Virtualising our CPE

Dave Wilson @davegw Pau Minoves @pminoves



Mantychore is part-funded by the EC under Grant Agreement Nº 261527

What's the problem?









Transmission

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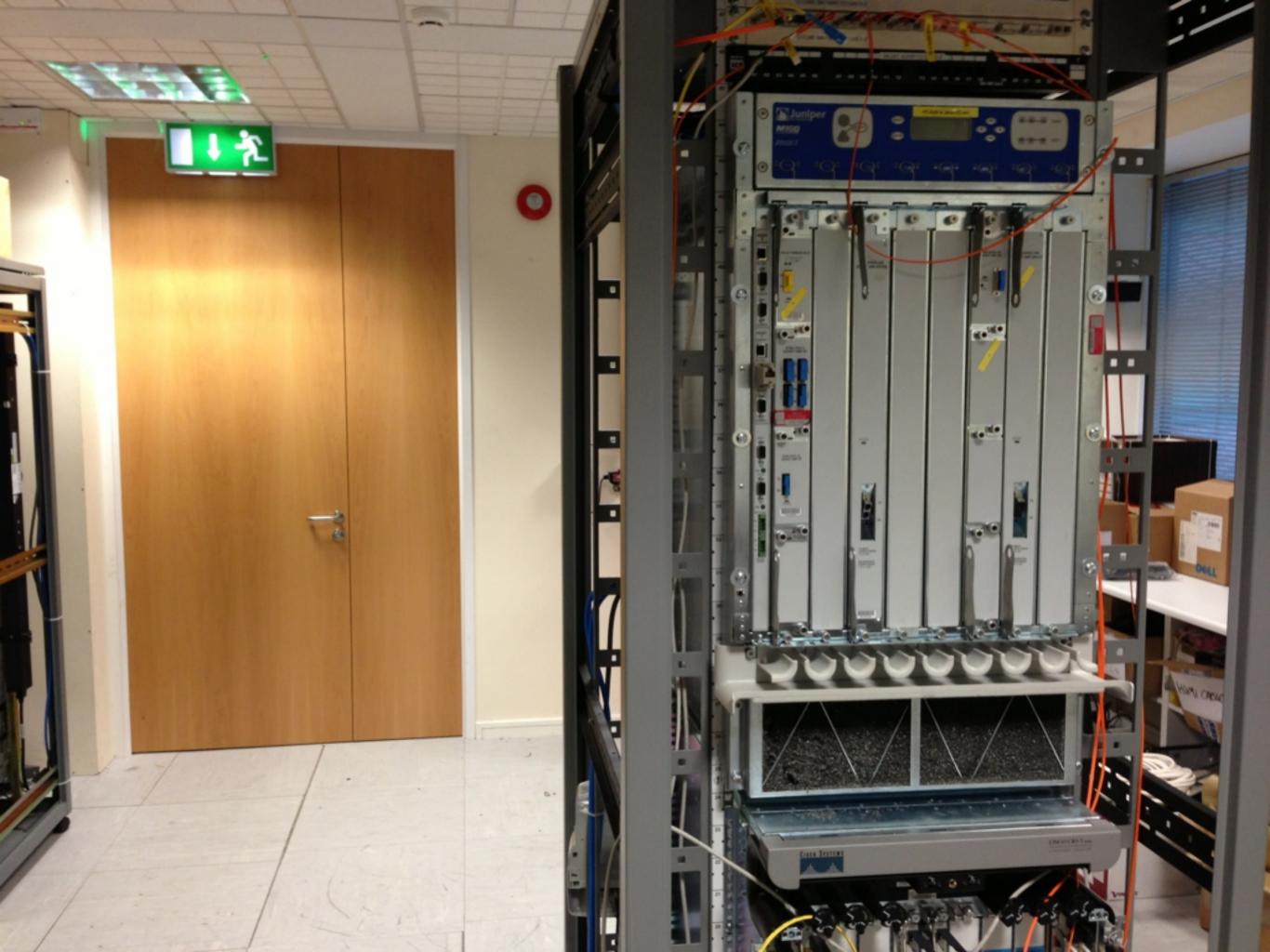
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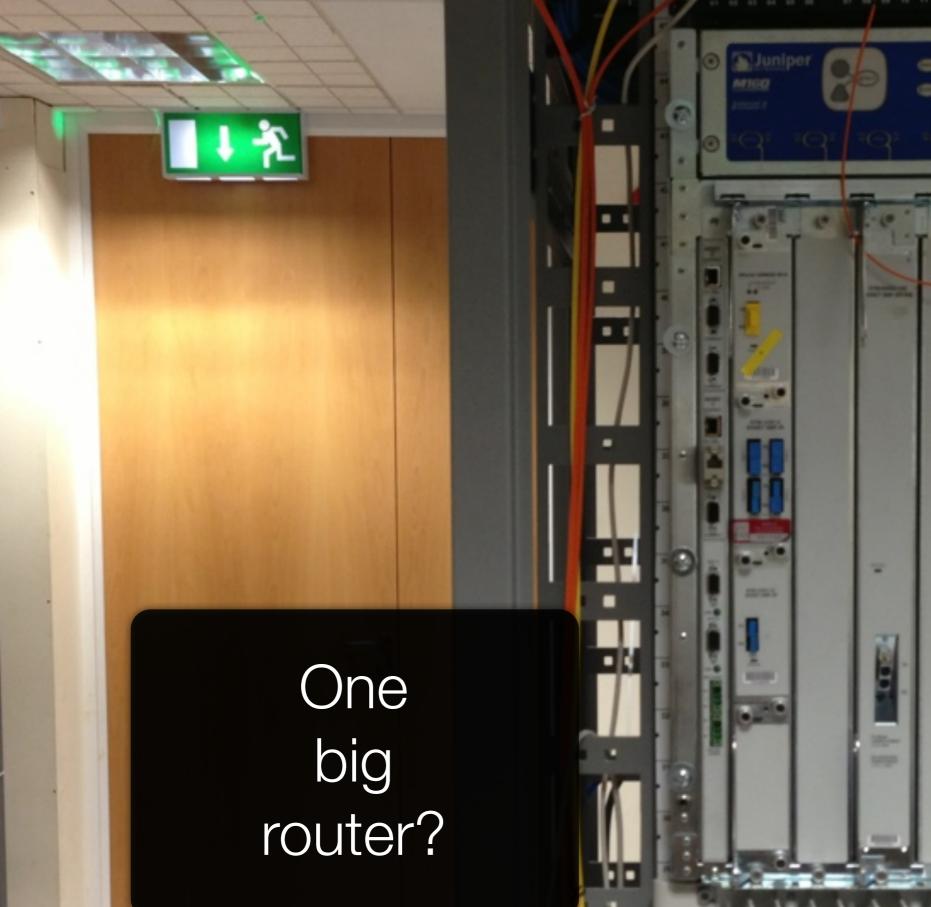












