

HEARTBEAT Job Using Bash

```
karthik@LAPTOP-A1S2J0I6: ~  
karthik@LAPTOP-A1S2J0I6:~$ ls  
age.sh          hello.sh          processed_machine_info.txt  q2.sh    q2a.sh  ss.sh  
file_data.txt  machine_info.txt  q1.sh             q2_a.sh  q3.sh  
karthik@LAPTOP-A1S2J0I6:~$ ls -l  
ls-l: command not found  
karthik@LAPTOP-A1S2J0I6:~$ ls -l  
total 44  
-rwxr-xr-x 1 karthik karthik 723 Feb 7 15:51 age.sh  
-rw-r--r-- 1 karthik karthik 126 Feb 14 09:11 file_data.txt  
-rwxr-xr-x 1 karthik karthik 38 Feb 3 15:22 hello.sh  
-rw-r--r-- 1 karthik karthik 401 Feb 10 16:29 machine_info.txt  
-rw-r--r-- 1 karthik karthik 342 Feb 14 09:15 processed_machine_info.txt  
-rwxr-xr-x 1 karthik karthik 1953 Feb 17 13:26 q1.sh  
-rwxr-xr-x 1 karthik karthik 1791 Feb 10 16:28 q2.sh  
-rwxr-xr-x 1 karthik karthik 1230 Feb 10 16:22 q2_a.sh  
-rwxr-xr-x 1 karthik karthik 460 Feb 10 14:52 q2a.sh  
-rwxr-xr-x 1 karthik karthik 928 Feb 14 09:00 q3.sh  
-rwxr-xr-x 1 karthik karthik 126 Feb 17 21:00 ss.sh  
karthik@LAPTOP-A1S2J0I6:~$ none heartbeat.sh  
Command 'none' not found, did you mean:  
  command 'node' from deb nodejs (12.22.9~dfsg-1ubuntu3.6)  
  command 'note' from deb note (1.3.26-3)  
Try: sudo apt install <deb name>  
karthik@LAPTOP-A1S2J0I6:~$ nano heartbeat.sh  
karthik@LAPTOP-A1S2J0I6:~$ chmod -x heartbeat.sh  
karthik@LAPTOP-A1S2J0I6:~$ ./heartbeat.sh  
-bash: ./heartbeat.sh: Permission denied  
karthik@LAPTOP-A1S2J0I6:~$ chmod -x heartbeat.sh  
karthik@LAPTOP-A1S2J0I6:~$ ls  
karthik@LAPTOP-A1S2J0I6:~$  
file_data.txt  hello.sh          processed_machine_info.txt  q2.sh    q2a.sh  ss.sh  
karthik@LAPTOP-A1S2J0I6:~$ ls -l  
total 48  
-rwxr-xr-x 1 karthik karthik 723 Feb 7 15:51 age.sh  
-rw-r--r-- 1 karthik karthik 126 Feb 14 09:11 file_data.txt  
-rw-r--r-- 1 karthik karthik 243 Mar 18 11:13 heartbeat.sh  
-rwxr-xr-x 1 karthik karthik 38 Feb 3 15:22 hello.sh  
-rw-r--r-- 1 karthik karthik 401 Feb 10 16:29 machine_info.txt  
-rw-r--r-- 1 karthik karthik 342 Feb 14 09:15 processed_machine_info.txt  
-rwxr-xr-x 1 karthik karthik 1953 Feb 17 13:26 q1.sh  
-rwxr-xr-x 1 karthik karthik 1791 Feb 10 16:28 q2.sh  
-rwxr-xr-x 1 karthik karthik 1230 Feb 10 16:22 q2_a.sh  
-rwxr-xr-x 1 karthik karthik 460 Feb 10 14:52 q2a.sh  
-rwxr-xr-x 1 karthik karthik 928 Feb 14 09:00 q3.sh  
-rwxr-xr-x 1 karthik karthik 126 Feb 17 21:00 ss.sh  
