Traverse

Intelligent Tracking by PCS

Installation Guide for Traverse.

Tom Romeo
6/10/2011

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1. Introduction

Installing Traverse is straight forward and intuitive for users that have basic knowledge of Windows Operating Systems, SQL Server, IIS (Internet Information Services), Browser based applications, and Windows Security.

It is a good idea however to skim through this document before installing so that there are no after thoughts to cause a reinstall.

**** Very important Note ****

If you are installing Traverse on a PC that is not a server, please go to the Control Panel → Power Options and make certain that the PC will never shut down, hibernate, or otherwise render any hardware to stop working after a period of inactivity.

**** Very important Note ****

It is assumed that Traverse will be installed on its own server or PC and a SQL Server exists that will host the database aspect of the system. For small installations everything including SQL server can be installed on one server.

Choose the correct installation for your company. Traverse is packaged three ways, alone, with SQL 2008 Express x86, and with SQL 2008 Express x64.

- Traverse.exe
- Traverse64.exe
- Traverse_SQLEXP32bit.exe
- Traverse_SQLEXP64bit.exe

Use the installation checklist in section 5 to verify that all steps have been completed and to log the company name and SQL Server name. You will need the exact spelling of both the company name and SQL Server name to obtain a valid license key. Both entries are case sensitive. This means that “Hello How Are You” is not the same as “hello how are you”. The capital letters are not the same as their lower case counter parts when an entry is “case sensitive”.

Traverse is composed of several programs working in concert.

The “Back Office” or “Web Client” is the primary interface used to manage whatever it is that Traverse is tracking.

The “Web Service” is the interface by which all “Business” transactions are performed. In this regard a “Business” transaction is a “Check-Out”, “Check-In”, “Move”, “Transfer”, or other action for an asset.

The “Reporting Service” serves the “Web Client” by processing report requests and serving them to the “Web Client”.

The “Interface Service” is the means by which data may be imported into and exported out of Traverse via the “Web Client”.

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The “Archive Service” decides when data is moved to historical tables or purged from the system based on rules that you set up.

The “DB Maintenance” service manages nightly backups and overall database health. If the Traverse database is installed on a database server that serves other applications and your company employs DBAs that manage these databases then you can turn the “DB Maintenance” service off as long as the DBA sets up a backup and maintenance plan for you.

1.1. System Requirements

There are not many prerequisites but if the following is not installed or available please see to it before attempting to install Traverse

- Windows Operating System – 32 or 64 bit {Windows XP, Server 2003 , Server 2008, Windows Vista, Window 7, Windows Server 2012 Full GUI **), Windows 8}
- Dot Net Framework v2.0.50727
- IIS – Internet Information Services v5, 6, or 7, or 7.5
  - If IIS 7 then IIS 6 management Compatibility
- SQL Server 2005 or 2008 or 2012
  - SQL Login must have “sysadmin” privileges
  - Supports SQL Express, Standard Edition and Enterprise Edition.
- Windows Login must have Administrator Privileges for installation

** Windows 2012 core is not supported. Traverse Requires Windows GUI for installation, configuration, and removal.

1.1.1. Traverse on its own 32 bit server

Minimum recommended configuration

4 GB RAM
2 CPUs
20 GB of unused disk space

1.1.2. Traverse on its own 64 bit server

Minimum recommended configuration

6 GB RAM
2 CPUs
20 GB of unused disk space

1.1.3. Traverse w/ SQL Express on a 32 bit server

Minimum recommended configuration

8 GB RAM
4 CPUs
50 GB of unused disk space

1.1.4. Traverse w/ with SQL Express on a 64 bit server

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Minimum recommended configuration

16 GB RAM
4 CPUs
50 GB of unused disk space

IIS (Internet Information Services) is required for the Traverse "Back Office" application and the Traverse Web Service. The Dot Net Framework must be registered to IIS.

Microsoft SQL Server 2005/2008 or SQL Express

Microsoft Internet Explorer 6.0 or higher. Traverse has been tested using Microsoft Internet Explorer 7.0, 8.0, 9.0, and 10.0. Traverse also works with Mozilla FireFox, Google Chrome, and Safari.

Administrative privileges of the installation PC or Server are required when installing this software.

1.2. Installing Traverse

Start the installation by double clicking the appropriate Traverse setup program

To install Traverse on a server or workstation with SQL server on a separate server run "Traverse.exe"

To install Traverse on Windows 2008 R2 or higher or Windows 7 64 bit or higher run "Traverse64.exe" Traverse64.exe will also run a PowerShell scripts and a DISM script to ensure that all windows features and roles are installed for you.

To install Traverse on a 32 bit operating system with SQL Express on the same server run "Traverse_SQLEXP32bit.exe"

To Install Traverse on a 64 bit operating system with SQL Express on the same server run "Traverse_SQLEXP64bit.exe".

Assuming all of the prerequisites are installed on the installation server, after double clicking the appropriate setup program the following screen will appear.

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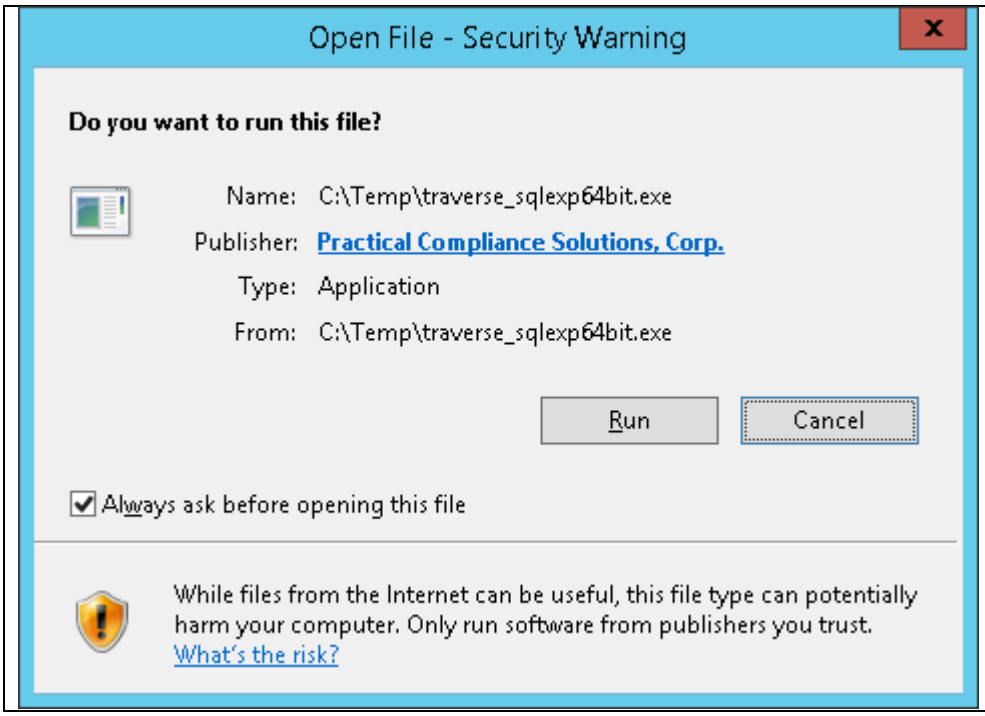
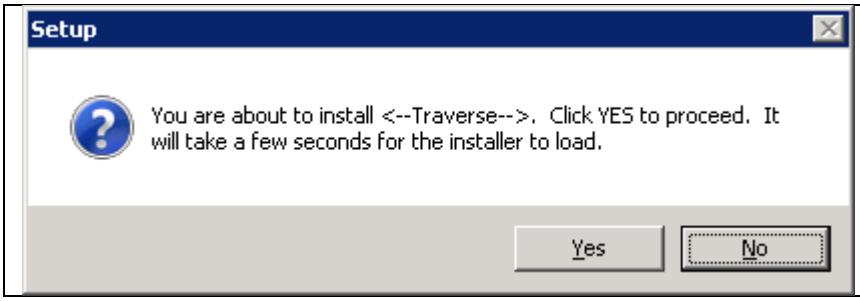
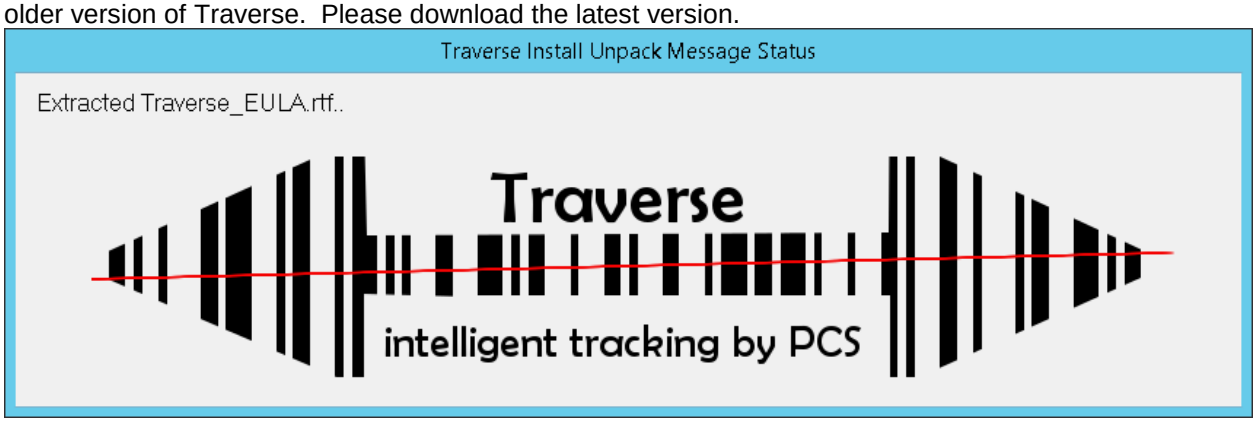


Traverse is digitally signed. If the publisher name is blank, do not install this package and contact us.



Click Yes to proceed. It will take several seconds or perhaps up to a minute to un-package the software for installation.

We have updated our unpack message box. If you do not see this logo, you are running an older version of Traverse. Please download the latest version.



After the software has been un-packaged the main installation screen for traverse will appear, pictured below.

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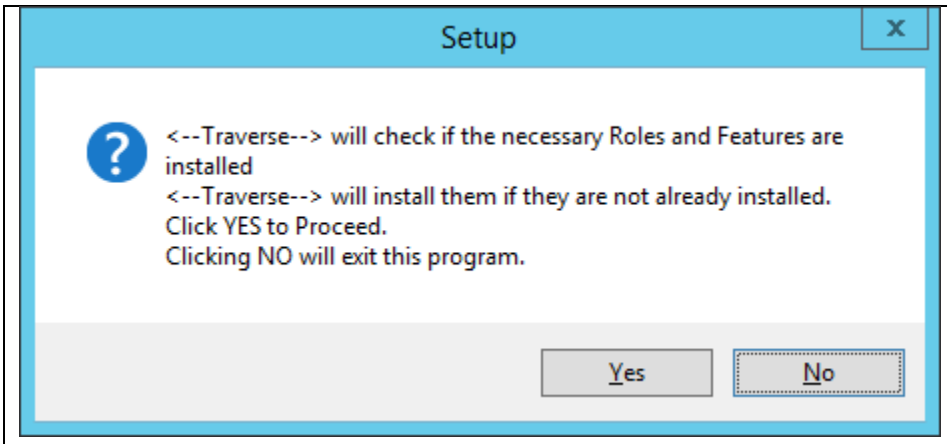
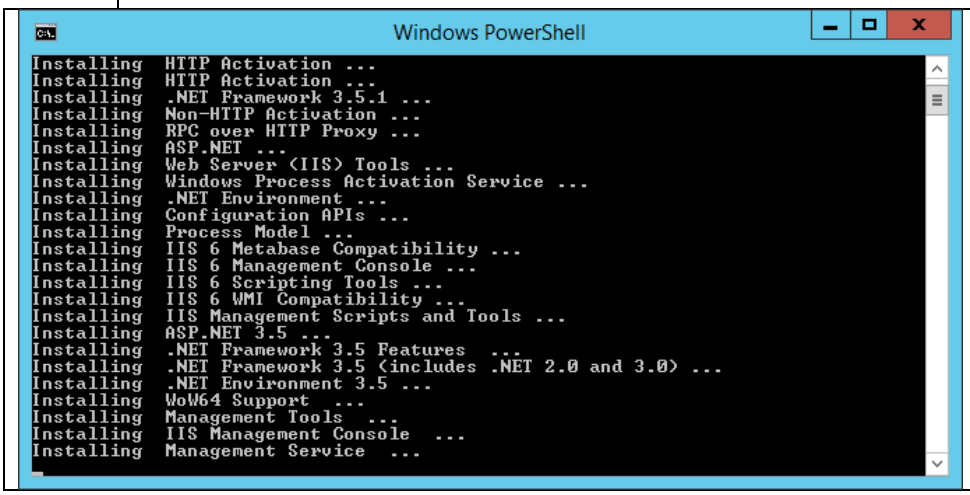


Running any of the Traverse 64 bit installers will display this screen. Pressing “no” will exit the installation.



PowerShell will install all necessary features and roles

1.2.1. Traverse Web Client and Web Service Configuration

Accept the EULA – End User License Agreement

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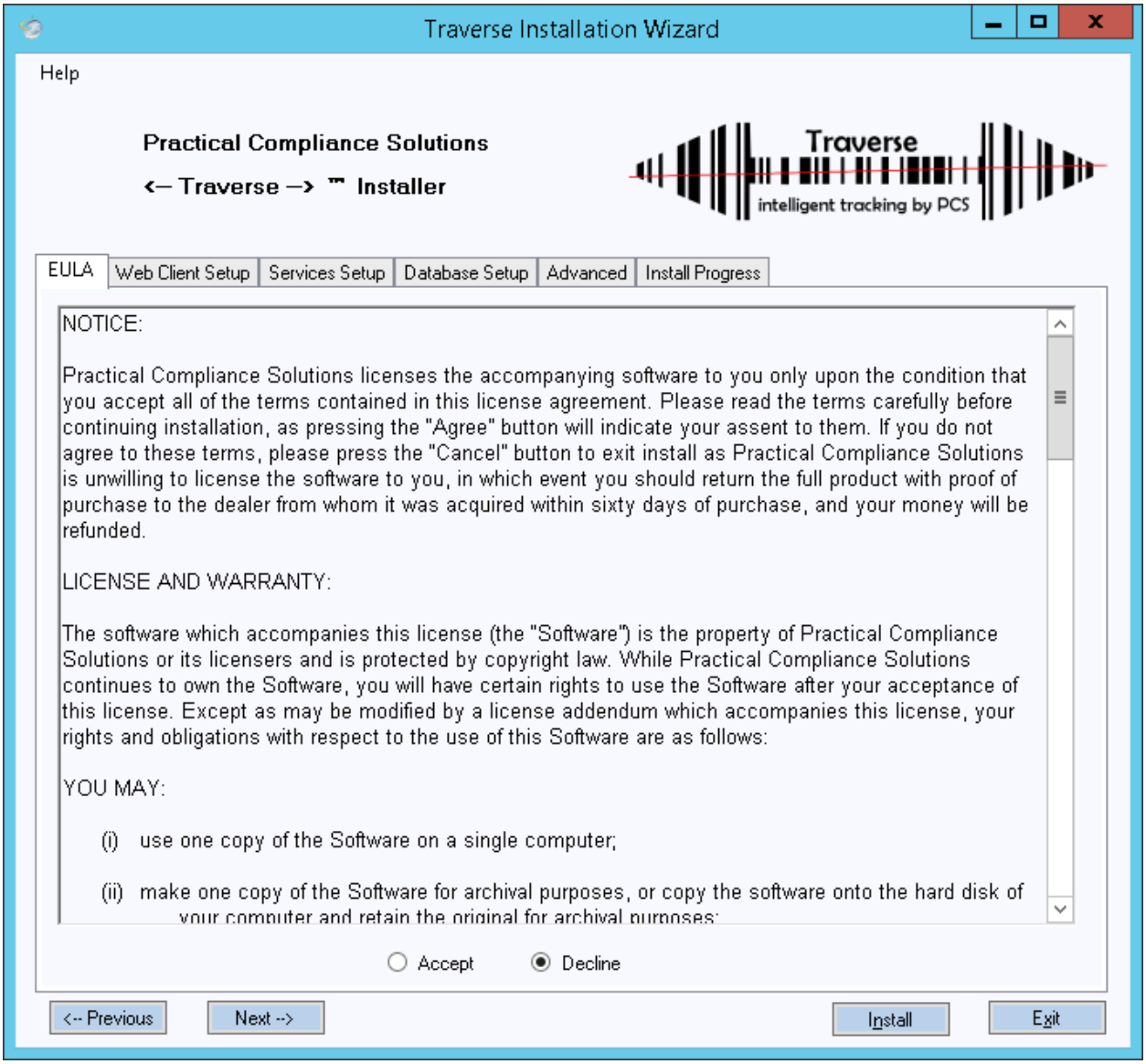

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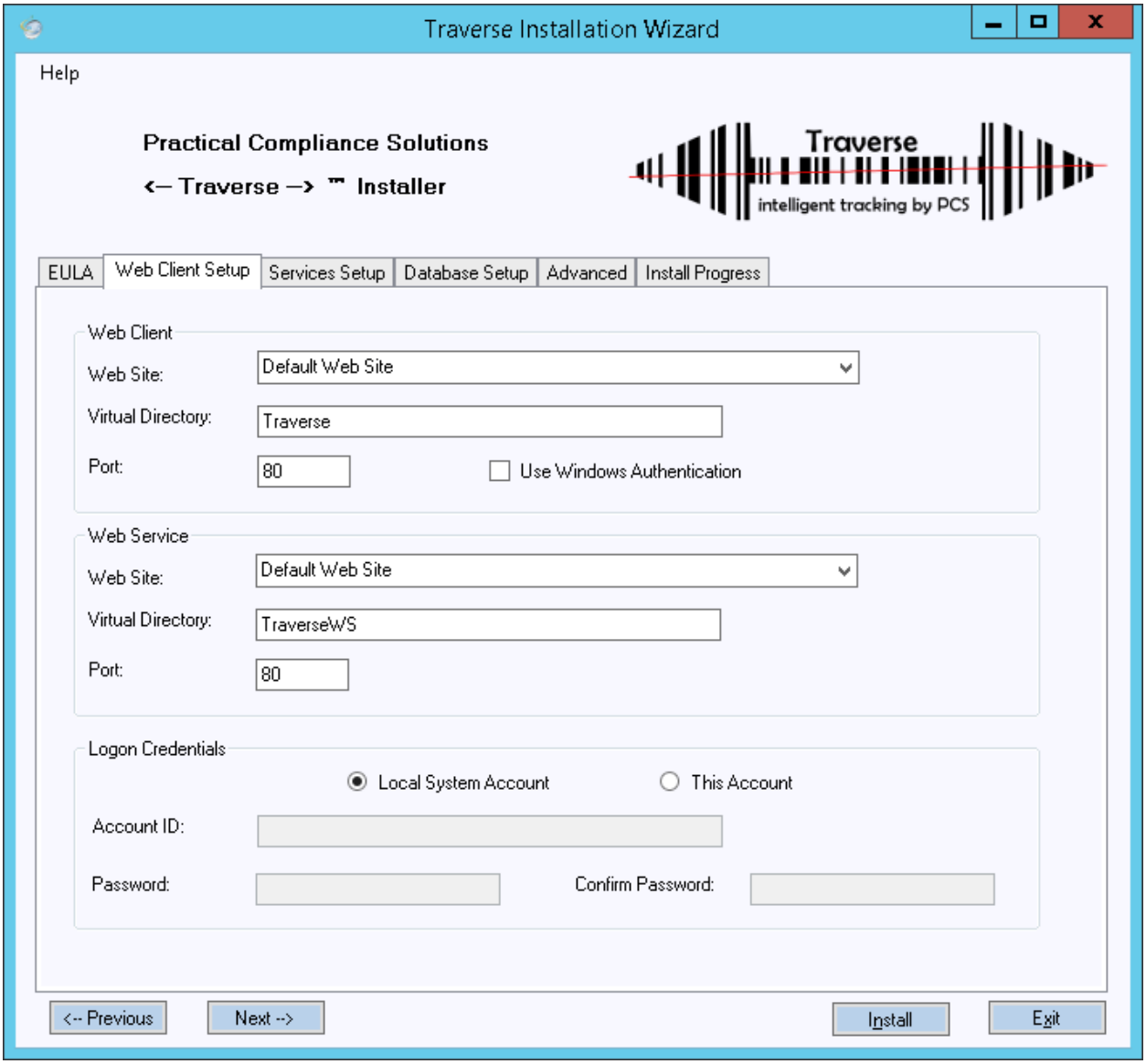

The installation program can be used in wizard mode by clicking the “Previous” and “Next” buttons located at the bottom of the screen, or by clicking each tab and entering the data.

Unless absolutely necessary, it is best to keep the default values for the installation. If Traverse is to be installed on an intranet server and only used by active directory users then checking the box “Use Windows Authentication” will allow any domain user access to Traverse. Otherwise each user must log in via an email address.

The Logon Credentials section is for the Application Pools associated with the Web Client and Web Service. A specific account can be specified if necessary. For example if windows authentication is specified for SQL server access then specify an account that has adequate privileges to SQL server.

If you are installing Traverse on Windows XP, you will see two additional prompts for impersonation on the web client. This is because IIS 5 does not yet use application pools. Please enter a local administrator user account and password.

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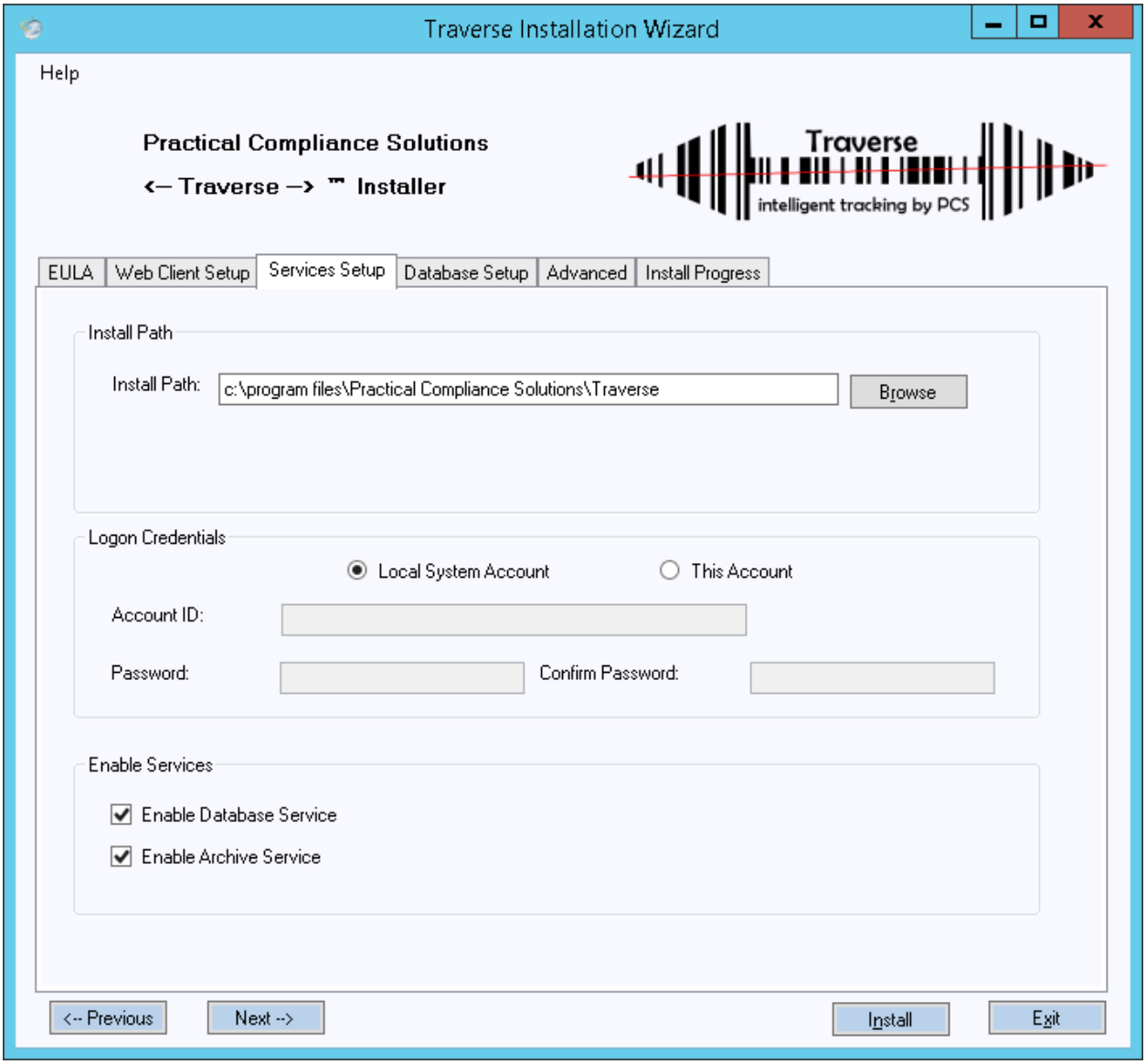
1.2.2. Traverse Services Installation



Enter the path where Traverse should be installed. If more than one disk is present, many times it is policy to install such programs on a disk other than the system disk.

