Scheduling Tasks

Linux System Administration
Fall 2025

Scheduling Commands

- `cron`
  - Run a recurring command
- `at`
  - Run a command at a specified time
- systemd timers
  - Re-invents the wheel

Common periodic tasks

- Rotate logs
- Check for software updates
- Perform backups

cron files

- One liners
  - `/etc/crontab` system-wide entries
  - `/etc/cron.d` additional crontab entries
- Scripts
  - `/etc/cron.hourly` script that run hourly
  - `/etc/cron.daily` scripts that run daily
  - `/etc/cron.weekly` scripts that run weekly

crontab entries

`min hour dom mon weekday user command`

- `*` = don't care
- `*/int` = match every (`*/10 = 0,10,20,30,40,50`)
- `integer` = match exactly
- `int-int` = range (`1-5 = 1,2,3,4,5`)
- `int,int,int` = match from list

Sunday is weekday 0

crontab examples

- At 00:15 each day, rsync backup from machinea
  ```
  15 0 * * * root rsync -aH machinea:/backup/* /backup
  ```
- Run the checkwx script on the hour
  ```
  0  * * * * root /usr/local/bin/checkwx
  ```
- Run the ntsgw scipt every 5 minutes
  ```
  */5 * * * * willem /usr/localbin/ntsgw
  ```
- Run the backup-db script Sunday morning at 2am
  ```
  0 2 * * 0 root /usr/local/bin/backup-db
  ```
- Run the snapshot script at 00:30 on the first of the month
  ```
  30 0 1 * * root /usr/local/bin/snapshot
  ```

at

- Commands to run are read from the command line and executed as `/bin/sh`
  - `at 21:00` at 9pm
  - `at now+20 minutes` (20 minutes from now)
- `atq` show jobs queued
- `atrm` remove job from queueq