A10

Modernizing Application Delivery with Dell Technologies and A10 Networks

Overcome Operational Challenges and Achieve Your Business Goals

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EXECUTIVE SUMMARY

The A10 Thunder® on Dell Technologies Single Service Platform (SSP) and Multi-Tenant Virtual Platform (MVP) provide enterprises with an upgrade path to modernize their application delivery infrastructure, whether on-premises or in a hybrid cloud environment.

Embrace a Modern Approach to Application Delivery for Better Business Outcomes

Digital transformation and a growing reliance on applications are changing the way organizations think about achieving their business goals. To remain competitive, enterprises must adopt a modern approach to application delivery. Together, A10 Networks and Dell Technologies have developed a solution that resolves the complexities around application availability, security, and optimization.

A10 Thunder on Dell Technologies SSP enables organizations to run A10 Networks' cloud-ready Thunder Application Delivery Controller (ADC), Thunder SSL Insight (SSLi) or Thunder Carrier Grade Networking (CGN) software on purpose-built Dell Technologies hardware. A10 Thunder on Dell Technologies MVP offers greater cost savings through consolidation by providing the option to create multiple virtual instances of Thunder ADC, SSLi, and/or CGN on a single platform.

Key Findings:

- Digital transformation and the explosion of applications are having a significant impact on application delivery and the user experience

- Embracing a modern approach to application delivery helps organizations overcome operational challenges and achieve business goals

- Taking a Polynimbus secure application services approach provides greater agility, operational efficiency, and cost savings

- Modernizing application delivery to improve DevOps provides a competitive advantage

- A10 Thunder on Dell Technologies SSP and MVP help enterprises modernize their application infrastructures and achieve success

70% OF BUSINESSES

Increased / Maintained Digital Transformation Spending During the Pandemic

Digital Adoption: 20 Digital Skills and Digital Transformation Statistics [2020]

$5,600 THE COST OF DOWNTIME

Per Minute on Average

Chatsworth Products: Understanding the Cost of Data Center Downtime

46x MORE SOFTWARE DEPLOYMENTS

For Organizations That Utilize DevOps Principles

CDNetworks: 5 Statistics that Prove DevOps Practices Improve Web Performance

47% OF PEOPLE EXPECT

Web Pages to Load in < 2 Seconds

PixelCrayons: Top Web Development Stats in 2020

INTRODUCTION

The Impact of Digital Transformation and Growing Application Usage

The business world is in the midst of a digital transformation that has been accelerated by the COVID-19 pandemic. To remain competitive, enterprise organizations must move away from their legacy practices and adopt a new approach that enables greater agility and responsiveness. Central to this transformation is the growing use of applications and the need to modernize their delivery.

Organizations, even individual users, have become increasingly more application-centric while the workplace has become more distributed. As the number of applications has increased, so too has the complexity of their delivery. The result is that enterprises and consumers are increasingly dependent on workplace, web, and mobile applications to keep us connected and productive wherever we are.

To support every business line and customer successfully, organizations need to ensure all their application environments are agile and flexible. But what is the best strategy to meet business goals? The answer depends on organizational priorities, which can include:

Delivering a better user experience (UX)

Enabling faster application rollouts

Initiating operational improvements that reduce human error, complexity, & TCO

Many are achieving success by upgrading from the legacy application delivery devices in their data centers to modern platforms and software-based solutions.

Enterprises that embrace this modernization approach to digital transformation and secure application services delivery are well-positioned to reap the benefits. However, there are challenges along the way. This eBook examines those challenges and offers insight into how enterprise organizations can successfully navigate their journey to achieve better business outcomes. You will also learn about a unique, and powerful, joint solution from A10 Networks and Dell Technologies for secure application services delivery.

