STAR TREK BEYOND

Let your Business Live Long and Prosper

NSX Network Virtualization Platform

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Networking and Security

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möbius PARTNERS

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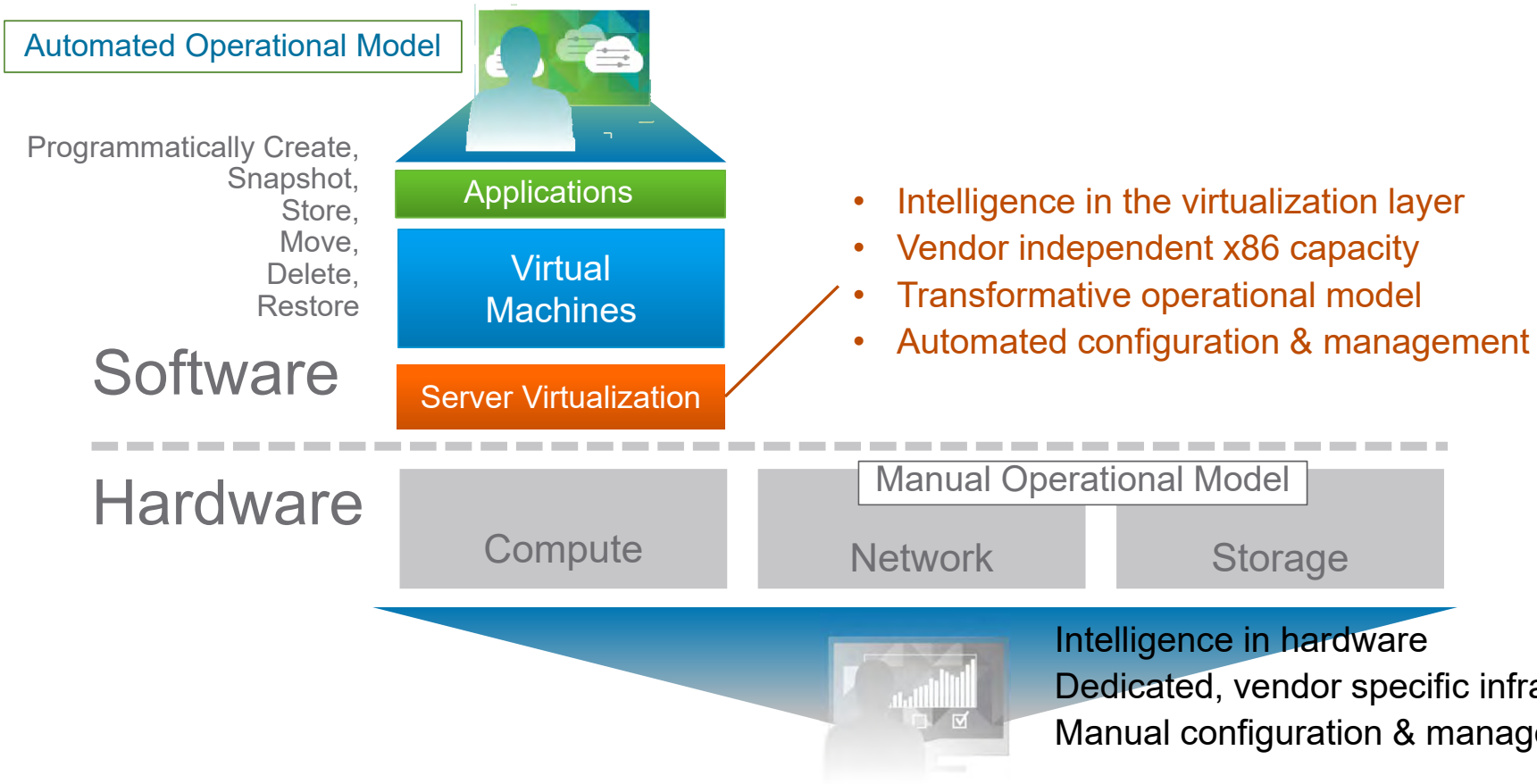
Questions? Please contact lizl@mobiuspartners.com or call 972.403.8045.

Taking what we have learned….



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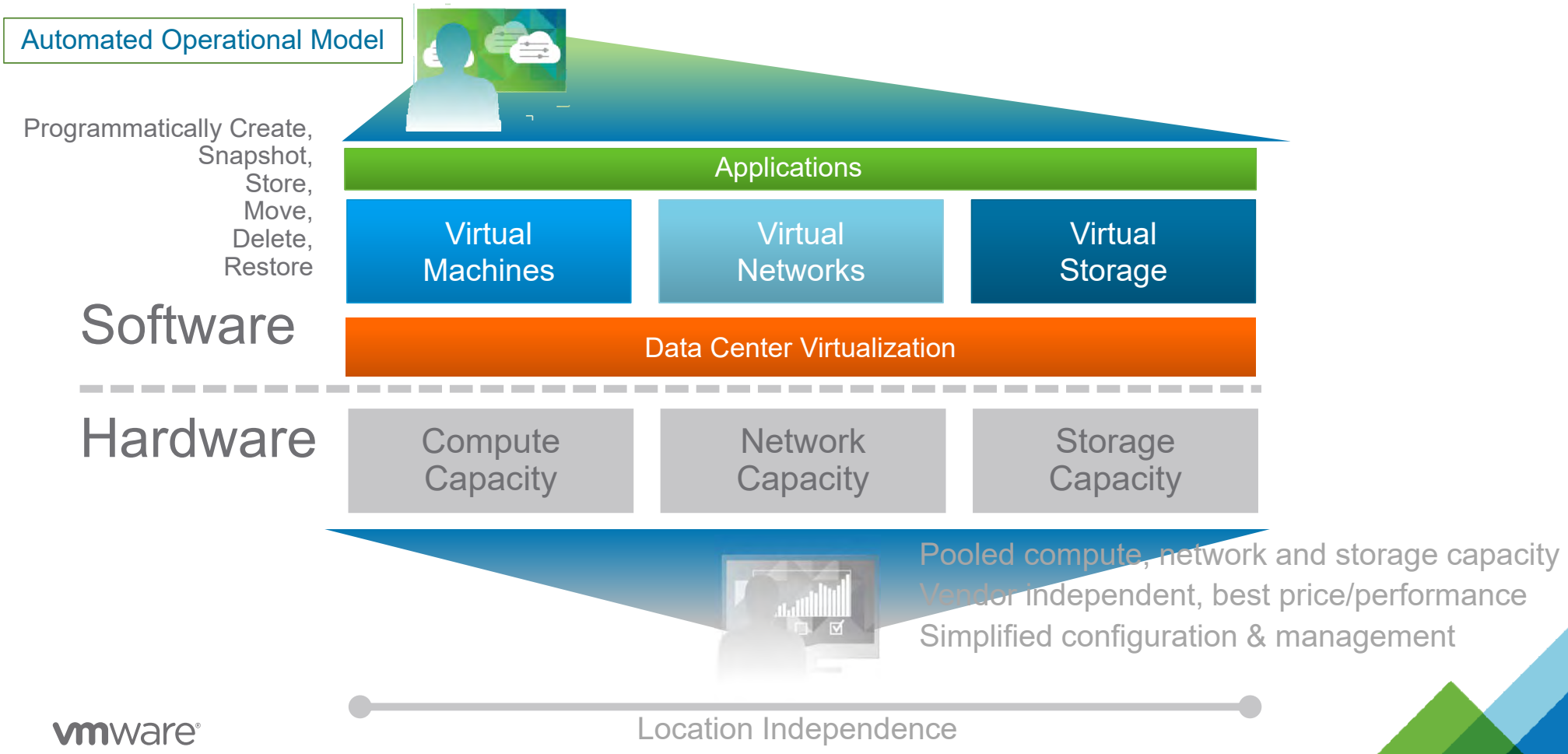
To deliver a Software Defined Data Center approach



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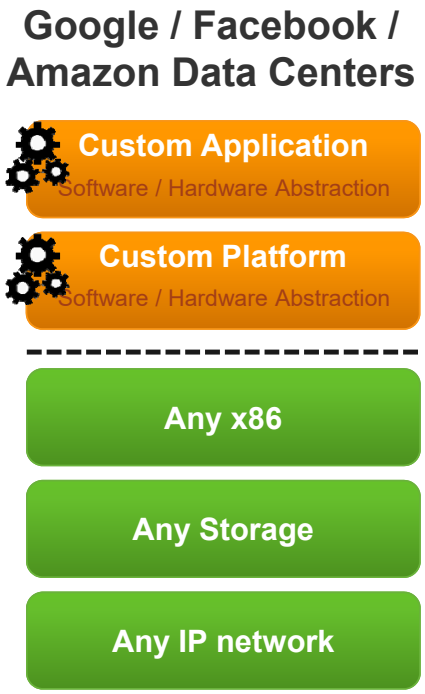
The anatomy of the most agile & efficient data centers is SDDC



