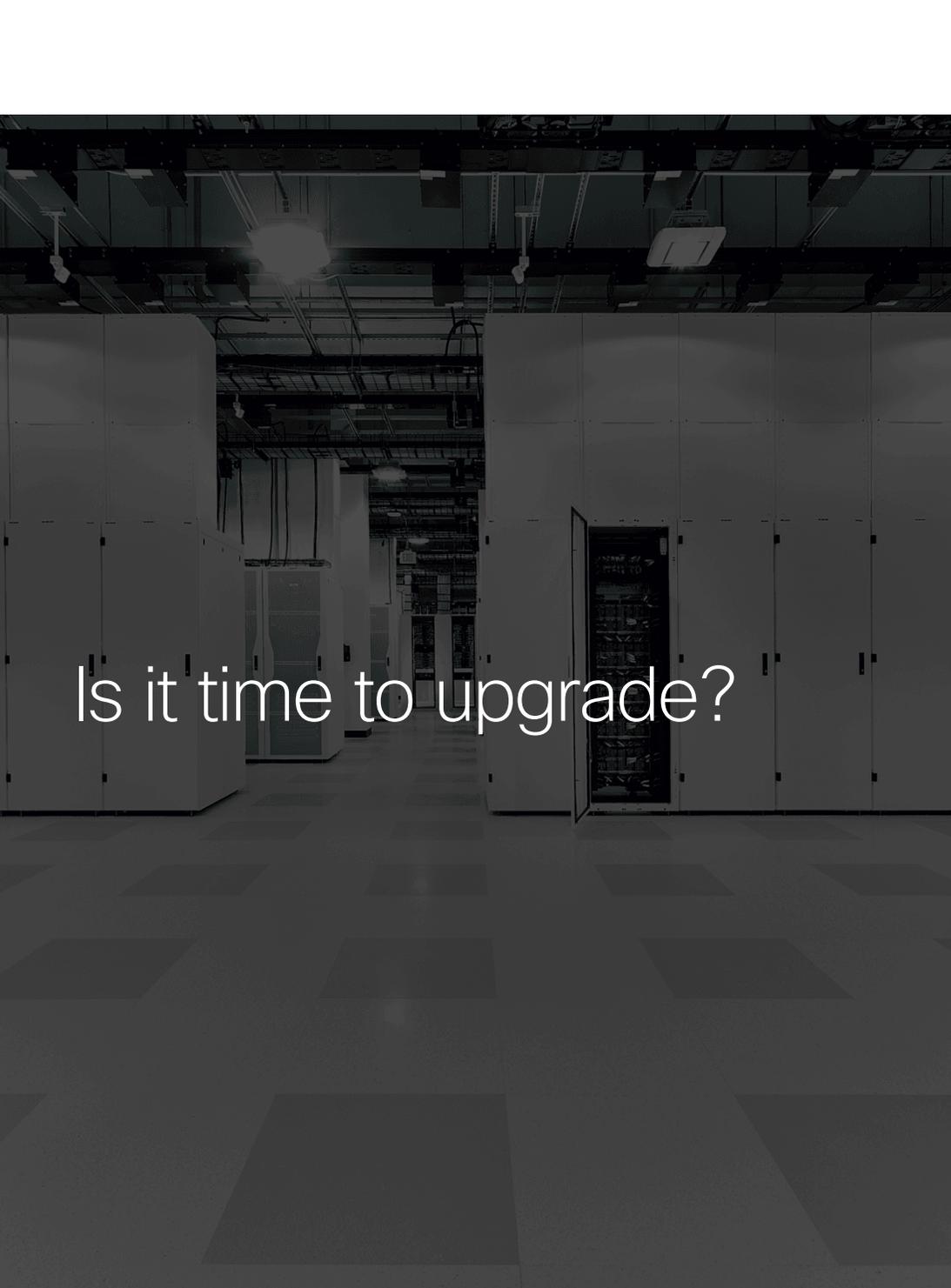
A dark, monochromatic photograph of a data center aisle. The aisle is lined with rows of server racks. The floor has a repeating geometric pattern. The lighting is dim, creating a sense of depth and perspective as the aisle recedes into the distance. The overall tone is professional and technical.

# Six Keys to Upgrading Your Data Center Network

We're here to help you grow, consolidate, scale and adapt to changing business needs.



