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ArubaOS / Cisco Switch Interoperability

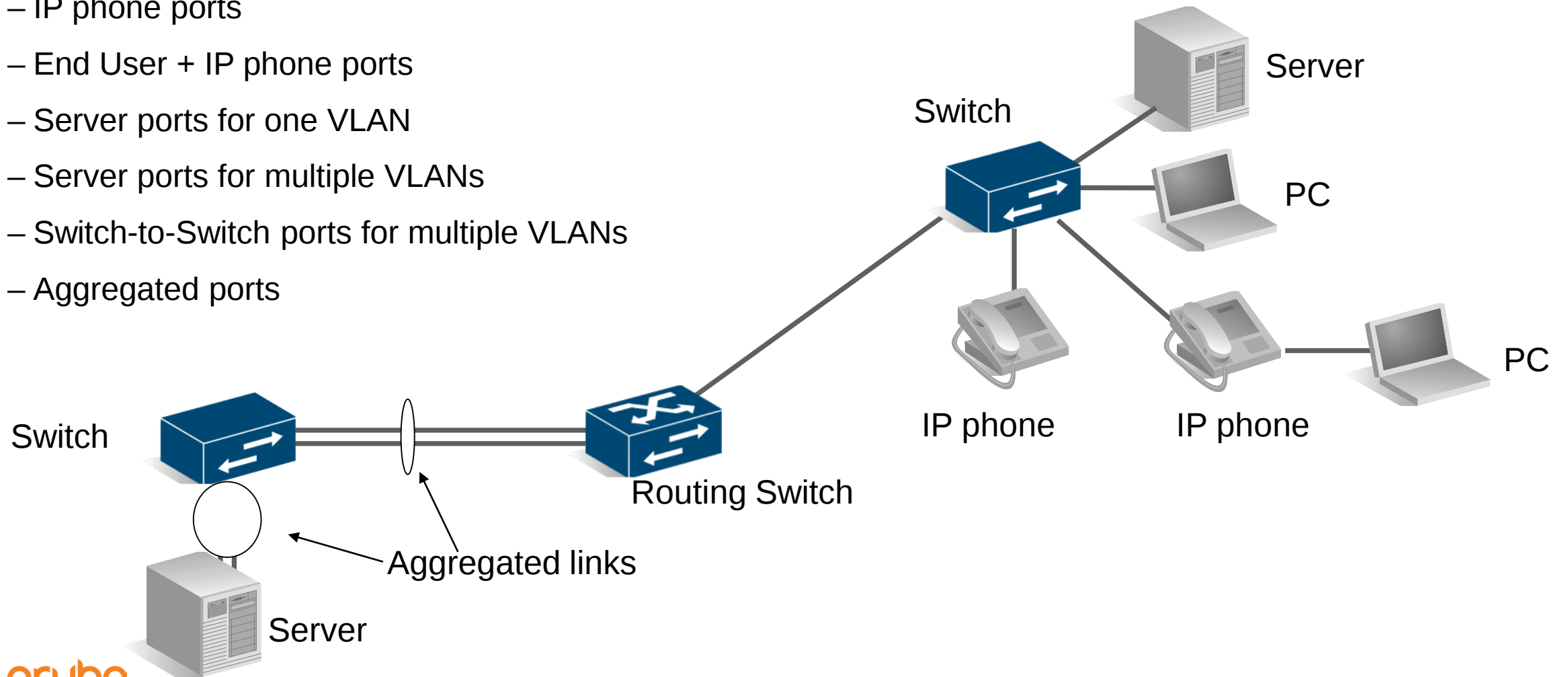
VLAN and Link-Aggregation

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VLAN Interoperability

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



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



VLAN Configuration Comparison

Switch-to-End Node connection

ArubaOS-Switch	Cisco
<pre>vlan 10 untagged a1</pre>	<pre>interface GigabitEthernet 1/10 switchport switchport access vlan 10 switchport mode access</pre> ← Default on access switches ← Default



Useful show commands

ArubaOS-Switch - Cisco

Description	ArubaOS-Switch	Cisco
Port status	show interface brief	show interfaces status
Port counters / utilization	show interface <port>	show interface <port>
What VLAN are configured?	show vlan	show vlan brief
Specific information about a single VLAN.	show vlan <vlan-id>	show vlan id <vlan-id>
Which untagged VLAN does a port belong to?	show vlan ports <port> detail	show interfaces status
Is the port a Cisco layer-2 port?		show interfaces <port> switchport
Which VLANs are configured on a port?	show vlan ports <port> detail	show interfaces <port> trunk
Which ports exist with more than one VLAN	show interface status	show interfaces trunk