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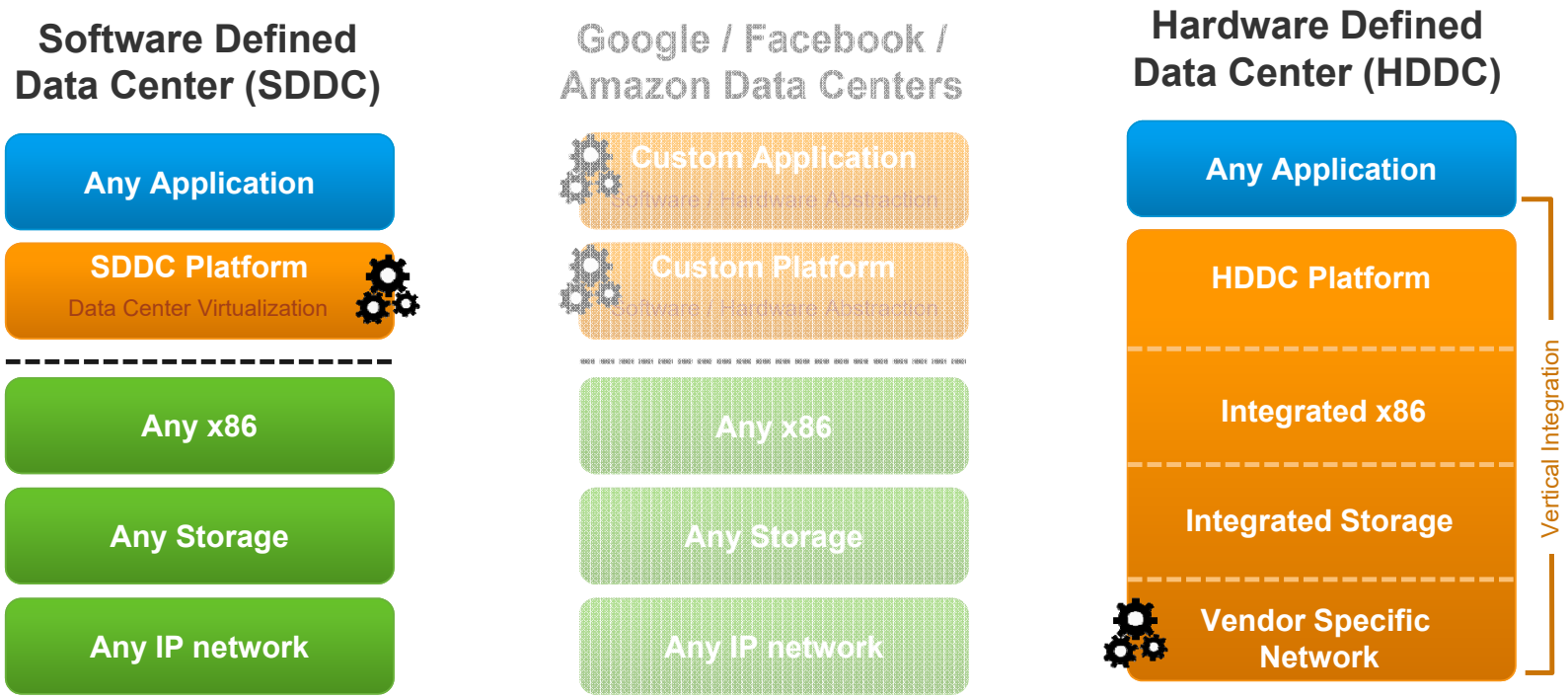
The Choice for “New IT” – SDDC or HDDC



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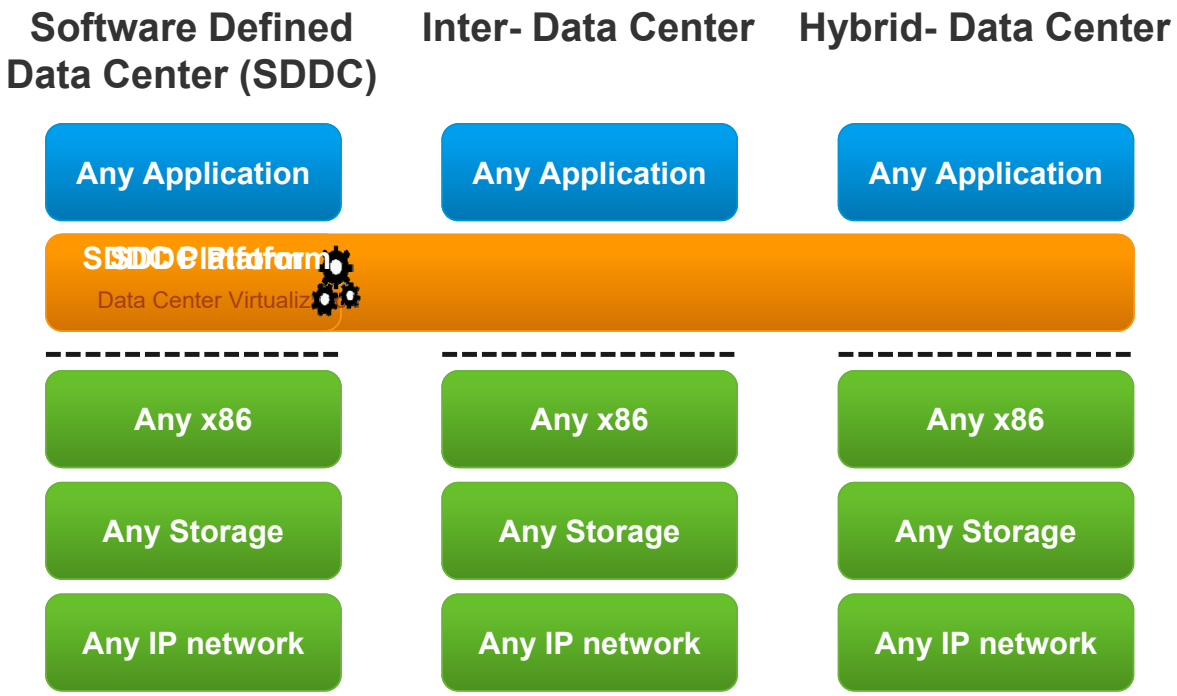
“New IT” will be SDDC



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Benefits of a Software Defined Data Center

Automation

- IT Automating IT
- Developer Clouds
- Multi-tenant Infrastructure

Security

- Micro-Segmentation
- DMZ Anywhere
- Secure User Environments

Application Continuity

- Disaster Recovery
- Metro Pooling
- Hybrid Cloud Networking

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Who is doing this? Big, Small, All Verticals