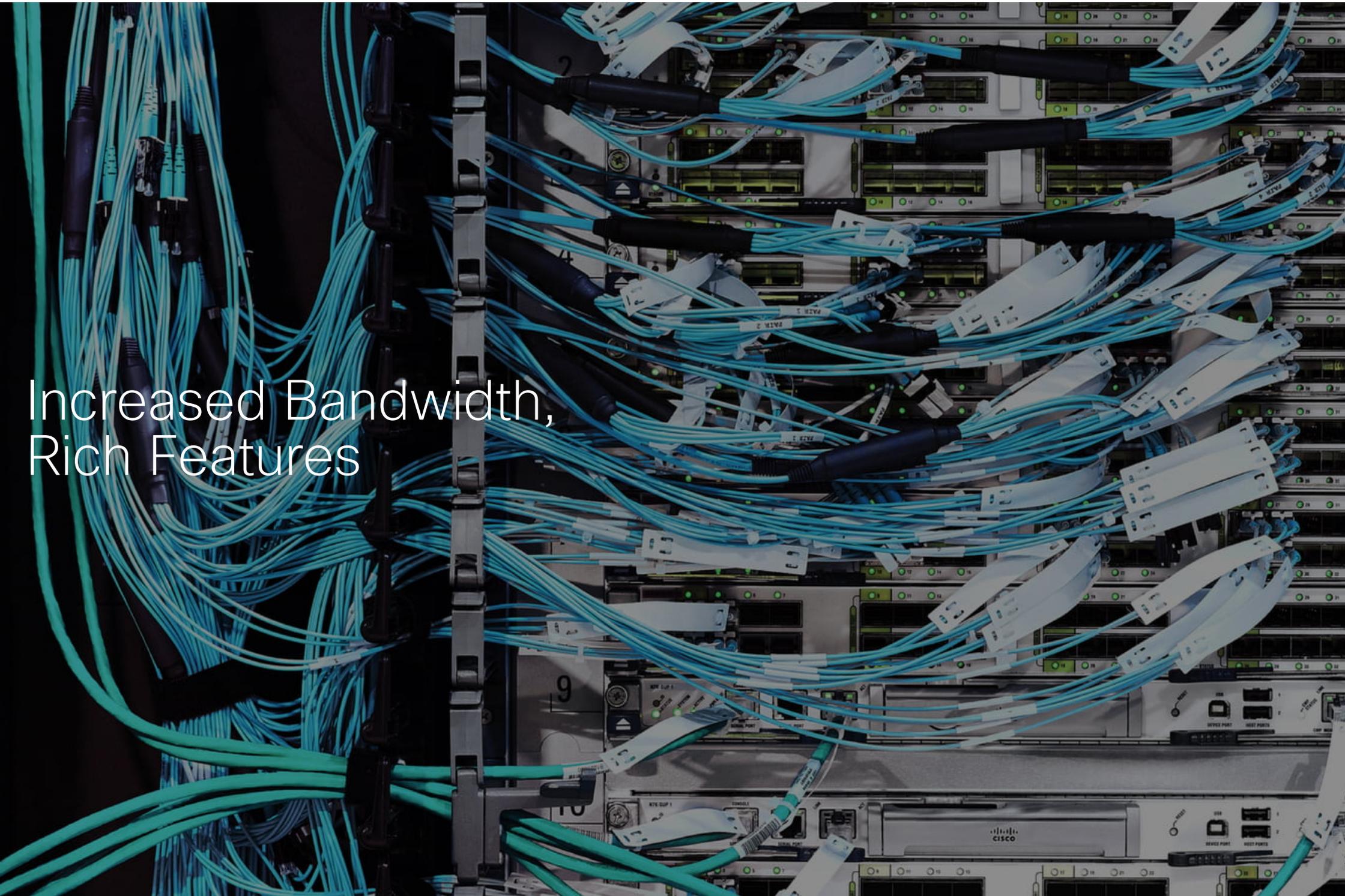
Is it time to upgrade?

How do you address business demands placed on your data center network that are becoming more diverse and complex as new business apps emerge? Whether you are upgrading an existing environment or building a new one, it's important to consider:

- Network architecture across data center and cloud continuum
- Application and service hierarchy, requirements and dependencies
- Easy access to technical support and expertise

Lastly, upgrading means you can confidently meet future growth expectations in new applications as containers, micro-services architectures, server less, machine learning and AI become more pervasive.

Increased Bandwidth,  
Rich Features





# Increased Bandwidth, Rich Features

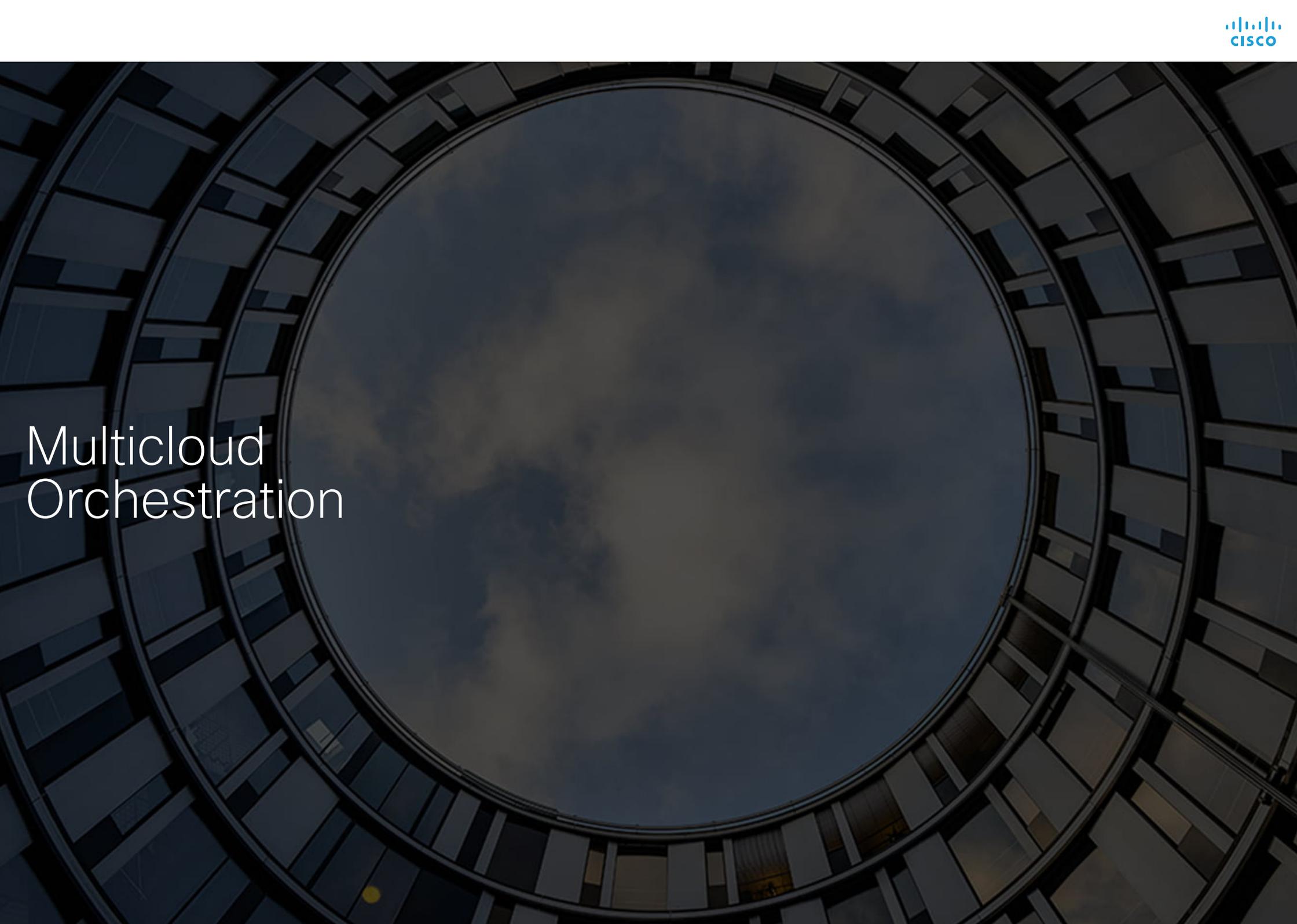
## Hyperscale data centers: The rise of 400G.