The Logon Credentials apply to the Traverse services same as the Credentials for the Web Client and Web Services.

Traverse has two services that help maintain the health of the system. The Database Service performs backups and re-indexing tasks to mention a few. If you already have SQL maintenance plans set up for your SQL server, you can disable the database service. If however you are using SQL Express, then you cannot disable the database service.

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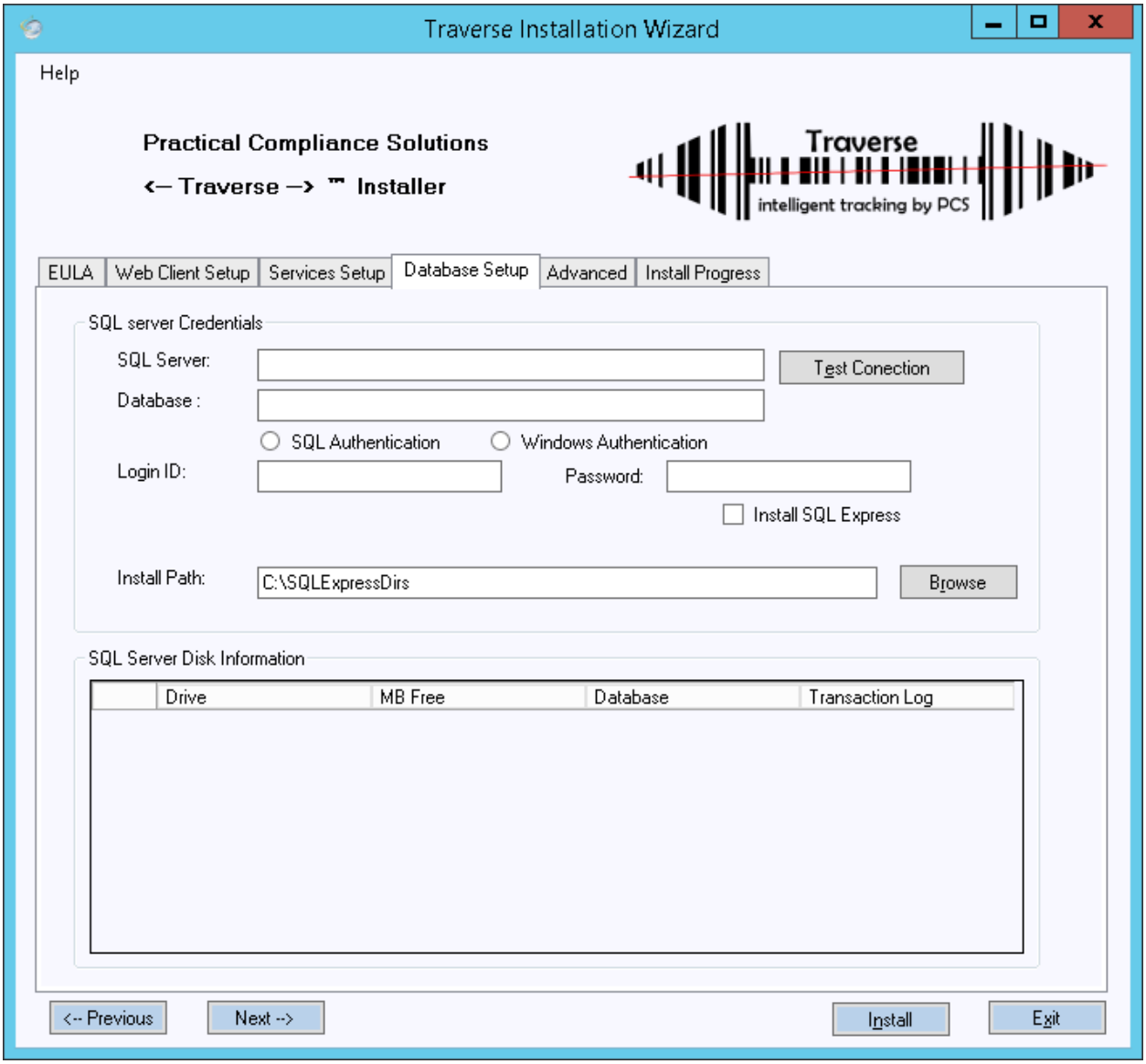
The archive service promotes database health by limiting the number of audit / transaction records in the live tables and in the historical tables. There are two system configurable thresholds for maintaining live data and historical data. One threshold is by date or age, and the second is by number of rows.

1.2.3. Traverse Database Configuration



Enter the SQL Server credentials and click the “Test Connection” button. Upon successful connection to SQL Server the disk and available drive space will appear. Select the disk where the Traverse database and transaction log should reside.

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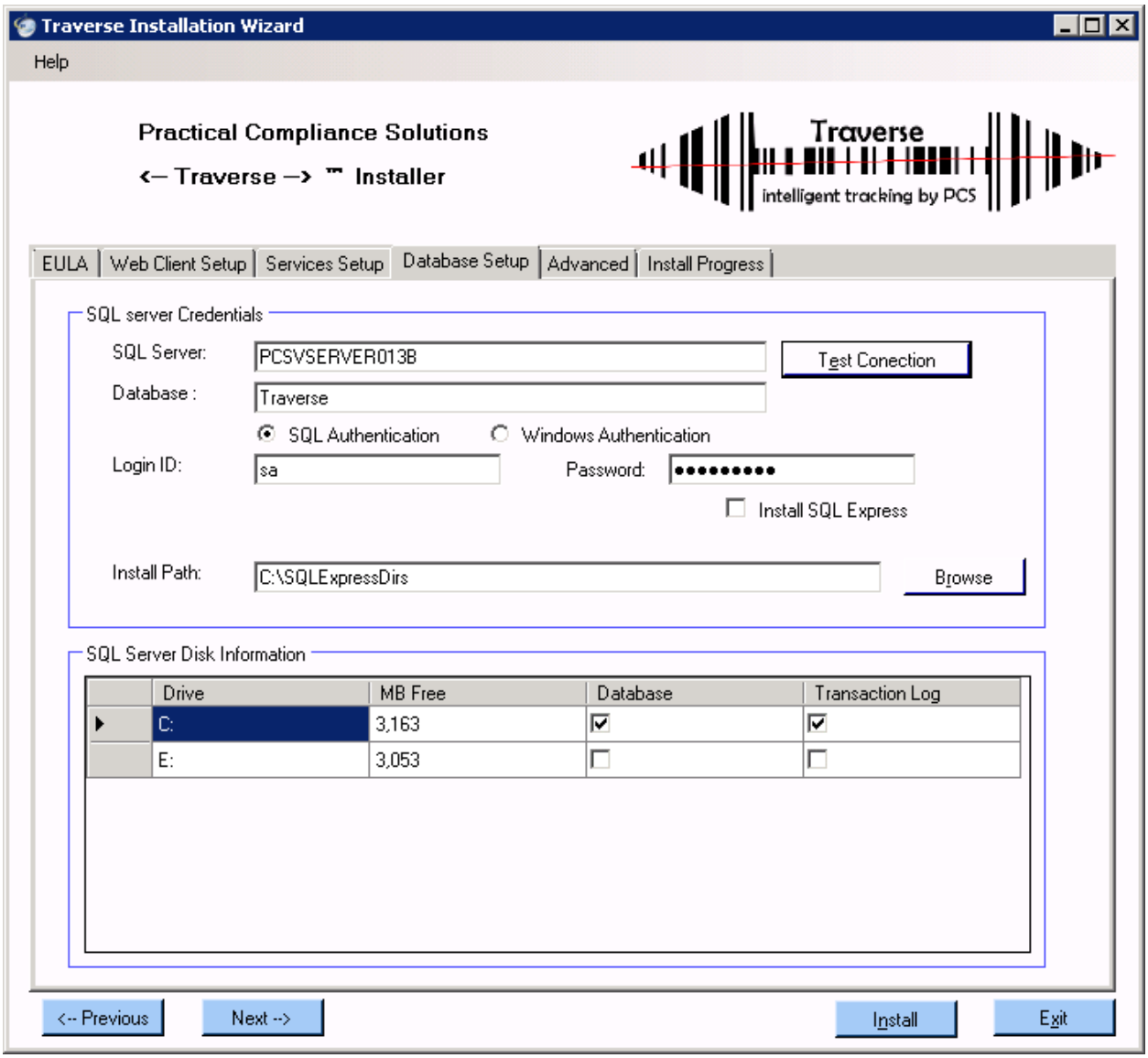

If you are installing a version of Traverse that is packaged with SQL Express, you will see the screen below. By checking the Check Box labeled “Install SQL Express, the Traverse installation package will install SQL Express. Refer to the “Installing Traverse with SQL Express” section of this document for more information.

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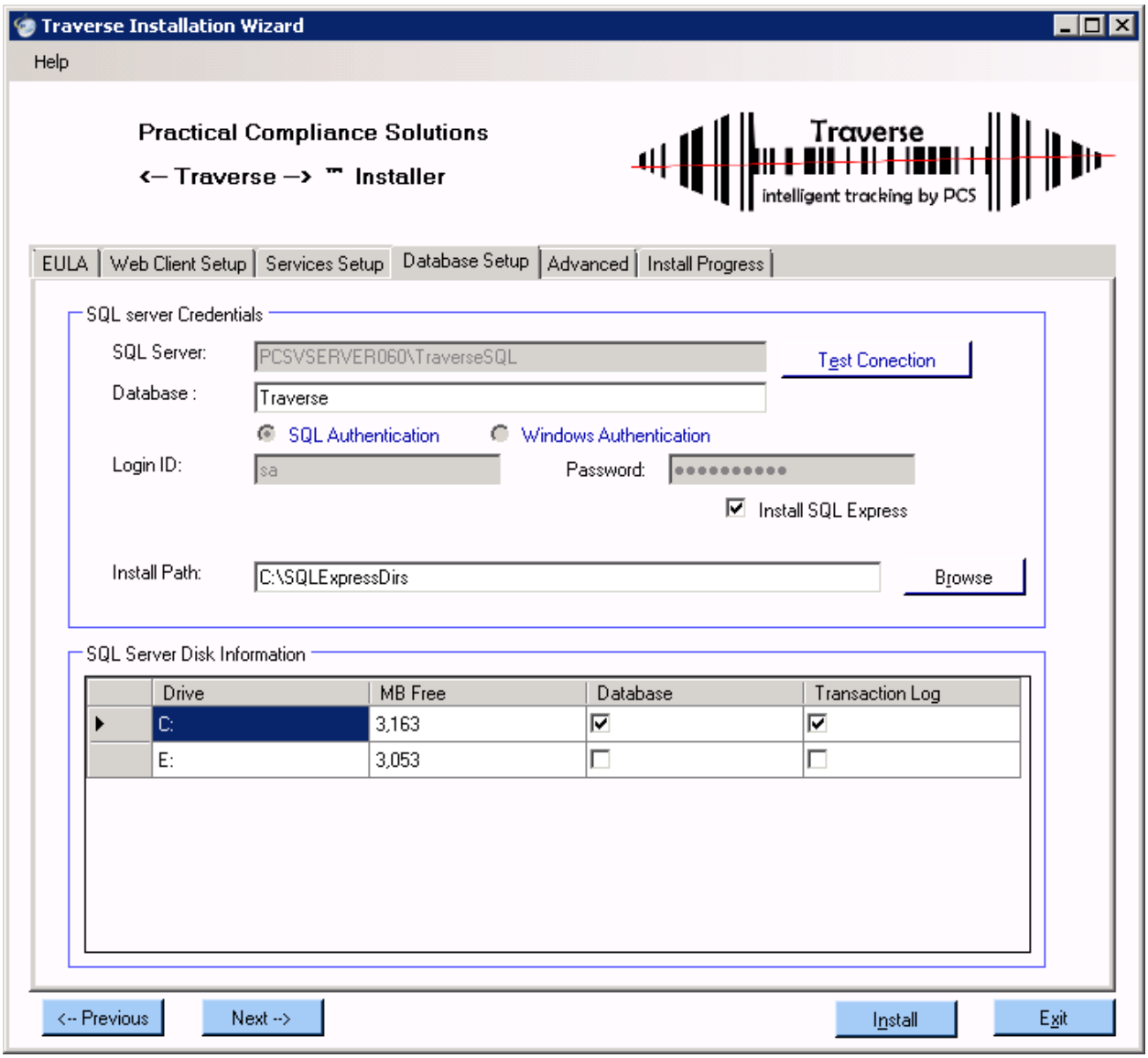

1.2.4. Traverse Service Ports

The traverse services communicate via TPC/IP. The Report and Interface Services listen for instructions on their own port. By default the Report Service listens on port 65104 and the interface service listens on port 65103. These ports can be changed. Use caution as you do not want to use a port that is already used by another service. This is one of the ways the services communicate with each other.

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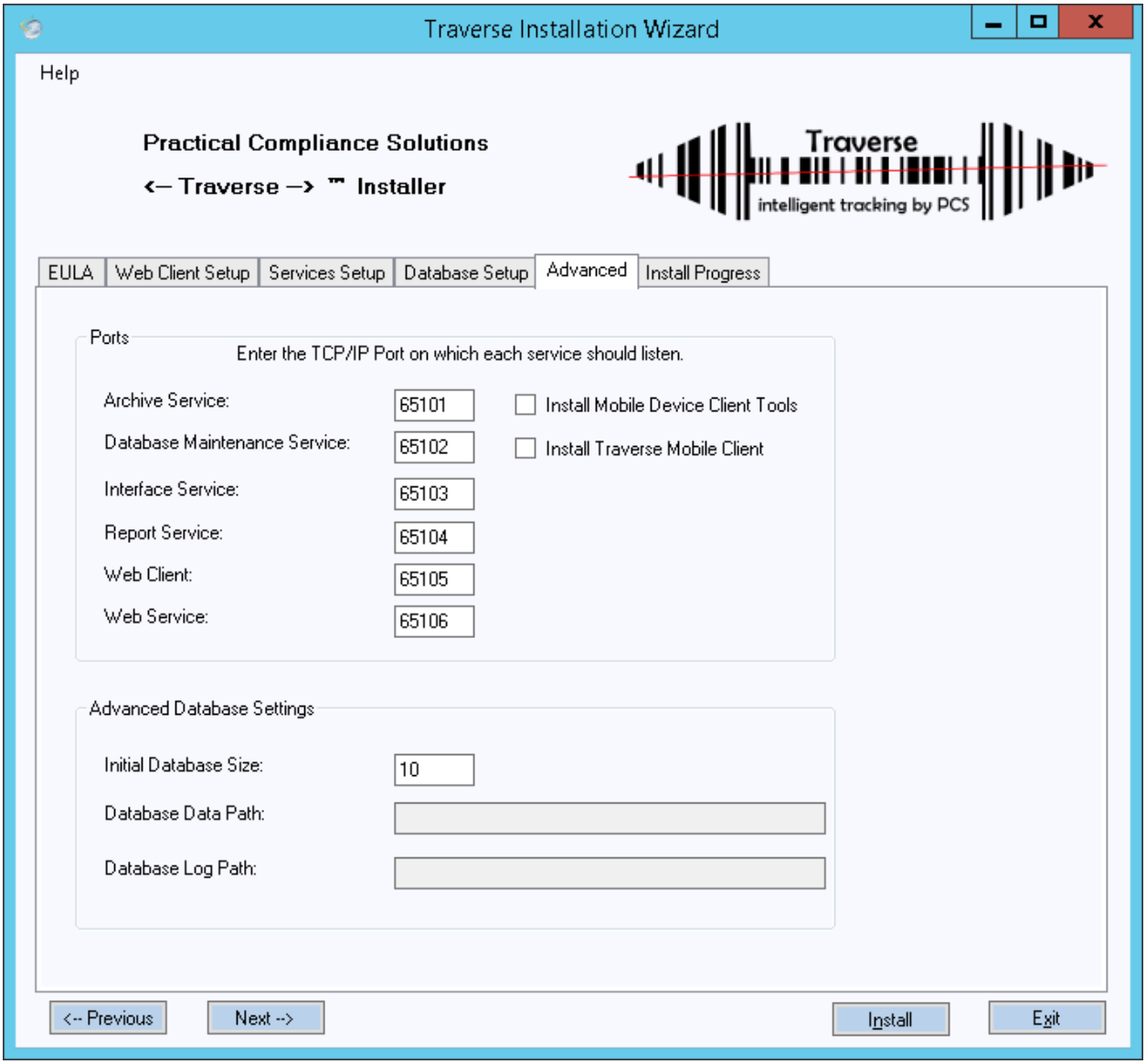

You can enter an initial database size and or installation path for the database files. When creating a new database on SQL server, the minimum size of a new database must be greater than or equal to the size of the SQL Server system database named model. By default the model database is 2MB for SQL 2008 and 4MB for SQL 2012. The default size for Traverse is 10MB.

Click install. A message indication the installation is complete will appear as soon as Traverse is fully installed.

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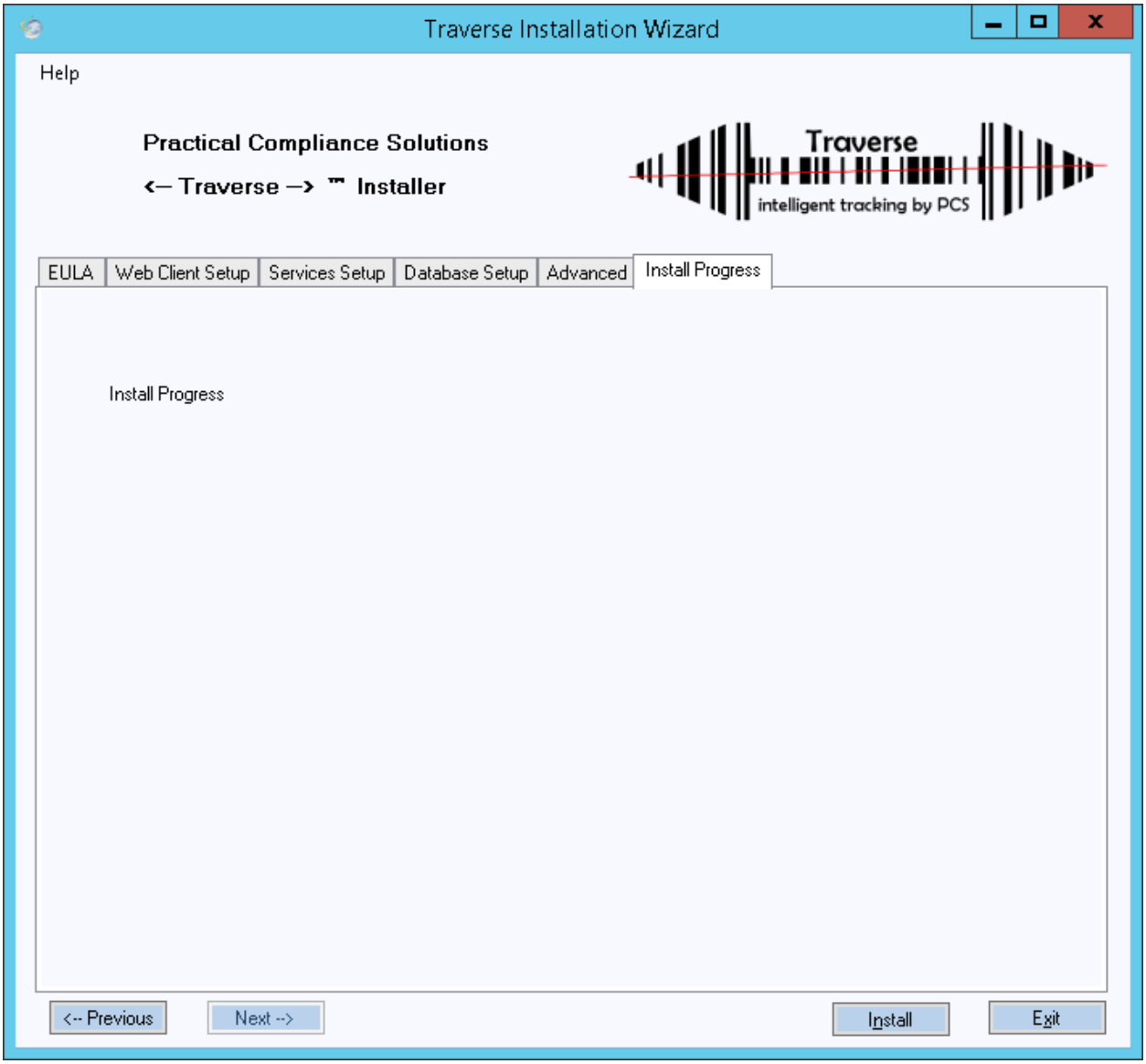

Click OK and then Click Exit on the installer screen.

Click the Windows Start menu and click “Run”. Type “services.msc” in the run prompt and press enter. Scroll down alphabetically to PCS and you will see the four new Traverse Services

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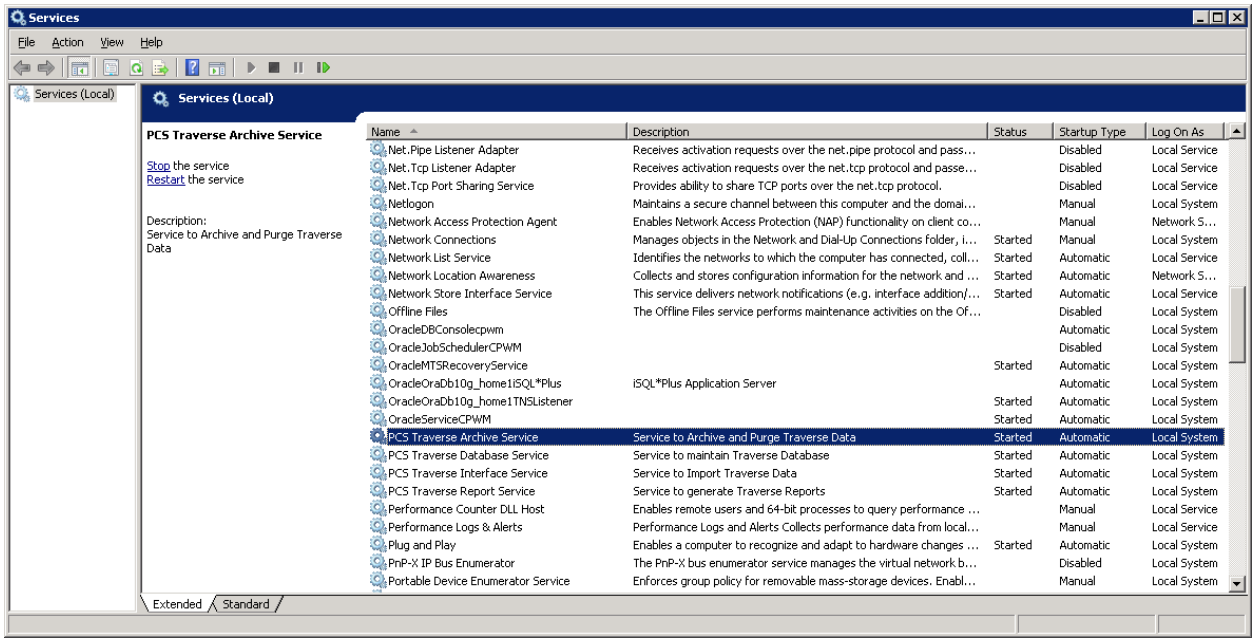

2. Starting Traverse

From the server you can launch the Traverse Web Client by typing http://localhost/traverse in the browser's URL window. Similarly you can see the traverse web service type typing http://localhost/traversews/traversews.asmx

If you are using IE9 (Internet Explorer 9) your local host and server name must be added to "Trusted Sites".