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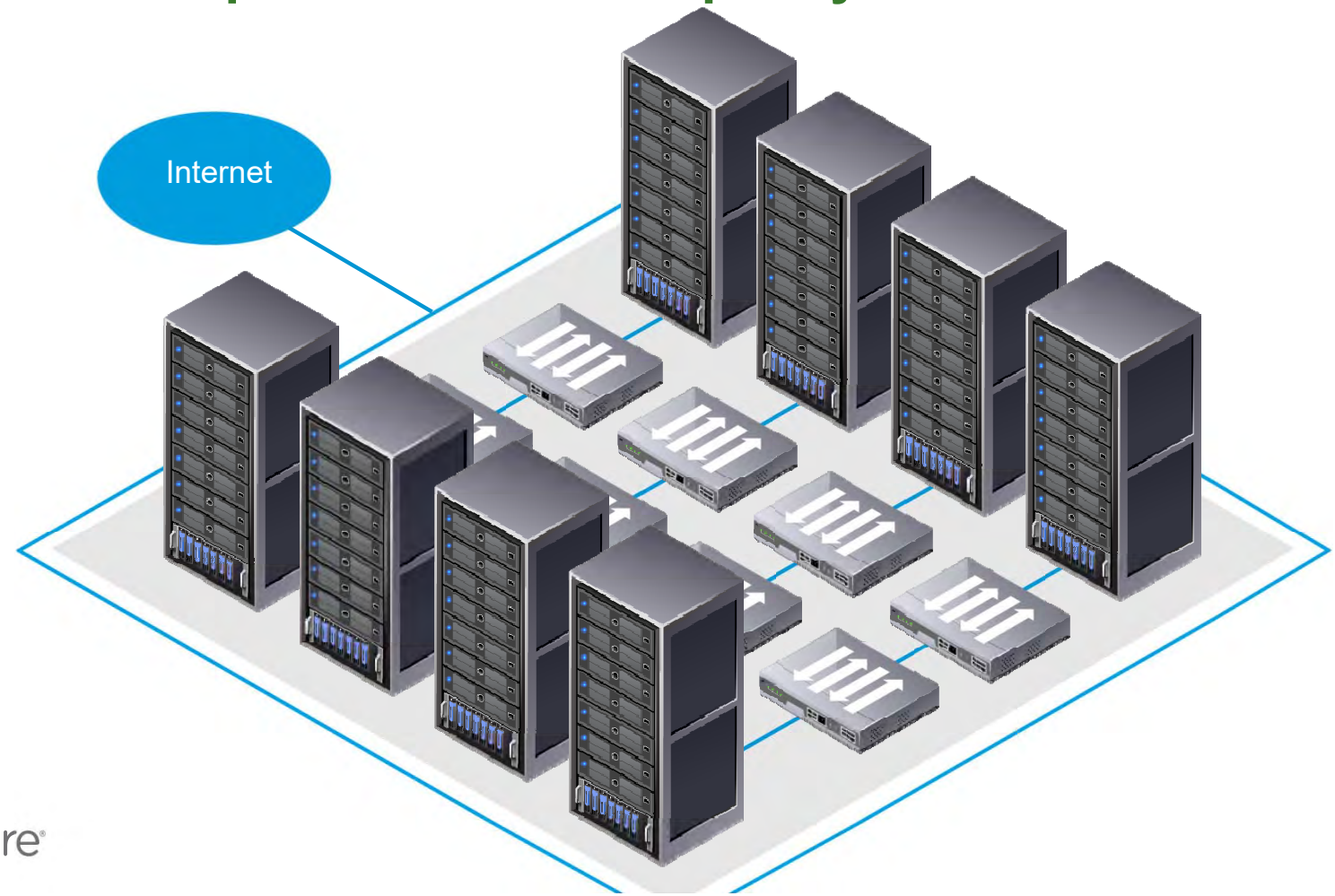
A traditional data center starts with physical compute & network capacity



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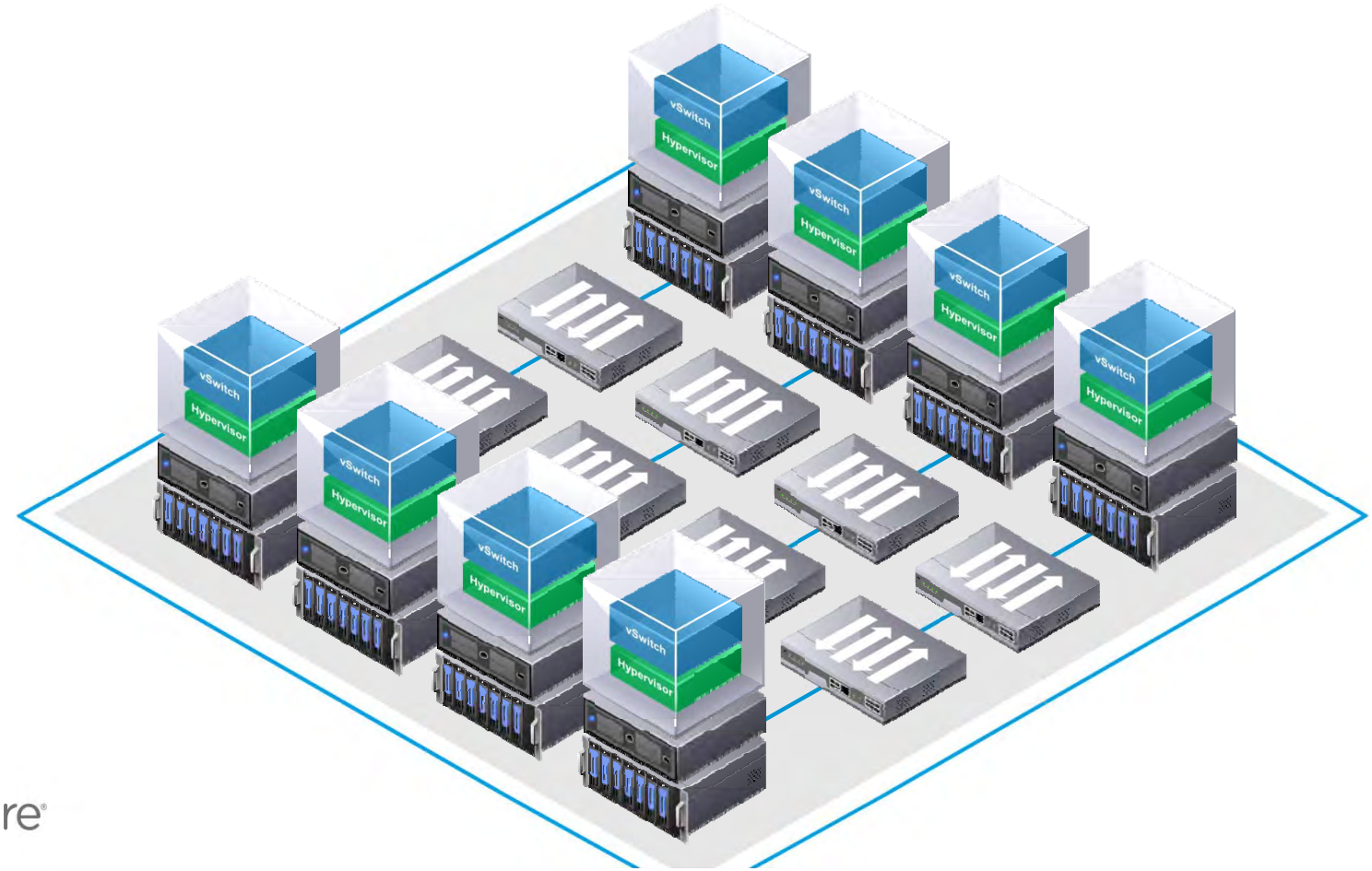
Then you virtualize your compute



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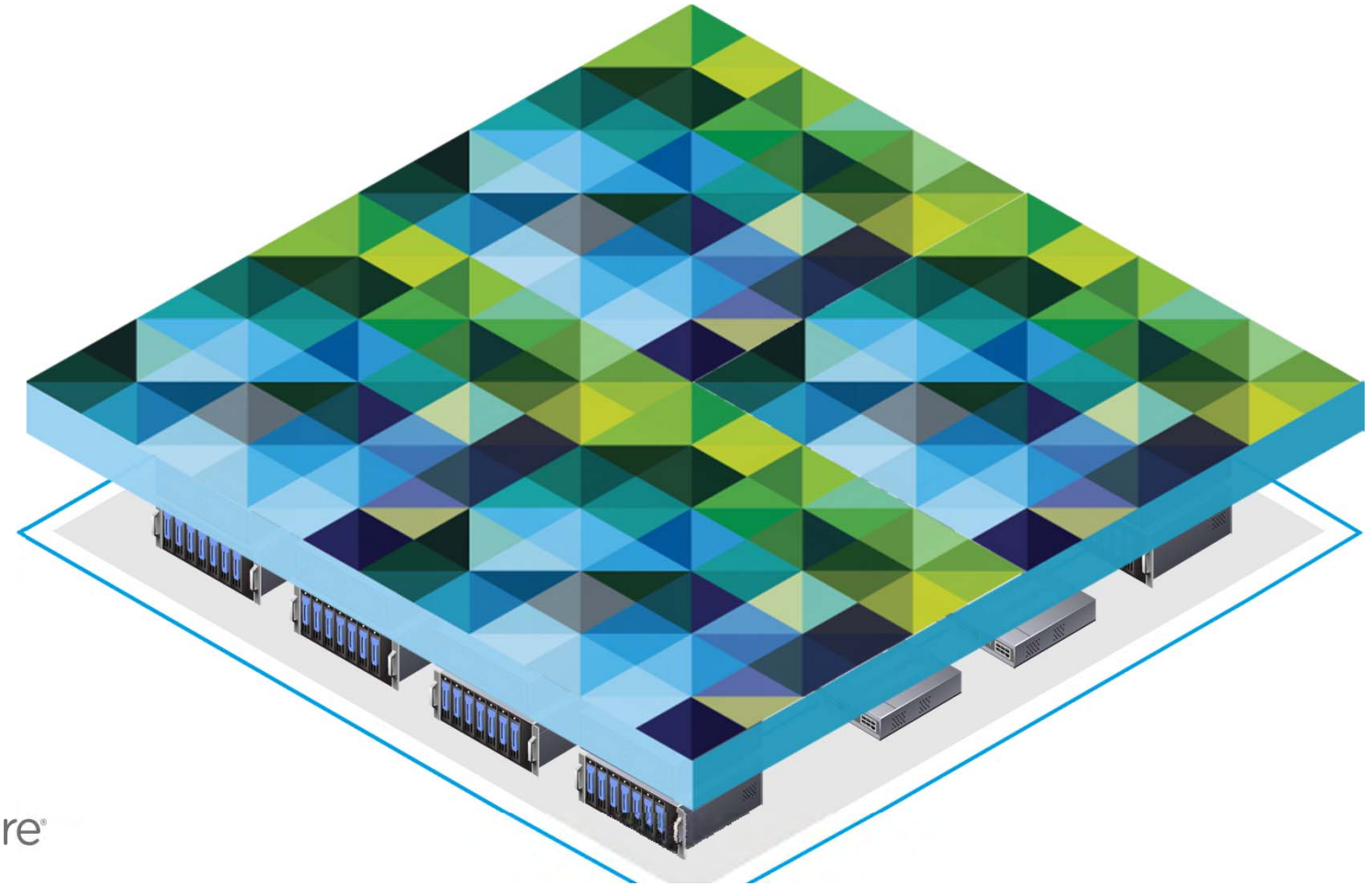
Add a “Network Hypervisor”