Data centers are undergoing significant transformation. Consolidation, virtualization, and cloud technology continue unabated as IT leaders seek ever more simplicity, scalability, and application workload agility. This has caused the underlying topology to move past traditional 3-tier architecture (access, aggregation, core) to 2-tier spine and leaf—enabling the era of the hyperscale data center. So, what was once 1GE at access and 10GE at aggregation is now 100GE at leaf and 40-400GE at spine.

Cisco offers a rich portfolio of hyperscale switches to meet the rapidly evolving needs of the modern data center:

- The high-density Nexus Series delivers unprecedented scale and investment protection with 1/10/25/50/100 and 400GE-capable ports—making terabyte networking (up to 12.8T) a possibility
- Cloud Scale ASIC delivers Cisco ACI-enabled leaf-spine architecture with industry-leading performance and software-defined networking

[Learn more about 400G](#)

A large, circular architectural structure, possibly a dome or a large window, with a complex, multi-layered design. The structure is composed of many small, rectangular panels arranged in concentric circles. The center of the structure is a large, circular opening that looks out onto a cloudy sky. The overall color palette is dark and muted, with shades of blue, grey, and black.

# Multicloud Orchestration



# Multicloud Orchestration

**If your organization is scaling up automation with DevOps, we have you covered...wherever your data is.**

Founded on Nexus technology, Cisco Multicloud solutions manage and automate workload delivery, comply with network security, and provide seamless connectivity to public clouds, LAN and WAN. [Cloud ACI](#) on AWS, Azure and Google Cloud, DCNM on Azure, SD-Access and SD-WAN integrations are all prime examples.

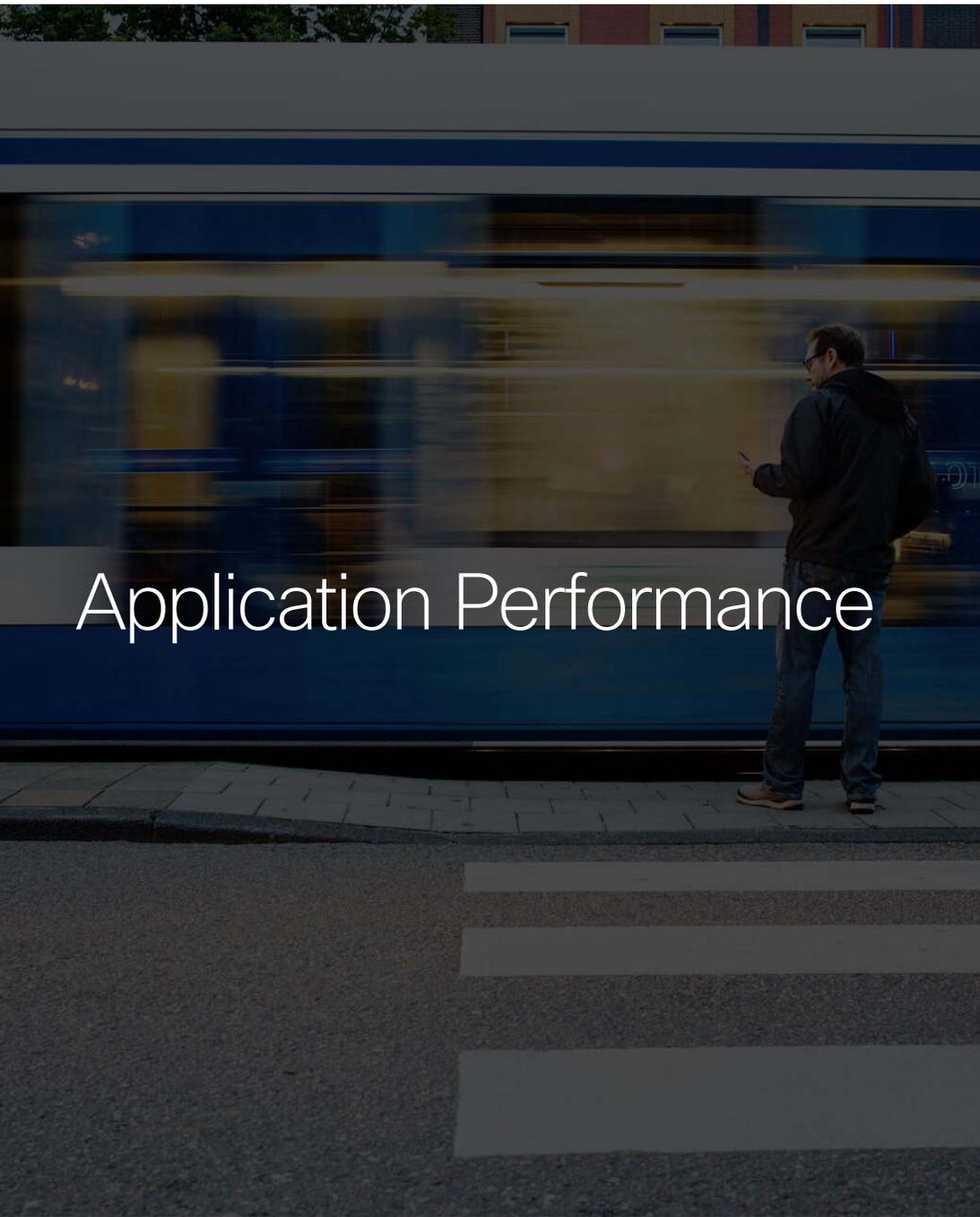
[Cisco Application Centric Infrastructure](#) (ACI) Anywhere extends the capabilities of Cisco's industry-leading SDN solution from on-premises and the cloud, out to the network edge. Wherever your application workloads take you, your DevOps team can ensure consistent policy, management, and operations across application, network, and security resources. Plus, high levels of flexibility and automation deliver the agility to quickly place workloads in any location or cloud, speeding deployments and enabling you to choose the best options based on your application needs—instead of being driven by technology limitations.

