



**Realizzazione di una  
infrastruttura di campus per la  
Conferenza Terena e GARR 2006**

**APPENDICE 1**

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# 1 LETTERA CONSEGNATA DALLA RECEPTION AI PARTECIPANTI

## Local Area Network Connectivity: Rules and Instructions

### Authentication Credential

Any conference participant may obtain her/his personal Authentication Credential during the registration procedure. The Credential is a temporary account identified by Username and Password (see at the end of this page) and it is mandatory to access the network at Conference site. The Credential validity is limited to the Terena and GARR Conferences period. The Credential is strictly personal and must not be communicate to anyone. The Credential is valid for wireless or wired access, but only one session at a time is permitted to each user.

### Wireless Connectivity

The following 4 wireless networks SSID are available in the conference venue "Le Ciminiere":

- **terenagarr1**
- **terenagarr2**
- **terenagarr3**
- **terenagarr4**

User authentication is implemented on the wireless networks by means of **SSID** selection and login procedure.

### Wireless access Login Procedure

After the selection of one of the above mentioned **SSID** (better if the suggested one) start your preferred web browser on your PC and open any web page. The browser will be automatically redirected to a login page: insert username and password you obtained as Credential. After a succesfull authentication the network access will be granted.

### Wireless access Logout Procedure

To logout point the browser to "<https://1.1.1.1/logout.html>" and press the LOGOUT button

### Wired Connectivity

Several FastEthernet sockets are available in the Terminal room (Building C2 first floor) as well as in the Speakers Room (Building C0 ground floor). In the Terminal Room about 10 PCs are at your disposal. The login procedure is described below

### Wired access Login Procedure

In order to login to the wired network start your preferred web browser and open any web page. The browser will be automatically redirected to a login page: insert username and password you obtained as Credential. After a succesfull authentication the network access will be granted.

### Wired access Logout Procedure

In order to avoid security issue at the end of the session remember to logout. To logout point the browser to "<http://login.conf06.garr.it/logout.shtml>"

### Technical Assistance

GARR technical staff is ready to assist you if any inconveniece occurs. Please contact the registration desk and ask for GARR technical support.

	<b>Username</b>	<b>conf001</b>	
	<b>Password:</b>	<b>mc71h</b>	
	<b>Suggested SSID:</b>	<b>terenagarr1</b>	

## 2 CONFIGURAZIONE DEGLI SWITCH LAYER3

Di seguito vengono riportate le configurazioni e il layout fisico degli switch del campus.

### 2.1 SWITCH C0-SW

```
C0_SW#show run
Building configuration...

Current configuration : 7092 bytes
!
version 12.2
no service pad
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname C0_SW
!
username toor privilege 15 password 0 <PWD>
no aaa new-model
switch 3 provision ws-c3750g-48ts
vtp domain TERENCEGARR
vtp mode transparent
ip subnet-zero
!
!
no file verify auto
spanning-tree mode pvst
spanning-tree extend system-id
!
vlan internal allocation policy ascending
!
vlan 10
 name MNG_VLAN
!
vlan 92-96
!
vlan 97
 name STREAMING_VLAN
!
vlan 99
 name SPEAKERS_VLAN
!
vlan 100
 name TERMINAL_VLAN
!
vlan 101
```

```
name TERMINAL1_VLAN
!
vlan 102
name EXHIBITORS_VLAN
!
vlan 103
name EXHIBITORS1_VLAN
!
vlan 104
name MUPBED_VLAN
!
vlan 105
name MUPBED1_VLAN
!
vlan 108
name VideoConf_FCCN
!
!
interface Port-channel3
switchport trunk encapsulation dot1q
switchport mode trunk
switchport nonegotiate
!
interface GigabitEthernet3/0/1
switchport access vlan 99
switchport mode access
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/2
switchport access vlan 99
switchport mode access
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/3
switchport access vlan 99
switchport mode access
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/4
switchport access vlan 99
switchport mode access
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/5
switchport access vlan 99
switchport mode access
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/6
switchport access vlan 99
switchport mode access
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/7
switchport access vlan 99
switchport mode access
```

```
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/8
switchport access vlan 99
switchport mode access
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/9
switchport access vlan 99
switchport mode access
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/10
switchport access vlan 99
switchport mode access
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/11
switchport access vlan 99
switchport mode access
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/12
switchport access vlan 99
switchport mode access
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/13
switchport access vlan 99
switchport mode access
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/14
switchport access vlan 99
switchport mode access
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/15
switchport access vlan 99
switchport mode access
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/16
switchport access vlan 99
switchport mode access
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/17
switchport access vlan 99
switchport mode access
speed 100
spanning-tree portfast
```

```
!  
interface GigabitEthernet3/0/18  
  switchport access vlan 99  
  switchport mode access  
  speed 100  
  spanning-tree portfast  
!  
interface GigabitEthernet3/0/19  
  switchport access vlan 99  
  switchport mode access  
  speed 100  
  spanning-tree portfast  
!  
interface GigabitEthernet3/0/20  
  switchport access vlan 99  
  switchport mode access  
  speed 100  
  spanning-tree portfast  
!  
interface GigabitEthernet3/0/21  
  switchport access vlan 99  
  switchport mode access  
  speed 100  
  spanning-tree portfast  
!  
interface GigabitEthernet3/0/22  
  switchport access vlan 99  
  switchport mode access  
  speed 100  
  spanning-tree portfast  
!  
interface GigabitEthernet3/0/23  
  description "ESPOSITORI_NORTEL"  
  switchport access vlan 102  
  switchport mode access  
  speed 100  
  spanning-tree portfast  
!  
interface GigabitEthernet3/0/24  
  switchport access vlan 102  
  switchport mode access  
  speed 100  
  spanning-tree portfast  
!  
interface GigabitEthernet3/0/25  
  description "ESPOSITORI_INGV"  
  switchport access vlan 102  
  switchport mode access  
  speed 100  
  spanning-tree portfast  
!  
interface GigabitEthernet3/0/26  
  switchport access vlan 102  
  switchport mode access  
  speed 100  
  spanning-tree portfast  
!  
interface GigabitEthernet3/0/27  
  description "ESPOSITORI_GLIMMER-GLASS"  
  switchport access vlan 102  
  switchport mode access  
  speed 100
```

```
spanning-tree portfast
!
interface GigabitEthernet3/0/28
switchport access vlan 102
switchport mode access
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/29
description "ESPOSITORI_DANTE"
switchport access vlan 102
switchport mode access
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/30
switchport access vlan 102
switchport mode access
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/31
description "ESPOSITORI_NORTEL"
switchport access vlan 102
switchport mode access
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/32
switchport access vlan 102
switchport mode access
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/33
switchport access vlan 10
switchport mode access
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/34
switchport access vlan 10
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/35
switchport access vlan 10
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/36
switchport access vlan 10
switchport mode access
speed 100
spanning-tree portfast
!
interface GigabitEthernet3/0/37
switchport access vlan 99
switchport mode access
speed 100
spanning-tree portfast
!
```

```
interface GigabitEthernet3/0/38
  speed 100
  spanning-tree portfast
!
interface GigabitEthernet3/0/39
  speed 100
  spanning-tree portfast
!
interface GigabitEthernet3/0/40
  speed 100
  spanning-tree portfast
!
interface GigabitEthernet3/0/41
  speed 100
  spanning-tree portfast
!
interface GigabitEthernet3/0/42
  speed 100
  spanning-tree portfast
!
interface GigabitEthernet3/0/43
  speed 100
  spanning-tree portfast
!
interface GigabitEthernet3/0/44
  speed 100
  spanning-tree portfast
!
interface GigabitEthernet3/0/45
  switchport access vlan 108
  switchport mode access
  speed 100
  spanning-tree portfast
!
interface GigabitEthernet3/0/46
  speed 100
  spanning-tree portfast
!
interface GigabitEthernet3/0/47
  switchport access vlan 104
  spanning-tree portfast
!
interface GigabitEthernet3/0/48
  switchport access vlan 105
  load-interval 30
  spanning-tree portfast
!
interface GigabitEthernet3/0/49
  switchport trunk encapsulation dot1q
  switchport mode trunk
  switchport nonegotiate
  load-interval 30
  channel-group 3 mode on
!
interface GigabitEthernet3/0/50
  switchport trunk encapsulation dot1q
  switchport mode trunk
  switchport nonegotiate
  channel-group 3 mode on
!
interface GigabitEthernet3/0/51
  switchport access vlan 99
```

```

switchport mode access
spanning-tree portfast
!
interface GigabitEthernet3/0/52
!
interface Vlan1
no ip address
!
interface Vlan10
ip address 10.10.10.100 255.255.255.0
!
ip classless
ip http server
ip http secure-server
!
!
logging facility local0
logging source-interface Vlan10
logging 10.10.10.3
!
control-plane
!
!
line con 0
line vty 0 4
password <PWD>
login local
line vty 5 15
no login
!
ntp server 10.10.10.1
end

