

CROND, ATD

CROND

Scheduled fun

OVERVIEW

- `crond` is the cron daemon. Cron provides for the ability to execute commands on a regular basis.
- Generally used to run hourly, daily and weekly type system maintenance scripts.
- Also useful to run reports, cleanup jobs and much, much more.

USING CRON

- Cron is controlled through crontab files.
 - There are system-wide crons, accessible under `/etc/cron.*`
 - Every user has their own crontab, accessible through the `crontab` command

SYSTEM CRONS

- `/etc/crontab` defines the system cron jobs.
- Many distributions use the `run-parts` script to execute all scripts found in `/etc/cron.hourly`, `/etc/cron.daily`, etc on the appropriate schedule.
- `/etc/crontab` defines the times for each schedule: hourly, daily, weekly, monthly
- Some systems (RHEL 6) use `anacron` as well

CRONTAB

- `crontab`: View, edit or remove crontabs
 - The `-l` option prints the crontab. The `-e` option opens the crontab for editing. The `-r` option removes the crontab.
 - Root can work with the crontab for any user by specifying the username on the command line:
 - `crontab -e -u bob`

CRONTAB SYNTAX

- There are two main components to a crontab entry:
 - The timespec specifies when the command should be run
 - The command is what gets executed every time the timespec is matched

CRONTAB TIMESPECS

- The timespec is broken down into 5 fields, separated by spaces:
 - minute hour day-of-month month day-of-week
- Each field can contain a number, a range of numbers, a comma-separated list of numbers, an asterisk or a number slash division rate
- Mostly self-explanatory - some examples will help...

TIMESPEC EXAMPLES

- 0 23 * * * *11pm every day*
- 30 * * * 1-5 *30 minutes after every hour, M-F*
- 0 7 1 * * *7am, first of every month*
- * * * * * *Every single minute*
- 0,10,20,30,40,50 * * * * *Every 10 minutes*
- */5 8-17 * * 1-5 *Every 5 minutes, 8am-5pm, M-F*

EXAMPLE CRONTAB

```
01 4 * * * /usr/local/bin/restart-webserver  
00 8 1 * * /usr/bin/mail-report boss@mycompany.com  
*/5 * * * * /monitor/bin/check-site -e admin@mycompany.com -o /var/log/check.log
```

- There are various additional options and features available to the cron system. Check the man pages for reference:
 - cron, crontab (sections 1 and 5)

ATD

ATD OVERVIEW

- `atd` is a simple daemon that executes one-off jobs at a certain time.
- To create an at job:
 - `at <time>`
 - Then you enter all of the commands you want run at the given time, and finish by typing `ctrl-d`

ATD

- atd is not commonly used these days, but if it's there it can be useful in some situations..
- If editing the firewall on a machine over the network, it's sometimes nice to put a simple “reset” so if you lock yourself out, you'll be able to get back in the machine:

```
[root@localhost ~]# at now + 10 minutes
at> iptables-save > /iptables.backup
at> iptables -F
at> <EOT>
job 1 at 2009-11-30 10:44 a root
[root@localhost ~]#
```


ATD

- Some additional commands to use with the at system:
 - `atq`: Displays list of at jobs
 - `atrm`: Removes given at job from queue