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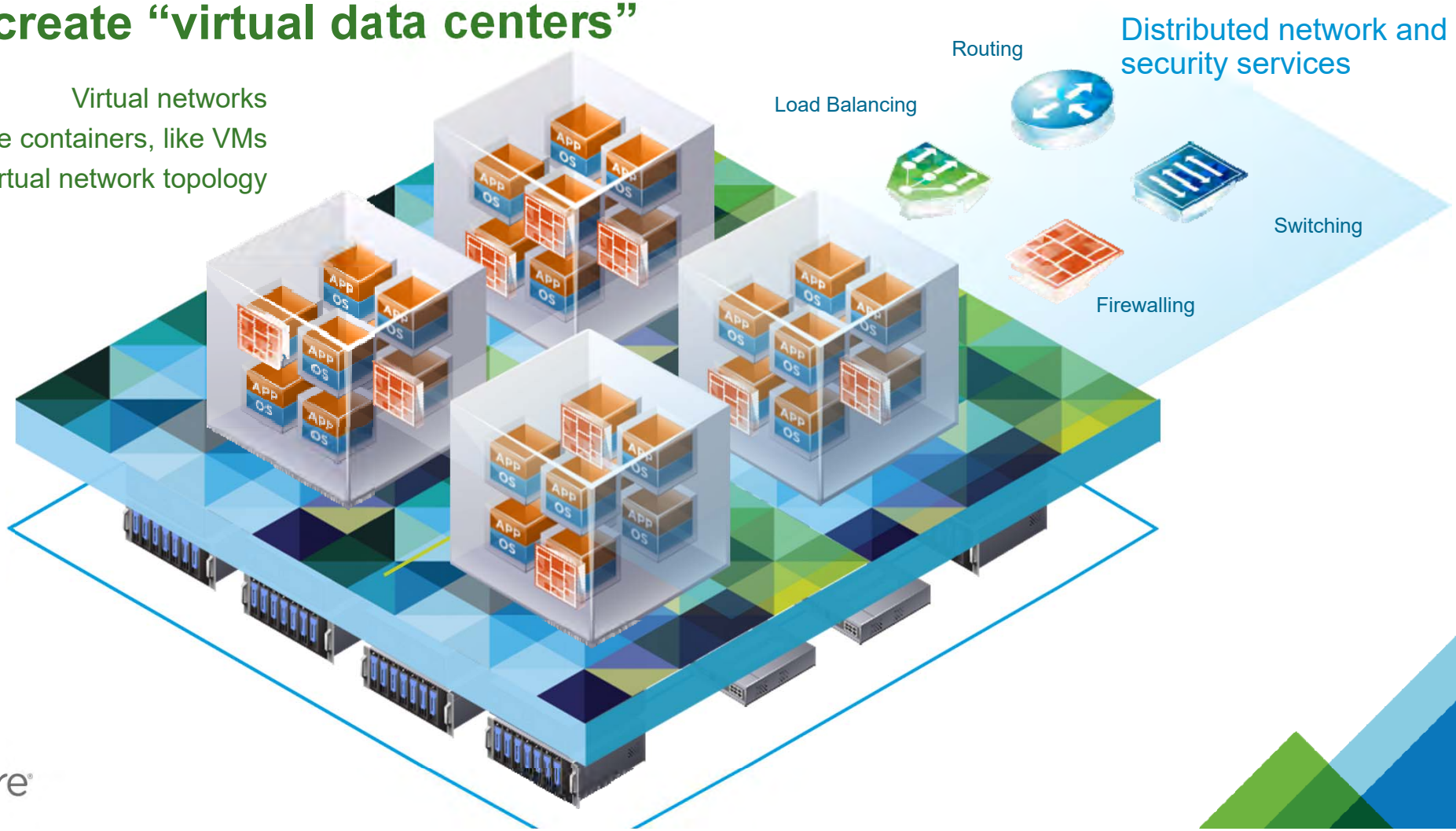
And create “virtual data centers”

Virtual networks
Software containers, like VMs
Virtual network topology



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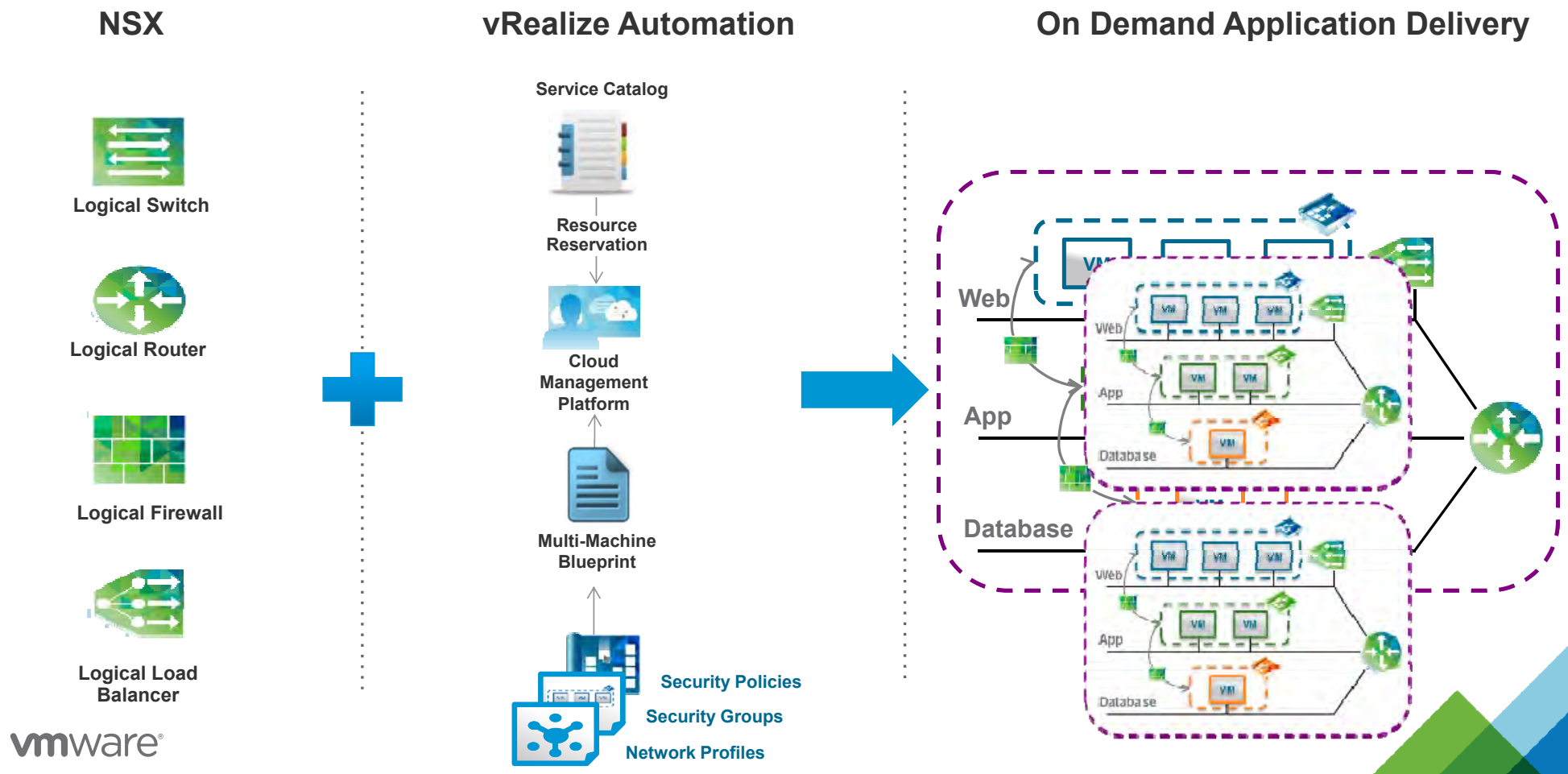
NSX with vRealize Automation

