IT’S NOT EASY BEING IT

There’s no way around it.

As IT professionals, we must keep up with modern business services while ensuring technological infrastructure is up to the task. We’re responsible for ensuring smooth operations for our line of business (LOB) teammates while maintaining reliable, scalable IT infrastructure.

As all IT professionals know: this is no simple task.

This challenge is a result of end users demanding increasing speed and agility from their new apps and services. For many organizations, this unprecedented requirement for speed and low latency takes its toll on legacy IT equipment.

The truth is that many IT professionals can’t keep up with modern business needs while using outdated IT practices and architecture. As IT professionals lag behind business operational needs, the Relevance Gap widens.
By understanding this new threat and identifying ways to achieve IT agility, IT professionals can close the gap, modernize their IT infrastructure approach and become relevant to their businesses once again.

The Relevance Gap: A Threat to IT Professionals Everywhere

Historically, LOB managers rely upon IT professionals and services for technological and network support. Now that the speed of business is at an unprecedented rate, and modern business applications are just a download and subscription away, LOB leaders can’t wait for IT. Unfortunately, this often results in LOB managers taking tech matters into their own hands, subscribing for new apps and services without thinking about the consequences these new services may have on IT.

IT professionals end up responsible for this surge in resource needs, often needing to relieve network congestion with already-limited budgets. IT also starts to look irrelevant to the business because LOB managers can subscribe and use apps and services on their own, with no thought to the network resource costs of these services. This is the Relevance Gap.

As the demands of LOB managers and end users continue to grow and they continue to add technological heft to the enterprise without IT’s acknowledgement, the Relevance Gap widens. As each day passes, IT professionals become progressively irrelevant to LOB managers while the IT workload and accountability grow.

We’ve got to do something about this.

Achieve IT Agility, Close the Gap

IT agility is about responding quickly to user service requests. To do this, IT professionals must understand what best-in-class businesses are doing to address growing LOB needs.

You’ll find information and a step-by-step process to help you assess your existing infrastructure, identify challenges, and gain insights on how to make your network not only more agile but also drive noticeable return on investment in your organization. (What business doesn’t like that!).

You’ll be on the path to IT agility once you accomplish the following:

1. Understand where your organization currently sits on its journey.
2. Identify the challenges preventing IT professionals from achieving the agility needed to better serve their organizations.
3. Learn what best-in-class IT departments are doing to gain IT agility and modernize their networks.

Use this guide to understand the challenge at hand. As you complete each chapter, you’ll get closer toward achieving the IT agility that you need to become relevant to your leadership and LOB managers once more.

That said, let’s begin.
IT AGILITY: HOW GOOD IS YOURS?

The Relevance Gap, a phenomenon where IT departments slowly become irrelevant to line of business (LOB) managers who make IT decisions on their own, continues to widen. Achieving a sense of IT agility, the ability to close the gap, begins with understanding what kind of IT department you run and the recent industry challenges at hand.

Pressures of the Third Platform

Mobile devices, cloud services, social networks, and big data analytics are priorities on many business leaders’ operational to-do lists. According to leading industry analyst firm IDC, consideration will soon have to be given to this disruptive “Third Platform” of IT technologies.

What does this mean for you?

1. **IT infrastructure must shift and evolve.**
   IT, and its infrastructure in particular, is at an inflection point thanks to external competition from cloud providers, virtualization, regulation, and the way end users use technology. Essentially, agile businesses need agile IT, and agile IT needs a modern IT infrastructure.

2. **End-user experience is critical.**
   Business continues to push IT at the speed of consumerism. Savvy employees expect the same ‘at-their-fingertips’ access to services as they enjoy in their personal web experiences.

3. **Focus attention on the network.**
   Virtualization, servers, and storage are much more agile and will experience a bottleneck in app and operational performance and speed on the network. The pressure is now on older networks to adapt and accommodate a growing need for third platform technology.

SUNPOWER, A MAJOR SOLAR PANEL MANUFACTURER, CAN NOW DEPLOY APPLICATIONS 92% FASTER WITH A NEW ETHERNET FABRIC-BASED NETWORK—A TRUE EXAMPLE OF IT AGILITY.
IT AGILITY: HOW GOOD IS YOURS?

Where Are You?

