

JUNOS CheatSheet

V0.1

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Junos CLI

1.1 Acronym

- FPC : Flexible PIC Concentrator
- PIC : Physical Interface Card
- RE : Routing Engine
- PFE : Packet Forwarding Engine

1.2 CLI Mode

```
(BSD) % cli
(Operational) > edit (configure)
(Configuration) #
```

1.3 CLI Shortcut

```
(CTRL+W) > Clear 1 word in the CLI
(CTRL+A) > Cursor at the beginning of the line
(CTRL+E) > Cursor to the end of the line
(CTRL+U) > Clear the entire line
```

1.4 Terminal Sizing

```
> set cli screen-width 500
```

1.5 Save command output

```
> show route | save my-routes.txt
> file show my-routes.txt
> file show my-routes.txt | match 10.10
```

1.6 Configuration Mode

```
( same candidate ) > configure
( lock candidate ) > configure exclusive
( X candidate ) > configure private
```

1.7 Configuration Manipulation

```
(see) # show
(create) # set
(delete) # delete
(deactivate) # deactivate

(replace) # replace pattern ge-0/0/0 with ge-0/0/1
(copy) # copy interface ge-0/0/0 to ge-0/0/1
```

1.8 Commit

(normal)	# commit
(verification only)	# commit check
(automatic rollback after 2 min)	# commit confirmed 2
(commit with comments)	# commit comment "your comments"
(see commit history)	> show system commit

1.9 Save & load

(save mode script)	# save my_file
(save mode set)	# show display set save my_file
(load mode script)	# load override terminal
(load mode set)	# load set terminal
(load patch step1)	# show compare
(load patch step2)	# load patch terminal

1.10 Rollback

(clear changes in candidate)	# rollback 0
(revert to last configuration)	# rollback 1
(compare candidate & running)	# show compare

2. Junos Configuration

2.1 Initial Configuration

```
# set system time-zone Europe/Paris
# set system ntp server 51.255.95.80
# set interfaces fxp0 unit 0 family inet address 10.10.X.X/24
# set routing-options static route <MGT-NETWORK> next-hop 10.10.X.Y
# set system services ssh
```

2.2 System Hardening

```
# set system login retry-options backoff-threshold
# set system login retry-options backoff-factor
```

2.3 Interfaces Type

(FastEthernet)	fe-fpc/pic/port
(GigaEthernet)	ge-fpc/pic/port
(10GigaEthernet)	xe-fpc/pic/port
(100GigaEthernet)	et-fpc/pic/port

2.4 Trunk Interface

```
# set interfaces ge-0/0/2 vlan-tagging
# set interfaces ge-0/0/2 speed 1g
# set interfaces ge-0/0/2 link-mode full-duplex
# set interfaces ge-0/0/2 unit 10 vlan-id 10
# set interfaces ge-0/0/2 unit 10 family inet address 10.10.10.10/24
# set interfaces ge-0/0/2 unit 20 vlan-id 20
# set interfaces ge-0/0/2 unit 20 family inet address 10.10.20.10/24
```

2.5 Interface Group

```
# set groups interface-speed interfaces <ge-*> speed 1g
# set groups interface-speed interfaces <ge-*> mtu 1400
# set groups interface-speed interfaces <ge-*> link-mode full-duplex
# set apply-groups interface-speed
```

3. Monitoring

3.1 Syslog Local

```
# set system syslog file message-log any any
# set system syslog file interface-down any any
# set system syslog file interface-down match SNMP_TRAP_LINK

# set system syslog file login-log any any
# set system syslog file login-log match UI_LOGIN_EVENT

> monitor start interface-down
> monitor stop interface-down
> show log interface-down | match xxxx
```

3.2 Interfaces & Traffic

```
> show interfaces ge-0/0/0 extensive | match error
> show interfaces terse
> show arp no-resolve interface ge-0/0/0
> monitor interface ge-0/0/0
> show interface ge-0/0/0 terse | refresh 2
> monitor traffic interface ge-0/0/0 no-resolve size 2000 write-file macapture.pcap
% tcpdump -nlr macapture.pcap
> show interfaces diagnostics optics xe-0/0/0
> ping 1.1.1.1 source 10.10.46.201
```

4. Routing

4.1 Routing RT & FT

```
> show route 192.168.1.1
> show route forwarding-table destination 192.168.1.1
```

4.2 Static Routing

```
# set routing-options static route 192.168.50.0/24 next-hop 10.10.46.205
# set routing-options static route 192.168.50.0/24 qualified-next-hop 192.168.83.5 preference 3
```

4.3 OSPF

```
# set protocols ospf area 0.0.0.0 interface ge-0/0/0.0
# set protocols ospf area 0.0.0.0 interface ge-0/0/1.0
# set protocols ospf area 0.0.0.0 interface ge-0/0/2.0
# set protocols ospf area 0.0.0.0 interface ge-0/0/3.0 passive

> show route protocol ospf
> show ospf neighbor
```

4.4 OSPF Debug

```
# set protocols ospf traceoptions file debug-ospf
# set protocols ospf traceoptions flag error
# set protocols ospf traceoptions flag event

> monitor start debug-ospf
> file show debug-ospf

> monitor traffic interface ge-0/0/0
```

4.5 VRF

```
set routing-instances TEST instance-type virtual-router
set routing-instances TEST interface ge-0/0/2.0
set routing-instances TEST interface ge-0/0/3.0
```

5. Security (SRX Only)

5.1 Zone

```
# set security zones security-zone zone-internet host-inbound-traffic system-services <services>
# set security zones security-zone zone-internet host-inbound-traffic protocols <protocols>
# set security zones security-zone zone-internet interfaces ge-0/0/0.0
```

5.2 Objects

```
# set security address-book global address srx2-network 192.168.50.0/24
```

5.3 Policies / Context

```
# set security policies from-zone zone-internet to-zone dmz policy p1 match source-address srx2-network
# set security policies from-zone zone-internet to-zone dmz policy p1 match destination-address any
# set security policies from-zone zone-internet to-zone dmz policy p1 match application junos-ping
# set security policies from-zone zone-internet to-zone dmz policy p1 then permit
```

5.4 Policies / Global

```
set security policies global policy deny-log match source-address any
set security policies global policy deny-log match destination-address any
set security policies global policy deny-log match application any
set security policies global policy deny-log then deny
set security policies global policy deny-log then log session-init
```

5.5 Session Log

```
# set system syslog file traffic-log any any
# set system syslog file traffic-log match RT_FLOW
> monitor start traffic-log
> show security policies hit-count
```

5.6 Session Monitoring

```
> show security flow session
```

5.7 SRX Packet Based

```
set security forwarding-options family mpls mode packet-based
```

5.8 Debug

```
# set security flow traceoptions file debug-traffic
# set security flow traceoptions flag basic-datapath
# set security flow traceoptions packet-filter ff1 source-prefix 192.168.50.1
# set security flow traceoptions file debug-traffic size 5m
> monitor start debug-traffic
> monitor stop debug-traffic
# delete security flow traceoptions
```


6. FUN

```
> show version and haiku  
> request message all message "Yo What s Up !!!"  
> show system user  
> request system logout user
```