Or if you prefer you can start traverse from a workstation by typing the traverse URL in the browser.

For example http://yourserver/traverse

You will see the traverse login screen if you did not check the "Use Windows Authentication" check box when installing traverse.

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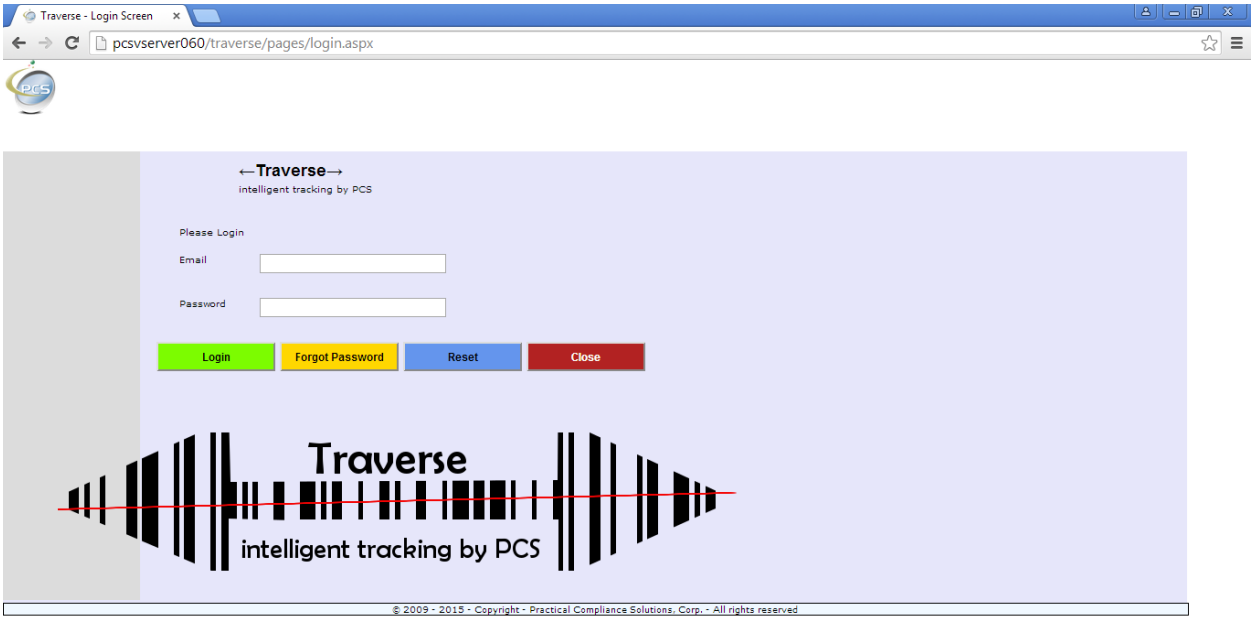
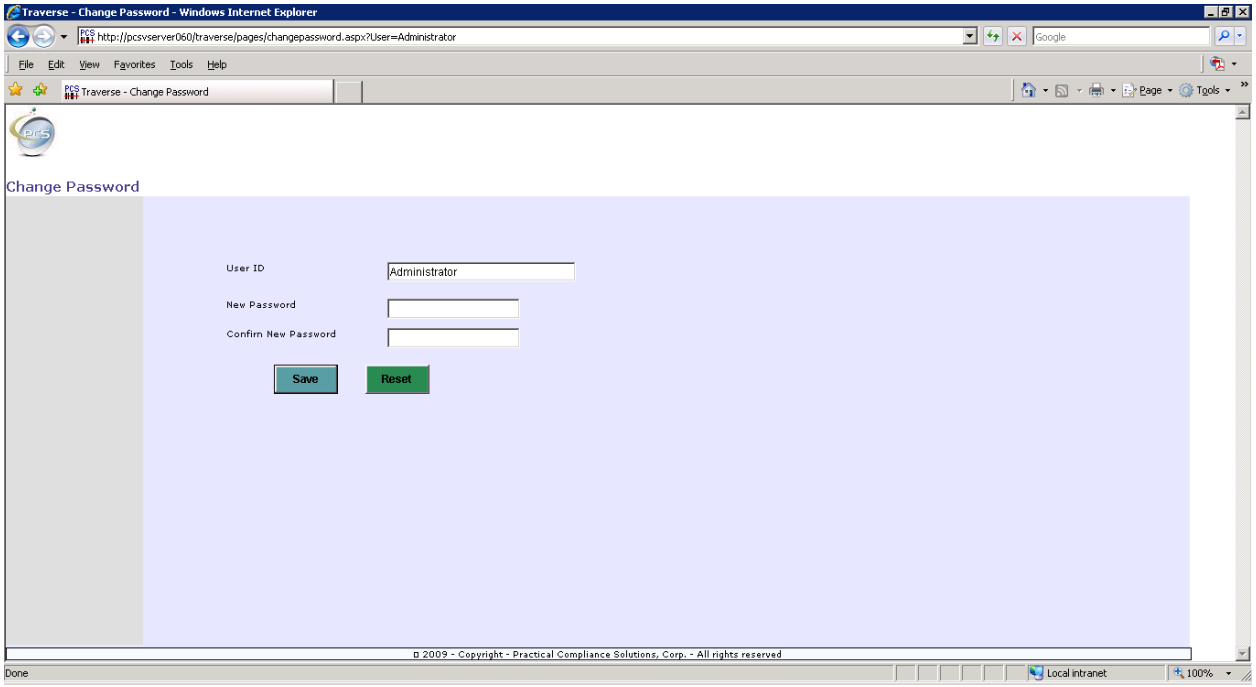
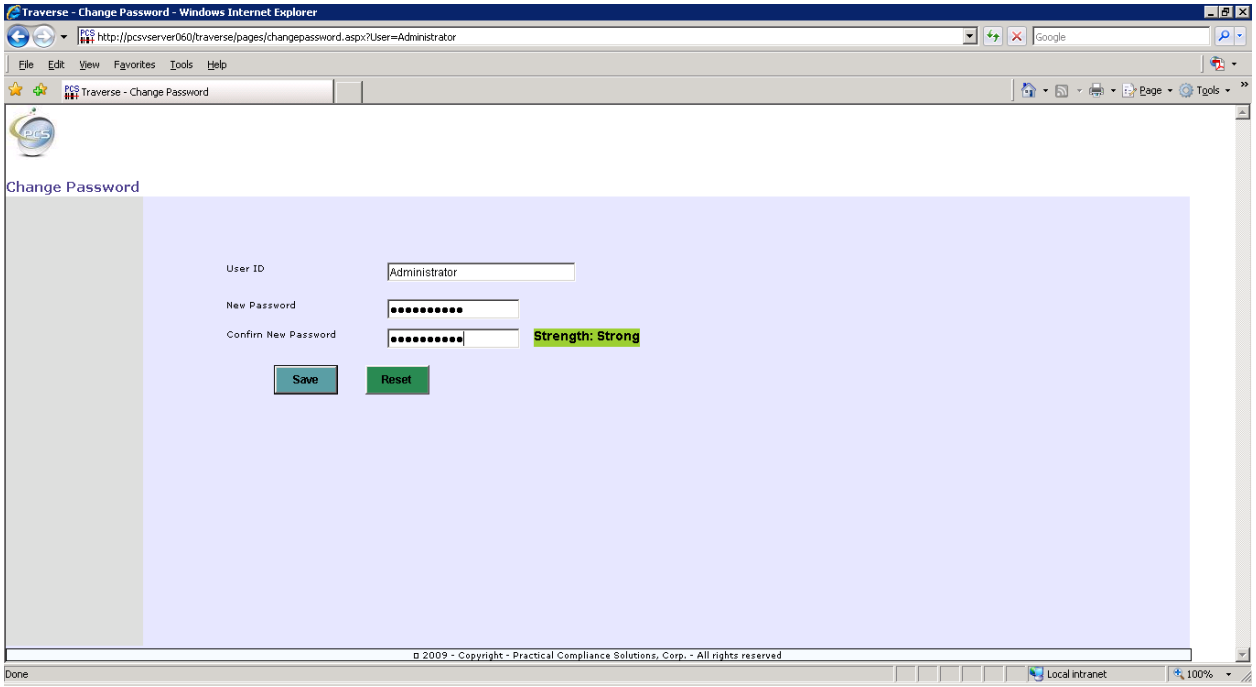


Type Administrator in the email text box and click the login button. You will be prompted to change the Administrator's password.



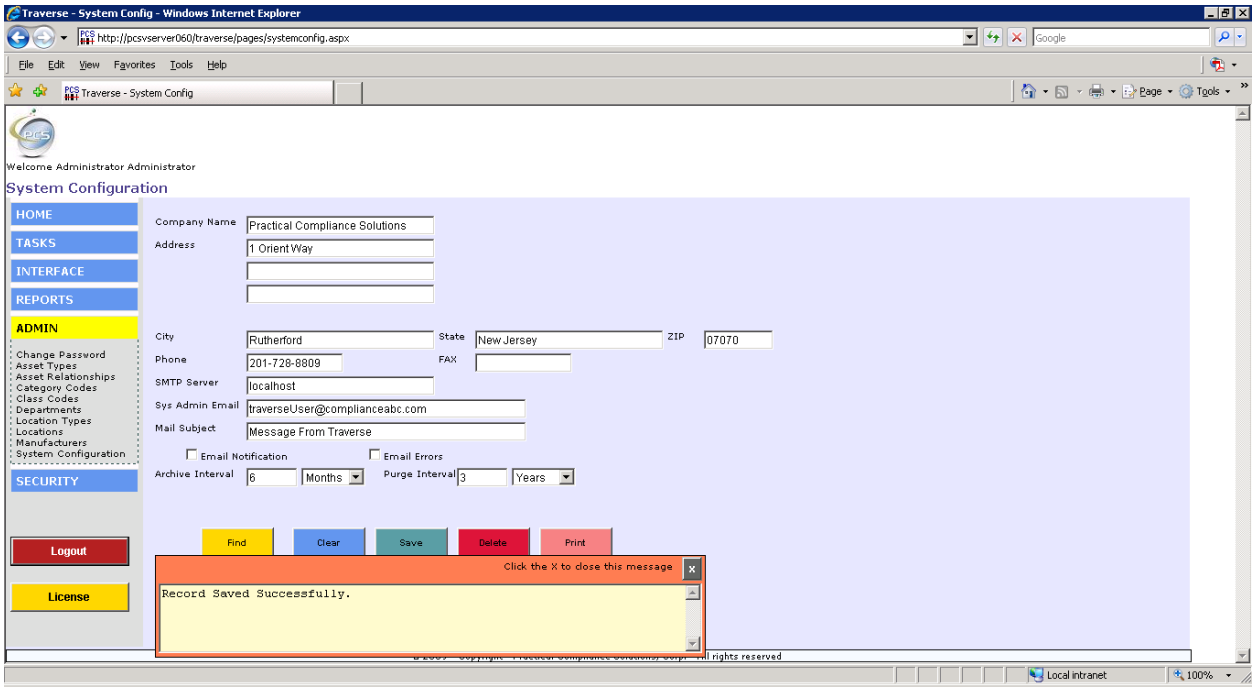
A password strength indicator will guide you



3. Licensing Traverse

Once you have changed the password, you must either provide the Traverse License or get a temporary license. To get a temporary Traverse License, the computer you are using must have access to the Internet.

Click the “ADMIN” menu and then click “System Configuration”.



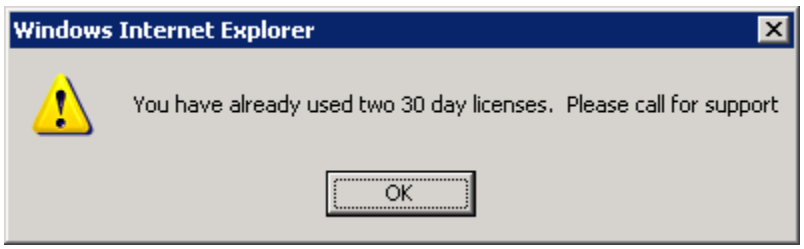
Enter your company data as shown and click the “Save” button.

You are now ready to click the “License” button.

You should receive a message like the following:

You now have a thirty day trial license to try Traverse free of change. During this time you may call or email support for answers to get you started.

You are entitled to two 30 day trial licenses. If you have used both of your trial licenses you will receive a message like the following.



After your second license you must call for a real license.

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4. Configuring Traverse for your business

Before you use Traverse there are certain configuration items that you must supply.

Under the “ADMIN” menu there are several categories that require attention before you can add assets.

It makes sense to create them in this order:

1) Category Codes
2) Class Codes
3) Status Codes
4) Departments
5) Site
6) Building
7) Location Types
8) Locations
9) Manufacturers
10) Asset Types
11) Asset Relationships

Under the security menu add yourself as a Traverse Administrator with security privileges.

4.1. The Administrative menu

All of the administrative screens and all of the security screens use the same buttons. The buttons are in the same order and the same color for each screen.

4.1.1.1. The Find Button

From a blank screen, the find button presents a list of records from which you may choose. To narrow your search you may type some data in any of the fields on the screen and press find. If an exact match is found, the record will be presented on the screen. If no match is found then a message indicating so will appear and the screen will remain blank or with the text you typed still in place. If more than one record is found then a list will appear.

4.1.1.2. The Clear Button

Clicking the clear button clears the screen.

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4.1.1.3. The Save Button

Clicking the save button saves the data on the screen to the database. The saved record remains on the screen after saving.

4.1.1.4. The Delete Button

Clicking the delete button deletes the current record. The deleted record remains on the screen so it can be resaved if desired.

4.1.1.5. The Print Button

The print button “if implemented” either prints the current record on the screen, or prints a simple report in the context of the screen.

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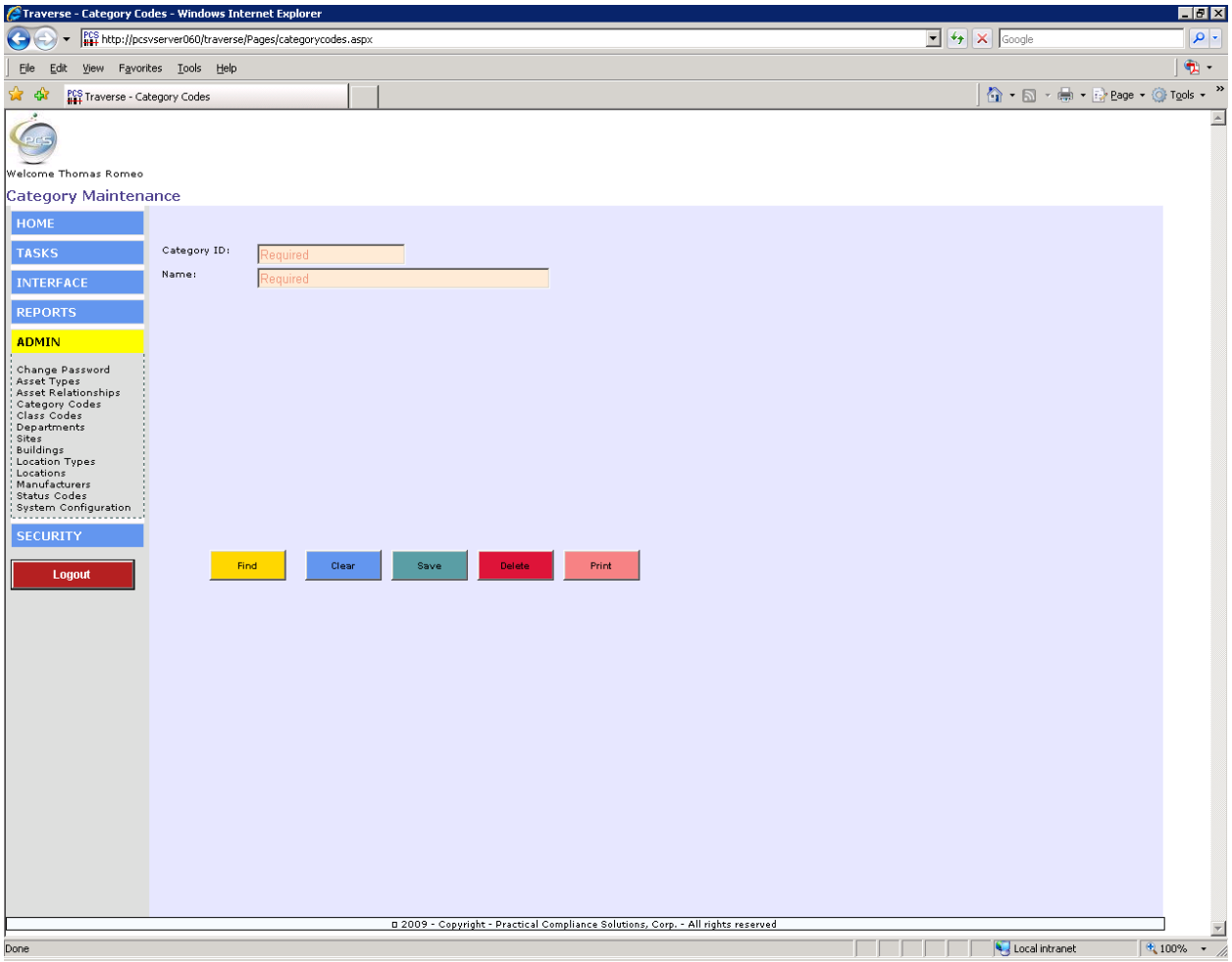
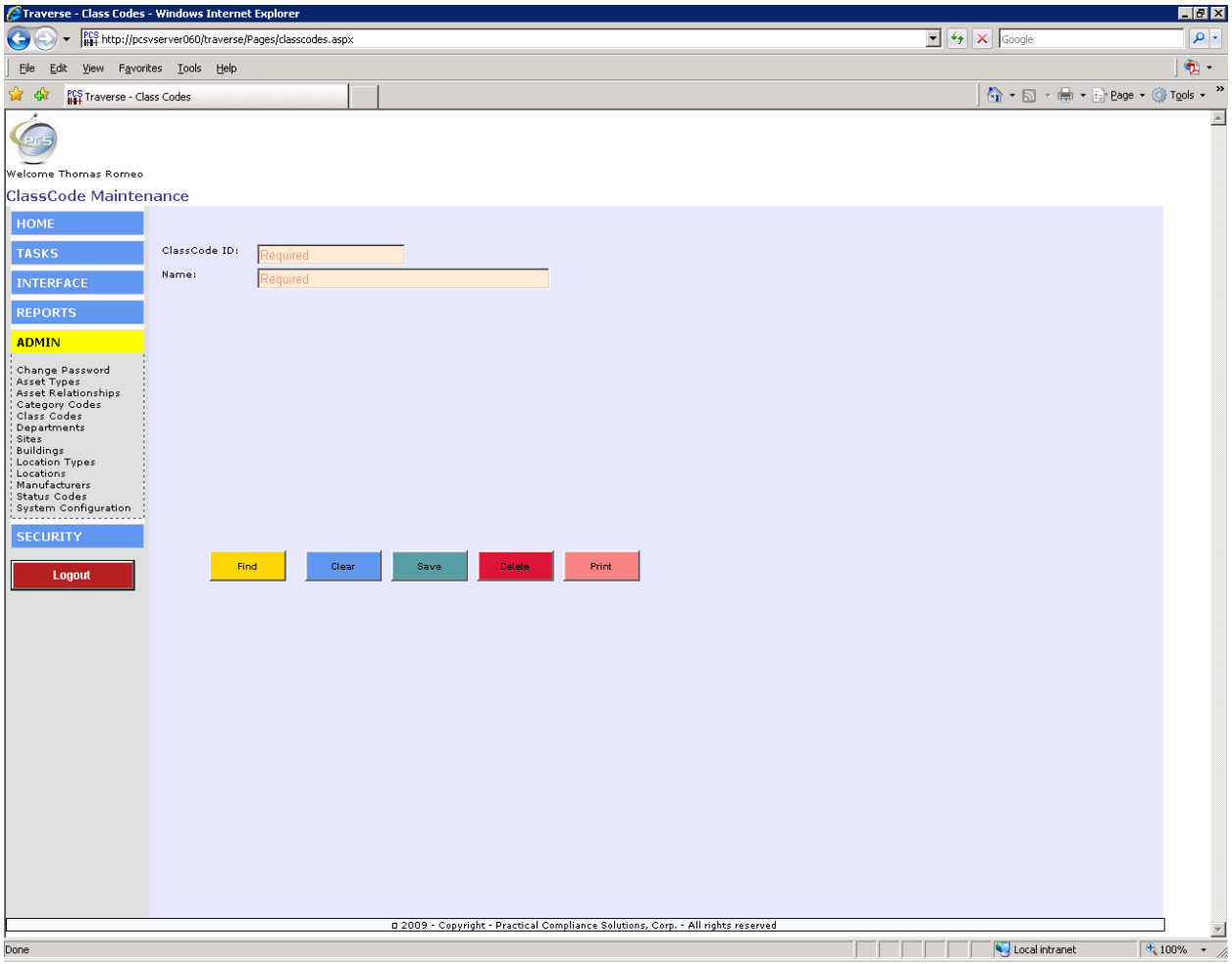
4.1.2. Adding Category Codes

Category Codes are used as a way to group your assets together in a way that has meaning for your business. For example if you are tracking IT equipment you could create category codes like, servers, laptops, workstations. All are computers but this allows you to separate your computers by type.



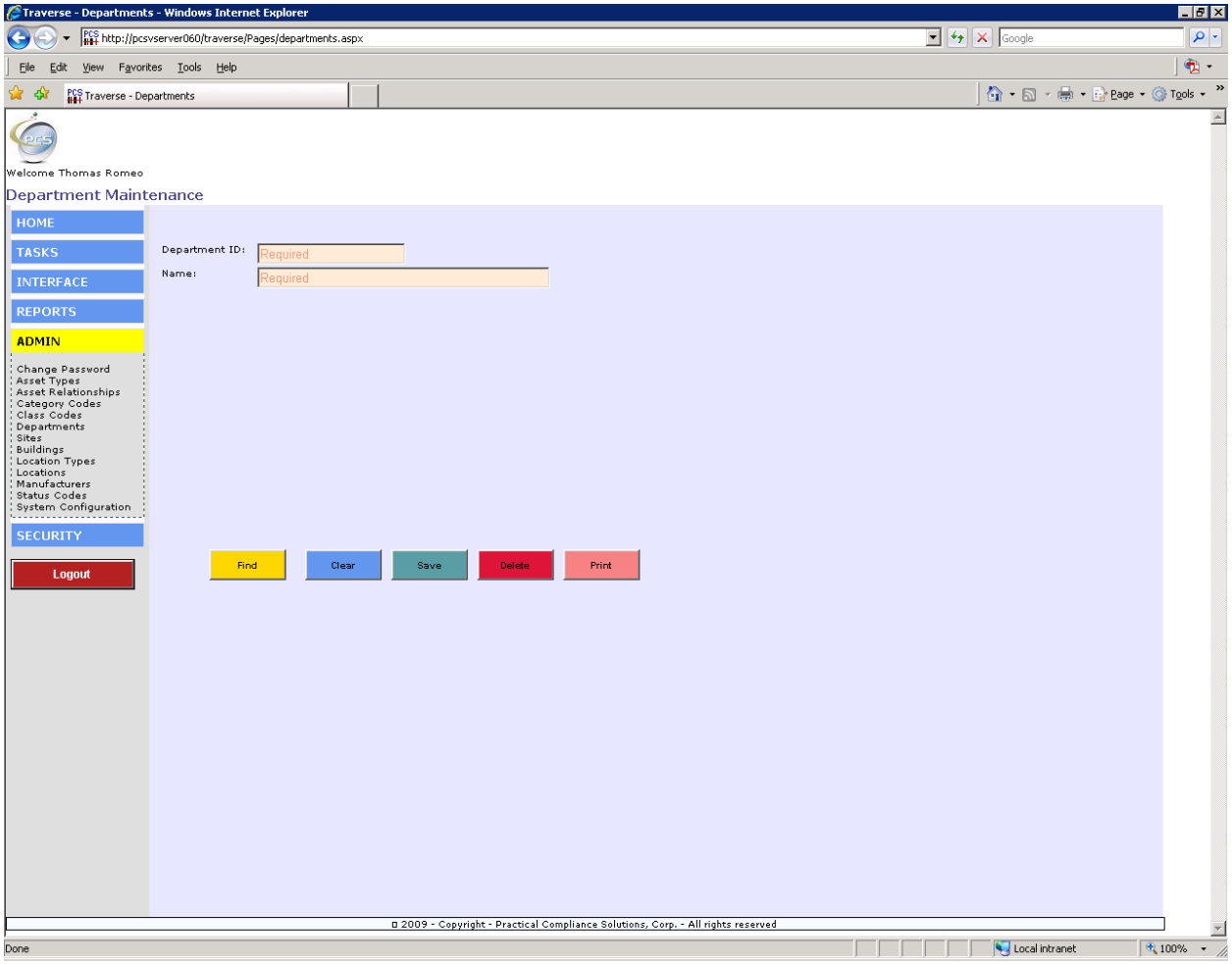
4.1.3. Adding Class Codes

Class codes are much like category codes and can be used completely separately or as sub-categories. In the above example there is a category called “servers” there could be class codes describing the server such as “blade” or “tower”, or class codes could be setup to mean something completely different such as “refurbished” or “new”, again use class codes as they make sense for your business.



