INTEGRATION TECHNOLOGIES LIMITED
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Enabler Install Instructions

Revision 4.6.3
27 February 2019

1 Prerequisites for Installation

1.1 Operating Systems

This installation requires:

- Microsoft Windows.
- Windows login as a member of administrators.

The following versions of Microsoft Windows can be used:

- Windows 10 Professional (Recommended)
- Windows Server 2012R2 Essential
- Windows 8 and 8.1
- Windows 7 Professional, Enterprise, or Ultimate[1].
- Windows Server 2008
- Vista Enterprise, Ultimate or Business. (Not recommended)
- Windows XP Pro – Service Pack 1, Service Pack 2 and Service Pack 3 (Not recommended)

Windows Server 2012R2 Known Issues

Windows Server 2012R2 Essential comes preinstalled with .NET 4.5/3.5/2.0 but only .NET 4.5 are enabled (.NET 3.5/2.0 are disabled by default). The.NET 3.5/2.0 must be enabled prior to installing Enabler. This can be enabled through the **Add Roles and Features Wizard**. The Windows Server 2012R2 media maybe required for the **Source Path**. Microsoft provides other alternatives on installing the .NET Frameworks besides the wizard. Refer to Microsoft's website or refer to this link: **http://support.microsoft.com/kb/2734782/en-us**.

Windows Server 2012 R2 has stricter password policy requirements by default. When installing the SQL Server with the Enabler installer, the SQL Server password must meet these requirements. Otherwise, the Enabler installer is expected to fail. Microsoft has provided this page as a guideline:
http://technet.microsoft.com/en-us/library/hh994562(v=ws.10).aspx

NOTE: Enabler has not been tested with Windows Server 2012 Essential (non R2). There are actually known .NET framework installation issues with Windows Server 2012 Essential (non R2). Refer to this link below to possibly resolve this:
http://blogs.technet.com/b/server_core/archive/2012/11/05/using-features-on-demand-with-updated-systems-and-patched-images.aspx

Windows 8, 8.1 and 10 Known Issues

Microsoft does not provide any official **offline .NET Framework installers** for Windows 8, 8.1 or 10. It is recommended that the target system be pre-installed with the required .NET framework 3.5 before the Enabler installer is run.

The .NET Framework 3.5 can be installed: **on Demand** (Windows prompts with you an installation message box when it is required); or through the **Control Panel (Programs > Turn Windows feature on or off).** The target system must be connected to the internet for the installation to succeed.

The **Fast Startup** option (available in Windows 8 and higher) must be disabled or turned OFF when setting up your Enabler system. If left ON, this may cause unpredictable results

[1] Testing was performed on Windows 7 Ultimate N, and Enterprise N editions.

as your Enabler PCI/Express Card hardware and software will not initialise correctly once the PC performs a shutdown or reboot.

Windows 7 Known Issues

When installing on Windows 7, you must be logged on using the built in Administrator account. If you install with another account you may encounter intermittent problems running scheduled tasks (nightly database backup) and when uninstalling Enabler.

To activate the built-in Administrator account open a command-window with Administrator privileges and type in the following, then press Enter:

```
net user administrator /active:yes
```

Windows Server 2008 Known Issues

NOTE: On this platform the .NET 3.5 Service Pack 1 runtime must be installed using Administrative Tools - Server Manager. If you have not already installed the .NET runtime, you must do this manually before running the Enabler Install.

Restart the PC in order to be able to use the updated path environment variable a system, otherwise the SQL backup script will fail.
NOTE: SQL Server 2008 R2 is not compatible with Windows Server 2008 Core or Windows Server 2008 R2 Core installations.

1.2 SQL Server

Microsoft SQL Server is required by the Enabler Server software. The following Microsoft SQL Server versions are compatible with The Enabler:

SQL Server 2016 Express Edition
SQL Server 2014 Express Edition
SQL Server 2012 Express Edition SP1
SQL Server 2008 R2 Express Edition SP1
SQL Server 2008 Express Edition SP1
SQL Server 2005 Express Edition SP2
SQL Server 2005 Express Edition
MSDE2000

NOTE:

- Versions earlier than SQL Server 2000 / MSDE2000 are NOT compatible with The Enabler.
- SQL Server 2012 (and higher) has high Windows Operating Service Pack requirements. Refer to the Appendix for more details.

The Enabler Installation CD includes five runtime versions of Microsoft SQL Servers ready to be installed: SQL Server 2016 Express, SQL Server 2014 Express, SQL Server 2012 Express, SQL 2008 R2 Express and SQL 2005 Express Edition. These Microsoft SQL Servers are FREE and can be used without any licensing cost.

When it runs, the Enabler Installer detects the SQL Server install folders available based on the order below:

- SQL 2014
- SQL 2016 - Applicable only for 64 bit Windows 8.1 and higher Operating System
- SQL 2012
- SQL 2008 R2
- SQL 2005

SQL 2005 is the last one selected as its Extended Support End Date has already passed (2016-04-12).

You may also choose to install the Standard/Enterprise SQL Server version before installing Enabler. The folder structure of the Enabler installer is as follows:

```
Branding\
Documentation\
Driver\
SDK\
SQL2005\
SQL2008R2\
SQL2012\
SQL2014\
SQL2016\
Win\
Enabler4Setup.exe
Release Notes.htm
PumpUpdate.htm
Installation Instructions.pdf
```

Tip: In order to install SQL server 2005 (SQL2005), delete or rename the other SQL server installation folders (e.g. SQL2008R2, SQL2012, SQL2014 and SQL2016) before starting the Enabler4Setup program.

See the Appendix for more information on specific SQL versions.

1.3 Java

The Java API and Sample application require Java 7 installation (the JRE is available as a free download from http://www.oracle.com). The Java 7 is not included with the Enabler installation CD or distribution.

- The Enabler Java API (`enabler-api-1.0.jar`) is included for both Enabler Server and Client installation.
- The Java sample (`pumpdemo.jar`) uses the Enabler Java API and installed only if *SDK Add-ons* option is ticked in the Select Installation Type screen. The following JAR files are also included with SDK installation:
  - `forms-1.3.0.jar`
  - `glazedlists-1.8.0_java15.jar`
  - `icu4j-49_1.jar`
  - `miglayout15-swing.jar`

The Enabler Java API and the sample application require Java 7 or later (using Programming language features such as Strings in Switch Statements, Catching Multiple Exception Types and re-throwing Exceptions).

The Enabler Java API also requires the Joda-Time Java Date and Time Library (`joda-time-2.0.jar`) to be on its classpath. (Version 2.0 or later of this library are supported). Joda-Time 2.0 is installed with the API in the Enabler Install Directory.
NOTE: For development or deployment, add this Install Directory (%ENABLER_ROOT%) to your classpath or copy these JAR files to a location that is in your classpath.

The Enabler Java API, Joda-Time Java Date and Time Library javadocs documentation (SDK installation) are located in %ENABLER_ROOT%\SDK\Doc\Java.

1.4 Security

This section refers to the security prerequisites when installing the Enabler.

New Install

The user installing Enabler must be a member of the Windows Administrators group to allow the installer read/write access permissions.

For Windows 7, the built-in Administrator account should be used in order to avoid interruptions (issues with the scheduled database backup script running).

For systems without SQL Server installed, Enabler will automatically install one of the included SQL Servers. To do this the installer will prompt for an SQL Server Administrator (SA) password which cannot be blank For SQL Server Express Editions. We recommend you use a strong and secure SA password. If connecting to the SQL Server using Windows Authentication you do not need this password. If not you should write it down somewhere safe in case you need to access the database using the SA login.

NOTE:

1. MSDE installations does not require SA password which is always blank.
2. The SQL Server password must follow the target Windows platform password complexity requirements. Refer to the section **Windows Server 2012R2 Known Issues** for more details

Upgrade Install

The user upgrading the Enabler should be a member of the Windows Administrators group. The SQL Server Administrator (SA) password is not required as Windows NT Authentication is used for connecting to the SQL Server.

1.5 PC BUS Slot

If you are installing an Enabler PCI/Express Card, then you must have at least a PCI or a 1x Express slot free in your Server PC.

1.6 Ethernet Network

If you are setting up an Enabler E, then it is required that your Server PC must have a Ethernet interface that can connect to the same network as where the Enabler E will be plugged in.

The Enabler E is expected to work with any 10Mb/100Mb network. Ensure that the Enabler E is configured to use AutoIP(ZeroConfig) or DHCP accordingly. Refer to Enabler E's hardware guide for more details.

Ensure that your Server PC has the latest Network Windows device driver for its network adapter.

1.7 Power Management

Enabler PCI/Express Windows device drivers do not support Sleep, Hibernate, or Fast Startup - i.e. the machine must be 'always on'. These PC power settings will need to be turned off for reliable operation. From Enabler v4.6.1 onwards, the installer disables these options itself.

Command Line Option

To disable Hibernation and Fast Start-up open a command window with Administrator privileges and type in the following, then press Enter:

```
powercfg /h off
```

Restart the PC after running this command. You should also check the Sleep settings as instructed below.

Steps for Windows 8 / 10 / Server 2012

1. Open the Windows **Control Panel**
2. Select **Power Options**
3. At the top-left, click **Choose what the power buttons do**
4. If required, click **Change settings that are currently unavailable**
5. Un-check **Turn on fast start-up**, **Sleep**, and **Hibernate**
6. Click **Save changes**
7. Click **Change when the computer sleeps** on the left
8. Next to **Put the computer to sleep** select **Never**
9. Click **Save changes**
10. Reboot the PC

Steps for Windows 7 / Server 2008

1. Open the Windows **Control Panel**
2. Change the View mode to **Large Icons**
3. Select **Power Options**
4. At the top-left, click **Choose when to turn off the display**
5. Click **Change advanced power settings**
6. Expand 'Sleep' and set the values for **Sleep after** and **Hibernate after** to **0 (never)**
7. Click **OK**
8. Reboot the PC

2 Installation

To upgrade an older version of Enabler refer instructions in section 2.4 Upgrade Installation first, and then follow the instructions in section 3 New Installation.

