



The Definitive Guide to Selecting the Right ADC for the Digital Transformation Era

Introduction

It used to be that you would build out your datacenter with all the right considerations in place, purchasing equipment that was sized to meet the needs of your organization for today and the near term future.

Change used to be merely planning for capacity upgrades or network expansion, or migrating to the latest application version—or more simply put: things we could measure, control and manage.

With the advent of the cloud, the rise in cyber-based threats, and the need to do more, faster, we're witnessing a perfect storm that is making it more and more difficult for the enterprise to plan for change, and to maximize the investments that they make in their IT infrastructure today.

This eBook will focus on considerations that you should make when deciding on an ADC solution that can not only survive these changes, but help create opportunities for innovation as the enterprise strives towards digital transformation. This guide will help you understand the changes that are currently underway, and enable you to invest with confidence as you plan your application delivery strategy for the next five-year cycle.

Digital Transformation's Impact on the ADC Landscape

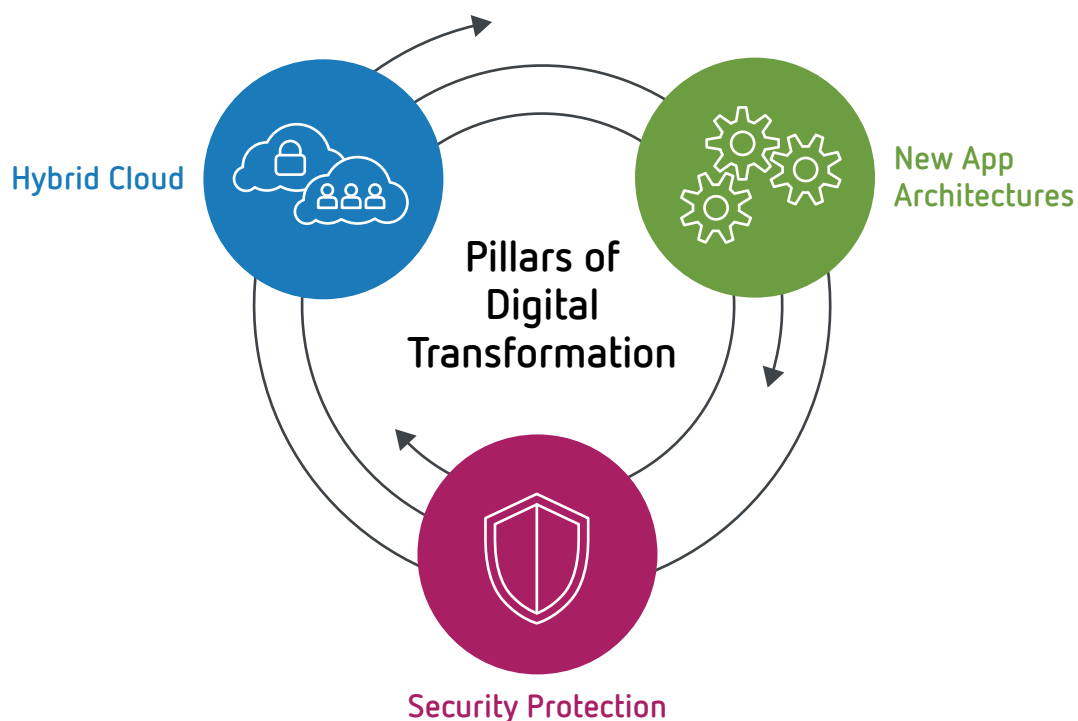
Digital transformation in the enterprise has historically led to initiatives such as Bring Your Own Device (BYOD), mobility, and collaborative mobile workspaces, but [things are changing](#).

The new pillars in an enterprise digital transformation strategy now include leverage of cloud and new application architectures to drive profitability, while reducing security vulnerabilities and overall technical debt. We're now seeing several large enterprise organizations begin to make this new wave of digital transformation [a critical strategy to ensure profitability and success](#).

As applications play a critical role in this endeavor, it's important to understand how these drivers should impact your selection of an ADC solution to embrace these new [pillars of digital transformation](#) and create opportunities for innovation in the face of change.

"Between 2016 and 2021, ING intends to spend close to \$900 million to boost innovation, and become more efficient, while reducing costs for years to come. Much of ING's plans focus on digital transformation to enable customers to do more business via digital devices."

