Sheaf System Programmer's Guide

Windows Installation How-To

# Installing on Windows

These notes assume that you are using Visual Studio 9.0, AKA “2008”, on 64 bit MS Vista/7.

# SheafSystem installation

You will need to know the full path to your installation of the SheafSystem. We'll refer to this as <ss\_install\_dir>. For instance, you might have:

<ss\_install\_dir> = C:\Users\<username>\SheafSystem-3.0.9

The <ss\_install\_dir> contains a subdirectory for the SheafSystem itself and a subdirectory for the SheafSystemTest module. We will refer to full path to the subdirectory containing the SheafSystem itself as <ss\_dir>. It is always of the form

<ss\_dir> = <ss\_install\_dir>/SheafSystem-<version>.

# Running the installer

First decide the absolute path to where you want the SheafSystem Programmer's Guide installed. We'll refer to that as <install\_dir> in this document. For instance, you might choose:

<install\_dir> = C:\Users\<username>\SheafSystemnProgrammersGuide

You do not have to create this folder first, but where ever you choose, make sure you have write access to it if it exists and to its parent folder if it does not. In the remainder of this document, mentally replace <install\_dir> with your chosen path.

Now, using the Windows Explorer, go to wherever you downloaded the installer to and double-click the installer file. Follow the instructions given by the installer. In particular, it will ask you "Where do you want to install?". Enter your choice for <install\_dir>.

When the installer is finished installing, it will present you with a "done" button. It takes a short time after you've pushed done to completely finish.

# Configuring the examples module

Launch CMake. CMake displays its version number in the left hand side of the title bar. SheafSystem requires at least 2.8.6. If your CMake is older, you will have to upgrade. If your CMake is new enough, proceed. Set the “where is the source code” value to <install\_dir>/examples and the “Where to build the binaries” value to <install\_dir>/examples/build. (Note that CMake uses forward slashes even on Windows.)

Now click on the “Configure” button. Tell it to create the build directory if it asks and accept the default for the "generator". Cmake will run for a moment, turn the top name/value pane red and then report an error. In the lower pane there will be an error message (in red) because it can’t find the SheafSystem. Scroll down in the name/value pane until you find “SHEAFSYSTEM\_HOME” on the left. Click on the right side of the SHEAFSYSTEM\_HOME table row, a text box with a file selection dialog button at the extreme right will appear. Click on the file selection dialog button and sellect <ss\_dir>.

Again, click configure. Cmake should now run to completion. When the message “Configuring done” appears in the output window, click the “generate” button. When the output window reports “Generating done”, you are finished, exit Cmake.

# Building and running the examples

## Setting your PATH variable

The example executables need to find the SheafSystem libraries at run time. There are two ways to do this. The sophisticated way is to put the path to your sheaf install libraries folder into your path environment variable using Control Panel/System/Advanced System Settings/Environemnt Variables before starting the Solution Explorer.

## Building the examples

Using the Windows explorer again, navigate to <install\_dir>\examples\build. Double click on the file examples.sln.

In the Solution Explorer under the "Example Targets" folder, right click on an example, right click, and select build to build the example. Right click on ALL\_BUILD and select build to build all the examples.

## Copying the sheaf libaries

The crude way to let the example executables find the SheafSystem libraries is to simply copy them to the folder the example executables are in, namely <install\_dir>/examples/build/bin/Debug-contracts.

## Running the examples

From the Solution Explorer Tools menu, select Visual Studio 2008 Command Prompt. A DOS command window will open. Change directory to <install\_dir>/examples/build/bin/Debug-contracts and run any example from the command line, for instance:

>./example1

Roughly speaking the examples should be run in order, since some require the output of earlier examples.