```

```

C0_SW#
C0_SW#show vlan

```

VLAN Name	Status	Ports
1 default	active	Gi3/0/38, Gi3/0/39, Gi3/0/40, Gi3/0/41, Gi3/0/42, Gi3/0/43, Gi3/0/44, Gi3/0/46, Gi3/0/50, Gi3/0/52
10 MNG_VLAN	active	Gi3/0/33, Gi3/0/34, Gi3/0/35, Gi3/0/36
92 VLAN0092	active	
93 VLAN0093	active	
94 VLAN0094	active	
95 VLAN0095	active	
96 VLAN0096	active	
97 STREAMING_VLAN	active	
99 SPEAKERS_VLAN	active	Gi3/0/1, Gi3/0/2, Gi3/0/3, Gi3/0/4, Gi3/0/5, Gi3/0/6, Gi3/0/7, Gi3/0/8, Gi3/0/9, Gi3/0/10, Gi3/0/11, Gi3/0/12, Gi3/0/13, Gi3/0/14, Gi3/0/15, Gi3/0/16, Gi3/0/17, Gi3/0/18, Gi3/0/19, Gi3/0/20, Gi3/0/21, Gi3/0/22, Gi3/0/37, Gi3/0/51
100 TERMINAL_VLAN	active	
101 TERMINAL1_VLAN	active	
102 EXHIBITORS_VLAN	active	Gi3/0/23, Gi3/0/24, Gi3/0/25, Gi3/0/26, Gi3/0/27, Gi3/0/28, Gi3/0/29, Gi3/0/30, Gi3/0/31, Gi3/0/32
103 EXHIBITORS1_VLAN	active	
104 MUPBED_VLAN	active	Gi3/0/47

```

105 MUPBED1_VLAN          active   Gi3/0/48
108 VideoConf_FCCN       active   Gi3/0/45
1002 fddi-default         act/unsup
1003 token-ring-default   act/unsup
1004 fddinet-default      act/unsup
1005 trnet-default        act/unsup
  
```

VLAN	Type	SAID	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode	Trans1	Trans2
1	enet	100001	1500	-	-	-	-	-	0	0
10	enet	100010	1500	-	-	-	-	-	0	0
92	enet	100092	1500	-	-	-	-	-	0	0
93	enet	100093	1500	-	-	-	-	-	0	0
94	enet	100094	1500	-	-	-	-	-	0	0
95	enet	100095	1500	-	-	-	-	-	0	0
96	enet	100096	1500	-	-	-	-	-	0	0
97	enet	100097	1500	-	-	-	-	-	0	0
99	enet	100099	1500	-	-	-	-	-	0	0
100	enet	100100	1500	-	-	-	-	-	0	0
101	enet	100101	1500	-	-	-	-	-	0	0
102	enet	100102	1500	-	-	-	-	-	0	0
103	enet	100103	1500	-	-	-	-	-	0	0
104	enet	100104	1500	-	-	-	-	-	0	0
105	enet	100105	1500	-	-	-	-	-	0	0
108	enet	100108	1500	-	-	-	-	-	0	0

VLAN	Type	SAID	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode	Trans1	Trans2
1002	fddi	101002	1500	-	-	-	-	-	0	0
1003	tr	101003	1500	-	-	-	-	-	0	0
1004	fdnet	101004	1500	-	-	-	ieee	-	0	0
1005	trnet	101005	1500	-	-	-	ibm	-	0	0

