

```
Activities Terminal 19:13 6 W
iti@iti-VirtualBox: ~
iti@iti-VirtualBox: ~
iti@iti-VirtualBox:~$ nano date.sh
iti@iti-VirtualBox:~$ cat date.sh
#!/usr/bin/env bash

while true
do
date
sleep 2
done
iti@iti-VirtualBox:~$ chmod 755 date.sh
iti@iti-VirtualBox:~$ ls -l date.sh
-rwxr-xr-x 1 iti iti 54 18:54 6 l_2 date.sh
iti@iti-VirtualBox:~$ ./date.sh
06 2023 ,l_2 EET 06:54:48 µ
06 2023 ,l_2 EET 06:54:50 µ
06 2023 ,l_2 EET 06:54:52 µ
06 2023 ,l_2 EET 06:54:54 µ
^C
iti@iti-VirtualBox:~$ ./date.sh > /tmp/date.log
^C
iti@iti-VirtualBox:~$ jobs
iti@iti-VirtualBox:~$ ps
  PID TTY          TIME CMD
  3015 pts/0    00:00:01 bash
 20064 pts/0    00:00:00 ps
iti@iti-VirtualBox:~$ cat /tmp/date.log
06 2023 ,l_2 EET 06:55:10 µ
06 2023 ,l_2 EET 06:55:12 µ
06 2023 ,l_2 EET 06:55:14 µ
06 2023 ,l_2 EET 06:55:16 µ
06 2023 ,l_2 EET 06:55:18 µ
06 2023 ,l_2 EET 06:55:20 µ
06 2023 ,l_2 EET 06:55:22 µ
06 2023 ,l_2 EET 06:55:24 µ
06 2023 ,l_2 EET 06:55:26 µ
06 2023 ,l_2 EET 06:55:28 µ
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Activities Terminal 19:14 6 W
iti@iti-VirtualBox: ~
iti@iti-VirtualBox: ~
iti@iti-VirtualBox:~$ cat /tmp/date.log
06 2023 ,l_2 EET 06:55:10 µ
06 2023 ,l_2 EET 06:55:12 µ
06 2023 ,l_2 EET 06:55:14 µ
06 2023 ,l_2 EET 06:55:16 µ
06 2023 ,l_2 EET 06:55:18 µ
06 2023 ,l_2 EET 06:55:20 µ
06 2023 ,l_2 EET 06:55:22 µ
06 2023 ,l_2 EET 06:55:24 µ
06 2023 ,l_2 EET 06:55:26 µ
06 2023 ,l_2 EET 06:55:28 µ
06 2023 ,l_2 EET 06:55:30 µ
06 2023 ,l_2 EET 06:55:32 µ
06 2023 ,l_2 EET 06:55:34 µ
06 2023 ,l_2 EET 06:55:36 µ
06 2023 ,l_2 EET 06:55:38 µ
06 2023 ,l_2 EET 06:55:40 µ
06 2023 ,l_2 EET 06:55:42 µ
06 2023 ,l_2 EET 06:55:44 µ
06 2023 ,l_2 EET 06:55:46 µ
06 2023 ,l_2 EET 06:55:48 µ
iti@iti-VirtualBox:~$ ^C
iti@iti-VirtualBox:~$ ^C
iti@iti-VirtualBox:~$ jobs
iti@iti-VirtualBox:~$ nohup ./date.sh &
[1] 20168
iti@iti-VirtualBox:~$ nohup: ignoring input and appending output to 'nohup.out'

iti@iti-VirtualBox:~$ tail -f nohup.out
06 2023 ,l_2 EET 06:57:41 µ
06 2023 ,l_2 EET 06:57:43 µ
06 2023 ,l_2 EET 06:57:45 µ
06 2023 ,l_2 EET 06:57:47 µ
```

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Activities Terminal 19:14 6 W
iti@iti-VirtualBox: ~
iti@iti-VirtualBox: ~
iti@iti-VirtualBox: $ tail -f nohup.out
06 2023 ,l,i EET 06:57:41 μ
06 2023 ,l,i EET 06:57:43 μ
06 2023 ,l,i EET 06:57:45 μ
06 2023 ,l,i EET 06:57:47 μ
06 2023 ,l,i EET 06:57:49 μ
06 2023 ,l,i EET 06:57:51 μ
06 2023 ,l,i EET 06:57:53 μ
06 2023 ,l,i EET 06:57:55 μ
06 2023 ,l,i EET 06:57:57 μ
06 2023 ,l,i EET 06:57:59 μ
06 2023 ,l,i EET 06:58:01 μ
06 2023 ,l,i EET 06:58:03 μ
06 2023 ,l,i EET 06:58:05 μ
06 2023 ,l,i EET 06:58:07 μ
06 2023 ,l,i EET 06:58:09 μ
^C
iti@iti-VirtualBox: $ jobs
[1]+  Running                  nohup ./date.sh &
