

Purpose:	Pre-sales Training for Enterprise Business Products and Solutions
Product/Solution:	Sx7 switches
Trainee:	Regional enterprise business and channel/partner product and solution managers
Introduction:	Market Summarize & Position, highlights, Product Correspondence, Roadmap, Success Case, Quota Introduction, Configuration Introduction
Organizer:	Enterprise Business Solution Sales Competence Improvement Center

Maintenance records:

New/Update	Author/Owner(Name/ID)	Date(YYYY-MM-DD)
V1.0	Enterprise Router & Switch Marketing Execution Dept. XieBojie 00109267	2011-11
V2.0	Meng Wenjun 62791	2012-01

Huawei Ethernet, Professional Quality, Simplify Network ---- SX7 Series Switches

www.huawei.com

Pre-sales Training Material for Enterprise Business Products and Solutions

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Market Summarize & Position

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Product Highlights

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Product Correspondence

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Roadmap

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Successful Stories

6

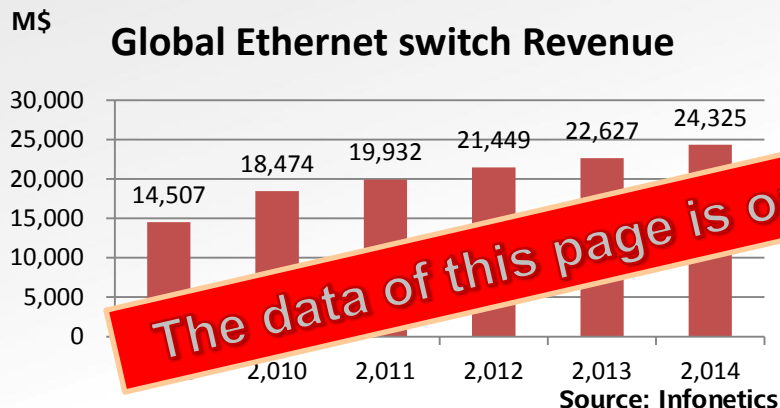
How to Quote

7

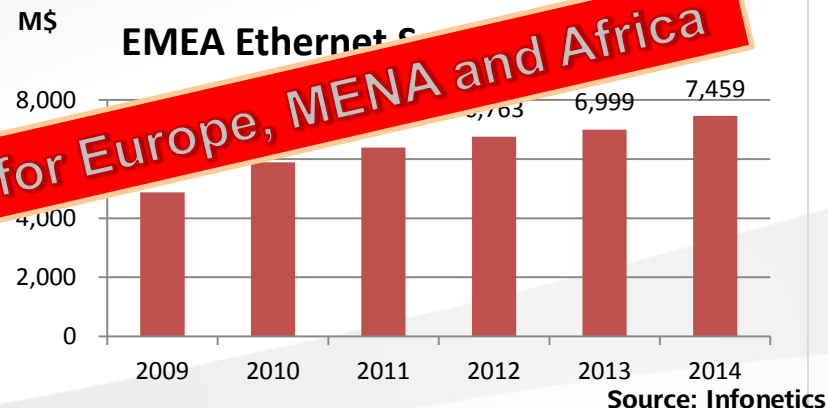
Configuration

A brand prospect for Lanswitches

Global Ethernet switch maintain growth,
\$ 20 billion market space



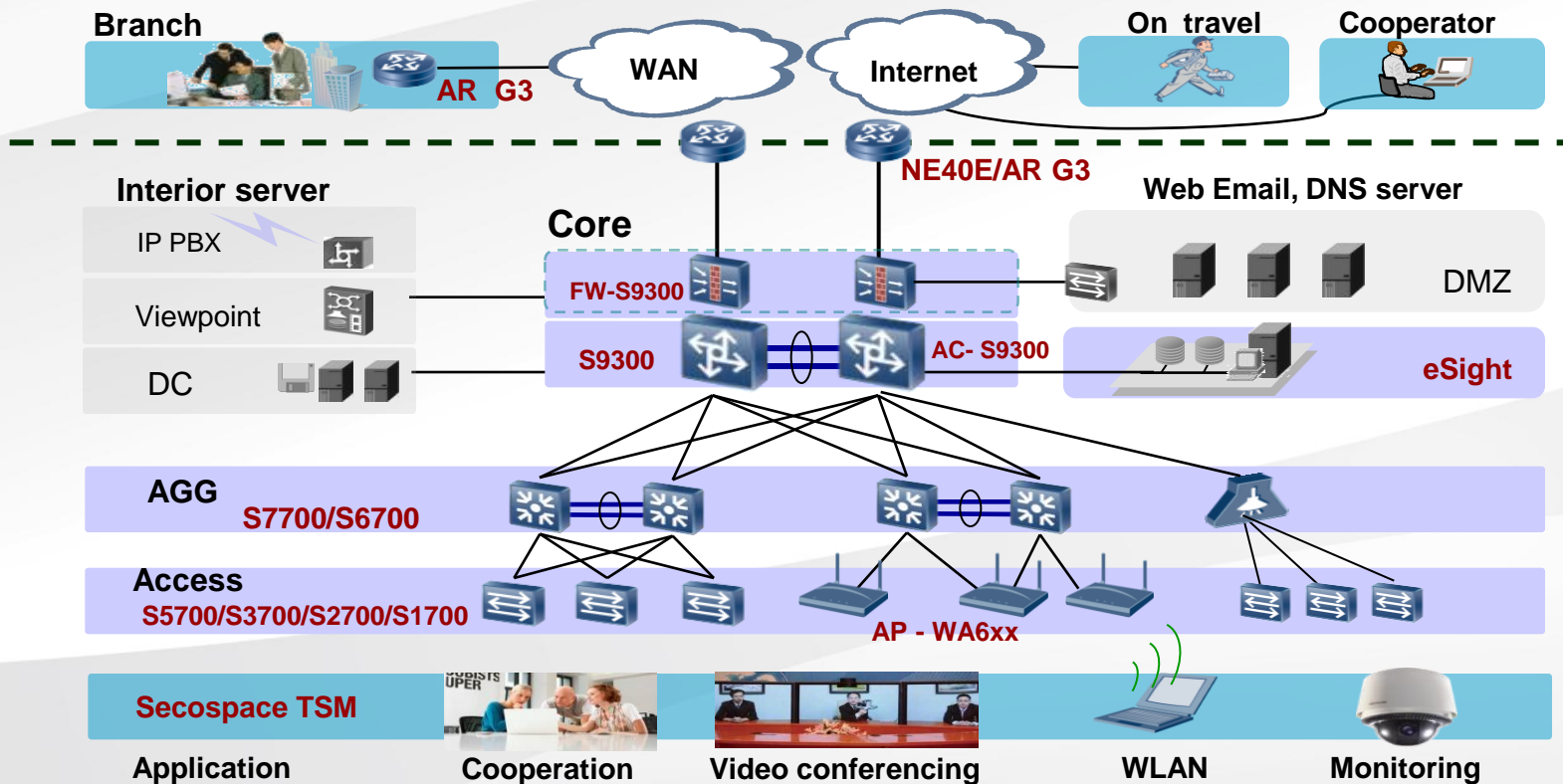
Stable growth of Ethernet switch in
EMEA market



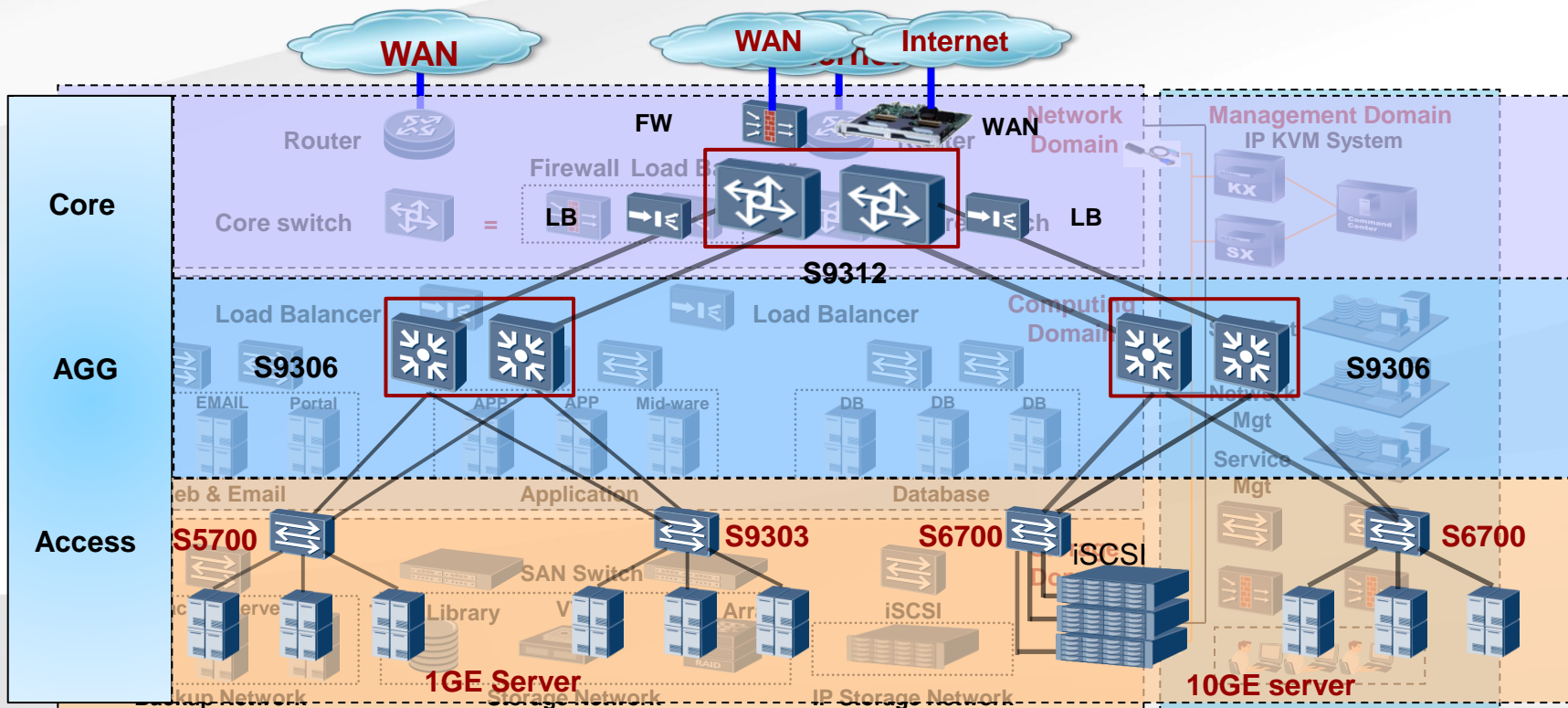
The data of this page is only for Europe, MENA and Africa

- Information technology and rapid development of cloud computing applications, promote growth in demand for networking products.
- Switch as one of the most important part of network infrastructure, there is a huge market space and broad prospects for development.

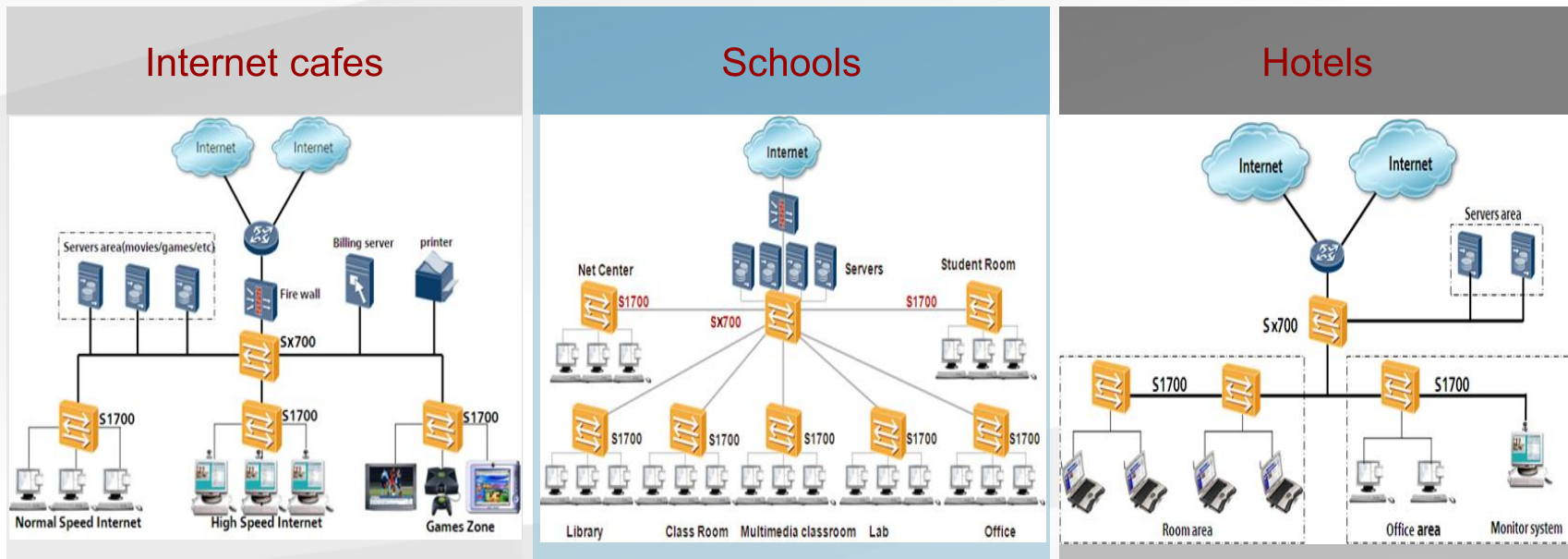
Sx7 in Campus Network



Sx7 in Data Center Network



Sx7 in SMB Network



S1700 can be used in internet cafes, schools, hotels, hospitals etc. It is an ideal product for small business.