In addition, [Cisco NX-OS](#) includes a set of well documented, comprehensive APIs that are ideal for fostering the growth of self-service infrastructure for DevOps pros.

[Learn More](#)

# Application Performance





# Application Performance

## **Applications are vital to your business.**

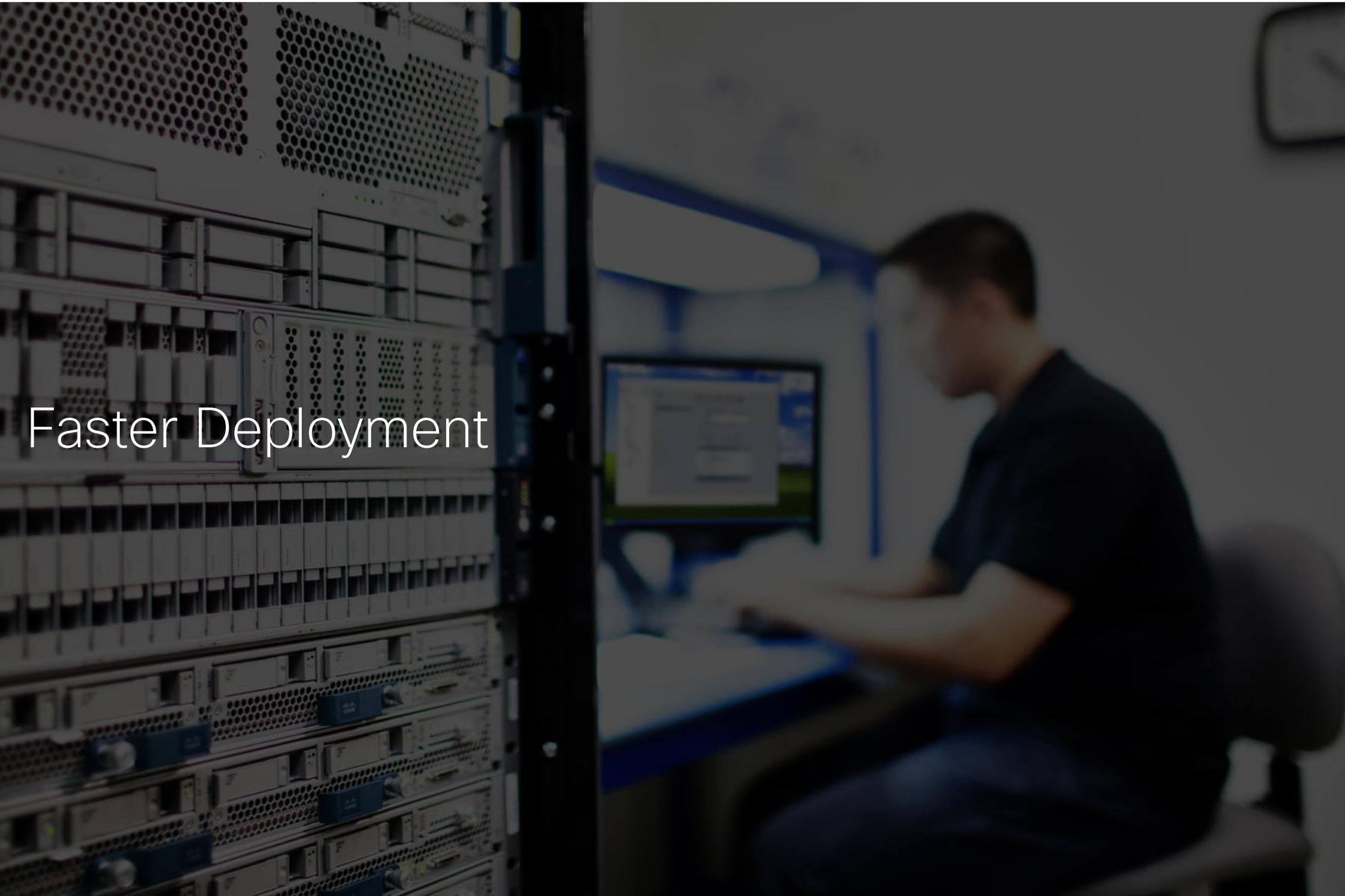
The rise of microservices and container endpoints is causing a dramatic change in traffic patterns across data center networks. To adapt to application proliferation, vendors are turning to leaf-spine architecture solutions that enable performance and scale.