First time installation: follow the instructions in section 3 New Installation.

2.1 Website

For full access to content in our website you need to use a login account– if you do not have an account please contact ITL support team.
Email: support@integration.co.nz

2.2 Software Updates

Enabler updates are available on our website:
http://www.integration.co.nz/privsoft/downloads.htm

We recommend that you periodically check the website for updates and install the latest Pump Driver Update before rollout or pilot installation. The V4 release notes indicate the Pump Update that is included.

The latest installation and troubleshooting information are available at:
http://ww.integration.co.nz/FAQ.htm

2.3 Connecting Pumps

Help with configuration and connection of pumps is available on our website:
http://www.integration.co.nz/privdocs/PumpSummary.htm

2.4 Upgrade Installation

This installation will automatically upgrade your database model on systems running Enabler Version 3.40 or later. If you have a version older than that you will need to drop the database as well as uninstall the previous Enabler software.

When upgrading from Enabler v3.40 (or later), you can install the new Enabler software – there is no need to uninstall the previous version. Follow the instructions in Section 3.

The existing configuration and transaction data will be migrated automatically by the Enabler installer. We recommend you test this using typical site data to ensure your software works correctly after an upgrade.

When upgrading Enabler version earlier than v3.40:

Step 1. Close applications.

Close all applications and services using Enabler components (e.g. POS applications).
Stop the Pump Server service.
Close the simulator if upgrading SDK install as well.

Step 2. Uninstall previous Enabler

Open the Control Panel and select 'Add/Remove Programs' to uninstall the Enabler version.

For a clean installation (e.g. for development or testing purposes), the Enabler database can be dropped. The Administrator users can drop (remove) an existing Enabler database by typing the following at a Command Window:

```
C:> OSQL -E
1>use master
2>go
1>drop database enablerdb
2>go
```

Step 3. Remove remaining files

Remove files from the Enabler install folder (e.g. C:\Enabler).

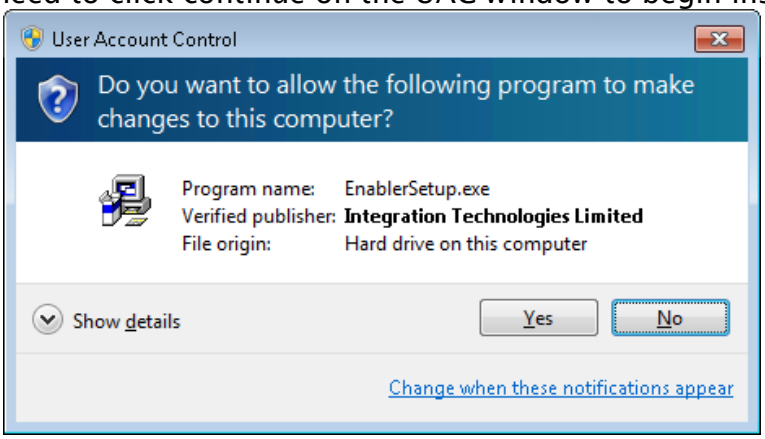
3 New Installation

We recommended you install The Enabler software before installing the hardware. If you install the hardware first, the **Found new hardware** window will appear when you start Windows and should be cancelled. The Enabler install will automatically setup the Enabler Windows Device Driver.

3.1 Software Installation

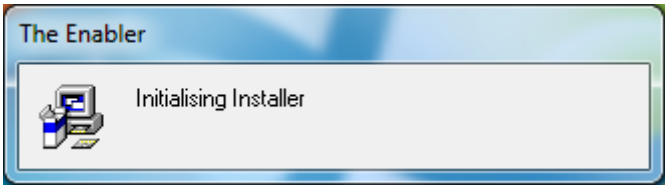
The installation process is similar for Windows Server 2012R2, Windows 8/8.1/10, Server 2008, 7, Vista and XP

- Ensure other applications are closed.
- Start the installation by double clicking Enabler4Setup.exe.
    - Logon with an administrator account and for Windows with UAC enabled you need to click continue on the UAC window to begin installation.

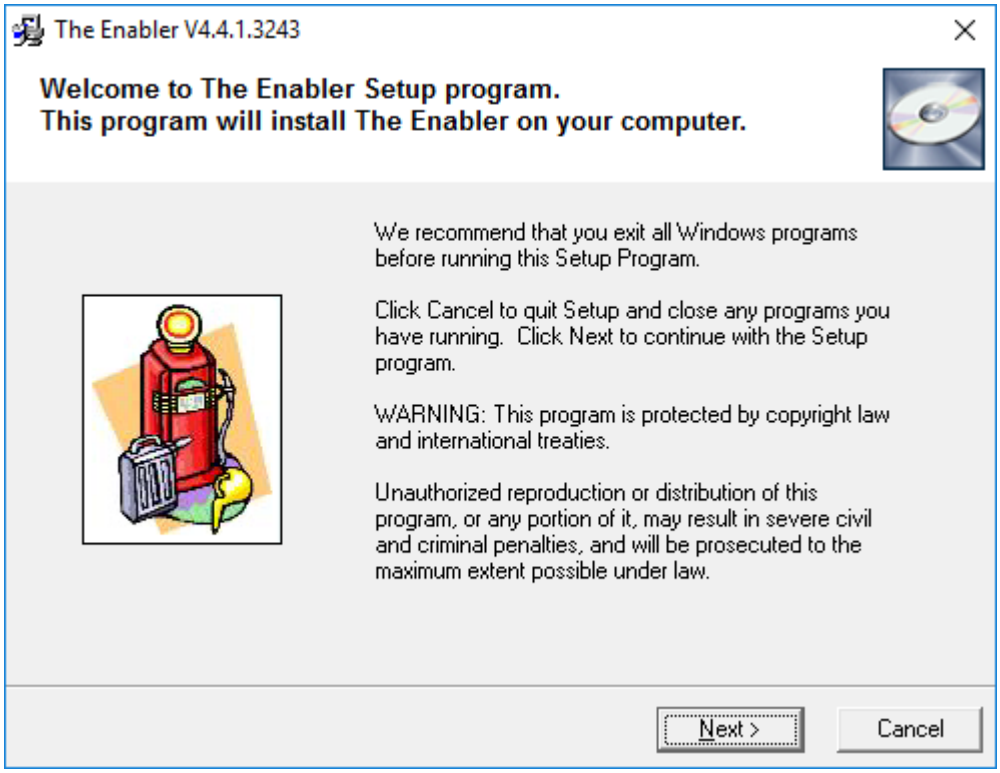


Step 1. Welcome screen.

The installer will begin by checking the system setup. This normally takes just a few seconds.



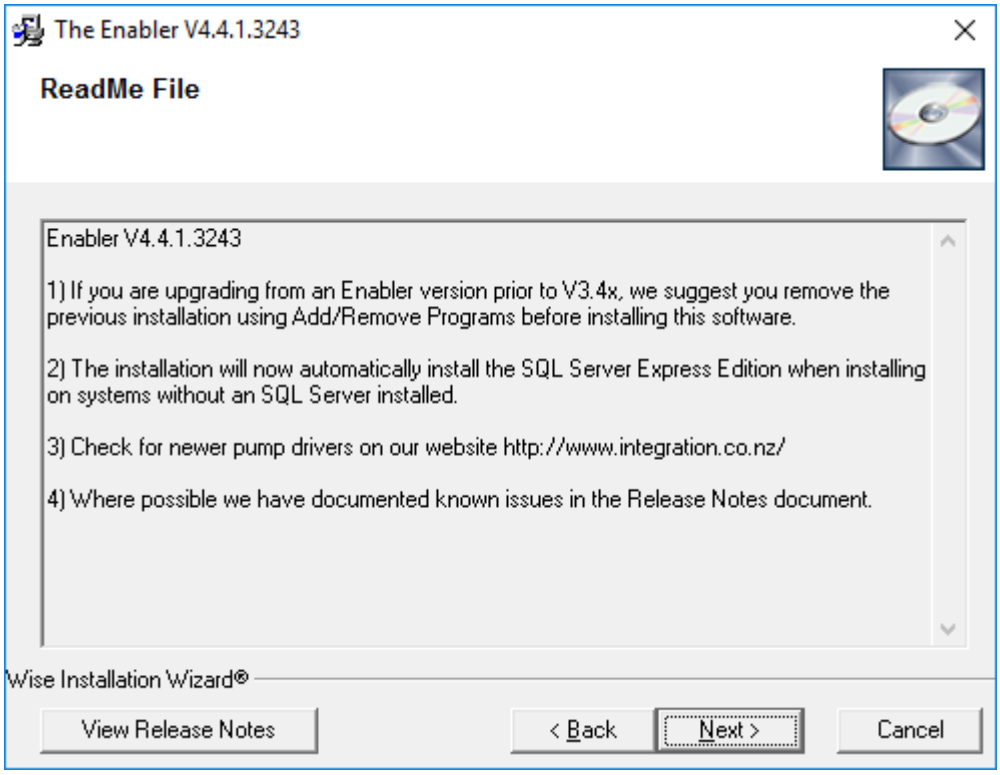
.



Click **Next** at the installer Welcome screen.

