

PRESIDIO™



10 STEPS

**to Successfully Reinvent Your Network
for a Digital, Cloud-Driven World**

The public cloud may bask in the spotlight these days, and its warm glow has massive implications on IT and your business, which has only made the network that much more important. Always a critical aspect of IT, the network has once again taken center stage in a multi-cloud world where the dynamic nature of resources, workflows and data can see an increasingly complex (and sprawling) environment spiraling out of control.

The reality is that networking resources become cloud resources, and cloud resources become networking resources—and they all need to be managed, supported, secured and continuously optimized.

While certain fundamentals remain the same, leveraging cloud effectively and securely—which means developing an automated, flexible, secure multi-cloud solution—requires IT to completely rethink its network strategy and approach. Your network strategy, staffing and skills are key to achieving real business benefits. Without them, you lose the ability to scale, build and control your environments—or to realize the benefits of cloud.





3

use cases highlight the interdependency of networking and cloud

Based in legacy tech, just starting to think about the cloud. A company with traditional data centers and private cloud with state-of-the-art security is moving to the cloud but has yet to determine how to change its current network and security approach.

Raced to the cloud and now refocusing. A large organization rushed its workforce to the cloud and its business online during the pandemic. Now, the company needs to clean it up and make sure it is ready for the future.

Planning to move more workloads to the cloud to prepare for the future. A global enterprise already has one major application in the cloud, and now it wants to expand further into hybrid cloud and multi-cloud.

These organizations have different needs but they have one major thing in common—they all need to reimagine their network strategy to best leverage the cloud. No matter what stage you are in, this eBook arms you with timely tips and proven best practices you can use to hone your network strategy to ensure you realize all the benefits of cloud.

Contents

- 1 Skate to where the puck is going.
- 2 Ted Lasso it.
- 3 Be a cost-control ninja.
- 4 Get your head in the cloud.
- 5 Don't be a total zero.
- 6 Be the data.
- 7 Fill the gap. Fuel the business.
- 8 Be a disruptor, not an interrupter.
- 9 Don't touch this.
- 10 Raise your hand.

“No network.”



No cloud. No kidding.”





Here are ten steps you can take to successfully reinvent your network and ensure success in a digital, cloud-driven world.

Skate to where the puck is going.

You may not have Wayne Gretzky's moves on the ice, but then again he can't configure a WAN. So, what do you have in common? The need to think holistically, be proactive and plan your moves before they need to be made.

Putting a strategy in place is job one, and that means identifying the greatest challenges to achieving your long-term goals and getting real about the organization's strengths and weaknesses. When you do this, you can plan better and move beyond the reactive legacy mindset that had your team waiting to respond to issues.

You can also better connect the dots between data flow, security, the network, cloud and all the other moving parts in your environment. Sure, in the past you lacked the information to anticipate problems, but today, with the right tools, skills and knowledge, you can be prepared ahead of time, see the big picture, and work all the angles to increase your odds of success.

Creating a holistic strategy in this context may require you to stretch beyond where you've had to in the past. But with an expanded purview and expectations come greater opportunities to grow as a professional and a business person, whether you come from a network, cloud, security or business background. You have to become a student of the larger game, which means you will have to learn with and from people and functions outside of your own, even more than you did in the past.

Of course, you are not alone.

The entire industry is going through growing pains, needing to reframe and reconceptualize their views of business and technology. You can lean on experts if needed, as well as others in your business as you go through the process. Just remember, even Wayne Gretzky had to rely on his teammates, coach and advisors as he grew throughout his career.



Ted Lasso it.

Sometimes the hero isn't the one with the flowing cape, but the person who steps up to lead with curiosity, humility and authenticity, rolls up his or her sleeves and then works with the team to make big things happen. In today's fast moving IT environment, networking experts bring the skills and perspective to be that leader. Although networking is a multi-disciplinary effort, you are uniquely positioned to lead the organization to a solution that scales well, is less prone to problems, and is more secure. And, as the one leading the charge and operationalizing strategy as IT moves to the cloud, you can maintain consistency, control and the ability to address issues head-on before they become business-impacting problems.

