



Kyndryl Managed Services for Data Center Networking

Revolutionize your data center with Kyndryl's fully managed, secure and cost-effective networking solution.

Challenges

- Managing growing complexity of networks
- Scalability while maintaining performance and security
- Automation capabilities to increase production and efficiency
- Compliance with regulatory requirements and industry standards

Kyndryl Solution

- Blueprint-driven solution that provides full orchestration
- Compute-as-a-service and storage-as-a-service provide dedicated, single-tenant environments
- Insight-driven and surfaces anomalies in real-time
- Private cloud-based SDN supports strict network segmentation and security

In today's fast-paced business environment, digital transformation continues to drive innovation and growth. Data center networking has become a critical component of IT infrastructure for organizations of all sizes. It is essential to effectively manage and optimize data center networking infrastructure to ensure seamless communication between different systems and applications, reduce downtime, and improve overall performance. By implementing the right data center networking solutions, organizations can optimize their IT infrastructure, reduce costs, and drive innovation to gain a competitive advantage in today's digital landscape.

Data center networking comprises the infrastructure and network components used to interconnect servers, storage systems, and other network-attached devices in a data center. This includes switches, routers, firewalls, load balancers, and other networking equipment, as well as the cabling and connections between these devices.

Key design considerations include network security, scalability, performance, and manageability to provide high-speed, low-latency, and highly available connectivity to support the demanding needs of data center applications and services. Data center networking plays a significant role in facilitating digital transformation by enabling organizations to modernize their IT infrastructure and move towards more agile, flexible, and scalable solutions, particularly with the adoption of private cloud infrastructure-as-a-service.

The Challenge

Enterprise customers face a variety of challenges when it comes to data center networking. One of the biggest challenges is managing the growing complexity of networks as organizations adopt new technologies such as cloud computing, virtualization, and Internet of Things (IoT) devices. In addition, enterprise customers must ensure high levels of availability, security, and scalability while keeping costs under control.

Managing network performance is also a key challenge, as enterprises must deliver reliable network connectivity to support mission-critical applications and services. Moreover, enterprise customers must comply with regulatory requirements and industry standards, which can add additional complexity to their data center networking infrastructure.

To overcome these challenges, enterprise customers require comprehensive data center networking solutions that are flexible, scalable, and secure, and that can integrate seamlessly with their existing IT environments.

The Solution

Kyndryl's Managed Services for Data Center Networking solution is a modular, blueprint-driven solution that provides full orchestration capabilities for organizations seeking to adopt new technologies without the associated risks and capital expenses. The solution is insight-driven and surfaces anomalies in real-time, enabling organizations to respond to network issues proactively. The fully managed, single-tenant, private cloud-based software-defined (SDN) data center local area network (LAN) environment is designed to facilitate planned migrations for inter-dependent workloads while adhering to strict network segmentation and security controls.

Tested on a LAB environment with Gartner's top vendors, the solution offers stability, reliability, and high performance. The framework offers improved application performance and efficiency, eliminating capital expenses and moving to a consumption-based OpEx model.

The compute-as-a-service and storage-as-a-service offerings provide dedicated, single-tenant environments with multiple highly scalable, security-rich, and high-performing data tiers for maximum savings and flexibility.



Performance and Resiliency

In data center networking, network performance is critical, but not the only factor to consider. Cost, scalability, and ease of management may also play a role. To optimize network performance, organizations can use techniques like load balancing, traffic optimization, and bandwidth management. They can also balance performance with other priorities like cost and scalability when designing and implementing the network.

Kyndryl's Managed Services for Data Center Networking solutions are designed to deliver high performance and low latency, ensuring that enterprise customers can meet their demanding performance requirements, through a proven SDN LAN Fabric architecture design to ensure traffic is always using the best to the destination, so latency is lower and predictable.

Cloud Integration

As organizations increasingly adopt cloud technologies, they must integrate new cloud environments with their existing on-premises infrastructure, including their data center networking environment. This requires organizations to manage multiple environments with different architectures, tools, and technologies.

Kyndryl's team include over 90,000 highly skilled employees worldwide that support a distributed cloud networks and software-as-a-service (SaaS) environments, providing the management of end-to-end connectivity through the enforcement of consistent security policies for applications running, not only on on-premises data centers but also on the public cloud provider.

Security

Integration into a cloud environment is often highly distributed and dynamic, creating further complexity in terms of network management and security. While network security is important, it may not always be the top priority for all organizations. Some organizations may prioritize performance or cost savings over security, leading them to implement different security solutions or trade-offs.

Kyndryl's security expertise provides customers with tailored, advanced security solutions to protect their data center networking environments from various security risks. These solutions include threat intelligence, vulnerability management, network segmentation, access control, and incident response, which help customers identify and address security risks, improve their security posture, and comply with regulatory requirements. Kyndryl's proactive approach to security allows customers to stay ahead of the evolving threat landscape and ensure that their networks and data are always protected.

