



# 5 Key Reasons to Migrate from Cisco ACE to F5 BIG-IP

With support for Cisco ACE load balancer ending, organizations need to find an alternative.

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## Introduction

The end of sale and support of the Cisco ACE product line presents organizations with an opportunity to find a replacement that better meets their operational and business needs. With F5, organizations can build elastic, flexible application delivery fabrics that are ready to meet the challenges of optimizing and securing applications in a constantly evolving environment.

To succeed in this dynamic environment, organizations must create networks that combine core layer 4–7 functionality, programmability, and application fluency into a scalable Application Delivery Network. While these components all bring their individual benefits, the real, lasting value lies in the resulting synergy of the combined solution. Failure to deliver even one of these technology components greatly reduces the business value of the infrastructure. Organizations should consider the following five advantages of F5 when evaluating a replacement for Cisco ACE:

- Advanced architecture
- Ease of application deployment
- Consolidation of multiple services
- Programmability
- Scalability

## Advanced Architecture

F5 offers an advanced architecture solution for application services that allows organizations to create a robust and scalable application delivery fabric with a rich set of functions to improve the user experience, add security, and provide analytic data when application traffic passes through the infrastructure.

This architecture revolves around some simple principles:

- Create a services fabric of scalable and interconnected devices.
- Pervasively connect the fabric to the application and client networks.
- Use repeatable templates to define policies that deliver application-fluent services to optimize applications via application proxy points.
- Open up management and control of the fabric to orchestration and integration tools.
- Address new protocols including HTTP/2 and TLS 1.0/SSL 3.1

The result is that this architecture enables the delivery of the right application services to the right applications at the right point in the network, for any application and any network.

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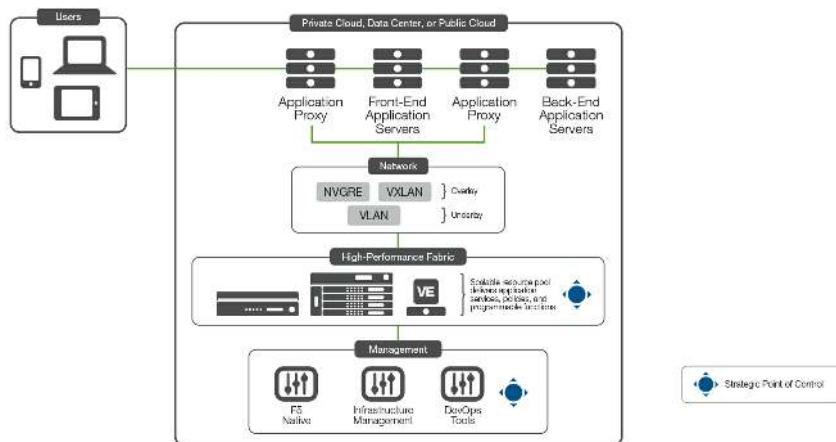


Figure 1: The F5 Application Services architecture

## Ease of Application Deployment

At the heart of this fabric is the F5® BIG-IP® platform, which is designed to supply application security, acceleration, and availability services. Available in physical, virtual, and cloud editions, the BIG-IP platform is easy to deploy into as many locations and architectures as you need, while maintaining consistency across environments.

Application-specific proxies provide parsing and manipulation of protocols such as HTTP, and SIP. This deep understanding of application protocols enables better traffic management and reporting—and opens up opportunities to control and manage traffic more effectively. Being able to route, drop, or manipulate traffic based on application values such as HTTP cookies or SIP header makes it easier to simplify application infrastructures and build additional application capability into the delivery fabric. Having understanding and control of application traffic at a strategic point in the network can speed and simplify application development cycles. Application functions can be outsourced to the network, where they can be done more efficiently at a strategic point of control within the delivery stack.

F5 iApps® templates significantly cut deployment time and remove much of the potential for human error by providing a simple, interactive process to configure and update application deployments. Selection and configuration of all of the required application functions is collapsed into a single, application-focused interface. Once an application has been deployed, iApps provides an application-focused view of the health and performance of the components that make up the deployment, which makes operational management easier and can provide feedback into the development or revision process for the next release.

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F5 maintains a library of new and updated iApps templates and has partnerships with leading software vendors to ensure that templates closely follow new releases. iApps templates are fully customizable and designed to work in different deployment scenarios. Where iApps templates are not available or suitable, F5 offers more than 100 application or solution deployment guides, which present detailed configuration information and best practices.

With a platform that understands applications and comes equipped with the knowledge to deliver them, organizations can save significant time and cost in both deploying new applications and maximizing the value from existing ones.

