



# 4 steps to embracing next gen networking



# Executive summary

The importance of next-generation networking is growing, particularly with the emphasis on multicloud strategies in today's digital world. As AI technologies advance, security needs evolve, and application deployment speeds up, there is an increasing demand for modular enterprise networks that support API integration and event-driven automation.

The challenges in this area are diverse, covering rapid cloud innovation and the intricate management of multicloud environments. This complexity underscores the need for a strategic approach to modernizing network infrastructure.

This guide supports enterprises through critical steps, including embracing automation and virtualization, moving to a software-defined approach, tackling sovereignty and resiliency, and embedding agility, scalability, and security in their IT operations. Each of these steps is pivotal in transforming network infrastructure to support the dynamic and evolving needs of contemporary business environments, ultimately facilitating greater efficiency, reduced operational complexity, and enhanced performance across global operations.





**“More than 65% of enterprise networking activities are performed manually. However, a small but growing percentage of large enterprises automate more than half of their network activities”.**

*-Gartner*

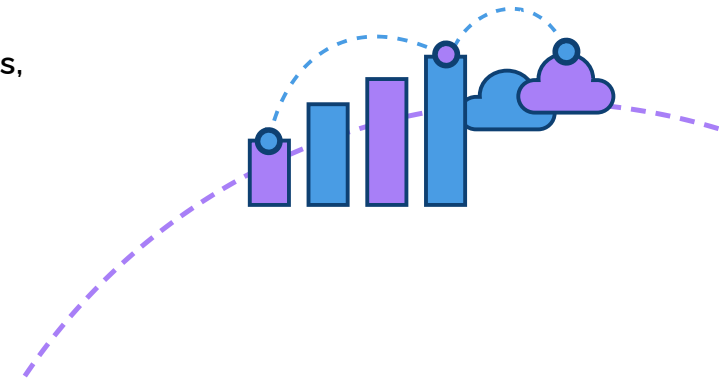
# Step 1: Embrace automation and virtualization

Automating network management significantly enhances operational efficiency by reducing the need for manual intervention and minimizing the risk of human errors. In modern IT operations, leveraging network automation platforms can streamline various tasks, including provisioning, configuration, and troubleshooting, which traditionally required substantial manual effort.

By integrating automation, organizations can handle large-scale network activities more efficiently and respond dynamically to incidents or requests, thus ensuring continuous, high-performance network operations. Network automation platforms interact directly with network devices and other automation tools, orchestrating complex workflows across diverse network environments.

These platforms enhance agility by enabling continuous integration and delivery (CI/CD) processes, facilitating rapid deployment and configuration of network resources.

This approach is essential for maintaining high efficiency and compliance with industry regulations and organizational policies. Moreover, network automation supports the creation of consistent, reproducible environments, reducing the potential for configuration drift and ensuring reliable infrastructure management .



# What can you do to harness network automation?



## ✓ Simplify your data center strategy

### Why?

Shifting workloads to virtual environments reduces data center complexity. This transition eases connectivity management and enhances virtualization functionality, supporting flexible and scalable infrastructure management.

### The outcome:

1. Achieve flexibility and scalability with dynamic virtual environments.
2. Reduce costs with pay-as-you-go models.
3. Enhance disaster recovery with cloud redundancy and recovery tools.
4. Streamline management with automation and centralized interfaces.

## ✓ Embrace infrastructure as code (IaC)

### Why?

IaC integrates seamlessly with DevOps, enhancing IT infrastructure management and deployment. Using code to define and deploy infrastructure ensures consistent, reproducible environments critical for modern operations.

### The outcome:

1. Achieve automation and consistency with IaC for rapid, error-free deployment.
2. Foster collaboration with IaC by using a shared codebase.
3. Enhance security and compliance with IaC through integrated security checks.
4. Reduce costs with IaC by minimizing manual interventions and optimizing resources.