The number of software apps deployed by large firms across all industries world-wide has increased

68% OVER THE PAST 4 YEARS

Reaching an average of 129 apps per company by the end of 2018

The Wall Street Journal: Employees Are Accessing More and More Business Apps, Study Finds

There are over

1.7B WEBSITES TODAY

Digital Adoption: 20 Digital Skills And Digital Transformation Statistics [2020]

MODERNIZING APPLICATION DELIVERY

As enterprises move forward on the path of modernizing application delivery, they face challenges along the way. However the benefits are worth the effort as they drive competitive advantages and streamline operations.

CHALLENGES: Transitioning to a Modern Architecture

⚠️ **Ensure Continual Application Availability** — Applications are the lifeblood of many organizations and must therefore be available around-the-clock. Any downtime could result in lost revenue and productivity as well as a damaged brand reputation. Moving from a legacy architecture to one that includes software agility removes layers of complexity and human error around application delivery consistency and the need for redundancy.

⚠️ **Secure Applications from the Latest Threats** — Protection from the onslaught of cyber threats across clouds, applications, networks, and data is critical. Web exploits, distributed denial of service (DDoS) attacks, ransomware, data theft, and threats hidden in encrypted traffic, can take a serious financial toll on even the most stable organizations. It's essential to maintain a robust level of security in all application delivery infrastructures wherever they are located.

⚠️ **Optimize for Performance** — Organizations must provide an exceptional, and dependable, user experience or risk losing customers. To help with this, enterprises are turning to UX software as part of their digital transformation. Customers who use digital channels to connect with businesses through their applications have an expectation of speed and responsiveness. This requires optimization for enhanced application performance, potentially across apps, geographically distributed data centers, and clouds from different vendors.

⚠️ **Management and Visibility Across the Network** — Managing devices in the modern network individually is counter-productive, too complex and too manual, whether that network is on-premises or in the cloud. To manage an enterprise network efficiently and deliver applications securely and reliably, IT administrators require a holistic view into devices, applications, policies, users, and more across data centers and clouds.

40% OF ENTERPRISE ORGANIZATIONS

Indicate that 1 hour of downtime can now cost their firms from $1 million to over $5 million

ITIC: Forty Percent of Enterprises Say Hourly Downtime Costs Top $1Million

98% OF ENTERPRISE ORGANIZATIONS

With 1000+ employees Indicate that on average, 1 hour of downtime per year costs their company over $100,000

Chatsworth Products: Understanding the Cost of Data Center Downtime

12.5M UNIQUE IP SOURCE ADDRESSES

Exploited hosts regularly used in DDoS attacks

A10 Networks: State of DDoS Weapons Report

Reduce page load time from 8 to 2 seconds for

74% HIGHER CONVERSION RATE

PixelCrayons: Top Web Development Stats in 2020

MODERNIZING APPLICATION DELIVERY

BENEFITS: The Path to Achieving Better Business Outcomes

✓ **Enhanced Agility** — Transitioning to a modern application delivery solution can make organizations nimbler as they look to implement changes, both large and small. Adding new applications, updating existing versions, and scaling resources to meet continually evolving application delivery needs, especially during usage spikes, can be more easily achieved with little or no application downtime required.

✓ **Faster Development and Delivery** — Minimizing the time it takes to develop, test, and bring applications to market can greatly impact an organization's fortunes. Organizations that take a DevOps approach to developing and delivering cloud-ready applications can bring their applications and services to market more quickly than those using traditional processes. They're also able to recovery from any downtime sooner than those who don't, giving them a competitive advantage.

✓ **Customer Acquisition and Retention** — Identifying and acquiring new customers is an ongoing challenge. So too is keeping them over the long term. Research shows that consumers are more likely to stay with a business rather than move to a competitor if they have a positive UX. They're also willing to pay more for services. Delivering an experience that delights prospective customers and retains existing customers could mean providing an engaging website, fulfilling online orders during peak times or offering multi-channel customer support.

