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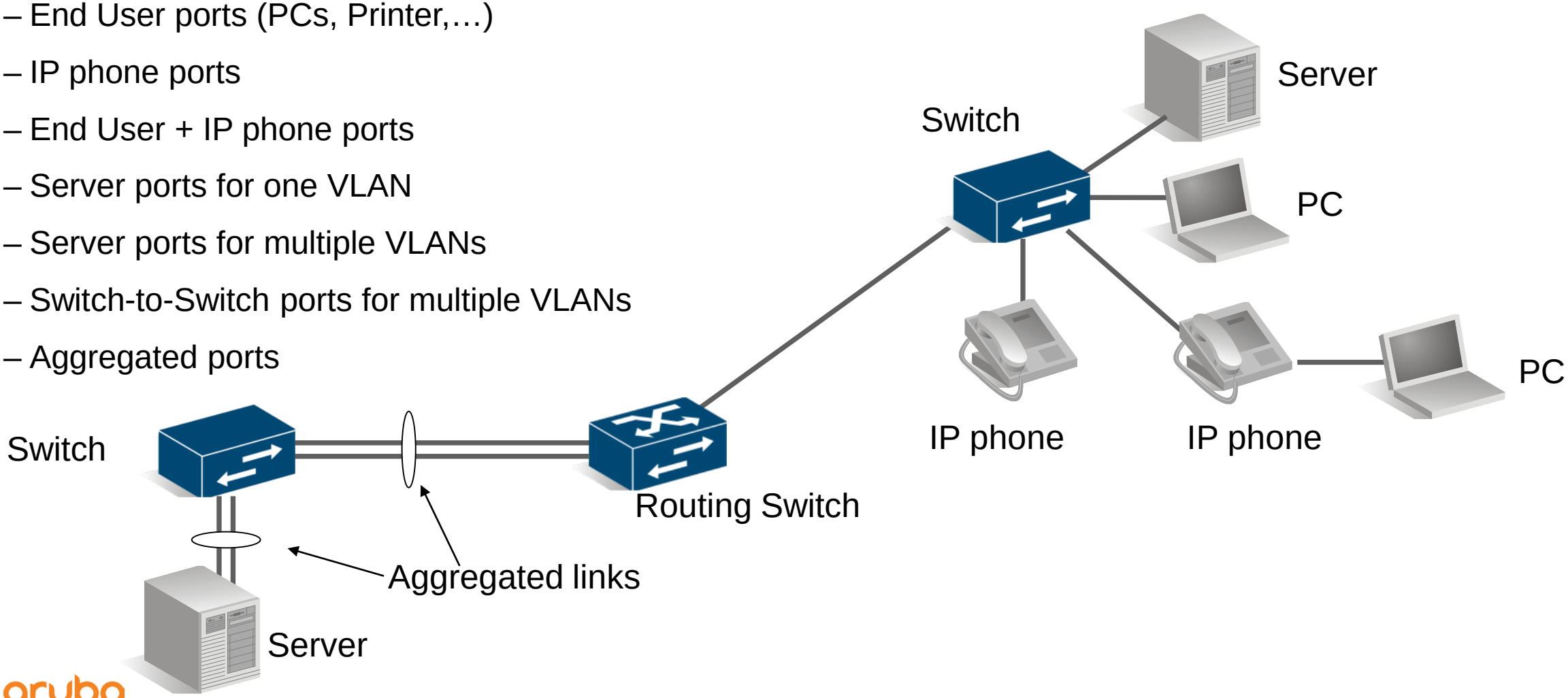
VLAN and Link-Aggregation Interoperability between ArubaOS switches and Cisco IOS devices

Switch Port Roles

– End User ports (PCs, Printer,…)
– IP phone ports
– End User + IP phone ports
– Server ports for one VLAN
– Server ports for multiple VLANs
– Switch-to-Switch ports for multiple VLANs
– Aggregated ports



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Terminology Differences

Switch Port Role	ArubaOS-Switch	Cisco
End nodes: PCs, printers, and so on	Untagged port	Access port
PC + IP Phone	Untagged in data VLAN; tagged in voice VLAN	Access port with auxiliary VLAN (voice)
Switch-to-switch with multiple VLANs	Tagged port	Trunk port
Link aggregation	Trunk port	Port channel interface

VLAN Configuration Comparison

– Switch-to-Switch connection

ArubaOS-Switch	Cisco

vlan 1
  untagged a1 ← Default
vlan 2
  tagged a1
vlan 3
  tagged a1
	interface GigabitEthernet 1/20
	  switchport ← Default on access switches
	  switchport trunk encapsulation dot1q
	  switchport trunk native vlan 1 ← default
	  switchport trunk allowed vlan 1-3
	  switchport mode trunk
	  switchport nonegotiate ← disable Cisco DTP

VLAN Configuration Comparison

– Switch-to-End Node connection

ArubaOS-Switch	Cisco

`vlan 10`
`  untagged a1`
	`interface GigabitEthernet 1/10`
	`  switchport` ← Default on access switches
	`  switchport access vlan 10`
	`  switchport mode access` ← Default

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Static Aggregated Ports

ArubaOS-Switch	Cisco

`trunk a1-a2 trk1 trunk`	`interface Port-channel1`
	
	`interface GigabitEthernet 1/20`
	`  channel-group 1 mode on`
	`interface GigabitEthernet 1/21`
	`  channel-group 1 mode on`

Automatically created

Here we do not use dynamic aggregation protocols like LACP

Order of configuration:
1. Physical Interface
2. Port Channel Interface

Dynamic Aggregated Ports using LACP

IEEE 802.1AX (former 802.3ad)

ArubaOS-Switch	Cisco
`trunk a1-a2 trk1 lacp`	`interface Port-channel1`
	`interface GigabitEthernet 1/20` `  channel-group 1 mode active`
	`interface GigabitEthernet 1/21` `  channel-group 1 mode active`

enable LACP

enable LACP

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Thank you

Contact information