CISCO IOS KOMUTLARI EL KİTABI

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Cisco IOS Komutları El Kitabı
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Anahtara isim (hostname) vermek

```
Switch(config)# hostname Admin-SW
Admin-SW(config)#
```

Anahtar SVI (Switch Virtual Interface) arayüzünü yapılandırmak

```
Admin-Sw(config)# interface vlan1
Admin-Sw(config-if)# ip address 192.168.0.10 255.255.255.0
Admin-Sw(config-if)# no shutdown
```

Anahtara uzaktan erişebilmesi için varsayılan ağ geçidi atamak

```
Switch(config)# ip default-gateway 192.168.0.1
```

Yapılandırmaları kalıcı hale getirmek için NVRAM'e kayıt etmek

```
Switch# copy running-config startup-config
```

Belirlenen aralıktaki (Gi 0/1 den 10'a kadar) anahtar arayüzleri altına girmek

```
switch(config)# interface range g0/ 1 - 10
switch(config-if-range)#
```

Anahtar arayüzlerini yapılandırmak

```
Switch(config)# interface g0/1
Switch(config-if)# duplex {auto | full | half}
Switch(config-if)# speed {10 | 100 | 1000 | auto}
```

Yapılandırma doğrulama komutları (show)

```
Switch# show running-configuration
Switch# show startup-config
Switch# show interface g0/1
```

Yönlendiriciye isim vermek

```
Router> enable
Router# configure terminal
Router(config)# hostname AYT
AYT(config)#
```

Yönlendirici ethernet (LAN) arayüzünü yapılandırmak

```
Router# configure terminal
Router(config)# interface g0/0
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#description Internet Link
```

Statik Yönlendirme Yapılandırmak

ip route destination-network mask {next-hop-address | outboundinterface} [distance] [permanent]

```
RouterB(config)# ip route 172.17.0.0 255.255.0.0 172.16.0.1
```

Varsayılan Rota Yapılandırmak

ip route 0.0.0.0 0.0.0.0 [ip-address-of-the-next-hop-router | outbound-interface]

```
RouterB(config)# ip route 0.0.0.0 0.0.0.0 172.16.0.2
```

Yapılandırma doğrulama komutları (show)

```
RouterA# show ip route
```

Standart ACL Yapılandırmak

access-list *access-list-number* {**permit | deny**} *source-address [wildcard-mask]*

access-list-number Standart ACL için 1 ile 99 arasındadır.

```
RouterA(config)# access-list 10 deny 192.168.0.0 0.0.255.255
RouterA(config)# access-list 10 permit any
```

Gelişmiş ACL Yapılandırmak

access-list *access-list-number* {**permit | deny**} *protocol sourceaddress source-wildcard [operator port] destination-address destination-wildcard [operator port]*

access-list-number Gelişmiş ACL için 100 ile 199 arasındadır.

```
RouterA(config)# access-list 101 deny tcp 172.16.4.0 0.0.0.255
172.16.3.0 0.0.0.255 eq 21
RouterA(config)# access-list 101 permit ip any any
RouterA(config)# interface g 0/0
RouterA(config-if)# access group 101 in
```

İsimli (Named) ACL Yapılandırmak

```
RouterA(config)# ip access-list extended block-ping
RouterA(config-ext-nacl)# deny icmp 172.160.0.0 0.0.3.255 host
192.168.0.101 echo
RouterA(config-ext-nacl)# permit ip any any
```

Yapılandırma doğrulama komutları (show)

```
RouterA# show ip interface
RouterA# show running-config
RouterA# show access-list
```

Statik NAT Yapılandırmak

```
RouterB(config)# ip nat inside source static 192.168.10.5
216.1.1.3
RouterB(config)# int g0
RouterB(config-if)# ip nat outside
RouterB(config-if)# int g1
RouterB(config-if)# ip nat inside
```