✓ **Cost Savings** — Consolidating equipment by replacing legacy products with a single solution, whether achieved through an upgrade and/or virtualization, that can run multiple services is an effective means to reduce costs. So too is using API-driven automation tools which can free up staff to focus on other tasks, enabling them to be more productive. Using these strategies, organizations can realize operational and management efficiencies that translate into reduced Opex incurred from application development and delivery cycles.

440x FASTER LEAD TIME FOR CHANGES

For organizations that utilize DevOps principles

CDNetworks: 5 Statistics that Prove DevOps Practices Improve Web Performance

Over 2/3 OF COMPANIES

Compete on the basis of customer experience

1 IN 3 CUSTOMERS

Will leave a brand they love after one bad experience

92% OF CUSTOMERS

Would abandon a company after two or three negative interactions

SuperOffice: 37 Customer Experience Statistics You Need to Know for 2021

MODERNIZING APPLICATION DELIVERY FOR THE HYBRID CLOUD ENVIRONMENT

To successfully modernize application delivery for a hybrid cloud or multi-cloud infrastructure requires a different approach, one that looks at existing practices and platforms in a more holistic way.

We call this a Polynimbus approach. At a high level, it means running your on-premises and cloud deployments together, not separately. Instead of treating data centers and clouds as silos that deploy different flavors of the same application or enforce independent policies for users, a better way is to operate everything as one system to enable greater simplicity, agility, security, and consistent manageability of applications and policies. It is a shift to managing the new reality securely and efficiently as a core IT operation.

Full Secure Services Stack — Security services from a cloud provider can vary widely, so Polynimbus application services must be available to ensure security is delivered seamlessly across infrastructures. Building a defense-in-depth strategy that includes advanced load balancing, web application firewall (WAF), authentication access management, malicious traffic and bot mitigation, integrated DDoS protection with real-time threat intelligence, data center firewall, TLS/SSL offload, and more will help mitigate network threats.

Central Visibility and Reporting — Centralized visibility across on-premises and cloud deployments is needed for operational consistency, with a granular view into individual applications, objects, and users. Analytics will lower TCO and reduce downtime by providing actionable intelligence that enables IT to quickly enact changes to meet user expectations and compliance objectives.