Eugene Sefanov
ING Endeavors for Digital Transformation



Your ADC Should Help You Harness the Power of the Cloud

The cloud has been around for at least a decade. When Amazon first launched its Elastic Compute Cloud (EC2) web service in 2006, it was the beginning of the shift to sourcing compute resources beyond the walls of the datacenter. Since Amazon, we've seen the emergence of similar offerings from other large vendors that include Google, Microsoft, IBM, and Oracle, in a very crowded space of cloud providers.

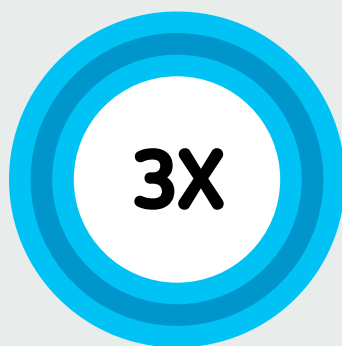
Every enterprise needs to have a cloud strategy, and it can no longer be one of exclusion.

The cloud offers compelling economic advantages for handling either unplanned capacity or short-lived resource demands over building and sourcing these in-house. However, after many organizations failed to emulate the scale and elasticity of the cloud in their private cloud endeavors, they've now defaulted to a "best of both" strategy, and hybrid is their go-to approach to harnessing its power.

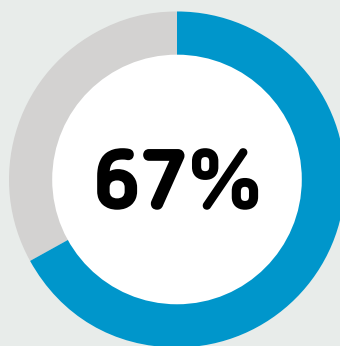
Hybrid cloud provides the foundation for a cost-effective and successful digital transformation

Today's most innovative organizations are enthusiastic adopters of hybrid cloud. Companies with significant workloads in hybrid cloud have been able to implement digital transformation initiatives faster and grow revenue up to 2x.

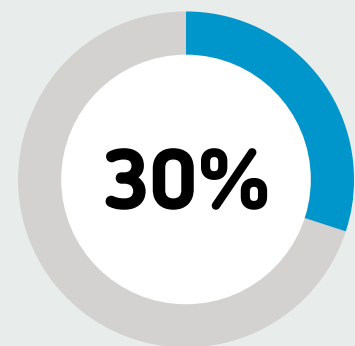
Dell EMC



more likely to be approaching digital transformation goals

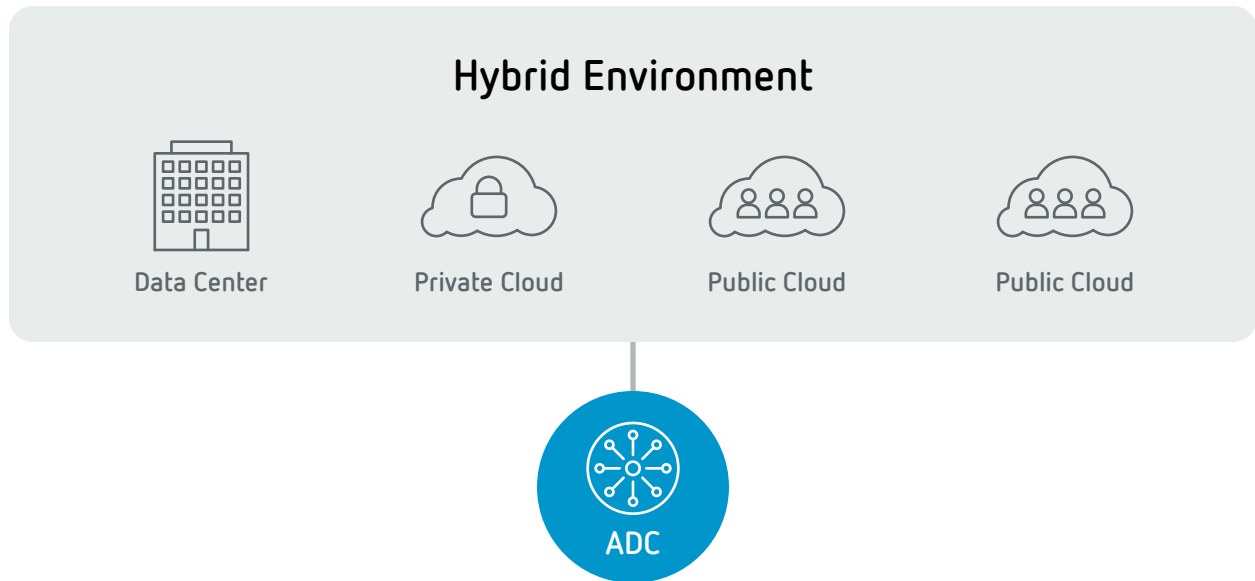


cost savings over 3 years



better business results

A hybrid cloud, as its name implies, is one that leverages resources sourced from both on-premise and public cloud locales. This presents increasing challenges of complexity for the enterprise in managing multiple workloads across a diverse ecosystem of platforms, creating the need for your ADC to easily adapt across local and cloud hosted domains for true end-to-end application delivery and maximum leverage. Selecting an ADC that can seamlessly be managed and deployed across all cloud environments creates **flexibility and scalability** to support changing network demands with efficiency.

