

### **Modes**

Router> (*user EXEC mode*)

Router> enable (en)

Router# (*privileged mode*)

Router# configuration terminal (conf t)

Router(config)# (*Global configuration mode*)

Kommandoen "exit" springer et niveau tilbage

Kommandoen "end" springer tilbage til "privileged" mode

Ctrl-shift-6 (afbryder funktion)

### **SHOW**

Router#show flash

Router#show version

Router#show running-config (sh r)

Router#show interfaces (sh int)

Router#show ip interfaces breaf

Router#show arp

Router#show ip route

Router#show protocols

Router#show version

### **Hjælpe funktioner**

Router(config)#logging synchronous (*- status opdateringer*)

Router(config)#no ip domain-lookup (*forhindre DNS opslag ved forkerte kommandoer*)

### **Password**

Router(config)#enable password [password] *(enable password)*

Router(config)#enable secret [password] *(krypterer enable password)*

Router(config)# service password-encryption *(krypterer alle password)*

Router(config)# security password min-length 10 *(password skal have 10 karakterer)*

Router(config)# login block-for 180 attempts 4 within 120 *(blokerer i 3 min efter 4 forsøg inden for 2 min)*

Router(config-line)#exec-timeout 5 30 *(consol logout efter 5 m. og 30 sek.)*

### **Gem kørende opsætning**

Router#copy running-config startup-config *(copy run start)/( wr) (Gemmer kørende fil i nvram)*

### **Interface opsætning**

Router(config)# interface fastethernet 0/0 *(int fa0/0)*

Router(config-if)# ip address 192.168.2.1 255.255.255.0 *(ip add)*

Router(config-if)# description Studentnet1

Router(config-if)# no shutdown *(n sh)*

Router(config-if)#exit

Router(config)#interface serial 0/0/0

Router(config-if)#ip address 192.168.1.125 255.255.255.0

Router(config-if)#clock rate 64000

Router(config-if)#no shutdown

### **DHCP opsætning**

Router(config)#ip dhcp excluded-address 192.168.1.1

Router(config)#ip dhcp excluded-address 192.168.1.101 192.168.1.254

Router(config)#ip dhcp pool navn *(navn er navnet på pool)*

Router(dhcp-config)#network 192.168.1.0 255.255.255.0

Router(dhcp-config)#domain-name zbc.dk *(ikke krav)(ikke Packet Tracer)*

Router(dhcp-config)#default-router 192.168.1.1 *(gateway)*

Router(dhcp-config)#dns-server 192.168.1.200

R1#show ip dhcp binding *(viser hvilke dhcp adresser der er delt ud)*

### **LOOPBACK**

Router(config)# interface loopback *(laver et virtuelt interface på router)*

Router(config-if)# ip address 3.3.3.3 255.0.0.0

Router(config-if)#exit

## NAT opsætning

```
Router(config)# interface fastethernet 0/0 (int fa0/0)
Router(config-if)# ip address 192.168.2.1 255.255.255.0 (ip add)
Router(config-if)# ip nat inside
Router(config-if)# no shutdown (n sh)
Router(config-if)#exit
```

```
Router(config)#interface serial 0/0/0
Router(config-if)#ip address 192.168.1.125 255.255.255.0
Router(config-if)#ip nat outside
Router(config-if)#clock rate 64000
Router(config-if)#no shutdown
```

```
Router(config)ip nat inside sourse static 192.168.1.25 209.25.63.44
```

## TFTP

```
Router#copy running-config tftp (til tftp server)
Address or name of remote host []? 192.168.1.100
Destination filename [Router-config]? router0
```

```
Router#copy tftp running-config (fra tftp server)
```

## Statisk Routning

```
Router(config)#ip route 0.0.0.0 0.0.0.0 192.168.1.5 (next hop) (default Gateway)
Router(config)#ip route 0.0.0.0 0.0.0.0 s0/0/0 (interface pakken sende ud af) (default Gateway)
```

```
Router(config)#ip route 192.168.1.0 255.255.255.224 192.168.2.1 (next hop)
Router(config)#ip route 192.168.1.0 255.255.255.224 s0/0/0 (interface pakken sende ud af)
```

## Router RIP

```
Router(config)#router rip
Router (config-router)#version 2
Router(config-router)#network 192.168.1.0 (net id)
Router (config-router)#no auto-summary ( slå opsummering af router fra)
```

```
Router# Show ip route (Viser hvilke netværk routeren kender)
Router# Show ip protocols (Viser den aktuelle protocol)
```

```
Router# debug ip rip (Viser udvekslingen af informationer i rip)
Router#undebug all (u all) (Slår alle debug kommandoer fra)
```

```
Router# clear ip route* (ryder router rip info)
```

```
Router(config)#default information originate (henter default gateway fra toprouteren)
```

### **FILSYSTEM**

```
Router#Show file system  (file systems)
```

```
Router#dir    (flash)
```

```
Router#cd nvram:  (nvram)
```

```
Router#pwd
```

```
Router#dir
```

### **SWITCH VLAN OPSÆTNING**

```
Switch#en
```

```
Switch#conf t
```

```
Switch(config)#interface vlan 1
```

```
Switch(config-if)#ip address 192.168.1.200 255.255.255.0
```

```
Switch(config-if)#no shutdown
```

```
Switch(config-if)#exit
```

```
Switch(config)#ip default-gateway 192.168.1.1
```

```
Switch(config)#exit
```

```
Switch#
```

### **SWITCH SECURITY**

```
Switch>
```

```
Switch>en
```

```
Switch#conf t
```

```
Switch(config)#interface fa 0/20
```

```
Switch(config-if)#switchport mode access
```

```
Switch(config-if)#switchport port-security
```

```
Switch(config-if)#switchport port-security maximum 1
```

```
Switch(config-if)#switchport port-security mac-address sticky
```

```
Switch(config-if)#end
```

```
Switch#
```

```
Switch#show port-security int fa0/19
```

### LINE con og Line VTY

```
Router(config)#line console 0
Router(config-line)#password [password]
Router(config-line)#login
```

```
Router(config)# line vty 0 4
Router(config)# password [password]
Router(config)# login
```

### SSH Access

```
R1(config)# ip domain-name ccna-lab.com
R1(config)# crypto key generate rsa      (derefter enter og svar på antal bit→)  modulus "1024"
R1(config)# username admin password cisco (her er brugernavn "admin" og password er "cisco")
```

**Enable SSH on the VTY lines.**

```
R1(config)# line vty 0 4
R1(config-line)# transport input ssh
R1(config-line)# login local
```

**Tilgå SSH via commando prompt i Packet Tracer**

C:> ssh -l admin 192.168.1.1 ("l" er bogstavet L, "admin" er brugernavn og derefter ip adressen)

### Interface opsætning IPv6

```
Router(config)# ipv6 unicast-routing (activate ipv6 routing)

Router(config)# interface fastethernet 0/0      (int fa0/0 eller int g0/0)
Router(config-if)# ipv6 address 2001:ABCD:1234:0001::1/64
Router(config-if)# ipv6 address FE80::1 link-local
Router(config-if)# no shutdown (n sh)
Router(config-if)#exit
```

### **CDP**

R1#cdp run     *(starter "cisco discovery protocol" afslut cdp sæt NO foran.)*

R1#show cdp

R1#show cdp neighbor

R1#show cdp neighbor detail

### **TELNET**

R1#show session   *(viser forbindelse til telnet skift mellem dem (ctrl+alt+6 med efterf. X))*

R1#disconnect