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Portorož, 15. in 16. marec 2017



Your Time Is Now

## Različni dizajni centralnih omrežij, kako naprej ?

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Architect*

S&T Slovenija

Cisco  
Connect

Portorož, 15. in 16. marec 2017

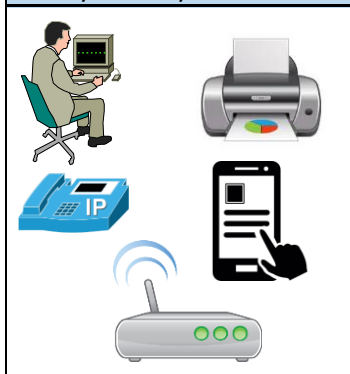


# Agenda

- DT, SVAPTAAS
- IT infrastruktura (case study)
- Dizajn možnosti
- Razdelitev nagrad

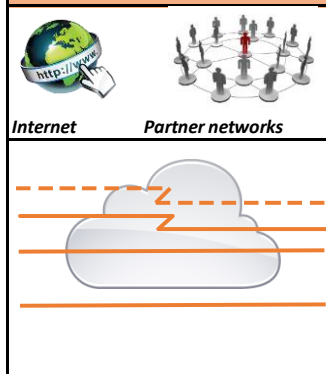
AUTOMATION & ORCHESTRATION
MANAGEMENT & MONITORING & REPORTING
SECURITY

## CAMPUS/END USERS/CLIENTS



End-point-Security	LAN	WLAN
Collaboration	(U)PoE	ISE/BYOD
802.1x/TrustSec	Stacking	QoS
0.1/1/2.5/5/10	IPSG	DAI
DHCP Snooping	PortSec	STP Enh
LACP/802.1q	Routing	FHRP
StromControl	AVC	

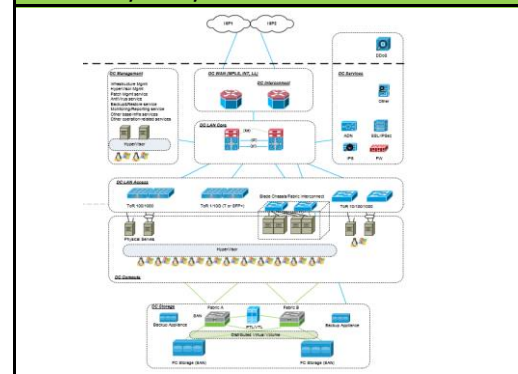
## CONNECTIVITY



links	WAN	MPLS
VPN	DCI	Metro
IPSec/SSL	xWDM	CarrierEth

ISSU	Mobility	Multi-Tenancy	Sizing/Scaling
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## DATA CENTER/CLOUD/RESOURCES



Facility	Power	Cooling	Racks
Network	RTR/SW	Fabric, FEX, VDC	Segmentation
Compute	HV	CPU/RAM/DSK	Rack/Blade
Storage	SAN/NAS	Storage	Bck&Rst
Net/Sec Services	FW/IPS	ADN (L3-L7)	vServices
Infra Services	AD/DNS	NTP	SMTP/FTP
Management	Infra/OoB	Patch	AV
Monitoring	Log/Mon	Alert	Report

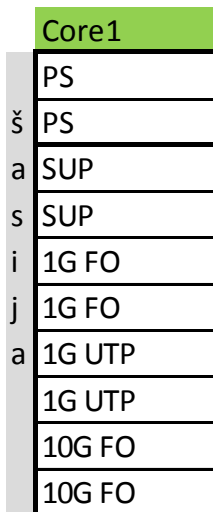
P R I V A T E P U B L I C

CAT	ISR/ASR	NX
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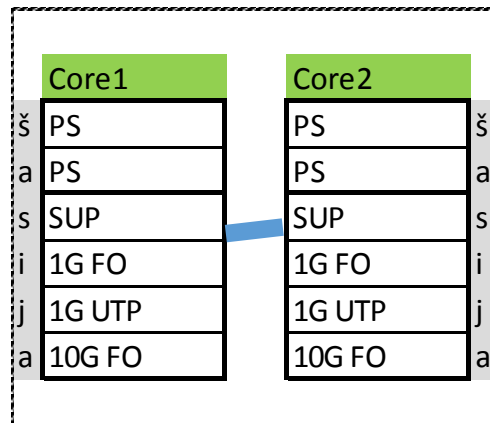
Sizing/Complexity	XS	S	M	L	XL	XXL
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# (SI) Dizajn skozi leta

## 1 šasija

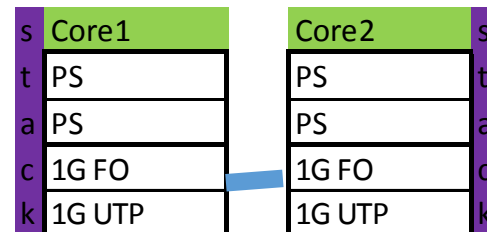
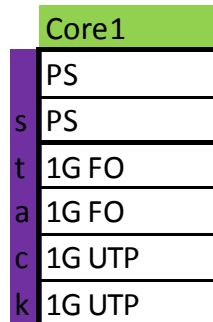


## 2 šasiji/2 stikali



- VSS (65xx 45xx)
- vPC (N7k, N5k)
- Redundantni priklopi (LACP)
  - Strežnikov, sistemov
  - vozlišč

stack



# Case Study (2016)

- **Case1**
- **Case2**
- **Case3**
- **Produkt = Znanje/dizajn/študije**

	Case1	Case2	Case3
<b>Scope</b>	PoD, Mgmt	All DC blocks	IT revision
<b>Deliverables</b> (services)	HLD	HLD	As-Is/To-be
	BoM	BoM	BSC/TSC
	LLD		BIA/RA
	Implementation		Strategy
	Operations (9m)		Transition
<b>Hardware</b>	N/A	N/A	N/A

- **DC Blocks:**
  - DC Network (DC WAN, DC LAN core/aggregation/access)
  - DC Services (FW, IPS, RA, ADN)
  - DC Compute (Servers, Hypervisors)
  - DC Storage (Storage System, SAN)
  - DC Management/Operation (IaaS, HV, AV, Patch, Mon, Backup&Restore, IPAM, ServiceDesk, ..)