karthik@LAPTOP-A1S2J0I6:~$ chmod +x heartbeat.sh  
karthik@LAPTOP-A1S2J0I6:~$ ls -l  
total 48  
-rwxr-xr-x 1 karthik karthik 723 Feb 7 15:51 age.sh
```

```
#!/bin/bash  
  
# Define the log message  
TIMESTAMP=$(date +"%Y-%m-%d %H:%M:%S")  
MESSAGE="HEARTBEAT: System is alive at $TIMESTAMP"  
  
# Log to syslog  
logger -t HEARTBEAT "$MESSAGE"  
  
# Optional: Print t
```

```

karthik@LAPTOP-A1S2J0I6:~$ chmod -x heartbeat.sh
karthik@LAPTOP-A1S2J0I6:~$ ./heartbeat.sh
-bash: ./heartbeat.sh: Permission denied
karthik@LAPTOP-A1S2J0I6:~$ chmod -x heartbeat.sh
karthik@LAPTOP-A1S2J0I6:~$ ls
karthik@LAPTOP-A1S2J0I6:~$
file_data.txt  hello.sh      processed_machine_info.txt  q2.sh  q2a.sh  ss.sh
karthik@LAPTOP-A1S2J0I6:~$ ls -l
total 48
-rwxr-xr-x 1 karthik karthik 723 Feb  7 15:51 age.sh
-rw-r--r-- 1 karthik karthik 126 Feb 14 09:11 file_data.txt
-rw-r--r-- 1 karthik karthik 243 Mar 18 11:13 heartbeat.sh
-rwxr-xr-x 1 karthik karthik  38 Feb  3 15:22 hello.sh
-rw-r--r-- 1 karthik karthik 401 Feb 10 16:29 machine_info.txt
-rw-r--r-- 1 karthik karthik 342 Feb 14 09:15 processed_machine_info.txt
-rwxr-xr-x 1 karthik karthik 1953 Feb 17 13:26 q1.sh
-rwxr-xr-x 1 karthik karthik 1791 Feb 10 16:28 q2.sh
-rwxr-xr-x 1 karthik karthik 1230 Feb 10 16:22 q2_a.sh
-rwxr-xr-x 1 karthik karthik 460 Feb 10 14:52 q2a.sh
-rwxr-xr-x 1 karthik karthik 928 Feb 14 09:00 q3.sh
-rwxr-xr-x 1 karthik karthik 126 Feb 17 21:00 ss.sh
karthik@LAPTOP-A1S2J0I6:~$ chmod +x heartbeat.sh
karthik@LAPTOP-A1S2J0I6:~$ ls -l
total 48
-rwxr-xr-x 1 karthik karthik 723 Feb  7 15:51 age.sh
-rw-r--r-- 1 karthik karthik 126 Feb 14 09:11 file_data.txt
-rwxr-xr-x 1 karthik karthik 243 Mar 18 11:13 heartbeat.sh
-rwxr-xr-x 1 karthik karthik  38 Feb  3 15:22 hello.sh
-rw-r--r-- 1 karthik karthik 401 Feb 10 16:29 machine_info.txt
-rw-r--r-- 1 karthik karthik 342 Feb 14 09:15 processed_machine_info.txt
-rwxr-xr-x 1 karthik karthik 1953 Feb 17 13:26 q1.sh
-rwxr-xr-x 1 karthik karthik 1791 Feb 10 16:28 q2.sh
-rwxr-xr-x 1 karthik karthik 1230 Feb 10 16:22 q2_a.sh
-rwxr-xr-x 1 karthik karthik 460 Feb 10 14:52 q2a.sh
-rwxr-xr-x 1 karthik karthik 928 Feb 14 09:00 q3.sh
-rwxr-xr-x 1 karthik karthik 126 Feb 17 21:00 ss.sh
karthik@LAPTOP-A1S2J0I6:~$ ./heartbeat.sh
HEARTBEAT: System is alive at 2025-03-18 11:15:06
karthik@LAPTOP-A1S2J0I6:~$

