

### Notes

#### How to use this cheat sheet

In order to use the commands you *MUST* be in the mode that that command is listed under. The sections are listed in order progression. "User EXEC Mode" is the default mode and thus has no command to enter it.

*Example:* In order to use the `hostname` command I must be in "Global Config Mode" so I look one section before to look up the command to enter "Global Config Mode". I then see that in order to use the `configure terminal` command I must be in "Privileged EXEC Mode" and to enter "Privileged EXEC Mode" I must use the command `enable` in "User EXEC Mode". This would give this string of commands: `enable > configure terminal > hostname <hostname>`

#### When in doubt google

If you are asked to do something that is not on this cheat sheet google it. For example if you are asked to deny all incoming information from a IP google "How to deny incoming IP cisco packet tracer"

#### Command conventions

When you see a command like `ip address <ip> <subnet>`, the `<ip>` and `<subnet>` part mean that in order to use this command you need to substitute information into those places.

*Example:* If I wanted to set the IP to `192.168.1.1` with a subnet mask of `255.255.255.0` I would fully replace both the `<ip>` and `<subnet>` sections with that information. I would end up with a command that looks like: `ip address 192.168.1.1 255.255.255.0`

### Desktops

#### Overview

Desktops do not have a router or switch like CLI. In order to configure settings on desktops you must click on them and then navigate to the "Desktop" tab. Here you can use the different apps to perform different operations. See below for specific operations help.

#### Setting an IP

Click on the "Configure IP" desktop app. Here you can input IPv4 and IPv6 addresses as well as other networking information. When you are done you can simply exit out and it will be saved.

#### Navigating to a web page

Use the "Web Browser" app as you would a normal web browser

#### Pinging IPs

Use the "Command Prompt" app and use the command `ping <ip>` in order to see if a host is up.

### How to tell what mode you are in

User EXEC Mode	Router>
Privileged EXEC Mode	Router#
Global Config Mode	Router (config)#
Interface Config Mode	Router (config-if)#
Line Config Mode	Router (config-line)#

### Universal Commands

Exit the current mode	<code>exit</code>
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### User EXEC Mode Commands

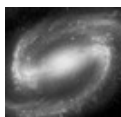
Enter Privileged EXEC Mode	<code>enable</code>
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### Privileged EXEC Mode

Enter Global Config Mode	<code>configure terminal</code>
Save current config	<code>copy running-config startup-config</code>
Save current config	<code>write memory</code>
Show running config	<code>show running-config</code>
List all interfaces	<code>show ip interface brief</code>
List all interface information	<code>show interface</code>
List all show parameters	<code>show ?</code>
List all debug parameters	<code>debug ?</code>

### Global Config Mode

Enter Interface Config Mode	<code>interface &lt;interface&gt; &lt;port&gt;</code>
Enable IPv6	<code>ipv6 unicast-routing</code>
Set Default Gateway	<code>ip default-gateway &lt;gateway&gt;</code>
Set Hostname	<code>hostname &lt;hostname&gt;</code>
Enter Line Config Mode	<code>line &lt;line&gt; &lt;startport&gt; &lt;endport&gt;</code> (lines: console, vty)
Enable Secret Password	<code>enable secret &lt;password&gt;</code>
MOTD	<code>banner motd #&lt;motd&gt;#</code>
Enable Password Encryption	<code>service password-encryption</code>



### Global Config Mode (cont)

Add new user      username <username> secret <password>

Enable AAA        aaa new-model

Populate default AAA method list      aaa authentication login default <method> <method1> <methodN> (see methods below)

Populate new AAA method list      aaa authentication login <list-name> <method> <method1> <methodN> (see methods below)

Set max fails AAA      aaa local authentication maxfail <maxfail>

### AAA Auth Methods

enable - uses enable password

krb5 - uses Kerberos 5

krb5-telnet - uses Kerberos 5 Telnet protocol

line - uses line password

local - uses local username database

local-case - uses local username database (case-sensitive)

none - no authentication (don't do this)

cache <group name> - uses cache server group

group radius - uses list of all RADIUS servers

group tacacs+ - uses list of all TACACS+ servers

### Interface Config Mode

Set Static IPv4      ip address <ip> <subnet>

Set Static IPv6      ipv6 address <ipv6>

Set IPv6 Link Local      ipv6 address <ipv6> link-local

Set duplex to auto      duplex auto

**NOTE:** When exiting Interface Config Mode you must issue the command `no shutdown` before `exit` if you wish for the interface to remain up.

### Line Config Mode

Set password (user EXEC)      password <password>

Enable password checking at login

Enable default AAA list      login authentication default

Enable AAA list      login authentication <list name>