Dinamik NAT Yapılandırmak

```
RouterB(config)# ip nat pool cisco 216.1.1.1 216.1.1.14 netmask
255.255.255.240 (creates a NAT pool called cisco)
RouterB(config)# access-list 10 permit 192.168.10.0 0.0.0.15
(defines the IP addresses that will be translated)
RouterB(config)# ip nat inside source list 10 pool cisco
(establishes dynamic translation of access list 10 with the NAT
pool
named cisco)
RouterB(config)# int g0
RouterB(config-if)# ip nat outside
RouterB(config-if)# int g1
RouterB(config-if)# ip nat inside
```

PAT Yapılandırmak

```
RouterA(config)# access-list 99 permit 10.0.0.1
RouterA(config)# ip nat inside source list 99 interface g0/1
overload
RouterA(config)# interface g0/0
RouterA(config-if)# ip nat inside
RouterA(config-if)# exit
RouterA(config)# interface g0/1
RouterA(config-if)# ip nat outside
RouterA(config-if)# exit
RouterA(config)# exit
```

Yapılandırma doğrulama komutları (show)

```
RouterA# show ip nat translations
RouterA# show ip nat statistics
```

Cihaz Erişimini Güvenli Hale Getirmek

```
Router(config)# enable password cisco
Router(config)# enable secret cisco123
```

enable secret parolası MD5 ile şifrelenir.

```
Router(config)# line console 0
Router(config-line)# login
Router(config-line)# password cisco345
Router(config-line)# exec-timeout 15
Router(config-line)# line vty 0 4
Router(config-line)# login
Router(config-line)# password cisco567
```

exec-timeout komutu ile 15 dakika işlem yapılmaması halinde iletişim kesilir.

Tüm parolaları Type 7 ile Şifrelemek

```
Router(config)# service password-encryption
```

SSH Yapılandırmak

```
RouterA(config)# username AYT password  abakuskitap
RouterA(config)# ip domain-name cisco.com
RouterA(config)# crypto key generate rsa
The name for the keys will be: RouterA.cisco.com
Choose the size of the key modulus in the range of 360 to 2048
for your General Purpose Keys. Choosing a key modulus greater
than 512 may take a few minutes.
How many bits in the modulus [1024]:
% Generating 1024 bit RSA keys ...[OK]
RouterA(config)# ip ssh ver 2
RouterA(config)# line vty 0 15
RouterA(config-line)# login local
RouterA(config-line)# transport input ssh
```

VTY Erişimini Güvenli Hale Getirmek

```
Router(config)# access list 10 permit ip 192.168.10.0 0.0.0.255
Router(config)# line vty 0 15
Router(config-line)# access-class 10 in
```

Banner MOTD Mesajı Yapılandırmak

```
Router(config)# banner motd #
Enter TEXT message. End with the character '#'.
Warning only authorized users many access this switch.
#
Router(config)#
```

Anahtar Bağlantı Noktası (switchport security) Yapılandırmak

```
SWA(config)# int f0/1
SWA(config-if)# switchport mode access
SWA(config-if)# switchport port-security
SWA(config-if)# switchport port-security max 1
SWA(config-if)# switchport port-security mac-address sticky
SWA(config-if)# switchport port-sec violation shutdown
```

Yapılandırma doğrulama komutları (show)

```
SWA# show port-security
```

VLAN Oluşturmak

```
SW1(Cat2960(config)# vlan 10
SW1(config-vlan)# name Admin
SW1(config-vlan)# vlan 20
SW1(config-vlan)# name Sales
```

Arayüzleri VLAN'e atamak

```
SW1(config)# int f0/1
SW1(config-if)# switchport access vlan 10
SW1(config-if)# int f0/2
SW1(config-if)# switchport access vlan 20
```

Yapılandırma doğrulama komutları (show)

```
SW1# show vlan id vlan ID
SW1# show vlan brief
SW1# show vlan
```

Trunk Yapılandırmak

```
SW1(config)# interface g0/1
SW1(config-if)# switchport mode trunk
SW1(config-if)# interface g0/2
SW1(config-if)# switchport mode dynamic desirable
SW1(config-if)# switchport trunk allowed vlan 10-50
```

allowed komutu ile bu trunktan geçmesine izin verilen VLAN'ler belirlenir.