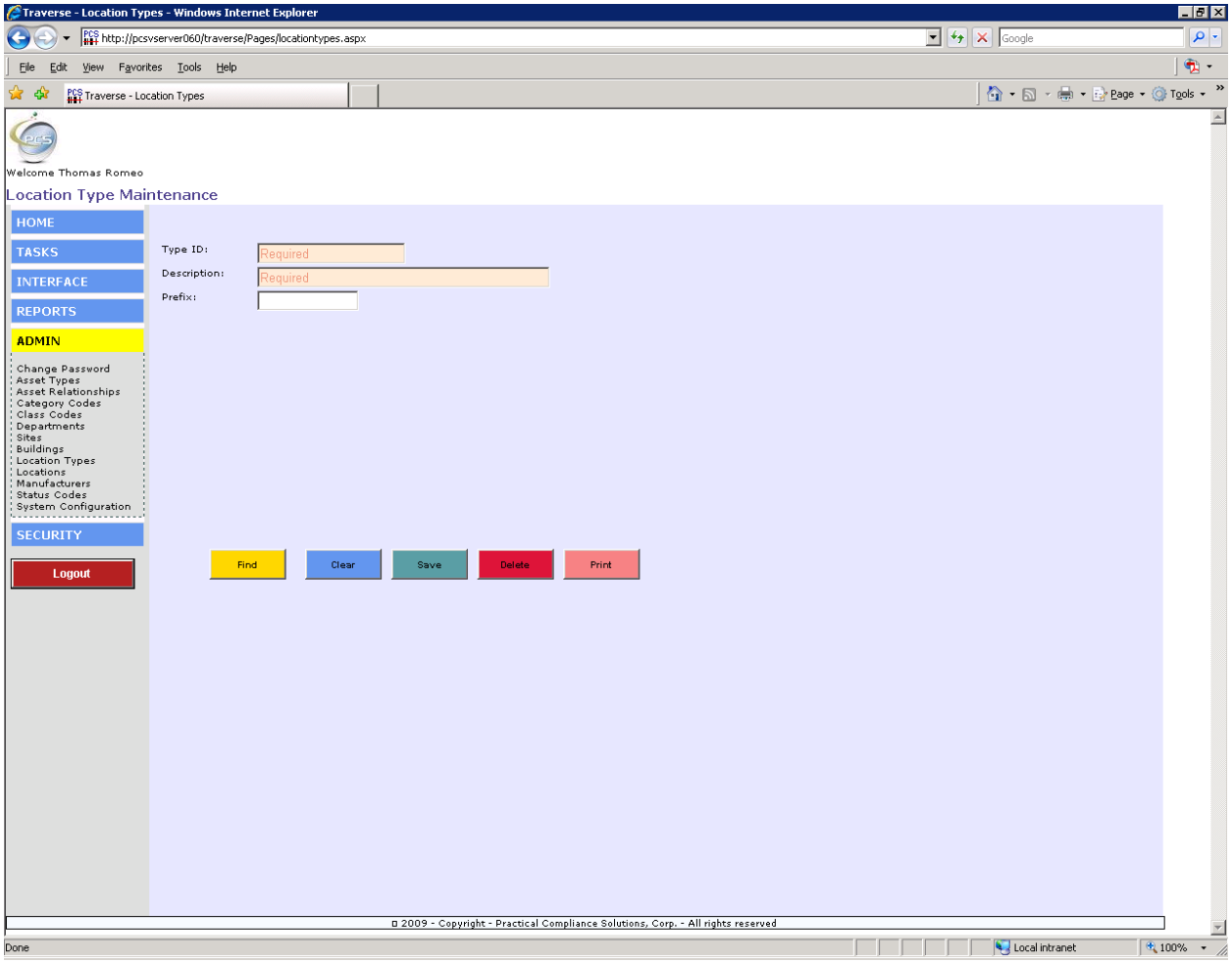
4.1.4. Adding Departments

Typically an asset will belong to a particular department.



4.1.5. Adding Location Types

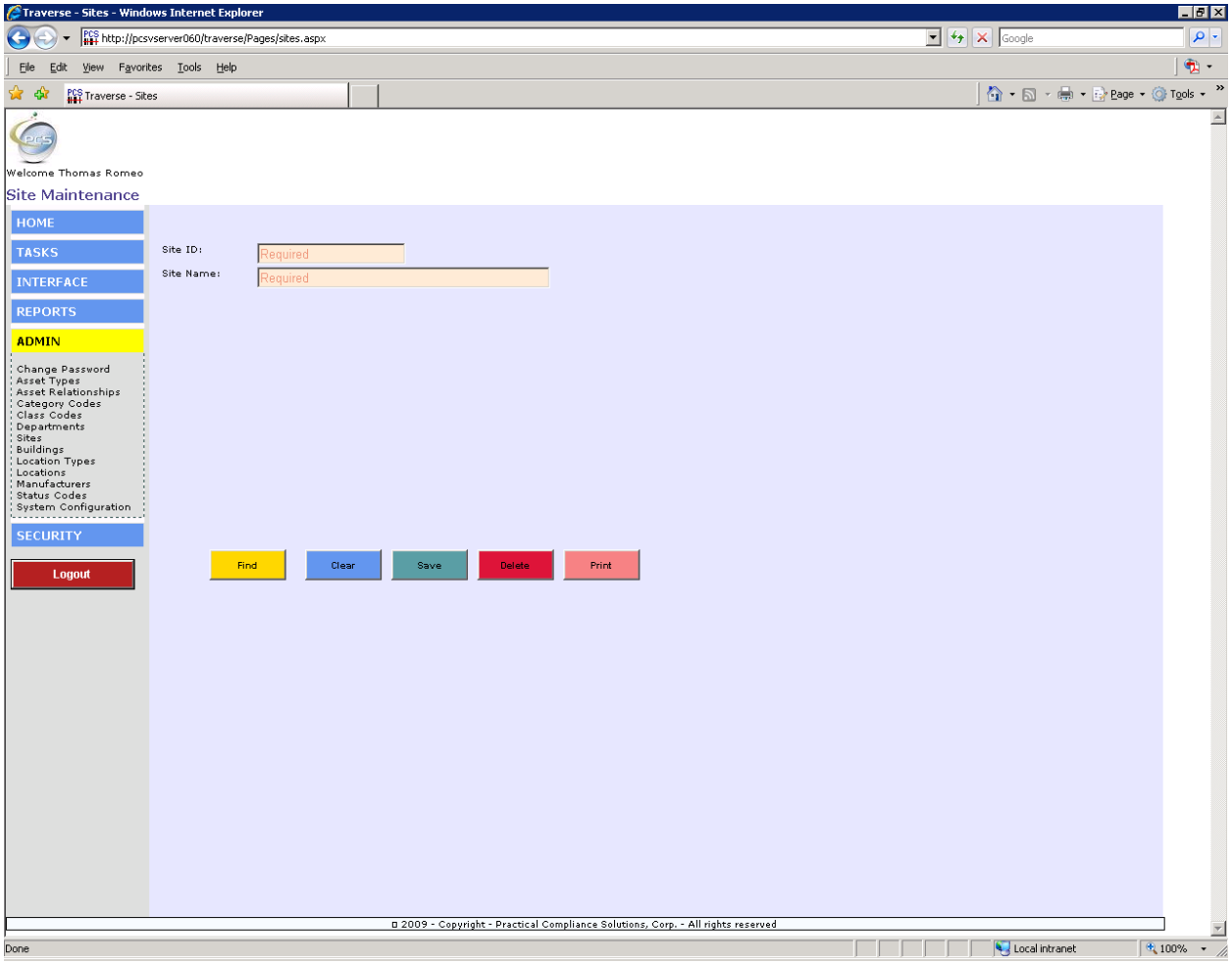
Before adding locations, you must enter at least one location type. Location types are used to categorize locations. A location Type can be as simple and broad as “warehouse” or as granular as “aisle” or “bin”, “yard”, “Door”, “File Room”, “Office”, Box”, “Mail Cart”.



4.1.6. Adding Sites

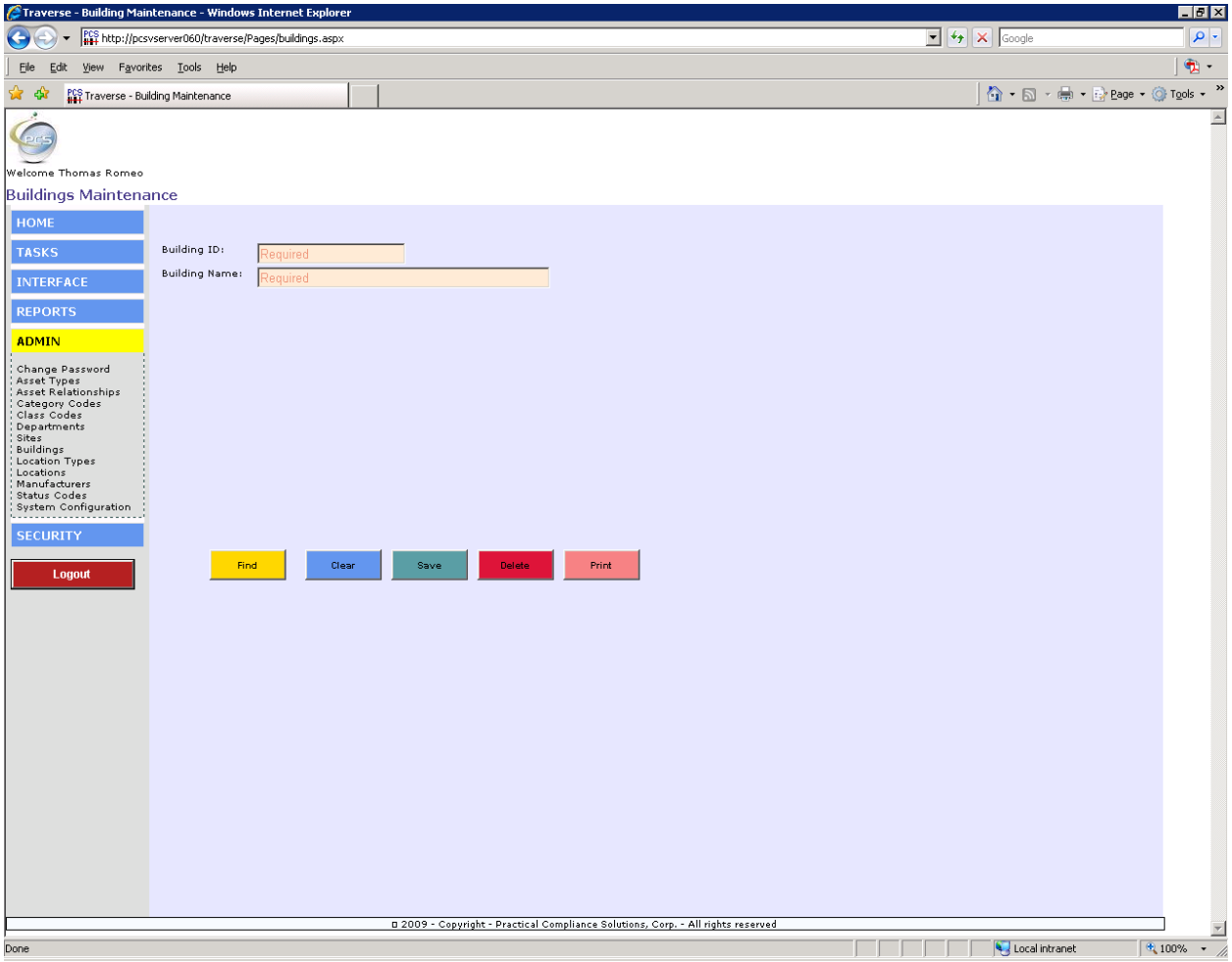
Traverse offers the ability to track assets stored at different sites. For example, you may have a warehouse in Pennsylvania and another in Iowa. Each site might be like a campus with more than one building at each.

If this is not the case then a single default site is required to add locations. Just create a site called "HOME" for example or CHQ – Corporate Headquarters.



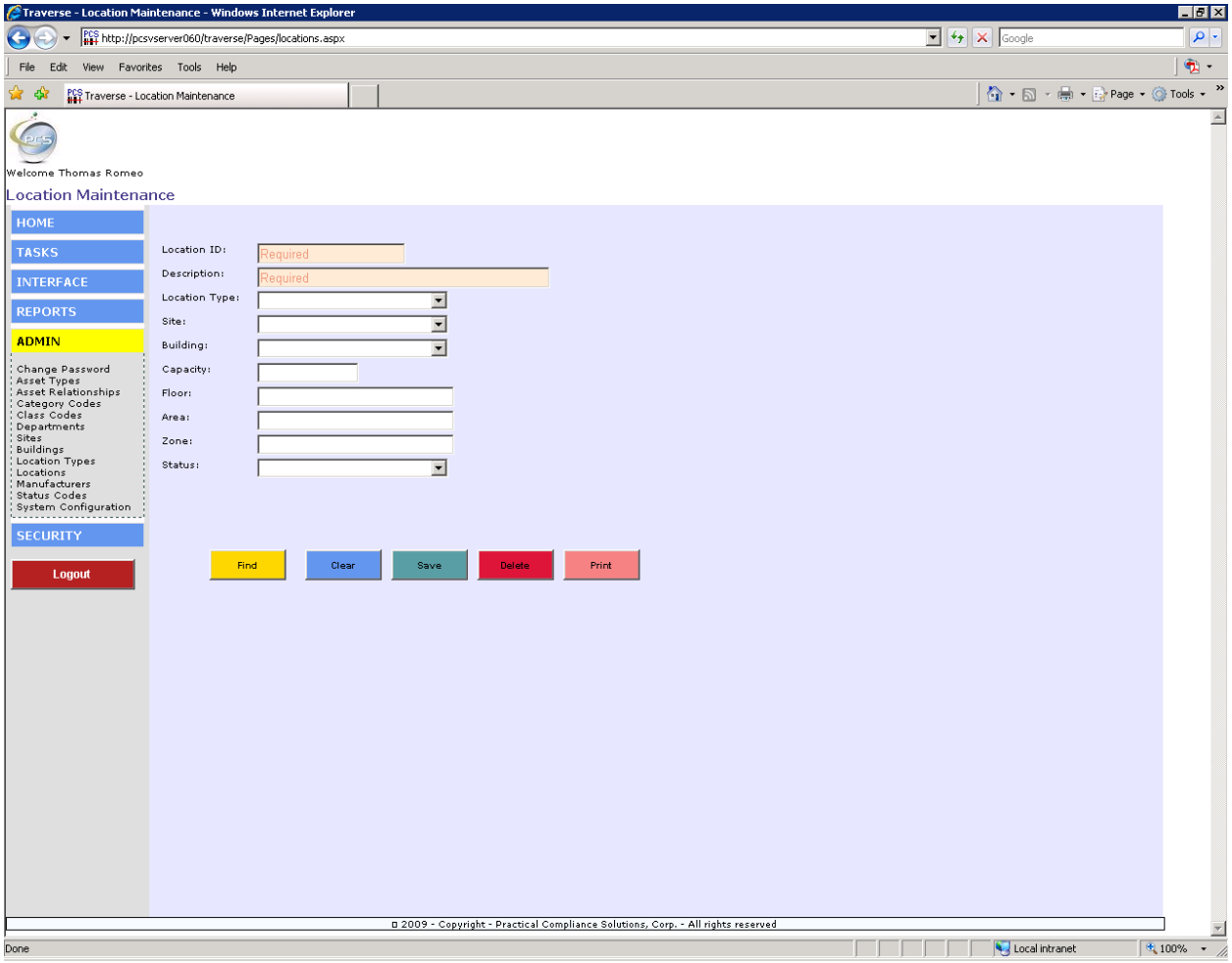
4.1.7. Adding Buildings

At least one building is required to add locations. If you plan to track assets that are only in one building then just create one building.



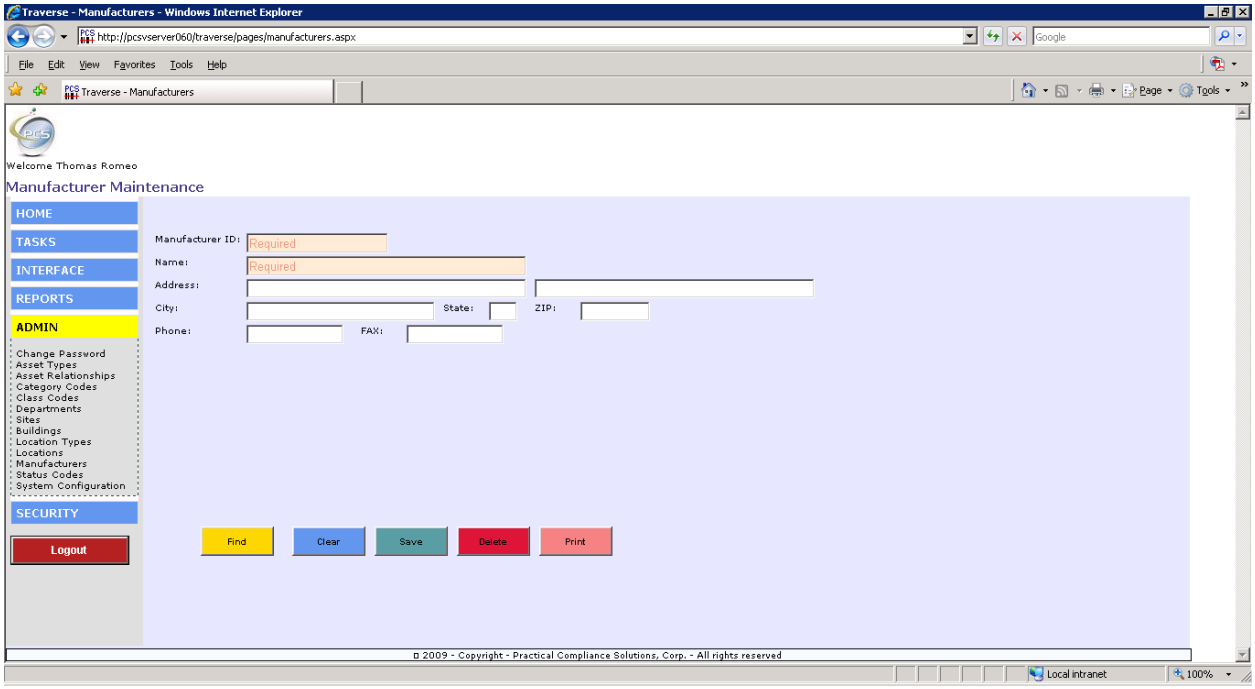
4.1.8. Adding Locations

At least one location must exist before any assets can be added.



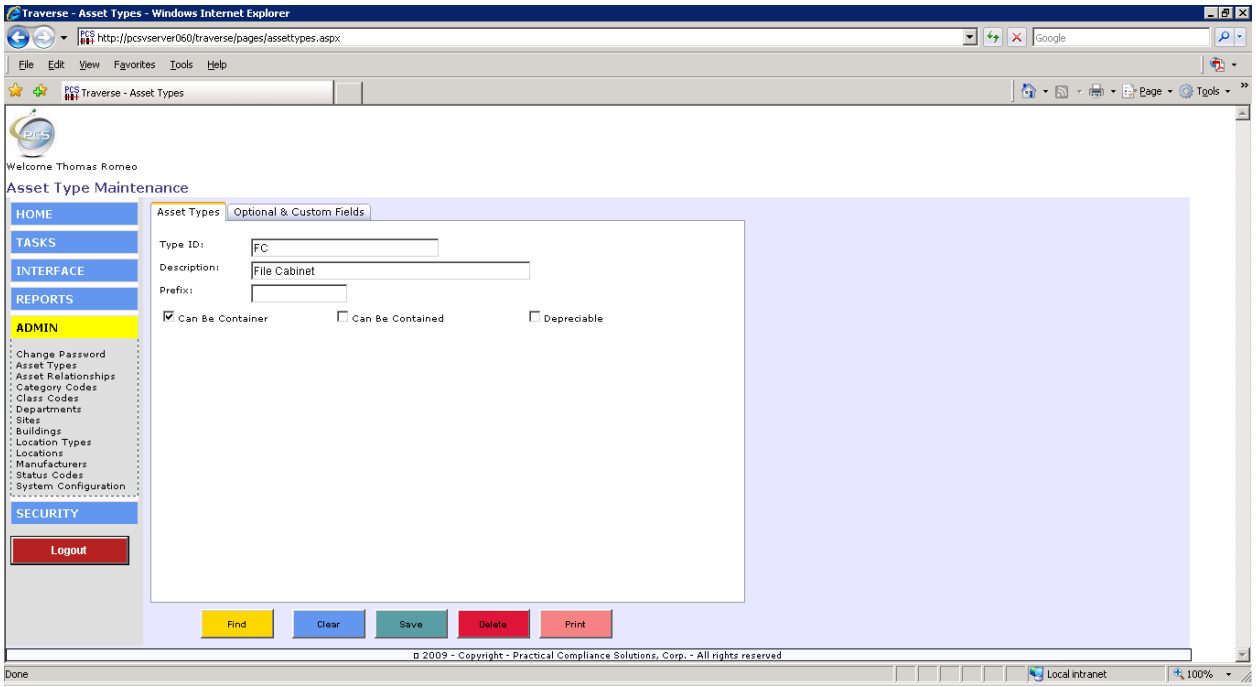
4.1.9. Adding Manufacturers

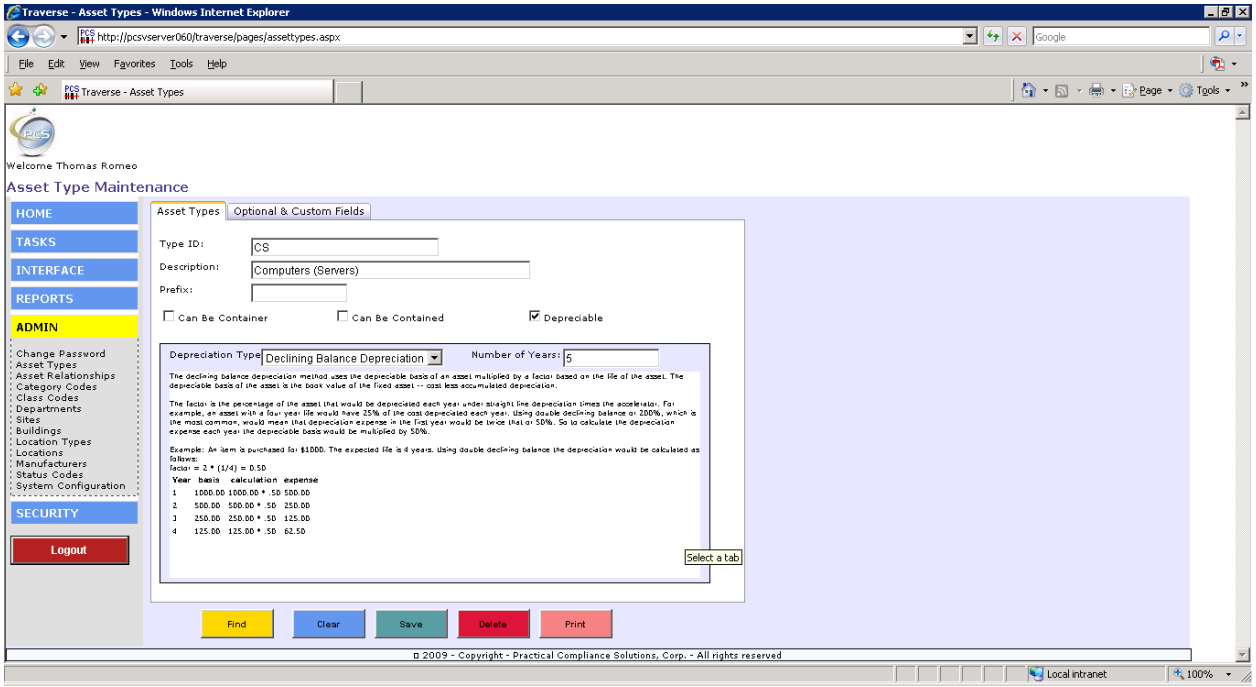
Add manufacturers (make and model) if you plan to track assets with serial numbers.