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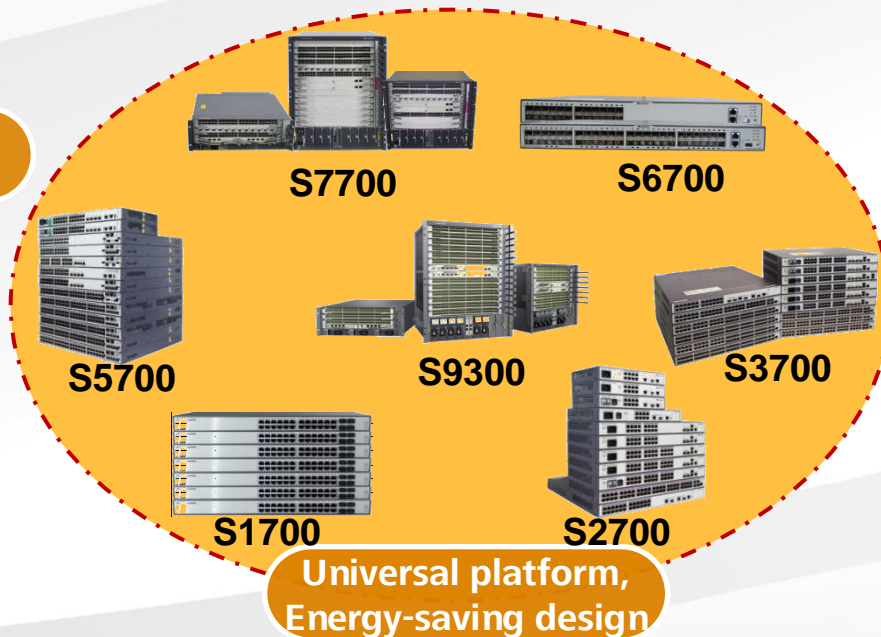
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Configuration

Smart & Flexible Ethernet Switch Platform

Switching capacity seamless upgrade

- **40*10G** high density 10G interfaces, leading position in the industry deployment in campus core and DC.
- **40G/100G port**, Seamless upgrade , saving CAPEX
- Supporting **CSS**, improving switching capacity

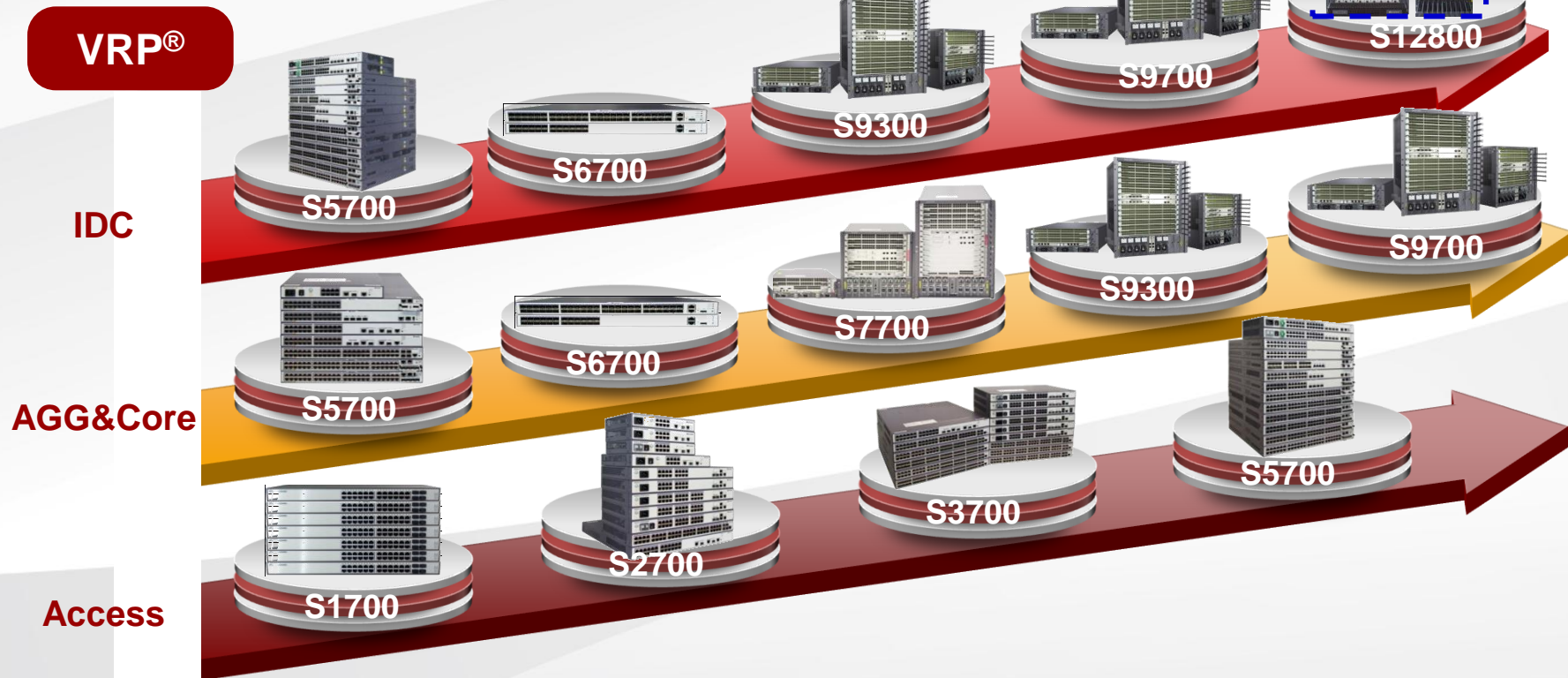


- Universal power supply and fan design, saving CAPEX.
- Innovated chips design ,energy-efficient management platform, industry green design benchmark.

Rich protocol platform

- 15+ years developing on VRP
- Supporting thousands of protocols on VRP
- 6M+ running devices with VRP in the exiting networks
- Seamless interconnection with mainstream products from the other manufactures, saving OPEX

S-Series Switches Portfolio



S9300 Unified Chassis Family

Applications

- Large campus core, aggregation
- IDC core, aggregation
- Enterprise branch interconnected
- WAN egress router



S9300	S9303	S9306	S9312
Backplane bandwidth	3T	6T	12T
Switch capacity	720G	2T	2T
Packet forwarding	540MPPS	1152MPPS	1344MPPS
Height	4U	10U	15U
Maximum port density	144GE / 144FE / 120*10GE	288GE / 288FE / 240*10GE	576GE / 576FE / 480*10GE

S9700 New Generation Core Switch

Upgrade Highlights

- Switching Capacity/Chassis 3.84T
- Switching Capacity/Slot 320G
- 8* 40G LPU



S9700	S9703	S9706	S9712
Switch capacity/Chassis	1.92T	3.84T	3.84T
Switch capacity/Slot	320G	320G	160G
Height	4U	10U	15U
Maximum GE density	3 * 48	6 * 48	12 * 48
Maximum 10GE density	3 * 40	6 * 40	12 * 40

S9300 Switch Routing Unit (SRU)



SRUA

- Quidway S9306/S9312 universal SRU
- 512Gbps Capacity

SRU's daughter-card



CSS Service Unit

- High cluster bandwidth
- Non-block forwarding
- High reliability



SRUB

- Quidway S9306/S9312 universal SRU
- 1Tbps Capacity



Flexible Service Unit

- 1K CPU hardware queues
- Hardware OAM detection
- Network Quality Analysis (NQA)



MCUA

- Quidway S9303 dedicated engine
- 360Gbps Capacity

S9300 Line Cards



12 * 10G SFP+(SA)



40 * 10G SFP+(FC)



4 * 10G XFP(EA/EC/ED)



24 * GE RJ45 + 2 * 10G XFP(EA)



24 * GE SFP + 2 * 10G XFP(EA/EC)



36 * GE RJ45 + 12GE SFP(EA)



48*GE SFP(BC)



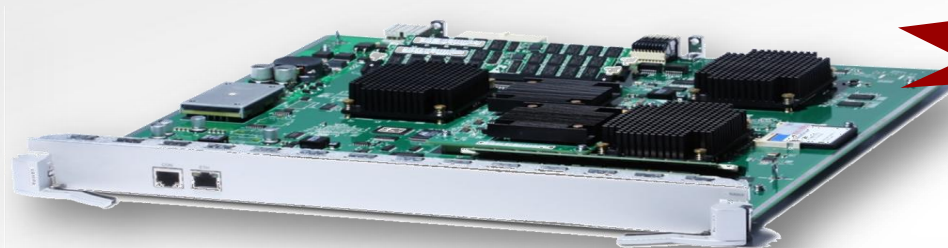
48GE RJ45(EA/EC/ED)



48GE SFP(EA/EC/ED)

Line Card Type	SA	EA/EC/ED	FA/FC	BC
MAC	32K	32K/128K/512K	32K/128K	128K
MPLS	N	Y	Y	Y
Netstream	N	Y	N	Y
IPv6	Y	Y	Y	Y

Multi-function in Value-added Card



All in one

① Firewall:

- support virtual firewall (VFW)
- NAT multi-instance
- ASPF

② IPSec: support IPSec VPN、GRE VPN

③ **LoadBalance** : Support dynamic "traffic lock", TCP/HTTP reuse

④ **Centralized Netstream**: support 1M

⑤ WLAN AC

- support 802.11a/b/g/n
- support max 7040 AP, 360448 users, leading in industry

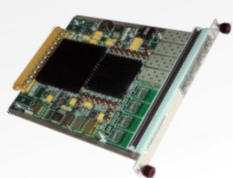
S9300 Special Cards(POS & Huge Buffer)



WAN Motherboard



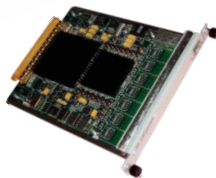
Clock Pinch Board



4*155M POS



4*622M POS



1*2.5G POS

- Daughter card can be mixed inserted
- Low Power Consumption: 95w
- Daughter card can be interchanged with NE40E



200ms
buffer



64K
queue



- 200ms/port huge buffer, avoid instant burst
- Max 64K hardware queue/board

S7700 Unified Chassis Family

Applications

- Medium campus core, aggregation
- Large campus aggregation
- IDC aggregation



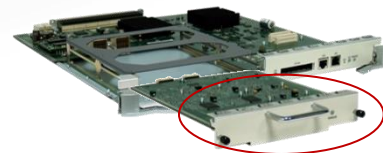
S7700	S7703	S7706	S7712
Backplane bandwidth	1.2T	2.4T	4.8T
Switch capacity	720G	2T	2T
Packet forwarding	540MPPS	1080MPPS	1320MPPS
Dimensions	4U	10U	15U
Maximum port density	144GE / 144FE / 36*10GE	288GE / 288FE / 72*10GE	576GE / 576FE / 144*10GE

S7700 Switch Routing Unit (SRU)



SRUA

- Quidway S7706/S7712 universal SRU
- 512Gbps Capacity



Flexible Service Unit

- Ethernet OAM, MPLS OAM, BFD
- Dos attack protection of CPU
- Network Quality Analysis (NQA)



SRUB

- Quidway S7706/S7712 universal SRU
- 1Tbps Capacity



MCUA

- Quidway S7703 dedicated engine
- 360Gbps Capacity

Difference Between S9300 and S7700

Different Backplane Capacity	S9312	S9306	S9303
	12Tbps	6Tbps	3Tbps
	S7712	S7706	S7703
	4.8Tbps	2.4Tbps	1.2Tbps

Different Features/LPUs	S9300	S7700
CSS	Yes	No
Centralized Netstream	Yes	No
48FE EA/EC/FA LPUs	Yes	No
48GE FA LPU	Yes	No
ED series LPUs	Yes	No
WAN/48GE huge buffer/40*10GE LPUs	Yes	No

Chassis Switches POE Power System



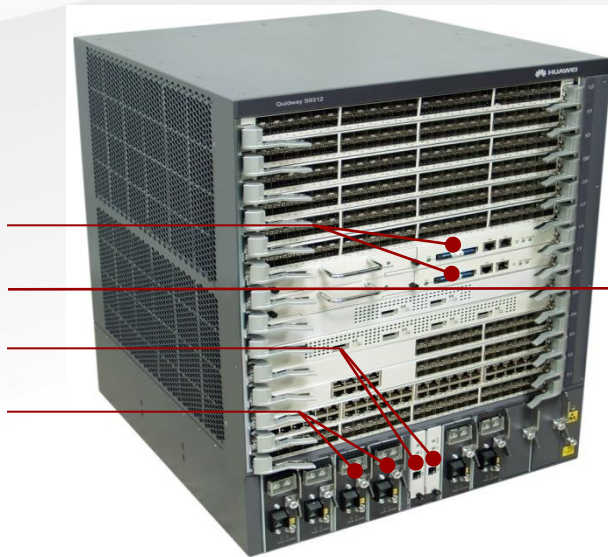
S9300 and S7700 power models are universal



- 1 Selective choice: Support 800W and 2200W power module
- 2 Intelligent Redundancy: realize 1+1,2+2,3+1,4+0 pattern
- 3 Support max 576 ports in a single chassis

High Availability Chassis Architecture

1 + 1 SRU
Two-double fans, 1 + 1
redundancy
1 + 1 DC / N + N AC
power module
1 + 1 CMU



- **S9300/S7700's** the most complex components are hardware redundancy and **hot swappable**, which include switching routing unit (SRU), power module and central management unit (CMU).
- **S9300/S7700's** fans are two-double fans, which can enhance availability for the whole chassis.

High Availability 99.999%+

Module Redundancy
Hot swappable redundant MPU, Power and fans

SSO
Stateful switchover assures data non-stop forwarding.

ISSU
In-service software upgrade minimizes downtime between software upgrades.

Chassis	Availability (%)	MTBF (year)	MTTR (hour)
S9303	99.99964	34.18	<0.5
S9306	99.99959	25.03	<0.5
S9312	99.99959	24.92	<0.5



E-VRRP
Enhanced Virtual Router Redundancy Protocol realize 50ms switchover.