Dynamic Configuration and Deployment of NSX Logical Services



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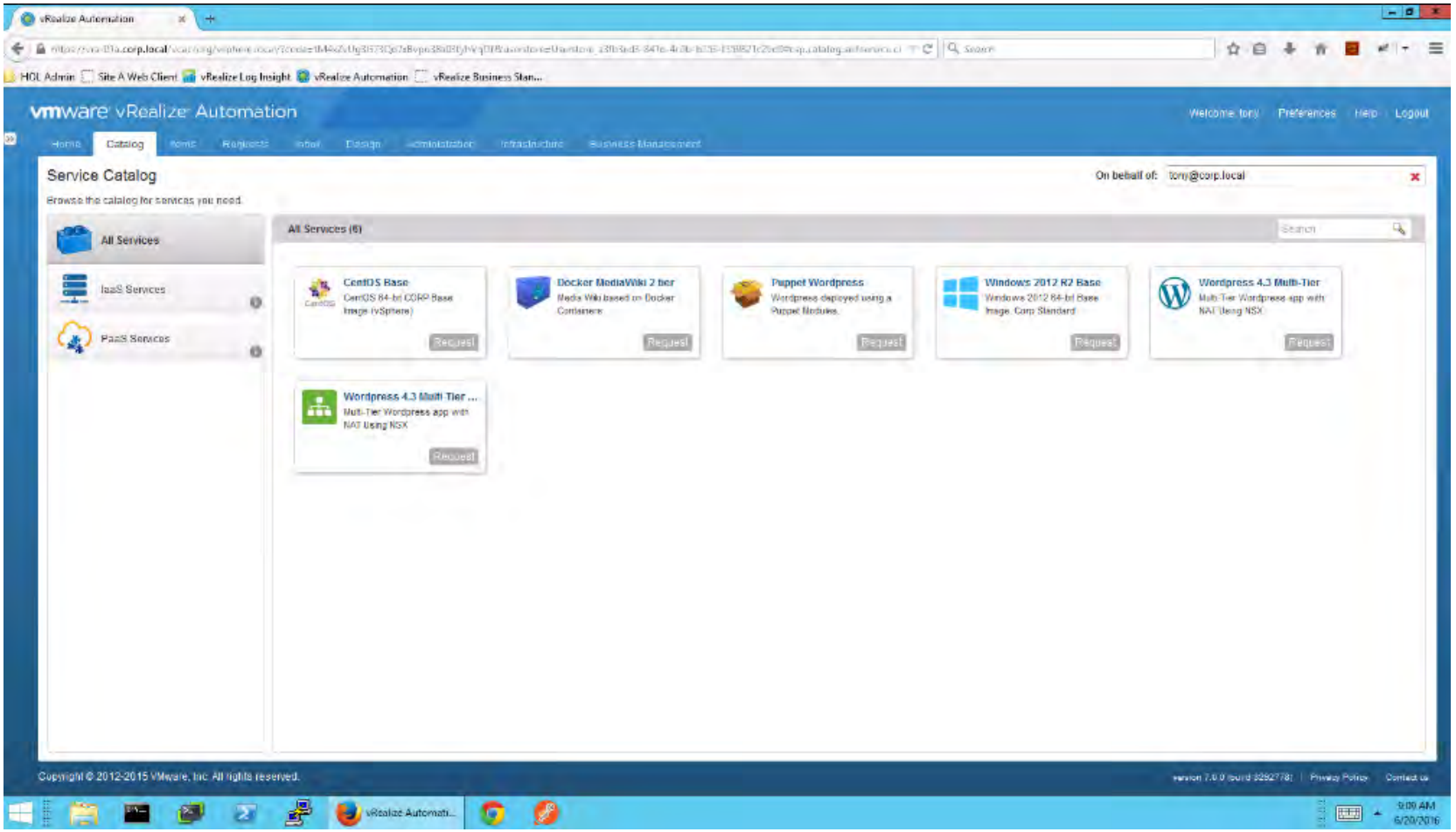
vRealize Automation – Self Service Catalog



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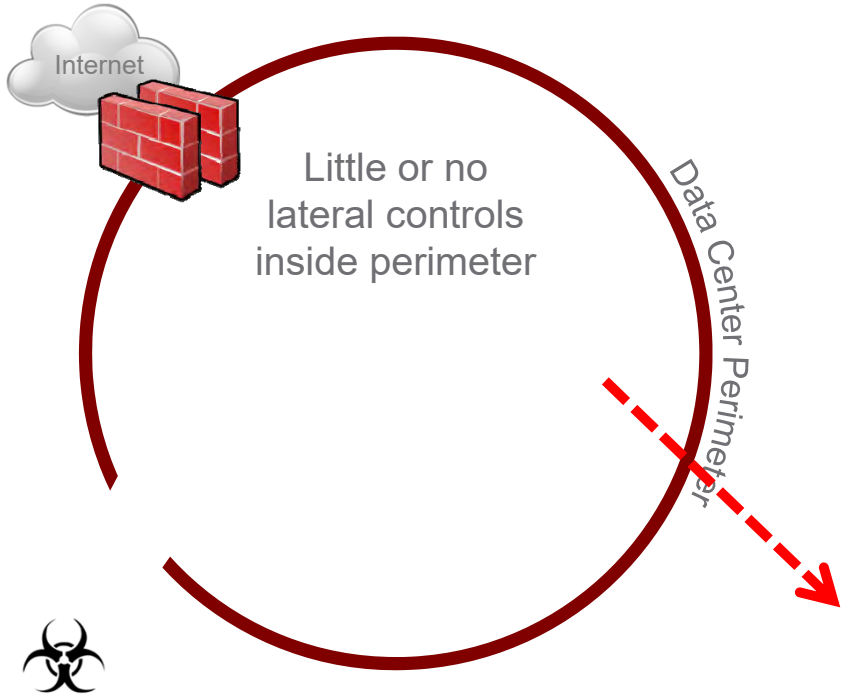
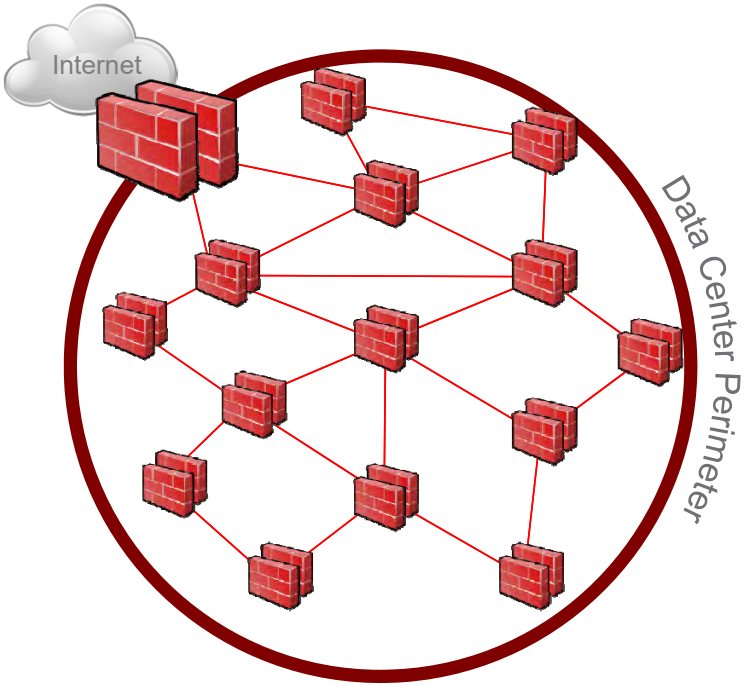
Problem: Data Center Network Security