**Build a modern, efficient, and resilient IT infrastructure to meet today's digital demands.**



# Step 2: Tackle sovereignty and resiliency now

Data sovereignty and network resiliency are essential for modern enterprises, particularly as they expand globally. Data sovereignty ensures compliance with local laws, avoiding legal issues and maintaining customer trust. Network resiliency ensures continuous operations despite disruptions such as cyber-attacks, natural disasters, or system failures. It is crucial for business continuity, enhancing performance, and ensuring seamless global operations. By prioritizing both data sovereignty and network resiliency, businesses can protect against operational interruptions, ensure data integrity, and provide consistent services to their customers, thereby fostering a secure and reliable business environment.

“ Digital sovereignty will be a primary source of complex, dynamic and expanding compliance obligations for multinational enterprises. ”

-Gartner



# What can you do to secure data sovereignty and resiliency?



## ✓ Develop a network architecture that puts you in control

### Why?

Simplifying network architecture improves scalability and performance. It reduces the burden on IT teams, minimizes configuration errors, and enhances security, allowing organizations to allocate resources better and integrate new technologies more easily.

### The outcome:

1. Simplify your network infrastructure with streamlined management and expert support.
2. Effortlessly route and manage traffic across your network to meet sovereignty requirements and deliver high availability.

## ✓ Avoid regulatory barriers and ensure compliance

### Why?

Ensuring compliance with data sovereignty and maintaining network availability globally are crucial in multicloud environments. A scalable network infrastructure mitigates legal risks, protects sensitive data, and sustains business operations through standardized global connectivity.

### The outcome:

1. Network traffic management and continuous monitoring delivers peace of mind for network compliance and uptime.
2. Expertly managed interconnectivity and network routing ensures you can optimize data flows to adapt as regulatory and business pressures change.

**Ensure compliance and high availability with a network infrastructure that puts business requirements at the heart of the solution.**

# Step 3: Move to a software-defined approach

“30% of global enterprises will use SDCI services by the end of 2027, up from less than 10% in 2022”.

-Gartner

The transition to a software-defined approach is critical in modernizing network infrastructure amidst rapid cloud innovation and the increasing complexity of applications distributed across multicloud environments.

By leveraging software-driven orchestration and automation, enterprises can maintain flexibility and reliability in their network operations. This approach not only simplifies and accelerates interconnections across diverse cloud platforms but also enhances service granularity, which is fundamental to future-proof networking.

SDCI hubs, recognized for their capability to connect enterprises to a broad array of cloud, network, and internet services, offer unparalleled flexibility and cost predictability. This flexibility and predictability makes SDCI an indispensable component in the infrastructure strategy of any organization aiming to expand operations and harness the full potential of cloud resources.





# What can you do to leverage a software-defined approach?



## Adopt software-driven orchestration and automation

### Why?

Integrating hardware and software with an API-driven management layer abstracts network infrastructure from administrators, simplifying management and increasing flexibility.

### The outcome:

1. Enhance network flexibility, enabling dynamic resource configuration and optimization across multiple clouds without BGP.
2. Reduce complexity by automating configurations to cut errors and free up IT staff.
3. Optimize you network resources with the API-driven management



## Leverage WAN Overlay technologies

### Why?

As highlighted by Gartner in its 2023 hypecycle for enterprise networking, WAN overlay technologies are essential for a software-defined approach, creating a virtual networking layer that extends across various physical networks.

### The outcome:

1. Enhance flexibility with quick setup of virtual networks that are independent of physical infrastructure.
2. Increase control through abstracted networking layers that simplify global policy implementation.
3. Streamline management by reducing complexities associated with multiple technologies and vendors.