Here's the problem: most vendors are limited by the constraints of merchant silicon. Application performance suffers when the required services are not available in merchant silicon and have to be implemented in software.

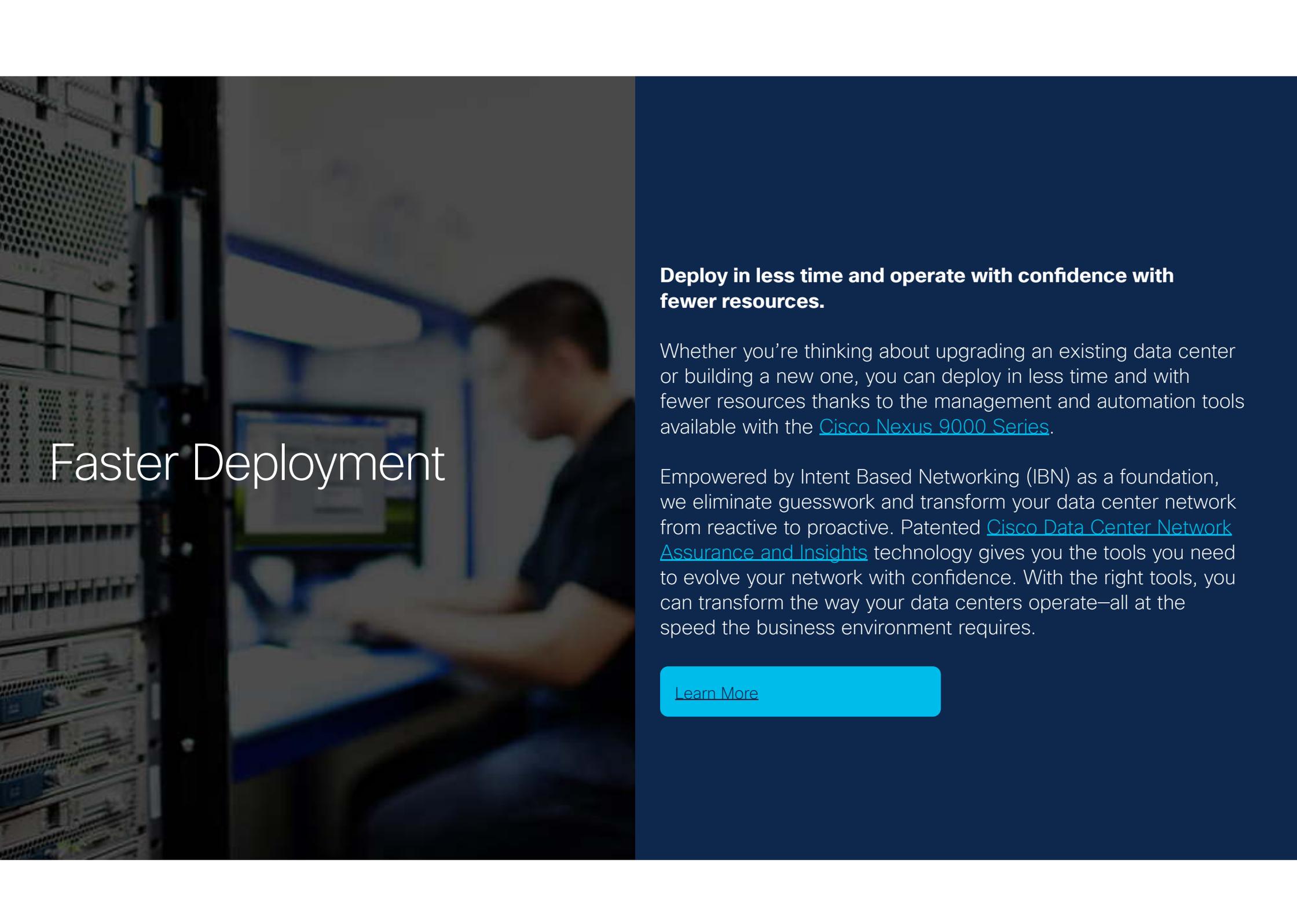
Cloud Scale ASICs offer greater scale and more services at an optimized price with capabilities that include segment routing, group-based security policy, network service headers, and full-featured Virtual Extensible LAN (VXLAN) overlays.

[Design options](#)

[Get analyst insights](#)



Faster Deployment

A person is working at a computer in a data center. The background shows server racks and a desk with a monitor. The text "Faster Deployment" is overlaid on the left side of the image.