Full SecOps and DevOps Readiness — Automation drives operational consistency and efficiencies across hybrid cloud and multi-cloud environments. The use of industry-leading automation tools can reduce response times, streamline DevOps and SecOps tasks, and drive down costs. This often requires integrated support for APIs from third-party developers.
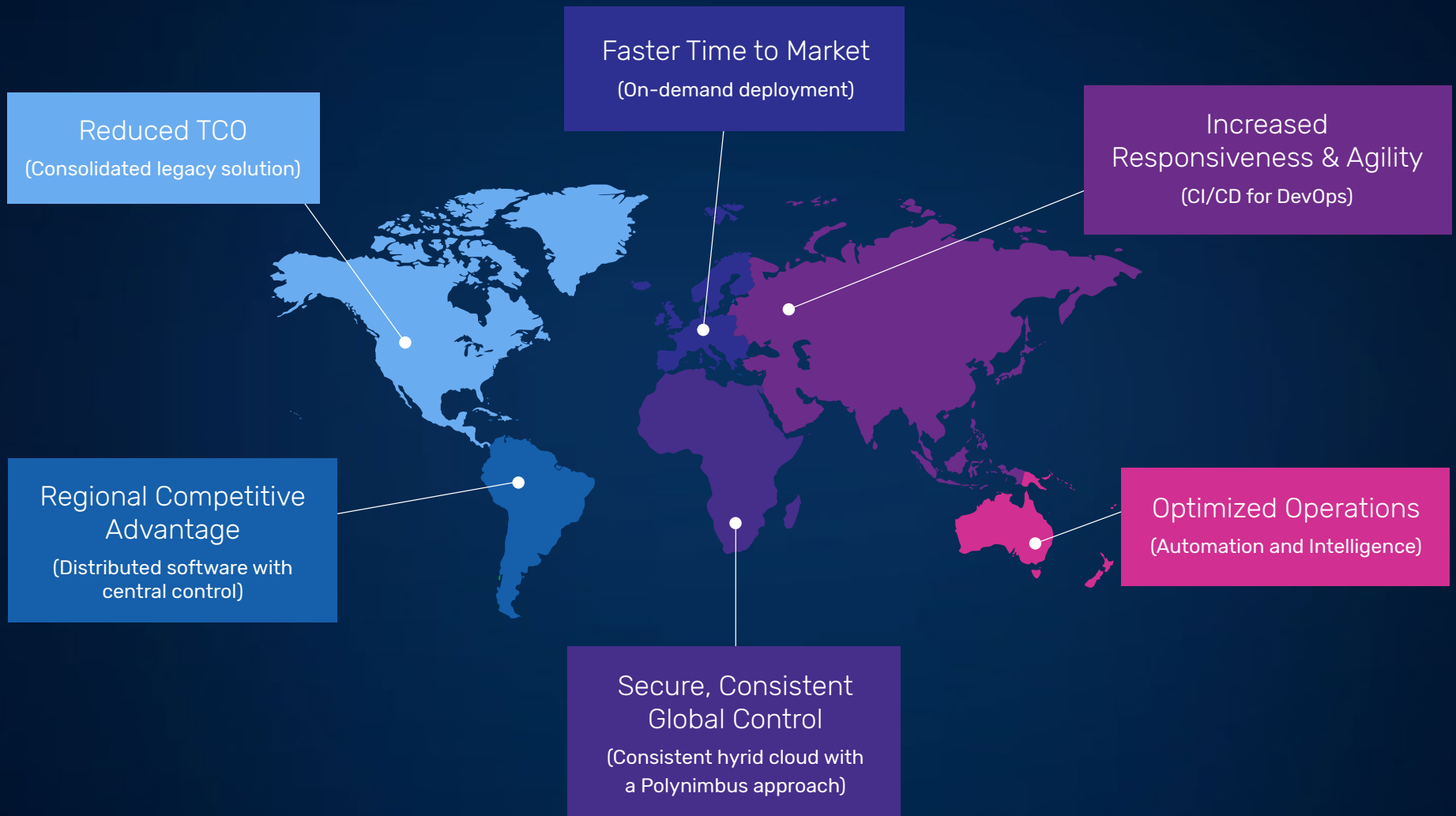
Centralized Management — Streamlined single-pane-of-glass management provides a complete view into network activity from one location, enabling administrators to initiate policy changes that simplify and normalize operations for consistency across diverse network environments.

Software Licensing Flexibility — Flexible software licensing enables organizations to partition virtual instances on the hardware and add or subtract instances as needed, increasing cost savings and reducing TCO.

VISUALIZING MODERN APPLICATION DELIVERY

What Can a New Approach Do for You?

Faster Time to Market
(On-demand deployment)

Reduced TCO
(Consolidated legacy solution)

Increased Responsiveness & Agility
(CI/CD for DevOps)

Regional Competitive Advantage
(Distributed software with central control)

Optimized Operations
(Automation and Intelligence)

Secure, Consistent Global Control
(Consistent hyrid cloud with a Polynimbus approach)

