5. In order to get information about previous boot and user logged sessions, use:

```
$ last
slynux   tty7         :0               Tue Sep 28 18:27   still
logged in
reboot   system boot  2.6.32-21-generic Tue Sep 28 18:10 - 21:46
(03:35)
slynux   pts/0        :0.0             Tue Sep 28 05:31 - crash
(12:39)
```

   The `last` command will provide information about logged in sessions. It is actually a log of system logins that consists of information, such as `tty` from which it has logged in, login time, status, and so on.

   The `last` command uses the log file `/var/log/wtmp` for the input log data. It is also possible to explicitly specify the log file for the `last` command using the `-f` option. For example:

```
$ last -f /var/log/wtmp
```

6. In order to obtain information about login sessions for a single user, use:

```
$ last USER
```

7. Get information about reboot sessions as follows:

```
$ last reboot
reboot   system boot  2.6.32-21-generi Tue Sep 28 18:10 - 21:48
(03:37)
reboot   system boot  2.6.32-21-generi Tue Sep 28 05:14 - 21:48
(16:33)
```

8. In order to get information about failed user login sessions, use:

```
# lastb
test     tty8         :0                Wed Dec 15 03:56 - 03:56
(00:00)
slynux   tty8         :0                Wed Dec 15 03:55 - 03:55
(00:00)
```

   You should run `lastb` as the root user.

Listing the top 10 CPU consuming processes in an hour

CPU is a major resource and it is good to keep a track of the processes that consume most of the CPU in a period of time. By monitoring the CPU usage for a certain period, we can identify the processes that keep the CPU busy all the time and troubleshoot them to efficiently use the CPU. In this recipe, we will discuss process monitoring and logging.

Getting ready

`ps` command is used for collecting details about the processes running on the system. It can be used to gather details, such as CPU usage, commands under execution, memory usage, status of processes, and so on. Processes that consume the CPU for one hour can be logged, and the top 10 can be determined by proper usage of `ps` and text processing. For more details on the ps command, refer to *Chapter 9*, *Administration Calls*.

How to do it...

Let's go through the following shell script for monitoring and calculating CPU usages in one hour:

```
#!/bin/bash
#Name: pcpu_usage.sh
#Description: Script to calculate cpu usage by processes for 1 hour

SECS=3600
UNIT_TIME=60

#Change the SECS to total seconds for which monitoring is to be
performed.
#UNIT_TIME is the interval in seconds between each sampling

STEPS=$(( $SECS / $UNIT_TIME ))

echo Watching CPU usage... ;

for((i=0;i<STEPS;i++))
do
  ps -eocomm,pcpu | tail -n +2 >> /tmp/cpu_usage.$$
```