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Chapter 1

Software Platform Procurement Procedures

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(In collaboration with Dr. Han Yang and Mr. Hexiang Wang)
1.1 Chapter Summary and Highlights

1.2 Real-ESSI Program Executables Download and Install

Executables for the Real-ESSI Simulator program (Jeremić et al., 1989-2020) are available online. Pre-built executables are available for Linux, Ubuntu 18.04, and can be downloaded and installed by analyst.

In order for prebuild executables to be able to run on a user/analyst computer, system libraries have to be brought up to date and additional libraries installed. System libraries update/upgrade:

```
sudo apt-get update
sudo apt-get upgrade
sudo apt-get dist-upgrade
sudo apt-get autoremove
```

For sequential and/or parallel version of Real-ESSI, additional libraries are needed, as described below:

**Sequential Version of Real-ESSI Program.** Libraries required to be installed for using sequential version of the Real ESSI program:

```
sudo apt-get install libboost-all-dev
sudo apt-get install libhdf5-dev
sudo apt-get install libtbb-dev
sudo apt-get install libssl1.0.0
```

**Parallel Version of Real-ESSI Program.** Libraries required to be installed for executing parallel version of the Real ESSI program:

```
sudo apt-get install libboost-all-dev
sudo apt-get install libhdf5-dev
sudo apt-get install libtbb-dev
sudo apt-get install mpich
sudo apt-get install libopenmpi-dev
sudo apt-get install libssl1.0.0
```

1.3  Real-ESSI Simulator System Install

In addition to the Real-ESSI Program, Real-ESSI Simulator system consists of a pre-processing modules and post-processing modules. Installation of pre-processing modules is described in Chapter 207, on page 1105 in Jeremić et al. (1989-present). Installation of post-processing modules is described in Chapter 208, on page 1171 in Jeremić et al. (1989-present).

Both pre and post processing manuals are also available through the main Real-ESSI Simulator web site: http://real-essi.info/.

1.3.1  Student Manual for Real-ESSI Simulator System Install

Students at ETH, Mr. Max Sieber and Mr. Antonio Felipe Salazar created a manual for installation of the Real-ESSI Simulator system on virtual machine computers. The manual is available HERE.
Bibliography