Today, 50% of organizations are planning to build a private cloud to accommodate the need for a modern network and infrastructure. Most enterprises fall into one of three categories, particularly as they relate to their networks. Which one does your company fall into?

BY 2020, WHEN WORLDWIDE ICT SPENDING [IS] $1.7 TRILLION LARGER THAN IT IS TODAY, AT LEAST 80% OF ICT INDUSTRY’S GROWTH WILL BE DRIVEN BY THIRD PLATFORM TECHNOLOGIES. — IDC

The Traditional Organization

Your organization can’t see the way forward with modernizing IT infrastructure. Or, your team contends with corporate policies that dictate what can and can’t be done, limiting the consideration of new technologies. There might be a fear of change and network professionals may worry about becoming obsolete with the introduction of network automation.

Steps for Improvement: First off, answer these questions.

1. Is your team in a position to evaluate current network structure and performance?

2. Are you able to keep up with LOB and end-user expectations?

3. Can you provision resources quickly?

If you answered “no” to any of those questions, it’s time for a change. If you’re still using a spanning tree structure, and users are impatient with IT, change is not only necessary—it’s inevitable. Start looking at solutions that modernize data infrastructure, such as Ethernet fabrics, that can ease the load on the network, and provide network professionals with the resources and opportunities to see the change to fruition and add strategic value to the organization.

The Transitional Organization

Your IT department cautiously evolves toward network automation and cloud solutions, and takes baby steps toward modern network solutions. IT teams understand that in order to prevent LOB managers from siphoning IT budgets to spend on external services, IT must bridge gaps in services where they are unable to provide resources or help in a timely manner. The organization understands that building and provisioning a modern network is critical in addressing the growing need for LOB and end-user apps. This shift will not be without challenges.
**IT Agility: How Good Is Yours?**

**Steps for Improvement:** Begin by evaluating the network’s current status. If you are still using a spanning tree structure, and the network is unable to keep up with user demand, like the traditional organization, you will need to consider solutions that will bring the network up to speed. Encourage line of business managers to work with IT to provision cloud services. More agile organizations will turn their IT department into strategic IT service brokers.

Most importantly, the next step is to begin evaluating technology that can transform the network and infrastructure, such as Ethernet fabrics.

**The Transformational Organization**

Your organization embraces and extends cloud-based services, and makes sweeping changes in the name of progress. IT now acts as a service broker, providing governance and guidance to properly manage and secure cloud investments. Your organization is hungry for the resources that will help accomplish business goals, and make the most of third platform technology.

**Steps for Improvement:** This is the strongest position, enabling organizations to turn older networks into agile ones that can meet modern cloud computing challenges. Continue fine-tuning and improving Ethernet fabric components and service. Explore testing Network Function Virtualization (NFV) and Software-Defined Networks (SDN).

**Key Takeaways:**

1. Is IT in a position to consider where the main challenges are regarding migration toward network automation?
2. Can IT transform from a department into a strategic cloud brokerage?
3. Is IT ready to consider modern network solutions such as Ethernet fabrics?

**Take Steps Toward IT Agility**

No matter where you are in your journey, you can take back control of your network. Start by shifting how the organization views, designs, and provisions the network.

This is where the IT agility mentality begins. It’s a step toward automated networks ready for faster provisioning, eliminating much of the manual work, and scripts that go into today’s antiquated infrastructure.
TOP 3 NETWORK CHALLENGES LIMITING IT AGILITY

IT teams that avoid the challenge of modernizing networks to catch up with LOB and end-user demands on resources will fall into the Relevance Gap, becoming irrelevant to their business.

Progressive, competitive IT departments acknowledge key network challenges and will achieve the IT agility to overcome them.

IT decision makers face three key challenges in the path toward IT agility.

1. Manual tasks slow your team down

Most proprietary network infrastructures are purpose-built, using manually driven processes for everything from changes to the data center to provisioning bandwidth. These manual processes are time-consuming, unsustainable, require a lot of personnel, and can create long delays. This just reeks of network downtime. Nobody likes that.

• Get IT agile. Deploy applications and services fast with Ethernet fabrics. Rapid, uniform, and cost-efficient deployments are trademarks for Ethernet fabrics, a key technology to overcome the barrier toward IT agility.

60% OF IT LEADERS WERE INTERESTED IN FABRICS FOR APPLICATION OPTIMIZATION, AND 56% WERE WORKING ON SOFTWARE-DEFINED NETWORKING (SDN).

