Space Details

Key:	STONEHENGE
Name:	Apache Stonehenge
Description:	
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Available Pages

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Stonehenge .NET StockTrader Documentation

Platform Information

The .NET Framework provides a base set of class libraries that can be used in general purpose programming on Windows based systems. Windows Communication Foundation (WCF) is a subset of this Framework that can be used for creating interoperable web services. WCF services can be hosted inside a .NET console application, Windows application, Windows service, or inside Internet Information Services (IIS). IIS is a component of Windows that can host web applications and web services. It is an optional component in the "Professional" versions of Microsoft's Operating Systems, and Microsoft's Windows Server Operating Systems.

Implementation Status

The .NET implementation of the Stonehenge StockTrader Sample Application is available in the trunk. It currently contains an implementation of the StockTrader Client, the StockTrader Business Service, the StockTrader Order Processor Service, and the StockTrader Configuration Service. A patch implementing claims-based security has also been made available.

Documentation Map

.NET Utilities List

The following is a list of utilities that may be useful when installing the .NET StockTrader Application. These utilities can be found in the setup_utilities/Util folder

Certificates

Filename	Description
BSLClient.pfx	This is the certificate for the Business Service
OPSHost.pfx	This is the certificate for the Order Processing Service
stocktraderpfxfile.pfx	This is the certificate for the Trade Web Client

Scripts

Filename	Description
AuthorizeWcfServices.bat	This script creates a URL Reservation in the network configuration and grants permission to the Certificates this allows the WCF services to be run without elevated priveleges. This script requires the download and installation of the Windows Resource Kit
installevents.cmd	Used to create an EventSource in the EventLog. *This is not currently used by the .NET StockTrader application, but may be used in the future.*
installevents64.cmd	Same as installevents.cmd for an x64 Environment
installnewevent.cmd	Used to create an EventSource in the EventLog. *This is not currently used by the .NET StockTrader application, but may be used in the future.*
installnewevent64.cmd	Same as installnewevent.cmd for an x64 Environment
runappcmd.cmd	This script is used to enable the WCF ports on the Trade Web Client
servicemodelreg.cmd	If you install ASP after .NET 3.5 you may need to run this script to setup the ASP.NET correctly to work with WCF
servicemodelreg64.cmd	Same as servicemodelreg.cmd for an x64 Environment

* These scripts are meant to be used as a guide. Users should be comfortable troubleshooting them on their own.

Misc

Filename	Description
SampleMakeCertificateWithPrivateKey_Commands.txt	This file contains the commands need to create the certificate. Use this as a guide if you need to create certificates for your own application.

Stonehenge .NET StockTrader Express Requirements Install Guide

This page last changed on May 04, 2009 by bendewey.

Overview

There are a few requirements that are needed in order to run the .NET StockTrader application. This document is meant to serve as an express install guide. The goal is to reduce any barriers for someone who may not have the .NET products installed on their machine. After completing the steps in this document refer to the Install Guide for the remainder of the documentation.

The following is a list of requirements as stated in the Install Guide. These requirements can be installed individually, but this document focuses on using the Web Platform installer, which will install the all of these items in one process.

- Internet Information Server (IIS) - Web Service Role with Static Content feature enabled
- Install .NET 3.5 SP1
- Install SQL Server 2008 with mixed mode authentication
- Install ASP.NET 3.5
- Install Visual Studio 2008 or Visual Web Developer Express 2008