Perimeter-centric network security has proven insufficient, and micro-segmentation is operationally infeasible



Insufficient



Operationally
Infeasible

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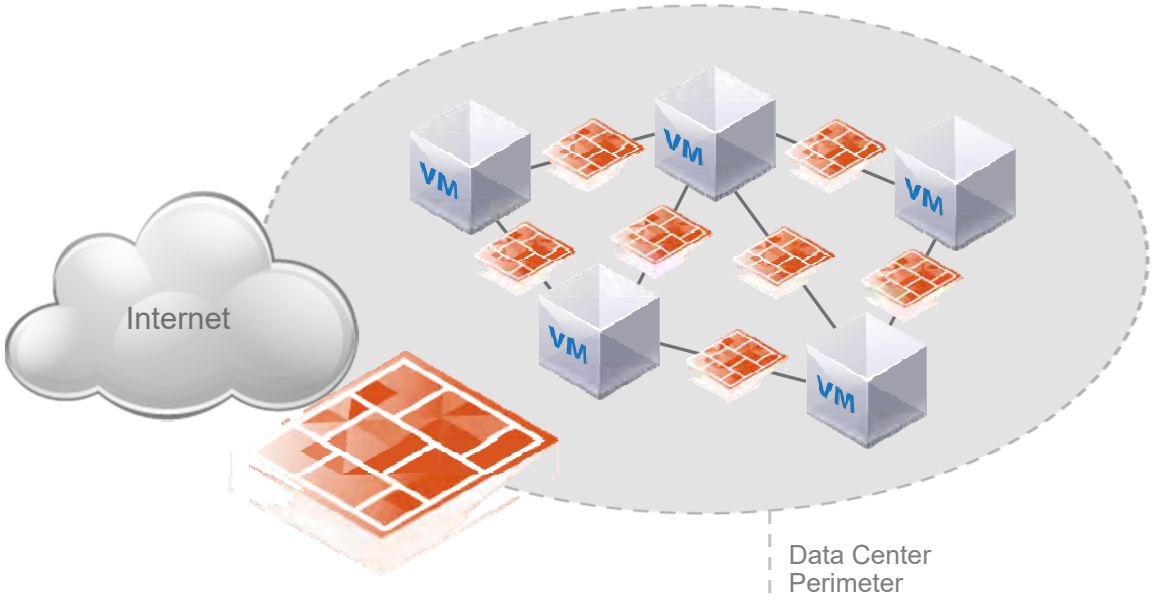
Security is Needed Throughout the DC

Why can't we have individual firewalls for every VM?



With traditional technology, this is operationally infeasible.

Physical firewalls

High Throughput, but

Expensive and complex

Virtual firewalls

Distributed but

Slow and Policy Complexity in Co-Mingled Environment

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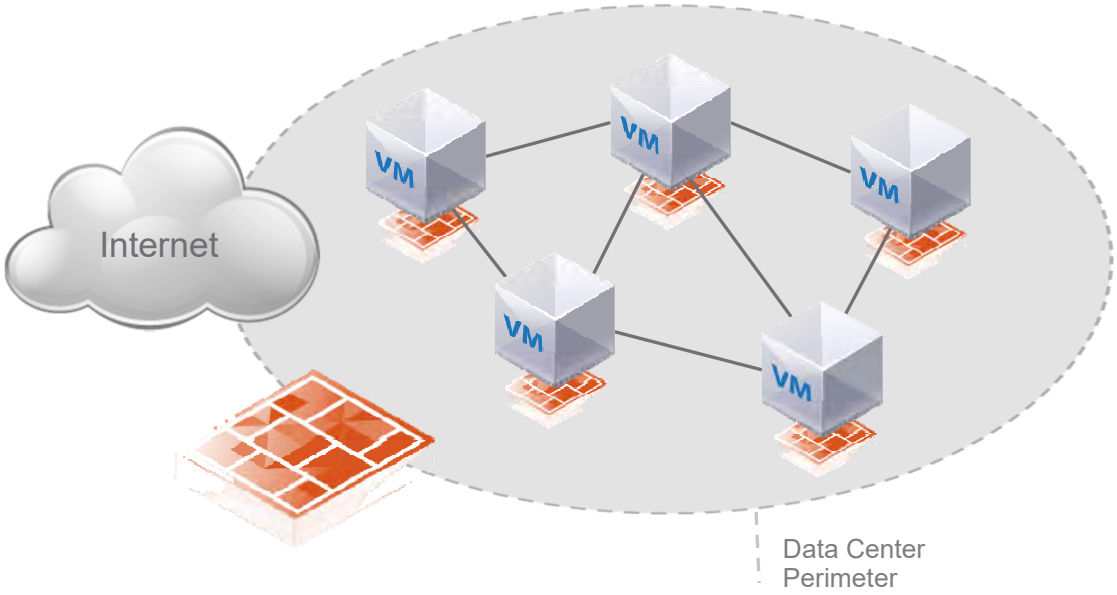
How about a Hypervisor based, Distributed Firewall?

Best of Both Worlds:

1. Policy Managed Centrally
2. Enforced in the Hypervisor Kernel, right at the virtual NIC



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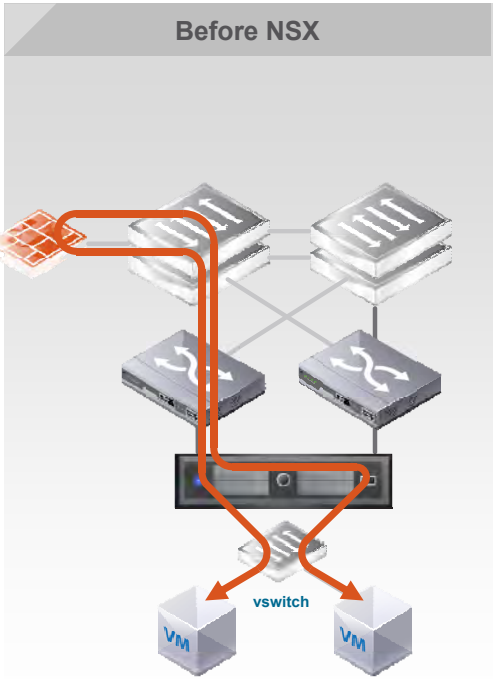
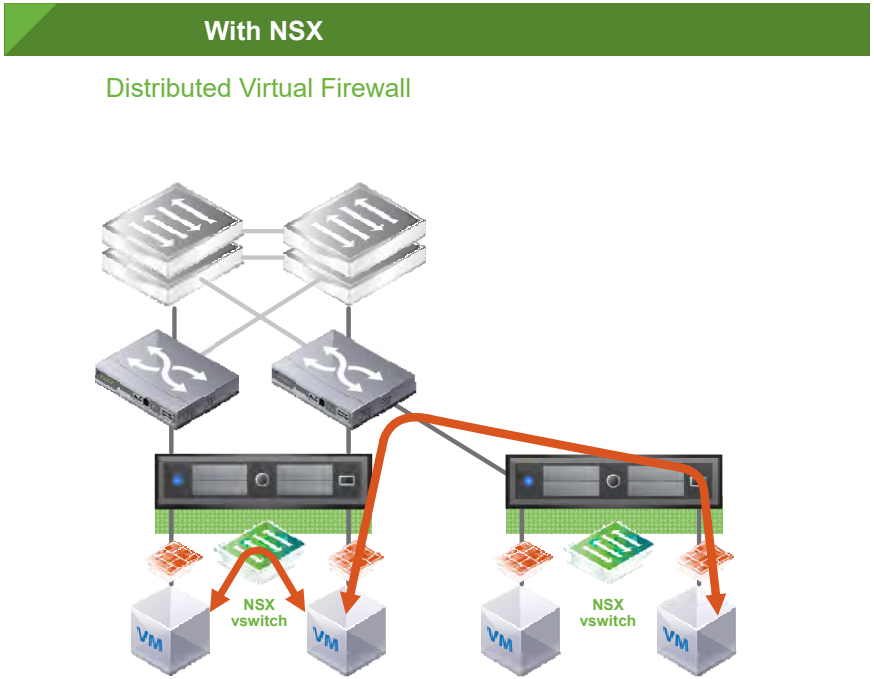
Distributed Services – Efficient, Scale-out