Yapılandırma doğrulama komutları (show)

```
SW1# show interface trunk
SW1# show interfaces interface-id trunk
```

Çubuk Yönlendirici İle (Router on a Stick)VLAN'ler Arası Yönlendirme Yapılandırmak

```
RouterB(config)# int f0/0
RouterB(config-if)# ip address 192.168.1.1 255.255.255.0
RouterB(config-if)# int f0/0.10
```

```
RouterB(config-if)# ip address 192.168.10.1 255.255.255.0
RouterB(config-if)# encapsulation dot1q 10
RouterB(config-if)# int f0/0.20
RouterB(config-if)# ip address 192.168.20.1 255.255.255.0
RouterB(config-if)# encapsulation dot1q 20
```

Yönlendiricide DHCP Yapılandırmak

```
Router(config)# ip dhcp pool abakuskitap
Router(dhcp-config)# network 192.168.1.0 /24
Router(dhcp-config)# default-router 192.168.1.1
Router(dhcp-config)# dns-server 192.168.1.10
Router(dhcp-config)# domain-name AYT.com
Router(dhcp-config)# lease 30 0
Router(dhcp-config)# exit
Router(config)# ip dhcp excluded-address 192.168.1.1 192.168.1.50
```

DHCP Relay Agent Yapılandırmak

```
Router(config)# int f0/0
Router(config-if)# ip helper-address 192.168.11.200
```

Yapılandırma doğrulama komutları (show)

```
Router# show ip dhcp pool
Router# show ip dhcp binding
Router# show ip dhcp conflict
```

Tek Alanda OSPF Yapılandırmak

```
RouterA(config)# router ospf 10
RouterA(config-router)# network 192.168.10.0 0.0.0.255 area 0
```

Çoklu Alanda OSPF Yapılandırmak

```
RouterA(config)# router ospf 1
RouterA(config-router)# network 172.16.0.0 0.0.255.255 area 0
RouterA(config-router)# network 192.168.1.0 0.0.0.255 area 1
```

Yapılandırma doğrulama komutları (show)

```
RouterA# show ip protocols
RouterA# show ip route
RouterA# show ip ospf interface
```

IPv6 Yönlendirmeyi Etkinleştimek ve IPv6 Adres Atamak

```
RouterA(config)# ipv6 unicast-routing
RouterA(config)# interface g 0/0
RouterA(config-if)# ipv6 address 2001:0d02::2:0100/64
```

Arayüze otomatik IPv6 Adres Atamak

```
Router(config)# interface g 0/0
Router(config-if)# ipv6 address autoconfig
```

IPv6 Statik Yönlendirme Yapılandırmak

```
Router(config)# ipv6 route 2001:DB8:A01::/48 g0/0
```

IPv6Varsayılan Rota Yapılandırmak

```
Router(config)# ipv6 route ::/0 g0/0
```

Yapılandırma doğrulama komutları (show)

```
Router# show ipv6 route
```

OSPFv3 Yapılandırmak

```
Router(config)# ipv6 router ospf 10
Router(config-rtr)# router-id 1.1.1.1
Router(config-rtf)# interface g0/0
Router(config-if)# ipv6 ospf 1 area 0
Router(config-if)# interface g0/1
Router(config-if)# ipv6 ospf 1 area 0
```

Yapılandırma doğrulama komutları (show)

```
Router# show ipv6 route ospf
Router# show ipv6 ospf neighbor
Router# show ipv6 ospf
```