THE A10 NETWORKS POWERED BY DELL TECHNOLOGIES SOLUTION

Finding and implementing the right solution as you modernize your infrastructure for application delivery can be complicated. That's where A10 Networks and Dell Technologies can help. We have teamed up to create a set of turn-key application availability and security solutions that help enterprises overcome the operational and security complexities they face on their application services journey.
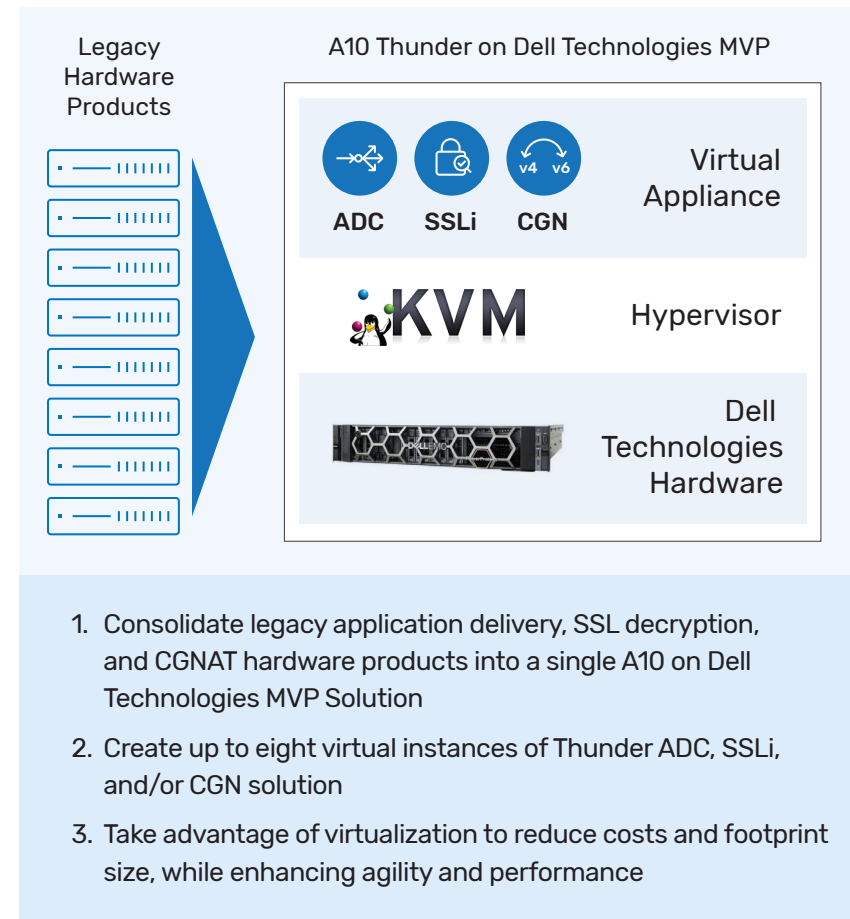
The solution features A10 Networks' cloud-ready ACOS® software running on enterprise-grade, purpose-built Dell Technologies hardware. Together, this combination provides consistent application availability and delivery through advanced load balancing, SSL visibility via SSL/TLS decryption, plus IPv4 preservation and IPv6 migration.

Solution Benefits

A10 Networks Powered by Dell Technologies solutions offer essential benefits that help enterprises achieve their goal of modernizing application delivery for a software and cloud world.

- **Simplified Deployment** — Standardization on Dell Technologies hardware offers a consistent platform and support experience

- **Cost Savings and Lower TCO** — Consolidation of up to eight application delivery controller instances with multi-tenant virtual platforms and higher performance through optimization lower Capex and Opex costs

- **Enhanced Agility and Performance** — Multi-tenant virtual solutions deliver operational agility and speed with independent software instances and strong isolation

- **Central Visibility and Management** — Tight integration with A10 Harmony® Controller provides deep per-application visibility and comprehensive management controls for secure application delivery across on-premises and cloud environments

- **Reduced Complexity** — The Dell EMC OpenManage systems management portfolio helps tame IT infrastructure complexity with intuitive tools that work together to deliver automated, repeatable processes, enabling effortless management

Legacy Hardware Products

A10 Thunder on Dell Technologies MVP

ADC SSLi CGN — Virtual Appliance

KVM — Hypervisor

Dell Technologies Hardware

1. Consolidate legacy application delivery, SSL decryption, and CGNAT hardware products into a single A10 on Dell Technologies MVP Solution

2. Create up to eight virtual instances of Thunder ADC, SSLi, and/or CGN solution

3. Take advantage of virtualization to reduce costs and footprint size, while enhancing agility and performance

SOLUTION PLATFORMS TO SOLVE YOUR HYBRID CLOUD CHALLENGES

A10 Thunder on Dell Technologies Single Service Platform (SSP) enables organizations to run A10 Networks' cloud-ready Thunder ADC software on purpose-built Dell Technologies hardware.

