

Sample_configuration_for_Voice_and_Data_deployment_on_a_Switch

Sample configuration for Voice and Data deployment on a Switch

Case 1: Phone and PC's on different/dedicated switch ports on the switch

Creating VLAN's

Voice VLAN

```
Switch#conf t
```

```
Switch(config)#vlan <VLAN ID>
```

```
Switch(config-vlan)#name Voice - description of the VLAN
```

Similarly for the Data VLAN

Creating VLAN interfaces (SVI's) and assigning IP address to them:

```
Switch#conf t
```

```
Switch(config)#interface vlan <VLAN ID>
```

```
Switch(config-if)#ip address <X.X.X.X> <X.X.X.X> - IP address Subnet Mask
```

(The ip address should be one of the useable IP addresses of the phone or data subnet)

Similarly for the Data VLAN

Sample_configuration_for_Voice_and_Data_deployment_on_a_Switch

Interface configuration - Data/Voice

```
Switch#conf t
```

```
Switch(config)#interface GigabitEthernet <interface ID>
```

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

```
Switch(config-if)#switchport access vlan <VLAN ID> - data VLAN in case of PC
```

or

```
Switch(config-if)#switchport voice vlan <VLAN ID> - Voice VLAN in case of phone
```

If QOS is to be applied

```
Switch(config)#mls qos - Enabline QOS globally on the switch
```

```
Switch(config)#interface GigabitEthernet <interface ID>
```

```
Switch(config-if)#auto qos voip trust
```

Case 2: PC's connected via switchport behind the IP phone.

Creating VLAN's

Voice VLAN

```
Switch#conf t
```

```
Switch(config)#vlan <VLAN ID>
```

```
Switch(config-vlan)#name Voice - description of the VLAN
```

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Similarly for the Data VLAN

Creating VLAN interfaces (SVI's) and assigning IP address to them:

```
Switch#conf t
```

```
Switch(config)#interface vlan <VLAN ID>
```

```
Switch(config-if)#ip address <X.X.X.X> <X.X.X.X> - IP address Subnet Mask
```

(The ip address should be one of the useable IP addresses of the phone or data subnet)

Similarly for the Data VLAN

Interface configuration - Data/Voice

```
Switch#conf t
```

```
Switch(config)#interface GigabitEthernet <interface ID>
```

```
Switch(config-if)#switchport trunk encapsulation dot1q
```

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

```
Switch(config-if)#switchport trunk native vlan <VLAN ID> - Data VLAN
```

```
Switch(config-if)#switchport access vlan <VLAN ID> - Voice VLAN
```

OR

```
Switch#conf t
```

Sample_configuration_for_Voice_and_Data_deployment_on_a_Switch

```
Switch(config)#interface GigabitEthernet <interface ID>
```

```
Switch(config-if)#switchport trunk encapsulation dot1q
```

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

```
Switch(config-if)#switchport voice vlan <Voice VLAN ID>
```

```
Switch(config-if)#switchport access vlan <VLAN ID>
```

- With newer IOS it is not required that a switchport connecting a phone piggybacking a PC to be configured as a trunk specifically. Please see the secondary configuration above.

If QOS is to be applied

```
Switch(config)#mls qos - Enable QOS globally on the switch
```

```
Switch(config)#interface GigabitEthernet <interface ID>
```

```
Switch(config-if)#auto qos voip trust
```

Or

```
Switch(config-if)#auto qos voip trust cisco-phone (specifically for Cisco IP phones)
```

Note: The above mentioned commands are version specific, however are same or similar in most of the cases.