What is a job

Step 1:

A job is the unit of work that a computer operator (or a programme called a job scheduler) provides to the operating system in some computer operating systems.

Step 2:

A job could, for example, be the administration of an application programme, such as a weekly paycheck programme. When a job is run in batch mode (rather than interactive mode), it is referred to as batch processing. When time-sensitive interactive work is not being done, the operator or job scheduler provides the operating system a "batch" of jobs to do (payroll, cost analysis, employee file updating, and so on), which are conducted in the background.

What part of the operating system manages jobs?

Step 1:

The process manager quickly allocates each process to the processor so that they can all be completed in a short amount of time. When a process is running, it has complete control of the CPU. However, the OS must reclaim control of designating the next process in line at some point.

Step 2:

Process manager responsibilities include the following:

1) Handle jobs as they are entered into the system by the Job Scheduler.

2) Use the Process Scheduler to manage each process within those jobs.

What is job control?

Step 1:

Job control refers to the capacity to pause (suspend) and resume the execution of processes at a later time. This function is commonly used by a user through an interactive interface provided by the operating system kernel's terminal driver and Bash.

Step 2:

Job control refers to the management of multiple tasks or jobs on a computer system, ensuring that each has sufficient resources to perform correctly, that competition for limited resources does not result in a deadlock in which two or more jobs are unable to complete, resolving such situations when they arise, and terminating jobs that are not performing as expected for any reason.

What is the difference between running a job in the foreground and running a job in the background?

Step 1:

Processes in the foreground and background Foreground processes are those that require a user to start them or interact with them. Background processes are those that run without the intervention of a user. By default, programmes and commands execute in the foreground.

Step 2:

The foreground job is the process that is connected to the terminal. Because it can communicate with the user via the screen and keyboard, a job is said to be in the forefront.

A Unix process can be operated in the background and detached from the terminal. Background jobs cannot communicate with the user since they are not connected to a terminal. If the background operation requires user interaction, it will come to a halt and wait for the terminal to be reconnected.

Jobs that do not require user involvement while running (such as sorting a huge file) can be run in the background, allowing the user to access the terminal and continue working without having to wait for a long job to finish.

By default, programmes and commands execute in the foreground. Place an ampersand (&) at the end of the command name you used to start the process to make it run in the background.

How do you run a job in the foreground? How do you run a job in the background? How do you move a job from the foreground to the background?

Step 1:

If you want to restart a suspended job, you must first determine whether you want it to run in the foreground or in the background. Using the jobs command, find the job ID of the suspended job, and then use bg (to execute the job in the background) or fg (to run the job in the foreground) (to run the job in the foreground).

Step 2:

You must enter the command you want to run in the background, followed by an ampersand (&) symbol at the end of the command line. Run the sleep command in the background, for example. The shell returns the command's job ID (in brackets) as well as the corresponding PID.

Step 3:

Using CTRL-Z and the bg command, send the current foreground job to the background. As shown below, you can send an already running foreground job to the background: The current foreground job will be suspended if you press 'CTRL+Z.' To have that command run in the background, type bg.