East-West Firewalling / Host to host



Hairpin



Direct VM-VM Path

Shortest Network Path

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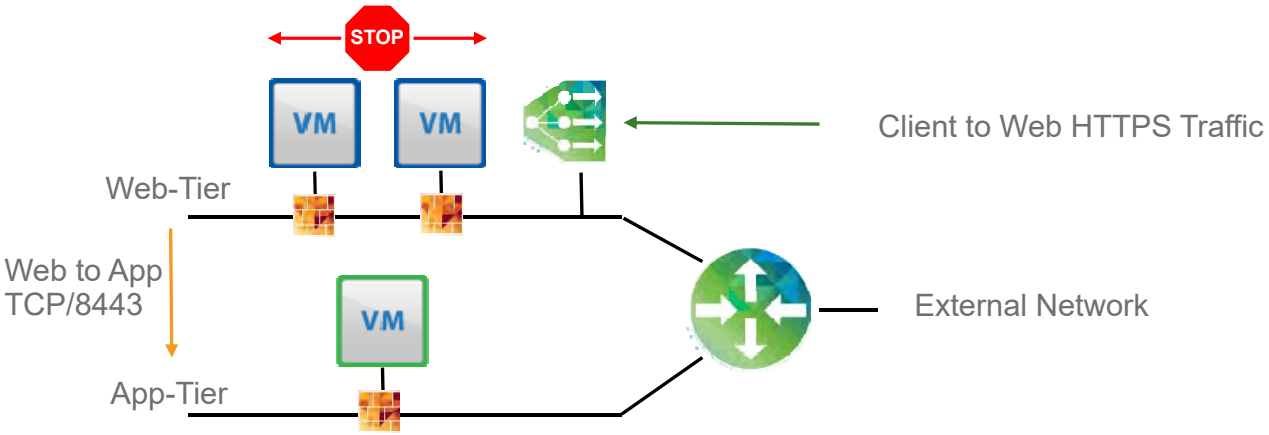
Example Building a Web DMZ



Source	Destination	Service	Policy
Web-VM1	Web-VM2		Block
Any	Web-Tier LS	HTTPS	Allow
Any	Web-Tier LS		Block
Web-Tier LS	App-Tier LS	TCP 8443	Allow
Any	App-Tier LS		Block

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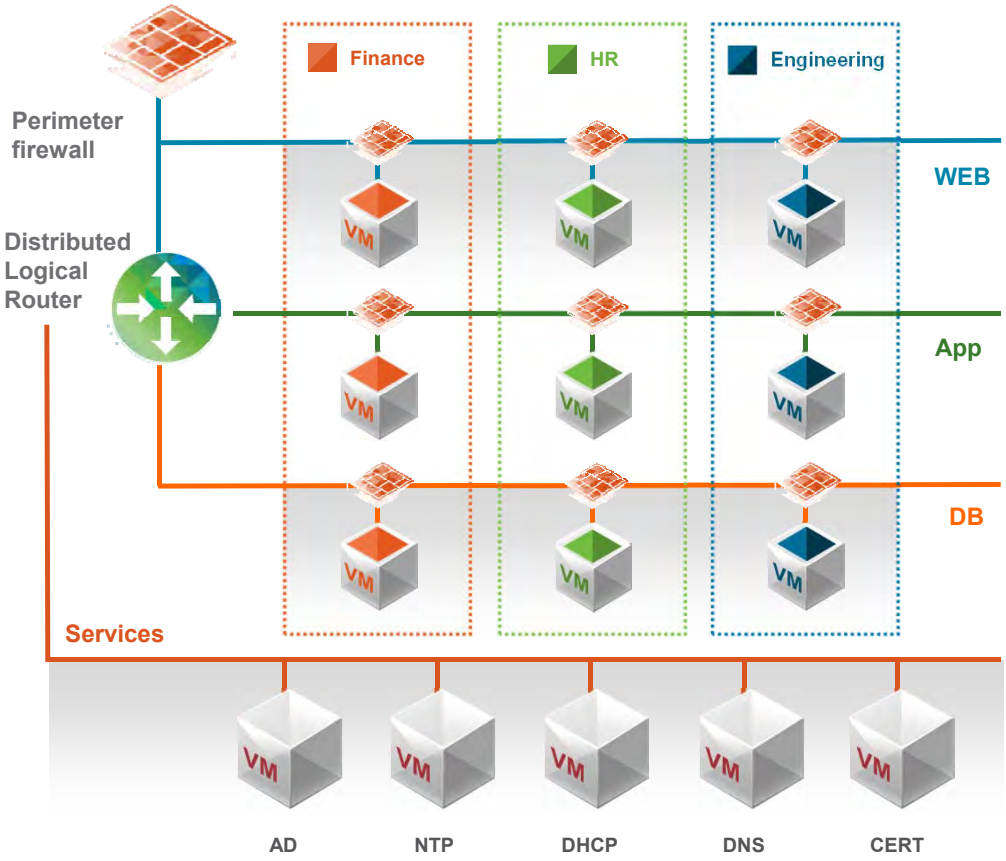
Micro-segmentation simplifies network security



- Each VM can now be its own perimeter
- Policies align with logical groups
- Intelligent security grouping
  - If the security tag:
    - Begins with the letters DB *~Tier*
    - Contains the letters HR *~Dep*
    - Ends with the letters SOC *~Type*

Example Security Tag: DB02-HR-SOC

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SDDC – A Platform for Industry Innovation

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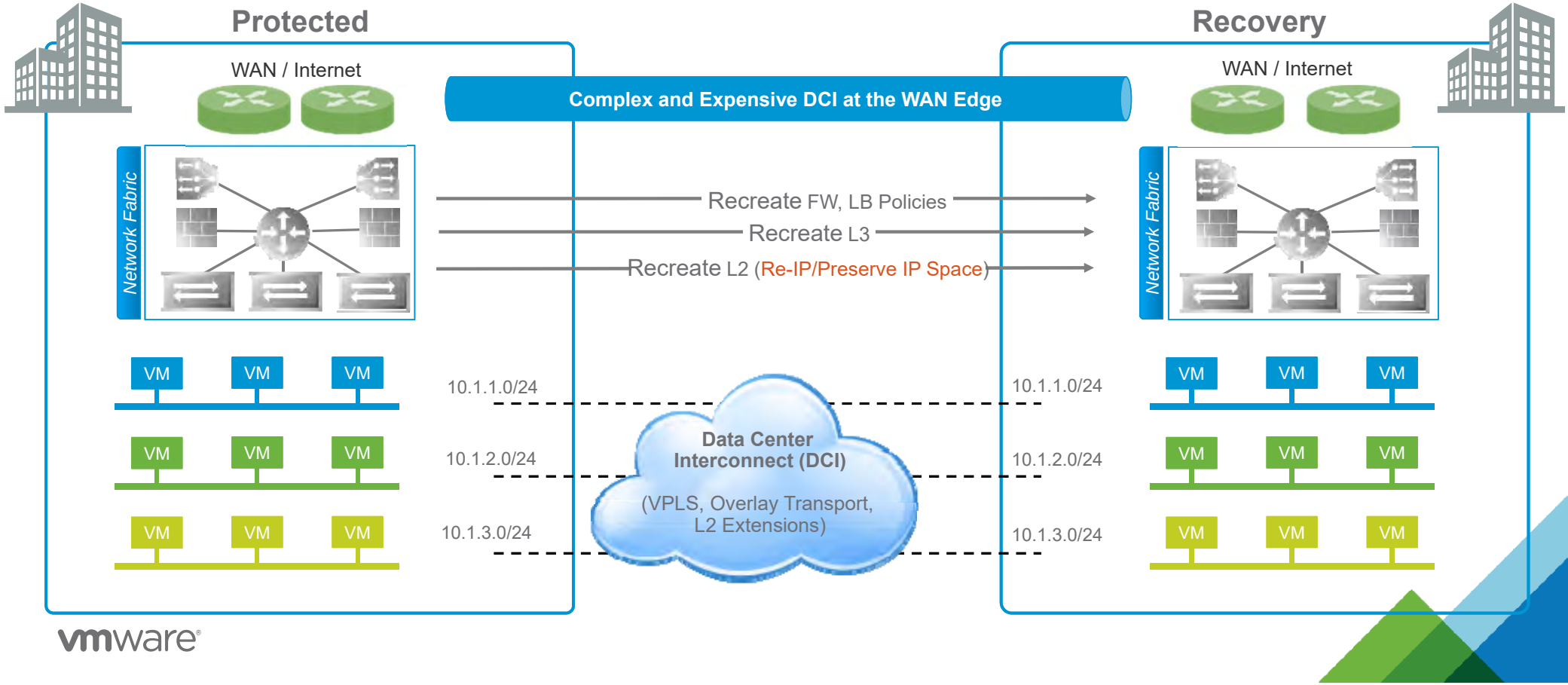
Traditional Disaster Recovery