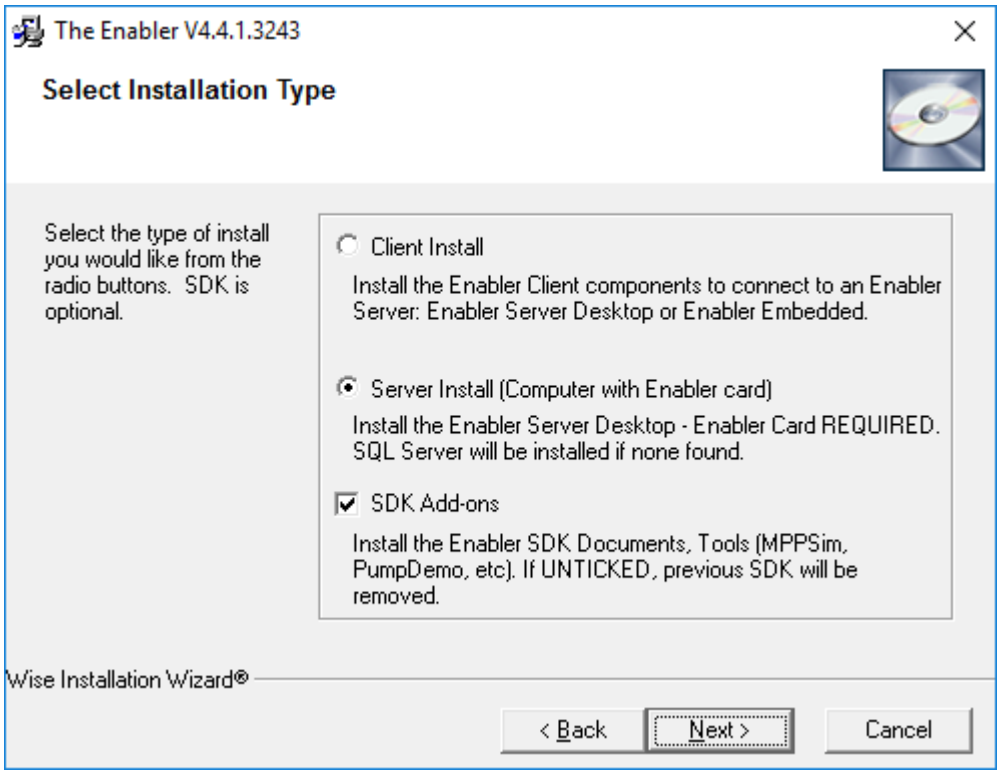
Step 2. Readme screen.

Read carefully the readme for instructions and notes specific to this Enabler release and click Next.



Step 3. Select Installation Type screen

Next you will be prompted to choose Client or Server installation.



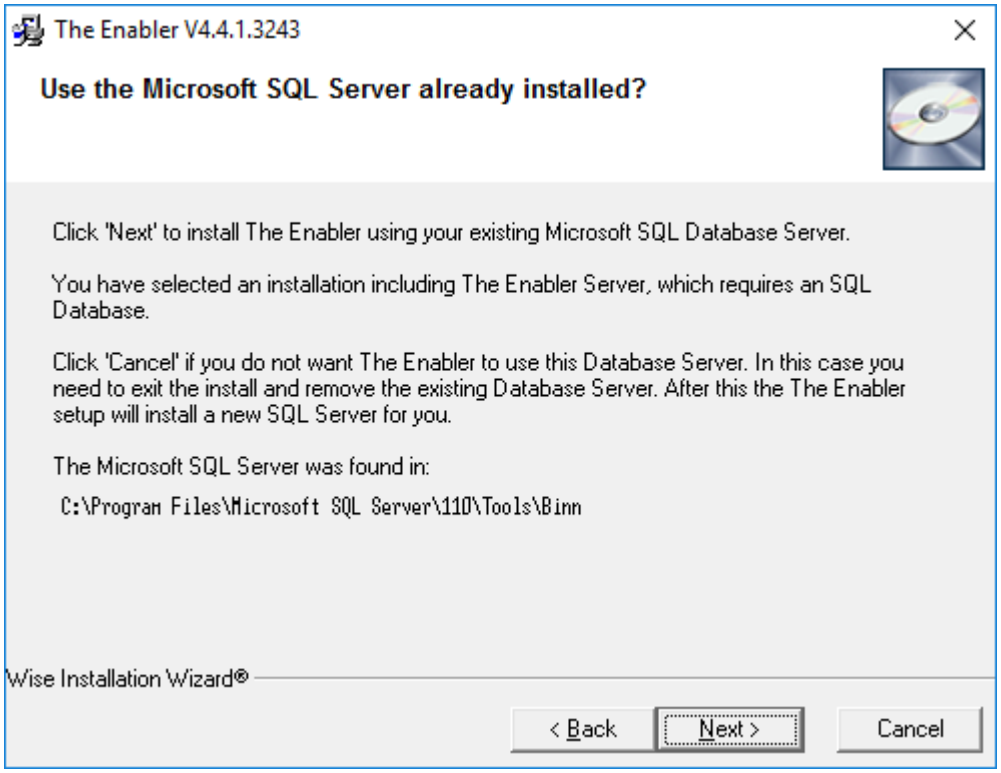
To install a client installation, tick 'Client Install' option. You will be prompted to enter the name of the computer running the Enabler Server.

For SQL Server 2005/2008R2versions, the Enabler setup program checks that Windows Installer (MSI) 4.5/3.1 and .NET Framework 3.5 SP1/2.0 SP2 are installed; otherwise they will be installed automatically if possible. Your computer will be restarted by the Enabler setup if required and installation will resume automatically.

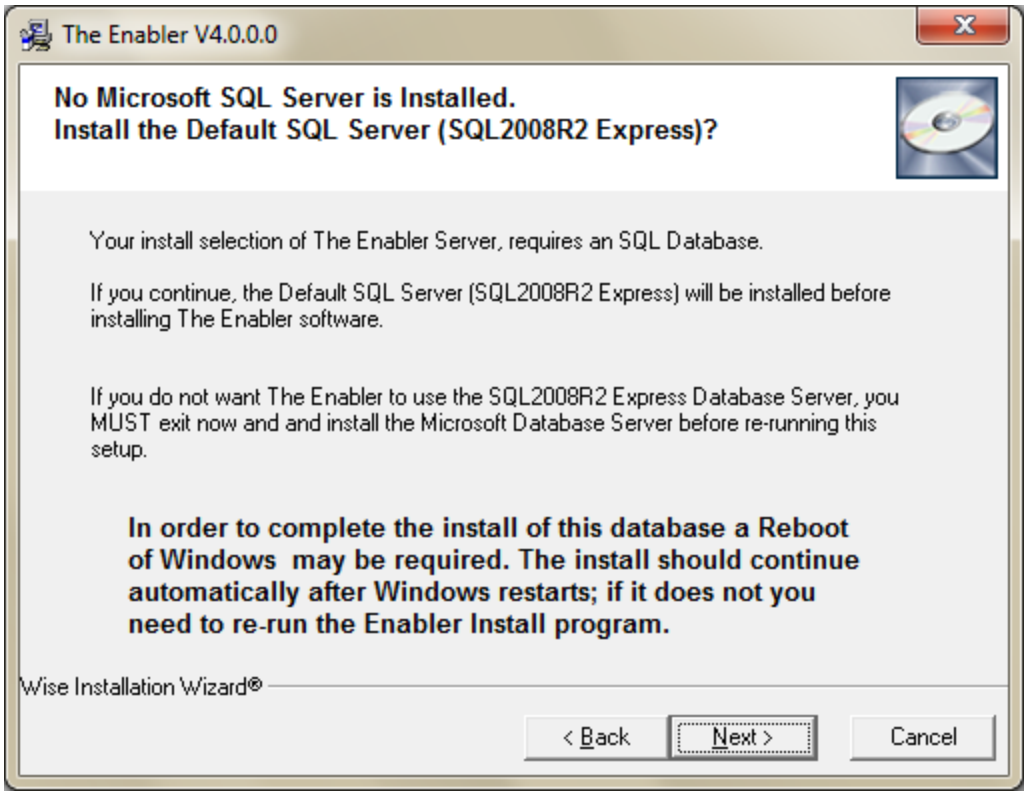
Step 4. Microsoft SQL Database screen.

For Enabler server installs with a pre-existing SQL Server, the installation will display the screen below to indicate the SQL Server found and will **not** install another instance. Step 6 has instructions for installing with a named instance of SQL Server.

Click Next to continue.

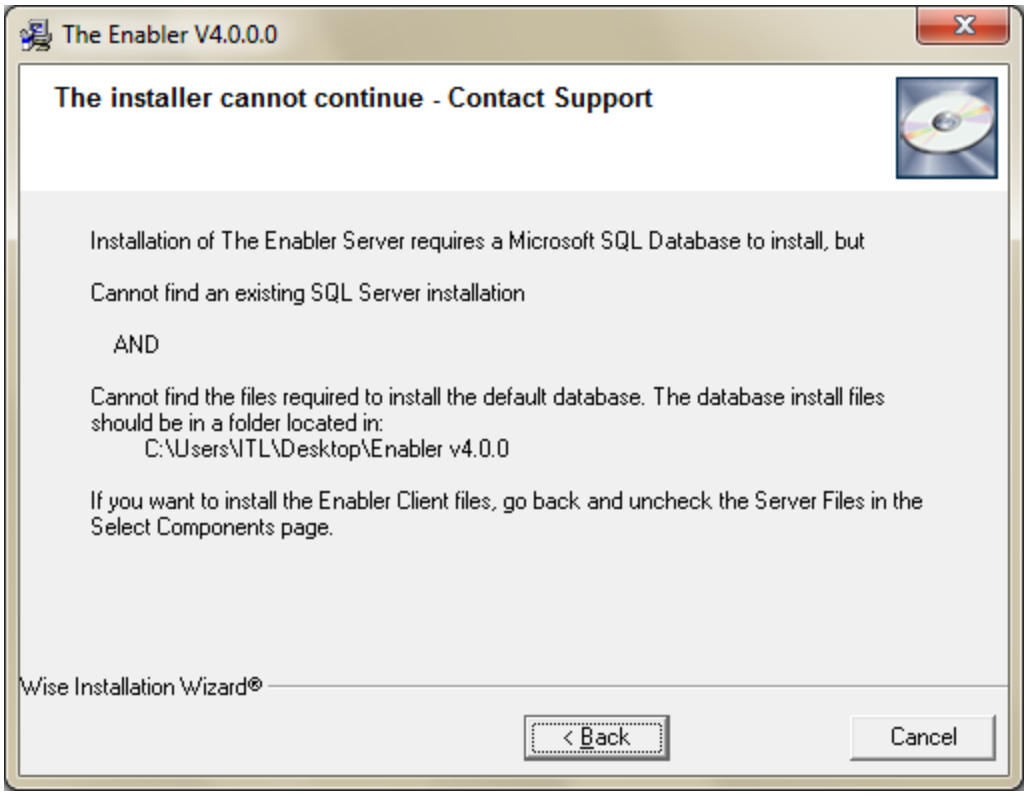


For Enabler server install or upgrade without an SQL Server, the installation will display the screen below indicating which SQL version will be installed:

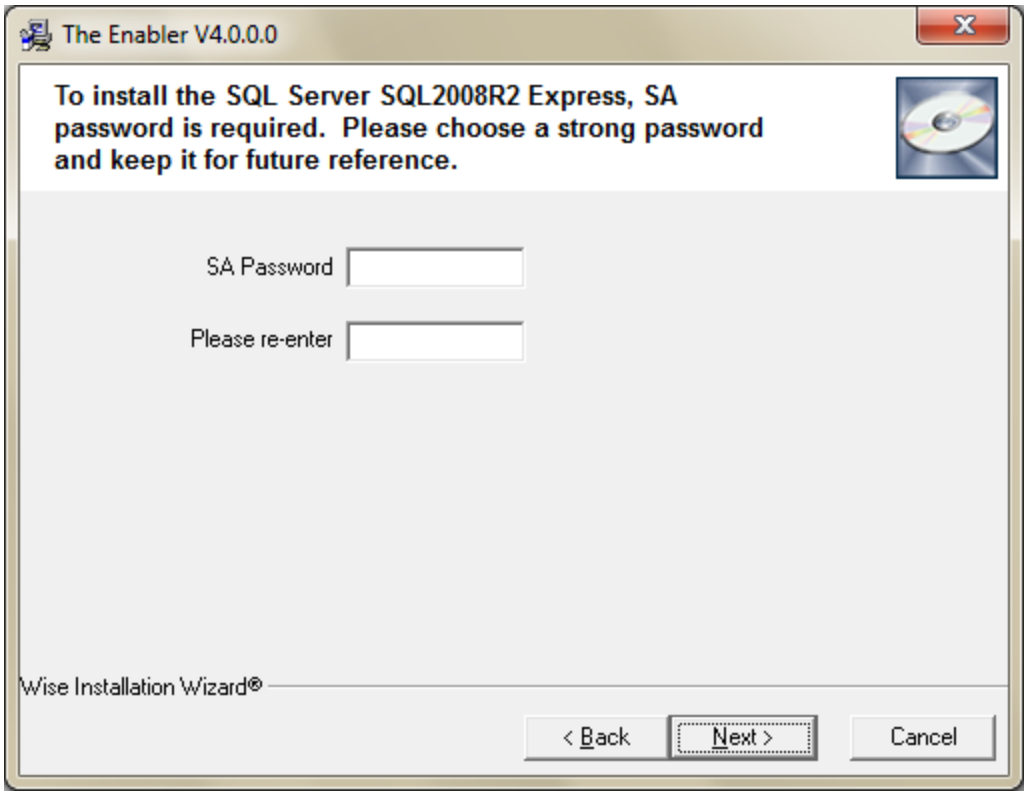


Click Next to install the default SQL Server and the Enabler.
Press Cancel to exit the installation to install another version of SQL Server.

NOTE: If the files required to install the SQL database are not found by the installer it will show the message below. Make sure there is a database installer in the correct folder structure.



When installing with MSDE2000 a blank SA password will be used, when installing later SQL versions you will be prompted for password to install the SQL database:



NOTE:

1) If MSXML is already installed on the system, SQL Server Express Editions may be unable to install its own MSXML package. This can cause the SQL Server Express install to fail. Our website has a database FAQ with more information on a workaround for this installation issue:
   http://www.integration.co.nz/FAQ-Database.htm

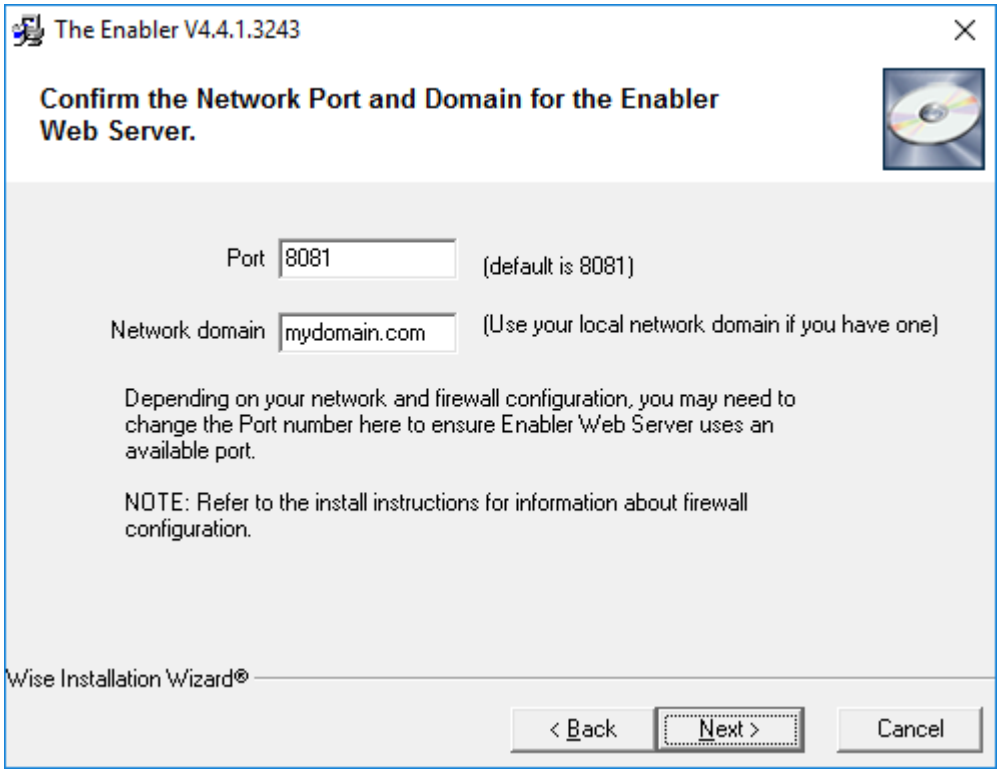
2) The Enabler installer creates a Data Source Name (DSN) called "Enabler" that connects using the SQL driver for both server and client installs. To check or update the Server name on 64-bit editions of Windows you need to use the 32-bit ODBC Administrator.

```
C:\Windows\SysWOW64\odbcad32.exe
```

The Enabler DSN is **not** visible when using the default (64-bit) ODBC Administrator.

Step 5. Enabler Web Server Settings

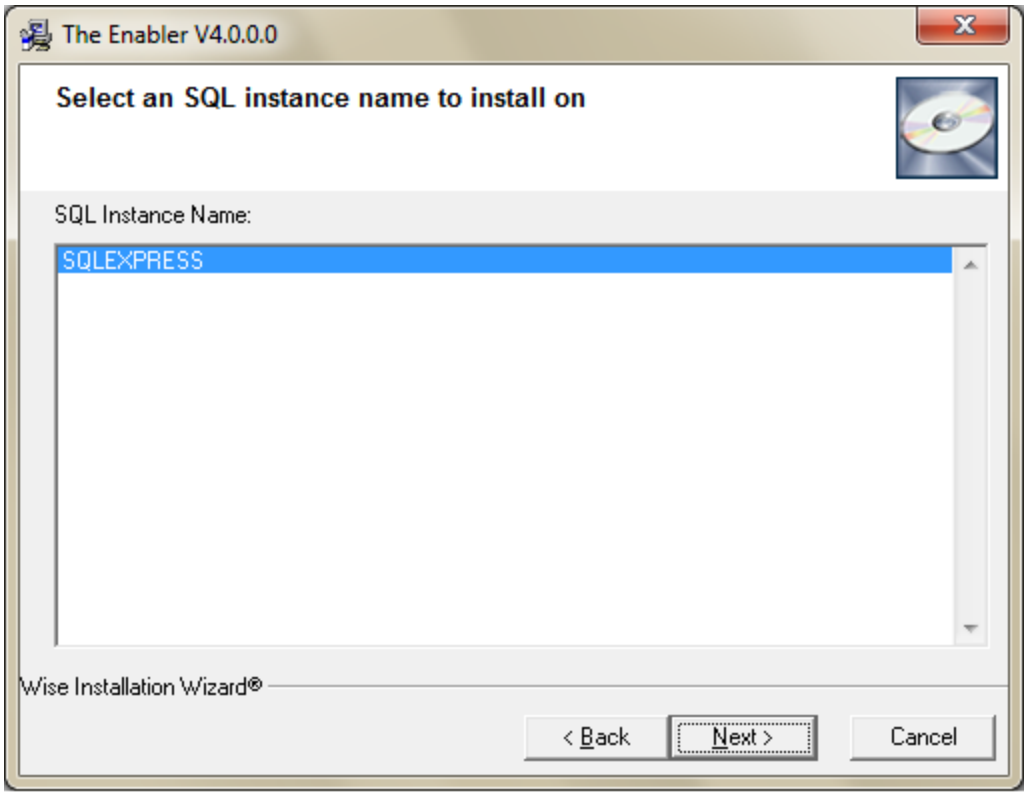
You will now be prompted for the Port and domain settings to use for the Enabler V4 Web-based configuration and maintenance service:



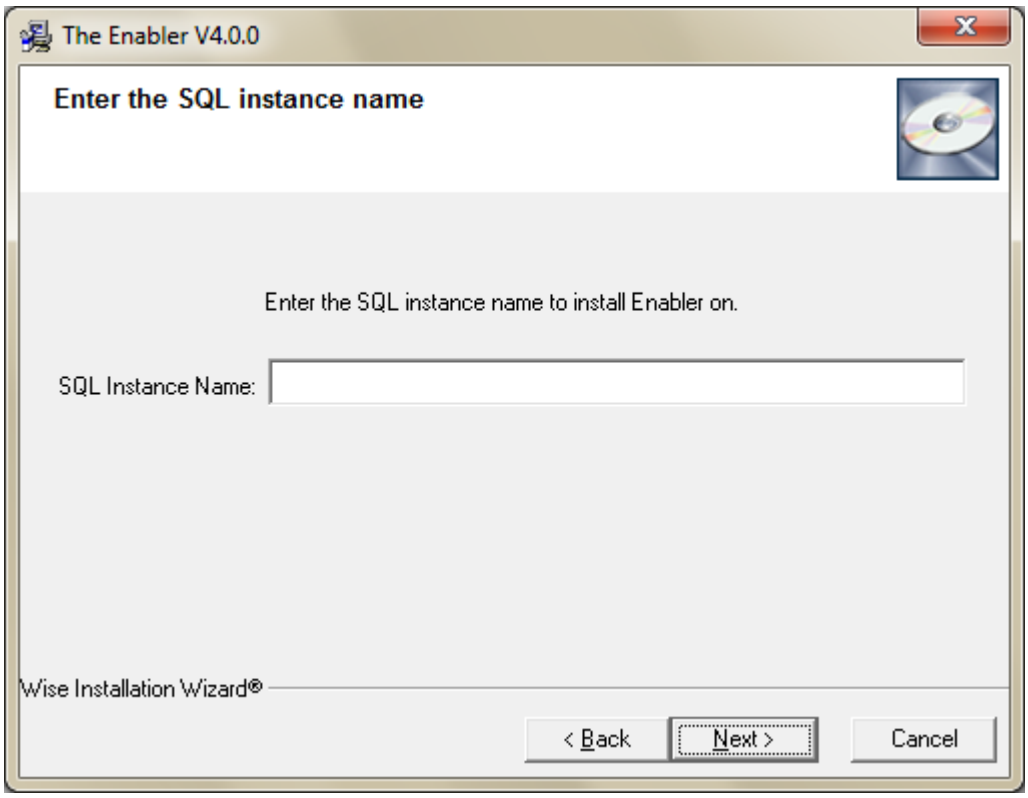
Step 6. Select an SQL Server Instance

When installing Enabler server with a named SQL server instance, Enabler will prompt you to confirm which SQL instance to use. This step does not apply for installation with default instance available or first time installation.

Instance Name	Description
MSSQLSERVER	This is the SQL server instance name used if installed by the Enabler installer, or the standalone SQL Server where 'Default Instance' is selected. .
SQLEXPRESS	SQL server instance name installed as part of the Visual Studio Express or using a standalone SQL Server Express installer where instance name is left as default The Enabler will use SQLEXPRESS if the default MSSQLSERVER instance is not found.

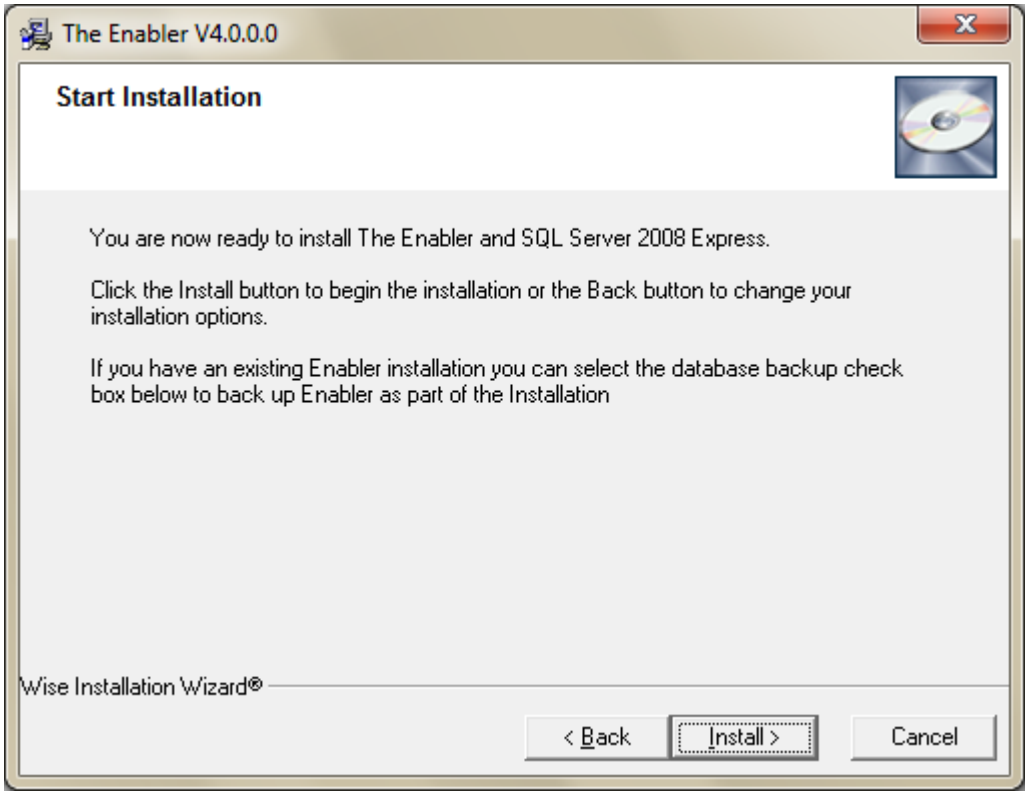


As shown below, the installer will prompt you for the SQL instance name if it cannot automatically retrieve a list of the available instances. MSDE 2000 installation cannot display instance names.



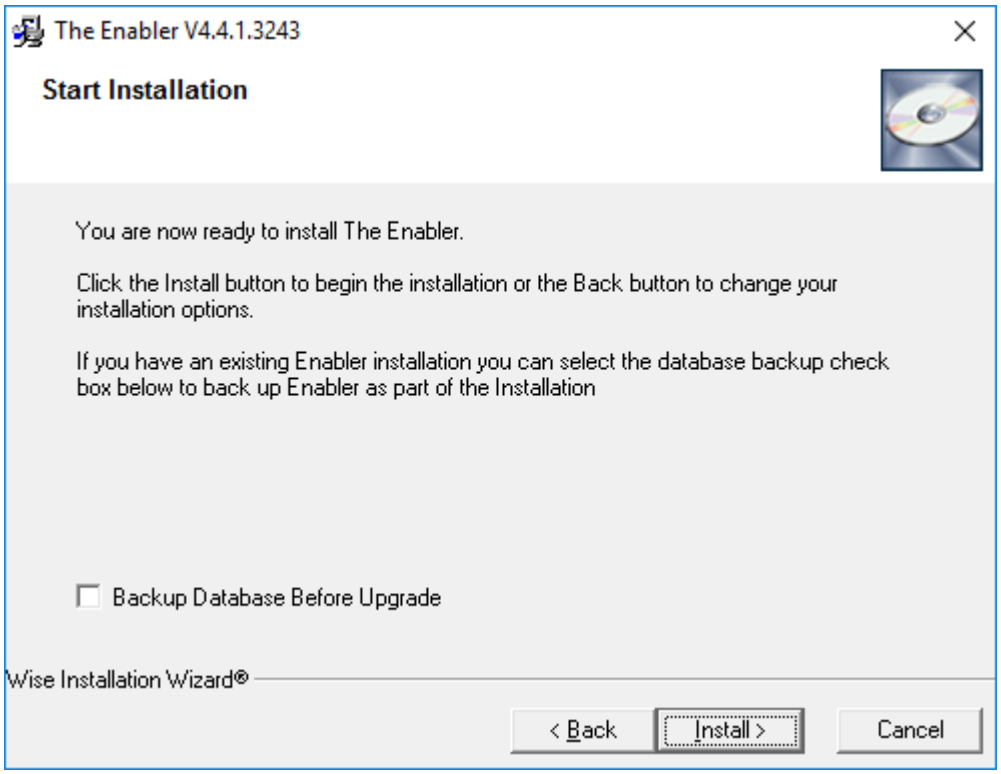
Step 7 Start Installation screen (New Install)

The last prompt screen before installation begins, click Install to confirm and install Enabler software package.



Step 7 Start Installation (Upgrade)

When upgrading the Enabler installation offers the option to “Backup Database Before Upgrade” before proceeding:



Selecting the backup database option will create a backup database dump “DMP” file in “C:\EnablerDB” using the following naming convention:

```
C:\EnablerDB\Enabler_YYYYMMDD.dmp
```

Where: YYYYMMDD represents today’s date.
For example: “Enabler_20120314.dmp”.

The database dump file can be used to restore the database in the event of rolling back the Enabler installation.

Step 8. Installing the default SQL Server (Enabler Server Install Only)

For Enabler server installs where no SQL Server was preinstalled, the SQL setup program will now run.

If an SQL Server was already installed this will be skipped.

The following SQL Server pre-requisites will be installed automatically:

- Microsoft Windows Installer 4.5 / 3.1(need to restart).
- Microsoft .Net Framework 3.5 SP1 / 2.0 SP2.
- Other SQL Server Express Editions supporting components.

