

Archiving Files in Linux



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Objectives



Write-Only Files

Securing Directories

Archiving Files Using tar and star

File Compression Using gzip and bzip2



Write-Only Files

Although, not strictly archiving files, write-only files allow users to submit data to a log file without being able to read the file content



Directory Permissions

Assigning only the execute permissions to a directory restricts users to file names that they know. Adding the write and execute permissions to a directory allows users access to create files and access them by name. The key is restricting read access so users can't list directory contents.



Demo



Controlling access to files and directories
for special purposes



```
$ sudo du -sh /etc
```

```
22M /etc
```

```
$ sudo tar -cf etc.tar /etc
```

```
tar: Removing leading `/' from member names
```

```
$ ls -lh etc.tar
```

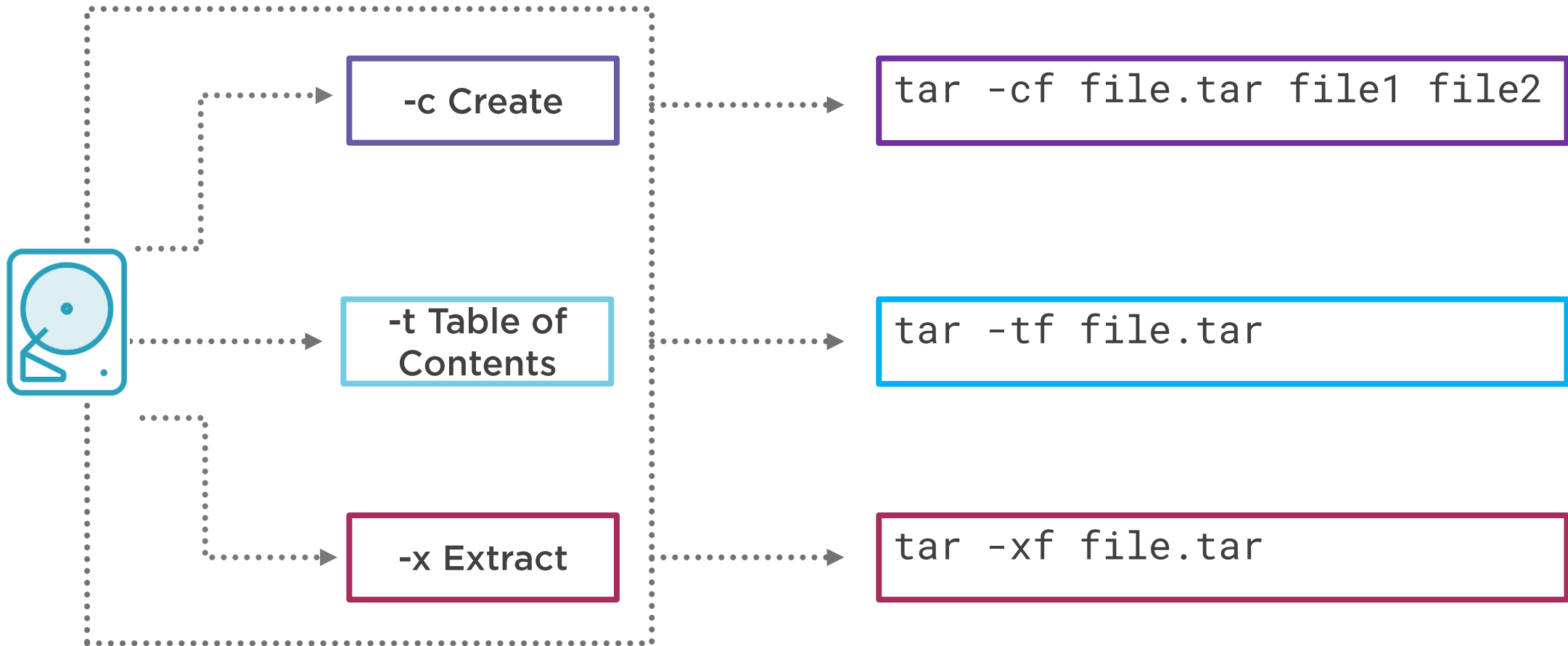
```
-rw-r--r--. 1 root root 21M Jan 18 10:49 etc.tar
```

Creating TAR Files

The command `tar` can be used to create file archives. Although, **Tape Archives**, they are more commonly used in standard filesystems. By default, a TAR file is not compressed but may appear to be a slightly small size than the original content. This is due to the more efficient use of blocks in the filesystem and not compression



Tar Operations



Demo



We will now investigate the basic tar operations



Demo



The command star is comparable to tar but has an increased option set





Various compression utilities exist in Linux

- gzip / gunzip
- bzip2 / bunzip2

These can be used independently or with tar

Creating a zipped archive

- tar -czf (gzip)
- tar -cjf (bzip2)

Demo



Compression operations from the CLI



Summary



Users can log information to a file but not read it if they have only the write permission

Users can access files in a directory that they have execute permissions. The write and execute permission allows creation of files without being able to read directory contents

The commands `tar` and `star` are used to create archives

The commands `gzip` and `bzip2` are used to compress files



You are well on your way to be a Linux Guru