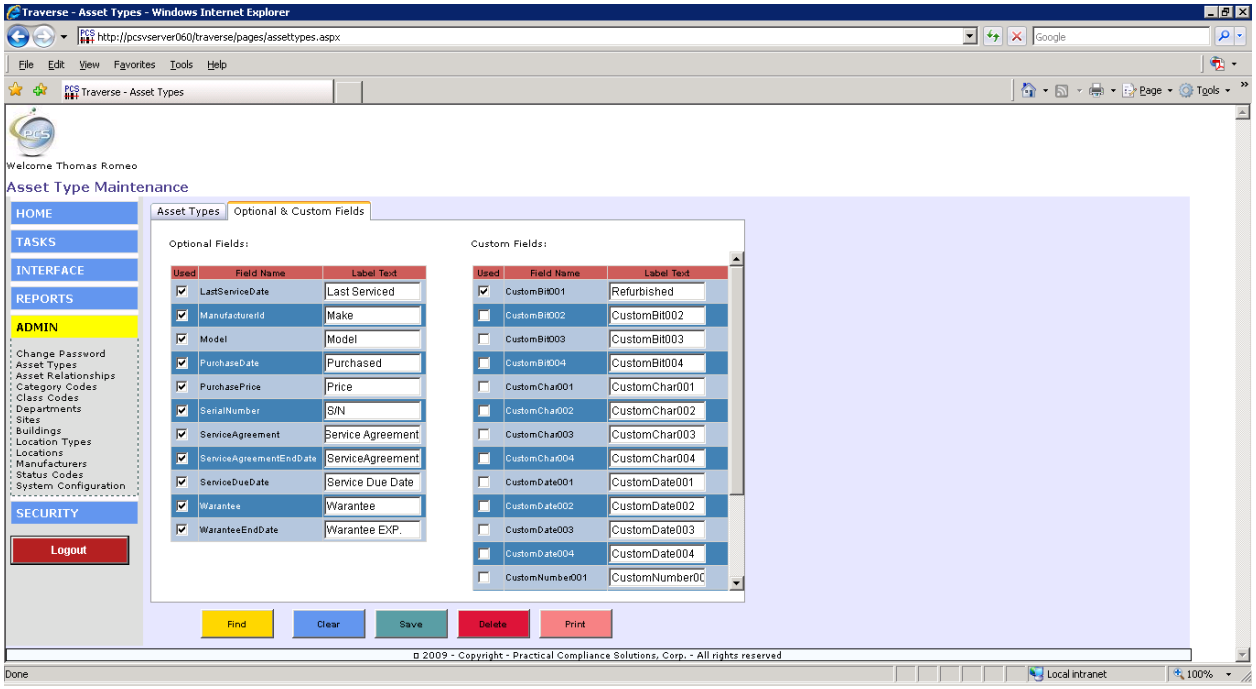
4.1.10. Adding Asset Types

The power of Traverse begins with asset types. Assets of a given type can be containers that contain other assets, can be contained within other assets, depreciable, and can unlock additional optional fields for custom definitions.



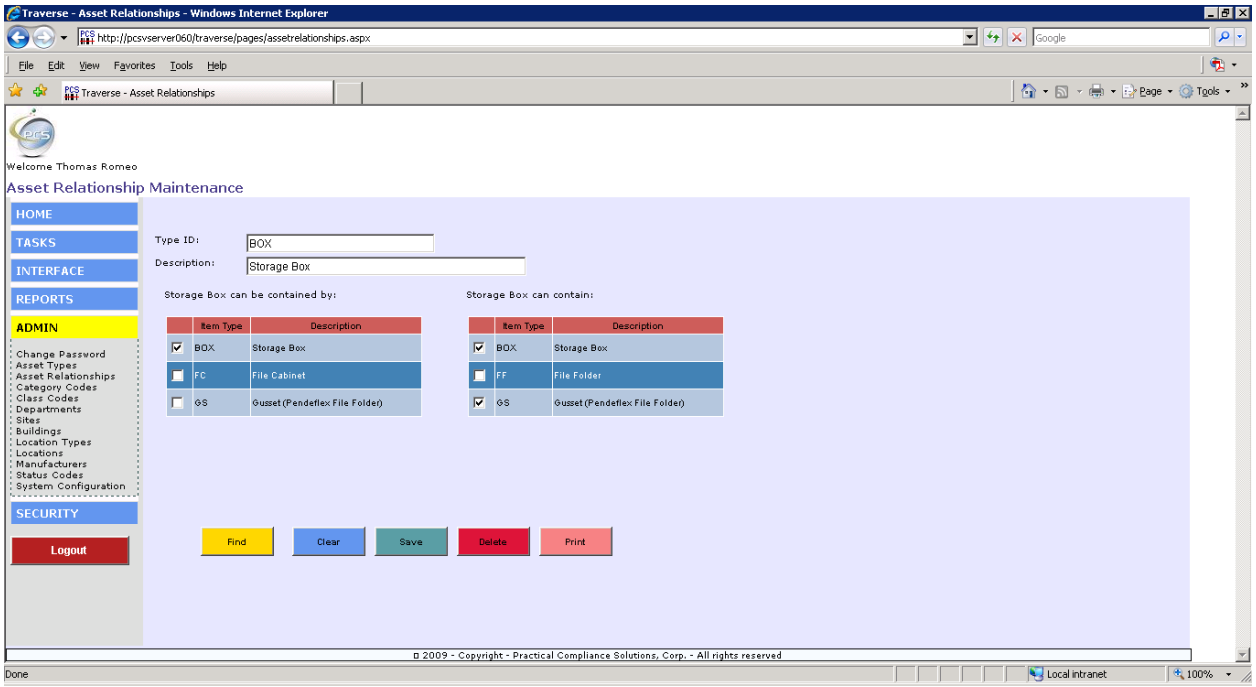


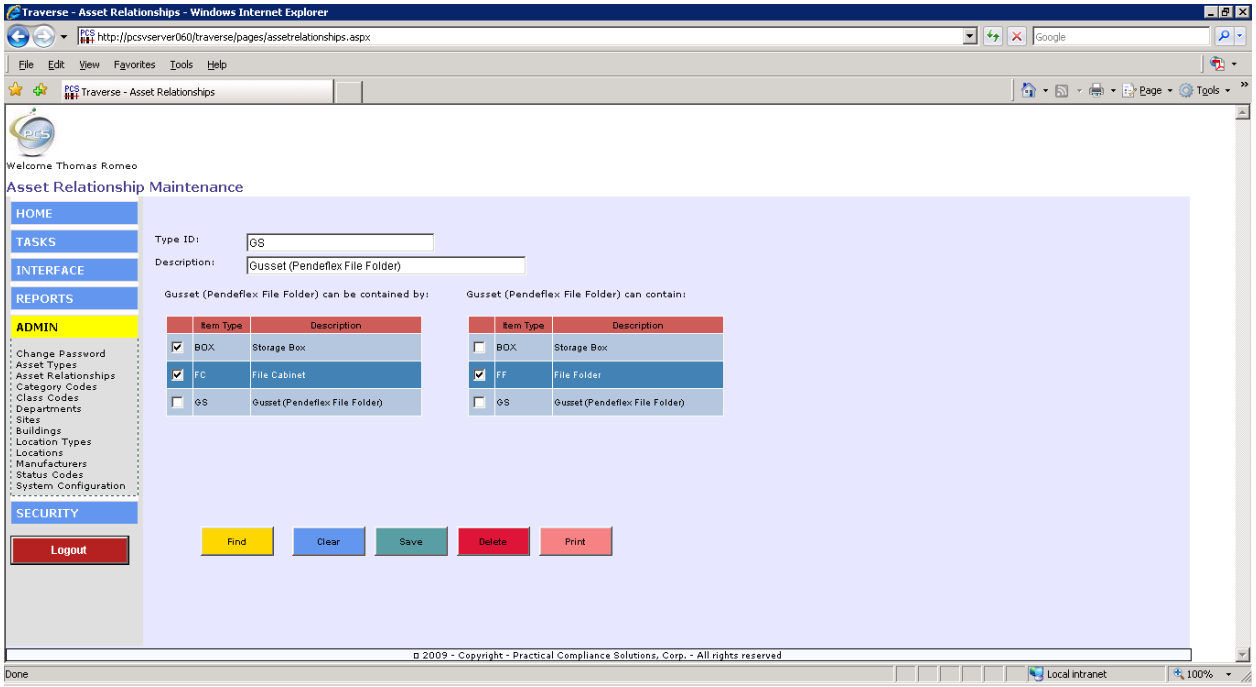
Defining assets types allows you to enable optional data elements and custom data elements.



4.1.11. Asset Relationships

Adding asset relationships defines the rules as to which asset types can be contained within other asset types. In the case below A storage box can contain smaller storage boxes and gussets. Gussets on the other hand can be contained by boxes and file cabinets and can contain file folders.





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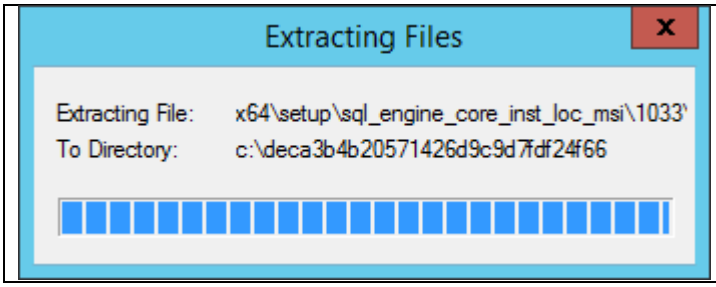
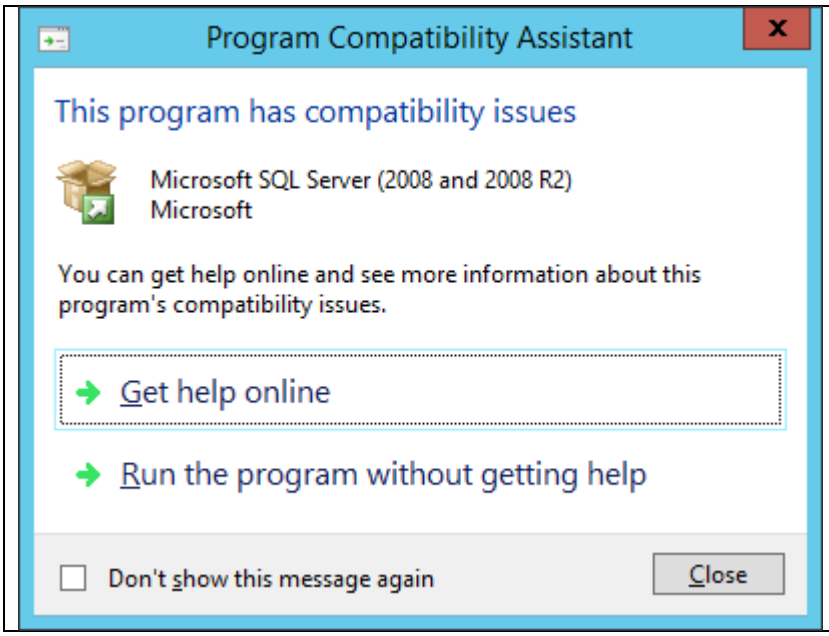
5. Installing Traverse with SQL Express

SQL Express is Microsoft's free version of SQL Server.

	The SQL Express Unpack screen will appear

	On windows 2012 this message may appear. Just click the "Run Program without getting help" button. Microsoft SQL Server 2008 Express does work properly on Windows 2012 and Windows 2012 R2

Follow the prompts for installing SQL Express

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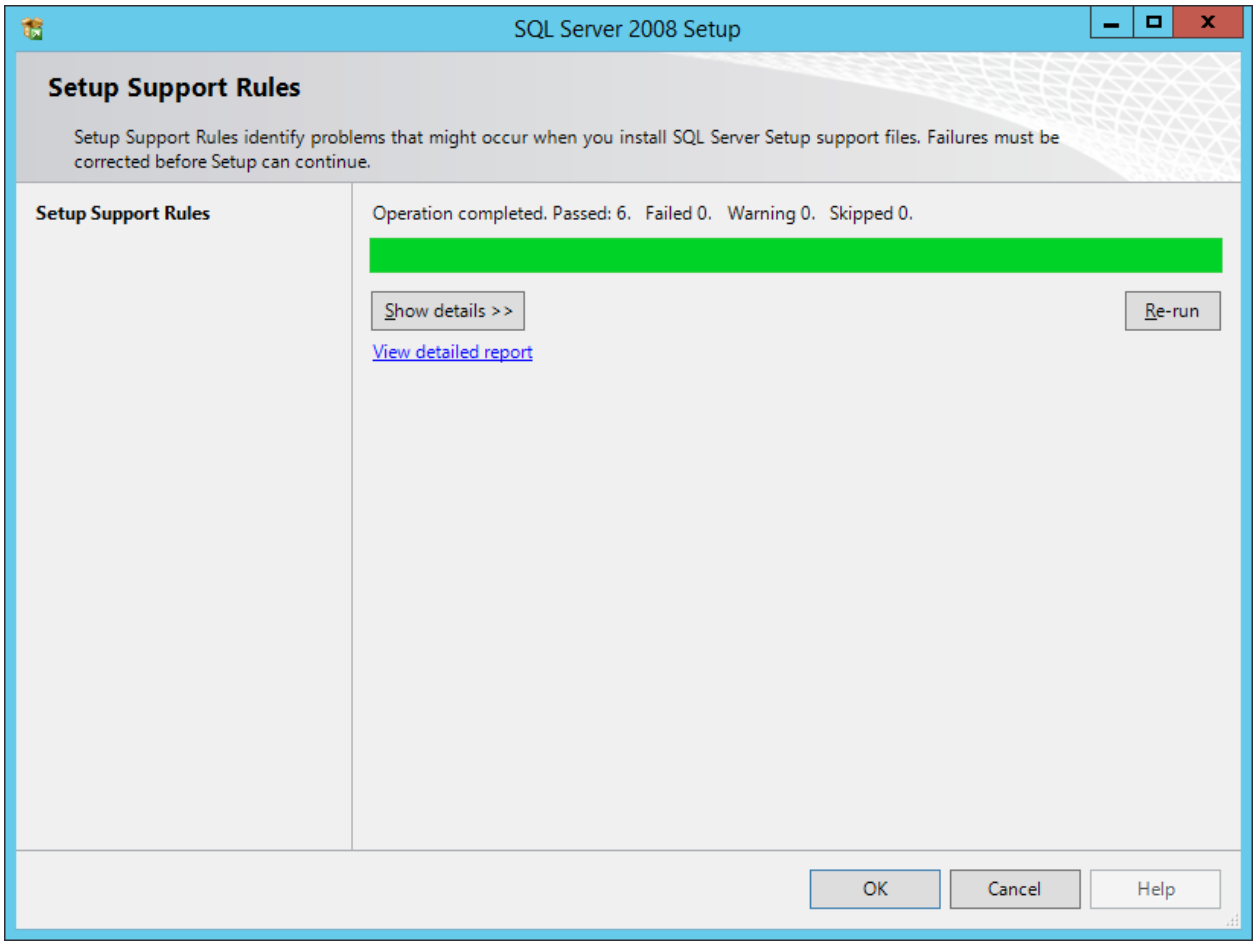

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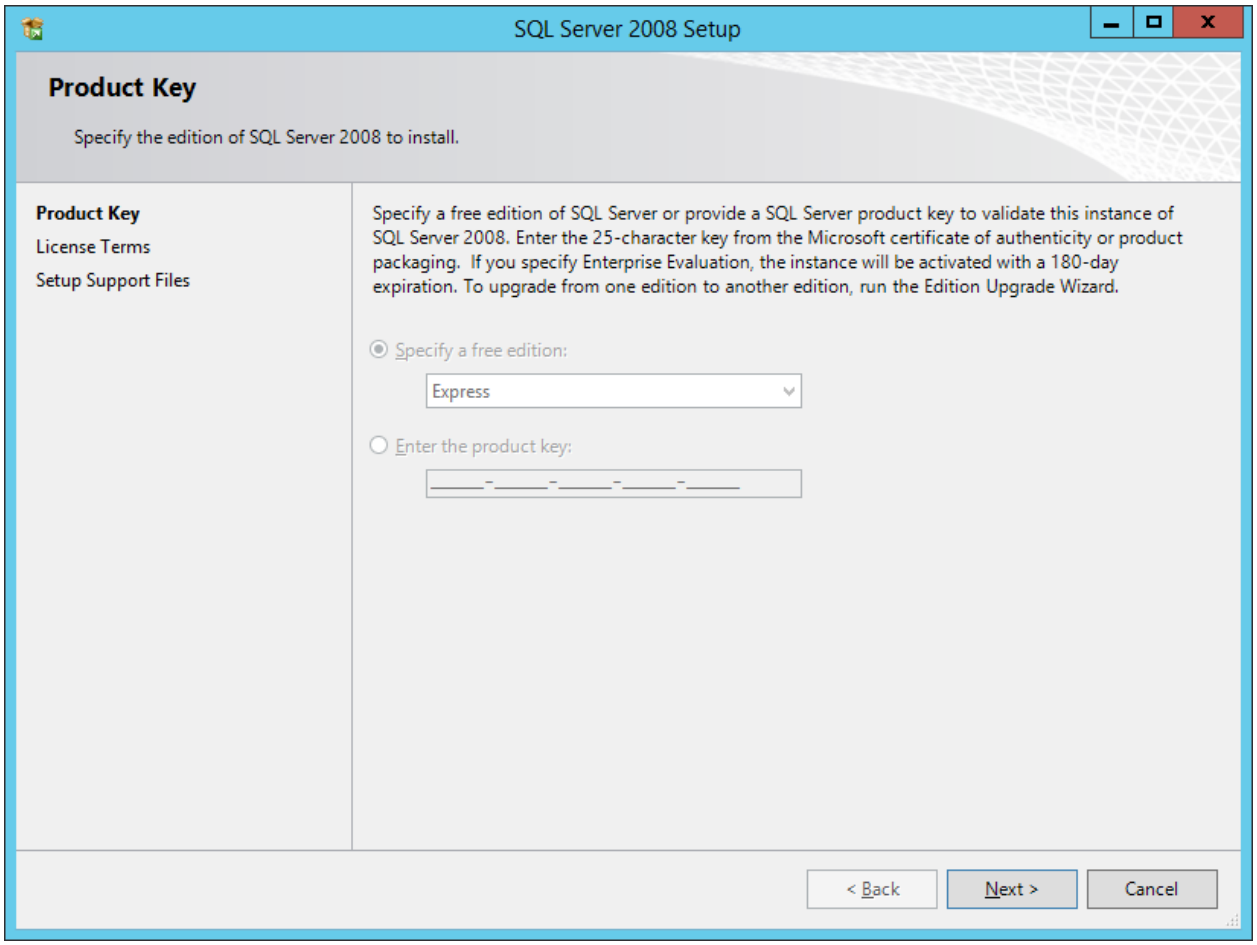

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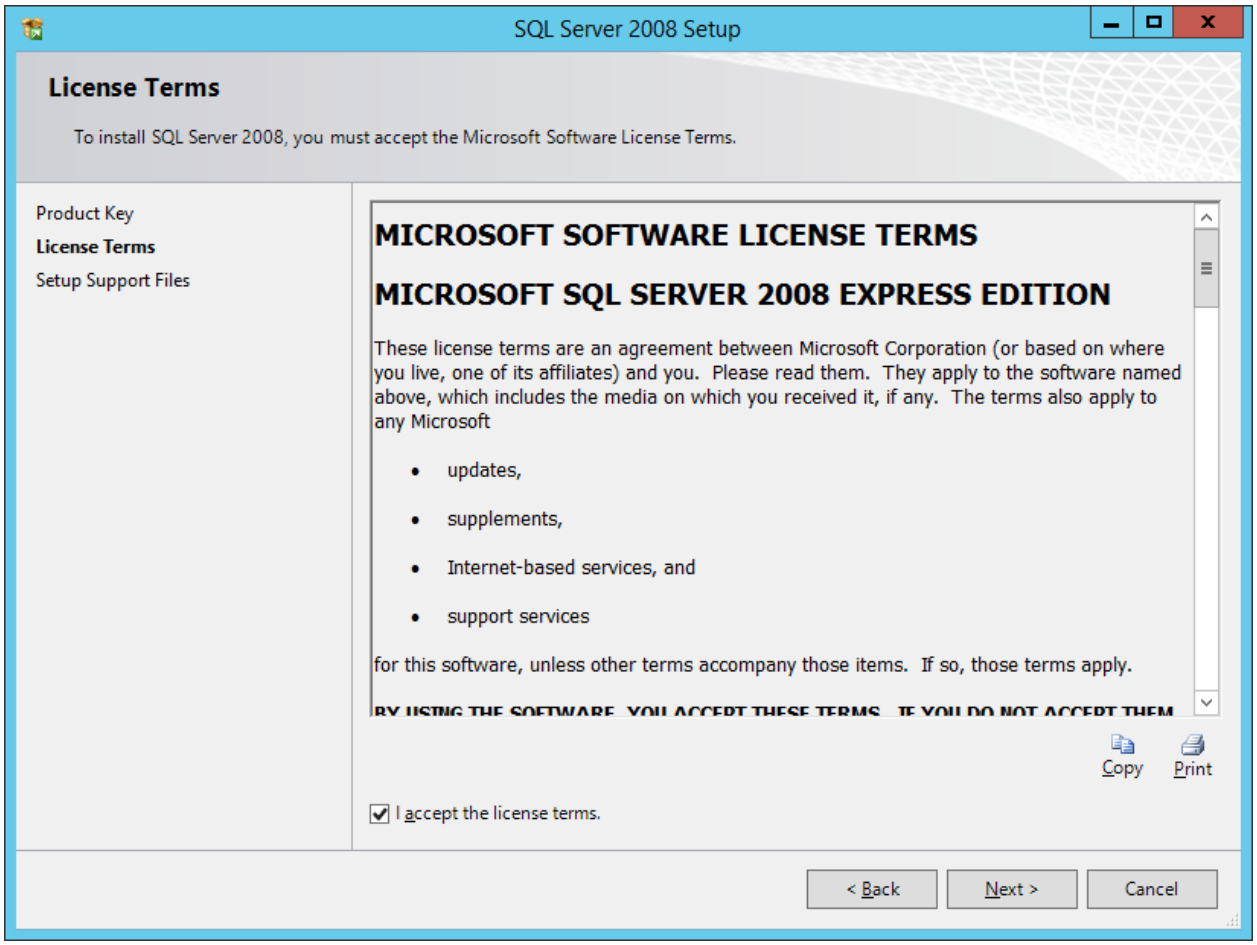