By collaborating with other teams (platform groups, application teams, security, LOBs), you can be there to break down silos and successfully reinvent the network for cloud, resulting in an automated, flexible solution that can pivot and change as needs evolve—a win-win for everyone.



Be a cost-control ninja.

When it comes to cloud, uncontrolled expenses can become an enterprise's worst enemy.

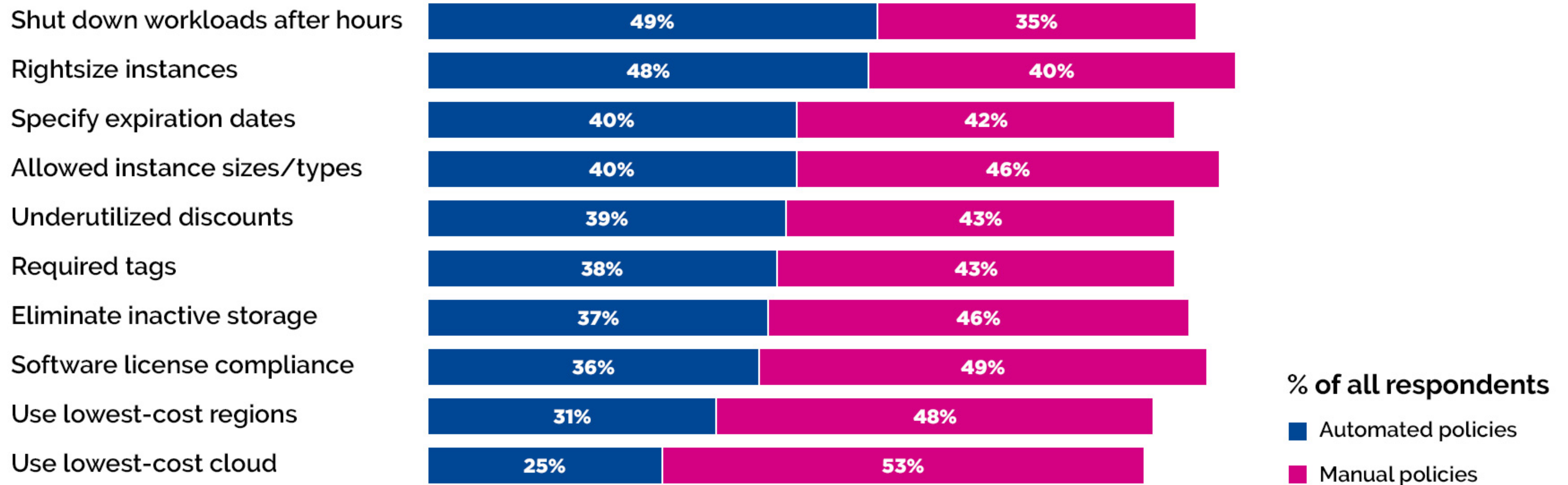
How? It comes down to a need for new skills, tools and mindset. For example, when you put powerful capabilities in the hands of smart users without management or cost controls, the results can be immediate and often disastrous.¹ In addition, many organizations still utilize the age-old IT practice of overbuying to ensure adequate resources—with cloud, this is otherwise known as throwing money away.² Yet old habits die hard.

IT is quickly learning the importance of cross-functional cost management, often the hard way, yet the challenge appears to only grow with cloud maturity; a recent study shows that organizations more advanced with cloud reported that cost management is their number one challenge, while beginners list it as 5th and intermediates as 3rd of their top 5 cloud concerns.²

3

“Cloud spending is now a significant part of a company’s IT budget, yet nearly one-third of it goes to waste.”¹

Policies to Optimize Cloud Costs



Source: Flexera 2021 State of the Cloud Report

Fortunately, organizations are learning to optimize cloud costs by developing effective **cost management policies**.² Cost should always be an important factor in design decisions, even if it is not your span of control. While the network team is not directly responsible for all areas of IT, the company is impacted every time a dollar doesn't support strategy or goals. As a business leader, it's crucial to take this into account.