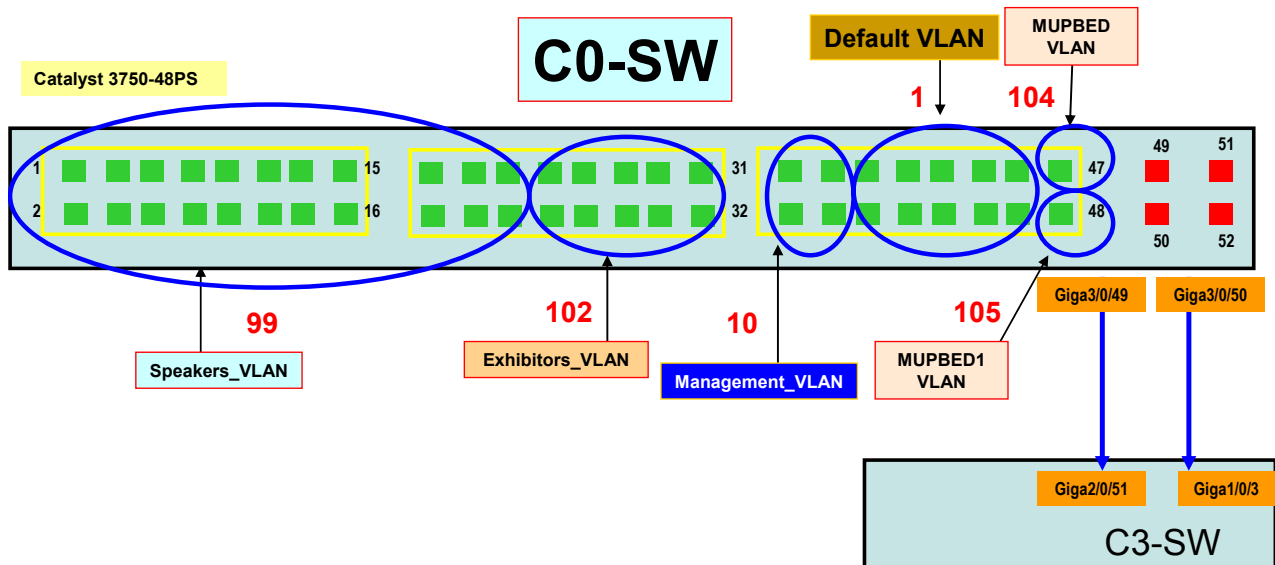


Figure 1: layout C0-SW

## 2.2 SWITCH C1-SW

```
C1-SW#show run
Building configuration...

Current configuration : 7552 bytes
!
version 12.2
no service pad
service tcp-keepalives-in
service tcp-keepalives-out
service timestamps debug datetime localtime
service timestamps log datetime localtime
no service password-encryption
!
hostname C1-SW
!
logging buffered 8000 debugging
enable secret 5 $1$kmoW$iO6.uXStRB2oQyGkGH9.g.
!
username toor password 0 <PWD>
no aaa new-model
clock timezone CET 1
clock summer-time cest recurring last Sun Mar 2:00 last Sun Oct 3:00
switch 1 provision ws-c3750-48p
vtp domain TERENCEGARR
vtp mode transparent
ip subnet-zero
no ip gratuitous-arps
ip name-server 212.189.204.1
!
!
no file verify auto
spanning-tree mode pvst
spanning-tree extend system-id
!
vlan internal allocation policy ascending
!
vlan 10
!
vlan 92
    name Wireless1_VLAN
!
vlan 93
    name Wireless2_VLAN
!
vlan 94
    name Wireless3_VLAN
!
vlan 95
    name Wireless4_VLAN
!
vlan 96
    name Services_VLAN
!
vlan 97
    name Streaming_VLAN
!
vlan 99
    name Speakers_VLAN
```

```
!  
vlan 100  
  name Terminal_VLAN  
!  
vlan 101  
  name Terminal1_VLAN  
!  
vlan 102  
  name Exhibitors_VLAN  
!  
vlan 106  
  name Rediris_VideoConf  
!  
!  
interface Port-channell  
  switchport trunk encapsulation dot1q  
  switchport mode trunk  
  switchport nonegotiate  
!  
interface FastEthernet1/0/1  
  switchport access vlan 10  
  switchport mode access  
  no cdp enable  
  spanning-tree portfast  
!  
interface FastEthernet1/0/2  
  switchport access vlan 10  
  switchport mode access  
  no cdp enable  
  spanning-tree portfast  
!  
interface FastEthernet1/0/3  
  switchport access vlan 10  
  switchport mode access  
  no cdp enable  
  spanning-tree portfast  
!  
interface FastEthernet1/0/4  
  switchport access vlan 10  
  switchport mode access  
  no cdp enable  
  spanning-tree portfast  
!  
interface FastEthernet1/0/5  
  switchport access vlan 10  
  switchport mode access  
  no cdp enable  
  spanning-tree portfast  
!  
interface FastEthernet1/0/6  
  switchport access vlan 10  
  switchport mode access  
  no cdp enable  
  spanning-tree portfast  
!  
interface FastEthernet1/0/7  
  switchport access vlan 10  
  switchport mode access  
  no cdp enable  
  spanning-tree portfast  
!  
interface FastEthernet1/0/8
```

```
switchport access vlan 10
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/9
switchport access vlan 10
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/10
switchport access vlan 10
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/11
switchport access vlan 10
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/12
switchport access vlan 10
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/13
switchport access vlan 10
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/14
switchport access vlan 10
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/15
switchport access vlan 10
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/16
switchport access vlan 10
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/17
switchport access vlan 99
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/18
switchport access vlan 99
switchport mode access
```

```
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/19
switchport access vlan 99
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/20
switchport access vlan 99
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/21
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/22
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/23
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/24
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/25
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/26
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/27
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/28
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/29
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/30
switchport mode access
```

```
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/31
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/32
switchport access vlan 106
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/33
switchport access vlan 97
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/34
switchport access vlan 97
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/35
switchport access vlan 97
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/36
switchport access vlan 97
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/37
switchport access vlan 97
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/38
switchport access vlan 97
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/39
switchport access vlan 97
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/40
switchport access vlan 97
switchport mode access
no cdp enable
spanning-tree portfast
!
```

```
interface FastEthernet1/0/41
  switchport access vlan 97
  switchport mode access
  no cdp enable
  spanning-tree portfast
!
interface FastEthernet1/0/42
  switchport access vlan 97
  switchport mode access
  no cdp enable
  spanning-tree portfast
!
interface FastEthernet1/0/43
  switchport access vlan 97
  switchport mode access
  no cdp enable
  spanning-tree portfast
!
interface FastEthernet1/0/44
  switchport access vlan 97
  switchport mode access
  no cdp enable
  spanning-tree portfast
!
interface FastEthernet1/0/45
  switchport access vlan 97
  switchport mode access
  no cdp enable
  spanning-tree portfast
!
interface FastEthernet1/0/46
  switchport access vlan 97
  switchport mode access
  no cdp enable
  spanning-tree portfast
!
interface FastEthernet1/0/47
  switchport access vlan 97
  switchport mode access
  no cdp enable
  spanning-tree portfast
!
interface FastEthernet1/0/48
  switchport access vlan 97
  switchport mode access
  no cdp enable
  spanning-tree portfast
!
interface GigabitEthernet1/0/1
  switchport trunk encapsulation dot1q
  switchport mode trunk
  switchport nonegotiate
  channel-group 1 mode on
!
interface GigabitEthernet1/0/2
  switchport trunk encapsulation dot1q
  switchport mode trunk
  switchport nonegotiate
  channel-group 1 mode on
!
interface GigabitEthernet1/0/3
!
```

```

interface GigabitEthernet1/0/4
!
interface Vlan1
  no ip address
  shutdown
!
interface Vlan10
  ip address 10.10.10.101 255.255.255.0
!
ip classless
ip http server
ip http secure-server
!
!
logging facility local1
logging source-interface Vlan10
logging 10.10.10.3
access-list 1 permit 10.10.10.0 0.0.0.255
snmp-server community public RO 1
!
control-plane
!
!
line con 0
line vty 0 4
  access-class 1 in
  password <PWD>
  login local
line vty 5 15
  no login
!
ntp server 10.10.10.1
end

```

Cl-SW# show vlan

VLAN Name	Status	Ports
1 default	active	Fal/0/21, Fal/0/22, Fal/0/23, Fal/0/24, Fal/0/25, Fal/0/26, Fal/0/27, Fal/0/28, Fal/0/29, Fal/0/30, Fal/0/31, Gil/0/3, Gil/0/4
10 VLAN0010	active	Fal/0/1, Fal/0/2, Fal/0/3, Fal/0/4, Fal/0/5, Fal/0/6, Fal/0/7, Fal/0/8, Fal/0/9, Fal/0/10, Fal/0/11, Fal/0/12, Fal/0/13, Fal/0/14, Fal/0/15, Fal/0/16
92 Wireless1_VLAN	active	
93 Wireless2_VLAN	active	
94 Wireless3_VLAN	active	
95 Wireless4_VLAN	active	
96 Services_VLAN	active	
97 Steaming_VLAN	active	Fal/0/33, Fal/0/34, Fal/0/35, Fal/0/36, Fal/0/37, Fal/0/38, Fal/0/39, Fal/0/40, Fal/0/41, Fal/0/42, Fal/0/43, Fal/0/44, Fal/0/45, Fal/0/46, Fal/0/47, Fal/0/48
99 Speakers_VLAN	active	Fal/0/17, Fal/0/18, Fal/0/19, Fal/0/20
100 Terminal_VLAN	active	
101 Terminal1_VLAN	active	
102 Exhibitors_VLAN	active	
106 Rediris_VideoConf	active	Fal/0/32

```

1002 fddi-default          act/unsup
1003 token-ring-default   act/unsup
1004 fddinet-default      act/unsup
1005 trnet-default        act/unsup

```

VLAN	Type	SAID	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode	Trans1	Trans2
1	enet	100001	1500	-	-	-	-	-	0	0
10	enet	100010	1500	-	-	-	-	-	0	0
92	enet	100092	1500	-	-	-	-	-	0	0
93	enet	100093	1500	-	-	-	-	-	0	0
94	enet	100094	1500	-	-	-	-	-	0	0
95	enet	100095	1500	-	-	-	-	-	0	0
96	enet	100096	1500	-	-	-	-	-	0	0
97	enet	100097	1500	-	-	-	-	-	0	0
99	enet	100099	1500	-	-	-	-	-	0	0
100	enet	100100	1500	-	-	-	-	-	0	0
101	enet	100101	1500	-	-	-	-	-	0	0
102	enet	100102	1500	-	-	-	-	-	0	0
106	enet	100106	1500	-	-	-	-	-	0	0
1002	fddi	101002	1500	-	-	-	-	-	0	0
1003	tr	101003	1500	-	-	-	-	-	0	0

VLAN	Type	SAID	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode	Trans1	Trans2
1004	fdnet	101004	1500	-	-	-	ieee	-	0	0
1005	trnet	101005	1500	-	-	-	ibm	-	0	0