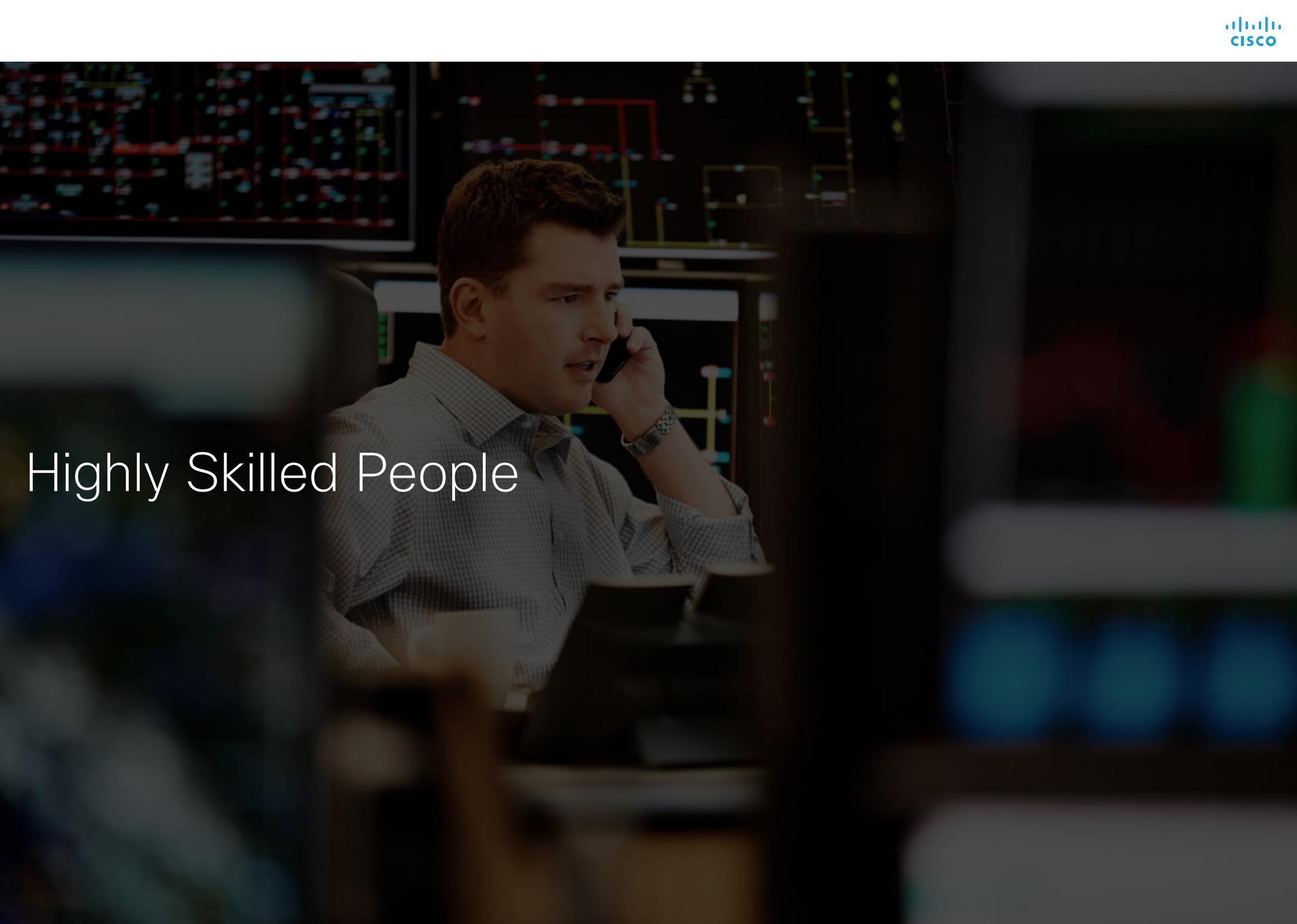
# Faster Deployment

**Deploy in less time and operate with confidence with fewer resources.**

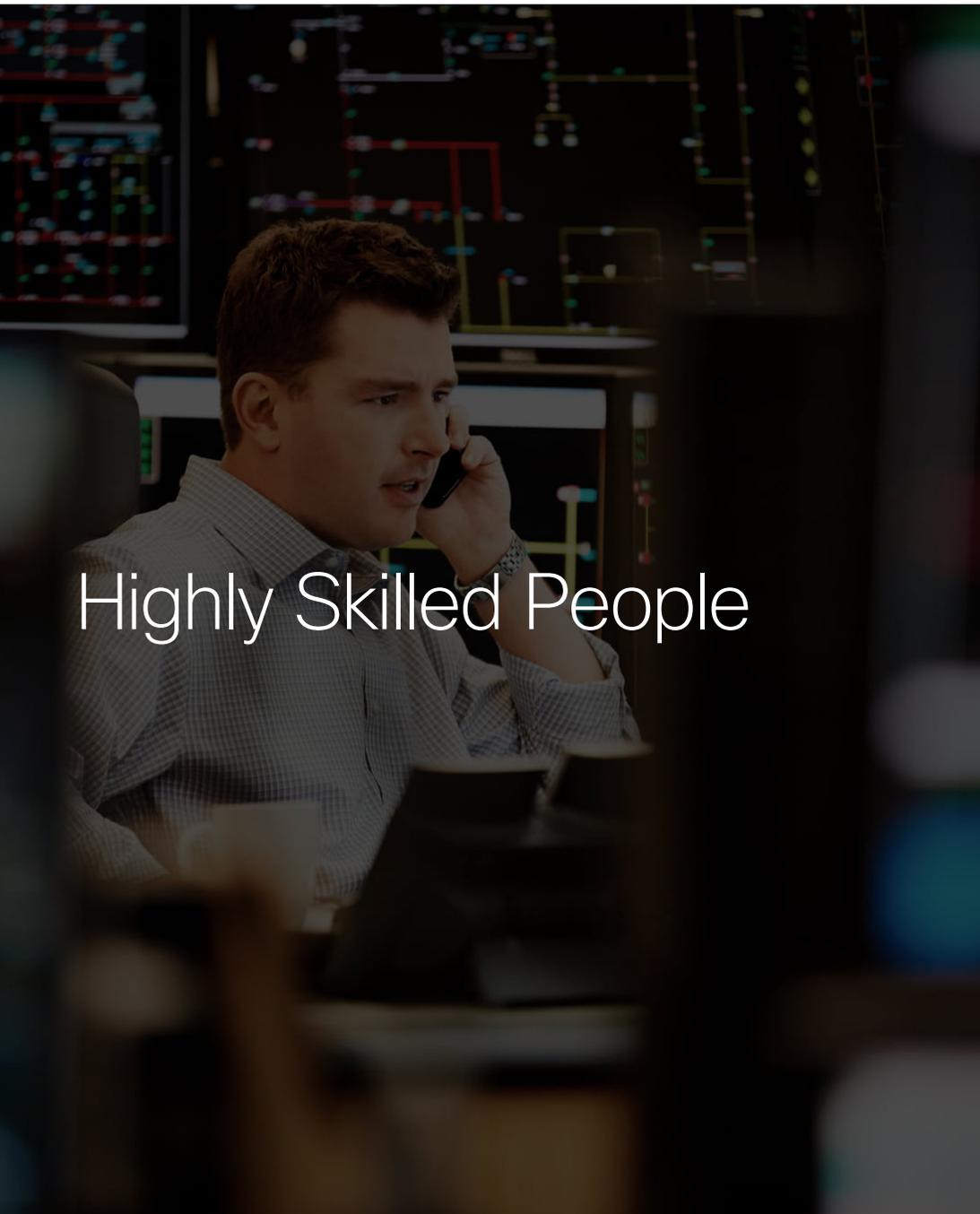
Whether you're thinking about upgrading an existing data center or building a new one, you can deploy in less time and with fewer resources thanks to the management and automation tools available with the [Cisco Nexus 9000 Series](#).