iti@iti-VirtualBox: $ jobs
[1]+  Running                  nohup ./date.sh &
iti@iti-VirtualBox: $ ls
date.sh Desktop Documents Downloads Music nohup.out Pictures Public script.sh snap Templates Videos
iti@iti-VirtualBox: $ cat /lib/systemd/system/cron
cat: /lib/systemd/system/cron: No such file or directory
iti@iti-VirtualBox: $ cat /lib/systemd/system/cron.service
[Unit]
Description=Regular background program processing daemon
Documentation=man:cron(8)
After=remote-fs.target nss-user-lookup.target

[Service]
EnvironmentFile=/etc/default/cron
ExecStart=/usr/sbin/cron -f -P $EXTRA_OPTS
IgnoreSIGPIPE=false
KillMode=process
```

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Activities Terminal 19:15 6 W
iti@iti-VirtualBox: ~
iti@iti-VirtualBox: ~
iti@iti-VirtualBox: $ cat /lib/systemd/system/cron.service
[Unit]
Description=Regular background program processing daemon
Documentation=man:cron(8)
After=remote-fs.target nss-user-lookup.target

[Service]
EnvironmentFile=/etc/default/cron
ExecStart=/usr/sbin/cron -f -P $EXTRA_OPTS
IgnoreSIGPIPE=false
KillMode=process
Restart=on-failure

[Install]
WantedBy=multi-user.target
iti@iti-VirtualBox: $ nano date_serv.service
iti@iti-VirtualBox: $ cat date_serv.service
[Unit]
Description=Date script daemon
After=remote-fs.target nss-user-lookup.target

[Service]
ExecStart=/home/iti/date.sh
IgnoreSIGPIPE=false
KillMode=process
Restart=on-failure

[Install]
WantedBy=multi-user.target
iti@iti-VirtualBox: $ sudo cp date_serv.service /lib/systemd/system
iti@iti-VirtualBox: $ systemctl daemon-reload
iti@iti-VirtualBox: $ systemctl enable date_serv.service
Created symlink /etc/systemd/system/multi-user.target.wants/date_serv.service → /lib/systemd/system/date_serv.service.
iti@iti-VirtualBox: $ service date_serv status
date_serv.service - Date script daemon
Loaded: loaded (/lib/systemd/system/date_serv.service; enabled; vendor preset: enabled)
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Activities Terminal 19:16 6 W
iti@iti-VirtualBox: ~

iti@iti-VirtualBox: ~
iti@iti-VirtualBox: $ service date_serv status
date_serv.service - Date script daemon
Loaded: loaded (/lib/systemd/system/date_serv.service; enabled; vendor preset: enabled)
Active: inactive (dead)
iti@iti-VirtualBox: $ service date_serv start
iti@iti-VirtualBox: $ service date_serv status
date_serv.service - Date script daemon
Loaded: loaded (/lib/systemd/system/date_serv.service; enabled; vendor preset: enabled)
Active: active (running) since Fri 2023-01-06 19:02:48 EET; 2s ago
Main PID: 21100 (bash)
Tasks: 2 (limit: 5785)
Memory: 544.0K
CPU: 21ms
CGroup: /system.slice/date_serv.service
└─21100 bash /home/iti/date.sh
   └─21110 sleep 2

19:02:48 06 li_ iti-VirtualBox systemd[1]: Started Date script daemon.
