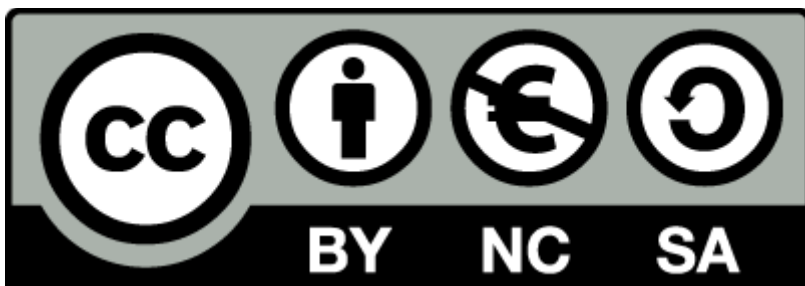


# 1 Intro

Hi. I am Panteleimon Sarantos (You can call me Pantelis) and I made this list of commands for the Cisco Routers and Switches.

## 2 License

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## 4 Save Progress

To save the following commands to the startup-config run:

```
en
conf t
wr
```

```
#or
do wr
```

## 5 Router

### 5.1 Security

#### 5.1.1 Management Security

##### 5.1.1.1 Enable CLI Password

```
en
conf t
line con 0
password compass
```

##### 5.1.1.2 Enable Password after enable – EXEC – Global Configuration

```
en
conf t
enable secret password
```

##### 5.1.1.3 Enable Telnet Password

```
en
conf t
line vty 0 15
password telnetpass
login
```

#### **5.1.1.4 SSH**

##### **5.1.1.4.1 SSH Configuration**

```
en
conf t
ip domain-name isp.gr
username admin privilege 15 secret sshpass
line vty 0 15
transport input ssh
login local
exit
crypto key generate rsa
end
show ip ssh
```

##### **5.1.1.4.2 More SSH Settings**

```
en
conf t
ip ssh time-out 75
ip ssh authentication-retries 2
```

#### **5.1.2 Access Lists Security**

##### **5.1.2.1 Standard ACLs**

###### **5.1.2.1.1 Numbered Standard ACLs**

```
en
conf t
access-list 1 remark Allow R1 LANs Access
access-list 1 permit 192.168.10.0 0.0.0.255
access-list 1 permit 192.168.20.0 0.0.0.255
access-list 1 deny any
```

```
en
conf t
interface g0/1
ip access-group 1 out
```

###### **5.1.2.1.2 Named Standard ACLs**

```
en
conf t
ip access-list standard BRANCH-OFFICE-POLICY
permit host 192.168.30.3
permit 192.168.40.0 0.0.0.255
end
```

```
en
```

```
conf t
int g0/1
ip access-group BRANCH-OFFICE-POLICY out
```

#### **5.1.2.1.3 Modify Named ACLs**

```
en
conf t
ip access-list standard BRANCH-OFFICE-POLICY
30 permit 209.165.200.224 0.0.0.31
40 deny any
end
```

#### **5.1.2.2 Extended ACLs**

##### **5.1.2.2.1 Numbered Extended ACLs**

```
en
conf t
access-list 100 remark Allow Web & SSH Access
access-list 100 permit tcp host 192.168.10.3 host 10.2.2.1 eq 22
access-list 100 permit tcp any any eq 80
```

```
en
conf t
interface g0/1
ip access-group 100 out
```

##### **5.1.2.2.2 Named Extended ACLs**

```
en
conf t
ip access-list extended WEB-POLICY
permit tcp 192.168.30.0 0.0.0.255 host 10.1.1.1 eq 80
permit tcp 192.168.30.0 0.0.0.255 209.165.200.224 0.0.0.31 eq 80
```

```
en
conf t
interface S0/0/1
ip access-group WEB-POLICY out
```

##### **5.1.2.2.3 Modify Numbered Extended ACLs**

```
en
conf t
ip access-list extended 100
30 permit ip 192.168.10.0 0.0.0.255 192.168.30.0 0.0.0.255
end
```

#### **5.1.2.2.4 Modify Named Extended ACLs**

```
en
conf t
ip access-list extended WEB-POLICY
30 permit ip 192.168.30.0 0.0.0.255 192.168.10.0 0.0.0.255
end
```

#### **5.1.2.3 Access Lists Info**

```
en
show access-lists
```

#### **5.1.2.3.1 More SSH Settings**

```
en
conf t
ip ssh time-out 75
ip ssh authentication-retries 2
```

## **5.2 IP**

### **5.2.1 Assign IP to Interface**

#### **5.2.1.1 IPv4**

```
En
conf t
int g0/0
ip add 192.168.1.1 255.255.255.0
no shut
```

#### **5.2.1.2 IPv6**

```
en
conf t
ipv6 unicast-routing
int g0/0
ipv6 add 2001:db8:1:1::1/64
ipv6 add fe80::1 link-local
no shut
```

## **5.3 Routing**

### **5.3.1 OSPF**

```
en
conf t
router ospf 1
network 192.168.1.0 0.0.0.255 area 0
```

```
network 10.0.0.0 0.0.0.3 area 0
network 10.1.1.0 0.0.0.3 area 0
```

