DAYANANDA SAGAR UNIVERSITY
Linux Programming

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wget – Downloading Files from the Web

1. What is wget? (History, Invention, Author)

wget is a command-line tool used to download files from the internet. It was introduced around 1996 as part of the GNU Project. The primary author was Hrvoje Nikši■. The name represents 'World Wide Web – Get'. It became popular because it supports unattended downloads and works well on servers without a GUI.

2. Why wget is Useful for System Administrators

System administrators frequently need to download configuration files, patches, logs, and software packages. wget allows automation, scheduled downloads, resuming broken downloads, and retrieving files without user interaction. It works reliably over unstable network connections and supports authentication and recursive downloads.

3. How wget Works (with Example)

Example of downloading a file: wget https://example.com/file.zip The command contacts the server, retrieves the file, and saves it to the current directory.

4. Important wget Options & Flags

• -O : Saves the downloaded file with a custom name. • -c : Resumes an interrupted file download. • -r : Enables recursive downloading for websites. • --limit-rate= : Controls download speed. • --user= / --password= : Authenticates for protected downloads. For full documentation, refer to the official GNU wget manual.

gcc – GNU C Compiler

1. What is gcc? (History, Invention, Author)

gcc stands for GNU Compiler Collection. It was originally created by Richard Stallman in 1987 for the GNU Project. Initially, it was a C compiler, but it expanded to support C++, Fortran, Objective■C, Ada, and more. It is the standard compiler for Linux systems.

2. Why gcc is Useful for System Administrators

System administrators may need to compile software from source, especially open-source programs. gcc allows them to create optimized binaries, compile kernel modules, validate custom utilities, and ensure system compatibility. It is essential for building packages in many Linux

distributions.

3. How gcc Works (with Example)

Example of compiling a C program: gcc hello.c -o hello This command converts the source file (hello.c) into an executable named 'hello'.

4. Important gcc Options & Flags

• -o : Specifies the output executable name. • -Wall : Enables common warnings. • -g : Adds debugging information. • -O2 : Optimizes the compiled program. • -c : Compiles without linking. Refer to the official GNU GCC manual for a complete list of flags.