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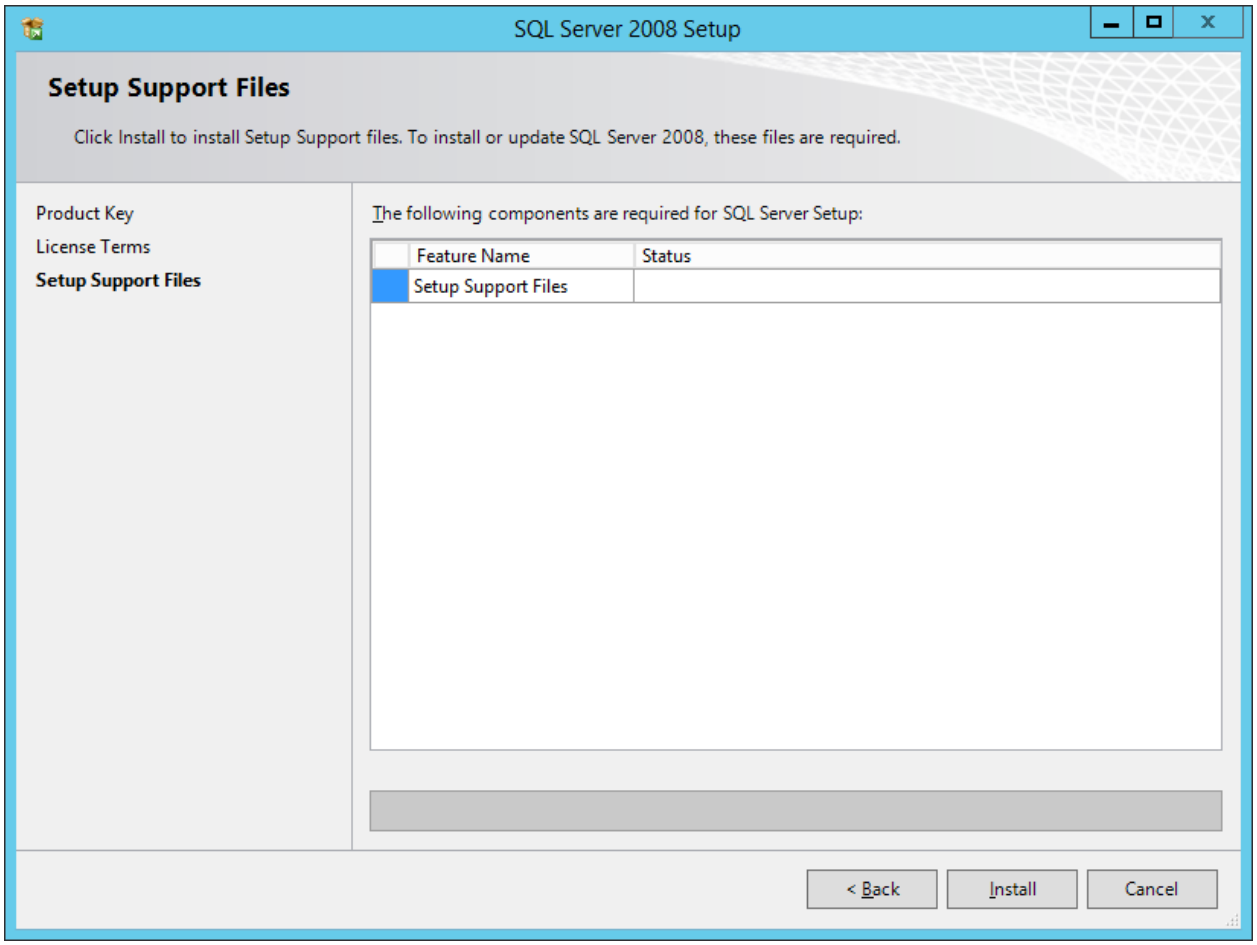

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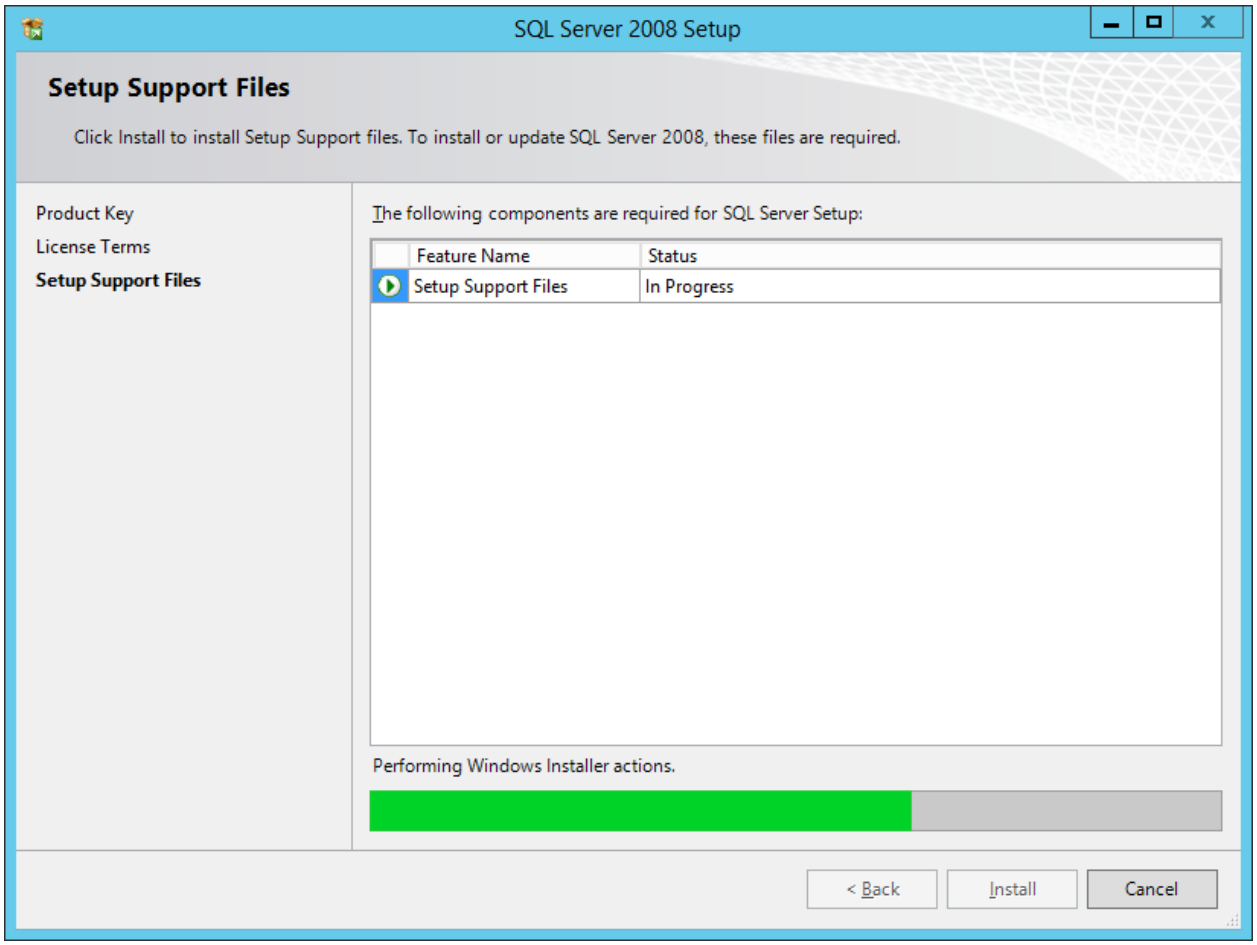

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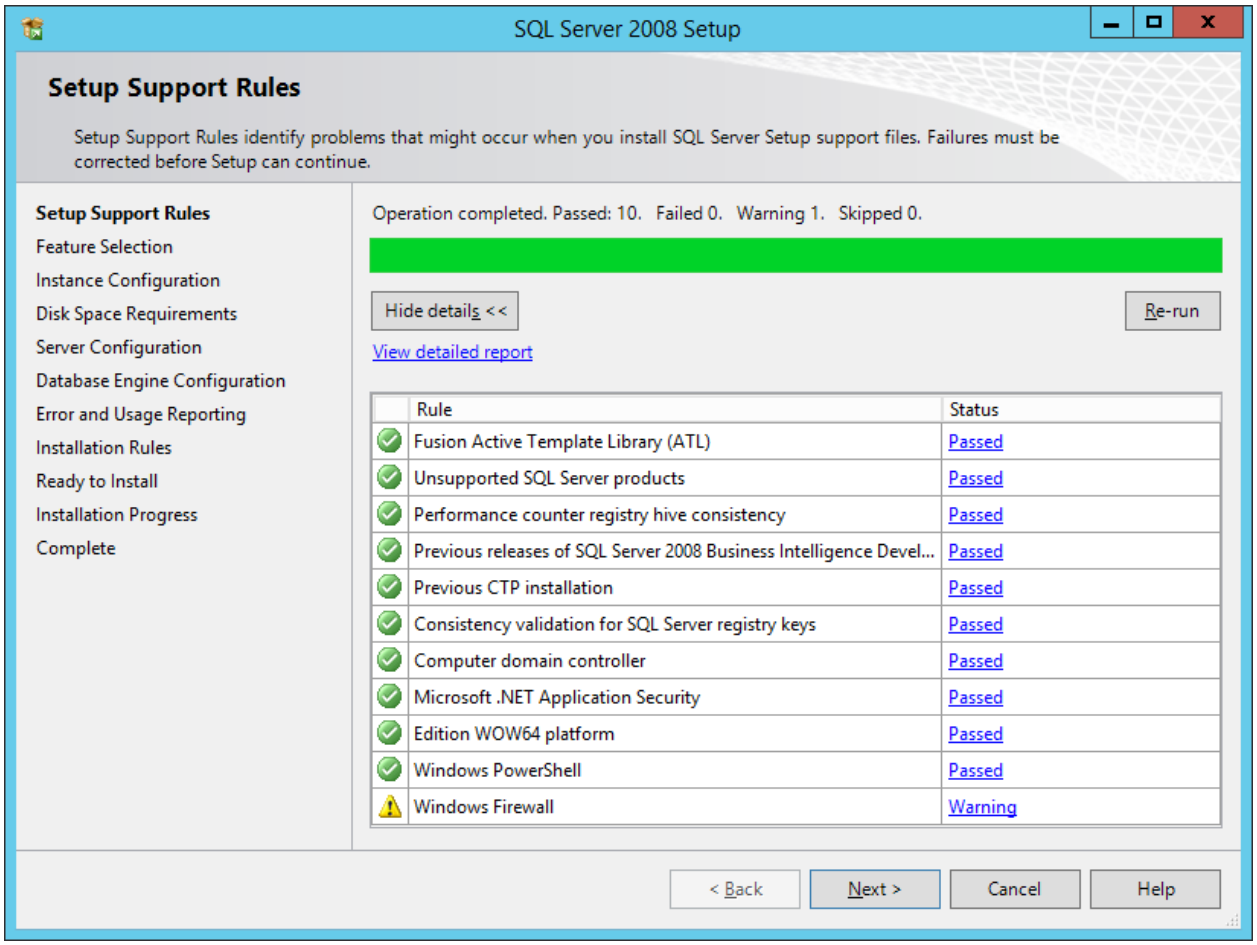

The Traverse installer will adjust the Windows Firewall allowing TCP Port 1433 and UDP 1434 for pass-through.

Traverse does not use SQL Replication. Please select the checkboxes as pictured below

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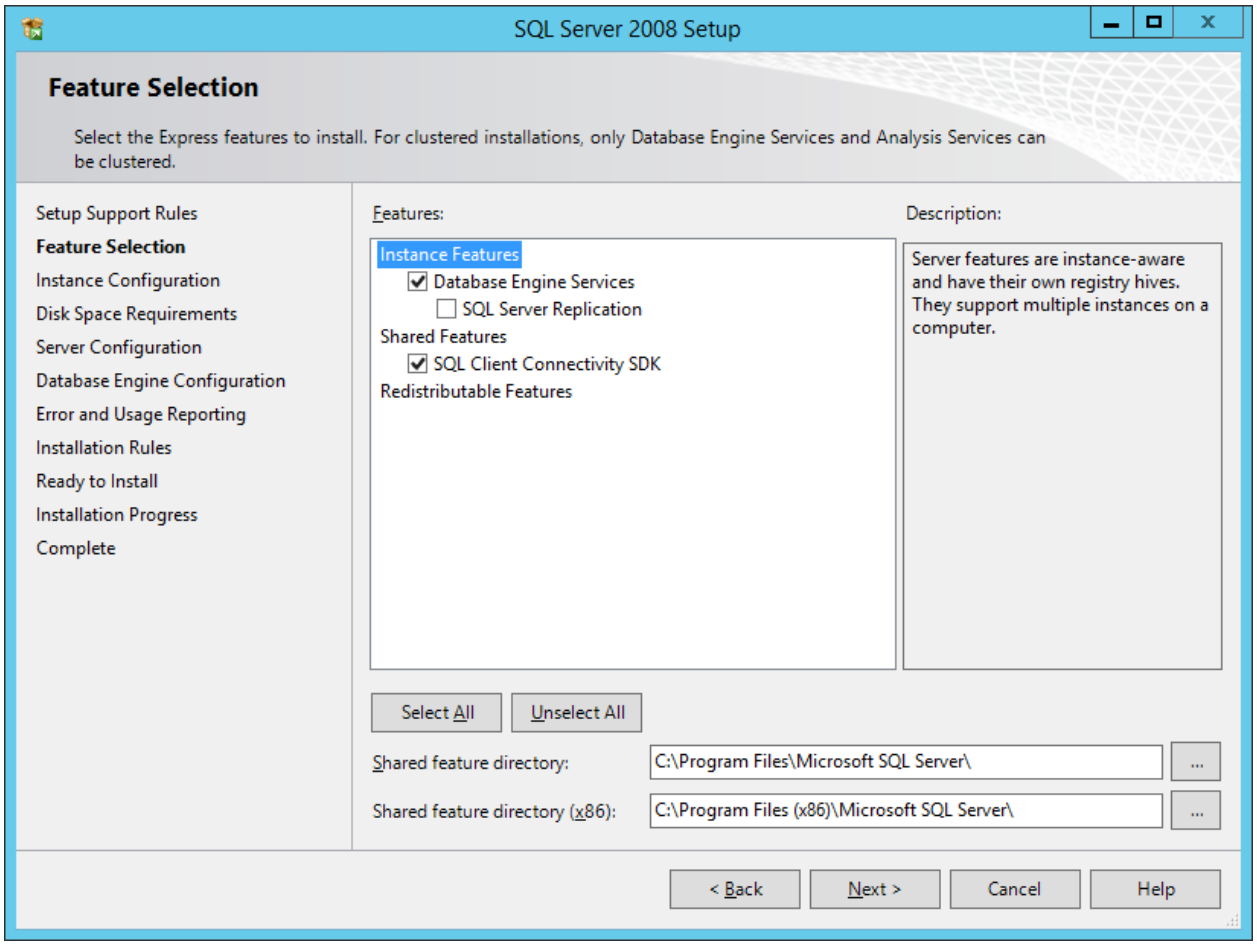

Leave the Named instance as it is pictured below.

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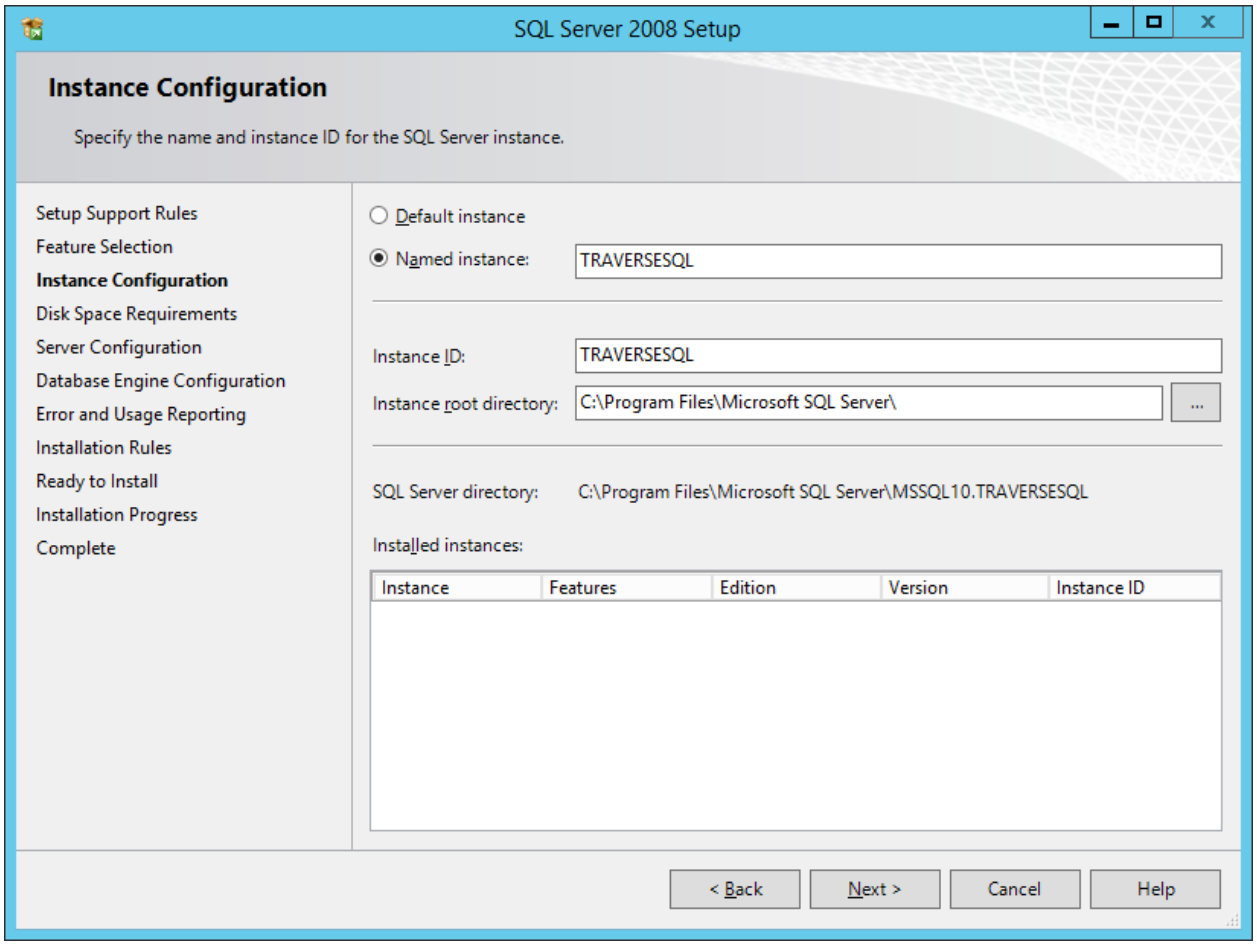

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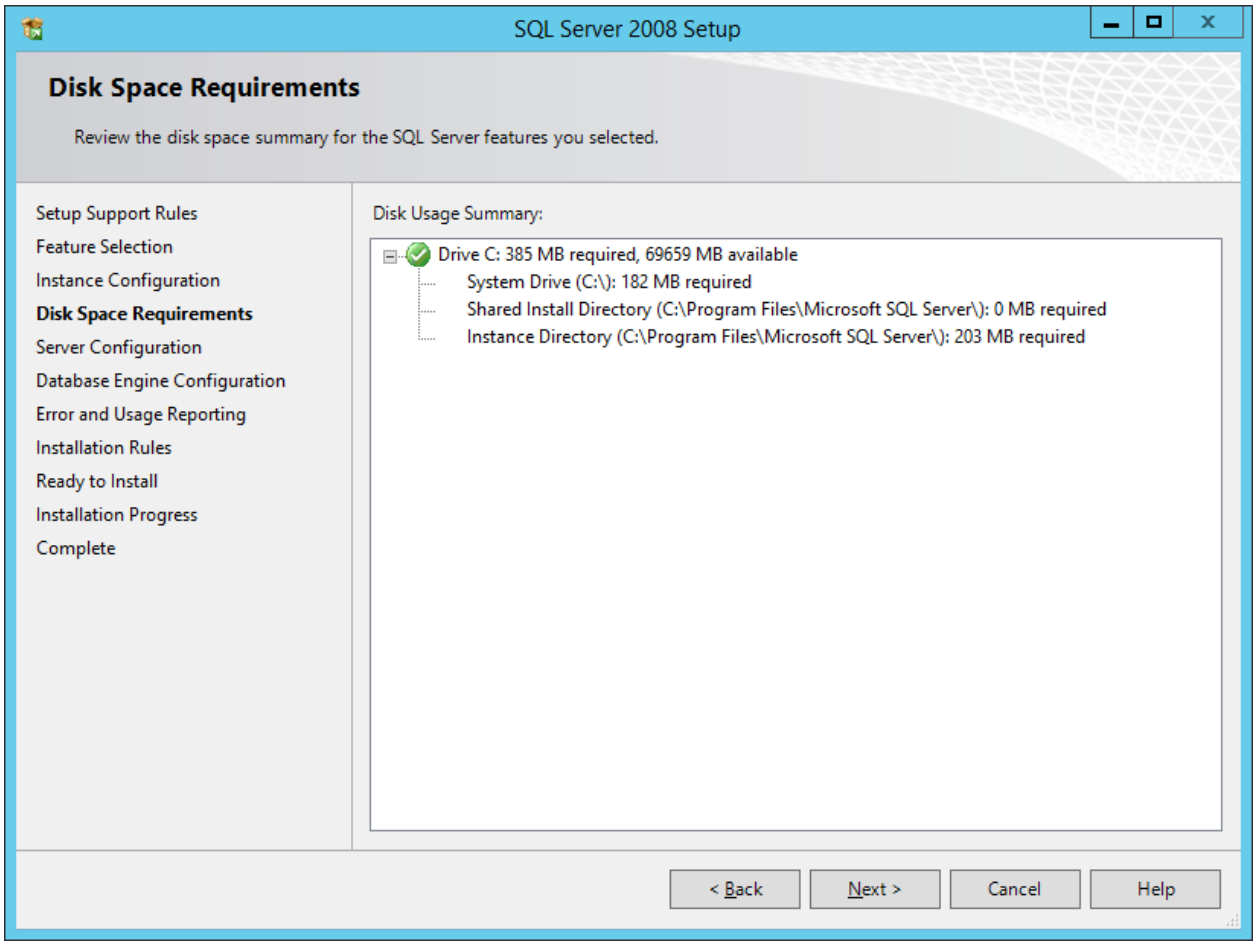

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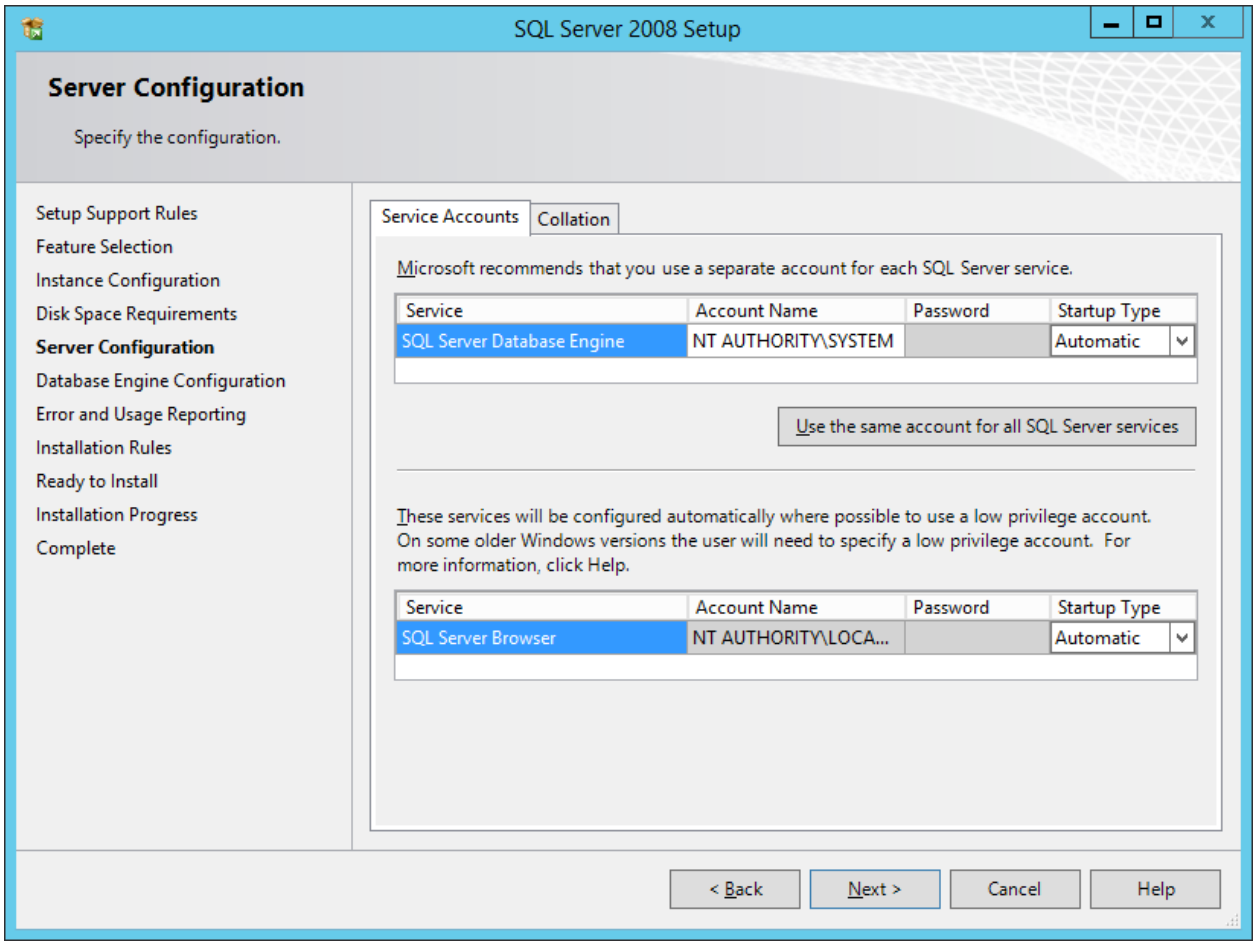

Traverse depends on a “Case Insensitive” database, which means that capital “A” and Lower case “a” are the same character. The Collation below is case insensitive, please do not change it.