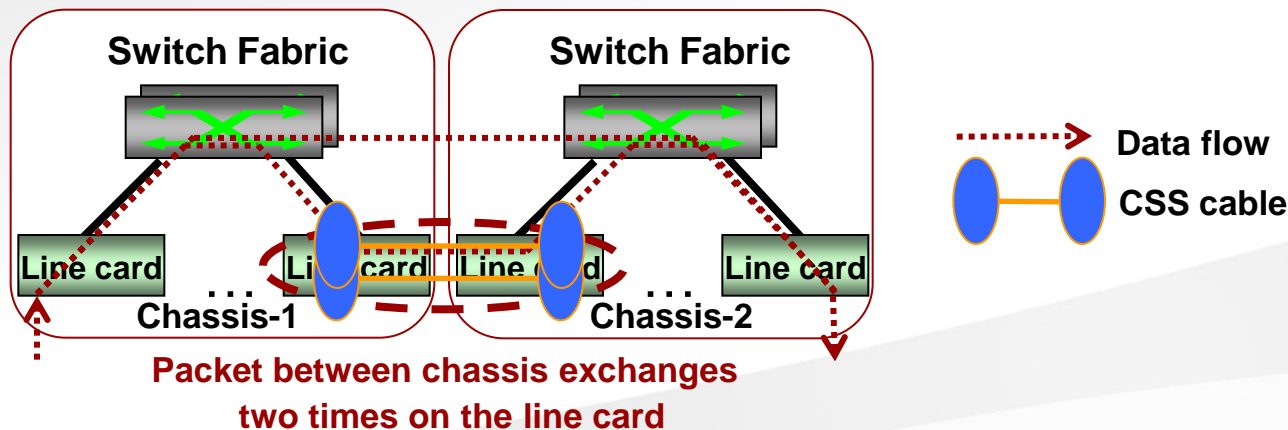
NSF
Nonstop Forwarding including GR for OSPF, GR for ISIS, GR for BGP and GR for LSP

MPLS TE FRR
Fast Reroute with 4k LSPs in 50 ms within active/ standby LSPs

Chassis	Availability (%)	MTBF (year)	MTTR (hour)
S7703	99.99964	34.18	<0.5
S7706	99.99959	25.03	<0.5
S7712	99.99959	24.92	<0.5

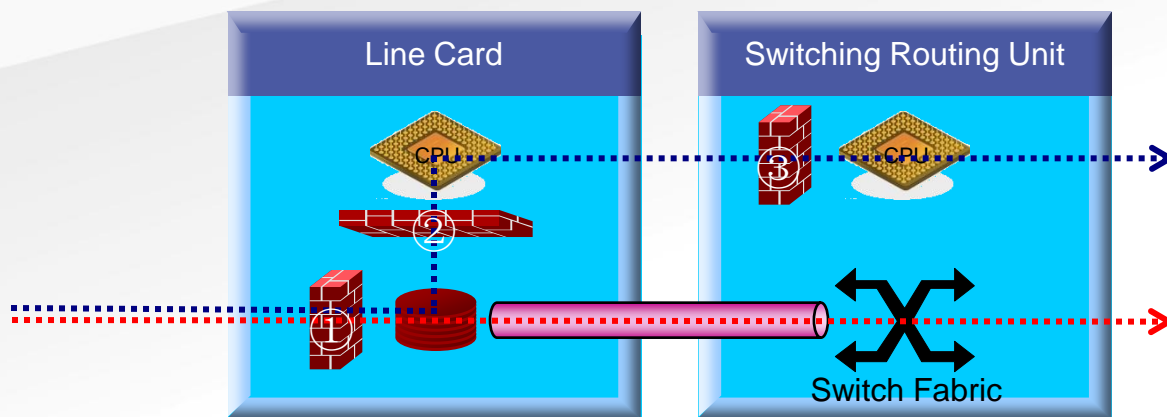
Cluster Switching System (CSS)

Huawei CSS cluster solution



- Industry cluster solutions, **packet between chassis** must be exchanged **two times** on the line card. At the same time, the cluster cards have **taken up line card slot**, and the cluster bandwidth only 160G.
- The S9300 implements the **CSS function** through switching fabrics. In this way, switching fabrics of the switches in a cluster are connected. This method saves line card slots and provides **256 Gbit/s bandwidth**, which is the highest in the industry.

Three-Dimension Equipment Security



First Level

- Ingress/Egress ACL
- Ingress/Egress CAR

Second Level

- CPU-CAR/ACL to prevent CPU overload
- Application Layer Port Filter

Third Level

- CPU-ACL/CAR
- Flood defense via **1K CPU Queue**: DDOS, TCP SYN
- SSH
- Protocol Security

Network High-density 10G



**S9312
Core switch**



**40-Port
10GBASE-X**



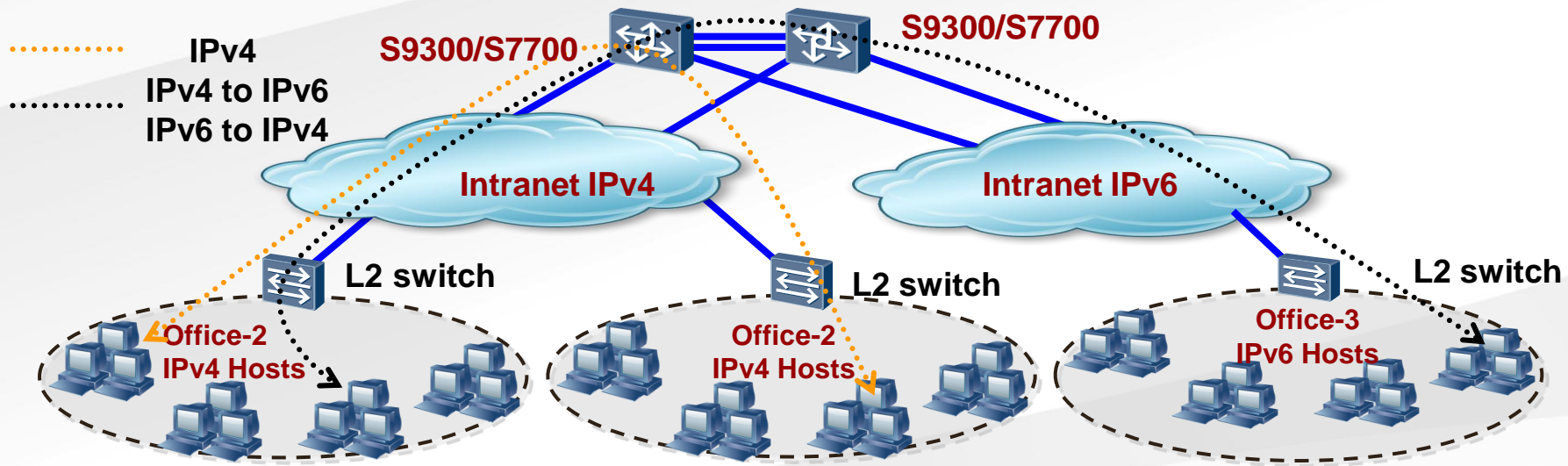
- **240 10G** interface in one chassis
- **720 10G** interface in one rack

Example: IDC configuration

Server (total)	Server (per rack)	Rack	10GE Qty (per rack)	10GE Qty (total)	Industry solution 10G Qty	Huawei solution 10G Qty
10K units	20 units	500 units	2 ports	1000 ports	32 units	25units

S9300 series switches support 40*10GE line card, which is the highest in Industry . As a result, the TCO will be decreased distinctly.

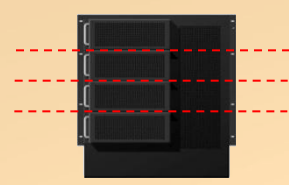
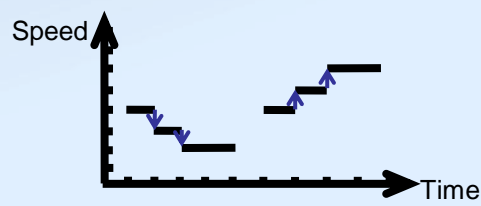
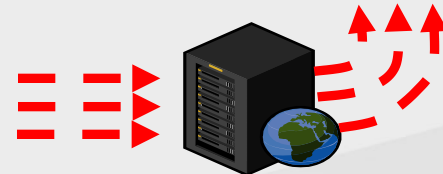
IPv4 Upgrade IPv6 Smoothly






- S9300/S7700 supports **IPv4/IPv6 dual protocol stack** and **multiple tunnel** technology, which can meet the IPv6 network, and IPv4/IPv6 hybrid network , to achieve smooth network upgrade.

Efficient Heat Dissipation & Conversion 60%

- Efficient cooling system : Reduce noise by 10dB and cooling power consumption by **60%**.

<p>Fan unit controlling and adjusting by position : Low power consumption</p>	<p>Fan fuzzy speed-adaptation : Low noise & Low power consuming</p>	<p>“Revolving Air Flow” air flow : Efficient heat dissipation</p>
		

- Intelligent system power and monitoring module : Increase power efficiency by 5~10% to lower down power consumption

 <ul style="list-style-type: none"> Dynamic line card power adjusting according to service traffic 7% power reduced 	 <p>Grain power module to improve power load efficiency</p> <p>5~10% power conversion efficiency increased</p>	 <ul style="list-style-type: none"> Dedicated ASIC Independent monitoring card
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Overview of X7 Case-Shaped Series



Non-SMB Naming Rule

HUAWEI S 3 7 00 -28TP-PWR-EI-24S-AC



Company Brand

S: switch series

6: downlink 10GE
 5 : downlink GE
 3: Layer 3 downlink 100M
 2 : Layer 2 downlink 100M

7: enterprise market product series
 3: carrier market product series

This field indicates generation of the product.

This field indicates the maximum number of uplink and down link ports.

* For the S6700 series, downlink ports are optical ports by default. If all ports are optical ports, this field is omitted. For switches except for the S6700 series, downlink ports are electrical ports by default. If all ports are electrical ports, this field is omitted.

AC
 DC

24S: number of downlink optical ports *
 24T: number of downlink electrical ports*

LI: simplified version
 SI: standard version
 EI: enhanced version
 HI: advanced version

PWR: PoE is supported.
 PD: powered device

P: The uplink port is connected to the SFP module.
 T: The uplink port is connected to the RJ45 module.
 TP: Combo ports are supported.
C: The uplink port is configured optionally.
 X: The uplink port is the 10GE port.
 Q : The uplink port is the 40GE port.
 If this field is empty, there is no uplink port.



S6700 10GE Cassette switch

S6700-24-EI



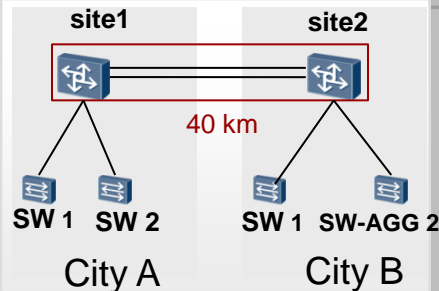
S6700-48-EI



Back panel:
redundancy fans & Power module

Item	Specification
Forwarding performance	Max 960G/714MPPS
10G port	Max 48/1U
Mac & buffer	MAC 128K Buffer: 9M
Stacking	Service port stacking

Long distances stacking



GE/10GE Adaptive



S6700

Distance: Max 40km

- Improve the reliability and utilization of TOR
- reduce the user's cost

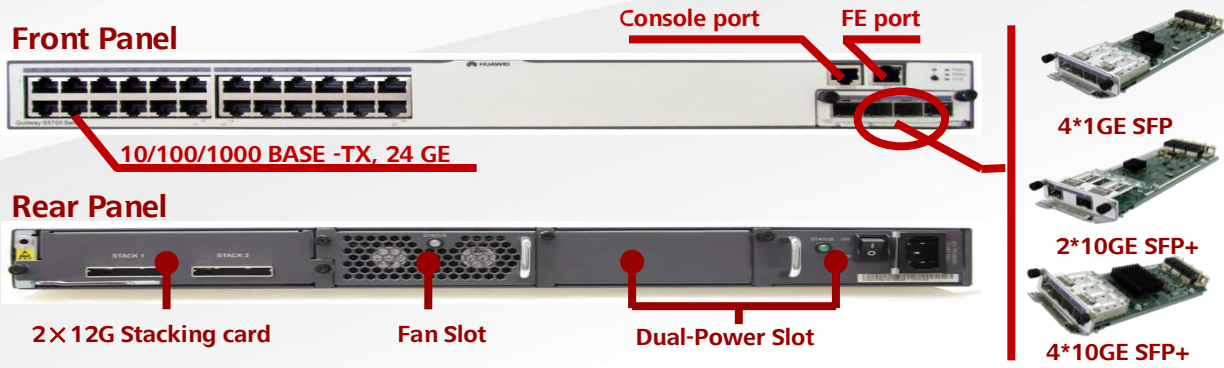


GE SFP



10GE SFP+

L3 GE -- S5700 Series Switch

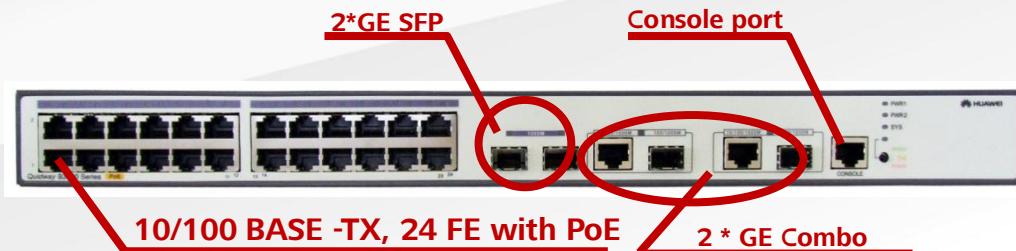


- ### S5700 Highlights
- >Dual powers input, 1+1 back up (POE series & 57-C series)
 - >Smart Ethernet Protection
 - >48Gbps bidirectional stacking bandwidth
 - >USB interface(SI series), easy for maintenance.

Item	Product	S5700-24TP-SI; S5700-24TP-PWR-SI	S5700-48TP-SI; S5700-48-PWR-SI	S5700-28C-SI	S5700-28C-EI; S5700-28C-PWR-EI	S5700-52C-SI/EI; S5700-52C-PWR-EI	S5700-28C-EI-24S
Port Configuration		24 * GE TX + 4 * GE Combo	48 * GE TX + 4*GE Combo	24 * GE TX + 4*GE Combo+ (4 * GE or 2 * 10 GE or 4 * 10GE)	24 * GE TX + (4 * GE or 2 * 10 GE or 4 * 10GE)	48 * GE TX + (4 * GE or 2 * 10 GE or 4*10GE)	24 * GE SFP + 4 * GE Combo + (4 * GE or 2 * 10GE or 4 *10GE)
Switching Capacity		48 Gbps	96 Gbps	88 Gbps	88 Gbps	136 Gbps	136 Gbps
Forwarding Performance		35.7 Mpps	71.4 Mpps	66 Mpps	66Mpps	102 Mpps	102 Mpps
Dimension(W*D*H)		SI:442 *220 *43.6	442 * 420 * 43.6	442 * 420 * 43.6	442 * 420 * 43.6	442 * 420 * 43.6	442 * 420 * 43.6
MAC		16K	16K	16K	32K	32K	32K

EI VS SI	MAC	Unicast Route	BGP	Static Route	RIP	ISIS	PIM	IGMP
5700SI	16 K	4 K	N	1 K	Y	N	N	N
5700EI	32 K	12 K	Y	1 K	Y	Y	Y	Y

L3 FE -- S3700 Series Switch



S3700 Highlights

- Dual powers input, 1+1 back up (POE series)
- Smart Ethernet Protection
- 6KV anti-lightening technology
- 10Gbps bidirectional stacking bandwidth
- Low power consumption

Item \ Product	S3700-28TP-SI/EI	S3700-28TP-EI-24S	S3700-28TP-PWR-EI	S3700-52P-EI-24S	S3700-52P-EI-48S	S3700-52P-SI/EI	S3700-52P-PWR-EI
Port Configuration	24 * FE + 2 * GE SFP + 2 * GE Combo	24 * FE SFP + 2 * GE SFP + 2 * GE Combo	24 * FE + 2 * GE SFP + 2 * GE Combo	24 * FE + 24 * FE SFP + 4 * GE SFP	48*FE SFP+ 4 * GE SFP	48 * FE + 4 * GE SFP	48 * FE + 4 * GE SFP
Power on Ethernet	N	N	Y	N	N	N	Y
Switching Capacity	12.8 Gbps			17.6 Gbps			
Forwarding Performance	9.6 Mpps			13.2 Mpps			
Dimension (W*D*H)	442 * 220 * 43.6		442 * 420 * 43.6			442 * 220 * 43.6	442 * 420 * 43.6
MAC	16K	16K	16K	16K	16K	16K	16K