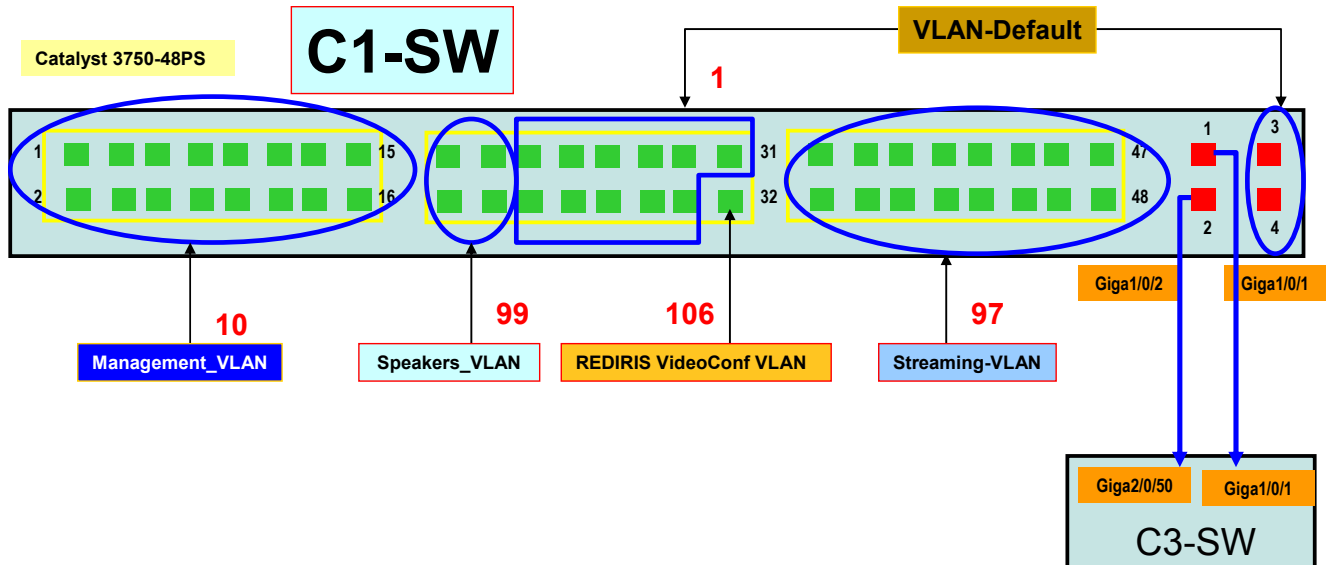


Figure 2: Layout switch C1-SW

## 2.3 SWITCH C2-SW

```

C2-SW>ena
Password:
C2-SW#show run
Building configuration...

```

Current configuration : 4543 bytes

```
!  
version 12.2  
no service pad  
service tcp-keepalives-in  
service tcp-keepalives-out  
service timestamps debug datetime localtime  
service timestamps log datetime localtime  
no service password-encryption  
!  
hostname C2-SW  
!  
logging buffered 8000 debugging  
enable secret 5 $1$V6f6$wBbqz9TKwSukPlm94u4/d/  
!  
username toor password 0 <PWD>  
no aaa new-model  
clock timezone CET 1  
clock summer-time cest recurring last Sun Mar 2:00 last Sun Oct 3:00  
switch 1 provision ws-c3750-24p  
vtp domain TERENA2006  
vtp mode transparent  
ip subnet-zero  
no ip gratuitous-arps  
no ip domain-lookup  
!  
no file verify auto  
spanning-tree mode pvst  
spanning-tree extend system-id  
!  
vlan internal allocation policy ascending  
!  
vlan 10  
  name Management_VLAN  
!  
vlan 97  
  name Streaming_VLAN  
!  
vlan 99  
  name Speakers_VLAN  
!  
vlan 100  
  name Terminal_VLAN  
!  
vlan 101  
  name TERMINAL1_VLAN  
!  
vlan 107  
  name FCCN_VideoConf  
!  
!  
interface Port-channel2  
  switchport trunk encapsulation dot1q  
  switchport mode trunk  
  switchport nonegotiate  
!  
interface FastEthernet1/0/1  
  switchport access vlan 97  
  switchport mode access  
  spanning-tree portfast  
!  
interface FastEthernet1/0/2  
  switchport access vlan 97
```

```
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/3
switchport access vlan 97
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/4
switchport access vlan 97
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/5
switchport access vlan 97
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/6
switchport access vlan 97
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/7
switchport access vlan 97
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/8
switchport access vlan 97
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/9
switchport access vlan 99
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/10
switchport access vlan 99
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/11
switchport access vlan 99
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/12
switchport access vlan 99
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/13
description "Terminali Rimando_A"
switchport access vlan 100
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/14
description "Terminali Rimando_B"
switchport access vlan 100
```

```
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/15
description "AP_4"
switchport access vlan 10
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/16
description "AP_16"
switchport access vlan 10
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/17
description "AP_14"
switchport access vlan 10
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/18
description "AP_17"
switchport access vlan 10
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/19
description "AP_19"
switchport access vlan 10
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/20
description "AP_20"
switchport access vlan 10
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/21
description "AP_18"
switchport access vlan 10
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/22
switchport access vlan 107
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/23
description "Speaker1_C2_Primo_Piano"
switchport access vlan 99
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/24
description "PORTA_ACCESS_VOIP"
switchport access vlan 101
switchport mode access
spanning-tree portfast
!
```

```

interface GigabitEthernet1/0/1
  switchport trunk encapsulation dot1q
  switchport mode trunk
  switchport nonegotiate
  channel-group 2 mode on
!
interface GigabitEthernet1/0/2
  switchport trunk encapsulation dot1q
  switchport mode trunk
  switchport nonegotiate
  channel-group 2 mode on
!
interface Vlan1
  no ip address
!
interface Vlan10
  ip address 10.10.10.102 255.255.255.0
!
ip classless
ip http server
ip http secure-server
!
!
logging facility local2
logging 10.10.10.3
access-list 1 permit 10.10.10.0 0.0.0.255
snmp-server community public RO 1
!
control-plane
!
!
line con 0
line vty 0 4
  access-class 1 in
  password <PWD>
  login local
line vty 5 15
  no login
!
ntp server 10.10.10.1
end

```

C2-SW#show vlan

VLAN Name	Status	Ports
1 default	active	
10 Management_VLAN	active	Fal/0/15, Fal/0/16, Fal/0/17, Fal/0/18, Fal/0/19, Fal/0/20
97 Streaming_VLAN	active	Fal/0/1, Fal/0/2, Fal/0/3, Fal/0/4, Fal/0/5, Fal/0/6, Fal/0/7
99 Speakers_VLAN	active	Fal/0/8
100 Terminal_VLAN	active	Fal/0/9, Fal/0/10, Fal/0/11, Fal/0/12, Fal/0/23
101 Terminall_VLAN	active	Fal/0/13, Fal/0/14
107 FCCN_VideoConf	active	Fal/0/24
1002 fddi-default	act/unsup	Fal/0/22
1003 token-ring-default	act/unsup	
1004 fddinet-default	act/unsup	
1005 trnet-default	act/unsup	

VLAN	Type	SAID	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode	Trans1	Trans2
1	enet	100001	1500	-	-	-	-	-	0	0
10	enet	100010	1500	-	-	-	-	-	0	0
97	enet	100097	1500	-	-	-	-	-	0	0
99	enet	100099	1500	-	-	-	-	-	0	0
100	enet	100100	1500	-	-	-	-	-	0	0
101	enet	100101	1500	-	-	-	-	-	0	0
107	enet	100107	1500	-	-	-	-	-	0	0
1002	fddi	101002	1500	-	-	-	-	-	0	0
1003	tr	101003	1500	-	-	-	-	-	0	0
1004	fdnet	101004	1500	-	-	-	ieee	-	0	0
1005	trnet	101005	1500	-	-	-	ibm	-	0	0

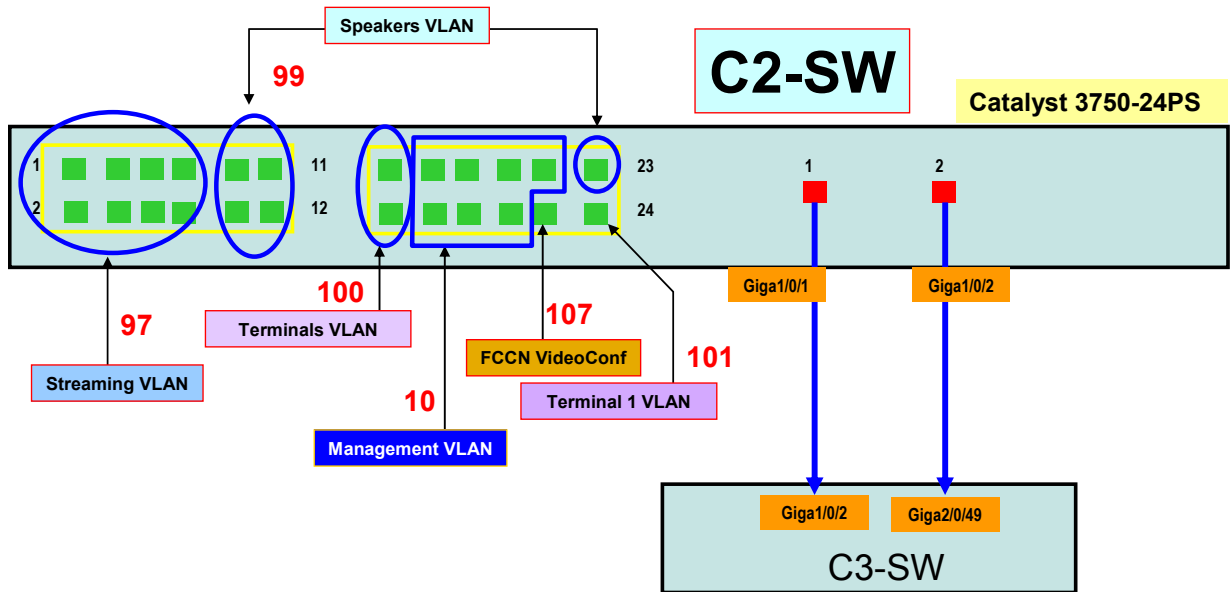


Figure 3: Layout switch C2-SW

## 2.4 SWITCH C3-SW

```

C3-SW#show run
Building configuration...

Current configuration : 20485 bytes
!
! Last configuration change at 12:37:47 cest Wed May 17 2006 by toor
! NVRAM config last updated at 12:38:28 cest Wed May 17 2006 by toor
!
version 12.2
no service pad
service tcp-keepalives-in
service tcp-keepalives-out
service timestamps debug datetime localtime
service timestamps log datetime localtime
no service password-encryption