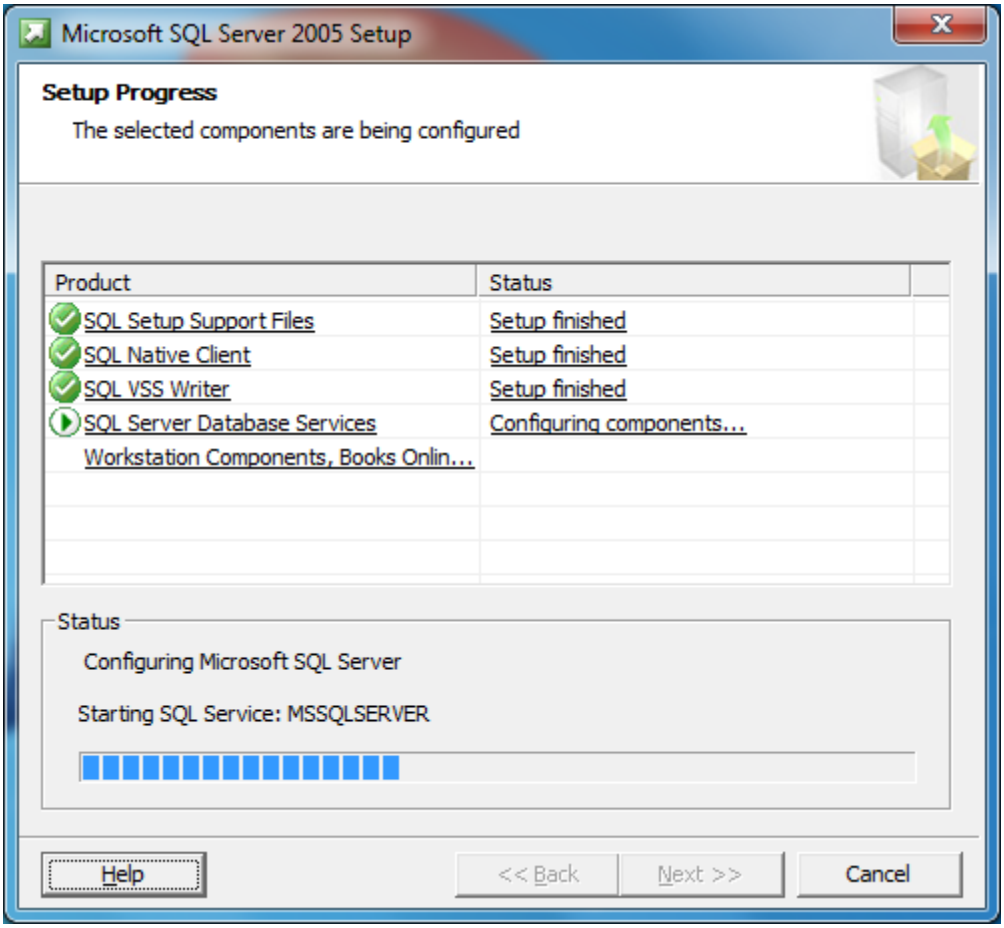
NOTES:

1. For Windows 8 and 8.1, refer to the section **Windows 8 and 8.1 Known Issues** about .NET framework installations.
2. For Windows Server 2012R2, refer to the section **Windows Server 2012R2 Known Issues** about .NET framework installations.

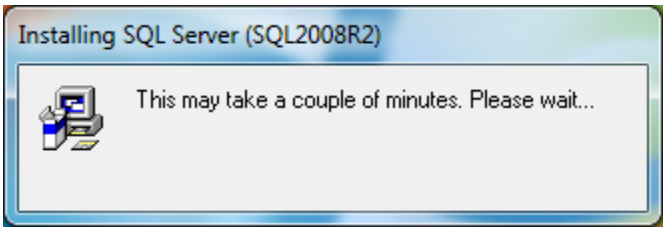
SQL Server 2012 prerequisites cannot be installed automatically as it may require Windows Operating Service Packs to be installed manually. Refer to the Appendix for further information.

The complete Enabler installation including prerequisites, SQL server and Enabler will normally take several minutes depending on existing hardware specifications; currently pre-installed software prerequisites; and the target Windows operating system.

SQL Server 2005 cannot be installed silently or in the background so the following progress screen is displayed during installation.

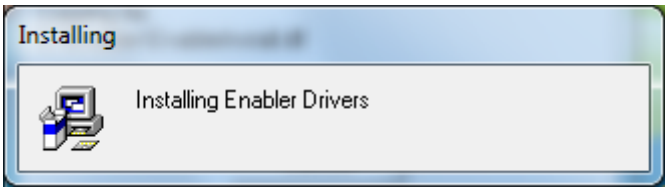


For SQL2008R2installation the dialog below is shown instead (similar dialog for SQL2012):

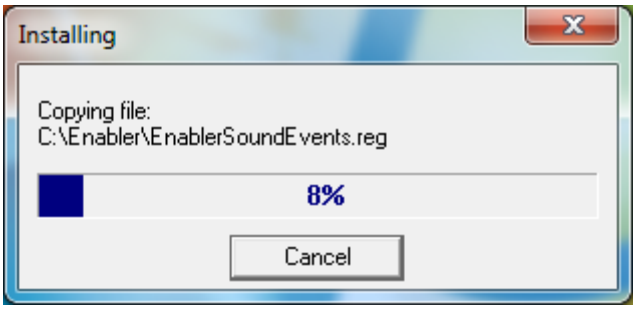


Step 9. Installing Enabler Files

On Windows Vista, 7, 8/8.1 and Server 2012R2 you will be prompted to permit installation of the Enabler device driver. We recommend you tick the box 'Always trust software from Integration Technologies Limited' for your convenience.
Then click the install button:

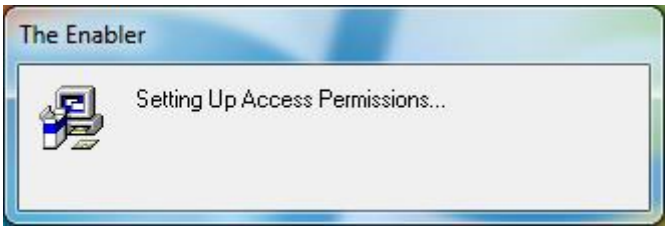


An installation progress dialog is displayed during the installation of the Enabler:



Step 10: Updating Configuration

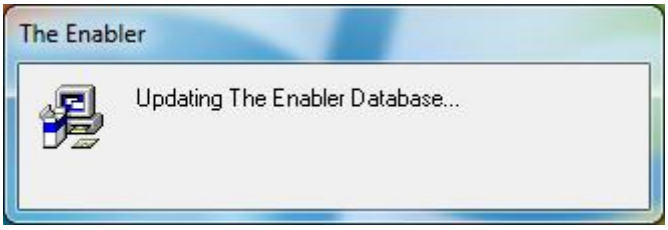
Once the file installation is completed, a dialog box will be displayed while the Windows System Configuration[2] is updated.



Step 11. Updating the Enabler Database

The Enabler database will now be created or upgraded.

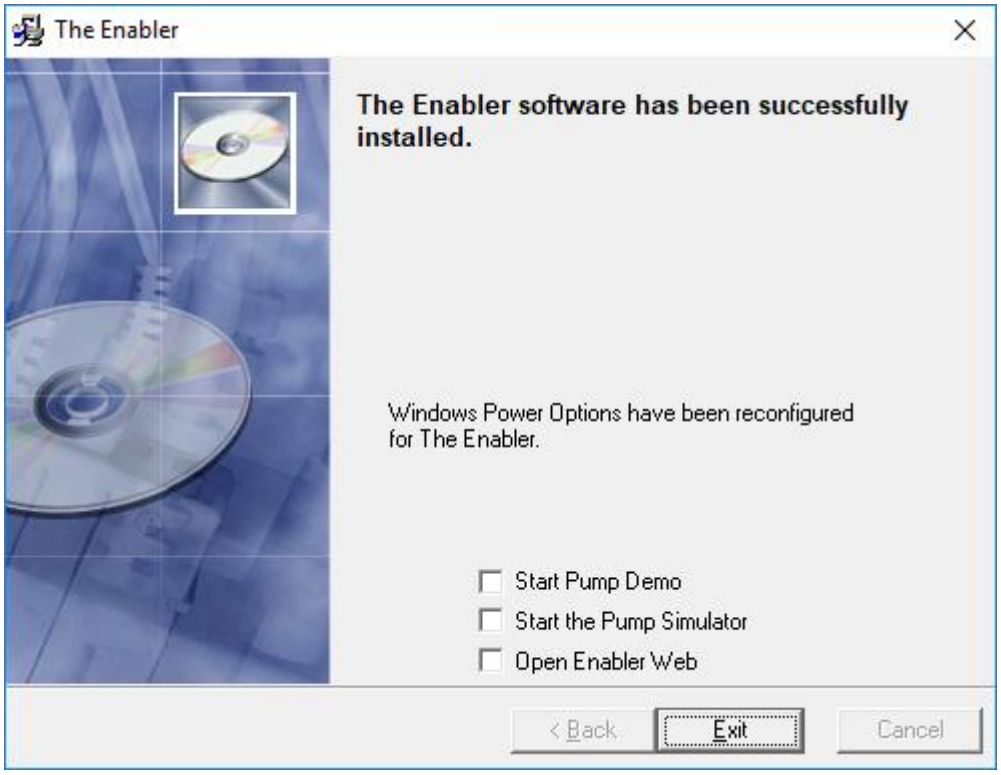
[2] The Windows Registry



Step 12. Completed Installation

When done the installer will show the screen below to indicate that the installation is complete. If you have not fitted or setup the Enabler Card hardware yet, this screen will include a reminder that this needs to be done.

Please note that the options in the screenshot below to start Pump Simulator (MPPSim) and the Demonstration Application (Pump Demo) are only available when installing SDK components.



NOTE: Do I need to restart the computer after installing the Enabler?

After the install has completed you need to restart the computer in the following situations:

A) If upgrading from any Enabler version before V4.0 – to ensure that the Enabler PCI/Express card device driver is reloaded and database backup scripts run correctly.

B) If Hibernation or Fast Startup was enabled – the installer reconfigures Windows Power Options and a restart is required to disable Fast Startup.

C) For new installs on 64-bit systems – to ensure the Enabler PCI/Express card device driver is correctly loaded.

D) For systems using the Enabler E, this restart may no longer be required.

NOTE: Client access to Enabler Server Database

By default, Enabler client computers may not be able to connect to the SQL Database on the Enabler Server. If you encounter problems please refer to ODBC section of the FAQ on our website:

http://www.integration.co.nz/FAQ-ClientServer.htm

NOTE: Windows Power Option changes for Server installation

From Enabler v4.6.1 onwards, the following Power Options are disabled during the installation:

- Windows Fast Startup.
- Windows System Sleep.
- Windows System Hibernate.

These settings must be disabled for reliable operation of all versions of the Enabler.