**Modernize your IT operations with a software-defined approach that ensures flexibility, adaptability, and seamless integration, tailored to meet evolving business needs.**

# Step 4: Embed agility, scalability and security

Maintaining agility, minimizing reliance on a single vendor, and enforcing robust security measures are vital for optimizing network performance and securing business assets. A diversified portfolio of CSPs, and comprehensive security protocols help mitigate risks such as vendor lock-in and service disruptions. These strategies bolster the network's resilience, adaptability, and alignment with business needs, enhancing its ability to respond to technological and market changes. By implementing these proactive measures, organizations can enhance system performance, reduce risks, and secure a competitive advantage in the multicloud environment.

“ Cloud security spending is projected to grow by 24% in 2024, marking it as the highest growth segment within the global security and risk management market. ”

-Gartner



# What can you do to enhance your network efficiency?



## ✓ Avoid vendor lock-in

### Why?

Diversifying CSPs prevents over-reliance on any single vendor, enhancing flexibility and control over cloud resources and reducing risks associated with vendor-specific disruptions or changes.

### The outcome:

1. Enhance performance by aligning CSP capabilities with business needs.
2. Reduce dependency on single CSPs, enabling more resilient infrastructure.

## ✓ Adopt a Zero-Trust security model

### Why?

Zero Trust architectures minimize risks by enforcing security policies across locations, ensuring networks are secure by design, and preventing unauthorized access and lateral movement within the network.

### The outcome:

1. Minimize the attack surface by verifying and authenticating all users and devices.
2. Enhance security by implementing strict access controls and microsegmentation.
3. Reduce risks of data breaches and unauthorized access.

**Excel your network strategy with an agile, scalable, and secure architecture that minimizes vendor reliance.**



# Embracing the steps

Unchain the cloud. Unleash your potential.



## 1 Embrace automation and virtualization

## 2 Tackle sovereignty and resiliency now

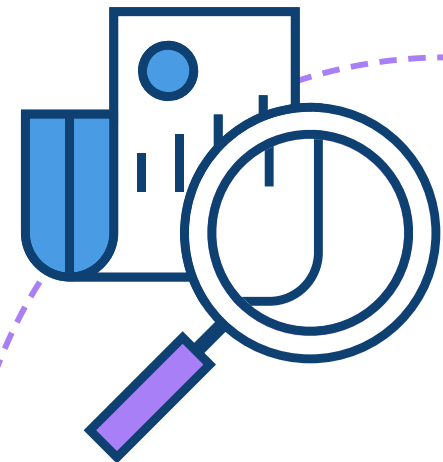
## 3 Move to a software-defined approach

## 4 Embed agility, scalability and security

Adapting to the rapidly changing digital landscape by adopting next-generation networking strategies is essential for businesses today. These strategies, as detailed in this paper, can significantly enhance operational efficiency, reduce network complexity, and fortify defenses against the evolving threats of global connectivity. The proactive, informed, and flexible approach discussed promises sustainable growth and a competitive edge.

InterCloud offers comprehensive solutions to help implement these strategies and build a future-proof, agile network infrastructure. By leveraging InterCloud's expertise and technology, businesses can gain control over their cloud connectivity, ensuring quick and flexible deployment while maintaining robust end-to-end network management.

Whether you need a self-managed platform to take control of your cloud connectivity with rapid deployment tools, or comprehensive, expert-driven managed services with robust SLAs for those preferring to focus on core business goals, InterCloud is here to support you.



If you are ready to transform your cloud connectivity, reach out to one of our cloud experts.



## About InterCloud

InterCloud's end-to-end global connectivity platform eliminates the complexity in deploying the cloud, giving businesses full control over the security, sovereignty, and performance of their critical data traffic with complete peace of mind.

Working with organizations to help them transform global connectivity, reduce network complexity, and accelerate growth and innovation, InterCloud is a trusted advisor to some of the world's leading brands when it comes to leveraging the cloud for future success

With offices across Europe, the company's platform is underpinned by its team of cloud experts who guide customers to implement effective strategies to leverage the power of the cloud across their organization – making global connectivity a driver for business performance.

[www.intercloud.com](http://www.intercloud.com)