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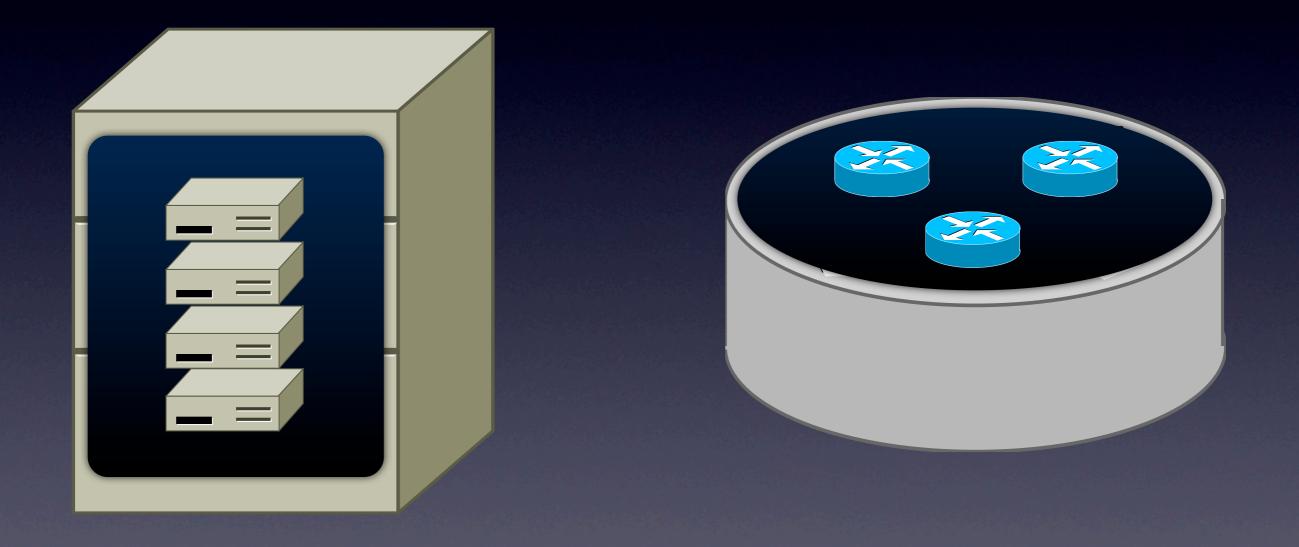
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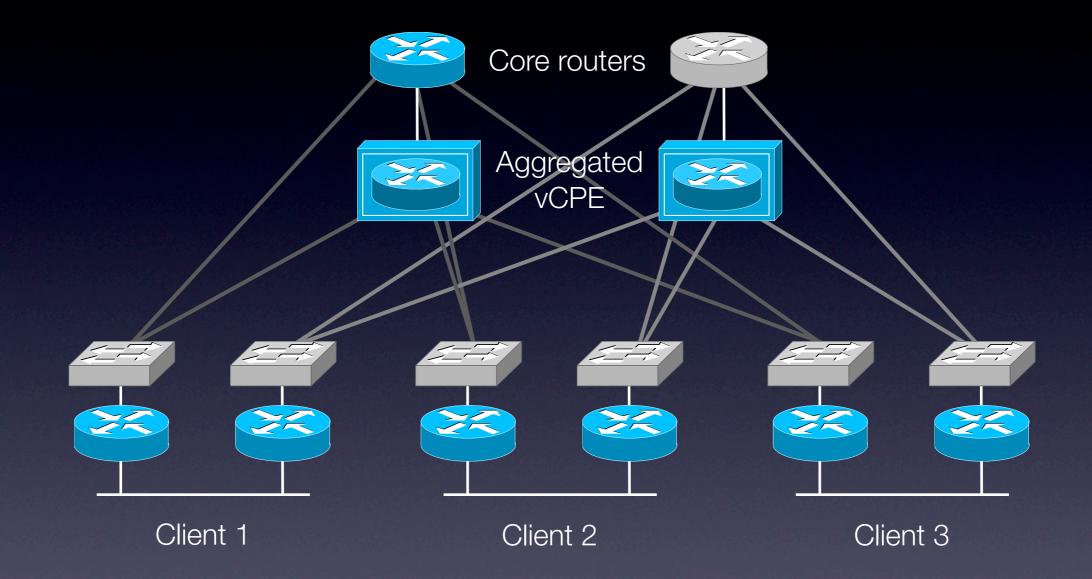