```

Schedule the Job Using Cron

Using this cmd

Crontab -e

Add the one line end of the file

*** * * * * /bin/bash /home/karthik/heartbeat.sh**

Save and exit

```
karthik@LAPTOP-A1S2J0I6:~$ crontab -e
```

No modification made

```
karthik@LAPTOP-A1S2J0I6:~$ crontab -l
```

```
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
# To define the time you can provide concrete values for
# minute (m), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any').
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
# To define the time you can provide concrete values for
# minute (m), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any').
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
# To define the time you can provide concrete values for
# minute (m), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any').
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
# To define the time you can provide concrete values for
# minute (m), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any').
#
# Notice that tasks will be started based on the cron's system
```

```
# daemon's notion of time and timezones.
#
# Output of the crontab jobs (including errors) is sent through
# email to the user the crontab file belongs to (unless redirected).
#
# For example, you can run a backup of all your user accounts
# at 5 a.m every week with:
# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/
#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h dom mon dow  command
* * * * * /bin/bash /home/karthik/heartbeat.sh
```

```
karthik@LAPTOP-A1S2J0I6:~$ grep CRON /var/log/syslog
Feb  3 15:15:59 LAPTOP-A1S2J0I6 cron[177]: (CRON) INFO (pidfile fd = 3)
Feb  3 15:15:59 LAPTOP-A1S2J0I6 cron[177]: (CRON) INFO (Running @reboot jobs)
Feb  3 15:16:32 LAPTOP-A1S2J0I6 cron[181]: (CRON) INFO (pidfile fd = 3)
Feb  3 15:16:32 LAPTOP-A1S2J0I6 cron[181]: (CRON) INFO (Running @reboot jobs)
Feb  3 15:16:46 LAPTOP-A1S2J0I6 cron[181]: (CRON) INFO (pidfile fd = 3)
Feb  3 15:16:46 LAPTOP-A1S2J0I6 cron[181]: (CRON) INFO (Running @reboot jobs)
Feb  3 15:17:01 LAPTOP-A1S2J0I6 CRON[392]: (root) CMD ( cd / && run-parts --report
/etc/cron.hourly)
Feb  3 15:19:24 LAPTOP-A1S2J0I6 cron[180]: (CRON) INFO (pidfile fd = 3)
Feb  3 15:19:24 LAPTOP-A1S2J0I6 cron[180]: (CRON) INFO (Running @reboot jobs)
Feb  7 15:21:11 LAPTOP-A1S2J0I6 cron[179]: (CRON) INFO (pidfile fd = 3)
Feb  7 15:21:11 LAPTOP-A1S2J0I6 cron[179]: (CRON) INFO (Running @reboot jobs)
Feb  7 15:40:21 LAPTOP-A1S2J0I6 cron[178]: (CRON) INFO (pidfile fd = 3)
Feb  7 15:40:21 LAPTOP-A1S2J0I6 cron[178]: (CRON) INFO (Running @reboot jobs)
Feb 10 13:54:37 LAPTOP-A1S2J0I6 cron[179]: (CRON) INFO (pidfile fd = 3)
Feb 10 13:54:37 LAPTOP-A1S2J0I6 cron[179]: (CRON) INFO (Running @reboot jobs)
Feb 10 14:17:07 LAPTOP-A1S2J0I6 CRON[712]: (root) CMD ( cd / && run-parts --report
/etc/cron.hourly)
Feb 10 15:15:19 LAPTOP-A1S2J0I6 cron[178]: (CRON) INFO (pidfile fd = 3)
Feb 10 15:15:19 LAPTOP-A1S2J0I6 cron[178]: (CRON) INFO (Running @reboot jobs)
Feb 10 15:17:03 LAPTOP-A1S2J0I6 CRON[408]: (root) CMD ( cd / && run-parts --report
/etc/cron.hourly)
Feb 10 16:17:04 LAPTOP-A1S2J0I6 CRON[2769]: (root) CMD ( cd / && run-parts --
report /etc/cron.hourly)
Feb 14 08:53:31 LAPTOP-A1S2J0I6 cron[181]: (CRON) INFO (pidfile fd = 3)
Feb 14 08:53:31 LAPTOP-A1S2J0I6 cron[181]: (CRON) INFO (Running @reboot jobs)
Feb 14 09:05:34 LAPTOP-A1S2J0I6 cron[202]: (CRON) INFO (pidfile fd = 3)
Feb 14 09:05:34 LAPTOP-A1S2J0I6 cron[202]: (CRON) INFO (Running @reboot jobs)
Feb 14 09:17:01 LAPTOP-A1S2J0I6 CRON[1126]: (root) CMD ( cd / && run-parts --
report /etc/cron.hourly)
Feb 17 20:48:04 LAPTOP-A1S2J0I6 cron[180]: (CRON) INFO (pidfile fd = 3)
Feb 17 20:48:04 LAPTOP-A1S2J0I6 cron[180]: (CRON) INFO (Running @reboot jobs)
Mar 18 10:37:46 LAPTOP-A1S2J0I6 cron[182]: (CRON) INFO (pidfile fd = 3)
Mar 18 10:37:46 LAPTOP-A1S2J0I6 cron[182]: (CRON) INFO (Running @reboot jobs)
Mar 18 10:53:01 LAPTOP-A1S2J0I6 CRON[500]: (karthik) CMD (/path/to/heartbeat.sh)
```