```

```
service sequence-numbers
!
hostname C3-SW
!
logging buffered 8000 debugging
enable password <PWD>
!
username toor password 0 <PWD>
no aaa new-model
clock timezone CET 1
clock summer-time cest recurring last Sun Mar 2:00 last Sun Oct 3:00
switch 1 provision ws-c3750-48p
switch 2 provision ws-c3750g-48ts
vtp domain TERENCEGARR
vtp mode transparent
ip subnet-zero
ip routing
no ip gratuitous-arps
ip domain-name conf06.garr.it
ip name-server 212.189.204.1
ip name-server 193.206.158.1
ip dhcp excluded-address 212.189.204.1
ip dhcp excluded-address 212.189.204.30
ip dhcp excluded-address 212.189.204.62
ip dhcp excluded-address 212.189.204.94
ip dhcp excluded-address 193.204.92.253 193.204.92.254
ip dhcp excluded-address 193.204.93.253 193.204.93.254
ip dhcp excluded-address 193.204.94.253 193.204.94.254
ip dhcp excluded-address 193.204.95.253 193.204.95.254
ip dhcp excluded-address 10.10.10.1 10.10.10.50
ip dhcp excluded-address 10.10.10.252 10.10.10.254
ip dhcp excluded-address 212.189.204.33 212.189.204.48
!
ip dhcp pool MANAGEMENT
    network 10.10.10.0 255.255.255.0
    default-router 10.10.10.254
    domain-name conf06.garr.it
    option 43 ip 10.10.10.20
    dns-server 212.189.204.1 193.206.158.1
!
ip dhcp pool VLAN92
    network 193.204.92.0 255.255.255.0
    domain-name conf06.garr.it
    default-router 193.204.92.254
    dns-server 212.189.204.1 193.206.158.1
    lease 0 0 30
!
ip dhcp pool VLAN93
    network 193.204.93.0 255.255.255.0
    domain-name conf06.garr.it
    default-router 193.204.93.254
    dns-server 212.189.204.1 193.206.158.1
    lease 0 0 30
!
ip dhcp pool VLAN94
    network 193.204.94.0 255.255.255.0
    domain-name conf06.garr.it
    default-router 193.204.94.254
    dns-server 212.189.204.1 193.206.158.1
    lease 0 0 30
!
ip dhcp pool VLAN95
```

```
network 193.204.95.0 255.255.255.0
domain-name conf06.garr.it
default-router 193.204.95.254
dns-server 212.189.204.1 193.206.158.1
lease 0 0 30
!
ip dhcp pool VLAN96
network 212.189.204.0 255.255.255.224
domain-name conf06.garr.it
default-router 212.189.204.30
dns-server 212.189.204.1 193.206.158.1
!
ip dhcp pool VLAN97
network 212.189.204.32 255.255.255.224
domain-name conf06.garr.it
default-router 212.189.204.62
dns-server 212.189.204.1 193.206.158.1
!
ip dhcp pool VLAN98
network 212.189.204.64 255.255.255.224
domain-name conf06.garr.it
default-router 212.189.204.94
dns-server 212.189.204.1 193.206.158.1
!
ip ssh authentication-retries 5
ip ssh source-interface Vlan10
!
!
!
no file verify auto
spanning-tree mode pvst
spanning-tree extend system-id
!
vlan internal allocation policy ascending
!
vlan 10
name Management_VLAN
!
vlan 92
name Wireless1_VLAN
!
vlan 93
name Wireless2_VLAN
!
vlan 94
name Wireless3_VLAN
!
vlan 95
name Wireless4_VLAN
!
vlan 96
name Services_VLAN
!
vlan 97
name Streaming_VLAN
!
vlan 99
name Speakers_VLAN
!
vlan 100
name Terminal_VLAN
!
```

```
vlan 101
  name Terminalii_VLAN
!
vlan 102
  name Exhibitors_VLAN
!
!
vlan 104
  name MUPBED_VLAN
!
vlan 105
  name MUPBED1_VLAN
!
vlan 106
  name VLAN_VideoConf
!
vlan 107
  name REDIRIS_VideoConf
!
vlan 108
  name FCCN_VideoConf
!
!
interface Port-channel1
  switchport trunk encapsulation dot1q
  switchport mode trunk
  switchport nonegotiate
!
interface Port-channel2
  switchport trunk encapsulation dot1q
  switchport mode trunk
  switchport nonegotiate
!
interface Port-channel3
  switchport trunk encapsulation dot1q
  switchport mode trunk
  switchport nonegotiate
!
interface FastEthernet1/0/1
  description "MANAGEMENT"
  switchport access vlan 10
  switchport mode access
  no cdp enable
  spanning-tree portfast
!
interface FastEthernet1/0/2
  description "MANAGEMENT"
  switchport access vlan 10
  switchport mode access
  no cdp enable
  spanning-tree portfast
!
interface FastEthernet1/0/3
  description "MANAGEMENT"
  switchport access vlan 10
  switchport mode access
  no cdp enable
  spanning-tree portfast
!
interface FastEthernet1/0/4
  description "MANAGEMENT"
  switchport access vlan 10
```

```
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/5
description "MANAGEMENT"
switchport access vlan 10
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/6
description "MANAGEMENT"
switchport access vlan 10
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/7
description "MANAGEMENT"
switchport access vlan 10
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/8
description "MANAGEMENT"
switchport access vlan 10
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/9
description "MANAGEMENT"
switchport access vlan 10
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/10
description "MANAGEMENT"
switchport access vlan 10
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/11
description "MANAGEMENT"
switchport access vlan 10
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/12
description "MANAGEMENT"
switchport access vlan 10
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/13
description "MANAGEMENT"
```

```
switchport access vlan 10
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/14
description "MANAGEMENT"
switchport access vlan 10
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/15
description "MANAGEMENT"
switchport access vlan 10
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/16
description "MANAGEMENT"
switchport access vlan 10
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/17
description "SPEAKER"
switchport access vlan 99
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/18
description "TERMINALI"
switchport access vlan 100
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/19
description "TERMINALI1"
switchport access vlan 101
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/20
description "ESPOSITORI"
switchport access vlan 102
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/21
description "ESPOSITORI1"
switchport access vlan 102
switchport mode access
spanning-tree portfast
!
interface FastEthernet1/0/22
description "VLAN_Streaming_C3"
switchport mode access
spanning-tree portfast
!
```

```
interface FastEthernet1/0/23
 spanning-tree portfast
!
interface FastEthernet1/0/24
 spanning-tree portfast
!
interface FastEthernet1/0/25
 spanning-tree portfast
!
interface FastEthernet1/0/26
 spanning-tree portfast
!
interface FastEthernet1/0/27
 spanning-tree portfast
!
interface FastEthernet1/0/28
 spanning-tree portfast
!
interface FastEthernet1/0/29
 spanning-tree portfast
!
interface FastEthernet1/0/30
 spanning-tree portfast
!
interface FastEthernet1/0/31
 spanning-tree portfast
!
interface FastEthernet1/0/32
 spanning-tree portfast
!
interface FastEthernet1/0/33
 description "SPEAKER"
 switchport access vlan 99
 switchport mode access
 spanning-tree portfast
!
interface FastEthernet1/0/34
 description "SPEAKER"
 switchport access vlan 99
 switchport mode access
 spanning-tree portfast
!
interface FastEthernet1/0/35
!
interface FastEthernet1/0/36
!
interface FastEthernet1/0/37
!
interface FastEthernet1/0/38
!
interface FastEthernet1/0/39
!
interface FastEthernet1/0/40
 spanning-tree portfast
!
interface FastEthernet1/0/41
!
interface FastEthernet1/0/42
!
interface FastEthernet1/0/43
 description "STREAMING"
 switchport access vlan 97
```

```
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/44
description "STREAMING"
switchport access vlan 97
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/45
description "STREAMING"
switchport access vlan 97
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/46
description "STREAMING"
switchport access vlan 97
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/47
description "STREAMING"
switchport access vlan 97
switchport mode access
no cdp enable
spanning-tree portfast
!
interface FastEthernet1/0/48
description "STREAMING"
switchport access vlan 97
switchport mode access
no cdp enable
spanning-tree portfast
!
interface GigabitEthernet1/0/1
switchport trunk encapsulation dot1q
switchport mode trunk
switchport nonegotiate
channel-group 1 mode on
!
interface GigabitEthernet1/0/2
switchport trunk encapsulation dot1q
switchport mode trunk
switchport nonegotiate
channel-group 2 mode on
!
interface GigabitEthernet1/0/3
description WLC_ServicePort
switchport trunk encapsulation dot1q
switchport mode trunk
switchport nonegotiate
load-interval 30
!
interface GigabitEthernet1/0/4
no switchport
ip address 193.206.141.74 255.255.255.252
no ip mroute-cache
```

```
!  
interface GigabitEthernet2/0/1  
  no switchport  
  ip address 10.1.1.1 255.255.255.252  
  no cdp enable  
!  
interface GigabitEthernet2/0/2  
  no switchport  
  ip address 10.2.2.1 255.255.255.252  
!  
interface GigabitEthernet2/0/3  
  description "SPEAKER"  
  switchport access vlan 99  
  switchport mode access  
  spanning-tree portfast  
!  
interface GigabitEthernet2/0/4  
  description "SPEAKER"  
  switchport access vlan 99  
  switchport mode access  
  spanning-tree portfast  
!  
interface GigabitEthernet2/0/5  
!  
interface GigabitEthernet2/0/6  
!  
interface GigabitEthernet2/0/7  
!  
interface GigabitEthernet2/0/8  
!  
interface GigabitEthernet2/0/9  
  description "TERMINALI"  
  switchport access vlan 100  
  switchport mode access  
!  
interface GigabitEthernet2/0/10  
  description "TERMINALI"  
  switchport access vlan 100  
  switchport mode access  
  spanning-tree portfast  
!  
interface GigabitEthernet2/0/11  
  switchport mode access  
!  
interface GigabitEthernet2/0/12  
!  
interface GigabitEthernet2/0/13  
!  
interface GigabitEthernet2/0/14  
!  
interface GigabitEthernet2/0/15  
!  
interface GigabitEthernet2/0/16  
  switchport trunk encapsulation dot1q  
  switchport mode trunk  
  switchport nonegotiate  
  load-interval 30  
!  
interface GigabitEthernet2/0/17  
  description "SERVIZI"  
  switchport access vlan 96  
  switchport mode access
```

```
spanning-tree portfast
!
interface GigabitEthernet2/0/18
description "SERVIZI"
switchport access vlan 96
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/19
description "SERVIZI"
switchport access vlan 96
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/20
description "SERVIZI"
switchport access vlan 96
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/21
description "SERVIZI"
switchport access vlan 96
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/22
description "SERVIZI"
switchport access vlan 96
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/23
description "SERVIZI"
switchport access vlan 96
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/24
description "SERVIZI"
switchport access vlan 96
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/25
description "SERVIZI"
switchport access vlan 96
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/26
description "SERVIZI"
switchport access vlan 96
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/27
description "SERVIZI"
switchport access vlan 96
switchport mode access
spanning-tree portfast
!
```

```
interface GigabitEthernet2/0/28
description "SERVIZI"
switchport access vlan 96
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/29
description "SERVIZI"
switchport access vlan 96
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/30
description "SERVIZI"
switchport access vlan 96
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/31
switchport access vlan 96
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/32
switchport access vlan 96
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/33
description "Connezione BASTIONE-MANAGEMENT"
switchport access vlan 10
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/34
switchport access vlan 10
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/35
description "Connezione SYSLOG"
switchport access vlan 10
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/36
switchport access vlan 10
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/37
switchport access vlan 10
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/38
switchport access vlan 10
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/39
switchport access vlan 10
```

```
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/40
switchport access vlan 10
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/41
switchport access vlan 10
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/42
switchport access vlan 10
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/43
switchport access vlan 10
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/44
switchport access vlan 10
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/45
description "Conessione DNS-MANAGEMENT"
switchport access vlan 10
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/46
switchport access vlan 10
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/47
description "Conessione ACS"
switchport access vlan 10
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/48
switchport access vlan 10
switchport mode access
spanning-tree portfast
!
interface GigabitEthernet2/0/49
switchport trunk encapsulation dot1q
switchport mode trunk
switchport nonegotiate
channel-group 2 mode on
!
interface GigabitEthernet2/0/50
switchport trunk encapsulation dot1q
switchport mode trunk
switchport nonegotiate
channel-group 1 mode on
!
```

```
interface GigabitEthernet2/0/51
  switchport trunk encapsulation dot1q
  switchport mode trunk
  switchport nonegotiate
  channel-group 3 mode on
!
interface GigabitEthernet2/0/52
  no switchport
  ip address 193.206.141.78 255.255.255.252
  no ip mroute-cache
!
interface Vlan1
  no ip address
  shutdown
!
interface Vlan10
  description MNG_VLAN
  ip address 10.10.10.254 255.255.255.0
!
interface Vlan92
  description WLAN1
  ip address 193.204.92.254 255.255.255.0
  ip access-group 101 in
  no ip unreachablees
!
interface Vlan93
  description WLAN2
  ip address 193.204.93.254 255.255.255.0
  ip access-group 101 in
  no ip unreachablees
!
interface Vlan94
  description WLAN3
  ip address 193.204.94.254 255.255.255.0
  ip access-group 101 in
  no ip unreachablees
!
interface Vlan95
  description WLAN4
  ip address 193.204.95.254 255.255.255.0
  ip access-group 101 in
  no ip unreachablees
!
interface Vlan96
  description ServiceVLAN
  ip address 212.189.204.30 255.255.255.224
  no ip unreachablees
!
interface Vlan97
  description StreamingVLAN
  ip address 212.189.204.62 255.255.255.224
  ip access-group 101 in
  no ip unreachablees
  ip pim sparse-mode
!
interface Vlan102
  ip address 212.189.204.222 255.255.255.224
  ip access-group 102 in
!
interface Vlan104
  description SVI for MUPBED VLAN
  ip address 212.189.204.65 255.255.255.252
```

```
ip access-group 101 in
!
interface Vlan105
description SVI for MUPBED1
ip address 212.189.204.69 255.255.255.252
ip access-group 101 in
!
interface Vlan106
description SVI for REDIRIS_VideoConf
ip address 212.189.204.73 255.255.255.252
ip access-group 101 in
!
interface Vlan107
description SVI for FCCN_VideoConf
ip address 212.189.204.77 255.255.255.252
ip access-group 101 in
!
!
ip classless
ip route 0.0.0.0 0.0.0.0 193.206.141.73
ip route 0.0.0.0 0.0.0.0 193.206.141.77
ip route 212.189.204.96 255.255.255.224 10.1.1.2
ip route 212.189.204.128 255.255.255.224 10.1.1.2
ip route 212.189.204.160 255.255.255.224 10.2.2.2
ip route 212.189.204.160 255.255.255.224 10.1.1.2
ip route 212.189.204.224 255.255.255.224 10.1.1.2
ip http server
ip http secure-server
!
!
logging facility local3
logging 10.10.10.3
access-list 1 permit 10.10.10.0 0.0.0.255
access-list 101 permit udp any any eq bootps
access-list 101 permit tcp any host 10.10.10.3 eq www
access-list 101 deny ip any 10.10.10.0 0.0.0.255
access-list 101 permit ip any any
access-list 102 deny ip any 10.10.10.0 0.0.0.255
access-list 102 permit ip host 212.189.204.194 any
access-list 102 permit ip host 212.189.204.195 any
access-list 102 permit ip host 212.189.204.196 any
access-list 102 permit ip host 212.189.204.197 any
access-list 102 permit ip host 212.189.204.198 any
snmp-server community public RO 1
snmp-server host 10.10.10.3 undefined
!
control-plane
!
!
line con 0
line vty 0 4
access-class 1 in
password <PWD>
login local
line vty 5 15
no login
!
ntp clock-period 36029190
ntp server 193.204.114.232
end

C3-SW#
```

