How to Use Sphinx

# Installation

Sphinx is the free program we use to create help files for HydroDesktop. Apparently there are a few ways of installing Sphinx. See <http://sphinx.pocoo.org/> for the latest details. There’s also an unofficial installation workflow at <http://docs.geoserver.org/trunk/en/docguide/install.html>.

The example workflow below shows one way to install Sphinx on Windows XP.

1. If it is not already installed, install Python from <http://www.python.org/download/>. I just installed version 2.7.

**Note**Afraid of Python? Don’t worry. You won’t be doing any Python programming for Sphinx. We only need Python so that we can run Sphinx.

1. Install setuptools from <http://pypi.python.org/pypi/setuptools#files>. I used the MS Windows Installer for Python version 2.7. Setuptools automatically searches the Internet for the item you want to install, installs any dependencies for the item, and installs the item itself.
2. Put Python and setuptools in your Path environment variable.
   1. Open Control Panel | System | Advanced | Environment Variables.
   2. In the User variables, select the variable named Path and click Edit. Or, if Path doesn’t exist, click New.
   3. If you clicked New in the previous step, type “Path” as the Variable name.
   4. Add the following text to the end of the Variable value, if it is not part of the value already. These locations point to where Python and setuptools (i.e., easy\_install.exe) are installed.

C:\Python27;C:\Python27\Scripts

* 1. Click OK to close the User Variable dialog, Environment Variables dialog and System Properties dialog.

1. Open a command prompt.
   1. Click Start | Run…
   2. Type cmd and press ENTER.
2. Enter the following command in the command prompt.

easy\_install sphinx

The installation can take several minutes, depending on the speed of your internet connection and the availability of the online resources that easy\_install uses. When the installation is finished, you’ll have control of the command prompt once again, and you can then close the command prompt window.

## Upgrading Sphinx

If you installed setuptools as described above, upgrading Sphinx is easy. When a new version is released (check <http://sphinx.pocoo.org> for updates), open a command prompt (Start | Run | cmd) and type easy\_install --upgrade sphinx.

# Creating a Project

Sphinx includes a quickstart utility to set up a project. The following walkthrough shows how to create a simple HTML help system for HydroDesktop.

**Please perform this walkthrough on your own local folder outside of the HydroDesktop source code folders. The HydroDesktop help project has already been created in the Documentation\OnlineHelp folder.**

1. Create a folder called “OnlineHelp” where the project will be created.
2. Open a command prompt and navigate to that folder. E.g., in the command prompt, type   
   cd C:\hydrodesktop\OnlineHelp
3. In the command prompt, type sphinx-quickstart.
4. I generally accept the defaults for all quickstart options except the following:
   1. Separate source and build directories: y
   2. Project name: HydroDesktop
   3. Author name(s): Consortium of Universities for the Advancement of Hydrologic Science, Inc.
   4. Project version: 1.0
   5. Project release: 1.0 Beta RC9
   6. Name of your master document: welcome
5. Once quickstart is finished, I right click on the Source\conf.py file that was created and click to edit the file with IDLE in order to customize some settings. Find the properties below in the conf.py file and change them accordingly.
   1. Don’t include source control system files: exclude\_patterns = ['.svn']
   2. This uses a Visual Studio color scheme when showing code: pygments\_style = 'vs'
   3. Shorten the title: html\_title = 'HydroDesktop Help'
   4. Show the last updated date: html\_last\_updated\_fmt = '%b %d, %Y'
   5. This prevents things like apostrophes from showing up as question marks in the web browser: html\_use\_smartypants = True
   6. We don’t have Python modules, so we don’t need a module index: html\_domain\_indices = False
   7. Showing the reST source is useful for help developers, but not general users: html\_show\_sourcelink = False  
      html\_copy\_source = False
6. Save and close conf.py.
7. For HydroDesktop, I also edited make.bat to assign the build directory to be in the Binaries\Help folder.  
   set BUILDDIR=../../Binaries/Help

At this point, you can open a command window in this folder and type make html to generate the HTML output. Next, you can tidy things up by editing the default welcome.rst file that was created, and by creating additional content.

# Creating Content

Let’s suppose that you’ve created your first Sphinx project, or that you’ve downloaded the HydroDesktop help project from the source code repository and want to add some help files. At this point, all you need to do is create or edit some reST files (the file format for Sphinx) and then use the make html command to update the output.

**Tip**The HydroDesktop help project is located in the Documentation\OnlineHelp folder.

Sphinx uses reStructured Text (reST) as its source file format. There is documentation about reST at <http://sphinx.pocoo.org/rest.html> and <http://docs.geoserver.org/trunk/en/docguide/sphinx.html>. You can also see a tutorial at <http://scienceoss.com/use-sphinx-for-documentation/>. I like to set Notepad or some other simple text editor as the program used for opening .rst files. There’s also an online editor at <http://cometdemo.lshift.net:8080>.

For more instructions about how to write reST files, see **readme Help Authors.docx**.