EI VS SI	RIP	OSPF	BGP	ISIS	PIM	IGMP	PBR
3700SI	Y	N	N	N	N	N	N
3700EI	Y	Y	Y	Y	Y	Y	Y

L2 FE -- S2700 Series Switch



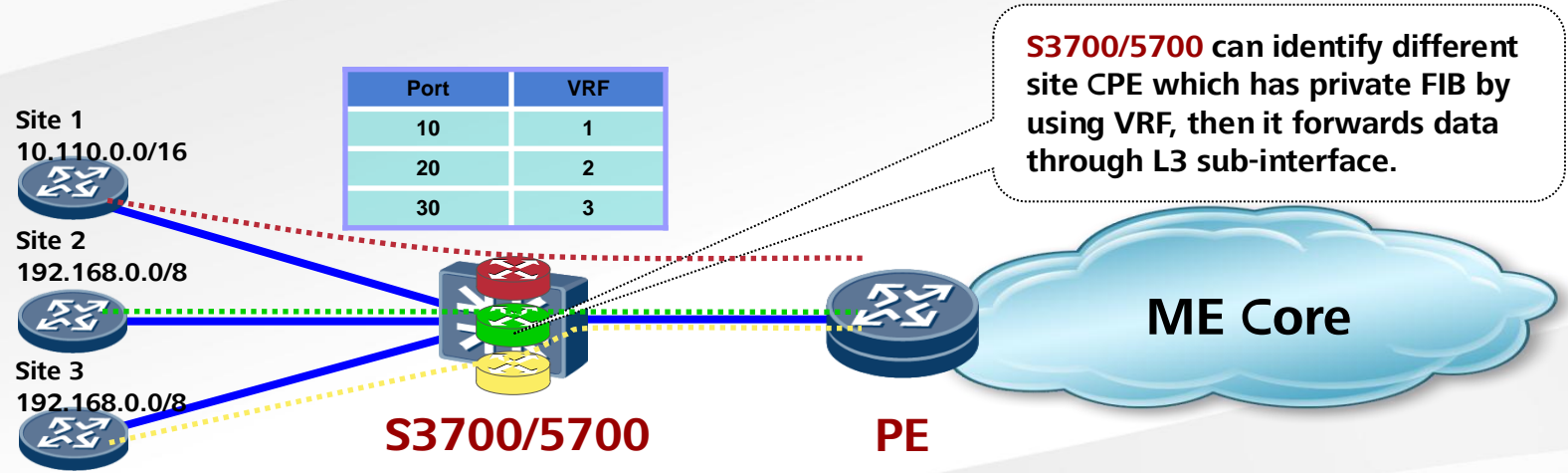
S2700 Highlights

- >Dual powers input, 1+1 back up (POE series)
- >6KV anti-lightening technology
- >Low power consumption
- >Auto configuration, easy maintenance

Item \ Product	S2700-9TP-SI/EI	S2700-9TP-PWR-EI	S2700-18TP-SI/EI	S2700-26TP-SI/EI	S2700-26TP-PWR-EI	S2700-52P-EI
Port Configuration	8 * FE + 1 * GE Combo	8 * FE + 1 * GE Combo	16 * FE + 2 * GE Combo	24 * FE + 2 * GE Combo	24 * FE + 2 * GE Combo	48 * FE + 4 * GE SFP
Switching Capacity	3.6 Gbps	3.6 Gbps	7.2 Gbps	8.8 Gbps	8.8 Gbps	17.6 Gbps
Forwarding Performance	2.7 Mpps	2.7 Mpps	5.4 Mpps	6.6 Mpps	6.6 Mpps	13.1 Mpps
Dimension(W*D*H)	250 * 180 * 43.6	320 * 220 * 43.6	442 * 220 * 43.6	442 * 220 * 43.6	442 * 420 * 43.6	442 * 220 * 43.6
Power on Ethernet	N	Y	N	N	Y	N
MAC	8K	8K	8K	8K	8K	8K

	ACL	QinQ	RRPP	MFF	MSTP	802.1x	DAI	IP Source Guard	OAM
2700SI	N	N	N	N	N	N	N	N	N
2700EI	Y	Y	Y	Y	Y	Y	Y	Y	Y

Economic VPN Solution -- MCE

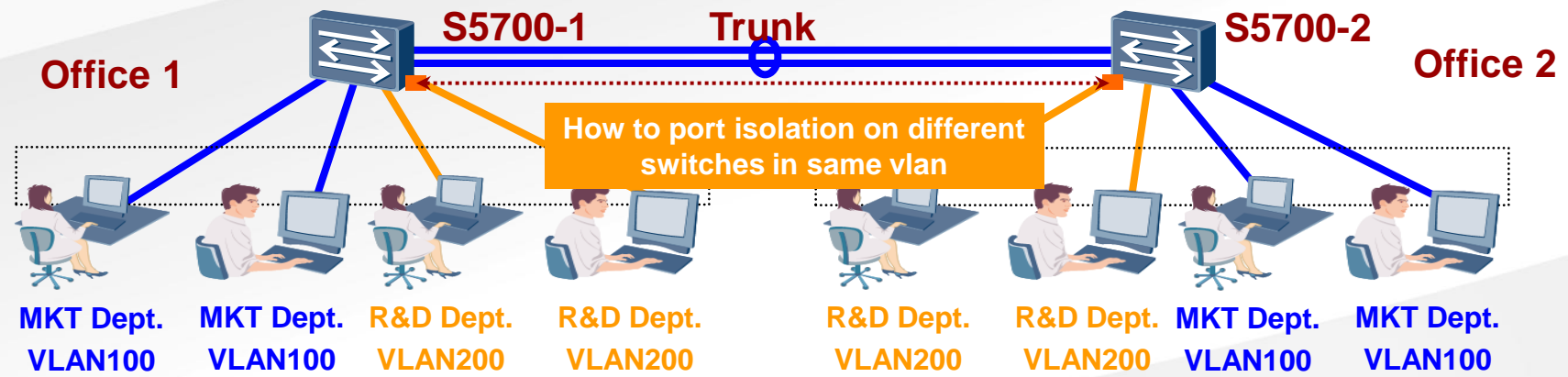


Customer Value:

When VIPs access, only one MCE switch is enough to ensure the access and isolation of VIPs, which is economical and safe.

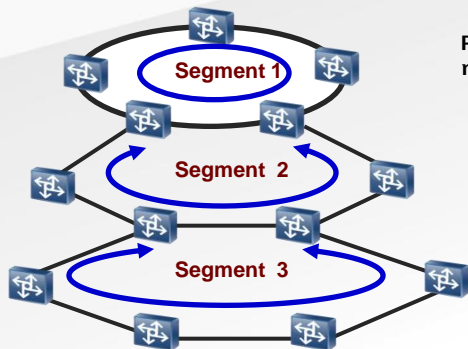
Reducing uplink port access link number, save the investment of the user

MUX VLAN



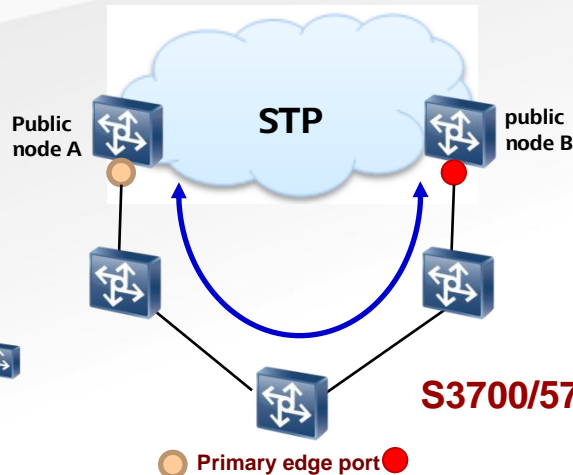
- Enterprise initial VLAN planning becomes messy because of expansion of business, and even these is complex LAN with inter-office and inter-floor, as a result access it is a big challenge in flexibility for business.
- S3700/5700 supports MUX VLAN feature, base on MUX VLAN port group with different switches, and it can achieve port isolation in the same VLAN by different VLAN, access flexibility to meet the needs of enterprise business.

Smart Ethernet Protection(SEP)

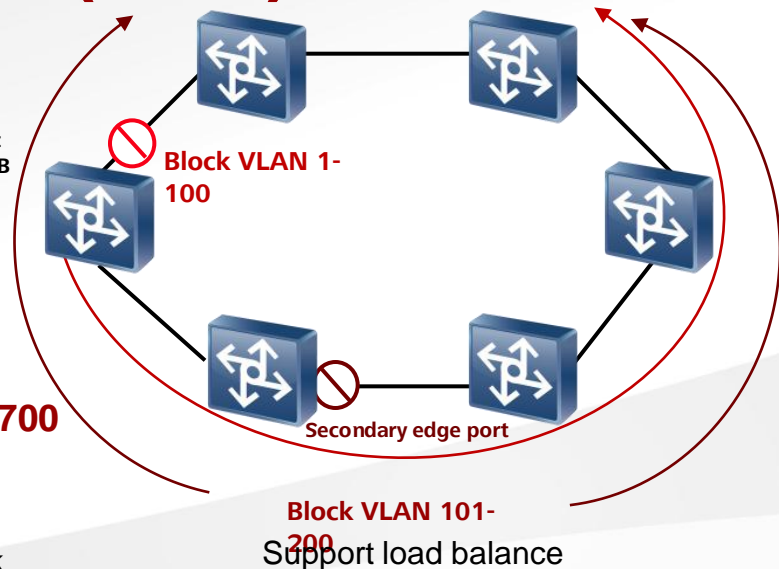


Endless topology cascade expansion

- **Cost-effective** : SEP doesn't need special hardware support
- **Faster convergence**: SEP has faster convergence speed within 100ms.
- **Flexible Network**: SEP supports multi-level cascade and STP mixed subnet, has good scalability, suitable for large-scale deployment.
- **High reliability** : SEP supports bi-direction detection and load balance.

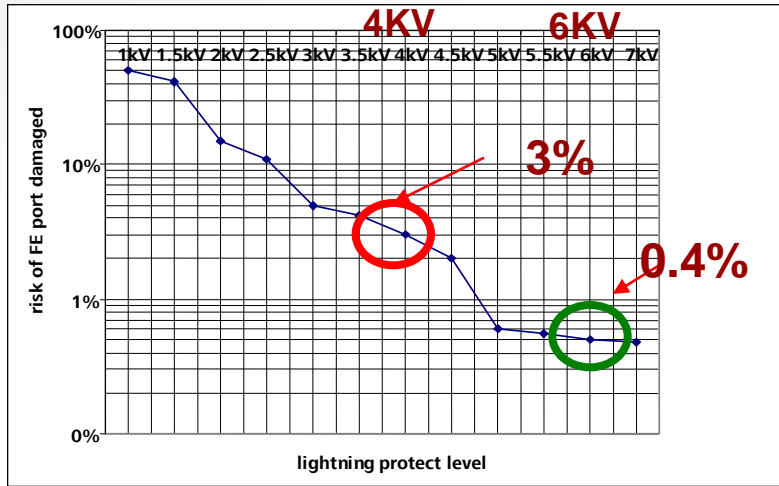
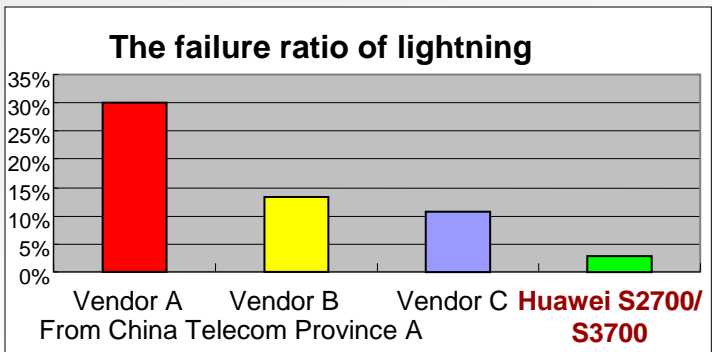


Support STP mixed Network



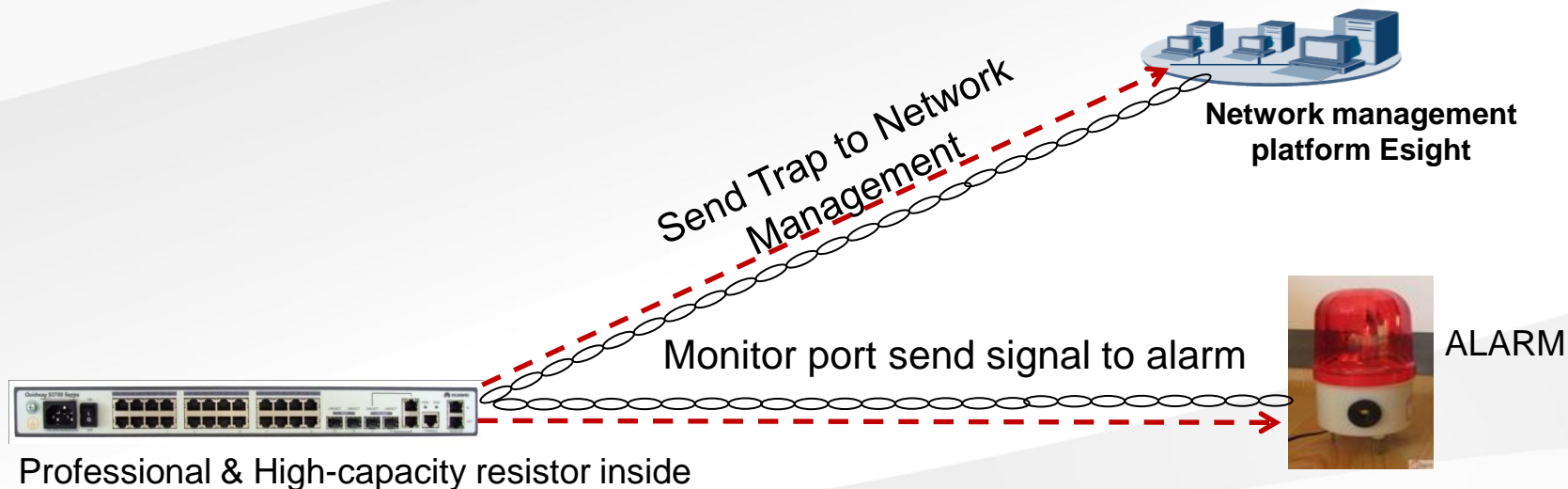
Support load balance

Adaptable for Lightning Disaster Area



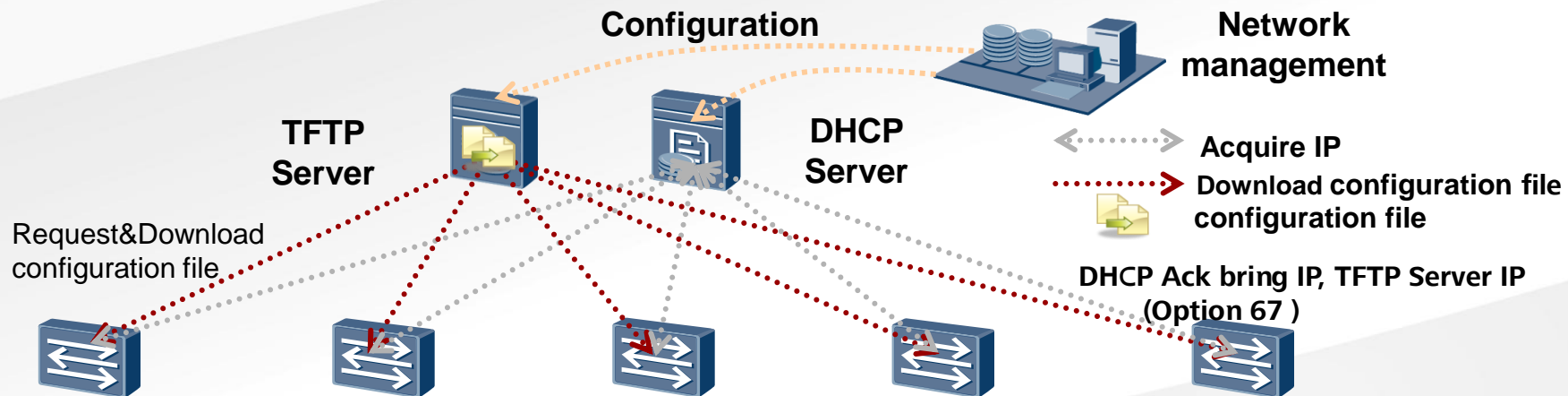
- Most access-switch build in the corridor, outdoor wall. These scenarios are the lightning 'disaster area'.
- Huawei patented build-in 6KV anti-lightening technology, which is 30 times better than other manufacturer's 2KV and 8 times than 4KV.