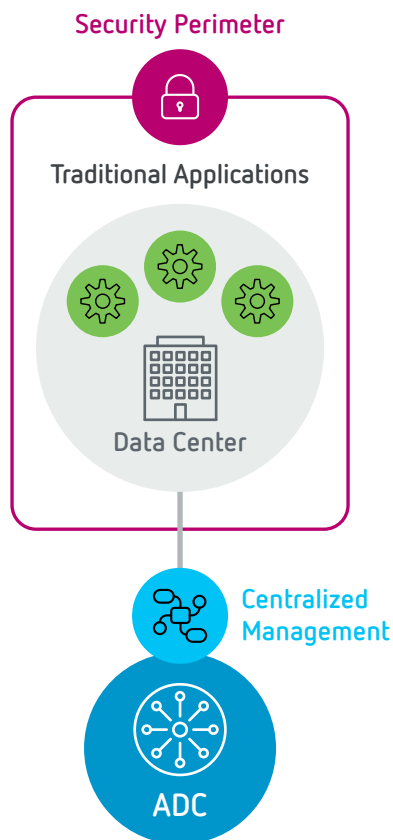


Your ADC Should Support New Generation Microservice Application Architectures

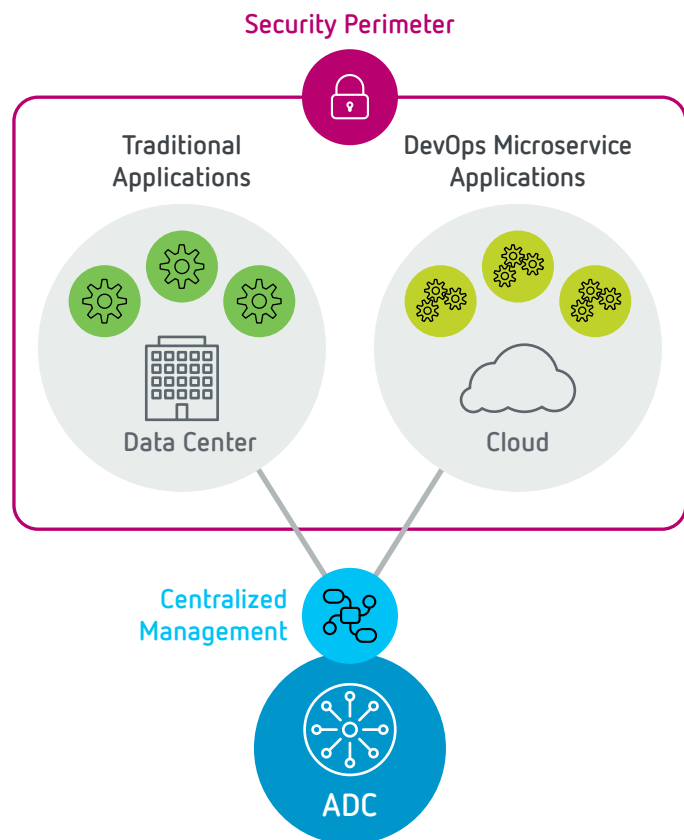
The cloud is now playing a role in how applications are architected, and can be held largely responsible for the app evolution that is currently underway. This new generation of applications are developed and tested in the cloud—and often reside there permanently.

In addition, applications are being built leveraging massive service-oriented architectures that bring a high level of resiliency and scalability. These applications are being deployed in containers and with microservices. They're even impacting traditional legacy application deployments, where IT is seeking to emulate the operational advantages of their web development peers and incorporating procedures for infrastructure automation.

Traditional Model



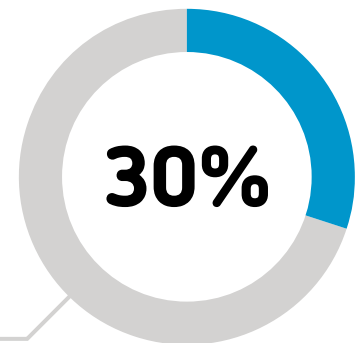
Next-Generation Model



These agile development practices have been the primary catalyst driving change in enterprise IT operations and infrastructure decisions, leading to the emergence of DevOps practices in several large IT organizations.