3.2 Windows Firewall

The Enabler install will modify Windows Firewall configuration to allow access to the Enabler Pump Server and Web Server. These settings can be edited manually:
Control Panel -> Windows Firewall:

Enabler Pump Server
Enabler Web Server

To manually change Firewall configuration to Enabler Pump and Web server:

1) Go to Control Panel\System and
2) Tick Security\Allow a program through Windows Firewall.
3) Click the "Allow another program…" button.
4) Click the "Browse" button and select the program to allow access.

```
C:\Enabler\bin\psrvr4.exe
```

This is the Enabler API Server. Access through the firewall is required if you plan to use our Enabler API from another computer or device.

```
C:\Enabler\bin\EnbWeb.exe
```

This process is Enabler's web server for configuration and maintenance and must be accessible through firewall in order to be accessed from a web browser on another computer or tablet.

Depending on your site automation and security needs, we recommend you review the default rules for these applications.

3.3 Firewall Ports Required

For those using a firewall other than the Windows Firewall, the ports used by Enabler as listed below:

Port	Process	Function
8081[3]	Enabler Web	Required for web browser access from remote computers and devices.
2322	Pump Server	Required for remote client applications to use the Enabler API Used for ActiveX, .NET, Java and COM API clients.
64109	Pump Server	Required when using Enabler E on your network. Allow for TCP and UDP.

[3] This is the default port for Enabler Web Apps see Step 5 where a different port can be entered during installation.

3.4 Hardware Installation – Enabler Card

3.4.1 Enabler PCI/Express

Follow steps below to install the Enabler Card into the server computer (skip if installed):

1. Shut down the computer and disconnect the power supply cable.
2. Locate and install the PCI/Express card into an available slot.
3. Reconnect power supply cable and restart the PC.
4. Login in with an administrator level user login.
5. At the prompt of 'found new hardware wizard'.
    a. Tick.' not this time for connecting to the internet' and click next.
    b. Tick '.Install the software automatically' and click next.

3.4.2 Enabler E

Follow steps below to install the Enabler E that will be used with the server computer. The following are assumed: a) the server computer's network interface is already configured and has the correct Windows device driver; b) the Enabler Installer has already been installed into the server computer: and c) a DHCP server is available on the network

1. Plugin the Enabler E directly to the server computer's network interface (for AutoIP/ZeroConfig); or to a network switch/router wherein the server computer is already plugged in (for DHCP operation)
2. Power ON the Enabler E.
3. Power ON the server computer.
4. Login to the Enabler Web Applications and go to the Cards page. Configure the Enabler E accordingly.

3.4.3 Pump Simulator

The Enabler Pump Simulator (MPPSim.EXE) and Pump Demo (PumpDemo.EXE) applications are available with Enabler SDK components installation option. The links for these sample applications can be opened from the Windows Start Menu, or directly from Enabler installation folder.

Further information about Pump simulator is available on our website.
http://integration.co.nz/FAQ-Simulator.htm

3.5 Activating Enabler Server – Not required for Clients

For EnablerV4 Desktop systems running on V4.5.0 (or newer) with an PCI/Express Card or Enabler E installed; or Enabler Embedded systems on V1.2.0 (or newer), then **Software Activation is no longer required**.

If your system is based on older software releases or has an Enabler PCI card installed, then the Enabler server still requires activation after installation (except when upgrading a previously activated V4 install).

To activate Enabler server, ensure the Primary Enabler Card is detected from the PC. If it's not installed, then refer to the instructions above – Hardware Installation:

1. Browse to the Enabler Web apps using a supported web browser:
   http://localhost:8081
   (or the port number used during the install if different from default 8081)
2. The default login is:
   username: admin
   password: admin
3. Browse to the Support -> Activation page.
4. Enter your "Integrator Code" provided by ITL.
5. Click "**Activate Online**" – this requires a working internet connection. Pump Server will restart after successful activation.

For more information about Enabler Software Activation refer to the Enabler Web Application Reference manual.

4 Automatic Installations

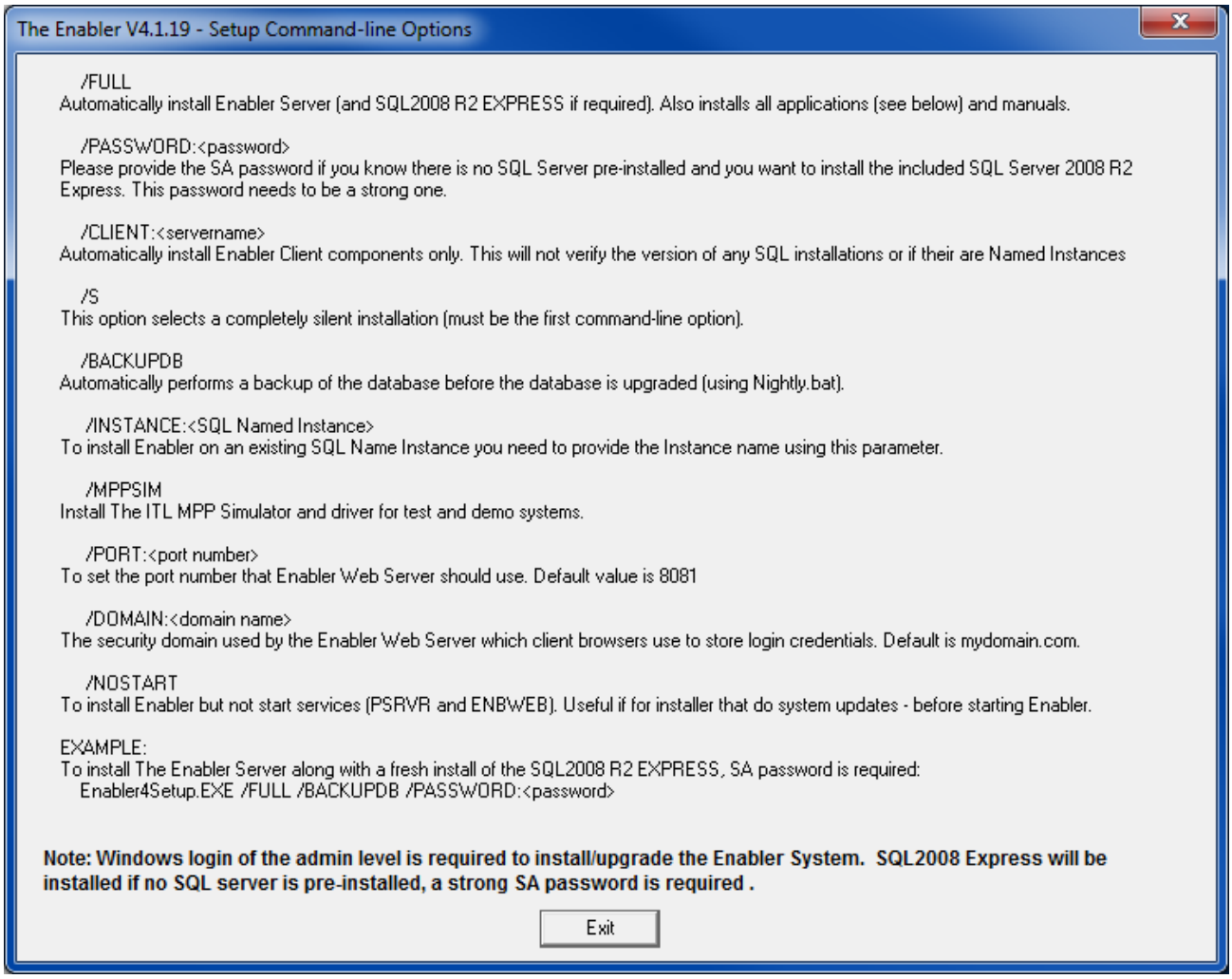
As you prepare for deployment to sites you will need to plan your system deployment strategy. Some Integrators will choose to build a standard image of the site system to clone and configure for specific sites.

The Enabler install provides an automatic install options if you want to run the Enabler install as part of your software install, or during construction of a standard system image.

Automatic Enabler installs are started using command-line parameters with the Enabler setup program.

To ensure you understand how these options work, we recommend you perform test installations and make sure the Enabler components you require install correctly.

Type in '**`Enabler4Setup /?`**' in Windows command prompt to display the help screen.



4.1 Example: Server Install

The following parameters can be used to control Enabler Server installations.

```
/FULL
```

Automatically installs Enabler Server (with the default SQL Server if required) and manuals.

```
/PASSWORD:<password>
```

The SA password is required when the SQL Express database needs to be installed. This password is not recorded in any installation log files.

This SA password is not required for upgrades

4.2 Example: Client Install

The following parameters can be used to control Enabler Client installations.

```
/CLIENT
or
/CLIENT:<servername>
```

This selects installation of the Enabler Client components only. The name of the computer where the Enabler Server software is installed can be specified.

The /INSTANCE parameter is used but not validated for client installations.

If the name of The Enabler Server is not specified, the default name 'SERVER' is used. Refer to the following FAQ on our website regarding Client to Server connectivity:

http://www.integration.co.nz/FAQ-ClientServer.htm

For example, use the options below to automatically install The Enabler Client using the computer called 'MyServer' as the Enabler Server:

```
Enabler4Setup /CLIENT:MyServer
```

4.3 Example: Silent Server Install

/S This option is used to install Enabler automatically without displaying install progress or status dialogs. This must always be the first command line option.

For example, use the options below to silently install the Enabler Server (and the default SQL Server)

```
Enabler4Setup /S /FULL
```

NOTE: The Enabler installation will not display install messages but Microsoft SQL2005 still shows an install progress dialog.

5 Branding Your Install

As an Integrator you may choose to customise Enabler installation as part of your site automation installation by updating the files outside of the Enabler Install EXE package:

```
Branding\              ←files you can modify are here
Documentation\
Driver\
SDK\
SQL2005\
SQL2008R2\
SQL2012\
SQL2014\
SQL2016\
Win\
Enabler4Setup.exe
Release Notes.htm
PumpUpdate.htm
Installation Instructions.pdf
```

The branding folder contains the following files:

Filename	Description
logo-web.png	Logo displayed in Enabler Web (top left corner).