“Dying gasp” make OM easier



- **S3700-28TP-EI-MC** can save switch's state and configuration within 10 seconds after power-off , then send It to the Network management platform through “Dying gasp”; Meanwhile, alarm can also be linked to the monitoring port.
- Network administrators Know clearly about the alert type, thus saving lots of investigation time

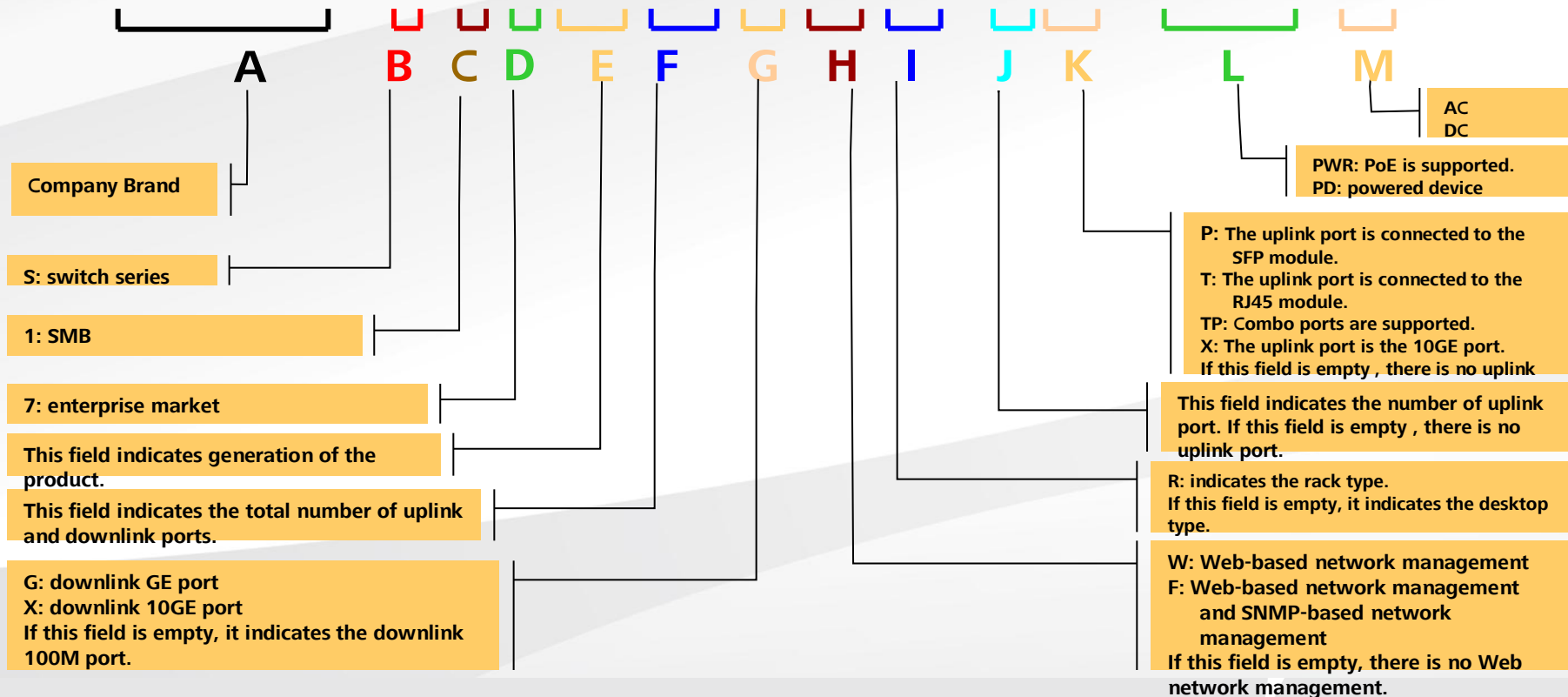
Auto-configuration make Opening easier



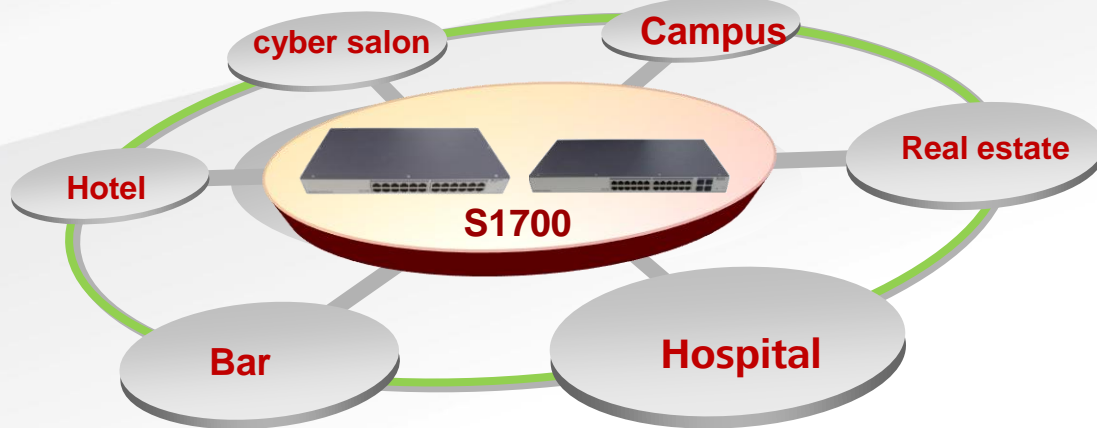
- There are **many access nodes** in large campus network. And while **wire-closet are scattered**, it brings a great challenge for rapid deployment of access equipment and network management.
- **S Series switches** supports **automatic configuration (Auto-Configure)**, and It can realize access switch "**zero**" **configuration** after installation. Access switch can obtain configuration through the DHCP and TFTP server, and complete the business deployment.

SMB Naming Rule

HUAWEI S 1 710-26 G W R - 2 X - PWR-AC



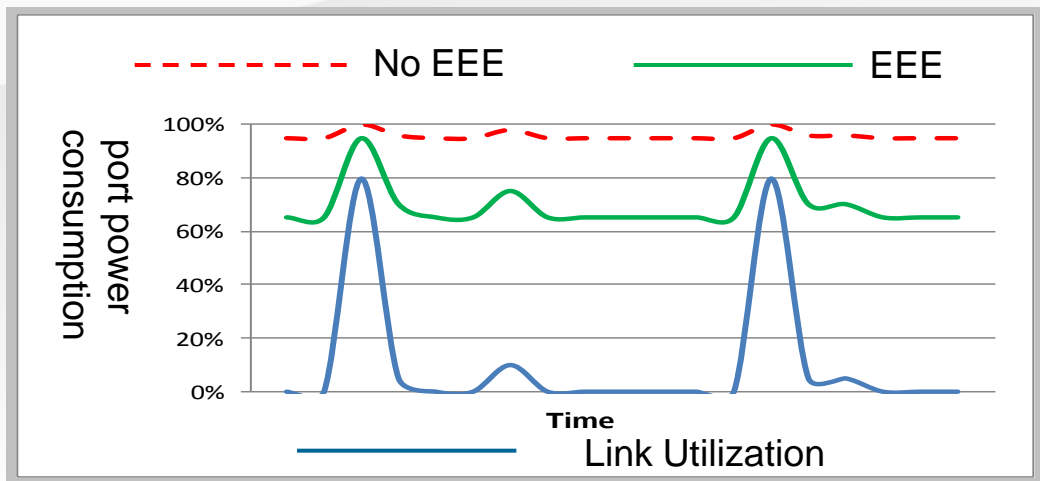
S1700 Series SMB Switch



- **The most secure SMB switches:**
 - The latest generation of chips, more comprehensive in business safety
- **Lowest power consumption in industry:**
 - Support EEE, 40% lower than the competitor
- **Best customer experience:**
 - Intimate maintenance-free design, "a key to restore" feature

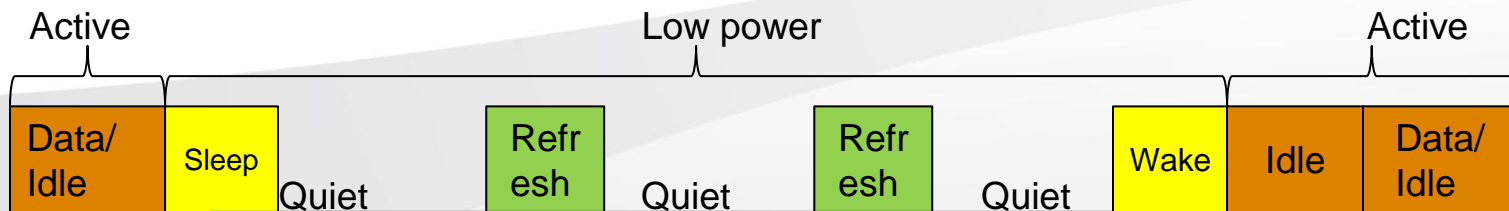
Item	S1728GWR-4P	Customer value
Power consumption	<20W	low energy cost
EEE	Y	low energy cost
Heat dissipating	Nature cooling	Noise-free
port	24RJ45+4SFP(independent)	Higher Cost-effective
Ethernet	LLDP; Voice VLAN; RSTP	Better service development
Security	DOS/Worm attack protection	Outstanding security

Energy efficiency Ethernet(802.3az)



Latest energy saving standards
In 2010, port energy efficiency
Promotion by **30%!**

EEE principle:



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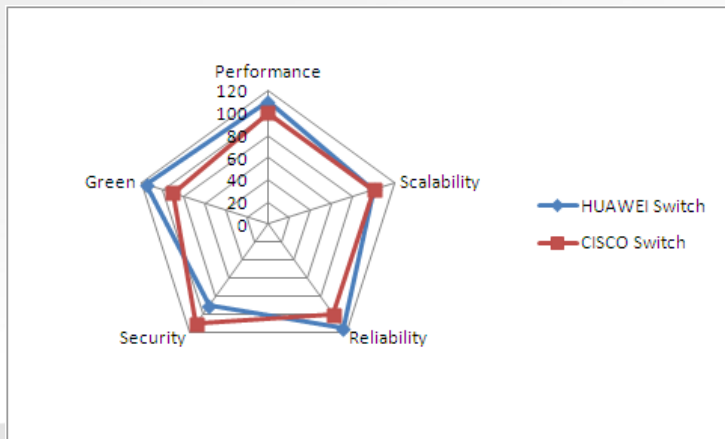
7

Configuration

Competition Analysis Overview of X7 Series

	 HUAWEI	 CISCO	 HP invent	
Chassis switch	S9300/S9700	C6500/C6500 E	A10500	
	S7700	C4500/C4500E	A9500	E8200zl/E5400zl
GE switch	S5700EI	C3750X/3560X	A5500EI	E5500G/E4800G
	S5700SI	C3750E/C3560E	A5500SI	E4510G/E4500G
	S5700SI	C3750G/3560G	A5500SI	E4510G/E4500G
	S5700SI	C2960G/C2960S	A5120EI/SI	E4200G/E2500G
FE switch	S3700EI	C3750/C3560	A3610	E5500
	S3700SI		A3600-EI	E4500/E3500
	S2700EI	C2960 LAN BASE	A3600-SI	E3500
	S2700SI	C2960 LAN LITE	A3100TP-EI	E4210
SMB	S1700	Cisco 100/200/300	A3100TP-SI	E2600/E2500
				V1900/V1400

Huawei vs. Cisco Chassis Switches



■ Higher performance

➢ S9300 max unidirectional bandwidth is **128Gbps/slot**, while Cisco C6500E is **80Gbps/slot**.

■ Higher density 10GE card

➢ S9300 supports **40*10GE** card, while Cisco supports **16*10GE** card.

■ Larger stacking bandwidth

➢ S9300 is fabric stacking, and the stacking bandwidth is **256Gbps** bidirectional, while Cisco C6500E is **160Gbps**.

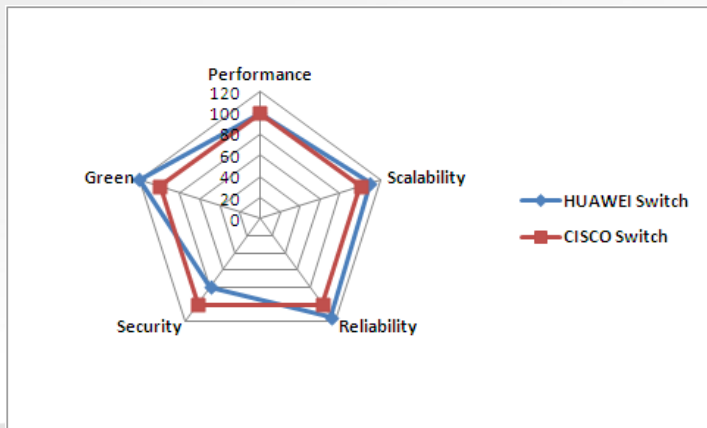
■ Higher Reliability

➢ S9300 supports **hardware Ethernet OAM** and **BFD**, while Cisco does not support.