Web Platform Installer

1. Download the latest version of the Microsoft Web Platform Installer from http://www.microsoft.com/web/downloads/platform.aspx. This document was created using version 2.0 Beta.
2. Run the Web Platform Installer. This will open a Wizard that allows you to select the products that you would like to install on your machine.
3. Select the Web Platform tab on the left
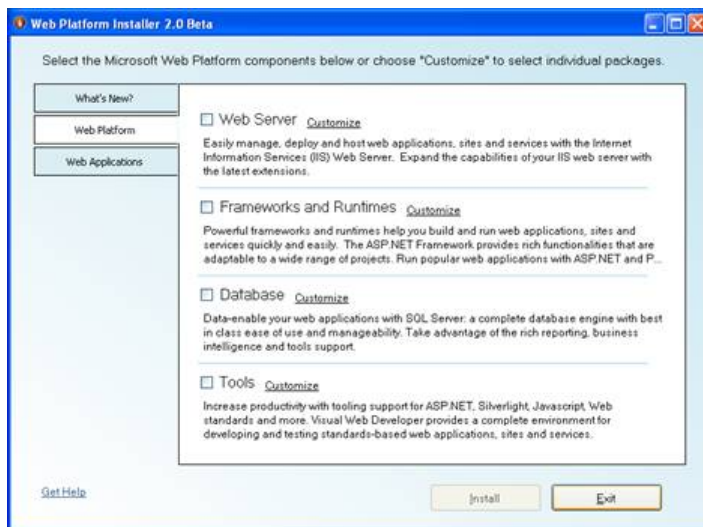
4. Select Internet Information Server (IIS)
   a. Click Customize next to Web Server
   b. Under the Core Web Server category, check IIS. The version number will depend on your operating system.
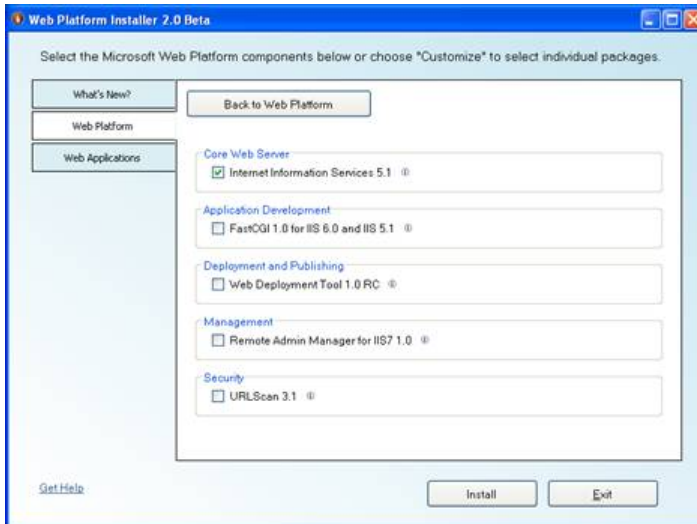
      c. Click Back to Web Platform
