

# Intro to Linux



## 1.4.1 – System Services

# System Services

- Essential background processes that are often initiated during the boot process
  - Manage hardware
  - Handle user authentication
  - Facilitate communication between programs
- Crucial in maintaining stability, security and efficiency

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SYSTEMCTL(1)                                systemctl                                SYSTEMCTL(1)

NAME
    systemctl - Control the systemd system and service manager

SYNOPSIS
    systemctl [OPTIONS...] COMMAND [UNIT...]

DESCRIPTION
    systemctl may be used to introspect and control the state of the "systemd" system and
    service manager. Please refer to systemd\(1\) for an introduction into the basic concepts and
    functionality this tool manages.

COMMANDS
    The following commands are understood:

    Unit Commands
    list-units [PATTERN...]
        List units that systemd currently has in memory. This includes units that are either
        referenced directly or through a dependency, units that are pinned by applications
        programmatically, or units that were active in the past and have failed. By default
        only units which are active, have pending jobs, or have failed are shown; this can be
        changed with option --all. If one or more PATTERNS are specified, only units matching
        one of them are shown. The units that are shown are additionally filtered by --type=
        and --state= if those options are specified.
```

# System Services - systemctl

- The **systemctl** command is used to manage services running on the system

Commonly Used systemctl Commands	
<code>systemctl stop &lt;service-name&gt;</code>	Stops the service specified
<code>systemctl start &lt;service-name&gt;</code>	Starts the service specified
<code>systemctl restart &lt;service-name&gt;</code>	Restarts the service specified
<code>systemctl status &lt;service-name&gt;</code>	Provide the status of the service specified
<code>systemctl enable &lt;service-name&gt;</code>	Enables the service specified to start at boot
<code>systemctl disable &lt;service-name&gt;</code>	Disables the service specified to not start at boot
<code>systemctl mask &lt;service-name&gt;</code>	Prevents the service specified from running or starting



# Scheduling Services

- Cron is a time-based job scheduler in Unix-like OSs
  - Allows users to schedule tasks to run periodically
  - Jobs are defined using the cron syntax
- **crontab** is a command-line utility that allows users to create, edit, and manage their cron jobs
  - Each user may have their own crontab file
- The **at** command is another scheduler in Unix-like systems
  - Used for one-time job scheduling
  - The at daemon executes it at a specified time

