LINUX

Questions

1. You have a file with permissions -rw-r--r--, and you run chmod +x file.sh. What happens?

A: The execute (x) permission is given to all (owner, group, others) for file.sh.

Hence, it becomes -rwxr-xr-x.

1. What is the difference between chmod 744 file.txt and chmod u=rwx,go=r file.txt?

A: Both the commands represent rwxr--r--.

chmod 744 is Octal notation, and chmod u=rwx,go=r is Symbolic notation.

1. What is the sticky bit, and when should you use it?

A: Sticky bit is a special file permission that restricts file deletion and renaming of files to only the file owner, directory owner, or the root user. It's primarily used on directories like /tmp to prevent users from arbitrarily deleting each other's files, even if those files have ‘write’ permissions.

It is set using : chmod +t filename.

1. You are told to give the owner full access, group only execute, and others no permissions. What symbolic command achieves this?

A: rwx--x---

1. What is umask, and why is it important?

A: umask controls the default file permissions for newly created files and directories. The default permissions for files is 666 and directories is 777. umask value is a 3-digit octal number, which acts as a mask, preventing certain permissions from being set on newly created files and directories.

1. If the umask is 022, what are the default permissions for a new file and a new directory?

A: For files : 666-022 = 644 => rw-r--r--

For directories: 777-022 = 755 => rwxr-xr-x

1. Why is umask often set to 002 in development environments but 027 or 077 in production?

A: During development, umask is set to 002. (777-002 = 775). This means that the group has write access to the directory.

However, during production, umask is set to 027 (777-027 = 750) or 077 (777-077 = 700). This means that there is no write access to users, thus ensuring security of the data.

1. useradd vs adduser

A: useradd : low-level

adduser : high-level