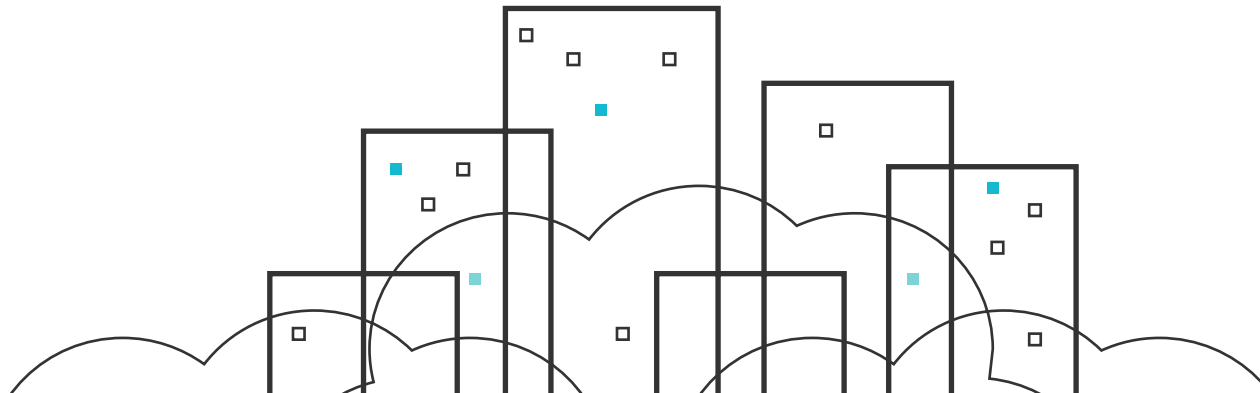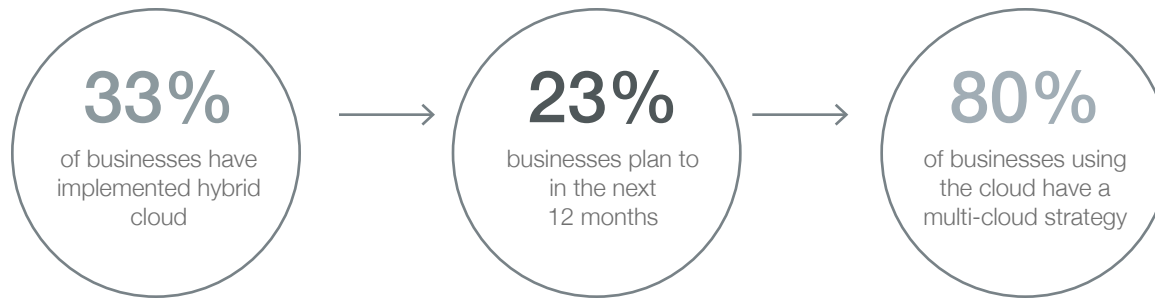# 5 QUESTIONS TO ASK
BEFORE YOU DELIVER YOUR APPLICATIONS TO THE CLOUD

INTRODUCTION

The classic data center is gone — and it is being replaced by multi-cloud, hybrid, and container-based infrastructures. With these changes, businesses are gaining increased scalability, realizing reduced costs, and are becoming more agile in their application infrastructure. However, these changes present challenges in how businesses deliver and optimize the traffic flow for their applications. In this eBook, we'll analyze these challenges, look at five questions to consider, and offer key tips on how to gain greater application visibility, security, automation, centralized management, and application portability.

ACCORDING TO **ABERDEEN RESEARCH**:

33%
of businesses have implemented hybrid cloud

→

23%
businesses plan to in the next 12 months

→

80%
of businesses using the cloud have a multi-cloud strategy

How a **Multi-Cloud** and **Microservice** Infrastructure Has Transformed the Entire Application Lifecycle

With 80% of today's businesses already deploying applications in the cloud, it is now the default application infrastructure. But at most organizations, where IT was designed for on-premises application infrastructures and siloed IT roles, there are challenges around the complexity of delivering applications to hybrid and multi-cloud environments. And furthermore, there are many hurdles to overcome in delivering application traffic in a secure and reliable manner.