A10 Thunder on Dell Technologies Multi-Tenant Virtual Platform (MVP) takes advantage of virtualization to offer greater flexibility through multi-tenancy. Create up to eight virtual instances of Thunder ADC on a single platform.
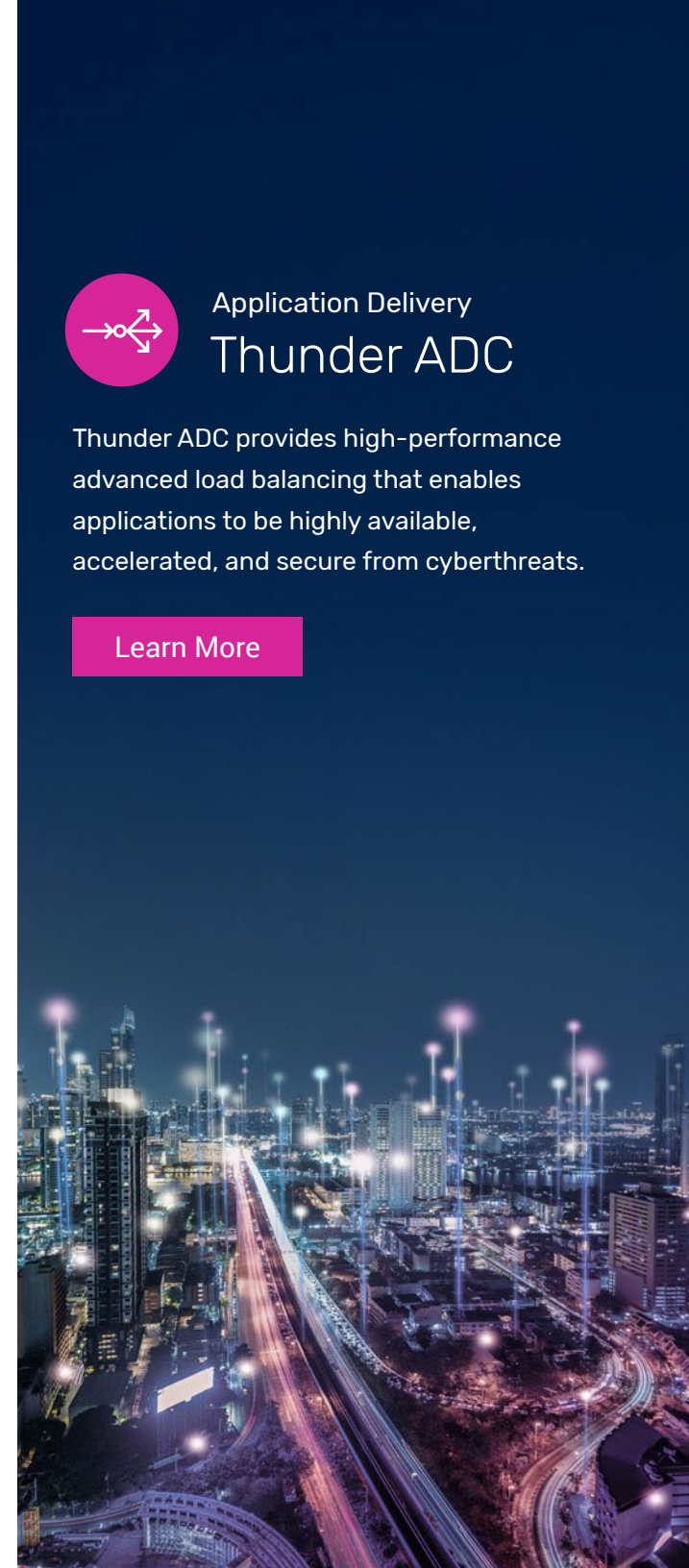
Key Application Delivery Features

- Advanced server load balancing ensures applications are consistently and reliably available. Global server load balancing extends availability by intelligently distributing application traffic across multiple geographic locations.

