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SimSys Software

Installation and Setup Instructions

1. Download the archive file for each SimSys Package that is to be installed.

Go to the SimSys Software Forum and login using your username and password at http://www.simcenter.msstate.edu/software/forum/login.php. Then select the appropriate package link from those at the top of the page. For each package that is available on the forum there are three sub-folders named *archive* (for older versions), *release* (for the current release), and *special* (for special files if available and as needed). Each folder will contain SimSys Package archive files that are self-contained and include all files for a working system. Also, each folder contains descriptive documents such as this one, including README.pdf, LICENSE.pdf, and README_packages.pdf.

2. Create a SimSys installation directory.

Create an installation directory for all SimSys Packages, such as "*simsys*". Future upgrades can be installed over existing files or multiple directories can be used for each release/upgrade, e.g. *simsys_release, simsys_sept_rel, simsys_july_rel*, etc. If multiple people will be accessing the files, then a global location would be best. The installation directory is static after the files are installed. There is no need for individual users to write within the installation directory.

3. Install the SimSys Package files.

The following Linux/MacOSX terminal commands will extract the SimSys Package files.

cd *simsys* (or other installation directory)
tar -zxvpf location_of_package_tar_files/package_archive_file

Repeat the command for each package file. Alternatively, you can do the equivalent using the GUI on Linux, MacOSX, or Windows systems. On Windows the files use zip compression. After installing the files, the following directories should exist.

bin/	executables along with dynamic/shared libraries (if *AFLR4* is installed)
interface/sm	GUI definitions (if *SolidMesh* is installed)
*doc/*system	html-based documentation files for the overall *SimSys* system
doc/aflr2	html-based documentation files for *AFLR2* (if installed)
doc/aflr2c	html-based documentation files for *AFLR2C* (if installed)
doc/aflr3	html-based documentation files for *AFLR3* (if installed)
doc/aflr4	html-based documentation files for *AFLR4* (if installed)
doc/bloom3	html-based documentation files for *BLOOM3* (if installed)
doc/sm	html-based documentation files for *SolidMesh* (if installed)
doc/ug_io	html-based documentation files for *UG_IO* input/output files
doc/uvmap	html-based documentation files for *UVMAP* (if installed)

Similar directories may be added in the future that follow this same directory structure. The above directories are included in standard package files and contain all files required to run a particular code.

4. Configure the SimSys installation.

You can configure your installation multiple ways to suit your local situation. A short list of alternative means of configuring the SimSys installation follows.

a. Add the location of the *bin/* directory to your system environment PATH, e.g. *path.../simsys/bin*.
b. Make links (*ln –s* on Linux or MacOSX) to the contents of the *bin/* directory (no need to link the subdirectory *dlib/* or its contents) in a directory that is already in the environment PATH.
c. Move or copy the contents of the *bin/* directory to a directory that is already in the environment PATH.

To run a specific program, after configuring your system, use the command line with the name of the specific software followed by options. For example, to test the installation and display a usage summary for *AFLR3,* or any of the other available programs, enter the following command line statement.

aflr3 -h

If you have an existing SimSys installation and want to test new versions before replacing the files, then install the new version in another location. You can then access those files using the version directory option. For example, to run another version of AFLR3 that is in directory */other_version...* then use the following command.

aflr3 -v /other_version... [options]

5. View documentation.

A script is also provided to open the system documentation main page. Enter the following command line statement to use this script.

simsys_doc

Alternatively, or if the script does not work with your systems then you should point your browser to the system documentation main page file path.../simsys/doc/system/index.html. The system documentation main page has links to all the overall system related information as well as links to documentation for specific packages.

Note that if you chose to move the contents of the *bin/* directory to a directory that is already in the environment PATH (alternative 4. c. above) then the *simsys_doc* script cannot be used as it will not know the actual location of the *doc/* directory (the script assumes that *bin/* and *doc/* have the same root).

6. Additional comments.

The executables (and scripts) located in the *bin/* directory use a naming that is the same as that of the program name. On Linux and MacOSX the executables do not have a suffix if a script is not required. On WINDOWS the executables always have an *.exe* suffix. Names and comments for most of the SimSys programs and scripts are listed in the following table.

Linux/MacOSX name	**WINDOWS name**	**Description**
simsys_doc	*simsys_doc.bat*	Script (*/bin/sh* shell or Windows *batch* file) to open system main documentation page.
aflr2	*aflr2.exe*	*AFLR2* executable (with BL).
aflr2c	*aflr2c.exe*	*AFLR2C* executable (with anisotropic adaptation).
bsurf2	*bsurf2.exe*	*BSURF2* 2D edge grid creation executable.
xplt2	*N/A*	*XPLT2* X-window display for 2D meshes executable.
aflr3	*aflr3.exe*	*AFLR3* executable.
aflr3_l	*aflr3_l.exe*	*AFLR3* executable with 64-bit integers.
aflr4	*aflr4.exe*	*AFLR4* executable.
bloom3_l	*bloom3_l.exe*	*BLOOM3* executable.
bloom3	*bloom3.exe*	*BLOOM3* executable with 64-bit integers.
ugc	*ugc.exe*	*UGC* executable.
ugc_l	*ugc_l.exe*	*UGC* executable with 64-bit integers.
uvmap	*uvmap.exe*	*UVMAP* test program executable.
sm	*N/A*	*SolidMesh /bin/sh* shell script required to set the SOLID_MESH_SETUP_DIR environment variable. This variable must be set to the location of the interface/ directory, e.g. path.../simsys/interface/sm. The script can be eliminated if that is made part of your standard environment. The script runs the executable *sm.exe.* Run *SolidMesh* using the script name *sm* or the executable name *sm.exe* if the SOLID_MESH_SETUP_DIR environment variable is set.
sm.exe	*N/A*	SolidMesh executable.
checkgrid	*N/A*	*GRID_TOOLS checkgrid* executable.
grid_tool_name	*N/A*	*GRID_TOOLS grid_tool_name* other executable.
name	*name.exe*	*NAME* other SimSys standard executable.
name_l	*name_l.exe*	*NAME* other SimSys standard executable with 64-bit integers.