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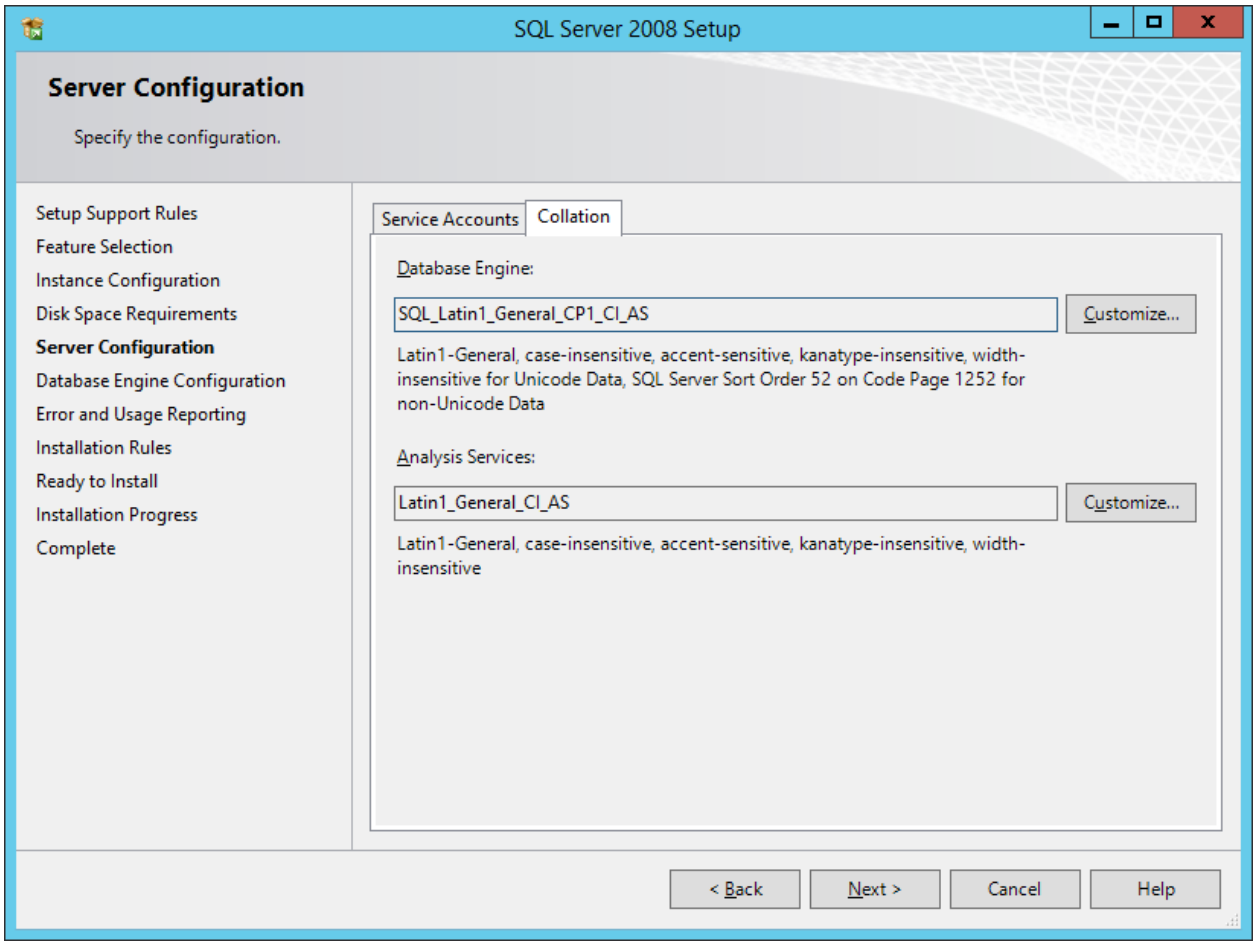

Click the “Add Current User button”

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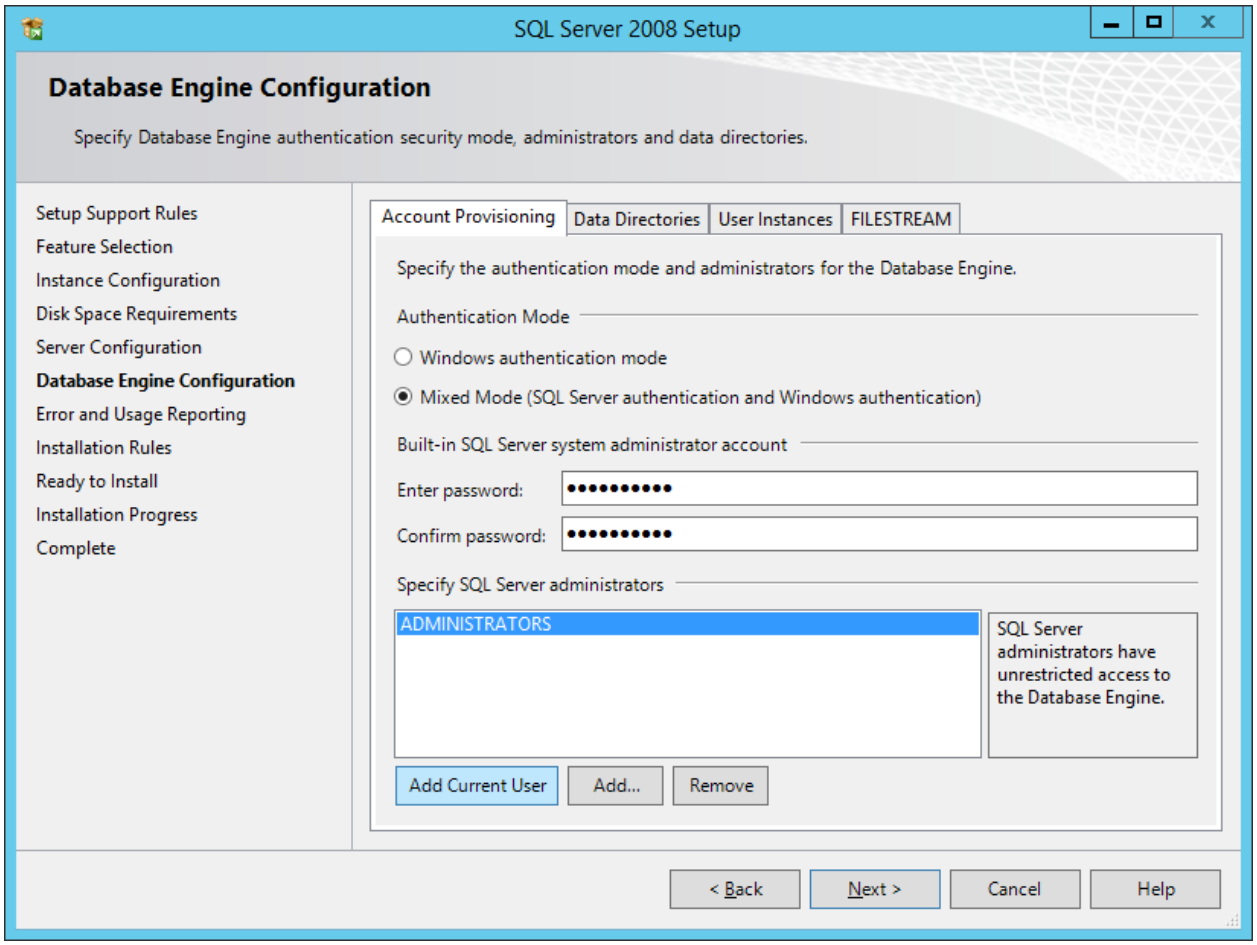

It is best to leave these directories as they are unless you have access to high capacity, high through put storage.

Click the “Add Current User button”

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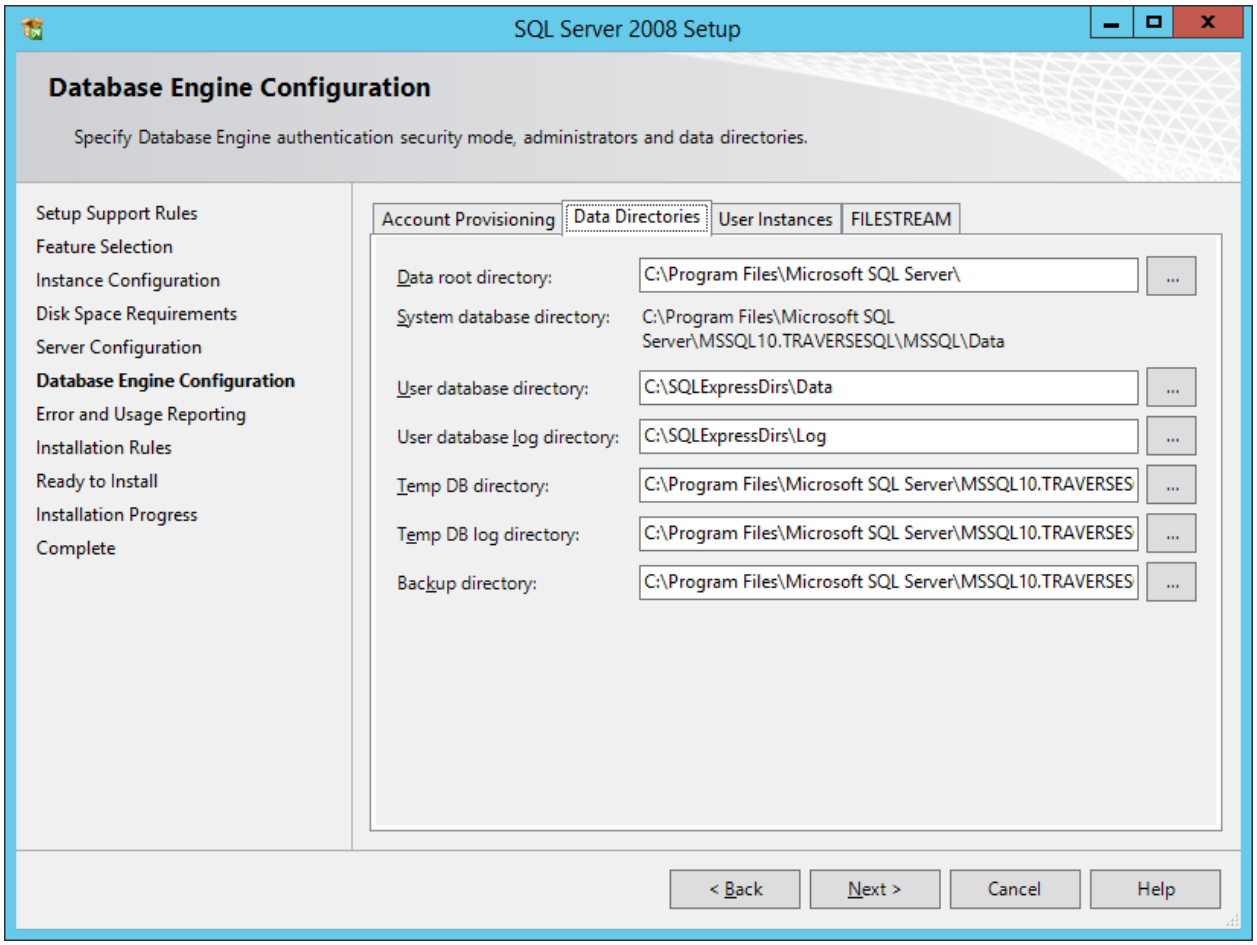

It is also best to leave this value as is

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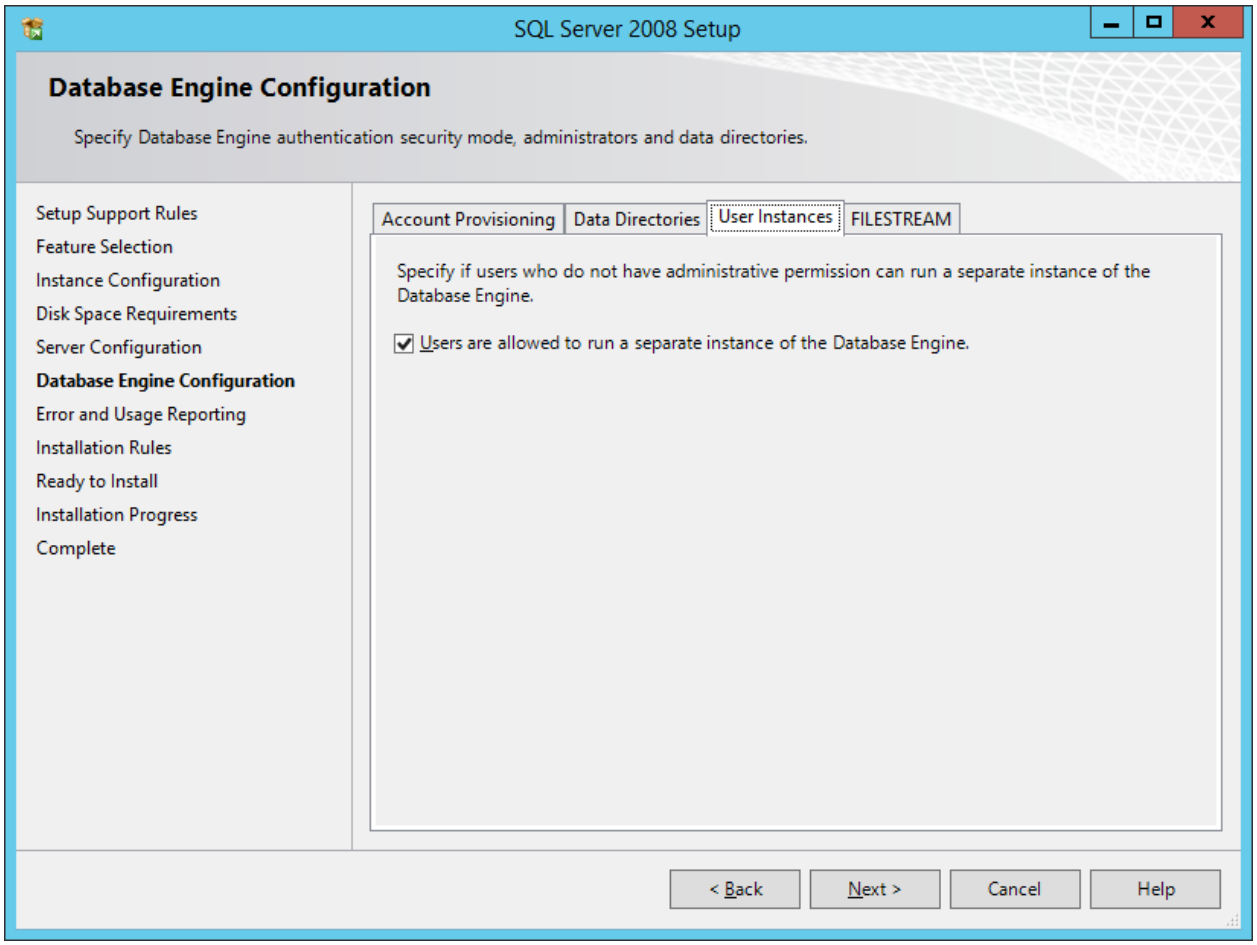

If you will be storing pictures of your assets in Traverse, it is best to turn on the SQL File Stream as pictured below.

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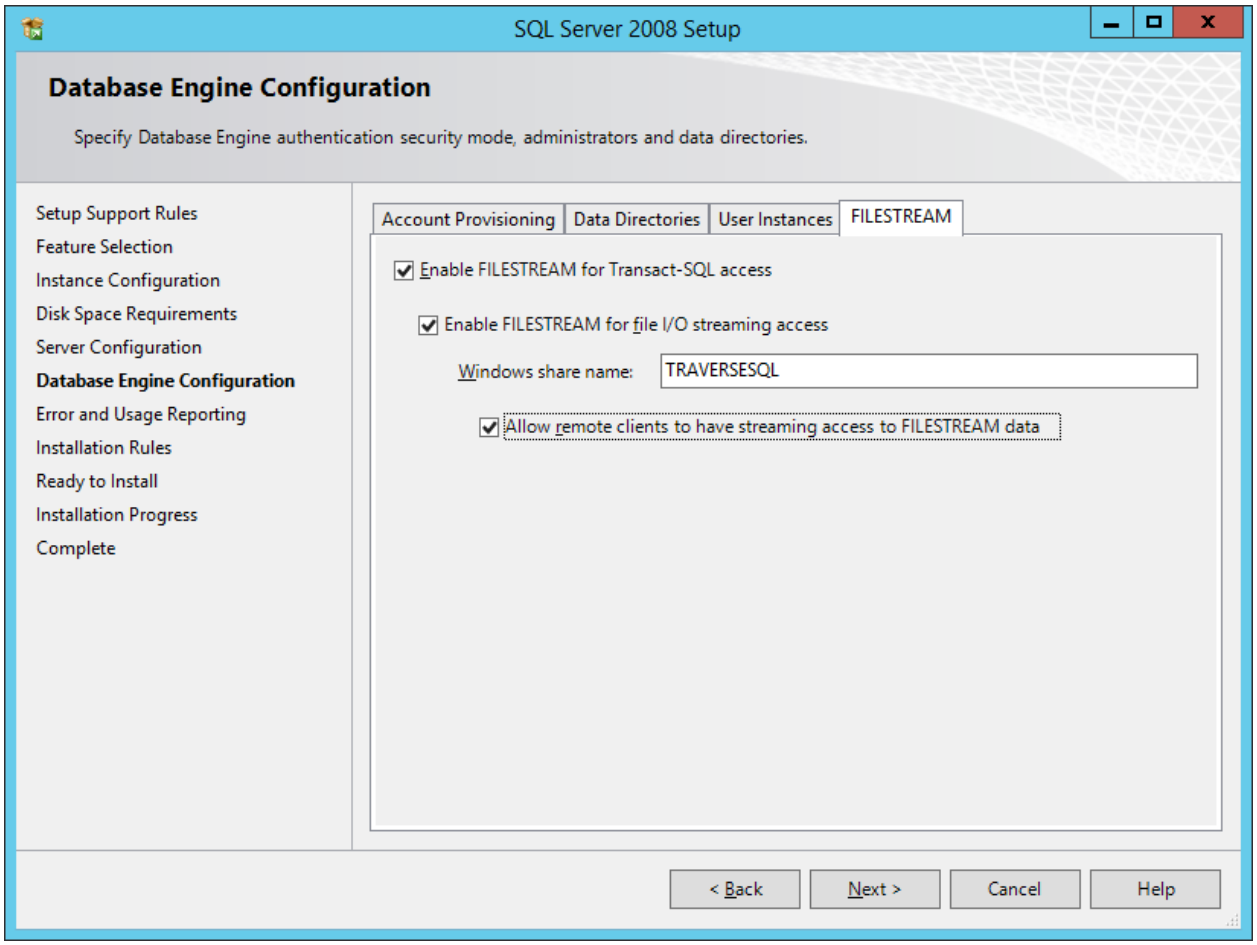

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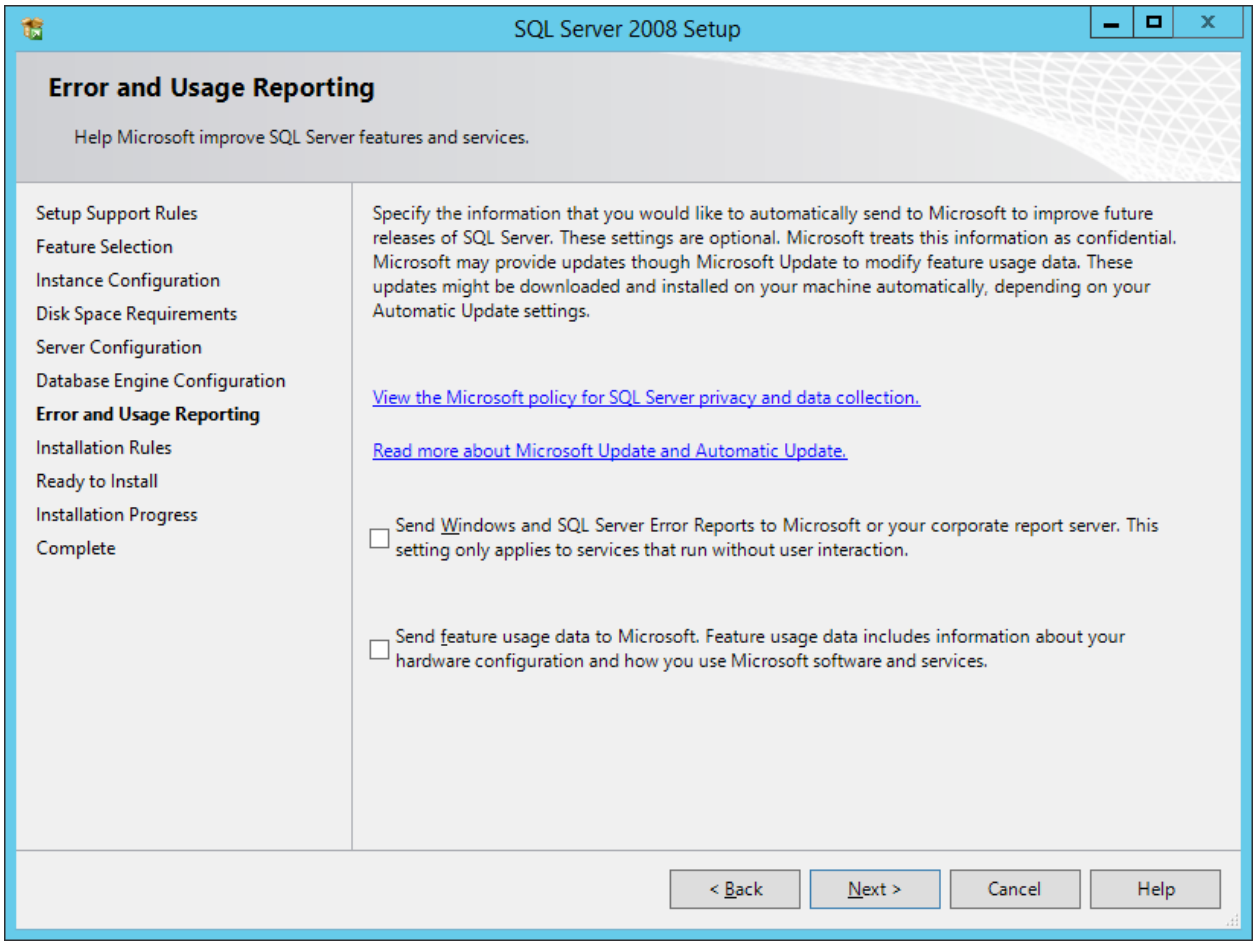