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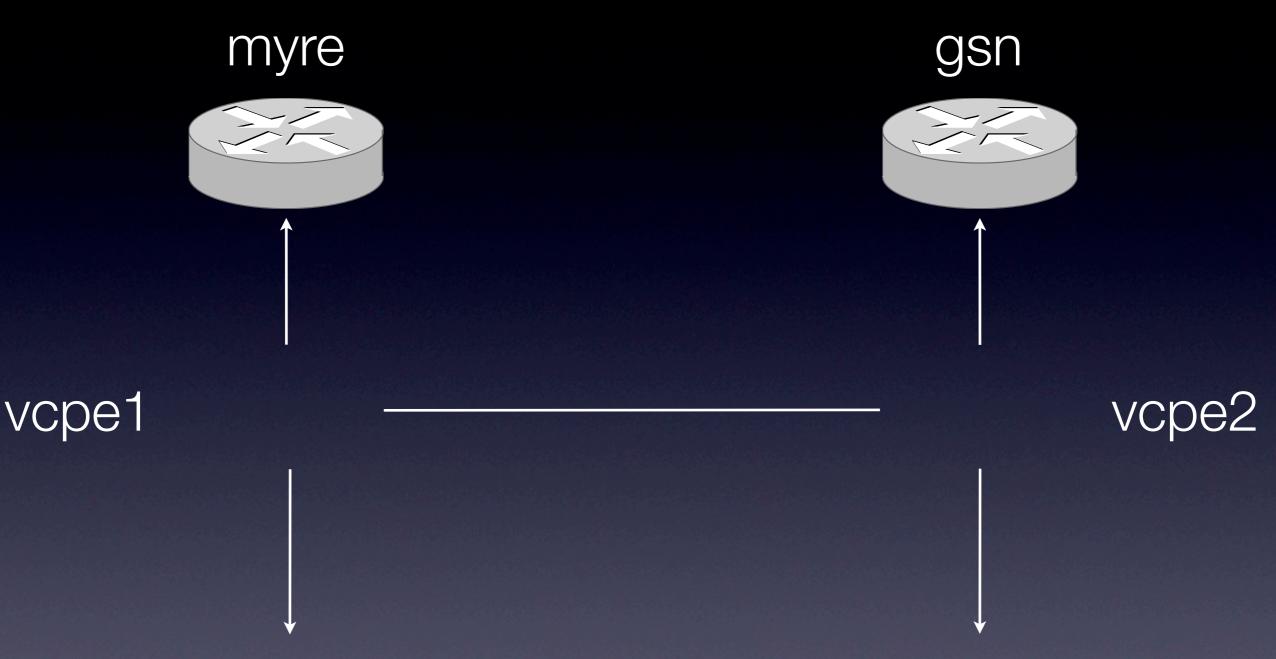
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Virtualise

