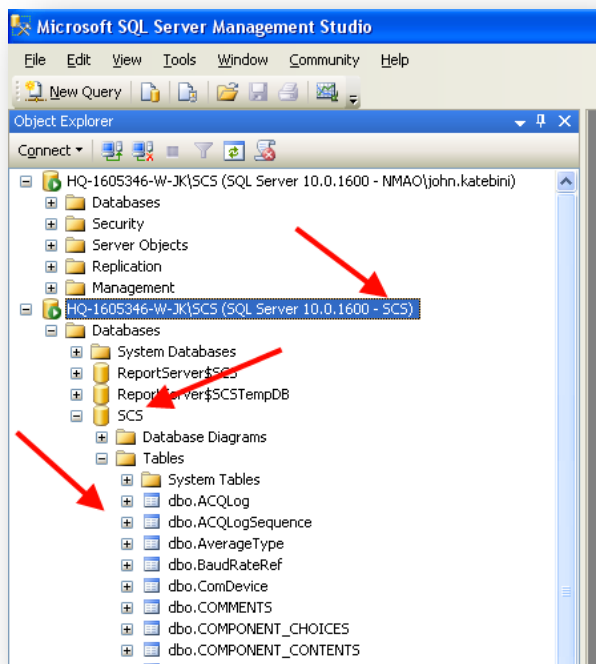
1.5 SCS Configuration File Setup

The final step in setting SCS for database operations is to make a few changes to the SCS Configuration File. To do this open the SCS Configuration File Editor (Chapter Two – Acquisition)

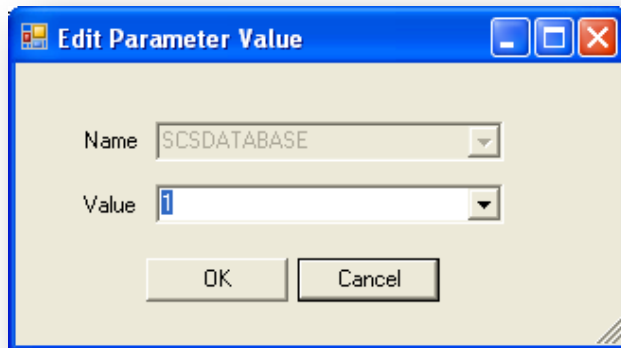1. Add / Edit DBConnectionString parameter
   - Host should be the database server
   - Schema should be SCS
   - Username should be SCS
   - Password should be same as specified for SCS account during SQL Installation
   - Instance should only be used for SQL Server Express

2. Set `SCSDatabase` parameter equal to 1 to allow the database-oriented apps to operate.

This parameter is the "master switch" that allows database activity. It controls which apps are displayed in the SCS Menu. If this parameter is set to 0 SCS reverts to its pre-database mode, as in v 4.2.3 and previous releases; database apps are invisible in ScsMenu. The new database version of CFE-DB is displayed on the SCS Menu, and the legacy CFE-DB is not available.

3. Set `SCSDatabaseLogging`

To allow ACQ to log raw data to the database, set the SCSDatabaseLogging parameter to 1. If set to 0 no database logging will take place. This allows small SCS installations to limit use of the database to sensor configuration by setting SCSDATABASE to 1 but SCSDatabaseLogging to 0.

4. Set `ScsOelEnabled`

Even with SCSDATABASE set to 1, the SCS Operation Event Logger (OEL), and its associated event builder are not available if this parameter is 0. Set it to 1 to make SCS OLE visible in the ScsMenu.

1.6   Supplementary Installation

With the release of SQL Server 2008 <u>R2</u> additional steps are needed in order for SCS to successfully connect via TCP due to increased security restrictions with the new database. This section goes over those additional steps and should be performed after the normal installation (as defined in previous sections) has already taken place.