Infrastructure Challenges: Site Connectivity



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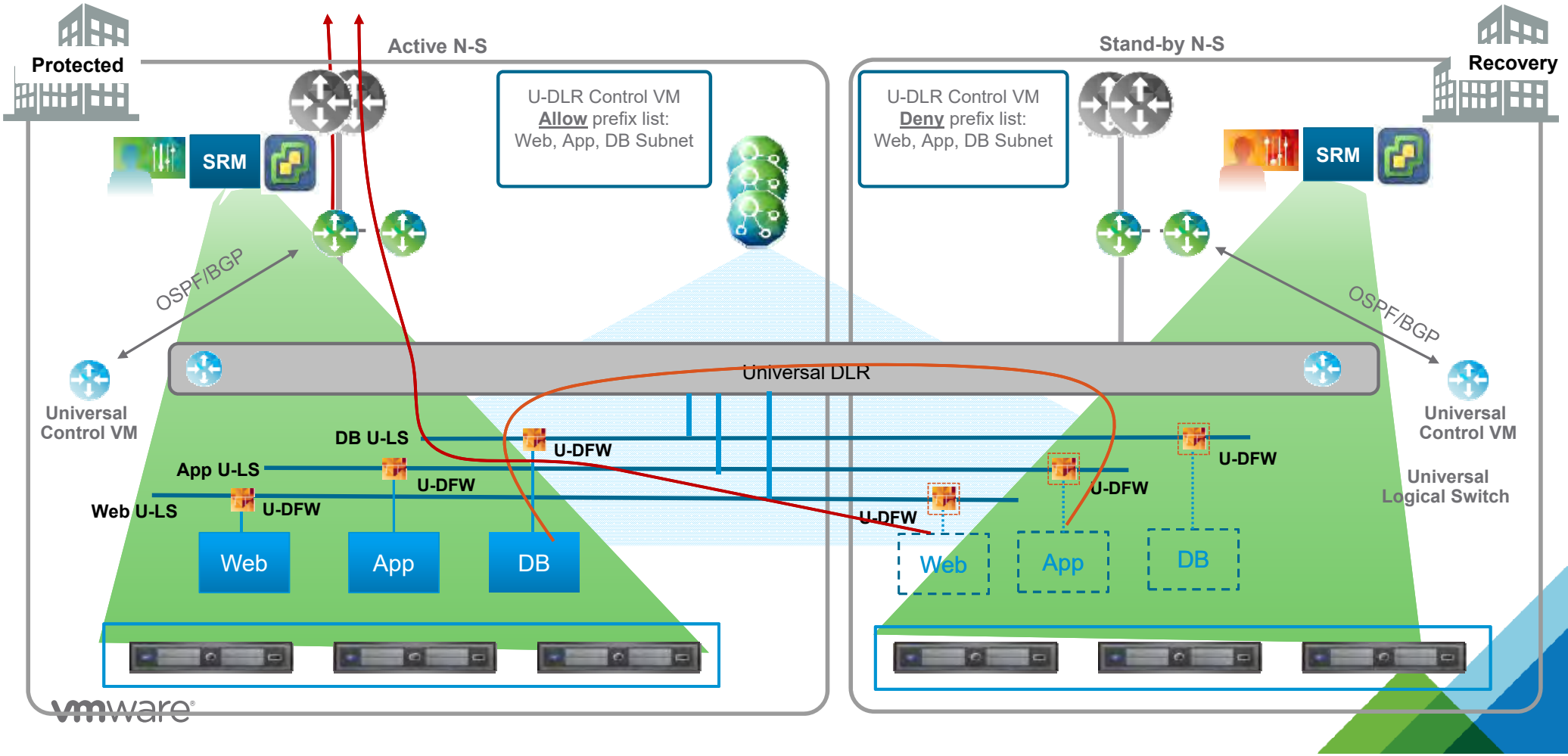
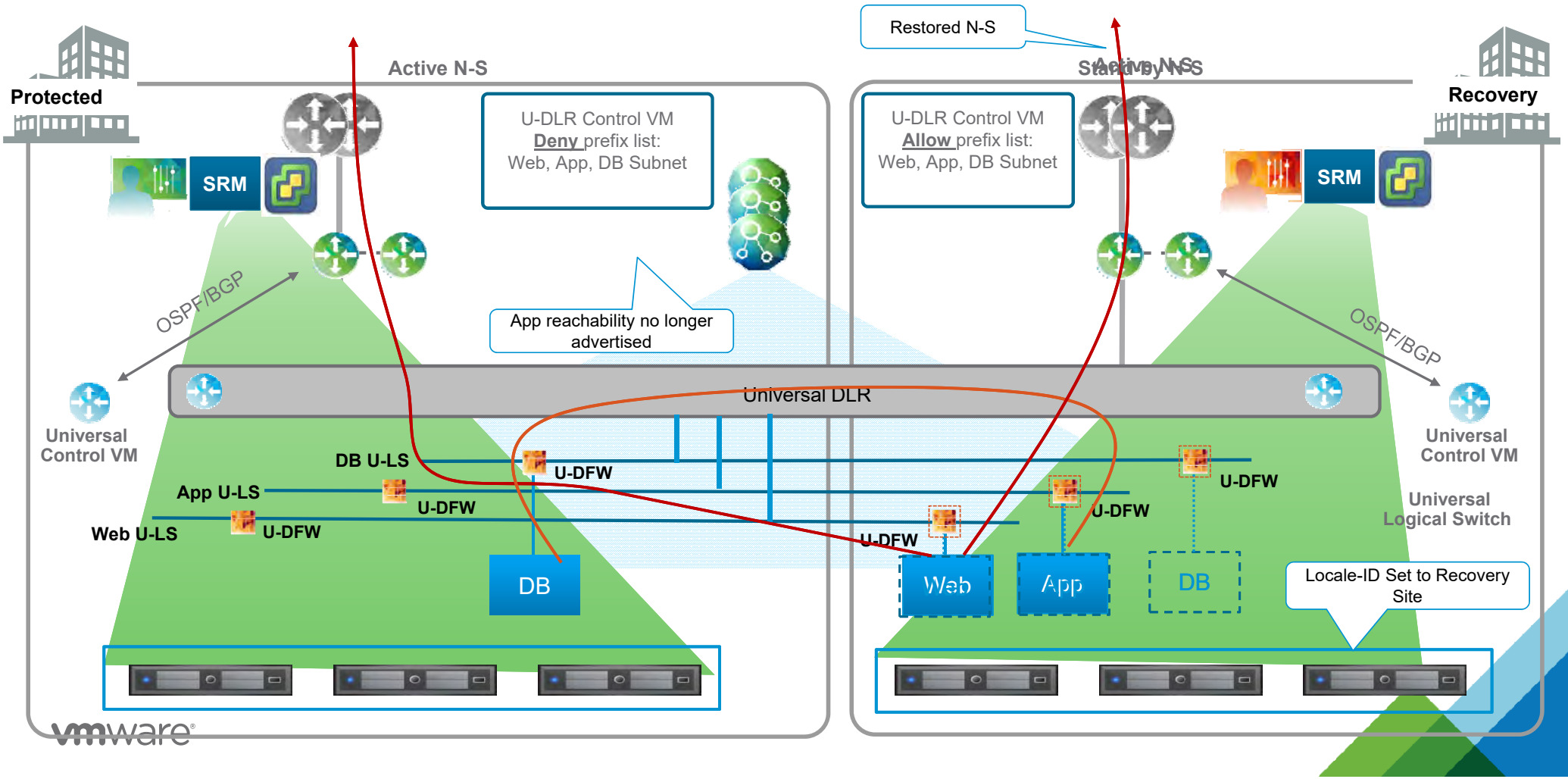
DR with NSX+SRM: Planned Migration/Partial Failure



DR with NSX+SRM: Complete Application Failure