■ Green

➢ Power consumption: 10GE port ---> HW:CISCO =**15.4:28.5**;
GE port ---> HW:CISCO =**1.53:2.13**

Huawei vs. Cisco Cased-Shape Switches



■ Selective Scalability

➤ S5700 supports **63 MCEs**, while Cisco 3560x/3750x supports 26 MCEs.

■ Higher Reliability

➤ Sx7 switches support STP/RSTP/MSTP/RRPP/SEP ring protection protocols, and **RRPP/SEP** fulfill 50ms fast protection.

➤ S2700/S3700 supports **6Kv anti-lightening** technology, better protection for the switches.

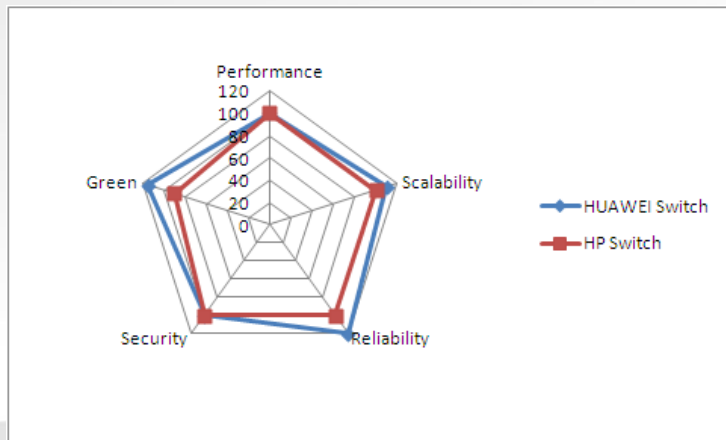
■ Larger Capacity

➤ S5700 MAC address is **32k**, while Cisco 3560X/3750X is 12K.

Huawei vs. HP Chassis Switch



VS



■ Higher performance forwarding

➤ S9300 max **unidirectional** bandwidth is **128Gbps/slot**, while HP A9500 is **80Gbps/slot**.

■ Higher density 10GE card

➤ S9300 supports **40*10GE** card, while HP A9500/A7500 support **16*10GE** card.

■ Larger stacking bandwidth

➤ S9300 is fabric stacking, and the stacking bandwidth is **256Gbps** bidirectional, while HP A9500/A7500 is **160Gbps**.

■ Higher Reliability

➤ S9300 supports **hardware Ethernet OAM** and **BFD**, while HP does not support.

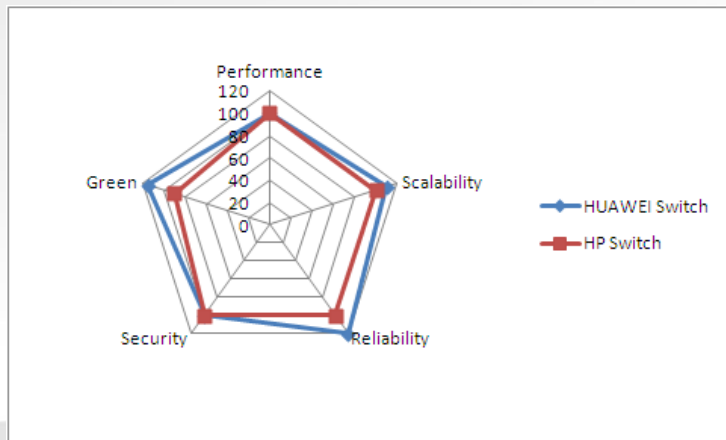
■ Selective Scalability

➤ S9300 supports **Pos card**, while HP A7500 does not support.

Huawei vs. HP Cased-shape Switch



VS



■ High Reliability

- Sx7 POE models and 57-C series support **1+1 dual power**, providing safe power supply.
- Sx7 switches support STP/RSTP/MSTP/RRPP/SEP ring protection protocols, and **RRPP/SEP** fulfill 50ms fast protection.
- S2700/S3700 support **6Kv anti-lightening** technology, better protection for the switches.

■ Convenient maintenance

- S5700 supports **USB** interface, while HP does not support.
- Sx7 switches supports **auto-configuration**, while HP does not support.

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Evolution of Sx7 products

Type	Series	2011	2012Q2	2012Q4
Version vlaue		Focus on expanding new opportunities of SMB market and enterprise network market.	Enhancing the capabilities of traditional DC core product and campus network switch.	Enhancing the capabilities of value-added board , reducing box switch cost.
Goal market		<ul style="list-style-type: none"> ➤ Traditional data center market; ➤ SMB market; 	<ul style="list-style-type: none"> ➤ Traditional data center market; ➤ Campus network: GE Access ➤ SMB market; 	<ul style="list-style-type: none"> ➤ campus network : core switch; ➤ FE access market;
SMB	1700	S1700 SMB Switch(24*GE)	S1700 SMB Switch series	
Fixed switch	2700	G.8032		S2710 series
	3700	SEP		S3710 series
	5700	S5700-HI	S5700-LI S5710-EI: Netstream S5700-HI: VPLS	S5710-HI: MACSEC S5710-LI
	6700	6724 6748		
Chassis switch	7700	2200W POE power	CSS	
	9700		8*10GE/16*10GE board GE/10GE CWDM/DWDM	OAP board (IPS) long distance CSS

S1700 roadmap

Released
Ready for Contract
Planned
Planning

V100R006 (2011Q3)
V100R007 (2012Q2)
UnManaged

NEW HARDWARE

- S1724G : 24GE RJ45

NEW HARDWARE

- S1708G: 8GE RJ45
- S1708: 8FE RJ45
- S1724: 24FE RJ45
- S1752R-2T2P: 48FE RJ45

Web Smart / full managed

NEW HARDWARE

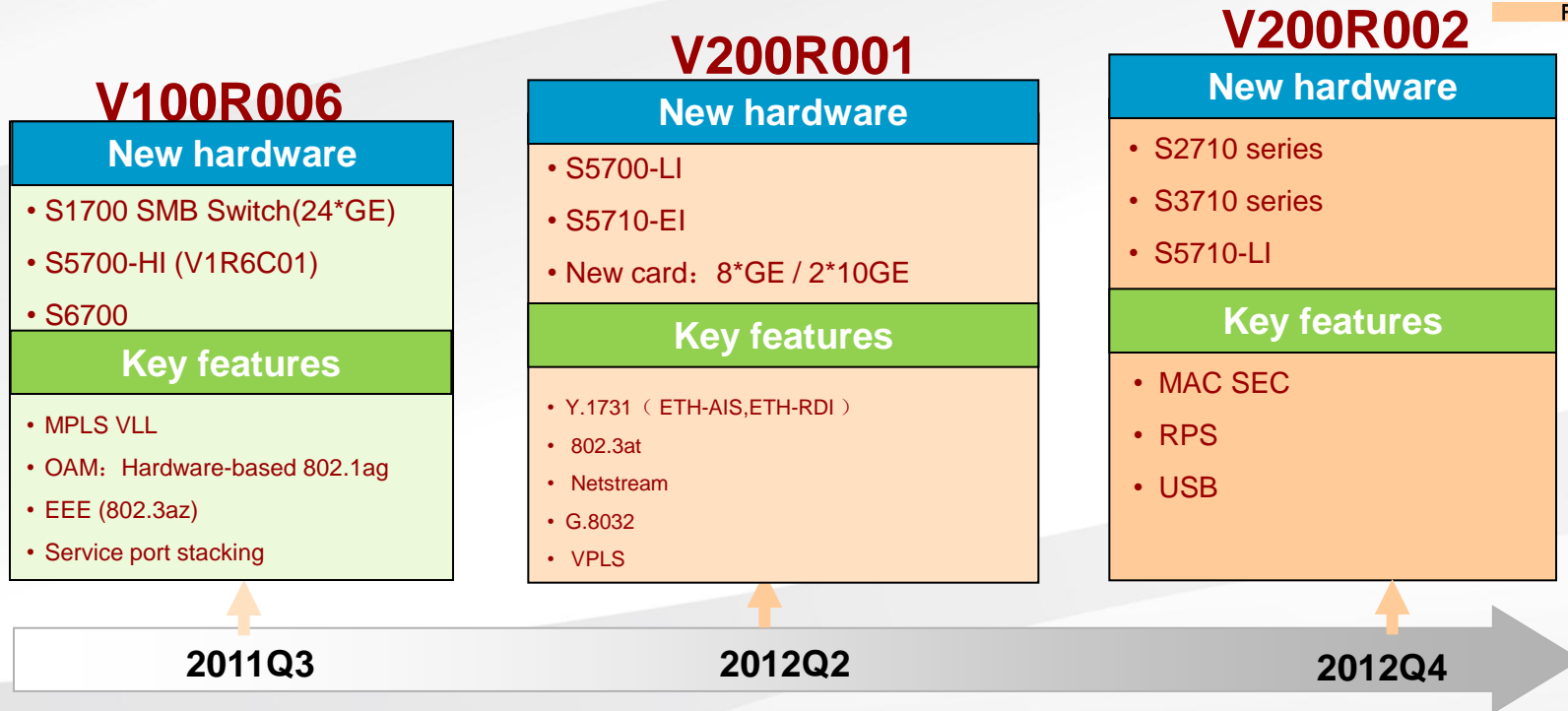
- S1728GWR-4P: 24GE RJ45 + 4GE Combo

NEW HARDWARE

- S1728FR-2TP: 24FE RJ45 + 2GE RJ45+2 GE SFP
- S1728GFR-4P: 24GE RJ45 + 2 GE SFP
- S1728GWR-4P: 24GE RJ45 + 2 GE SFP
- S1752FR-2T2P: 48FE RJ45 + 2GE RJ45+2 GE SFP
- S1752GFR-4P: 48GE RJ45 + 2 GE SFP

Box switch roadmap

Released
Ready for Contract
Planned
Planning



Notes:S5700-LI: Layer 2 GE access switch;

Chassis switch roadmap

Released
Ready for Contract
Planned
Planning

V100R006

New hardware

- 24GE RF45 board
- 2200W POE power

Key features

- Y.1731 (ETH-DM)
- EEE(802.3az)

2011Q3

V200R001

New hardware

- S9703 / S9706 / S9712
- 8×40GE board (test)
- 8*10GE (512K MAC) board
- 16*10GE board (LRM)

Key features

- Y.1731 (ETH-AIS,ETH-RDI)
- G.8032
- MLD V1/V2 proxy
- 100 m long distance CSS
- GE/10GE CWDM/DWDM

2012Q2

V200R002

New hardware

- X86 board (IPS)
- 10G BASE-T board

Key features

- Long distance CSS

2012Q4

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Santander Group

Background

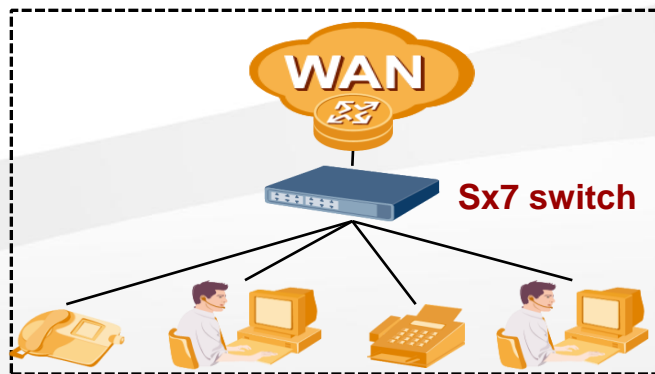
- The Santander Group is a banking group centered on Banco Santander, S.A., the largest bank in the Eurozone and one of the largest banks in the world in terms of market capitalization.
- Santander Group have a multi-domain, multi-service network, based on standardized technologies to avoid "single vendor" dependency.

Huawei solution

- Currently Huawei provides LAN switches for branch offices.
- Huawei is also validated as provider for LAN switching solution for Campus or Single Buildings
- Huawei is also in validation phase for AR, IPCC and Telepresence solution.

Customer value

- Huawei provides an end-to-end, open and feature rich product portfolio, that fulfill the different needs of the Santander Group as second vendor.
- Huawei provides excellent products to reduce the cost on IT information, makes Santander Group a good practice of green bank.



Wey Tec - IP KVM Solution Integration



Background

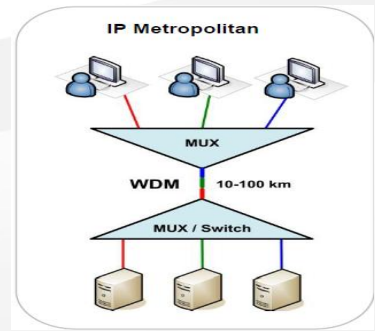
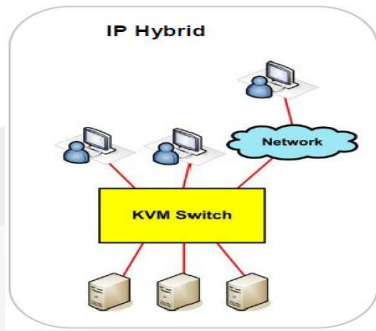
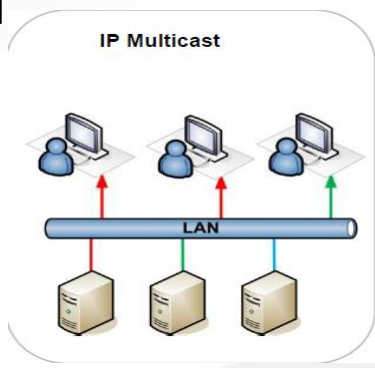
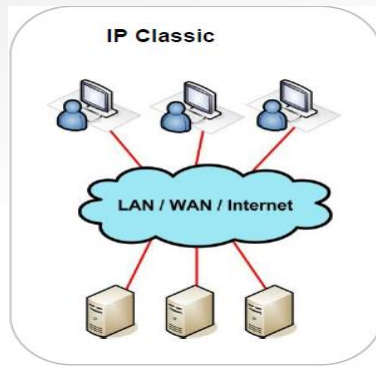
- The WEY Group is a global developer of unique integrated solutions in the area of trading room workstations, security and control centers, specialized health care applications.
- WEY TEC is seeking the global IP product partner to integrate in it's IP KVM (Keyboard Video Mouse) solution.
- Required high density optical and electrical GE interfaces.
- Switch + WDM solution desired.

Huawei Solution

- Huawei Switches are integrated into Wey Tec's IP KVM solution already deployed several S93 and S53 in some cases.
- Comprehensive IP and WDM products portfolios.
- Multicast service.
- High reliability in network and device level; high port density.
- Global service support ability: maintenance, training, spare parts, TAC etc.

Customer Value

- Be able to provide end to end IP KVM solution: IGMPv3 and special parameters like "fast-leave", "multicast drop-unknown", "flow-control" are fundamental plus the high availability of the hardware.
- Short lead time to meet the efficient deployment requirement and global technical support capability.
- Cost effective GE optical and electrical interfaces.