Empowered by Intent Based Networking (IBN) as a foundation, we eliminate guesswork and transform your data center network from reactive to proactive. Patented [Cisco Data Center Network Assurance and Insights](#) technology gives you the tools you need to evolve your network with confidence. With the right tools, you can transform the way your data centers operate—all at the speed the business environment requires.

[Learn More](#)

A man in a light-colored, patterned button-down shirt is sitting in a control room, talking on a mobile phone. He is looking towards the right. The background is dark with several computer monitors displaying colorful network diagrams and data. The overall lighting is dim, with the primary light source being the screens.

Highly Skilled People



# Highly Skilled People

## **Highly skilled people are critical to run and maintain your data center.**

Regardless of the vendor you decide on for the network, it's important to have highly skilled people to run and maintain your data center. At Cisco, we take our customers' success seriously. It starts with our partner network, consisting of 60,000 partners in more than 175 countries. We also continue to invest heavily in our Cisco Networking Academy®. Over 6 million network professionals have completed the training since 1997.

No matter where you are, you can have confidence that our industry leading data center networking [Customer Experience \(CX\)](#), [services](#) and technical support teams are here to make you successful.

[Learn About Smart Net Total Care Services](#)

[Find a Cisco Partner](#)

Value





Value

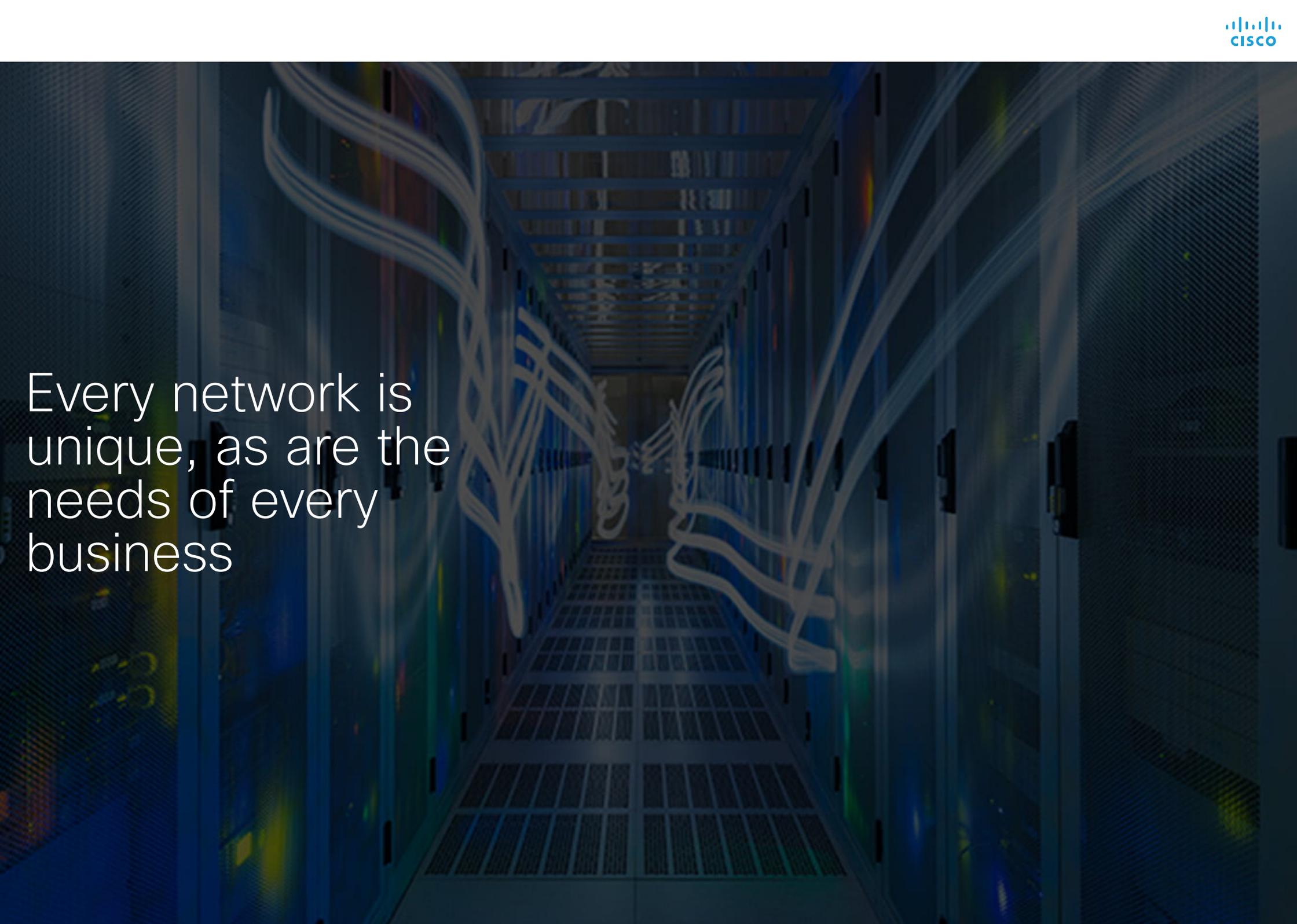
### Higher value within your budget.