Link Aggregation Interoperability

Static Aggregated Ports

ArubaOS-Switch	Cisco
<pre>trunk a1-a2 trk1 trunk</pre>	<pre>interface Port-channel1</pre> Automatically created <pre>interface GigabitEthernet 1/20 channel-group 1 mode on</pre> Here we do not use dynamic aggregation protocols like LACP <pre>interface GigabitEthernet 1/21 channel-group 1 mode on</pre> Order of configuration: 1. Physical Interface 2. Port Channel Interface



Dynamic Aggregated Ports using LACP

IEEE 802.1AX (former 802.3ad)

ArubaOS-Switch	Cisco
<pre>trunk a1-a2 trk1 lacp</pre> enable LACP	<pre>interface Port-channel1</pre> <pre>interface GigabitEthernet 1/20</pre> <pre>channel-group 1 mode active</pre> <pre>interface GigabitEthernet 1/21</pre> <pre>channel-group 1 mode active</pre> enable LACP



Useful show commands

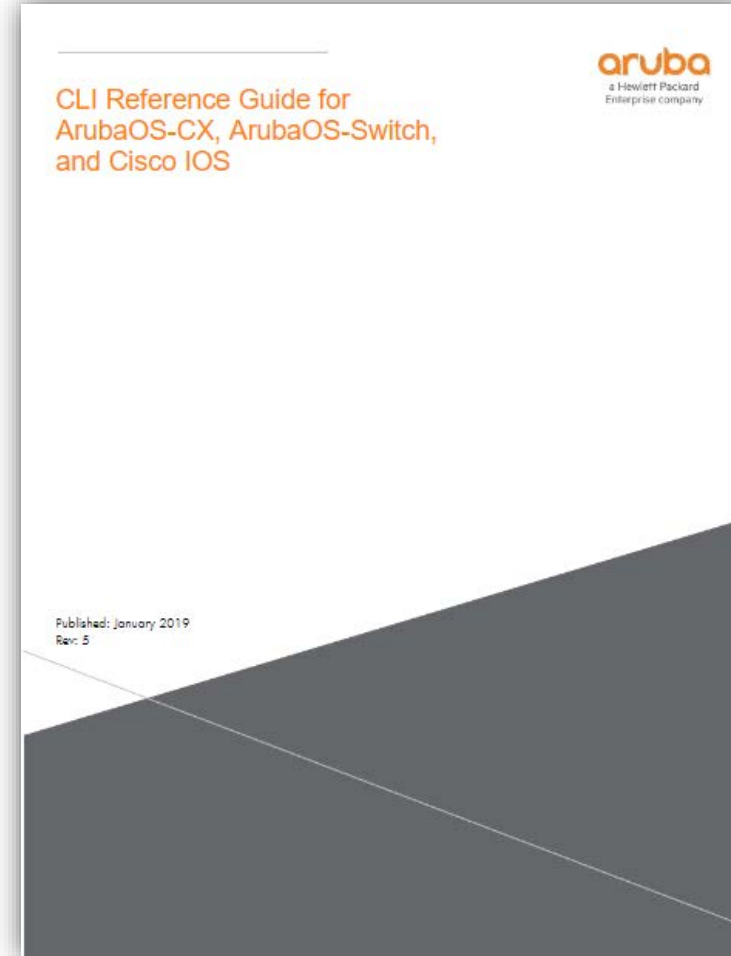
ArubaOS-Switch - Cisco

Description	ArubaOS-Switch	Cisco
What ports belong to the aggregation?	show trunk	show etherchannel <port-channel> summary detail
Which aggregation does a port belong to?	show trunk <port>	show interfaces <port> etherchannel
What load-balancing algorithm is used for egress traffic?	show trunks load-balance interface ...	show etherchannel load-balance
Specific LACP information.	show lacp ...	show lacp ...

Additional Resources

ArubaOS / Cisco Interoperability Documents

- ArubaOS-Switch, Comware and Cisco IOS CLI Reference Guide





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Thank you

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