## Consolidation of Multiple Services

F5 offers advanced traffic management, optimization, and security services on one BIG-IP platform. Consolidating services with F5 helps make it easier to adopt multiple functions and save costs. By offering a full platform, F5 enables you to rapidly deploy, secure, and optimize so it is easier and more affordable to get the capabilities you need.

F5 believes that application services should not only be easy to provision, they should be easy to procure. When it comes to IT, a variety of deployment and purchasing models exist today. Through innovative licensing and product bundling practices, F5 supports the deployment of flexible services with cloud, hybrid, and usage-based IT models.

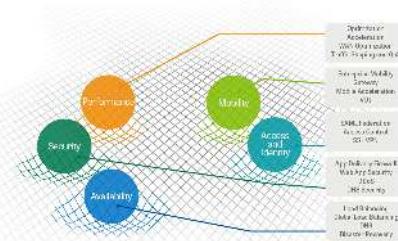


Figure 2: The F5 application delivery fabric enables customers to consolidate a broad range of services on one platform.

## Programmability

The F5 BIG-IP platform has a well-documented suite of programmable components across the control, data, and management planes. Organizations can use these components to build an adaptive and automated application delivery fabric with real-time control over application traffic and device configuration.

## Data Plane Programming

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The F5 iRules® scripting language offers real-time control of application traffic as it passes through the infrastructure. With the ability to route, reject, modify, and inspect traffic in any direction, you can build or deploy solutions to meet just about any application traffic challenge, no matter how unusual. iRules can use contextual application services such as IP reputation or location to make traffic management decisions—or to manipulate server responses to remove sensitive information.

## Control Plane Programming

The F5 iCall® scripting framework allows the configuration of the BIG-IP platform to adjust based on data plane events, such as DHCP requests from new server instances or altering traffic distribution based on a change in monitoring data.

## Management Plane Programming

The F5 iControl® comprehensive management API enables integration with data center management frameworks, orchestration tools, and third-party applications and scripts. iControl also supports an event-based model, allowing applications and frameworks to subscribe to BIG-IP system events such as the change in status from up to down for a given application node.

These three planes of programmability increase agility, reduce operational costs, and improve application deployments, freeing the network to promote innovation instead of constraining it.

## F5 and DevOps

To better align IT to business needs, organizations are moving to compressed application revision schedules and “continuous delivery” methods. Innovative DevOps practices automate the testing and deployment processes, driving consistency and faster times to production. The BIG-IP platform provides the application traffic control and the programmability required to realize these benefits within the production delivery network.

## Scalability

Programmability, fluency, and functionality combine to create application-specific services that improve end user experience, increase security, and drive innovation. This is true only if they can be delivered at the right point in the network and at the scale required by the application. F5 provides a secure, elastic fabric that can deliver application services anywhere they are required.

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The secure BIG-IP platform enables physical or virtual devices to be connected to the core network in a data center or in a public cloud, to provide application services and managed control points across all zones. Functionality and performance are no longer locked in silos of devices in particular zones, but are available at all points in the infrastructure. This improves device utilization and reduces implementation costs for new applications, as the services can be supplied from existing resources no matter where the services are required.

The F5 ScaleN™ architecture creates clusters of up to 32 devices (physical, virtual, or mixed), which form a highly available, elastic delivery fabric. Application workloads migrate between devices in the event of failure and can be moved should more resources be required. Devices can be upgraded physically or by license key to process more traffic or to enable additional features. The ScaleN fabric allows the incremental addition of capacity and services, enabling a smooth growth and cost curve as traffic increases. Workloads can be managed to run on the most appropriate device, and additional resources can be provisioned quickly via virtual editions, giving organizations fine-grained control of resources and putting the administrator in control of applications.

Network virtualization support in the BIG-IP platform allows the unification of virtual infrastructures and high-performance network hardware. Support for VXLAN and NVGRE (on virtual platforms only) enables the delivery fabric to extend from physical devices into virtual networks, bringing the power of specialized hardware for compression, encryption, and network processing into the virtual data center.

## Conclusion

Designed to address today's applications delivery challenges, F5 combines a high-performance application services fabric, intelligent layer 4–7 services, programmability, and application fluency to enable organizations to achieve new economies of scale from both a cost savings and an operational perspective. This helps organizations align to the business, deploy applications faster, and automate for operational efficiency. As Cisco ACE enters the end-of-life cycle, the ability to deliver applications requires a much broader consideration than simple load balancing. It is critical to understand and implement a solution that will allow the business to grow and ensure a better experience for end customers.

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