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Migrating from NSX-V to NSX-T in 8 questions

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Scale-out Networking at a Fraction of the Cost

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Introduction Are you making the most of your multi-cloud networking strategy?

Digital transformation is driving the need for a more co-ordinated multi-cloud networking strategy. Modern apps now run on multiple clouds and make use of heterogeneous compute platforms such as containers, virtual machines, and bare metal.

This means many enterprises are grappling with a tangled, multi-vendor landscape that's complex and costly to maintain. Different components of hardware, managed by different interfaces, and all at different lifecycle stages. This is inherently limiting. And it's ultimately unsustainable, if businesses want to be able to offer customers access to the solutions and options that will come into play the next three to five years.

Companies and organisations are recognizing the importance of futureproofing their approach to network management as well as simplifying security to save time and mitigate risk. And they are seeking ways to achieve this.



What's next?

When it comes to trends, it's fair to say that the days of single, public cloud deployments are no more. With so many technology options available, along with a need for cost savings and business agility, many businesses have already made the move to multi-cloud architecture and deployment, leveraging the benefits of multiple public and private clouds. That said, we're now seeing a significant number of businesses reevaluating their use of cloud, building out new datacenters and bringing infrastructure back on-premise. What this demonstrates is that IT strategies go in cycles and infrastructure, apps and workloads will continue to move.

But this multi-cloud era brings fresh challenges for IT professionals. In dealing with multiple clouds, IT pros are not necessarily realising the enhanced agility and scalability they'd originally been hoping for.

The reason? Public clouds have their own networking and security criteria, as well as unique policy management principles. This siloed approach slows down delivery and interoperability, costing money and wasting valuable time, clogging up the ticketing queue and adding yet further to IT workloads. 81% of organizations surveyed have a multi-cloud strategy. Respondents used an average of 5 public and private clouds.

(RightScale, State of the Cloud Report, 2018)





New builds and migrations drive tremendous movement of applications across all cloud/ non-cloud environments, resulting in the need to integrate these applications and information clusters for ease of management and cost efficiency. This trend is expected to accelerate as new cloud platforms and frameworks continue to emerge.

(IDC InfoBrief, Applications, Businesses, Clouds of Enterprise Digital Transformation)

Empowering growth through streamlined channel-only solutions

An all-encompassing answer

VMware could see that businesses needed a different approach to networking in order to overcome issues and enable agility. This required technology that could encompass the entire network, take containers in its stride and factor in security. This simply wasn't possible with NSX-V. To move into the new era, a new solution was needed.



Time to move on

NSX-V will reach end of general support on January 16, 2022, and end of technical guidance on January 16, 2023.

With VMware NSX-V support due to end in a matter of months, Comms-care answers some key questions that demystify and help smooth the transition to VMware's new single networking platform... NSX-T.



Questions 8 Question Guide to Migrating from NSX-V to NSX-T

Q1	Q2
What is NSX-T and why migrate from NSX-V?	Is NSX-V going away?
Q3	Q4
Business reasons for NSX-T and why migrate?	What Are the Key Use Cases for NSX-T?
Q5	Q6
What version of NSX for vSphere do I need to migrate to NSX-T using the Migration Coordinator?	Do I need to buy additional licenses to migrate my environment from NSX-V to NSX-T?
Q7	Q8
What are the general approaches to migrate from NSX-V to NSX-T?	Why Comms-care for NSX-T migration?

Question 1 What is NSX-T and why migrate from NSX-V?

NSX-T is the next-generation software-defined networking solution that provides the next evolution of software-defined networking from VMware.

Modern distributed applications are deployed on a variety of compute platforms such as virtual machines, containers, and bare metal—all on multi-cloud. With NSX-T, you can connect and protect them all.

NSX-T is a complete Layer2-Layer7 networking and security virtualization platform that brings the public cloud experience to the private cloud and empowers businesses to manage the entire network from a single pane of glass.

In much the same way that server virtualization programmatically creates, snapshots, deletes and restores software-based virtual machines (VMs), NSX-T network virtualization programmatically creates, deletes, and restores software-based virtual networks.

