Enterprise Linux 7 (RedHat, CentOS)

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Command cheat sheet for EL7. For every action, I try to give the 'canonical' command, as recommended by RedHat. That means using `systemd`, NetworkManager, `journald`, etc.

Network configuration

Action	Command
List interfaces (and IP addresses)	`ip address`, `ip a`
Route table	`ip route`, `ip r`
DNS servers	`cat /etc/resolv.conf`

NetworkManager

Action	Command
Show available network connection profiles	`nmcli connection show`
Show active network connection profiles	`nmcli connection show active`
Show network device status	`nmcli device status`
Connect to profile CONNECTION	`nmcli connection up id CONNECTION`
Disconnect profile CONNECTION	`nmcli connection down id CONNECTION`
Query Wifi status	`nmcli radio wifi`
Turn Wifi on/off	`nmcli radio wifi {on,off}`
List available wireless networks	`nmcli device wifi list`
Refresh list of wireless networks	`nmcli device wifi rescan`
Connect to wireless network SSID	`nmcli device wifi connect SSID`

`connection` and `device` can be abbreviated to `con` and `dev`, respectively.

Resources

- RedHat Enterprise Linux 7 Networking Guide
- Fedora Wiki: Networking/CLI

Managing services with `systemctl`

Action	Command
List services	`systemctl list-units –type service`
Query SERVICE status	`sudo systemctl status SERVICE.service`
List failed services on boot	`sudo systemctl –failed`
Start SERVICE	`sudo systemctl start SERVICE.service`

Action	Command
Stop SERVICE	`sudo systemctl stop SERVICE.service`
Restart SERVICE	`sudo systemctl restart SERVICE.service`
Kill SERVICE (all processes) with SIGTERM	`sudo systemctl kill SERVICE.service`
Kill SERVICE (all processes) with SIGKILL	`sudo systemctl kill -s SIGKILL SERVICE.service`
Start SERVICE on boot	`sudo systemctl enable SERVICE.service`
Don't start SERVICE on boot	`sudo systemctl disable SERVICE.service`

Resources

- RedhHat 7 System Administrator's Guide
- Systemd for Administrators, Part IV: Killing Services

Perusing system logs with `journalctl`

Viewing logs requires root privileges. However, users that are members of the `adm` group get access as well. So, add your user to the `adm` group to make viewing logs easier.

Action	Command
Show log since last boot	`journalctl -b`
Kernel messages (like `dmesg`)	`journalctl -k`
Show latest log and wait for changes	`journalctl -f`
Reverse output (newest first)	`journalctl -r`
Show only errors and worse	`journalctl -b -p err`
Filter on time (example)	`journalctl –since=2014-06-00 –until="2014-06-07 12:00:00"`
Since yesterday	`journalctl –since=yesterday`
Show only log of SERVICE	`journalctl -u SERVICE`
Match executable, e.g. `dhclient`	`journalctl /usr/sbin/dhclient`
Match device node, e.g. `/dev/sda`	`journalctl /dev/sda`

Resources

- Systemd for Administrators, Part XVII: Using the journal

Configuring the firewall with `firewalld`

The `firewalld-cmd` should run with root privileges, do always use `sudo`.

Action	Command
Firewall state	`firewall-cmd –state`
Reload permanent rules	`firewall-cmd –reload`
Currently enabled features	`firewall-cmd –list-all-zones`

Action	Command
List supported zones	`firewall-cmd –get-zones`
List preconfigured services	`firewall-cmd –get-services`
Enabled features in current zone	`firewall-cmd –list-all`
Enabled features in zone	`firewall-cmd [–permanent] [–zone=ZONE] –list-all`
Enable a service in zone	`firewall-cmd [–permanent] [–zone=ZONE] –add-service=http`
Remove service frome zone	`firewall-cmd [–permanent] [–zone=ZONE] –remove-service=http`
Enable a port in zone	`firewall-cmd [–permanent] [–zone=ZONE] –add-port=80/tcp`
Remove a port from zone	`firewall-cmd [–permanent] [–zone=ZONE] –remove-port=80/tcp`
Turn panic mode on	`firewall-cmd –panic-on`
Turn panic mode off	`firewall-cmd –panic-off`

- Configuration is stored in `/etc/firewalld` and `/usr/lib/firewalld`
- The default zone is `public`, which you don’t have to specify on the command line when adding/removing rules
- Adding permanent rules

Resources

- Using Firewalls, in RHEL 7 Security Guide
- FirewallD, in Fedora Project Wiki