STP Yapılandırmak

```
SW1(config)# spanning-tree vlan 1 root primary
```

STP Portfast Yapılandırmak

```
SwitchA(config-if)# spanning-tree portfast
```

STP BPDUGuard Yapılandırmak

```
SwitchA(config)# spanning-tree portfast bpduguard default
```

Yapılandırma doğrulama komutları (show)

```
SwitchA# show spanning-tree
```

EtherChannel Yapılandırmak

```
Switch(config)# interface port-channel 1
Switch(config-if)# switchport mode trunk
Switch(config-if)# interface range g 1/1-2
Switch(config-if-range)# channel-group 1 mode active
```

Yapılandırma doğrulama komutları (show)

```
SwitchA# show etherchannel summary

SwitchA# show etherchannel port-channel
```

HSRP Yapılandırmak

```
R1(config-if)# standby 1 priority 150 (default priority is 100)
R1(config-if)# standby 1 preempt
R1(config-if)# standby 1 ip 192.168.1.254
```

Yapılandırma doğrulama komutları (show)

```
R1# show standby
```

EIGRP Yapılandırmak

```
RouterA(config)# router eigrp 100
RouterA(config-router)# network 192.168.3.0
RouterA(config-router)# network 192.168.4.0
```

Yapılandırma doğrulama komutları (show)

```
Router# show ip eigrp neighbors
Router# show ip route eigrp
Router# show ip eigrp protocols
Router# show ip eigrp topology
```

IPv6 için EIGRP Yapılandırmak

```
RouterA(config)# ipv6 unicast-routing
RouterA(config)# ipv6 router eigrp 10
RouterA(config-rtr)#eigrp router-id 1.1.1.1
RouterA(config-rtr)# no shutdown
RouterA(config-rtr)# interface g0/0
RouterA(config-if)# ipv6 eigrp 10
RouterA(config-rtr)# interface g0/1
RouterA(config-if)# ipv6 eigrp 10
```

Yapılandırma doğrulama komutları (show)

```
Router# show ipv6 eigrp topology
Router# show ipv6 eigrp neighbors
Router# show ipv6 route eigrp
```

Yönlendiricide Seri Arayüzü (WAN) Yapılandırmak

```
RouterA(config)# interface s 0/0
RouterA(config-if)# bandwidth 128
RouterA(config-if)# clock rate 128000
RouterA(config-if)# no shutdown
Router(config-if)# encapsulation hdlc
Router(config-if)# encapsulation ppp
```

CHAP Yapılandırmak

```
Router(config)# hostname RouterB
RouterB(config)# username RouterA password cisco
RouterB(config)# int s0
RouterB(config-if)# ppp authentication chap
```

Yapılandırma doğrulama komutları (show)

```
RouterB# show int s0
```

GRE Tünel Yapılandırmak

```
R1(config)# interface Tunnel0
R1(config-if)# ip address 192.168.255.1 255.255.255.0
R1(config-if)# tunnel mode gre ip
R1(config-if)# tunnel source 192.168.1.1
R1(config-if)# tunnel destination 192.168.1.2


R2(config)# interface Tunnel0
R2(config-if)# ip address 192.168.255.2 255.255.255.0
R2(config-if)# tunnel mode gre ip
R2(config-if)# tunnel source 192.168.1.2
R2config-if)# tunnel destination 192.168.1.1
```

Yapılandırma doğrulama komutları (show)

```
R1# show ip interface tunnel
```

SNMP Yapılandırmak

```
RouterA(config)# snmp-server community abakuskitap RW
RouterA(config)# snmp-server location istanbul
RouterA(config)# snmp-server contact Cemal Taner
```

Syslog Yapılandırmak

```
RouterA(config)# logging 192.168.1.150
RouterA(config)# logging trap warning
```

NTP Yapılandırmak

```
R1(config)# ntp master 1

R2(config)# ntp server 10.0.0.1
```

Yapılandırma doğrulama komutları (show)

```
R2# show ntp associations
R2# show ntp status
```