### **5.3.2 EIGRP**

```
en
conf t
router eigrp 1
network 200.200.200.0 0.0.0.3
network 100.100.100.0 0.0.0.255
auto-summary
```

### **5.3.3 RIPv2**

```
en
conf t
router rip
version 2
network 192.168.10.0
network 192.168.20.0
network 192.168.30.0
no auto-summary
```

## **5.4 InterVLAN Routing**

```
interface g0/1.1
encapsulation dot1Q 1
ip add 192.168.1.1 255.255.255.0
interface g0/1.10
encapsulation dot1Q 10
ip add 192.168.10.1 255.255.255.0
interface g0/1.20
encapsulation dot1Q 20
ip add 192.168.20.1 255.255.255.0
exit
interface g0/1
no shut
```

## **5.5 DHCP**

```
en
conf t
ip dhcp excluded-address 100.100.100.1
ip dhcp pool KATOSTARI
network 100.100.100.0 255.255.255.0
default-router 100.100.100.1
```

## 5.6 NAT

### 5.6.1 Static NAT

#### 5.6.1.1 Configuration

```
en
conf t
ip nat inside source static <Private Address> <Public Address>
ip nat inside source static 192.168.1.20 209.169.200.225
```

#### 5.6.1.2 Assign NAT to Interfaces

```
en
conf t
int g0/1
ip nat inside
int s0/0/1
ip nat outside
```

### 5.6.2 Dynamic NAT

#### 5.6.2.1 Configuration

```
en
conf t
access-list 1 permit 192.168.1.1 0.0.0.255
ip nat pool public_access 209.169.200.242 209.169.200.254 netmask 255.255.255.224
ip nat inside source list 1 pool public_access
```

### 5.6.3 General

#### 5.6.3.1 Verify Configuration

```
en
show ip nat translations
show ip nat statistics
```

#### 5.6.3.2 Clear Static NAT

```
en
conf t
no ip nat inside source static 192.168.1.20 209.169.200.225
```

#### 5.6.3.3 Clear Dynamic NAT

```
en
clear ip nat translation *
clear ip nat statistics
```



## 5.7 General Settings

### 5.7.1 Date and Time Settings

Set clock settings

clock set 16:45:00 Dec 8 2016

### 5.7.2 Prevent unwanted DNS Lookups

en

conf t

no ip domain-lookup

## 6 Switch

### 6.1 Security

#### 6.1.1 Management Security

##### 6.1.1.1 Enable CLI Password

en

conf t

line con 0

password conpass

login

logging synchronous

##### 6.1.1.2 Enable Encrypted Password after enable – EXEC – Global Configuration

en

conf t

enable password-encryption

enable secret pass

##### 6.1.1.3 Enable Telnet Password

en

conf t

line vty 0 15

password telnetpass

login

##### 6.1.1.3.1 SSH

##### 6.1.1.3.1.1 SSH Configuration

en

```
conf t
ip domain-name isp.gr
username admin privilege 15 secret sshpass
line vty 0 15
transport input ssh
login local
exit
crypto key generate rsa
end
show ip ssh
```

#### **6.1.1.3.1.2 More SSH Settings**

```
en
conf t
ip ssh time-out 75
ip ssh authentication-retries 2
```

### **6.1.2 Port Security**

#### **6.1.2.1 Close unused physical ports**

```
en
conf t
int f0/0 | int range f0/0 – 4
shut
do sh ip interface brief
```

#### **6.1.2.2 Configure Basic Port Security**

```
en
conf t
int f0/5
shut
switchport mode access
switchport port-security
switchport port-security mac-address xxxx.xxxx.xxxx
(switchport port-security mac-address sticky)
no shut
end
sh port-security int f0/5
```

## **6.2 VLAN**

### **6.2.1 Create a VLAN**

```
en
```

```
conf t
vlan 10
name Students
exit
```

### **6.2.2 Assign Physical Access Ports to VLAN**

```
en
conf t
int range f0/1 - 24, g0/1 - 2
switchport access vlan 10
```

### **6.2.3 Set Physical Ports to Trunk**

```
en
conf t
int g0/1
switchport mode trunk
```

### **6.2.4 Set Physical Ports to Native Trunking**

```
en
conf t
int g0/1
switchport mode trunk
switchport trunk native vlan 99
```

### **6.2.5 Assign IP to VLAN**

```
int vlan99
ip add 192.168.1.2 255.255.255.0
no shut
```

### **6.2.6 Verify VLAN**

```
en
sh vlan brief
```

## **6.3 IP**

### **6.3.1 Prevent unwanted DNS Lookups**

```
en
conf t
no ip domain-lookup
```

### **6.3.2 Default Gateway**

```
en
conf t
ip default-gateway 192.168.1.1
```

## **6.4 General Settings**

### **6.4.1 Date and Time Settings**

show clock detail

clock set 16:30:00 Mar 27 2017

do wr

### **6.4.2 Log In Banner Message**

en

conf t

banner motd #

Some message #