— 2014 STATE OF THE NETWORK SURVEY
2. Getting too comfy with the status quo

It’s not that IT teams enjoy the status quo, but more that the vision toward modernizing networks remains cloudy for most. Inaction can result in IT departments watching the pace of business outrun the allocation of IT resources.

All of a sudden, external cloud services do the job better than these IT departments, rendering them irrelevant to the business. Obsolescence is a status no one wants. There is an answer, though.

**Evolve your network.** Evaluating your network and vendors is critical in keeping up with industry innovation. Organizations that evaluate Network Functions Virtualization (NFV) technologies take large steps toward IT agility and outperforming their competition. While many NFVs are built for service providers and telecommunications companies, they continue moving into the enterprise market and promise drastic cost reductions and other benefits. These entities progressively become service providers via virtualized data centers and applications. Software-Defined Networking (SDN) is on a similar path.

70% OF ALL DOWNTIME IS CAUSED BY HUMAN ERROR WHEN CONFIGURING PORTS OR ALLOCATING RESOURCES VIA CLI SCRIPTS. — GARTNER

FIND OUT MORE ABOUT NFV AND SDN TECHNOLOGIES IN OUR VIDEO, ‘GOODBYE VIRTUAL, HELLO PHYSICAL’ ➤
3. Fearing change, avoiding progress

The fear of obsolescence and the viewpoint of “pain of adapting to the new system will be worse than the pain of the old system” holds IT departments back. When IT fears progress, the organization suffers.

Banish fear. Automation and agility aren’t threats to jobs—they’re career opportunities. Network engineers that learn and perform higher-value tasks to help the organization subsequently move their careers forward as strategic IT services brokers.

Despite these challenges, IT decision makers are moving forward, evolving legacy networks to fabric-based networks and transforming the IT department into a strategic force within the organization.

Key Takeaways:

1. Is IT ready to consider modern network solutions such as Ethernet fabrics?
2. Does the IT team have educational resources about Software-Defined Networks (SDN) and Network Functions Virtualization (NFV)?
3. What can IT do to acknowledge that modernizing the network is not an end to their jobs, but is actually a career opportunity?

Remember that network technicians are the “N” in Software-Defined Network: someone needs to design and maintain the network. The software does a lot of work, but it can’t do it all.
Leading organizations actively seek ways to address the challenges of achieving IT agility and closing the Relevance Gap. Each technological advancement and business operations win not only modernizes the organization’s network, but also brings IT back into relevance and, most importantly, reverence. Let’s take a look at how two businesses accomplished the task.

**HOW OTHER ORGANIZATIONS ACHIEVE IT AGILITY**

**CASE STUDY 1**

A major hospital system drastically reduced login times by modernizing their network.

**Challenge**

A major hospital system with 2,600 employees needed to reduce its electronic health record (EHR) login time. The previous process was manual and anything that needed to be changed required extensive support time. Not only was it a business problem, it affected customer experience.

**What they needed**

- Seamless continuity in the event of a disaster
- Simplified device management
- Faster user response time

**Solution**

- Ethernet fabric-capable switch
- Hardware and software with Ethernet fabric capability
HOW OTHER ORGANIZATIONS ACHIEVE IT AGILITY

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CASE STUDY 1

A major hospital system drastically reduced login times by modernizing their network.

Results

The hospital system moved to Ethernet fabric, which allowed it to embrace automation. The results were impressive:

- **50%**
  - **Quicker processes:** Epic reduced electronic health record (EHR) login time by nearly half the industry standard.

- **Eight Minutes**
  - **Reliable performance:** Ability to move 80 virtual machines and their data in eight minutes and with ZERO service disruption; a process which used to take days.

- **Zero Downtime**
  - **Network redundancy:** Enabling seamless business continuity in the event of a disaster.

THE BOTTOM LINE

- Ethernet fabrics increase network availability, performance, and stability for critical business functions. Implementing Ethernet fabrics is the first step toward answering IT-crippling network loads from modern apps and cloud-based business solutions.
A leading solar power provider in the United States wanted to deploy services fast by building out its IT infrastructure. This involved the addition of numerous racks and servers.