Get your head in the cloud.

Remember when security seemed relatively easy? You protected hardware and software and made sure the network was safe. Data and applications lived in your own data centers, and you could put perimeters in place to protect and empower users to secure resources.

Clearly, things have changed. Organizations need to approach network security in the cloud in a vastly different way. In short, they need to ensure that traffic is controlled and users can only access the data they are permitted to access. Of course, this is easier said than done.

Putting your apps in the cloud creates massive exposure compared to hosting on-premises. If you host an app in AWS without having your security in place, you may open things up to hundreds of thousands of unauthorized users and a potential breach. To make matters worse, organizations often make the mistake of assuming cloud providers will cover aspects of security that are actually

part of a “shared responsibility.” In fact, according to Gartner, through 2025, 99% of cloud security failures will be the customer's fault, citing misconfigurations and mismanagement as the top reasons.³ Although this is changing as businesses become more mature in terms of cloud security, it is still a major risk for many organizations.

Ransomware

has become an increasing problem for organizations, especially after the pandemic drove workforces into the cloud en masse and basically overnight. Developing a strong strategy is crucial and also requires new approaches.

Don't be a total zero.

Zero trust, heard of it? Of course you have. It's become the holy grail of security at a time when ransomware is making headlines and cyber attackers are more aggressive (and sophisticated) than ever. Industry research shows that almost three quarters (72%) of businesses have plans to adopt zero trust in the future or have already adopted it.⁴

Yes, zero trust is a framework that will dramatically improve the security posture of organizations when it's realized its potential, but today zero trust has limitations. Anyone who says that zero trust is a mature concept would be fooling you. That's why it's imperative that you find other ways to protect data as we move from closed to open systems and a dramatically changed data center.

So definitely adopt a zero trust approach, but remember that at this point, it is just that: an approach. You still need to consider many elements, such as determining who in your business truly needs access to what, aligning with

SASE models, identifying (and possibly replacing) apps that expose too much to the web, perhaps moving to a zero trust network architecture in the cloud ... And the list goes on.

Tools you may need include:

- Multifactor authentication capabilities and/or your cloud provider's native security controls, including multifactor authentication.
- Identity and Access Management (IAM) to manage users' digital identities and access privileges securely and effectively.
- Cloud Infrastructure Entitlement Management (CIEM), which is another IAM solution known to manage entitlements.

Be the data.

Live it. Breathe it. Get inside of it. To build the most effective network strategy, you must fully understand data and strategy. After all, if network engineers don't know where data is flowing, they can't manage, monitor or protect it.

By 2025, IDC estimates the world will create and replicate 163 zettabytes (ZB) of data.⁵ Gone are the days where data resides in a single location and you could react to issues as they occurred. Today, data is the lifeblood of business, and you need a strategy to get ahead of connection, performance and security issues.

In order to harness the full power of data, you need to know a whole lot more about the business than you may have in the past: what's happening in the industry, what disruptions are occurring in similar or adjacent industries that could happen in yours, where your business hopes to go in the future. In short, you have to become a student of the business.

Here's how:

- Consider, if you're not already, meeting up with R&D, Marketing or other areas to get a handle on where they see things moving over the next few years.
- Get involved in an industry organization for news on the latest trends, practices and tools.
- Begin reading blogs of futurists, data scientists, industry experts, and your own organizations' thought leaders.
- And set your own mind to work on how your data can serve the future of your business.



Fill the gap. Fuel the business.