# Min. dizajn 10G (96p) in širljivost

L2 network	
L2	underlay
systems	vPC/LACP
L3 func	routing/FHRP

L3 fabric	
L3	underlay
L2	overlay
systems	vPC/LACP
L3 func	routing/FHRP

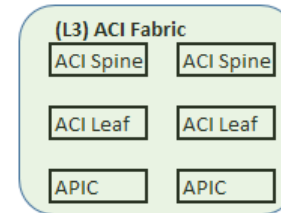
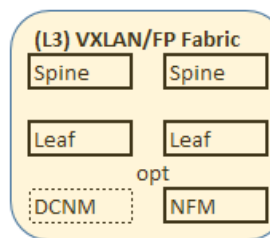
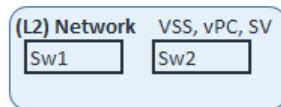
1		2		3		4		5		6	
SMB		Meraki		Catalyst		N7K/N5K		N9K/N3K		N9K	
SMB	Cloud-Managed	software	IOS	NX-OS	NX-OS	ACI					
500XG	MS2xx	platforms	IOS XE								
550XG	MS3xx		2960-X/XR	N7000/N7700	N9500	N9500					
	MS4xx		2960-L	N5600	N9300	N9300					
			3650/3850		N9200						
			3560-CX/2960-CX								
			4500E/4500-X								
		6500/6800	N2K	N2K	N2K						
		overlays (L2 over L3)	Campus Fabric	FabricPath	VXLAN F&L	ACI Fabric					
					VXLAN F&L	VXLAN EVPN					
					VXLAN EVPN						
STP, Stacking	STP, Stacking	topology	STP, Stacking	vPC (n=2)	vPC (n=2)	Fabric (n>2)					
				VSS (n=2), SV	Fabric (n>2)	Fabric (N>2)					
		automation	APIC-EM	DCNM	NFM	APIC					

Scale ports  
> ports

L2 Network	L3 Fabric
add FEX/IA	add Leaf
add ToR	add FEX

Scale bandwidth  
> bandwidth  
< oversubscription

add Uplink	add Uplink
add Layer (2-Tier)	add Spine





Ko brez miru okrog divjam  
prijatljji prašajo me, kam?

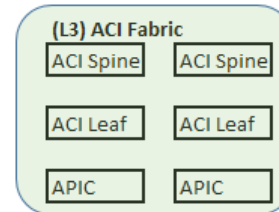
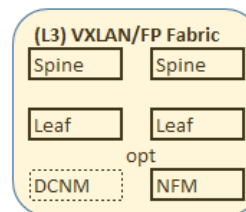
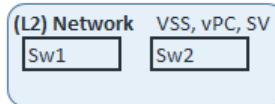


**Mail:**  
design@snt.si

**Subject:**

- KAM1
- KAM2
- KAM3
- KAM4
- KAM5
- KAM6

1		2		3		4		5		6	
SMB		Meraki		Catalyst		N7K/N5K		N9K/N3K		N9K	
SMB	Cloud-Managed	software	IOS	NX-OS	NX-OS	ACI					
500XG	MS2xx	platforms	IOS XE								
550XG	MS3xx		2960-X/XR	N7000/N7700	N9500	N9500					
	MS4xx		2960-L	N5600	N9300	N9300					
			3650/3850		N9200						
			3560-CX/2960-CX								
			4500E/4500-X								
			6500/6800	N2K	N2K	N2K					
		overlays (L2 over L3)	Campus Fabric	FabricPath	VXLAN F&L	ACI Fabric					
					VXLAN F&L	VXLAN EVPN					
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STP, Stacking	STP, Stacking	topology	STP, Stacking	vPC (n=2)	vPC (n=2)	Fabric (n>2)					
				VSS (n=2), SV	Fabric (n>2)	Fabric (N>2)					
		automation	APIC-EM	DCNM	NFM	APIC					



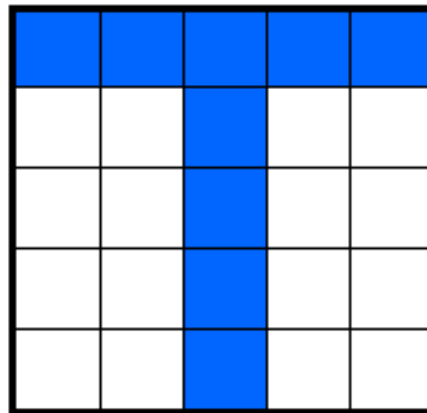
Sizing/Complexity	XS	S	M	L	XL	XXL



# Dve besedi manjkata do popolne rešitve problema ?

- Problem: Vstavite vseh 8 spodnjih besed v lik. (vodoravno in navpično)
- Rešitev: 2 besedi, ki manjkata (povezani s prezentacijo)

ALARM  
ALIAS  
KANAL  
KRČAN  
MANKO  
NIHČE  
OMELA  
OSENSA



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