5. Select .NET 3.5 Framework SP1
      a. Click Customize next to Frameworks and Runtimes
   b. Under the .NET Framework category, check .NET Framework 3.5 SP1
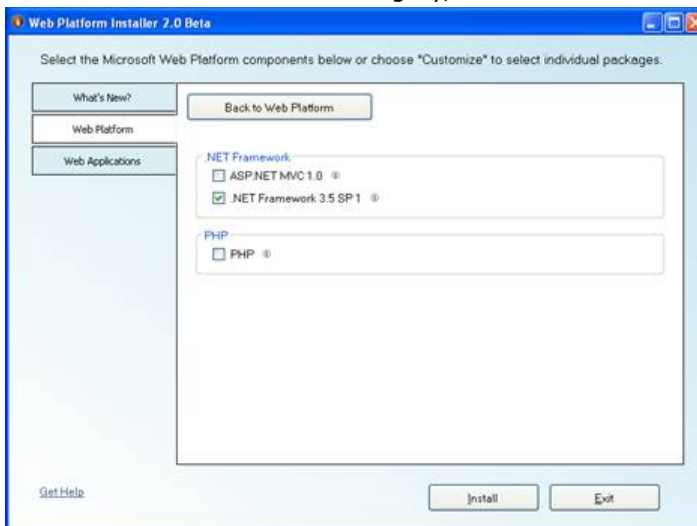
      c. Click Back to Web Platform
6. Select SQL Server with Management Studio
      a. Click Customize next to Database
      b. Under the SQL category, check SQL Express 2008, SQL Server 2008 Management Studio Express, and SQL Server 2008 Management Objects
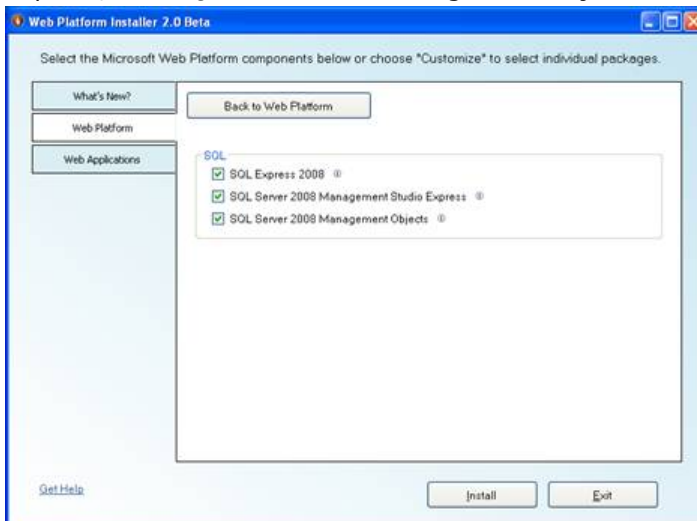
c. Click Back to Web Platform
7. Select Visual Web Developer Express
    a. Click Customize next to Tools
    b. Select Visual Web Developer 2008 Express with SP1
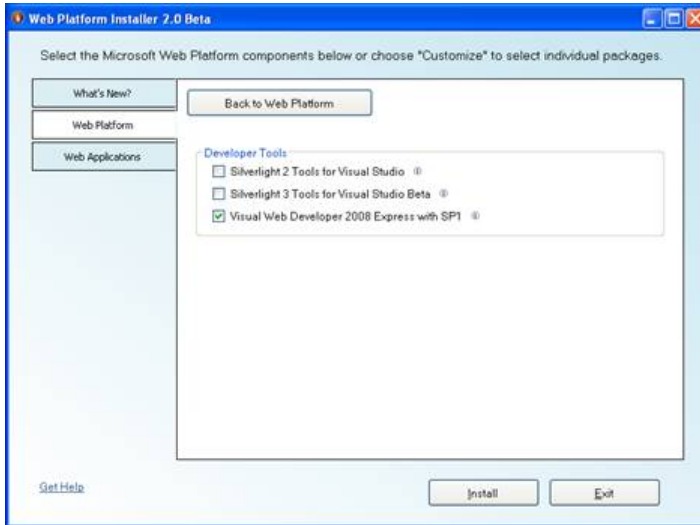