C3-SW#  
C3-SW#show vlan

VLAN Name	Status	Ports
1 default	active	Fal/0/22, Fal/0/23, Fal/0/24, Fal/0/25, Fal/0/26, Fal/0/27, Fal/0/28, Fal/0/29, Fal/0/30, Fal/0/31, Fal/0/32, Fal/0/35, Fal/0/36, Fal/0/37, Fal/0/38, Fal/0/39, Fal/0/40, Fal/0/41, Fal/0/42, Gi2/0/5, Gi2/0/6, Gi2/0/7, Gi2/0/8, Gi2/0/11, Gi2/0/12, Gi2/0/13, Gi2/0/14, Gi2/0/15, Gi2/0/16
10 Management_VLAN	active	Fal/0/1, Fal/0/2, Fal/0/3, Fal/0/4, Fal/0/5, Fal/0/6, Fal/0/7, Fal/0/8, Fal/0/9, Fal/0/10, Fal/0/11, Fal/0/12, Fal/0/13, Fal/0/14, Fal/0/15, Fal/0/16, Gi2/0/33, Gi2/0/34, Gi2/0/35, Gi2/0/36, Gi2/0/37, Gi2/0/38, Gi2/0/39, Gi2/0/40, Gi2/0/41, Gi2/0/42, Gi2/0/43, Gi2/0/44, Gi2/0/45, Gi2/0/46, Gi2/0/47, Gi2/0/48
92 Wireless1_VLAN	active	
93 Wireless2_VLAN	active	
94 Wireless3_VLAN	active	
95 Wireless4_VLAN	active	
96 Services_VLAN	active	Gi2/0/17, Gi2/0/18, Gi2/0/19, Gi2/0/20, Gi2/0/21, Gi2/0/22, Gi2/0/23, Gi2/0/24, Gi2/0/25, Gi2/0/26, Gi2/0/27, Gi2/0/28, Gi2/0/29, Gi2/0/30, Gi2/0/31, Gi2/0/32
97 Streaming_VLAN	active	Fal/0/43, Fal/0/44, Fal/0/45, Fal/0/46, Fal/0/47, Fal/0/48
99 VLAN_Speaker	active	Fal/0/17, Fal/0/33, Fal/0/34, Gi2/0/3, Gi2/0/4
100 Terminal_VLAN	active	Fal/0/18, Gi2/0/9, Gi2/0/10
101 Terminal1_VLAN	active	Fal/0/19
102 Exhibitors_VLAN	active	Fal/0/20, Fal/0/21
104 VLAN_MUPBED	active	
105 VLAN_MUPBED1	active	
106 REDIRIS_VideoConf	active	
107 FCNN_VideoConf	active	
1002 fddi-default	act/unsup	
1003 token-ring-default	act/unsup	
1004 fddinet-default	act/unsup	
1005 trnet-default	act/unsup	