1. Start SQL Server Configuration Manager
    a. Start Menu
    b. Microsoft SQL Server 2008 R2
    c. Configuration Tools
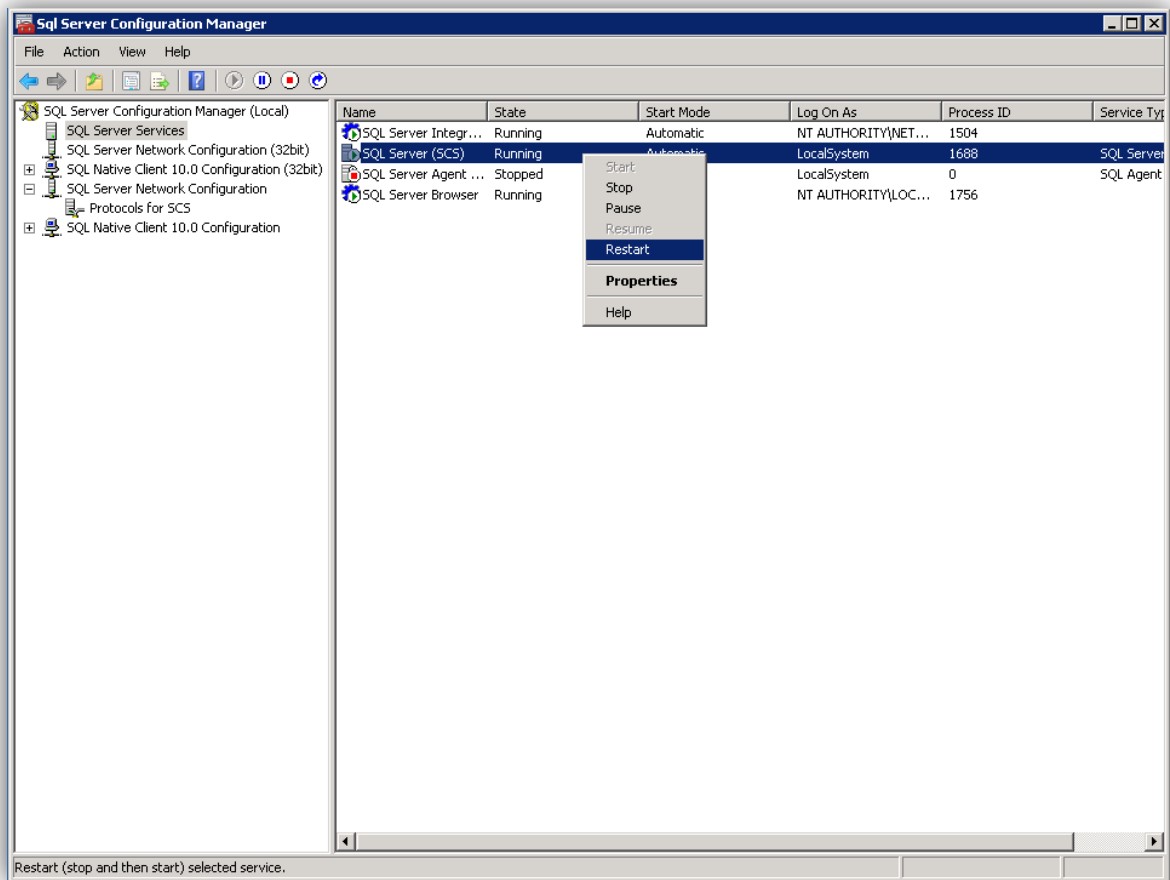   d. SQL Server Configuration Manager
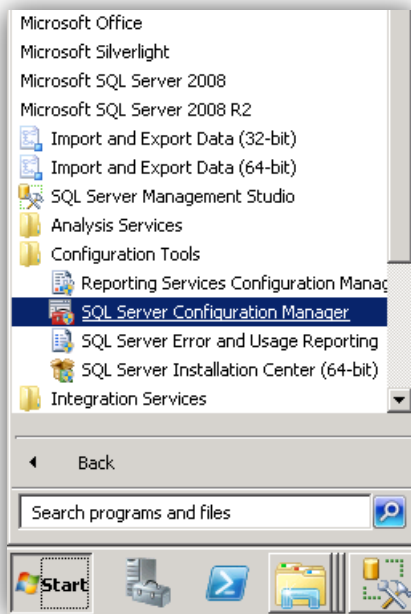
2. Find the Protocols node for the SCS database
3. Ensure that TCP/IP is enabled
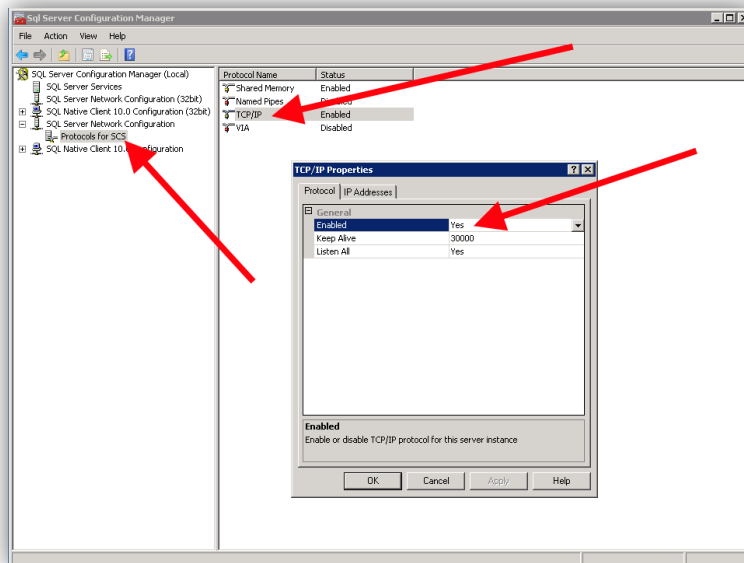
4. Tab over to the IP Addresses tab
5. Ensure all [relevant] IP address nodes are
   a. Active
   b. Enabled
   c. Have a blank value for TCP Dynamic Ports
   d. Have 1433 set for the TCP port
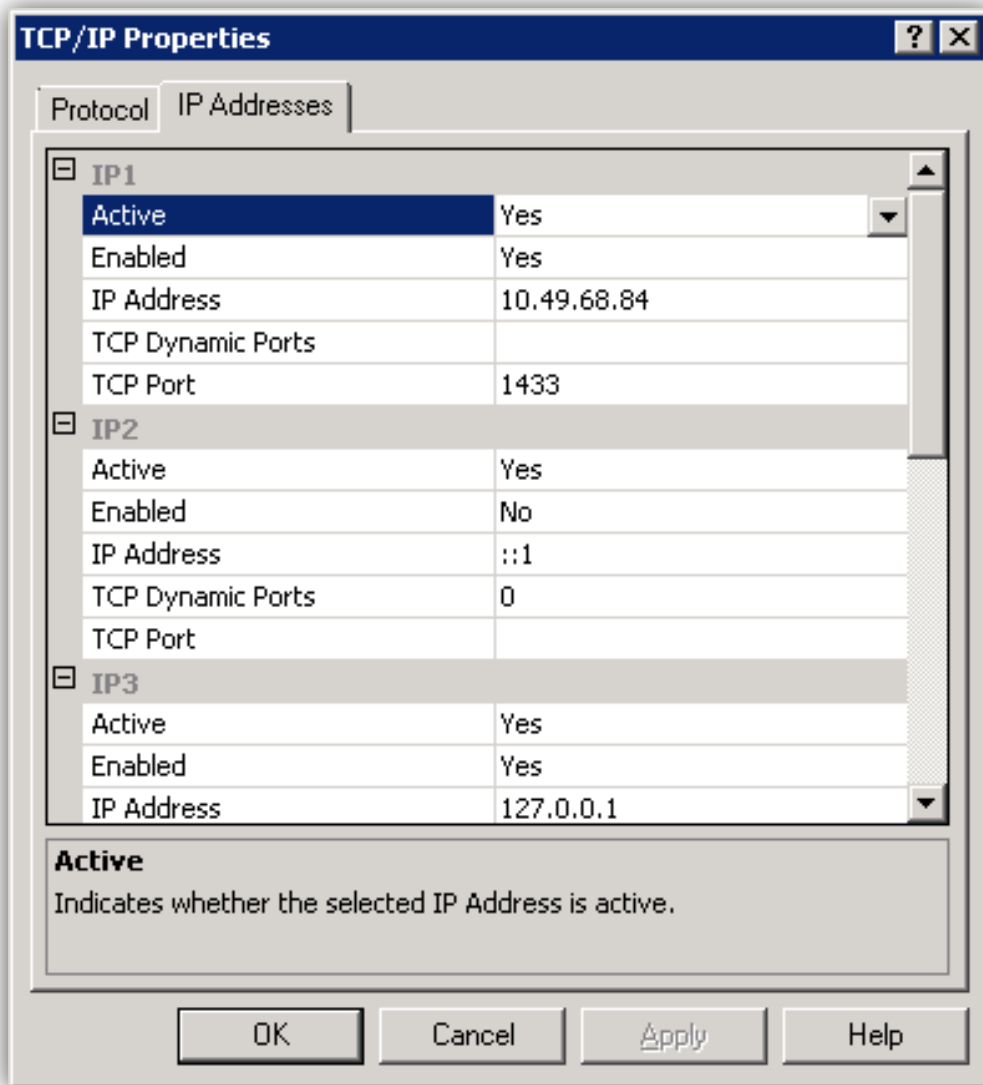
6. Once you've modified all IP address, restart the SQL Service

7. Now you can proceed with hooking SCS up to the SQL Server.

1.7 Troubleshooting

Known Problem: At the start of the SQL install, it tells you that a previous installation failed to complete and you need to reboot You reboot, start the install again, and it gives you the same message. And on and on …

Solution: There may be other ways but this Registry hack works

Drill down to

HKEY_LOCAL_MACHINE->SYSTEM->CURRENT_CONTROL_SET->SESSION_MANAGER->PENDING_FILE_RENAM

Clear all text out of the *Value Data*.