Virtualise







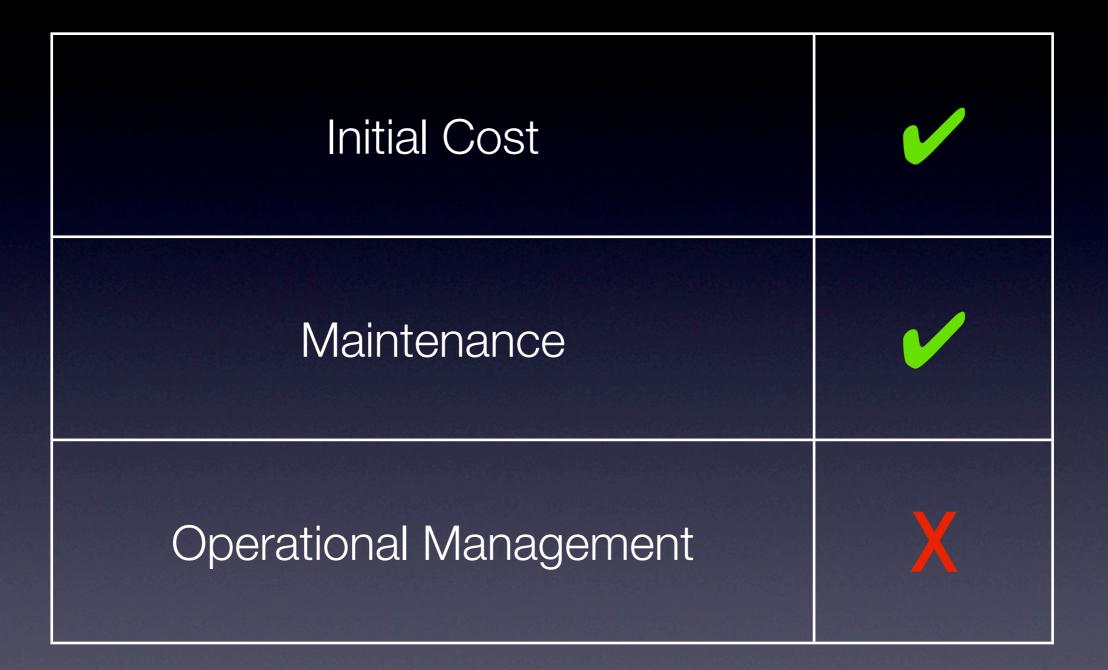
Local network

Local network



Why do this in this way?