China Permanent Mission to WTO (Geneva) Network Migration



Background

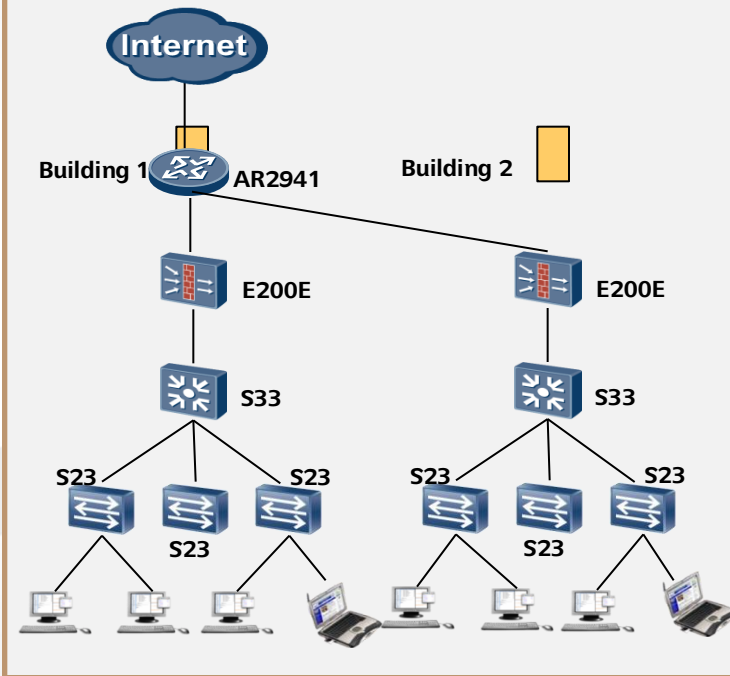
- The current network of China Permanent Mission to WTO reached the end of lifecycle.
- The network devices can not match the high speed internet requirement and are supplied by different vendors.
- Need Voice solution ready in the future.
- High network security, network reliability are desired.

Huawei Solution

- End to end Data + Voice solution with Huawei own products in including L2/L3 switches, firewall, CPE routers.
- Network design, seamless network migration, high level L1/L2 service including maintenance, training, spare parts, TAC.
- Ensure high network security, high network scalability, high reliability devices and network.

Customer Value

- High network security, network reliability, ready for the oncoming Voice requirement.
- Green design decreased power consumption.
- High level technical support.



Fastlog Enterprise Network Replacement



Background

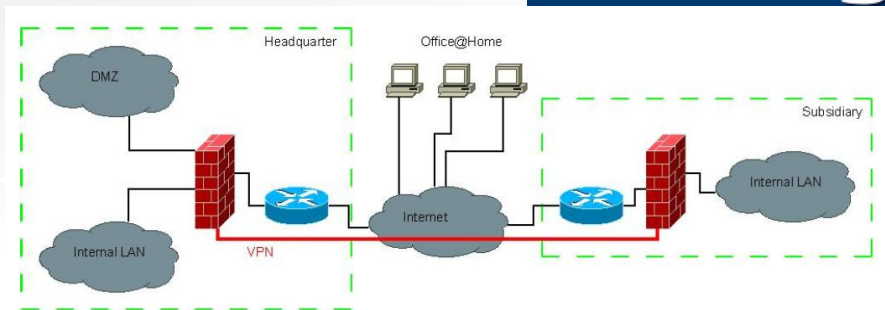
- Fastlog is the leading service partner in telecommunication business in Switzerland.
- Network replacement and extension in branch office step by step.
- Campus network Data + Voice, network security, reliability, VPN.
- WLAN is desired in the future.

Huawei Solution

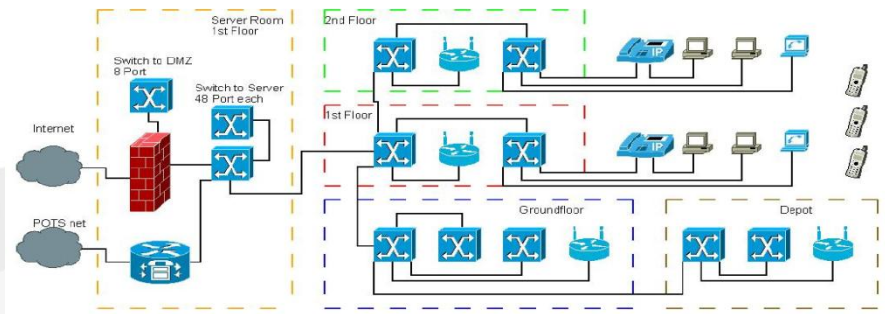
- Unified product platform, flexible application: several S5300 are deployed in the current network in the first stage.
- Provide end to end solution: Data + Voice, VPN, security.
- Ready for the WLAN solution in the further stage.
- High network security, network and devices reliability.

Customer Value

- End to end solution and unified products for the future network.
- Green design to save 30% + power consumption.
- Cost effective solution and products to match all the services and technical requirements.



Network overall



Network plan of branch office

Bank of China IDC Network



Background

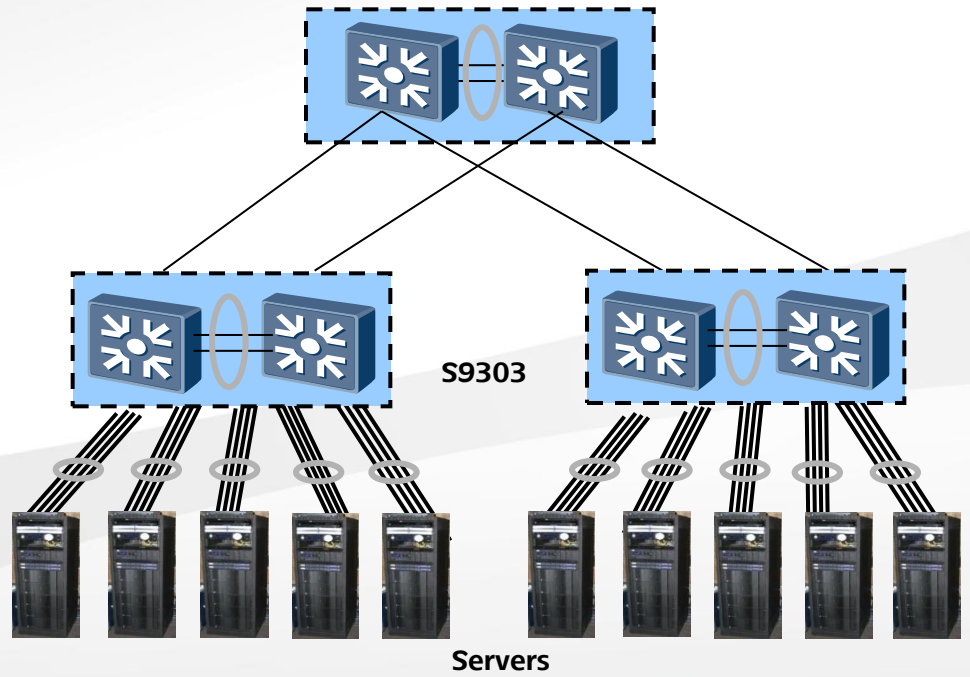
- > The capacity bottleneck comes from the data and servers expansion.
- > Limited room and rack space.
- > Needs to lower power consumption and maintenance cost.

Huawei Solution

- > Huawei uses more than 1700*GE and 432*10GE wire speed ports to ensure the large capacity service.
- > Huawei uses S9300 serial switches green design and high density ports to lower the OPEX.
- > Huawei uses end to end availability design to make sure the data forwarded safely.

Customer Value

- > Huawei uses the high performance feature to make sure the massive data exchange.
- > Huawei helps to save rack resources distinctly, decreased 30% of power consumption.
- > The 99.999% availability can make sure the safety of the data



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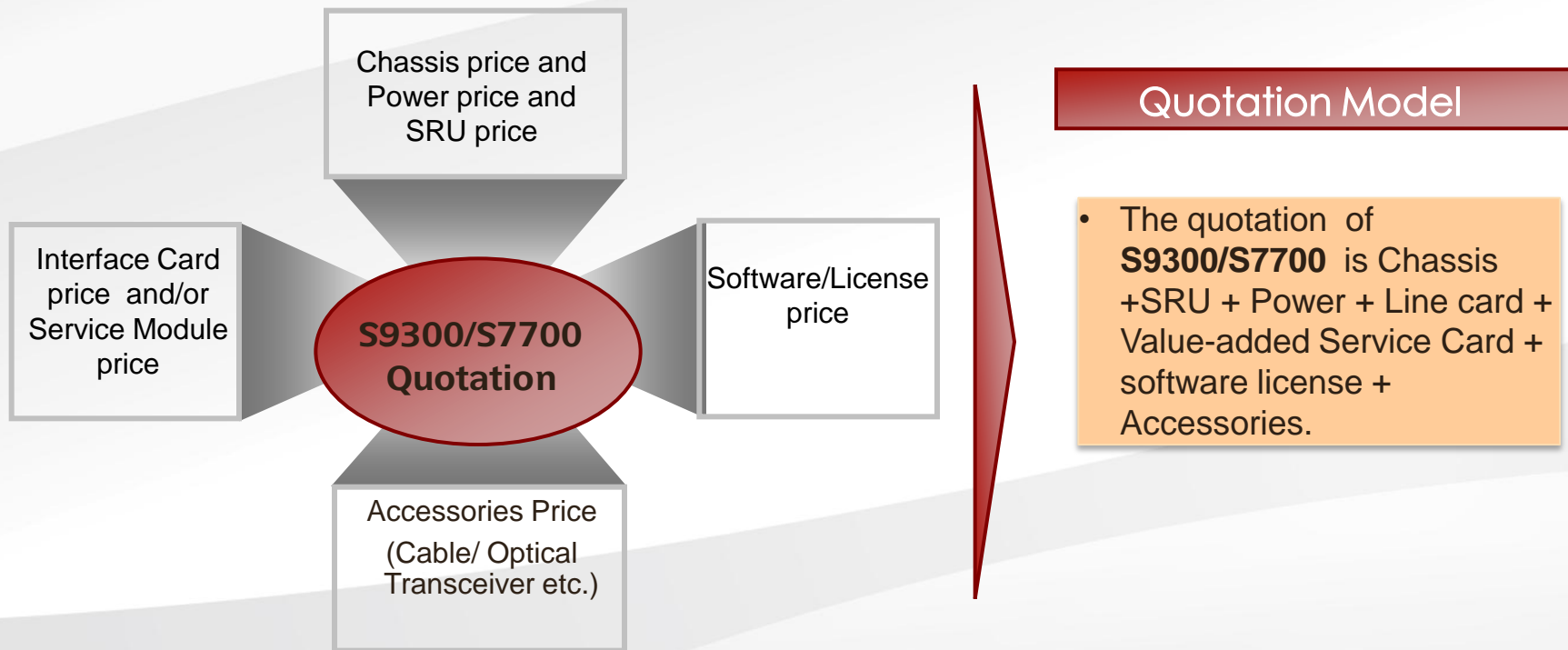
5

Successful Stories

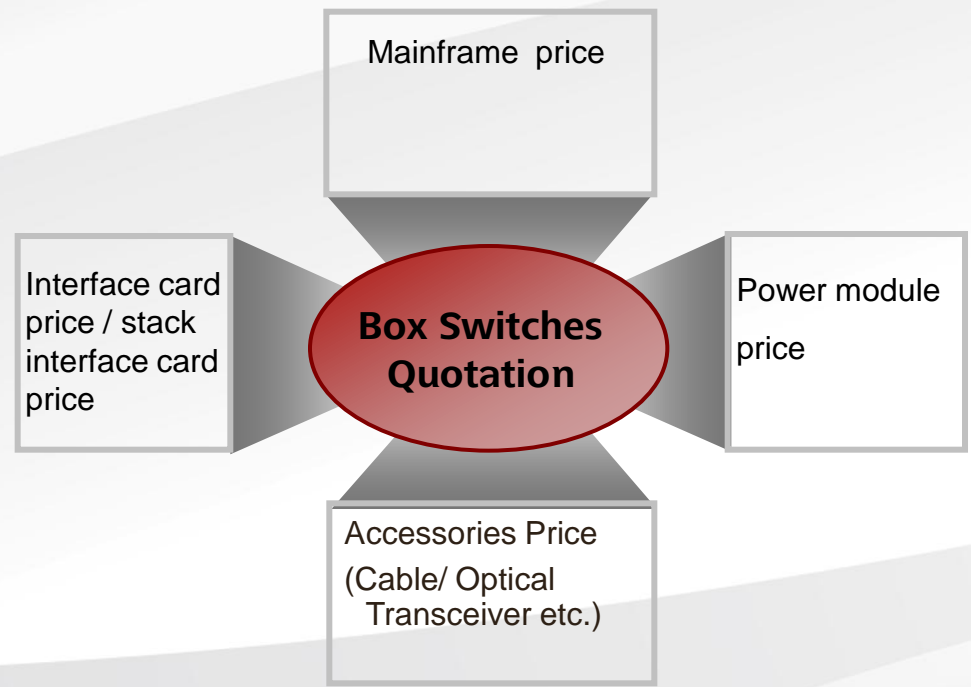
6**How to Quote****7**

Configuration

Chassis Switches Quotation Model



Box Switches Quotation Model



Quotation Model

- The quotation of **S6700** switch is mainframe + Power + Accessories.
- The quotation of **S5700** switch is mainframe + Power + interface card + stack interface card+ Accessories.
- The quotation of **S3700** switch is mainframe + Power + interface card + stacking cable + Accessories.
- The quotation of **S2700** switch is host + Power + Accessories.
- The quotation of **S1700** switch is host + Accessories.

S7700 Bundle

Item	Bundle Name	Component
ES0ZB03ACS00	HUAWEI S7703 Basic Engine AC Bundle	Including: S7703 Assembly Chassis, MCUA, Dual AC Power
ES0ZB06ACS00	HUAWEI S7706 Basic Engine AC Bundle	Including: S7706 non-PoE Assembly Chassis, SRUA, Dual AC Power
ES0ZB12ACS00	HUAWEI S7712 Basic Engine AC Bundle	Including: S7712 non-PoE Assembly Chassis, SRUA, Dual AC Power

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7**Configuration**

Select Chassis/SRU/Power(S9300)

Step1: Select chassis based on the number of required service boards and the requirements for POE

Model Number	Model	Power Slots	Remarks
LEOKS9303	S9303 Assembly chassis	2	S9303 does not support CMU
LEOKS9306	S9306 Assembly chassis		
LEOKS9312	S9312 Assembly chassis	4	
LEOBS9306P1	S9306 POE Assembly chassis		
LEOBS9312P1	S9312 POE Assembly chassis		

Step2: Select SRU according to the chassis, bandwidth, and requirements for backup

Model Number	Mode	Bandwidth	Chassis	Remarks
LEOMMUA	MCUA	720 Gbit/s	9303	The FSU can be installed in the SRUA/B slot, improving security. The FSU cannot be installed in MCU slot.
LEODMUA	MCUA-Clock	720 Gbit/s		
LEOMSRUA	SRUA	512Gbit/s	9306/9312	
LEODSRUA	SRUB	1 Tbit/s		
LEOD00SRUB00	SRUB-Clock	1 Tbit/s		

Step3: Select power model according to the demand of system and POE consuming

Model Number	Model	Description	Remarks
LE0MPSD16	1600W DC	Use for POE power	S9300 POE power support only AC inputs
LE0MPSA08	800W AC	Use for POE power or system power	
W0PSA2200	2200W AC	Use for POE power	

Select Line Card(S9300)

Step4: Select line cards considering the required interface type, MAC address quantity, MPLS function, and unicast and multicast route quantity.