Services, such as switching, routing, access control, firewalling and QoS can be programmatically assembled in any arbitrary combination, to produce unique, isolated virtual networks in a matter of seconds.

NSX-T underpins everything VMware is doing going forward. By not migrating to NSX-T, you'll lose out on the direction of VMware's innovations with Tanzu, containers and maximising the advantage of Modern Applications.

The 3 top reasons to migrate to NSX-T:



It offers cross-platform, multi-cloud capabilities with enhanced scale, federated together into a single, larger environment, managed via a single source.



You'll be able to integrate Kubernetes, running secure virtual and containerized workloads wherever they are.



You can introduce micro-segmentation and other security improvements for non-VMware services. e.g.: service-defined firewalls across differing time zones or identities.

Enhanced connectivity and access.

NSX-T seamlessly integrates with the rest of the data centre infrastructure. So, if you've built an application that runs, say, in Kubernetes, it might still need a database service or other service that's still located in the traditional infrastructure. NSX-T ensures that the application has the appropriate connectivity and access to those services. It also lets you relocate your infrastructure from on-premises to public cloud or datacentre to datacentre easily, taking all the policies along – unlocking agility once and for all.

In short, NSX-T is transformative in ways that NSX-V isn't designed for, and it's fast becoming the technology that businesses are building their future on.

Question 2 Is NSX-V going away?

VMware will continue to support customers running NSX-V, but there is a date after which this support will end. Your success is critical to us, and per standard VMware practice, the End of General Support date for the latest NSX Data Center for vSphere release is set for January 16, 2022 and the End of Technical Guidance is set for January 16, 2023. Please see the VMware Lifecycle Product Matrix for details.

Question 3 **Business reasons for NSX-T** and why migrate?

VMware has defined its top reasons for migrating to NSX-T as follows:





Scale-out Networking at a Fraction of the Cost

Provide a public cloud like experience on-premises with cloud-scale networking, security, and centralised network operations with NSX Federation.



Full-stack Networking for Modern Distributed Applications

Deploy converged networking capabilities including distributed switching and routing, firewalling, load balancing, NAT, IPAM, and more for both VMs and containers.



Networking and **Security Automation**

Simplify network automation and management with a declarative policy model and a streamlined user experience.



Best-in-Class Security Built into Your Infrastructure

Gain superior protection against the lateral movement of threats with stateful Layer 7 security controls that include IDS/IPS and security analytics via NSX Intelligence.

Question 4 What Are the Key Use Cases for NSX-T?

Adopt Zero-Trust Security

• Lock down critical apps, create a logical DMZ in software, and reduce the attack surface of a virtual desktop environment using the segmentation capabilities in NSX. Zero-trust security is now attainable and efficient in private and public cloud environments.

Speed Up Delivery of Networking and Security

Accelerate application delivery by leveraging blueprints to automate the provisioning and management
of networking and security services consistently across all sites and clouds — or by exposing the
infrastructure as code.

Modernize with Advanced Load Balancing

• Update your datacenters with SDN automation and software load balancers, while enjoying a TCO savings of over 50%. Transform your legacy load balancers from F5 or Citrix to 100% software solutions.

Extend Networking Across Clouds

• Streamline your multi-cloud operations with consistent networking and security while enabling multi-cloud use cases ranging from seamless datacenter extension, to multi-DC pooling, to rapid workload mobility.

Manage Containers as First-class Citizens

 Provide integrated, full-stack networking and security for your containerized apps and microservices, just like your VMs. Leverage native container networking for Kubernetes, micro-segmentation, and end-to-end observability for microservices.

Leverage Enterprise-grade Container Ingress

• Provide enterprise-grade container networking and services across both traditional applications in on-premises datacenters and cloud-native applications in container environments.



Question 5

What version of NSX for vSphere do I need to migrate to NSX-T using the Migration Coordinator?

To use the Migration Coordinator to migrate from NSX for vSphere to NSX-T you must run NSX-V 6.4.4 or later.

Question 6

Do I need to buy additional licenses to migrate my environment from NSX-V to NSX-T?