“30% of surveyed NetScaler customers considered the ability to support their traditional and microservice application deployments on a common platform for their application delivery infrastructure needs.”

**TechValidate survey of 437 users
TVID: 5D1-6F4-44E**



The key to delivering these next generation application architectures is [an ADC that can span physical, virtual, and containerized form factors](#). Deploying the same ADC in these new environments provides a simplified platform for manageability, security, and visibility, regardless of the inherent application architectures.

Your ADC Should Provide Protection Against the New Wave of Security Threats

Security is constantly evolving, as are the threats that an enterprise business faces. Headlines of ransomware and cyber attacks are a CSO's worst nightmare. With new app deployment topologies come new potential vulnerabilities that the enterprise needs to guard against.

These attacks are becoming more sophisticated, and often are motivated by commercial gains to supply personal data to the cyber black market.

This has forced new standards to be implemented for encryption. [Everything is encrypted](#). In fact, the protocols employed for encryption are even becoming more complex in an attempt to outsmart cyber criminals.

Elliptic curve cryptography (ECC) is now becoming more widely used to protect data that is transferred over the web, coupled with secure identity protection measures such as Diffie-Hellman key exchanges to further secure application data and traffic.

[The enterprise must now incorporate these new standards of protection](#) to secure their environments and prepare for emerging security threats. This places emphasis and importance on choosing an ADC that includes built-in security features such as a web application firewall, DDoS protection and a hybrid approach to supporting encryption leveraging hardware and software.

“We’ve observed that organizations have hundreds, if not thousands, of consumer-facing web applications, and each of these web apps has anywhere from five to 32 vulnerabilities. This means that there are thousands of vulnerabilities across the average organization’s web applications.”

Tamir Hardof
Chief Marketing Officer, WhiteHat Security

Your ADC Should Be Software-Based and Provide Flexibility to Adapt to Constant Change

Hybrid Cloud, emerging security concerns, and evolving application architectures are but a few of the trends that are impacting the enterprise, and collectively represent an industry in transition. These factors have led to an upheaval in the datacenter that is challenging standard operational procedures.

Change is inevitable, but how do you manage these changes *and* stay in control? Building your environments to meet these evolving trends is the destination, but most organizations see a chasm of uncertainty in their quest to meet this destination.

“We need to apply everything we’ve learned about navigating change and uncertainty, and step beyond the binary success/failure conceptual model of adoption.”

The New Stack
The Docker and Container Ecosystem

The main reason these changes are so challenging is [the sheer pace of change](#), which is embattling IT to stay ahead of the curve. ADC investments involve capital expenditures, knowledge, training, and customizations to meet the requirements of your business. But today, changes are occurring so rapidly that they rarely provide an opportunity for your investments to yield their promised return.

The only way to assure that what you buy today will be relevant two, three, or five years down the road when the next major

shift in IT occurs, is to [invest in an ADC that unlocks software from hardware](#). An ADC that is built with a software-first approach gives you the freedom and flexibility you need, no matter what the future brings. Software-first means you can deploy on any hypervisor or any cloud and in any form factor—seamlessly. [One code base. One feature set. One ADC.](#)









Choosing an ADC — Making Your 5-Year Bet

Who will you choose to help you navigate the turmoil of change ahead? To help bridge the chasm of uncertainty?

Make your 5-year ADC bet. [Where there is change, there is opportunity.](#)



ADC Check List

-   Hybrid cloud enabled
-   Support for micro-service apps
-   Comprehensive app security
-   Software-based solution

You need to invest in an ADC that is **fluid and adaptive**. For network vendors, if half of your intellectual property is locked in hardware — where is your ability to change? You need to maximize the flexibility and agility of software to secure the investment protection that you need to weather these changes. You need an ADC solution that **puts software first** and performs equally whether it is deployed on custom or commodity hardware.

Your ADC should enable freedom of choice, and consequently give you the power to change your mind. You should be able to deploy your applications in any environment with confidence, and be assured interoperability with any orchestration platform.