On demand provisioning



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Enet Provisioning	Tool	p2p Nagios Cricket RANCID Wiki	Logged in as davew (admin)	
2vor 2 p2p	Select First E	ndpoint (p2p 2467)		
Layer 2 p2p				
New Request	Encapsulation VLAN	•		
List Active List Requests				
List Deactivated	Curautara marked as Th	WALTD or interfaces marked as UNAVAU ADLED		
List All	Swouters marked as INVALID or interfaces marked as UNAVAILABLE? See Wiki documentation on valid P2P Services and how interface availability is determined.			
Search			bindy is determined.	
Logs	Format of interfaces:			
Tools] (possible UNAVAILABLE reason) => endpoint descrip	ption if set	
Check Interface Availability		Provider Edge Router		Pouter and Switch Filter
Add new Swouter	Router	Select \$		Men (ber 74 =
Interface Usage	Router	Select +		Region ALL :
Network Audit	Physical Interface	None +		Region ALL :
Network Audit & P2P Verification		Provider Edge Switch		PoP ALL ‡
(slow)		-		
Template Chooser	Switch	gd5-sw1.ardnet.net 0		
Topology	Port	GigabitEthernet1/0/4 [P2P] => MANTICORE M20 ge-0/2/0	•	
		Multiple P2Ps may use this interface - a single, (anal)	vier drei trid vieristice an dise for all	there 226 r
P2P Graph Network Graph				Life Se 1275
Node Paths	Previous Description	MANTICORE M20 ge=0/2/0 Use previous des	scription	
	New Description	🛛 🔾 Use new descrip	tion	
Adjacencies		Note: Endpoint description must be provided. The cl	haracters " : \$ 1.2 will be removed	
Add Manual		Format: "L3-Router-Name Interface" (e.g. "cr2-cwt		
List Manual				
List All		Select This Endpoint		
Developer		Detect mit endpoint		
Developer Tools	Makes All second in francis			
loois	Note: All required inform	mation has not been entered or selected yet.		
Issue Tracker	p2p 2467 Detail	s:		
API Docs				
Test Syntax	Description foo			
Highlighting System Check		w Status Incomplete		
System check	User dave			
Jsers	Same Domain? n/a	VC ID n/a		
		ct Endpoint 1		
View all users		te this Request (further confirmation required)		
	Modi	fy Request description / log for this Request		