c. Click Back to Web Platform
8. Click Install
9. You should receive a License Agreement for all the products you are installing. Read the information, Click View License for more details on any particular license, when you're ready click I Accept
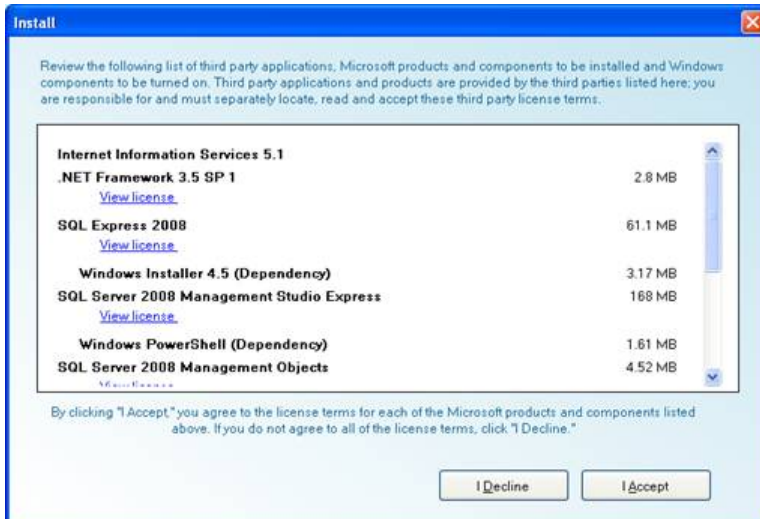
10. You will then be prompted to choose the Authentication Method of SQL Server. Choose Mixed Mode, and enter the password for your sa account.
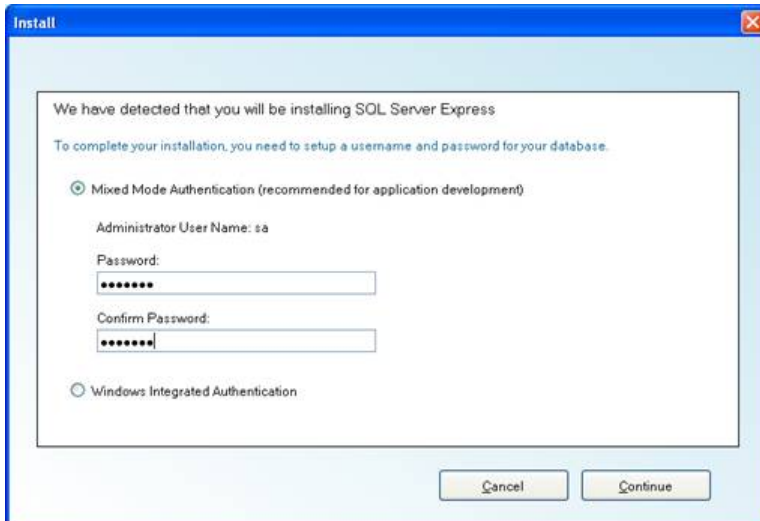
11. Click Continue
12. Web Platform Install will begin Downloading and Installing your development environment.
13. You may be asked to Restart your machine. After your computer turns back on it should automatically continue installing.
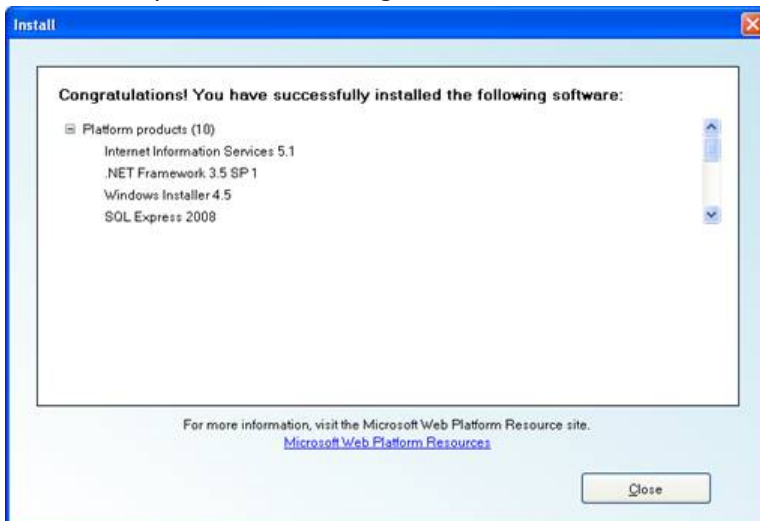
14. When the installation completes you should receive a successfully installed notification. Click Close.
15. You have now completed the Express Install. You should have all the StoneHenge .NET requirements installed. You can close the Web Platform Installer by clicking Exit.