- Integrated ICSA-certified DDoS protection, SSL/TLS offload, and authentication access management provide enhanced application and authentication security from cyberthreats.

- Performance and optimization including SSL/TLS offload, the use of Perfect Forward Secrecy (PFS) ciphers and Elliptic Curve Cryptography (ECC), content caching, and data compression accelerate application performance for an exceptional user experience.

- Management and analytics through tight integration with A10 Harmony Controller and Dell OpenManage offer greater software and hardware management control across on-premises and cloud deployments plus extensive API support for granular analytics.

Application Delivery
Thunder ADC

Thunder ADC provides high-performance advanced load balancing that enables applications to be highly available, accelerated, and secure from cyberthreats.

Learn More

CONCLUSION: NOW IS THE TIME...

Organizations are quickly moving down the path to hybrid cloud and multi-cloud infrastructures as part of their digital transformation.

Modernizing application delivery comes with challenges: managing a growing number of applications, ensuring application availability, security, and optimization, overcoming increased operational complexity, improving cost savings, and delivering the best user experience possible

To help enterprises navigate their way and achieve better business outcomes, A10 Networks developed its Polynimbus secure application services blueprint. The blueprint offers organizations a framework to streamline operational processes and reduce complexities across on-premises and hybrid cloud architectures.

Whether your network is staying on-premises or moving to a hybrid or multi-cloud architecture, making the decision to modernize application delivery requires the right solution. Together, A10 Networks and Dell Technologies have developed a set of solutions that deliver A10's Thunder ADC service running on purpose-built Dell Technologies hardware. The A10 Networks Powered by Dell Technologies SSP and MVP solutions enable organizations to be more competitive by reliably and securely delivering applications that are optimized for performance and provide a dynamic user experience. Adding Harmony Controller provides centralized management and analytics for secure application services across data center and hybrid cloud deployments. **To learn more about how these solutions can benefit you, visit a10networks.com**.

Other A10 Networks on Dell Technologies SSP and MVP Services

SSL/TLS Visibility
Thunder SSLi

Thunder SSLi delivers comprehensive SSL/TLS decryption that enables security devices to efficiently analyze all enterprise traffic while ensuring GDPR mandates, stopping encrypted data exfiltration, and boosting ROI.

▸ Learn More

CGNAT and IPv6
Thunder CGN

Thunder CGN offers industry-leading carrier-grade NAT that scales networks to overcome IPv4 exhaustion, supports network growth, and delivers a seamless user experience.

▸ Learn More

Additional Solutions

Analytics & Management
Harmony Controller

Harmony Controller provides centralized management, automation, and analytics for A10 secure application services deployed over various underlying infrastructure — from data centers to hybrid clouds and multi-clouds.

▸ Learn More

ABOUT A10 NETWORKS

A10 Networks (NYSE: ATEN) provides secure application services for on-premises, multi-cloud and edge-cloud environments at hyperscale. Our mission is to enable service providers and enterprises to deliver business-critical applications that are secure, available and efficient for multi-cloud transformation and 5G readiness. We deliver better business outcomes that support investment protection, new business models and help future-proof infrastructures, empowering our customers to provide the most secure and available digital experience. Founded in 2004, A10 Networks is based in San Jose, Calif. and serves customers globally.

For more information, visit a10networks.com and follow us @A10Networks.

Learn More
About A10 Networks

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