While developers are the “boots on the ground” in today’s app-centric business, network engineers and administrators are tasked with building around them in our brave new cloud-centric world. But it’s not that easy. Technologies and tools are advancing faster than the skills of the IT teams charged with supporting evolving networks.

And the results of lagging or missing skills? They’re real and they have serious business consequences: delayed product and service releases, missed revenue and increased costs.

It’s no wonder that 80% of managers identified the IT skills gap as a major business concern.⁶ And with the number of devices connected to IP networks expected to be more than three times the global population by 2023, the network is only going to become more complex.⁷ That’s why network, cloud, security and other IT teams need to

picture and ensure that everyone has the tools and knowledge to collaborate on a common goal. But investing in tech skills will only get teams so far because soft skills are just as important in organizations where technology is embedded into the business. Attributes such as flexibility, adaptability, leadership and strong work ethic will be vital to IT’s ability to work across teams, according to industry research.⁸ In the best organizations, learning never stops.

80% of managers

identified the IT skills gap as a major business concern.



Be a disruptor, not an interrupter.

Business interruption. Network outage. Downtime. There are many ways to say it, but they're all just polite ways to say what your customers and users know: your business is down.

With 82% of organizations suffering a disruptive event (e.g. downtime or data loss) in 2020, and high profile outages regularly making the news, downtime has become an unfortunate fact of life for today's business.⁹ **In 2021, global internet outages climbed 142% in the first month alone.**¹⁰ And the use of collaboration tools such as Zoom and Microsoft Teams has only exacerbated the organization-wide impact of downtime.

Even minor outages can become business killers when customers can't purchase products or access support and when employees can't get on the network to do their jobs.

How do you create cloud services redundancy to build resiliency for today's applications?

- Build redundancy for failover or load-balancing by running multiple direct connections to your cloud providers so there is no single point of failure.
- Utilize native redundancy capabilities of your cloud service providers; many organizations never realize these capabilities exist so they never turn it on.
- Build effective back up architecture, and leverage automation and other IT tools to enhance systems recovery.¹¹





Don't touch this.

It was one thing when networking controlled every piece of hardware, but in today's cloud environment, you may have to set up a logging and monitoring system across hundreds of different systems. Enter automation. **Gartner predicts that by 2024, organizations will lower operational costs by 30%** by combining automation technologies with redesigned operational processes.¹²

Sounds great, right? That's probably why one recent study discovered that 31% of businesses have fully automated at least one function, and two-thirds of businesses are piloting the automation of business processes in one or more business units or functions.¹³

But automation is a BIG subject with wide-reaching ramifications. And when your eyes are bigger than your stomach, automation projects can give you a big case of heartburn. One way to make automation more palatable and still see the benefits is to start with projects that are

more accessible and easier to incorporate, for instance tools and basic scripting. Start small, gain some experience, and grow from there. Be sure to think it through, so it doesn't come back to bite you later.

For example, make sure you first understand which repeatable tasks would have the most impact for the business if automated. Make sure your infrastructure is API-driven to work best in hybrid infrastructure, and use tools that are designed to work in a hybrid cloud environment. To take a deeper dive into automation best practices, see **"Five Tips to Avoid Toil and Trouble on Your Automation Journey."**





Raise your hand.

You need to know when to raise your hand and engage help. After all, this is big, complex, evolving stuff and you are the key to bringing it all together. Why not call in experts who have done this for a multitude of companies and know how to get things done effectively and smoothly?

Here's what to look for when choosing experts to help you build a modern network strategy for the cloud:

- Experts who get it, who can fit in seamlessly wherever you need them, and who can shortcut the process
- A company that has networking in its DNA so it understands both the fundamentals that remain relevant, the changes with cloud and how to seamlessly weave approaches together
- Deep and broad expertise across all the interrelated components of cloud, security, network, app dev and dev ops, and more
- Consultants who can assist you in facilitating conversations, defining shared goals, building roadmaps, transferring knowledge and delivering the business outcomes you need

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