19:02:48 06 li_ iti-VirtualBox date.sh[21101]: 06 2023 ,li_ EET 07:02:48 م
19:02:50 06 li_ iti-VirtualBox date.sh[21109]: 06 2023 ,li_ EET 07:02:50 م
iti@iti-VirtualBox: $ ps -ef|grep date.sh
root      14644      1  0 18:45 ?        00:00:00 bash /home/iti/date.sh
iti       20168    3015  0 18:57 pts/0    00:00:00 bash ./date.sh
root      21100      1  0 19:02 ?        00:00:00 bash /home/iti/date.sh
iti       21196    3015  0 19:03 pts/0    00:00:00 grep --color=auto date.sh
iti@iti-VirtualBox: $ kill -9 14644
bash: kill: (14644) - Operation not permitted
iti@iti-VirtualBox: $ sudo kill -9 14644
iti@iti-VirtualBox: $ ps -ef|grep date.sh
iti       20168    3015  0 18:57 pts/0    00:00:00 bash ./date.sh
root      21100      1  0 19:02 ?        00:00:00 bash /home/iti/date.sh
iti       21338    3015  0 19:03 pts/0    00:00:00 grep --color=auto date.sh
iti@iti-VirtualBox: $ ps -ef|grep date.sh
iti       20168    3015  0 18:57 pts/0    00:00:00 bash ./date.sh
root      21100      1  0 19:02 ?        00:00:00 bash /home/iti/date.sh
iti       21364    3015  0 19:03 pts/0    00:00:00 grep --color=auto date.sh
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Activities Terminal 19:17 6 W
iti@iti-VirtualBox: ~

iti@iti-VirtualBox: ~
iti@iti-VirtualBox: $ ps -ef|grep date.sh
iti       20168    3015  0 18:57 pts/0    00:00:00 bash ./date.sh
root      21100      1  0 19:02 ?        00:00:00 bash /home/iti/date.sh
iti       21338    3015  0 19:03 pts/0    00:00:00 grep --color=auto date.sh
iti@iti-VirtualBox: $ ps -ef|grep date.sh
iti       20168    3015  0 18:57 pts/0    00:00:00 bash ./date.sh
root      21100      1  0 19:02 ?        00:00:00 bash /home/iti/date.sh
iti       21364    3015  0 19:03 pts/0    00:00:00 grep --color=auto date.sh
iti@iti-VirtualBox: $ service date_serv status
date_serv.service - Date script daemon
Loaded: loaded (/lib/systemd/system/date_serv.service; enabled; vendor preset: enabled)
Active: active (running) since Fri 2023-01-06 19:02:48 EET; 1min 17s ago
Main PID: 21100 (bash)
Tasks: 2 (limit: 5785)
Memory: 544.0K
CPU: 301ms
CGroup: /system.slice/date_serv.service
└─21100 bash /home/iti/date.sh
   └─21387 sleep 2

19:03:47 06 li_ iti-VirtualBox date.sh[21328]: 06 2023 ,li_ EET 07:03:47 م
19:03:49 06 li_ iti-VirtualBox date.sh[21335]: 06 2023 ,li_ EET 07:03:49 م
19:03:51 06 li_ iti-VirtualBox date.sh[21343]: 06 2023 ,li_ EET 07:03:51 م
19:03:53 06 li_ iti-VirtualBox date.sh[21348]: 06 2023 ,li_ EET 07:03:53 م
19:03:55 06 li_ iti-VirtualBox date.sh[21353]: 06 2023 ,li_ EET 07:03:55 م
19:03:57 06 li_ iti-VirtualBox date.sh[21359]: 06 2023 ,li_ EET 07:03:57 م
19:03:59 06 li_ iti-VirtualBox date.sh[21366]: 06 2023 ,li_ EET 07:03:59 م
19:04:01 06 li_ iti-VirtualBox date.sh[21372]: 06 2023 ,li_ EET 07:04:01 م
19:04:03 06 li_ iti-VirtualBox date.sh[21379]: 06 2023 ,li_ EET 07:04:03 م
19:04:05 06 li_ iti-VirtualBox date.sh[21386]: 06 2023 ,li_ EET 07:04:05 م
iti@iti-VirtualBox: $ kill -9 20168
iti@iti-VirtualBox: $ ps -ef|grep date.sh
root      21100      1  0 19:02 ?        00:00:00 bash /home/iti/date.sh
iti       22085    3015  0 19:08 pts/0    00:00:00 grep --color=auto date.sh
[1]+  Killed                  nohup ./date.sh
iti@iti-VirtualBox: $ ps -ef|grep date.sh
```