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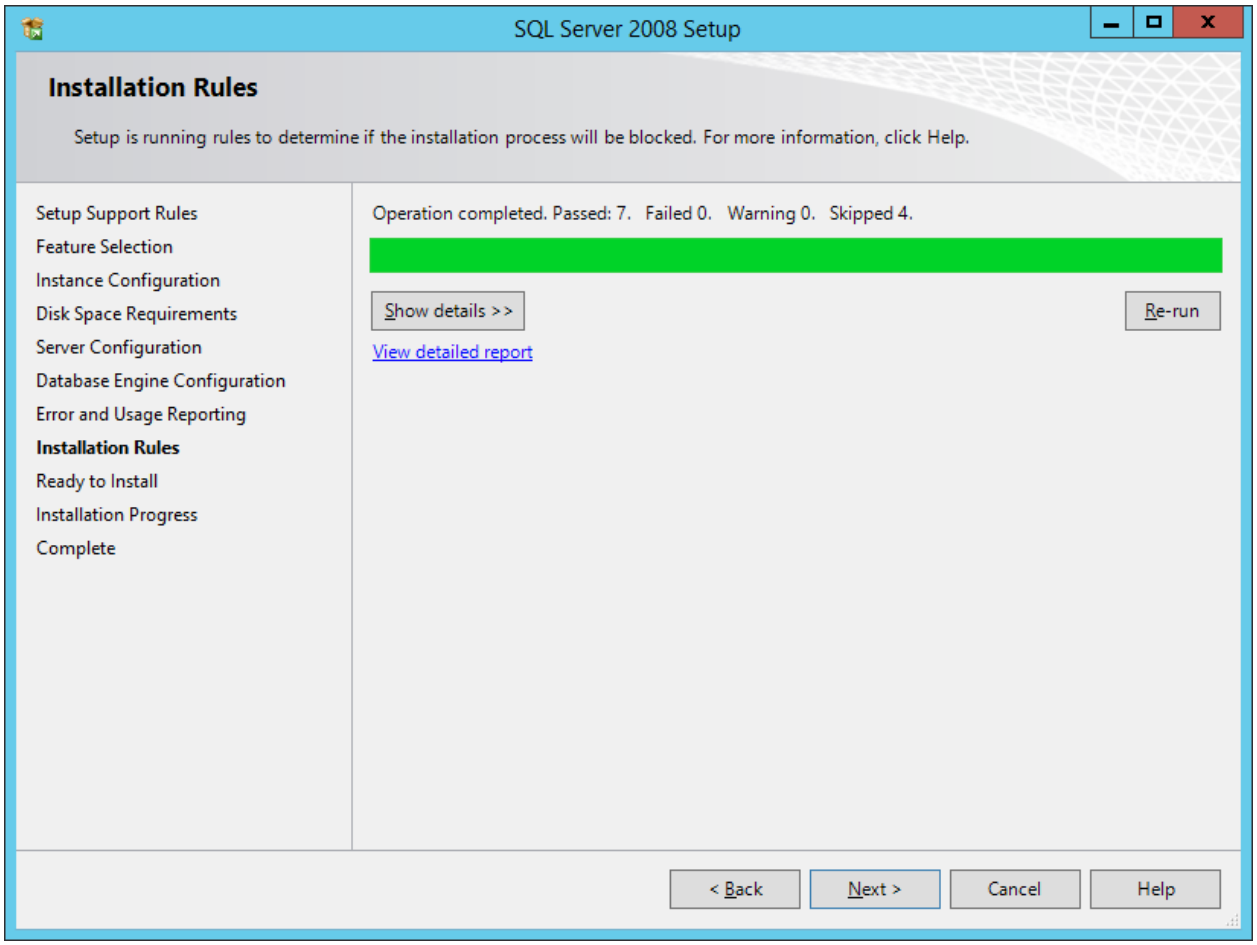

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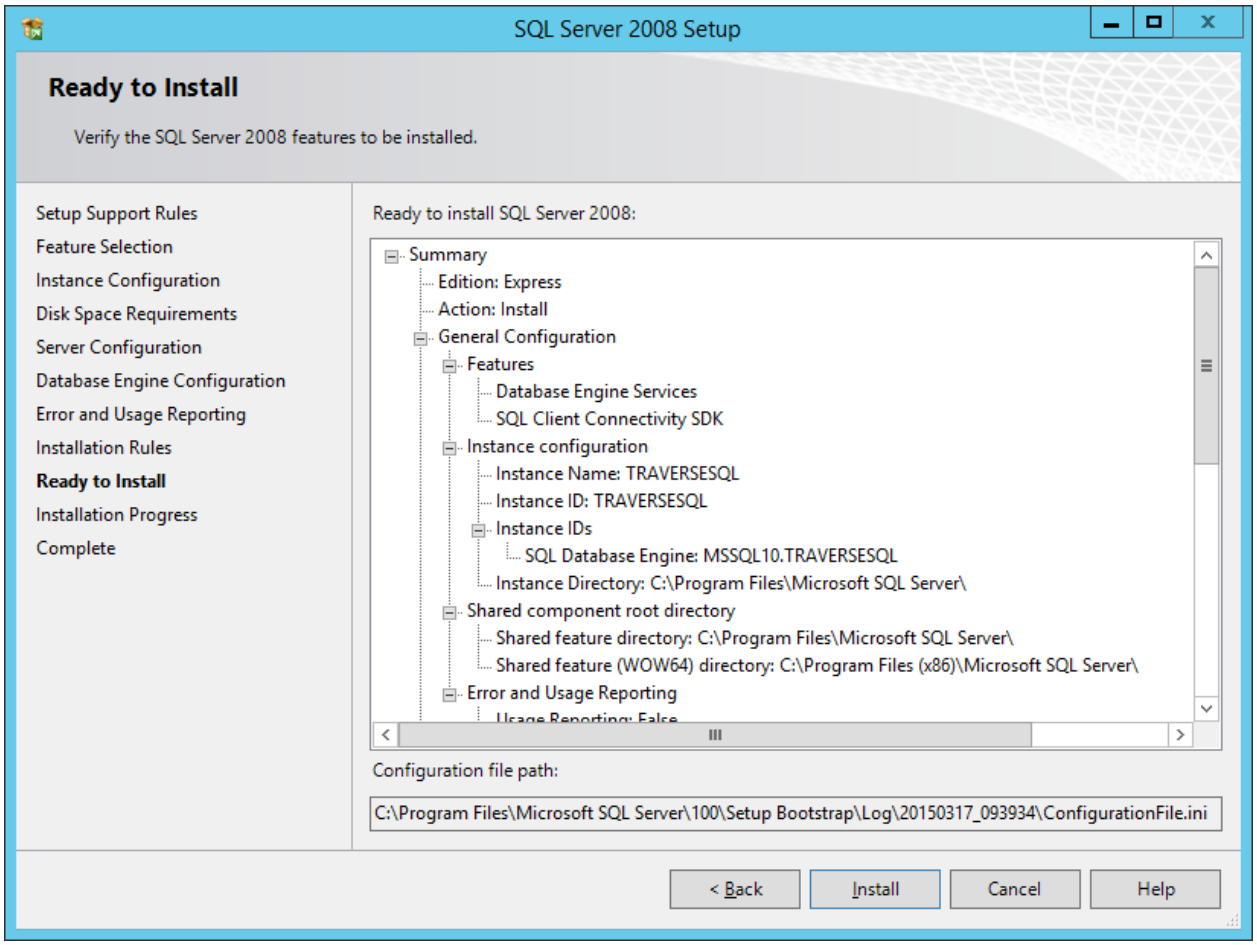

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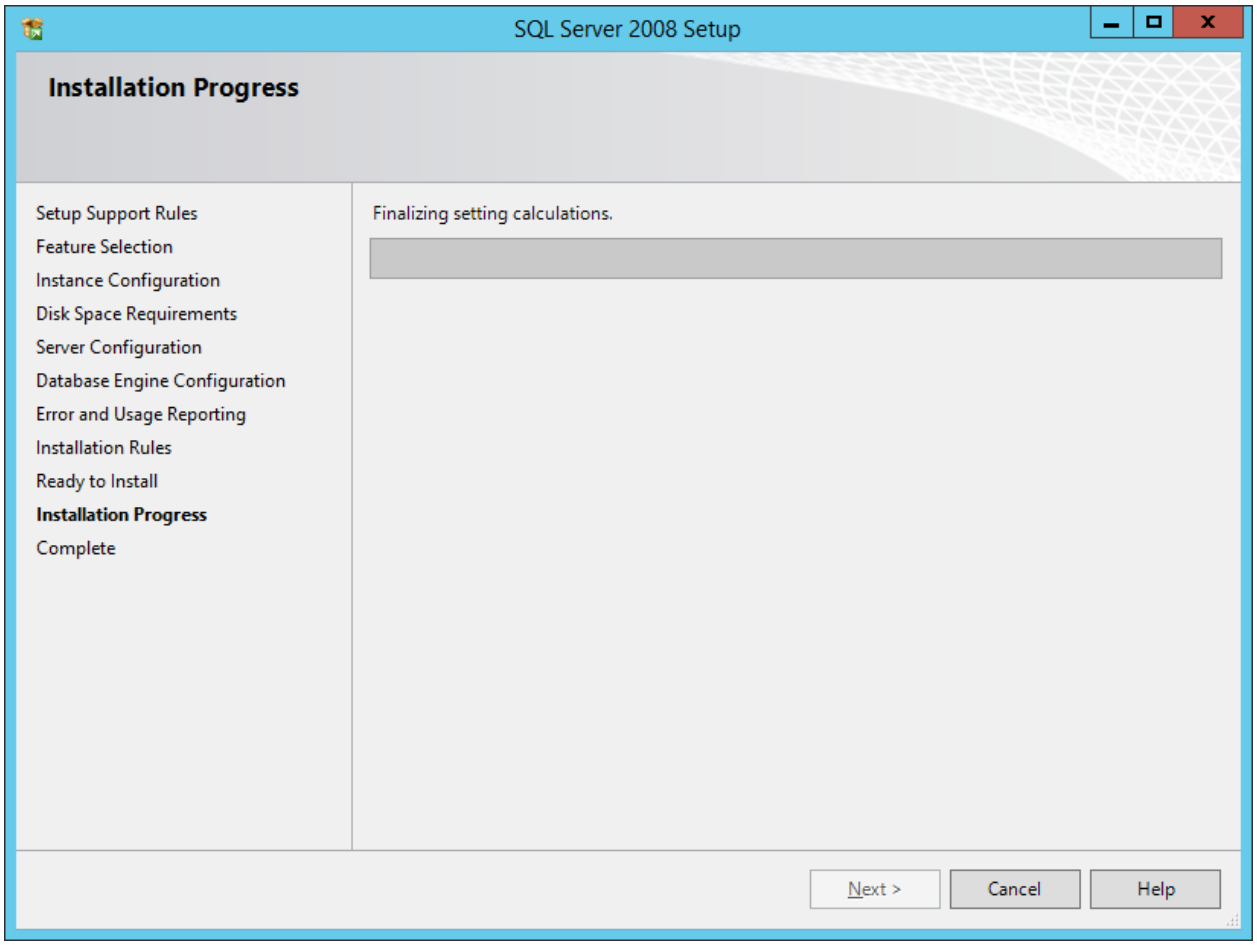

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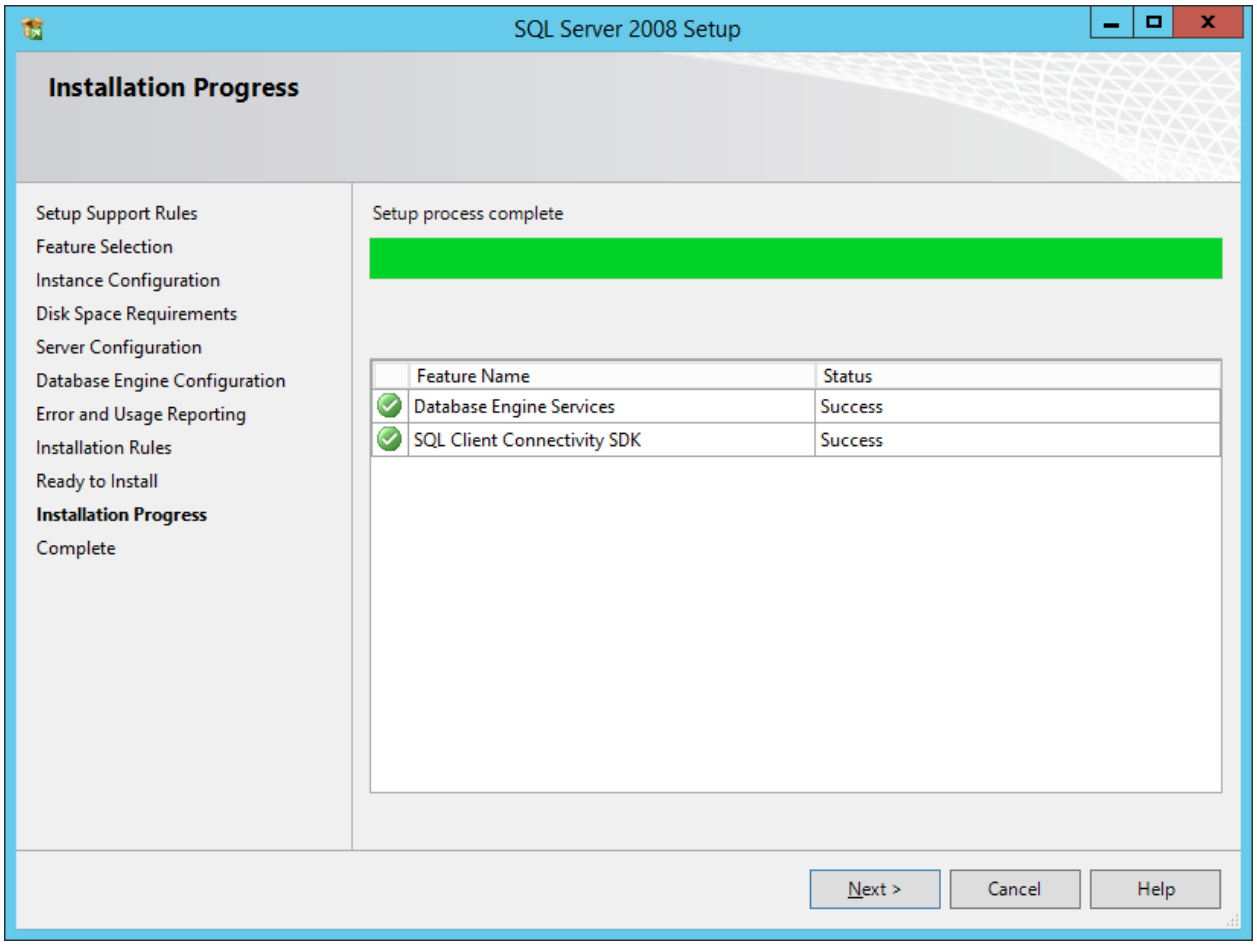

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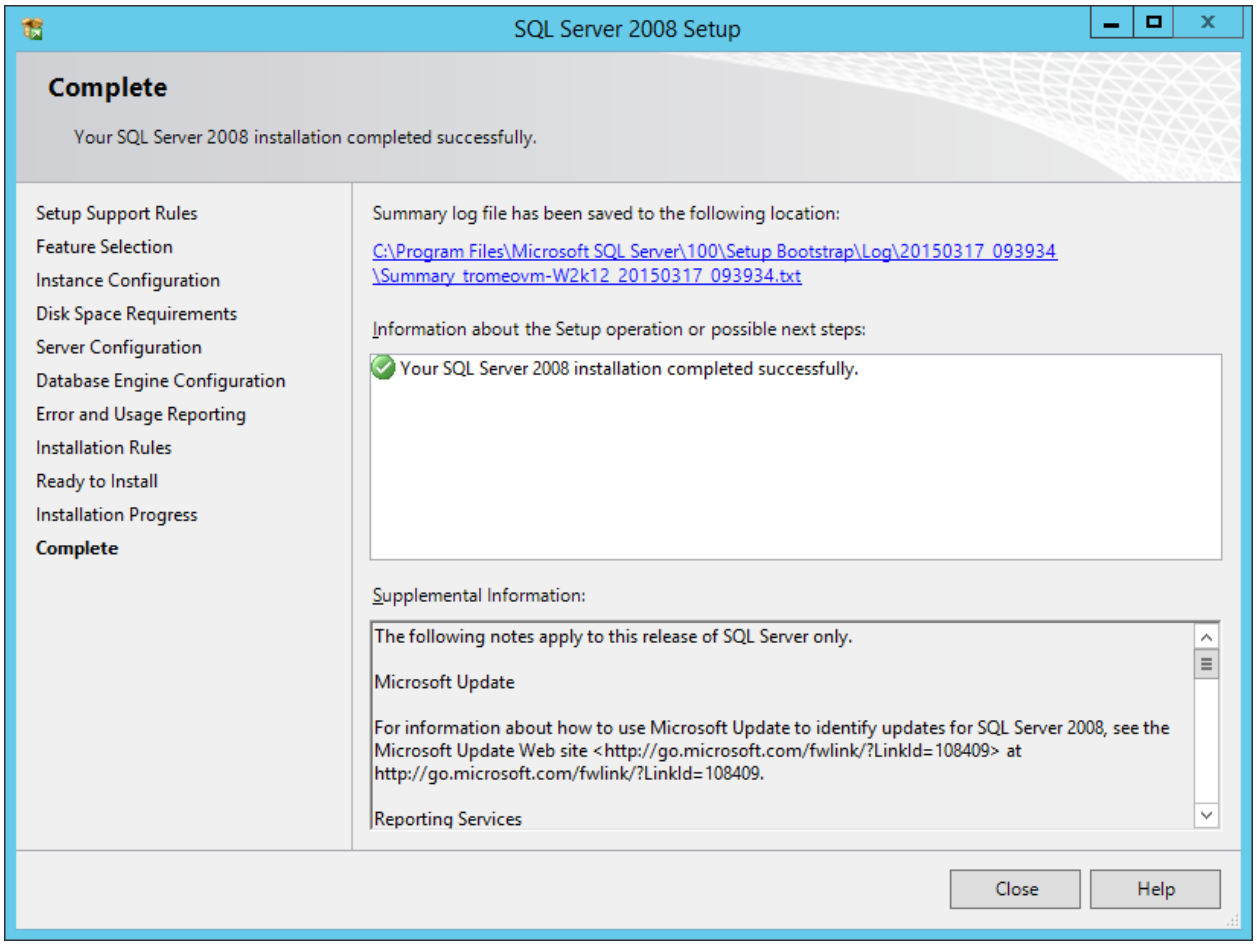

Traverse will continue its installation after SQL Express is installed

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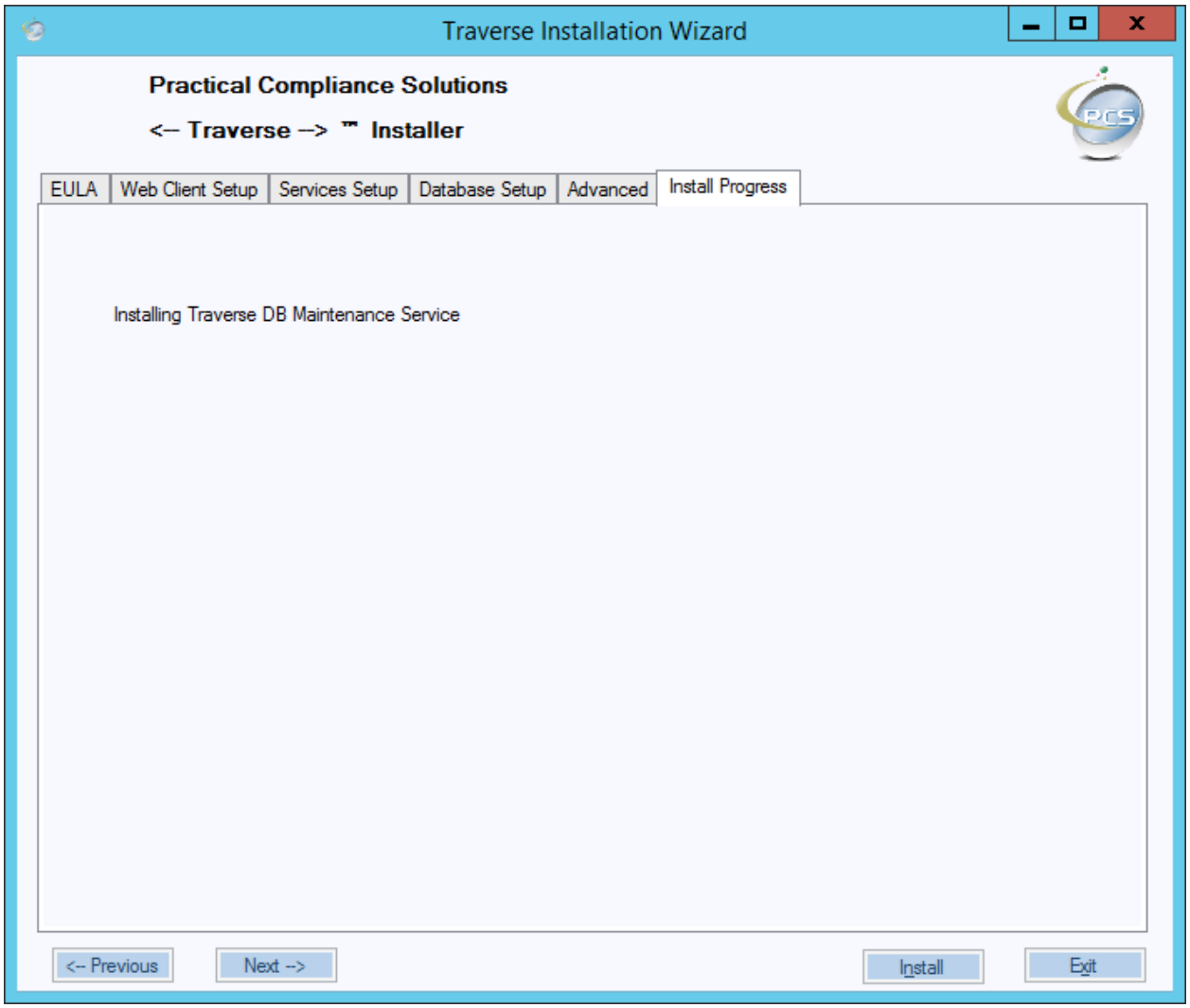

6. Installation Check List

- ❑ Install IIS (Internet Information Services)
- ❑ Install Dot Net Framework 3.5
- ❑ Company Name _____
  - Company Name is Case Sensitive
- ❑ Database Server Name _____
- ❑ Register the Dot Net Framework with IIS
- ❑ Log In as an administrator when installing Traverse
- ❑ Certify ample disk, CPU, and RAM per section 1.1 System Requirements

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7. Index

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