Card Type	MAC	MPLS	Interface Type	FIB	Multicast Route
SA	32K	N	<ul style="list-style-type: none"> 24*GE Optical interface 24*GE Optical interface + 8*Combo 12*10GE Optical interface 	12K	2K
EA	32K	Y	<ul style="list-style-type: none"> 48*GE electrical/optical interface 48*FE electrical/optical interface 24*GE Optical interface + 8*Combo 2*10GE + 24*GE electrical/optical interface 36*GE electrical interface + 12*GE Optical interface 2/4*10GE Optical interface 	16K	4K
EC	128K	Y	<ul style="list-style-type: none"> 48*FE electrical/optical interface 48*GE electrical/optical interface 24*GE optical interface 2*10GE + 24*GE electrical/optical interface 2/4*10GE optical interface 	128K	4K
ED	512K	Y	<ul style="list-style-type: none"> 48*GE electrical/optical interface 24*GE optical interface 4*10GE optical interface 	512K	4K
FA	32K	Y	<ul style="list-style-type: none"> 48*FE electrical interface 48*GE electrical/optical interface 24*GE electrical interface 	12K	2K
FC	128K	Y	<ul style="list-style-type: none"> 40*10GE optical interface 	4K	4K

Select Service Card(S9300)

Step5: Select a service card based on the demand.

Model Number	Type	Function	Remarks
LE0DG48VEA00	POE	<ul style="list-style-type: none"> 48*GE 	<ul style="list-style-type: none"> It complies with IEEE802.3af (each port provides a maximum of 15.4 W power) and IEEE802.3at (each port provides a maximum of 30 W power).
LE0MFSUA	FSUA	<ul style="list-style-type: none"> Hardware-based Ethernet OAM Hardware-based MPLS OAM Hardware-based BFD CPU protection on the main control board 	<ul style="list-style-type: none"> The FSUA is installed in the SRU slot and is configured according to service requirements. If dual main control boards are configured, configure both FSUAs or neither FSUAs
LE0DCMUA0000	CMU	<ul style="list-style-type: none"> Power module monitoring and management Fan module monitoring and management 	<ul style="list-style-type: none"> The S9303 does not require the CMU. The S9306/S9312 supports the 1+1 redundancy mode.
LE0D0VAMPA00	Value-added service board	<ul style="list-style-type: none"> Firewall/NAT Load balancing IPSec VPN WLAN AC 	<ul style="list-style-type: none"> The version released in Russia does not provide the IPSec function. To support the WLAN AC function, a license is required.
LE0D0VSTSA00	VSTSA	<ul style="list-style-type: none"> used to connect multiple devices to form a stack 	<ul style="list-style-type: none"> The VSU is installed in the SRU slot and is configured according to service requirements. The S9303 does not support stacking.
LE0D0WMNPA00	WAN	<ul style="list-style-type: none"> WAN Interface Services Process Card 	<ul style="list-style-type: none"> If the WAN board LE0D0WMNPA00 (03020SWW) is used, the CKMAs must be configured on both main control boards and the software version must be V100R006 or later.

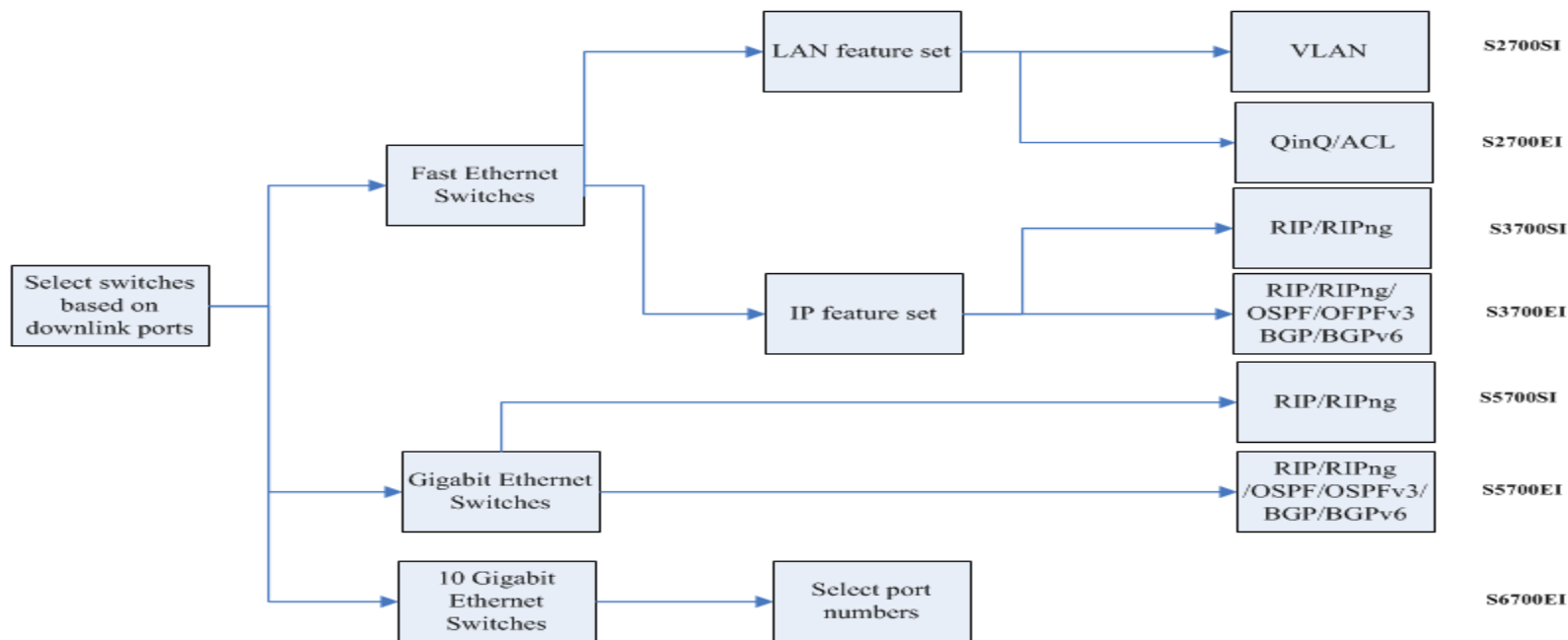
Select Software and License(S9300)

Step6: Select software and license based on demand.

Model Number	Description	Remarks
LE0SMS139300	Quidway S9300 Basic SW,V100R006	Each device is configured with this software.
LE0SMPLS9300	Function-Quidway S9300-LLE02PLS01-MPLS Function License	<ul style="list-style-type: none"> Each WLAN AC board (LE0DOVAMPA00) can authorize 128 APs by default. After the license is purchased, the value is increased.
LE0SNQAF9300	Function-Quidway S9300-LLE0NQAF01-NQA Function License	
LE0SIPV69300	Function-Quidway S9300-LLE0IPV601-IPV6 Function License	
LE0SWLAN9300	Resource-Quidway S9300-LLE0WLAN01-WLAN Access Controller AP Resource License	

S6700/S5700/S3700/S2700 Configuration

S6700/S5700/S3700/S2700 series configuration



Summary of S x7

Product Portfolio

Chassis: **S9300/S7700**

10 GE: **S6700**

L3 GE: **S5700**

L3 FE: **S3700**

L2 FE: **S2700**

SMB: **S1700**

Why Huawei

Full-service Ethernet switching platform:

Distributed L2/L3 service forwarding, Firewall/Load Balance/Wlan AC Integrated, high density 10GE.

High Reliability :

Hardware EOAM/BFD detection, 50ms protection.

Green: Innovative technologies, support IEEE 802.3az.

Which markets to sell

Technical Scenario:

- Enterprise Campus Network
- Data Center
- Small Business

Vertical Industries:

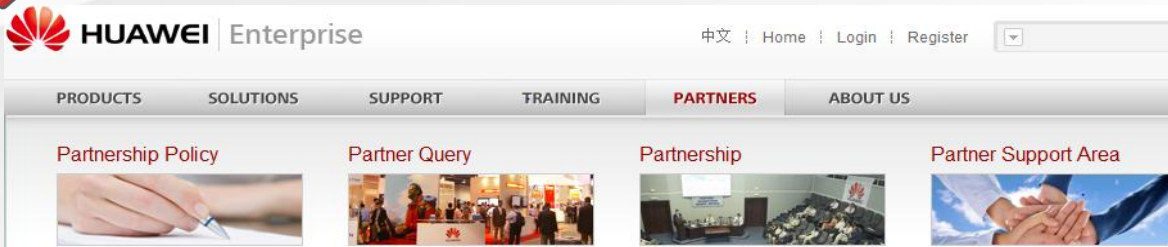
- Government
- Power
- Finance
- Transportation
- Energy
- Carrier Resale

Huawei Kung Fu Document - Weapons for you

Weapon1: Enterprise Website



<http://enterprise.huawei.com/en/>



- Partnership Policy
 - To learn Partner Policy
- Partner Query
 - To find a partner
- Partnership
 - To be a partner
- Partner Support Area
 - To get support anytime and anywhere

Weapon2: Document Email



Where can I find it and give feedback



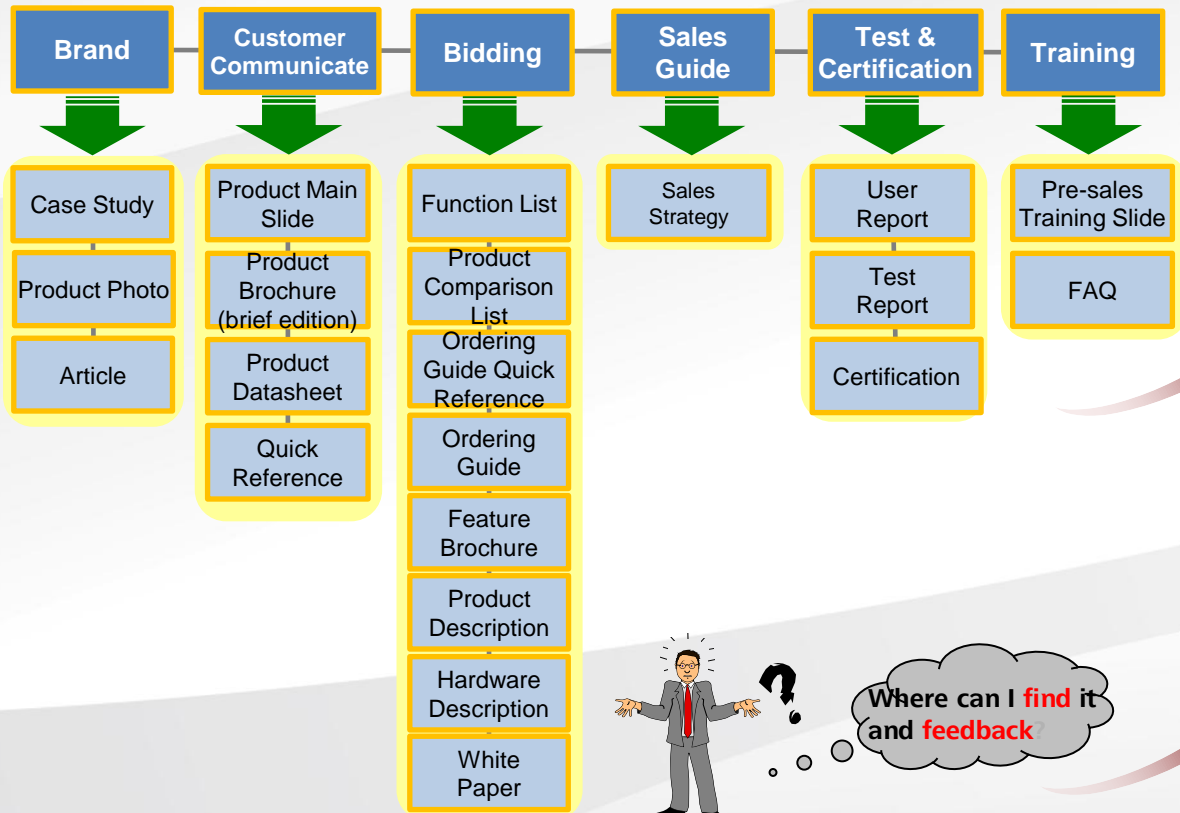
enterprise_channel@huawei.com

Weapon3: Material Bookshelf

Sorts	Doc Types	Document Name	Product Type	Version	Path of Website	Link of Website
Customer Communications	Main Slide	Professional Quality, Simply Network S Series LAN Switch Main Slide V3.2	ALL	V1R6	HomePage > Partners > Partner Support Area > West Europe Region > Product > LAN Switch > Customer Communications	Web
Customer Communications	Brochure (Simple Edition)	Brochures(Simple Edition)	S170027005710570067007700S9300	V1R6	HomePage > Partners > Partner Support Area > West Europe Region > Product > LAN Switch > Customer Communications	Web
Customer Communications	Brochure (Detail Edition)	Brochures(Detail Edition)	S170027005710570067007700S9300	V1R6	HomePage > Partners > Partner Support Area > West Europe Region > Product > LAN Switch > Customer Communications	Web
Bidding	Brief Ordering Guide	Guide	S170027005710570067007700S9300	V1R6	HomePage > Partners > Partner Support Area > West Europe Region > Product > LAN Switch > Bidding	Web
Sales Guide	Brief Sales Guide	P Product Brief Sales Guide	ALL	V1R6	HomePage > Partners > Partner Support Area > West Europe Region > Product > LAN Switch > Sales Guide	Web
Bidding	Product Models Comparison with Competitor	Oversea Switches Models Comparison	ALL	/	HomePage > Partners > Partner Support Area > West Europe Region > Product > LAN Switch > Bidding	Web
Training	Pre-sale Training Slides	Huawei Quidway S17 Series Switch Introduction V1.2	ALL	/	HomePage > Partners > Partner Support Area > West Europe Region > Product > LAN Switch > Training	Web
Brand	Case Study	Huawei Datacom Product Cases on Industry Networks	ALL	/	HomePage > Partners > Partner Support Area > West Europe Region > Product > LAN Switch > Brand	Web

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