As businesses adopt DevOps, microservices, and agile practices, new stakeholders are involved in application delivery and optimization. This is especially true as businesses leverage technologies like containers.

In recent years, the rise of containers has done for applications what virtualization did for servers. By separating the application layer from the underlying OS, containers are enabling organizations to develop applications that are more flexible, scalable, and agile than ever before. In discussions with businesses using containers, Aberdeen has found that while many existing applications aren't built on containers, most new applications will be.

applications

OS

server
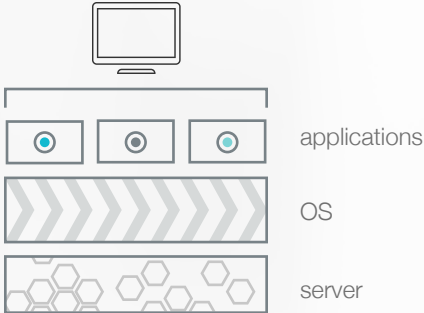
Overcoming the Challenges of **Application Delivery** in Hybrid and Multi-Cloud Environments

TOP CHALLENGES FOR BUSINESSES WITH A **MULTI-CLOUD STRATEGY**:

39%
Too much application **infrastructure complexity**

38%
Application infrastructure can't meet **growing demand**

30%
Lack ability for **end-to-end** application management

20%
Can't monitor **entire** application environment

In order to effectively manage and deploy applications in today's transforming technology infrastructures, businesses need to have a clear understanding of the challenges they face and how to overcome them.

HERE ARE **5 QUESTIONS** TO ASK YOURSELF:

1
MONITORING

How do I keep track of all my applications in one place?

Enterprise applications require constant monitoring and deep visibility to provide faster troubleshooting. With applications running on different architectures and spanning across multiple clouds, gaining visibility into application health and performance is one of the top concerns.

2
SAFETY

Are my applications safe in this multi-cloud environment?

While public cloud adoption continues to rise, protecting applications from existing and emerging threats and applying consistent security policies across multiple cloud platforms still remains a core challenge for most organizations.

3
CLOUD

Do I need to consider private and hybrid clouds?

With multiple cloud options available, most organizations are required to pick the right solution for their application — and choosing the right cloud solution for your needs can be overwhelming.

Exact requirements and evaluation criteria are typically unique for each organization, and without automation, adoption can be increasingly difficult.

4
COMPLEXITY

How do organizations manage the complexity and cost?

When looking at multi-cloud deployments alongside cloud skills gaps, it's clear that most IT organizations are struggling. Each cloud platform uses its own toolset, making it impossible for organizations to streamline management tasks and manage complex, consistent security policies across multi-cloud and hybrid environments. And, the lack of centralized management only increases the complexity.

5
PORTABILIATY

What do I need to enable optimized and flexible application portability and performance?

As businesses have adopted containers and microservices to gain increased application portability and flexibility, they need to ensure that they can manage applications and optimize traffic even when they are hybrid, multi-cloud, and developed in containers.

Finding the Right Solution to Make Your Application Infrastructure **Ready** for the Technologies of Today

How are businesses that are delivering applications in hybrid and multi-cloud infrastructures overcoming these challenges and building high-performing and secure application environments? Aberdeen research finds that these leaders answer the five critical questions this way:

How do I keep track of all my applications in one place?

USE VISIBILITY AND ANALYTICS

Advanced load balancing keeps your apps running with efficiency and reliability in many ways. They use machine learning to set baselines for application performance, user behavior, etc., so you have visibility into which assets are doing well, and which may be due for an overhaul or have reached end of life. When a problem is discovered, contextual information helps your operations team troubleshoot faster and more efficiently so the customer experience can continue with little or no interruption, and anomaly detection can be used to drive proactive and even predictive responses. Businesses leading in application delivery are 40% more likely than competitors to have deep visibility into their application usage and performance.

Are my applications safe in this multi-cloud environment?