**What they needed**
- Ability to expand the infrastructure to accommodate new racks and servers
- Plug-and-play operability
- Zero administrator configuration: devices needed to automatically join the network, download policies and best practices, and immediately implement that defined behavior
- Line-rate 10 Gigabit Ethernet with low latency and reduced power consumption
- Escape from traditional data center environments, including Spanning Tree Protocol (STP)

**Solution**
- Ethernet fabric-ready data center switch
HOW OTHER ORGANIZATIONS ACHIEVE IT AGILITY

CHAPTER 3

HOW OTHER ORGANIZATIONS ACHIEVE IT AGILITY

HOW OTHER ORGANIZATIONS ACHIEVE IT AGILITY CASE STUDY 2
A leading solar power provider captured immediate and long term network and IT savings.

Results
View the benefits of an Ethernet fabric-driven network in action:

- **Quicker deployment:** Services are delivered 92% faster than they could be with a multi-tiered architecture.
- **Immediate ROI:** Implementation led to a capital cost savings of 50%.
- **Lower Operational Costs:** Simplified network infrastructure reduced management time from hours to minutes.

THE BOTTOM LINE
Ethernet fabrics helped the solar power provider achieve immediate ROI, as well as reducing time to deployment, network management time, and operating expenses.
How other organizations achieve IT Agility

Key Takeaways:

How Can You Get Similar Results?

- **Evolve to Ethernet fabrics.** Ethernet fabrics are a beautiful technology. Imagine a platform where the entire network infrastructure doesn’t need to be torn out all at once. Engineers can deploy a minimalist setup and start to see immediate results. Ethernet fabrics are 100% compatible with existing legacy infrastructure, which means a much easier time integrating new solutions with existing architecture.

- **Introduce policy-based management.** Ethernet fabrics can provide a uniform interface that enforces security and use policies across every port. This allows engineers to plug in new infrastructure and have it automatically receive proper security and network protocols.

- **Embrace change.** Organizations that position automation as an opportunity for advancement, and not a threat to careers, will help their network professionals evolve to the next level. Gain IT agility and whiz past the days of constantly writing CLI scripts. Encourage IT departments to become a strategic partner in the organization, increasing its usefulness.

For instance, **become certified in Software-Driven Data Centers (SDDC)** to take a first step toward a modern, strategic network.

CONGRATS
YOU EARNED YOUR
IT AGILITY BADGE!

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ABOUT BROCADE

Brocade VCS fabric technology is the industry’s first Ethernet fabric technology and allows organizations to transition smoothly to elastic, cloud-optimized networks. Brocade’s VDX platform is a line of highly scalable, low-latency switches specifically designed to scale out Brocade VCS fabrics. The Brocade Vyatta line of routers enables sophisticated, multi-tier networks to be built within virtualized environments.

Brocade VCS fabrics grant IT teams true IT agility, allowing them to gain the following:

• **Lower expenses**: Approximately 30-40% can be cut from capital expenses.

• **Improved cost savings**: Due to the lower power consumption attributable to Ethernet fabrics, operating costs can be cut by at least 50%.

• **Increase IT labor efficiency**: No new IT hires are needed to maintain a meshed, flattened network versus a traditional, three-tier network with a spanning tree.

• **Achieve a unique competitive advantage**: Companies have the flexibility to leverage their assets further, as the business needs arise, with minimal investment.

In the rapidly changing world of IT, where cloud computing is the norm, companies need to remain agile. The best way to do that—and thrive, not just survive—is to evolve the network to support those applications.

We hope that by reading the “IT Agility Survival Guide,” you’ve gained some insight on how you can make your network smarter—and ultimately, more agile. Evolution of the network is a journey—preparing your network for today’s challenges but building to support new technologies will put you ahead of the game to be agile today and in the future.

“THE KEY IS AUTOMATION. THE KEY IS NOT TO DUMB THE NETWORKS DOWN, BUT TO MAKE THE NETWORKS SMARTER.”
— CHIP COPPER, PHD, PRINCIPAL ENGINEER, BROCADE

Ready to modernize your network?
www.datacenterfuture.com brings together innovative and informative resources to help you build an optimized network infrastructure. Featuring a wealth of videos, case studies, infographics, white papers and more on topics including Ethernet fabrics, Network Function Virtualization and Software-Defined Networking, it’s the best place to go for the latest news.

About Brocade Brocade networking solutions help the world’s leading organizations transition smoothly to a world where applications and information reside anywhere.