Automation

Enterprises evaluating their data center networking environment for automation face the complexity of managing and integrating multiple automation tools and processes. A comprehensive automation strategy, including the selection of appropriate tools and integration with network management processes, is crucial. However, implementing and managing these solutions can be resource-intensive, requiring investment in training and resources. Enterprises must develop a clear understanding of their automation requirements and a strategy aligned with business objectives.

Kyndryl Cloud Network Services team have the know-how and tools to troubleshoot and debug problems in distributed cloud networks through network telemetry at all layers of the network, hypervisor, OS and Kubernetes.

Predictive Analysis

Predictive analysis is crucial for enterprises evaluating their data center networking transformation as it provides insights into network performance, capacity planning, and potential issues. It helps identify potential bottlenecks, anticipate capacity needs, and detect anomalies before they impact network performance. By optimizing network resources, identifying areas for improvement, and providing data-driven insights into ROI, enterprises can improve network performance, reduce downtime, and make informed investment decisions.

By incorporating ongoing validation in tools and timely notification of irregularities, Kyndryl uses predictive analysis to empower customers to address potential problems before they have a negative impact on their business.

Reduce Human Errors

Reducing human errors is vital for enterprises evaluating their data center networking transformation as it can significantly impact network performance, uptime, and security. To mitigate these risks, enterprises can invest in automation and network management tools, implement training and education programs, and leverage advanced analytics and machine learning. By reducing the risk of human error and improving network automation and management, enterprises can enhance the overall effectiveness of their data center networking transformation efforts.

Kyndryl's set of experience and lab testing, has allowed customers to develop blueprints that will provide consistency across the SDN LAN Fabric infrastructure with intent-based networking that enables network administrators to define desired outcomes and allows the network to adapt and self-correct.

Use cases

01

Virtualization and Cloud Computing

Data center networks play a critical role in supporting virtualization and cloud computing environments. Customers can leverage these technologies to optimize their IT resources, reduce costs, and increase overall agility and scalability.

02

Big Data and Analytics

Data center networks are essential for supporting big data and analytics applications, which require high-speed, low-latency connectivity to collect, process, and analyze large amounts of data.

03

Web and Application Services

Data center networks play a critical role in supporting web and application services, which are critical for delivering online content and applications to customers. This requires high-speed, reliable connectivity to support large amounts of data and concurrent users.

04

Disaster Recovery and Business Continuity

Data center networks can be used to support disaster recovery and business continuity planning, providing organizations with the ability to quickly recover from outages and minimize downtime.

05

Internet of Things (IoT)

Data center networks play a critical role in supporting IoT environments, which require high-speed, low-latency connectivity to collect and analyze large amounts of data from connected devices.

06

Software-Defined Networking (SDN)

Data center networks can be used to implement software-defined networking (SDN) technologies, which allow organizations to manage their network resources more dynamically and efficiently and support a wide range of new use cases and applications.



Summary

Kyndryl provides high-performance and low-latency Data Center Networking solutions through a proven SDN LAN Fabric architecture design. With over 90,000 highly skilled employees, Kyndryl supports distributed cloud networks and SaaS environments, ensuring end-to-end connectivity with consistent security policies. Kyndryl's security expertise offers tailored, advanced security solutions, including threat intelligence, vulnerability management, network segmentation, access control, and incident response.

Kyndryl uses a proactive approach to security, leveraging ongoing validation and predictive analysis to identify and address potential problems. Kyndryl's experience and lab testing has helped customers develop blueprints for consistency across the SDN LAN Fabric infrastructure with intent-based networking, enabling network administrators to define desired outcomes and allowing the network to adapt and self-correct.

Why Kyndryl?

Kyndryl has deep expertise in designing, running and managing the most modern, efficient and reliable technology infrastructure that the world depends on every day. We are deeply committed to advancing the critical infrastructure that powers human progress. We're building on our foundation of excellence by creating systems in new ways: bringing in the right partners, investing in our business, and working side-by-side with our customers to unlock potential.

Next Steps

Discover how Kyndryl Managed Services for Data Center Networking can help you unlock new value from your digital transformation journey. Schedule a free consultation today. [Talk to an expert.](#)



© Copyright Kyndryl, Inc. 2023.

Kyndryl is a trademark or registered trademark of Kyndryl, Inc. in the United States and/or other countries. Other product and service names may be trademarks of Kyndryl, Inc. or other companies.

This document is current as of the initial date of publication and may be changed by Kyndryl at any time without notice. Not all offerings are available in every country in which Kyndryl operates. Kyndryl products and services are warranted according to the terms and conditions of the agreements under which they are provided.