6 Install Issues – Diagnosis

Both interactive and automatic Enabler installs produce log files for diagnosis and troubleshooting in the event of installation failure.

We recommend you use our AutoSupport tool to collect log files:
C:\Enabler\AutoSupport.exe
This is also available for download on our website:
http://integration.co.nz/support.htm

If the install fails before AutoSupport is installed, search for files with LOG extension in the Enabler installation folder (C:\Enabler), add them to a compressed folder[4] and send it to ITL support for investigation.

Return Codes

The Enabler installer returns the following values to indicate the outcome of the installation:

Return Code	Description
1	Invalid parameter This value is also returned when the '/?' parameter is used.
2	Required version of Internet Explorer was not found.
3	Cannot install from UNC path (e.g. \\SERVER\SHARE) SQL Server installation must be started from a local drive, or a mapped network drive. Installations on Windows Vista must be started from a local drive.
4	SQL Server install is required, but the install files required for SQL Server 2014 Express, SQL Server 2016 Express, SQL Server 2012 Express, SQL 2008 Express, SQL 2005 Express Edition or MSDE could not be located by the installer.
5	Database SA password incorrect.
6	Reboot required as default SQL Server installation completed successfully or System Power Settings have changed. The Enabler installation will continue automatically after reboot.
7	The default SQL Server installation failed.
8	The default SQL Server installation completed but could not access OSQL. Enabler installation will reboot and retry.
9	Failure while creating Enabler database (EnablerDB).Check INSTALL.LOG in the Enabler folder for diagnostics.
10	Failure while upgrading Enabler database (EnablerDB).Check INSTALL.LOG in the Enabler folder for diagnostics.
11	The default SQL Server was stopped during Enabler Installation – installation has failed.

[4] You can do this using WinZip or your favourite compression tool.

Return Code	Description
12	Enabler Server installation selected but the required version of Windows was not found.
13	<reserved – unused>
14	<reserved – unused>
15	<reserved – unused>
16	<reserved – unused>
17	The user running the install is not member of the local Administrators group.
18	The installed SQL version is not supported by Enabler. You must upgrade your SQL Server first and then re-run the Enabler installation.
19	Could not access the SQL Server to complete the installation. Check the instance name and server name are correct.
20	Insufficient disk space for installation.
21	<reserved – unused>
22	Failure of VC runtime (redistributable package) installation.
23	.NET 3.5 Runtime cannot be installed automatically. This error is specific to installs on Windows Server where the runtime must be installed using the Administrative Tools – Server Manager control panel.
24	Enabler API failed to install
25	Windows file system has 8dot3 name creation disabled, either run **fsutil.exe behavior set disable8dot3 2** from a command line with administrator right or change the value of **HKLM_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\FileSystem\ NtfsDisable8dot3NameCreation** to **2** to enable the name creation.
-2067922335	Prerequisites for SQL Server 2012 Express installation are not met. Please check the .NET 4.0 or higher framework is installed
-2067529676	Prerequisites for SQL Server 2012 Express installation are not met. Please check the required service pack(s) is/are installed
-2068578304	SQL server installation failed due to SQL password not meeting minimum password complexity requirement

7 Appendix – Environment and Registry

The Enabler installer creates environment variables and registry keys that can be used to locate server or client components. Registry keys are added to the 32-bit registry at:

HKEY_LOCAL_MACHINE\Software\ITL\Enabler

Attribute	Key Name	Environment Variable
Path to install directory (default C:\Enabler)	Root	ENABLER_ROOT
Path to Enabler DB files (default C:\EnablerDB)	DatabasePath	ENABLER_DB
Path to Enabler Web files (default C:\Enabler\www)	Web	ENABLER_WEB
Path to Enabler Log files (default C:\Enabler\log)	Enabler_Log	ENABLER_LOG
Path to Enabler bin folder (default C:\Enabler\bin)	Bin	ENABLER_BIN
Name of the server[5]	ServerName	ENABLER_SERVER
Database instance name	DatabaseInstanceName	ENABLER_DB_INSTANCE_NAME

[5] For server installs this will be 'localhost'. For Client installs server name is the name entered during the installation.

8 Appendix – SQL Server Deployment Notes

Licensed SQL Server

Installation of full license SQL Server must be done before installing the Enabler and the following features and options are required for operation with The Enabler:

Mixed mode Authentication

Mixed Mode authentication is no longer required for Enabler. Select **Mixed mode authentication** only if required by other applications to connect to the database using an SQL login.

64-bit systems and WoW64 (Windows 32-bit On Windows 64-bit)

Some of the full licensed versions of SQL Server are not compatible with WoW64 on Vista Home 64-bit (Basic and Premium) or Server 2003 64-bit. The Enterprise version is only compatible with WoW64 on Server 2003 64-bit (Server 2008 is unknown).

For 64-bit operating systems, we recommend installing 64 bit version of SQL Server 2008 R2 Express Edition SP1 edition, SQL2005 Express Edition SP2 or SQL Server 2012 Express SP1.

SQL 2016 Express Edition

SQL Server 2016 Express can only be installed on 64 bit Windows 8/8.1 and 64 bit Windows 10 Operating systems.

If both the SQL Server 2014 and SQL Server 2016 Express folders are available on install, the installer will still default to SQL Server 2014. If you want to install SQL Server 2016, then rename/delete the SQL Server 2014 folder.

SQL Server 2016 installations may require the system to be updated with Windows Update if the minimum requirements are not met. The installer will check the system and the following dialog is shown:-

SQL 2012 Express Edition SP1

SQL Server 2012 Express requires **Windows Operating Service Packs** in addition to .NET 4.0. These Service Packs need to be installed first.

- Windows Vista Service Pack 2
- Windows 7 Service Pack 1
- Windows Server 2008 Service Pack 1

For Windows 7 (32/64) and Server 2008, **Windows Update** can be used to ensure that SQL Server 2012 Express software prerequisites are installed automatically.

For Windows Vista (32/64), using **Windows Update** is not sufficient as it does not install Service Pack 2 and .NET 4.0. Both of these components need to be manually installed.

Please refer to the additional notes below for detailed limitations and points for SQL Server 2012 Express.

NOTE:

- Itanium processor is not supported by SQL Server 2012 Express
- Windows XP/2000 does not support SQL Server 2012 Express
- SQL Server 2012 Express documented requirements specifies that Powershell 2.0 as a prerequisite. However, our tests indicate that installing Service Pack 2 and .NET 4.0 is sufficient for Vista 32/64 bits. If unsure, please install Powershell 2.0 from Windows Update.
- SQL Server 2012 Express installation may take several minutes.

SQL 2008 R2 Express Edition SP1

SQL Server 2008 will require Windows Installer (MSI) 4.5 and .NET framework version 2.0 Service Pack 2. This can only be installed by installing .NET framework version 3.5 with Service Pack 1. These are on the install CD and will be installed if required. The SQL Server Administrator (SA) password needs to be specified. SQL Server 2008 is not supported in Windows 2000.

NOTE:

- SQL Server Administrator password (SA) is required for installation
- Windows 2000 does not support SQL Server 2008
- The .NET framework version 2.0 SP2 is included with Windows 7 and Windows Server 2008. In Windows Server 2012R2 is also installed but disabled by default.
- SQL Server 2008 on a 64 bit system requires the updated SQL Server 2008 R2 native client driver. See our website database FAQ page for more information. http://www.integration.co.nz/FAQ-Database.htm

SQL 2005 Express Edition SP2

SQL Server 2005 requires Internet Explorer 6 and MDAC 2.8 to install on Windows 2000 SP4. It also requires Windows Installer (MSI 3.1) and .NET framework version 2.0.
If installing on Windows Vista 64-bit new the latest updates from Microsoft should be installed first. The MSI installer for SQL Server requires Windows Installer (MSI 3.1), .NET framework 2.0 and Windows updates applied first.

SQL Server on Windows Vista

The Enabler installation files must be located on local folder (actual target computer hard disk or CD-ROM or USB drive). SQL Server installation fails when run from a network location or a mapped network drive.

Pre-SQL 2005 Express SQL Servers

We do not recommend installing Enabler with SQL Servers older than SQL Server 2005 Express (e.g. MSDE2000, SQL Server 2000, etc.). We recommend upgrading SQL Server before installing the Enabler.

SQL Server on Windows 7

Microsoft recommends SQL 2005 Service Pack 3 as minimum in Windows 7. However, we found that MSDE 2000 and SQL Server 2005 Express SP can be installed in Windows 7.

SQL Server on Windows Server 2012R2

Installation of SQL 2005/2008R2/2012/2014/2016 is successful provided a strong SQL password in entered during Enabler installation. A SQL password that is not strong enough will cause Enabler Installation to fail (refer section 1.1 Operating System for further details).

SQL Server on Windows 10

Microsoft no longer supports SQL 2005/2008R2 on Windows 10. However, our tests show that both SQL 2005/2008R2 can still be installed and run on Windows 10.

Multiple SQL Servers

The Enabler can be installed on machines with multiple SQL Servers installed. The Enabler installs on the default instance **first** if available or on the named **SQLExpress** instance if available as second choice. Otherwise, the installer will display a list of named instance available in your system.

Upgrading SQL Server Database Files (*.DAT)

SQL Server 2016(64bit)/2014/2012/SQL Server 2008R2 are capable of upgrading older Database Files (*.DAT).
SQL Server 2008 R2 can only use and upgrade files from SQL Server 2005. If the previous installation had SQL Server 2000, then upgrade to SQL Server 2005 first.
SQL Server 2005 can upgrade files from SQL Server 2000.

CPU Architecture

In the event SQL server has issues with multi-core processors the workaround is:

- Apply the latest Service Pack from Microsoft's website;
- Temporarily change the number of logical processors to one

Detailed steps can be found in Microsoft's website below:
http://support.microsoft.com/default.aspx?scid=kb;en-us;954835&sd=rss&spid=2855