VLAN	Type	SAID	MTU	Parent	RingNo	BridgeNo	Stp	BrdgMode	Trans1	Trans2
1	enet	100001	1500	-	-	-	-	-	0	0
10	enet	100010	1500	-	-	-	-	-	0	0
92	enet	100092	1500	-	-	-	-	-	0	0
93	enet	100093	1500	-	-	-	-	-	0	0
94	enet	100094	1500	-	-	-	-	-	0	0
95	enet	100095	1500	-	-	-	-	-	0	0
96	enet	100096	1500	-	-	-	-	-	0	0
97	enet	100097	1500	-	-	-	-	-	0	0
99	enet	100099	1500	-	-	-	-	-	0	0
100	enet	100100	1500	-	-	-	-	-	0	0
101	enet	100101	1500	-	-	-	-	-	0	0
102	enet	100102	1500	-	-	-	-	-	0	0

104	enet	100104	1500	-	-	-	-	-	0	0
105	enet	100105	1500	-	-	-	-	-	0	0
106	enet	100106	1500	-	-	-	-	-	0	0
107	enet	100107	1500	-	-	-	-	-	0	0
1002	fddi	101002	1500	-	-	-	-	-	0	0
1003	tr	101003	1500	-	-	-	-	-	0	0
1004	fdnet	101004	1500	-	-	-	ieee	-	0	0
1005	trnet	101005	1500	-	-	-	ibm	-	0	0

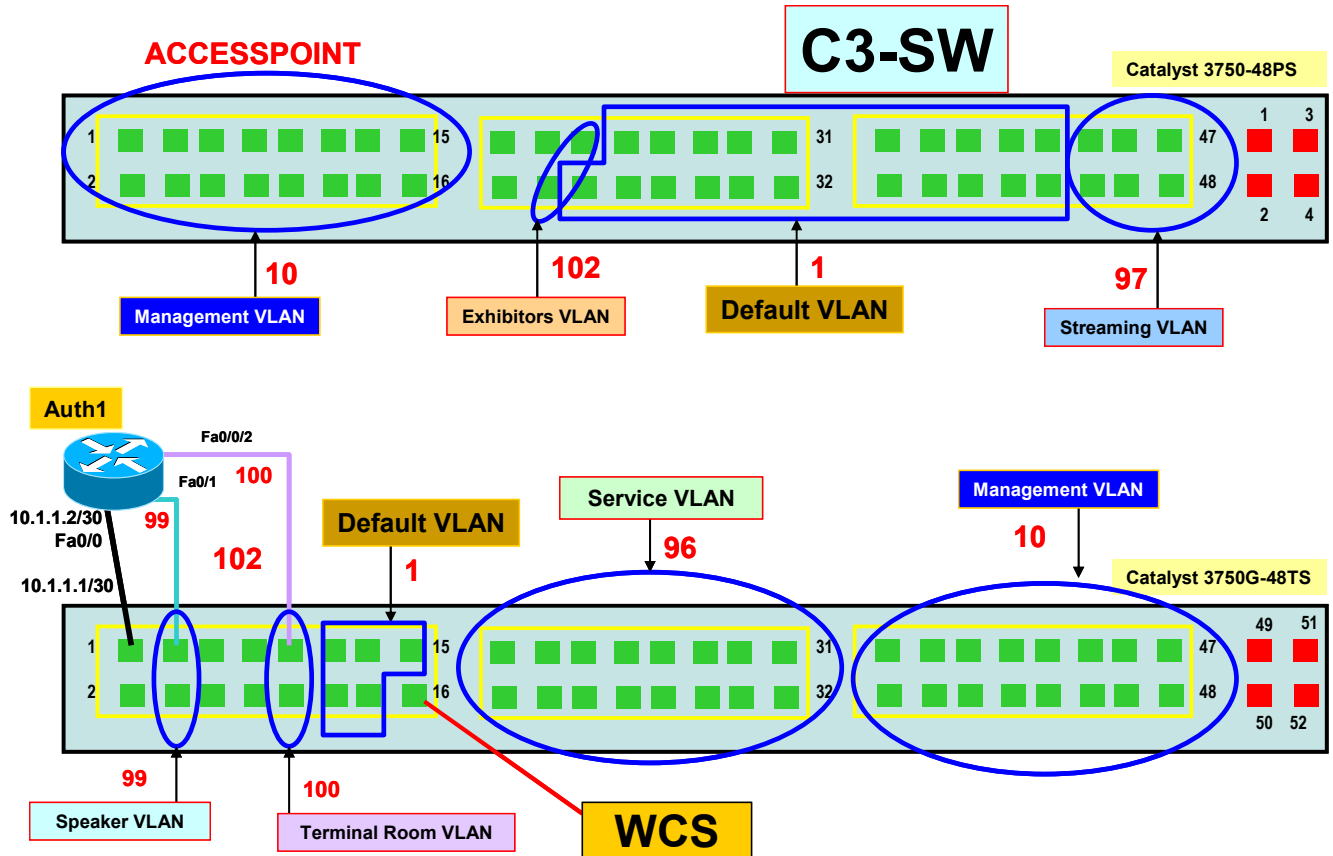


Figure 4: layout switch C3-SW

## 2.5 ROUTER AUTH1

```
Auth1#show run
Building configuration...
```

```
Current configuration : 3769 bytes
!
version 12.4
no service pad
service tcp-keepalives-in
service tcp-keepalives-out
service timestamps debug datetime localtime
service timestamps log datetime localtime
no service password-encryption
```

```
!  
hostname Auth1  
!  
boot-start-marker  
boot system flash:c2800nm-advsecurityk9-mz.124-7.bin  
boot-end-marker  
!  
logging buffered 8000 debugging  
enable password <Enable_Password>  
!  
aaa new-model  
!  
aaa authentication login default group radius local  
aaa authorization exec default group radius local  
aaa authorization auth-proxy default group radius local  
aaa accounting auth-proxy default start-stop group radius  
!  
aaa session-id common  
!  
resource policy  
!  
clock timezone CET 1  
clock summer-time cest recurring last Sun Mar 2:00 last Sun Oct 3:00  
no ip source-route  
no ip gratuitous-arps  
!  
!  
ip cef  
ip auth-proxy auth-proxy-banner http ^C<center><h3>Welcome to the TNC06<br>Catania May 15-18  
2006<h4>^C  
ip auth-proxy name AUTHCONF http inactivity-time 60  
ip admission auth-proxy-banner http ^C<center><h3>Welcome to the TNC06<br>Catania May 15-18  
2006<h4>^C  
no ip dhcp use vrf connected  
ip dhcp excluded-address 212.189.204.126  
ip dhcp excluded-address 212.189.204.158  
ip dhcp excluded-address 212.189.204.190  
!  
ip dhcp pool Vlan99_Speaker  
network 212.189.204.96 255.255.255.224  
default-router 212.189.204.126  
dns-server 212.189.204.1  
domain-name conf06.garr.it  
lease 0 0 30  
!  
ip dhcp pool Vlan100_Sala_Terminali  
network 212.189.204.128 255.255.255.224  
default-router 212.189.204.158  
dns-server 212.189.204.1  
domain-name conf06.garr.it  
lease 0 0 30  
!  
ip dhcp pool Vlan101_Sala_Terminali1  
network 212.189.204.160 255.255.255.224  
default-router 212.189.204.190
```

```
    dns-server 212.189.204.1
    domain-name conf06.garr.it
!
ip dhcp pool Vlan100_Sala_Terminali1
    lease 0 0 30
!
no ip bootp server
ip domain name conf06.garr.it
!
username root privilege 15 password 0 <Enable_Password>
!
interface FastEthernet0/0
    description "Punto-Punto Verso Catalyst 3750"
    ip address 10.1.1.2 255.255.255.252
    duplex auto
    speed auto
!
interface FastEthernet0/1
    description "GATEWAY-VLAN-SPEAKER"
    ip address 212.189.204.126 255.255.255.224
    ip access-group 101 in
    ip auth-proxy AUTHCONF
    duplex auto
    speed auto
    no cdp enable
!
interface FastEthernet0/0/0
    description "VLAN-SALA_TERMINALI1-VOIP"
    switchport access vlan 101
    no cdp enable
!
interface FastEthernet0/0/1
    shutdown
    no cdp enable
!
interface FastEthernet0/0/2
    description "VLAN_Terminali"
    switchport access vlan 100
    no cdp enable
!
interface FastEthernet0/0/3
    switchport access vlan 10
!
interface Vlan1
    no ip address
!
interface Vlan10
    ip address 10.10.10.252 255.255.255.0
!
interface Vlan100
    description "VLAN_Terminali"
    ip address 212.189.204.158 255.255.255.224
    ip access-group 102 in
    ip auth-proxy AUTHCONF
!
```

```
interface Vlan101
  description "GATEWAY-VLAN-SALA_TERMINALI1"
  ip address 212.189.204.190 255.255.255.224
  ip access-group 103 in
  ip auth-proxy AUTHCONF
!
ip route 0.0.0.0 0.0.0.0 10.1.1.1
!
ip http server
ip http authentication aaa
no ip http secure-server
!
logging facility local6
logging source-interface Vlan10
logging 10.10.10.3
access-list 1 permit 10.10.10.0 0.0.0.255
access-list 101 permit ip 212.189.204.96 0.0.0.31 host 212.189.204.1
access-list 101 permit udp any any eq bootps
access-list 102 permit ip 212.189.204.128 0.0.0.31 host 212.189.204.1
access-list 102 permit udp any any eq bootps
access-list 103 permit ip 212.189.204.160 0.0.0.31 host 212.189.204.1
access-list 103 permit udp any any eq bootps
snmp-server community public RO 1
!
radius-server host 10.10.10.5 auth-port 1645 acct-port 1646 key attiTogli
!
control-plane
!
line con 0
line aux 0
line vty 0 4
!
scheduler allocate 20000 1000
ntp server 193.204.114.232
!
end

Auth1#
```