Framework for NaaS

Open source

CLI + RESTful API

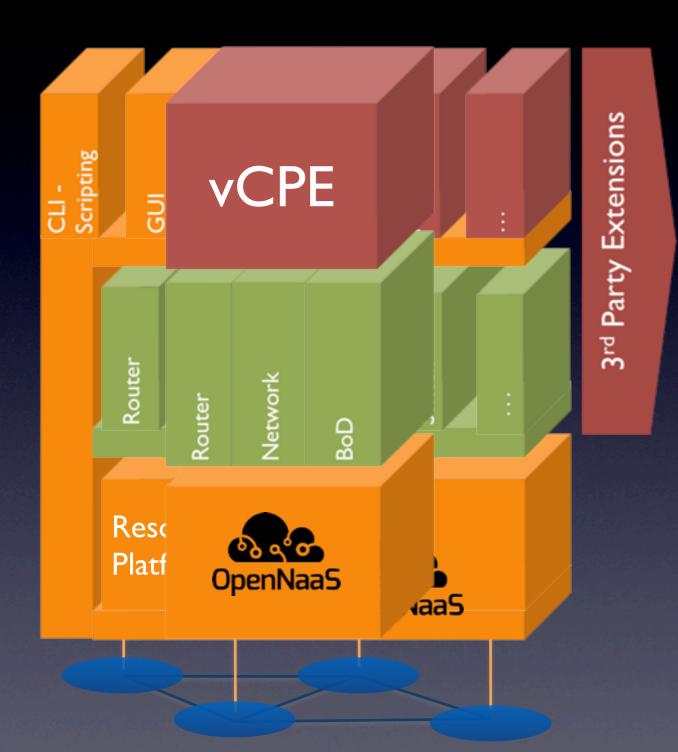
Developing a GUI



Integrated with Bandwidth on Demand

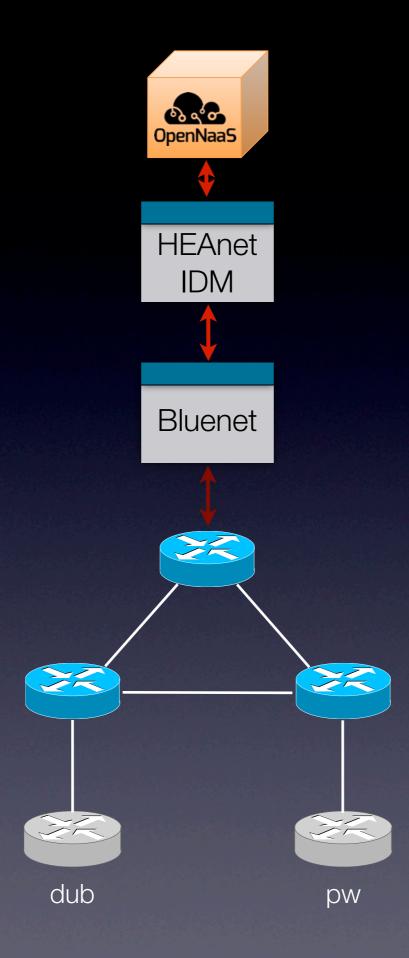
On demand provisioning

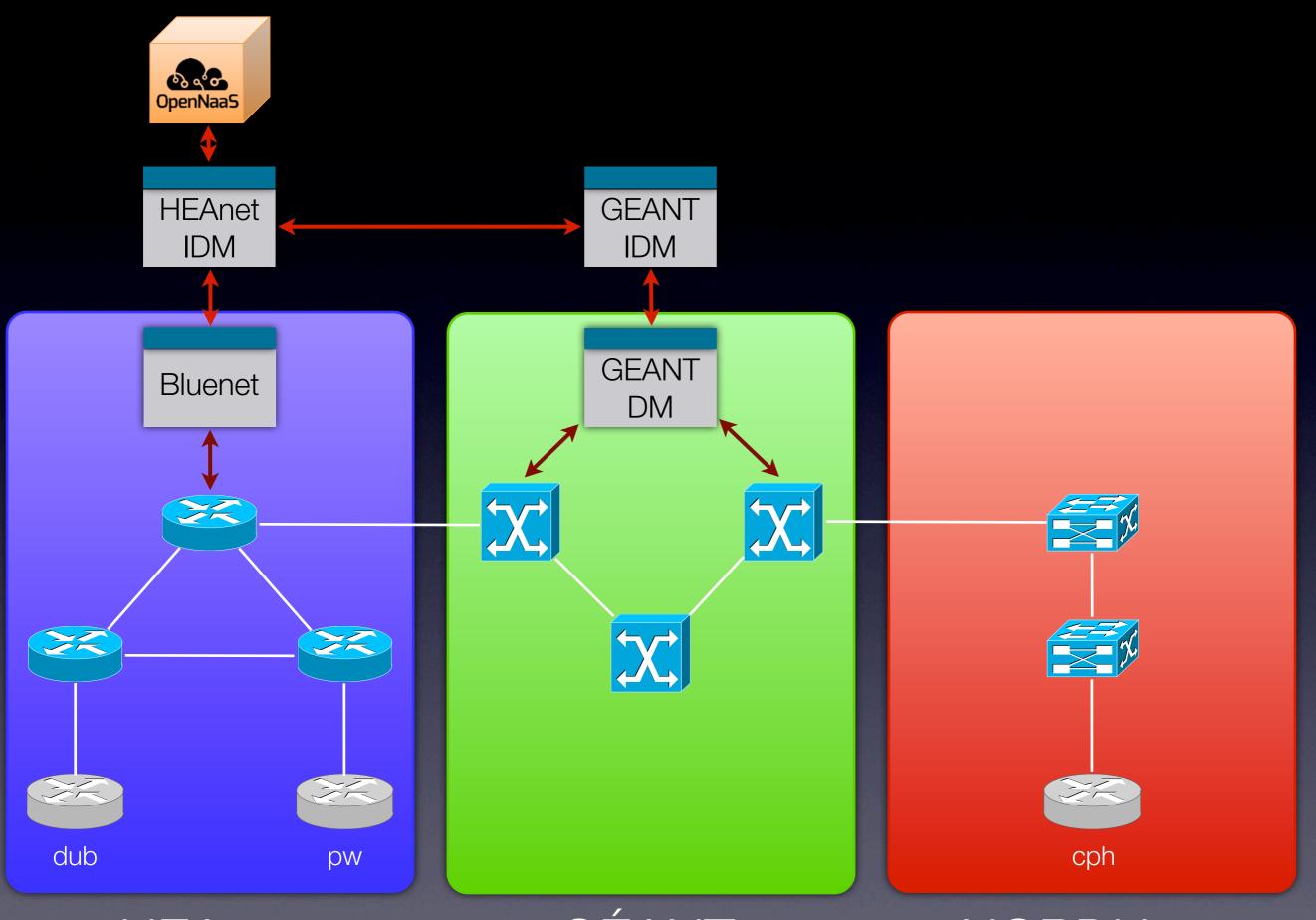
Provide abstractions



Single instance

OpenNaaS framework





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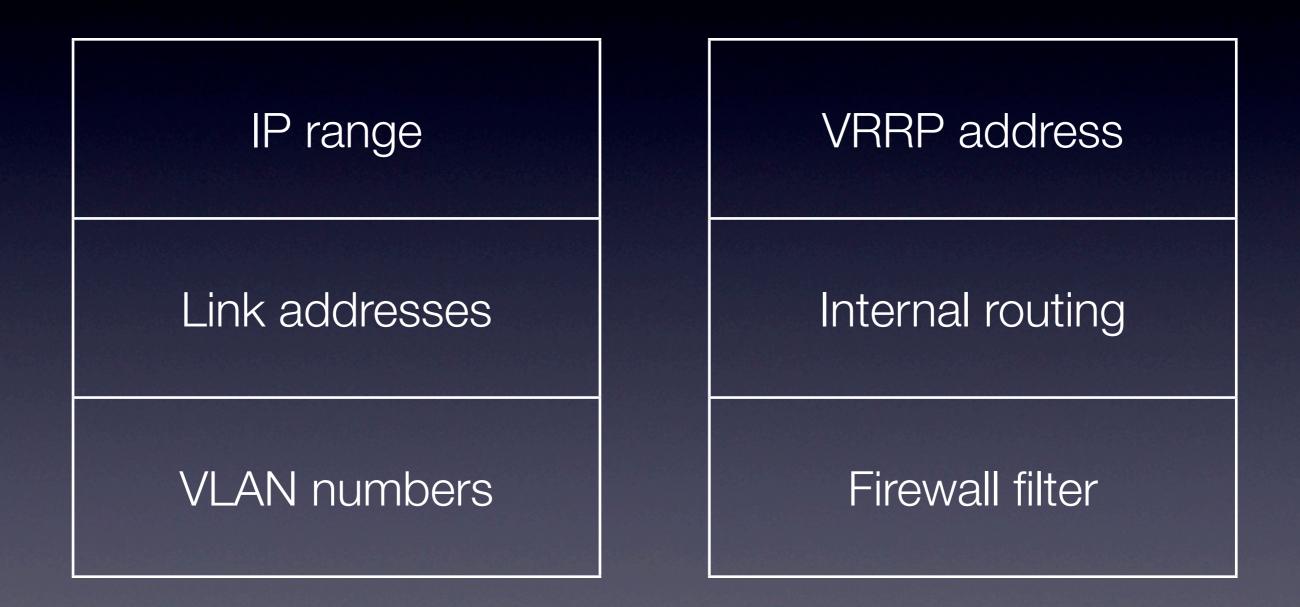
On demand provisioning

Provide abstractions

Delegation

Provider

Client



