

# Apache Stonehenge : Stonehenge .NET StockTrader Installation Guide

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## 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 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. If you are using the InProcess Access method of the .NET Website you will also need to update the database instance name in the web.config file in the Trade directory.
  8. Run the StockTrader demo
    - a. Start the Order Processor and Business Service.
      - i. Right click the RunServices.bat file and choose Run as Administrator.
      - ii. Choose either a run mode of either Debug or Release.
      - iii. This will start both the OrderProcessorService and the 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](#)