### 3 SCRIPT PER LA GENERAZIONE DEGLI ACCOUNT

Di seguito è riportato lo script per la generazione degli account temporanei

```
#!/usr/bin/perl
# =====
# Description:
#   The script allows to generate an output text file contains users record
#   The structure of each record is shown below:
#   ADD:<UserName>:CSDB:<PWD>:PROFILE:<#GRP>
#
#
# where:
#   <UserName> is the name of user
#   <PWD> is the password assigned to the user for authentication-proxy security service
#   <#GRP> is the number of the group which user belongs to.
#
#   The output text file is used to insert username,password reconrd into Cisco ACS RADIUS
server
#   for deliver authentication security service.
#
# Scope:
#   Conference GARR 06-Catania
# =====
$Author      = '$Author:  $'; #'
$Date        = '$Date:    $'; #'
$RCSfile     = '$RCSfile: $'; #'
$LastUpdate  = "Last Update: $Date:";
$Copyright   = "Consortium GARR (C) 2006";
# =====
# Requiered library files
#
require "getopts.pl";
&Getopts("l:o:d:n:s:");
#=====
my $UsrName;    # user name
my $UsrPwd;     # user password
my $LineFile;  # line buffer to write in the output text file
my $k;
my $Ntot = 10; # Total Number of record has to generate
my $Plen = 6;  # Lunghezza della password che verra' generata
my $Start = 0;
#=====

$OUTPUT = $opt_o if ( $opt_o);
$DEBLEV = $opt_d if ( $opt_d);
$Start  = $opt_s if ( $opt_s);
$Plen   = $opt_l if ( $opt_l);
$Ntot   = $opt_n if ( $opt_n);
$USAGE  = ">>> Usage: $0 [-o outfile] [-l LungPass] \n";
$USAGE  .= "          [-s userOffset] [-d DEBLEv] [-n Nutenti]\n";
$MESSAG = ">>>          $CONFIG filename is mandatory \n";
#=====

die $USAGE . $MESSAG if ( ! defined $OUTPUT);

#==== Setting fflush ON for every print or printf command
select (STDOUT);
$| = 1;
```

```

#=====
$OUTPUT = 'records.dat' if ( ! defined $OUTPUT ) ;

# delete esisting file
unlink ($OUTPUT);

# write first record into file
# Cisco ACS accept two types of first: ONLINE or OFFLINE
&WriteRecord($OUTPUT,"ONLINE\n");

srand('1111000');
for ($k=1; $k <= $Ntot+$Start ;$k++) {

    # &randomUsr(N, M): create a user
    # N: total number of characters of username
    # M= -1    user name format is "confXXXX" (where XXX are random alphabetic chars)
    # M= 1,2,3 user name format is "conf00nn" (where nn is an integer)
    $UsrName = &randomUsr(3,$k);
    print "Username: $UsrName          " if ( $Start < $k);

    # &randomPwd(N): create a password which is N characters long
    $UsrPwd = &randomPwd($Plen);
    print "Password: $UsrPwd \n" if ( $Start < $k);

    $LineFile = &OutLine($UsrName,$UsrPwd);
    print "RADIUS Record: $LineFile" if (defined $DEBLEV);
    print "File Name:      $OUTPUT \n" if (defined $DEBLEV);

    # write single record into file
    &WriteRecord($OUTPUT,$LineFile) if ( $Start < $k);
}
exit;

# =====
# Random Password Generator
sub randomPwd {
    my $i;
    my $password; # user password
    my $_rand;    # random value
    my $nPwd;     # numeric value in the user password
    my $sPwd;     # string value in the user password
    my $nOffset;
    my $password_length = shift;

    $password_length = 6 if (! defined password_length);

    my @Alfabeto = (a .. z);
    my @Numbers  = (0 .. 9);

    # generate offset position for numeric digits in the password
    $nOffset = int(rand ($password_length - 1));

    print "Offeset value: $nOffset \n" if ($DEBLEV);

    # generate # 2 numeric digit in the password
    for ($i=1; $i <= 2 ;$i++) {
        # rand(<N>) function returns a decimal number between [0,<N>-1]
        $_rand = int(rand (1 + $#Numbers));
        $nPwd .= $Numbers[$_rand];
    }
}

```

```

    for (my $i=1; $i <= $password_length ;$i++) {
        $_rand = int(rand (1 + $#Alfabeto));
        $sPwd .= $Alfabeto[$_rand];
    }
    print "Alfa Numeric Pw: $sPwd ";
    $password = substr($sPwd,0,$nOffset);
    $password .= $nPwd;
    $password .= substr($sPwd,$nOffset+length($nPwd));

    return $password;
}
# =====

# =====
# Random Username Generator
sub randomUsr {
    my $_rand;
    my $usr = "conf";      # prefix for user name
    my @chars = (0 .. 9);

    my $usr_length = shift;
    my $option = shift;

    $option = -1 if (! defined $option);
    $usr_length = 4 if (! defined $usr_length);

    if ($option == -1) {

        for (my $i=1; $i <= $usr_length ;$i++) {
            # rand(10) function returns a decimal number between [0,9]
            $_rand = int(rand (1 + $#chars));
            $usr .= $chars[$_rand];
        }
    }
    else { $usr .= sprintf("%0${usr_length}d",$option); };

    return $usr;
}

# =====
# Compose single record with following format:
#     ADD:<UserName>:CSDB:<PWD>:PROFILE:<#GRP>
#     ADD:user02:CSDB:garr02:PROFILE:1
#     ADD:user03:CSDB:garr03:PROFILE:1
#     .....
#     .....
sub OutLine {
    my $LINE;          # buffer to store single record
    my $NGRP = "1";   # group number
    my $USR = shift;  # user name
    my $PWD = shift;  # user password

    $LINE = "ADD:";   # key to add record to Cisco ACS DB
    $LINE .= $USR;    # user name
    $LINE .= ":CSDB:"; # DB name of Cisco ACS
    $LINE .= $PWD;    # user password
    $LINE .= ":PROFILE:"; # Cisco ACS key to specify group number assigned to each user
    $LINE .= $NGRP;   # Cisco ACS group number value assigned to each user
    $LINE .= "\n";
}

```

```
        return $LINE;
    }
# =====
# =====
sub WriteRecord {
    my ($FileName) = shift;
    my ($BUFFER)   = shift;

    print "Write: $FileName\n" if ($DEBLEV > 1);
    open (FH," >> $FileName") or die ("Cannot Open $Filename File: $!");
    print FH $BUFFER;
    print "INFO $BUFFER\n" if ($DEBLEV > 1);
    close(FH);
    return;
}
# =====
```