"If you need a machine and don't buy it then you will ultimately find that you have paid for it and don't have it."

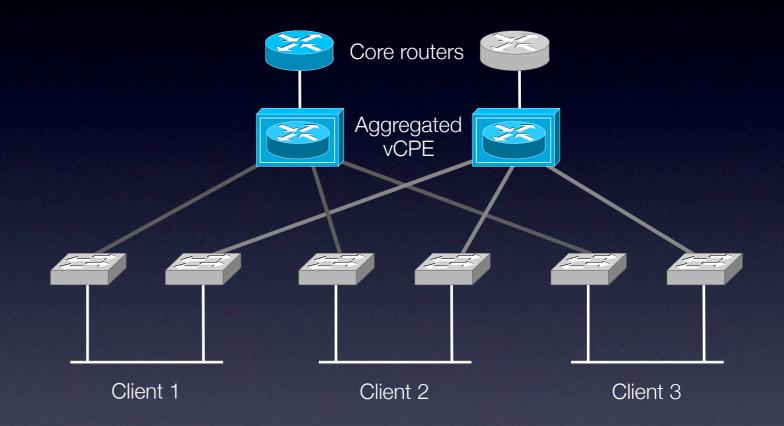
Henry Ford

"More pilots than the RAF"

Senior Visa exec

Today

One thing: vCPE Simple OSPF Dual-star BGP



Simple VRRP

Work to do

Download opennaas.org/download/

Documentation opennaas.org/documentation/

Mailing lists opennaas.org/community/

Thank you!

www.opennaas.org



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