MAINTAIN CONSISTENT SECURITY AND COMPLIANCE

The scale and scope of attacks is increasing and will continue to increase as 5G and IoT gain traction. In public clouds, security is a shared responsibility. Security that is integrated into the load balancing solution provides the best defense. Bolt-on security products tend to be complex and hard to configure, particularly with regard to application security. Unless your operations team includes security experts, you will be implementing security on the load-balancer. Configuration and management of security features and the ability to adjust policies at a granular level needs be straightforward and easy. Based on our survey, we have seen that with improved application delivery solutions in place, leading organizations are 20% more likely to report increased application security.

Do I need to consider private and hybrid cloud?

DEPLOY INTELLIGENT AUTOMATION

New brands and technologies are emerging at a pace faster than ever before, and it is essential that application delivery, security, and load-balancing solutions are able to integrate with everything else.

As organizations look to expand to a multi-cloud and microservice-based architecture, the need for automation and orchestration becomes even more important. Automation helps organizations save time, increase accuracy, and improve business efficiency. For example, they are 90% more likely to see faster application issue resolution.
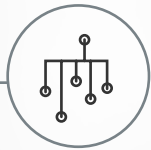
How do organizations manage the complexity and cost?

KEEP MANAGEMENT CENTRALIZED

Today, the typical organization has technology everywhere, and managing all that traffic can be a challenge.

Centralized management is the key to delivering operational efficiency across traditional data centers and hybrid-cloud environments since it reduces administrative workloads and provides powerful, unified, and granular policy controls from a single console. In fact, our research shows that leading organizations are 80% more likely to be able to centrally manage and control applications.

What do I need to enable optimized and flexible application portability and performance?

SIMPLIFY AND ENABLE APP PORTABILITY

Applications have expanded from traditional hardware servers to virtual machines and multiple public and private clouds. With the application infrastructure becoming more and more complex, adoption of containers is critical.

As technology innovators leverage containers and microservices that give them increased flexibility, scalability, and automation to manage application performance, capacity, licenses, and usage across their entire infrastructure, they need to also adopt systems that bring improved traffic management and optimization.

How Effective **Application Optimization** and **Load-Balancing** Services Can Lead to Success in the Cloud

As application infrastructures have transformed through the use of containers, multi-cloud, and hybrid cloud, how to best deliver advanced load balancing has also changed.

BUILD ANALYTICS DESIGNED FOR TODAY'S INFRASTRUCTURE

Having a single source of truth that gives detailed analytics into everything that is happening in your application infrastructure is vital to success. With this in hand, businesses can isolate issues and optimize the traffic to your applications.

HAVE APPLICATION MANAGEMENT THAT IS BUILT FOR AGILE PRACTICES

As businesses move to agile development practices, application traffic can become a speed bump to application deployment. With central management and automation, technology innovators are helping to make agile delivery even faster across multi-cloud environments.
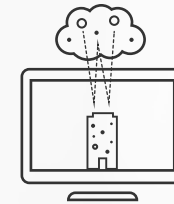
PREPARE FOR FUTURE APPLICATION PLATFORMS

By leveraging application load-balancing that is compatible with containers, hybrid cloud, and private clouds, businesses can ease application delivery complexity and more effectively innovate with these new technologies.
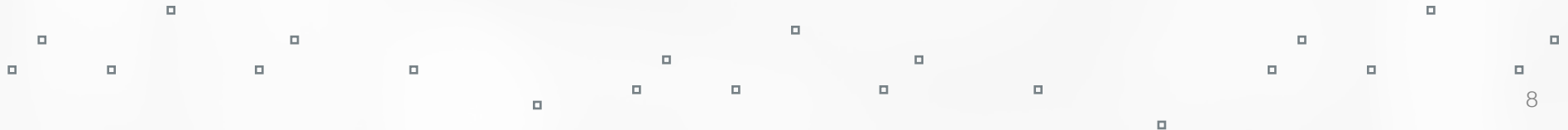
CONCLUSION

As your applications evolve into containers, multi-cloud, and hybrid cloud, application load-balancing has to grow with it. Whether your business depends on customer-facing apps, internal apps, or a mix, don't tolerate slow loading or downtime. Advanced load-balancing gives you the control to provide fast, reliable content and services.

As your business gets ready to move to a cloud-native, containerized, and multi-cloud infrastructure, follow the recommendations provided in this eBook to get on the right path to effectively deliver your applications to the cloud.

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