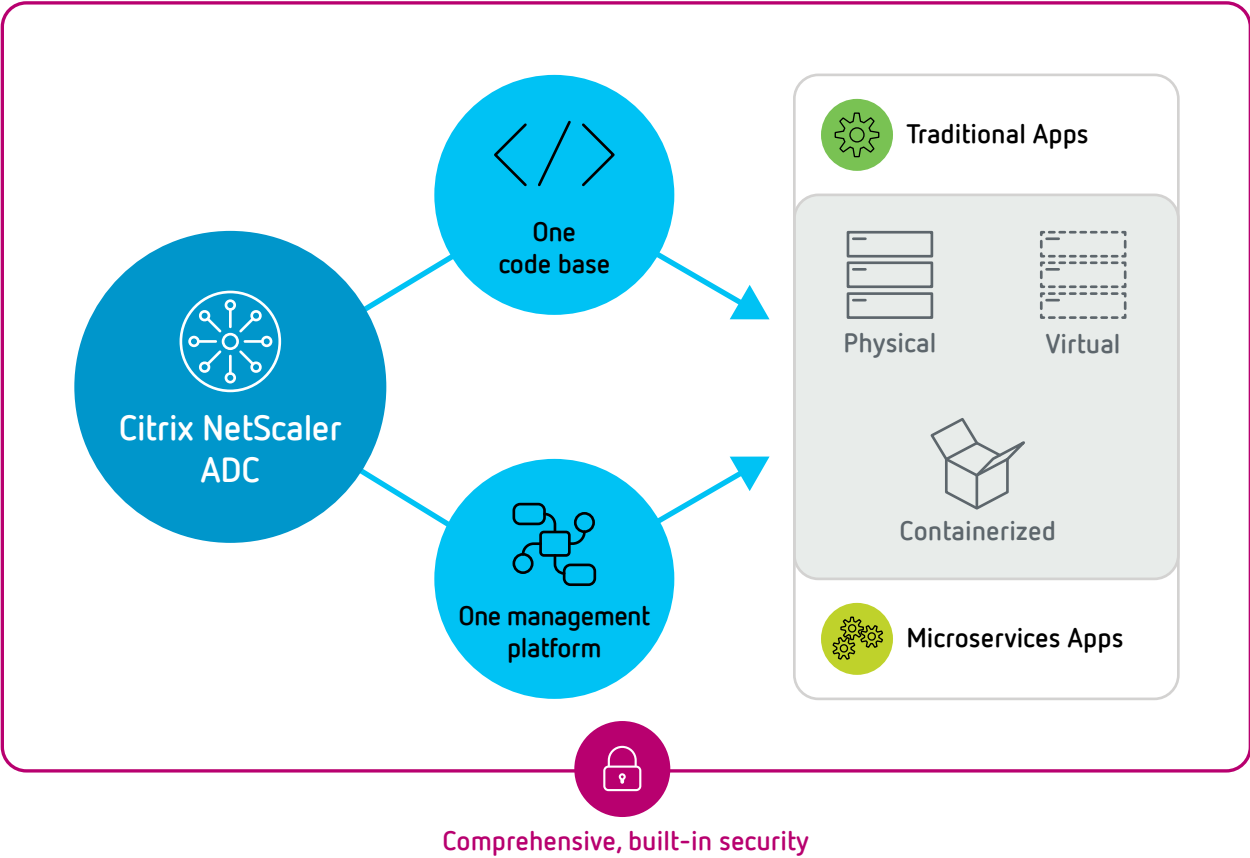
You need an ADC that can leverage automation, big data, and machine learning, allowing you to democratize the skill sets and expertise of your best and brightest people. These are the key features your ADC must provide to unlock the path and power of digital transformation.

Meet Citrix NetScaler: The Redefined ADC for the Digital Transformation Era

Citrix NetScaler is an application delivery controller with a software-centric architecture that makes it the best choice for ADCs that need to be deployed and managed in next-generation datacenters that span private, hybrid, and multi-cloud architectures.

NetScaler ADC employs a single code base across multiple form factors, including physical, virtual and containerized. This single code base increases compatibility across instances, and minimizes feature disparity across each form factor.

CITRIX® NetScaler



Additionally, NetScaler instances and services can be managed and orchestrated via a single portal; regardless of whether these instances are deployed on-premise or in multiple clouds.

NetScaler is also the first ADC to have a container-based form factor that can be managed and automated in unison with all other form factors through a single management platform to support DevOps microservice application delivery.

NetScaler application security features an industry-leading web application firewall, comprehensive DDoS protection, and hybrid support for modern encryption requirements. So no matter where you house your apps—or where you move them to, security is built in.

Citrix NetScaler is the only ADC that gives you the flexibility you need, so you can say yes to the future of business and embrace digital transformation with a software first approach.



Learn more about Citrix NetScaler

www.citrix.com/products/netscaler

