Installing Software From Source

REZA ETEMADI IDGAHI

FERDOWSI UNIVERSITY OF MASHHAD LINUX USERS GROUP

Build Systems

- Designed to automate the process of program compilation
  - Source code → binary code
  - Packaging binary code
  - Running automated tests

Some of the most important build systems

- Make
- CMake
- Gradle
- Apache Ant
- Apache Maven

Let’s install a software…

Just remember these 3 steps

- ./configure
- make
- make install

./configure

- Check some details about your system and required dependencies
- lots of question and a respective yes/no as the reply.
- If any of the major requirements are missing on your system, the configure script would exit and you cannot proceed with the installation, until you get those required things.
- The main job of the configure script is to create a ' *Makefile* ' . This is a very important file for the installation process.
- If there is any error the last few lines of the output would be stating the error

make

- A utility which exists on almost all Unix systems
- It requires a file named Makefile in the same directory in which you run make
- The Makefile indicates the sequence, that Linux must follow to build various components / sub-programs of your software
- The sequence depends on the way the software is designed as well as many other factors
- At last it creates the executables

make install

- Copy the executables and other required files created during the last step (make) into the required final directories on your machine
- The executable that the user runs may be copied to the /usr/local/bin so that all users are able to run the software
- Similarly all the other files are also copied to the standard directories in Linux

Thank You