This page last changed on Jul 24, 2009 by avantika.

Getting Started

Stonehenge .NET StockTrader for Apache is a subset and fork of Microsoft's .NET StockTrader Sample Application on MSDN. The original StockTrader can be used as a reference. It is located at http://msdn.microsoft.com/en-us/netframework/bb499684.aspx. A main difference is that this version does NOT include the configuration management features of the MSDN .Net StockTrader. Configuration is done manually. The expected audience is an experienced developer with knowledge of C# and SOA with WCF.

Installing the Stonehenge/Apache .Net StockTrader Application

1. Get software from https://svn.apache.org/repos/asf/incubator/stonehenge/trunk/stocktrader/dotnet/
    a. It is recommended that you use Tortoise (http://tortoisesvn.net/) to download the entire source tree to C:\StockTraderDemo.
2. Install Prerequisites, if you don't have these requirements you can follow the Express Requirements Install Guide
    a. Internet Information Server (IIS) - Web Service Role with Static Content feature enabled
    b. Install Visual Studio 2008 or Visual Web Developer Express 2008
    c. Install .NET 3.5 SP1
    d. Install ASP.NET 3.5
    e. Install SQL Server 2008 with mixed mode authentication
        i. Enable the sa account with a password. You will need the password for sa later.
        ii. If SQL Server 2008 is already installed without mixed mode authentication and/or sa is disabled:
            i. Open the SQL Server 2008 Management Studio
            ii. Connect to SQL Server using windows authentication
            iii. Right click the server name and choose properties
            iv. Go to security tab. Change server authentication to "SQL Server and Windows Authentication mode"
            v. Click OK and restart SQL Server
            vi. Go to SQL Server 2008 Management Studio
            vii. Expand the server and choose security and expand logins
            viii. Right click on sa, from properties modify the password and confirm password
            ix. If you setup IIS before this you may need to run setup_utilities\util\servicemodelreg64.cmd (or servicemodel.cmd if you run 32 bit)
            x. *Optional:* You may want to enable network discovery so you can browse to shares with code. This may not be needed for a single server install but if you are going to use more than one machine then this is a good option.
3. Seed the database and create accounts
    a. Open the solution setup_utilities\SetupActions\SetupActions.sln
    b. Open the App.config in your solution. When you build the project this will be renamed to [program name].exe.config.
    c. If you checked-out the solution to a different directory then C:\StockTraderDemo, then update the **installPath** setting with the proper path.
    d. Set the **dbserver** key to point to your MSSQL instance. You might be able to set it to **"."** for the simplest case. If you use SQLExpress or a named instance it will be different (eg. **".\SQLExpress"**).
    e. Set the right **dbPassword** for the sa account.
    f. Run the project
    g. Press any key when the SetupActions has completed.
4. Open ports 8000 and 9000 on your firewall.
    a. Control Panel->Windows Firewall->"Allow a program through the fire wall"
    b. You will get to a dialog, choose exceptions Tab
    c. Click Add Port
    d. Name it "8000" and put 8000 in the port Number field
    e. Repeat for 9000

5. Setup the website under IIS
   a. In IIS manager
   b. Right-click Default Website and choose Add a Virtual Directory
   c. Enter **trade** as the alias.
   d. Select trader_client\trade as the physical path
   e. If your running vista, right-click the virtual directory and choose Convert to Application.
6. Install the Test Certificates
   a. Install three certificates: setup_utilities\Util\ stocktraderpfxfile.pfx, BSLClient.pfx, OPSHost.pfx
   b. Run mmc
   c. In mmc go to File -> Add/Remove Snap-in...
   d. Add Certificates and select Computer Account and choose Next then choose Finish.
   e. Push Ok to return to mmc
   f. Now, open the Certificates Folder, and then open the Trusted People folder.
   g. Right click on the Trusted People folder, and choose All Tasks, Import.
   h. This will bring up the Import wizard.
   i. Choose Next, then click Browse.
   j. Make sure to change the displayed file types to "Personal Information Exchange (*.pfx; *p12) file types.
   k. Browse to and select the setup_utilities\util\stocktraderpfxfile.pfx file.
   l. Click Next.
   m. You will be prompted for a password. The password is 'yyy'.
   n. Click Next, Next, and Finish to import the certificate to the \Local Computer\Trusted People certificate store.
   o. Repeat for the BSLClient.pfx and OPSHost.pfx certificates.
   p. If you are running Windows Server 2003 or Windows XP you will need to repeat these steps with the Local Computer\Trusted Root Certificate Authorities folder.
7. Build the solutions
   a. Double-click the BuidDotNet.cmd script to build the solution
   b. Binaries are copied by build to order_processor\bin\Debug, business_service\bin\Debug, trade_client\bin\Debug respectively
   c. If you specified a database instance name in the section 3, you will need to update the config files for the Config_Service to point to the proper database instance. The config files are located in the same directory as the .exe files, and they contain the extension .exe.config.
8. Run the StockTrader demo
   a. Start the Order Processor, Configuration and Business Services.
      i. Right click the RunServices.bat file and choose Run as Administrator. (Running the AuthorizeWcfServices.bat script in the \Util directory will prevent you from having to always run the services as Administrator)
      ii. Choose either a run mode of either Debug or Release.
      iii. This will start the ConfigurationService, OrderProcessorService, BusinessService console applications.

> ⚠ **Note**
>
> Console App should remain open and active (do not exit application!)

   b. In a browser, run the Web app http://localhost/trade/

Configuration

The default configuration for the .NET StockTrader Website is to use the **DotNet_Http_WcfService** for communicating with the Business Service, and **ASync_DotNet_WsHttp_MSecurity** when processing orders. For more information on configuration options see the Stonehenge Interoperability Walk-through.

Utilities

Inside the setup_utilities/Util folder you will find a number of different scripts. For more information about these scripts see the .NET Utilities List