The simple answer is, no. NSX Data Center is sold as one set of licenses that provides access to both NSX Data Center for vSphere ("NSX-V") and NSX-T Data Center ("NSX-T"), protecting your NSX investments.



Question 7

What are the general approaches to migrate from NSX-V to NSX-T?

Customers typically use one of the three main options based on requirements:

- 1) Automated in-place migration on existing hosts with the NSX Migration Coordinator
- 2) Co-existing NSX-V and NSX-T environments with new workloads deployed on NSX-T
- 3) Move all existing workloads to NSX-T environment deployed on new set of hardware

General methods of migration

1. Co-Exist

In this model, NSX-T is deployed alongside NSX-V. The two infrastructures may share some hardware resources such as management and Edge clusters. Migration in this case is limited to deploying new apps in the new infrastructure and letting the old apps die over time. As the NSX-T environment grows and NSX-V

environment shrinks, compute resources may be repurposed from NSX-V to NSX-T.

This model is useful when planning to deploy NSX-T with a different architecture/design. In this case, NSX-T design does not depend on the existing NSX-V; however, there is an additional burden of managing two different infrastructures.

2. Lift-and-Shift Migration

With this method, NSX-T infrastructure is deployed in parallel along with the existing NSX-V infrastructure. The key difference from the co-exist model is migration of the configuration and workloads from NSX-V to NSX-T. There are then two migrations that need to take place, the configuration of NSX and the migration of the workloads to the new NSX-T cluster.

The NSX configuration migration can use a mix of available tools or manual configuration, with the NSX-T 3.1 Data Center release, Migration Coordinator includes modular migration, a feature that enables configuration migration, such as firewall rules, and this will be added to in future releases. Workloads can be migrated between environments with various methods including L2 bridging or VMware HCX, providing a staged approach to workload migration.

3. In-Place Migration

The final model, in-place migration, leverages NSX-T's built-in Migration Coordinator tool. Migration Coordinator helps with replacing NSX-V in place on existing hardware. It imports an existing configuration for application on the new NSX-T infrastructure in a workflow that is similar to an upgrade with very little downtime. Migration Coordinator is also fully automated and has pre-migration checks to ensure successful migration.

The Migration Coordinator tool also supports NSX Maintenance Mode, automatically placing ESXi hosts into maintenance mode and vMotioning VMs off before replacing the VIBs. This feature was introduced in NSX-T 3.0. The goal of this tool is to completely transform an existing NSX-V infrastructure into NSX-T.

This method requires an extensive list of pre-requisites to be met, so detailed workshops are required to ensure that the infrastructure is ready for migration.

Question 8 Why Comms-care for NSX-T migration?

We truly hope that you've found this NSX-T migration guide useful and informative. Migrating existing deployments involves careful review and planning. Organisations need to start early to ensure they have sufficient time provisioned to execute a proper migration. As your expert VMware partner, we are here to help your customers make the business-critical move to NSX-T and make it a success. We have the people, the skills and the capacity to make a complex process as simple as possible, and deliver each project to the highest standards.

A VMware Principal Partner

Comms-care is accredited as a **Principal Partner with VMware**, placing us as one of the most capable partners in the VMware partner community. Comms-care also holds the **VMware Master Services Competency** for Network & Security, Data Centre Virtualization and Digital Workspace, and was awarded the **VMware Partner Expertise Award** for Service Excellence 2020. To learn more about how Commscare can help you deliver effective networking and security solutions built around VMware technologies to your customers, please contact us on **enquiries@comms-care.com**



Ready to migrate?

Why not join a Comms-care Virtual Demo Lab? These are our virtual enablement sessions for partners.

Expertly Planned. Expertly Delivered.

These sessions help resellers take the conversation beyond the initial engagement to explore how you can simplify and accelerate your customer migration journey, whilst at the same time ensuring a fantastic customer experience by leveraging Commscare's rich portfolio.

To get involved, simply email us at: enquiries@comms-care.com

We look forward to hearing from you.



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Partner Expertise Award - Service Excellence 2020

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Thank you

For more information about migrating to NSX-T or to learn more about our VMware services, contact us at:

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