We know that your success can depend on staying within your budget. And in fact, the Cisco Nexus® 9000 Series is one of the most competitively priced data center switches in the industry because of our Cloud Scale Application-Specific Integrated Circuit (ASIC).

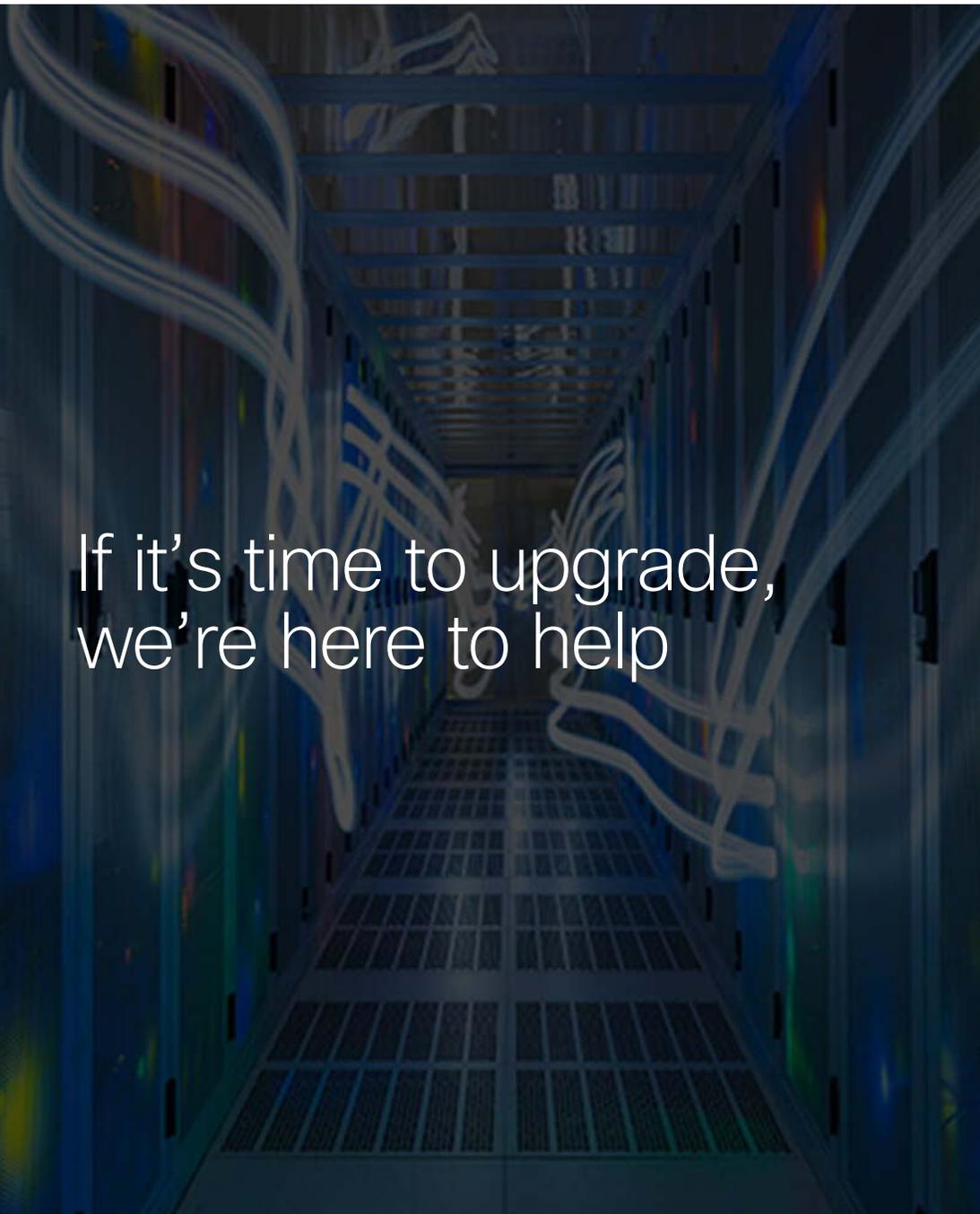
In terms of value per port, you can get 100 Gigabit Ethernet ports for what most competitors ask for 40G ports, and 25G ports for what most competitors ask for 10G ports. You also need to consider future investments for 400G speeds in the data center.

Another way to help your bottom line? With [Cisco Nexus 9000 Series](#), you can eliminate several storage area switches from your network because Cisco combines both storage and data networks.

[Let's find your partner](#)

A perspective view of a server room aisle. The aisle is flanked by rows of server racks. The racks are filled with equipment, and numerous white cables are bundled and run along the top of the racks. The floor is a metal grating. The lighting is dim, with some green and yellow indicator lights visible on the server racks.

Every network is  
unique, as are the  
needs of every  
business



If it's time to upgrade,  
we're here to help

**Successfully upgrading your data center network requires:**

- The right architecture for your applications
- The right people to deploy the solution
- The right price to stay in your budget

With more than 18,000 [Cisco Nexus 9000 Series](#) customers, we are confident our solutions will help you build an automated data center that will simplify and scale your network.

[Follow our blog](#)

[Compare Cisco Nexus models](#)

Do you know someone  
considering an upgrade?

