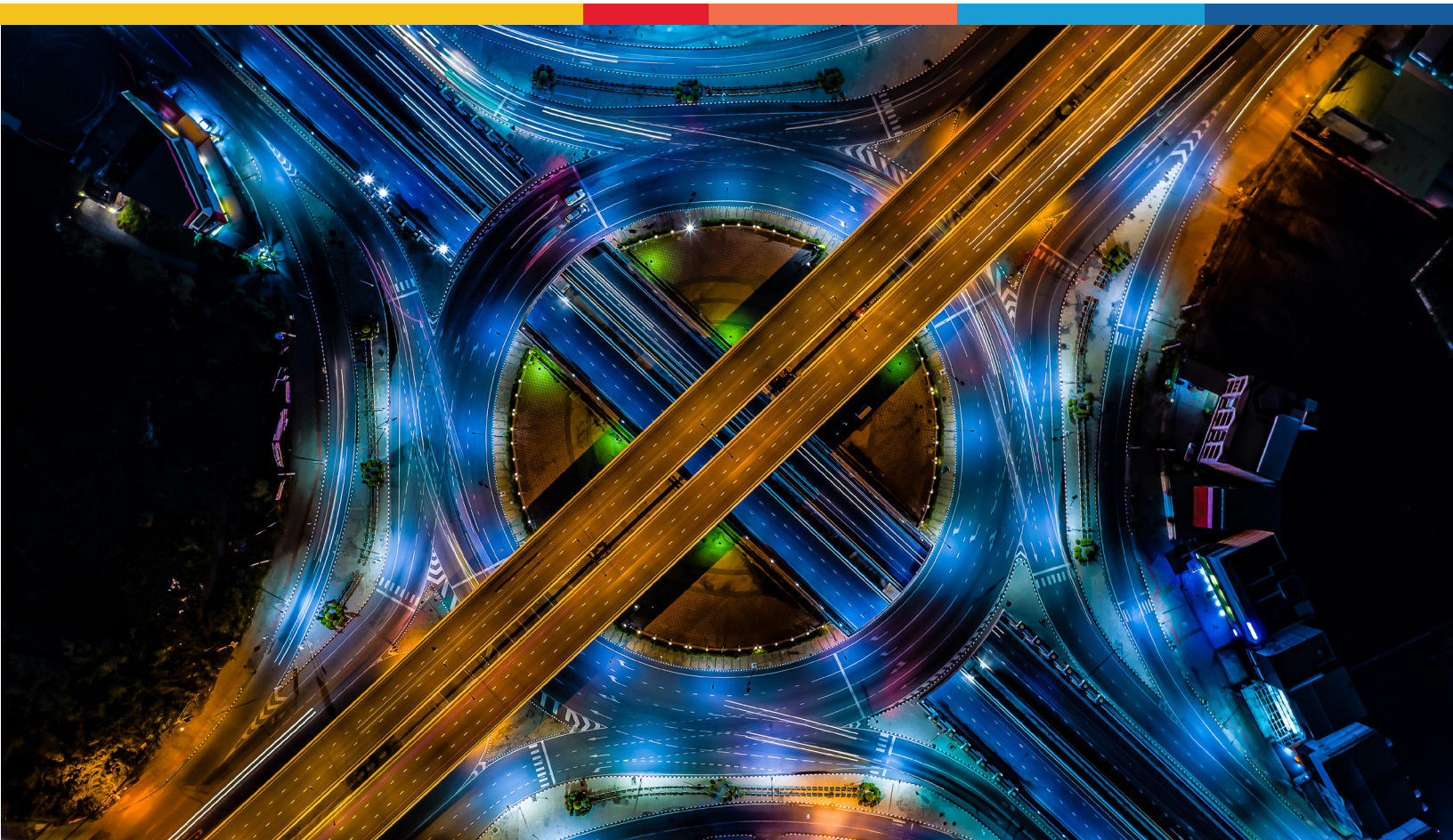
SOLUTION OVERVIEW

Optimize Global Application Delivery with Local and Global Load Balancing

An F5 and Cisco Collaboration

On your journey to hybrid multi-cloud, you need to connect things in a way that reduces complexity and speeds change. In your expanding IT universe, we can help you manage that.



KEY BENEFITS

Ensure application availability
Automatically distribute application requests across the network of servers to guarantee high availability.

Optimize app performance
Efficiently respond to customer queries and ensure greater reliability, performance, availability, and security for mission-critical applications.

Achieve consistency and control
Utilize centralized policies for consistency and control with reduced operational overhead.

BUSINESS VELOCITY AND LONG-TERM GROWTH WILL RELY ON FINDING WAYS TO CONNECT AND PROTECT APPS AND APIS ACROSS LOCATIONS WHILE EASING THE MANAGEMENT OF COMPLEX HYBRID ENVIRONMENTS.

F5 2023 State of Application Strategy Report

Complexity and Growing Demand Is Compromising User Experience

Applications serve as the lifeblood of today's enterprises, making the delivery of high availability critical. Hosting distributed apps allows them to run closer to users, resulting in a faster experience, whether across servers at a single site or spanning multiple data centers and clouds. However, with fluctuating traffic patterns and concentrated user requests during peak hours, ensuring distributed apps are available can be difficult.

Robust Applications Across Servers, Data Centers, and Clouds

F5 natively integrates global and local traffic management capabilities into Cisco Application Centric Infrastructure (ACI) Single Pod, Multi-Site, and Multi-Pod so you can:

- Intelligently load balance application traffic across servers or sites
- Automatically redirect application traffic to the next available server or site in the event of an outage or failure

Requests are directed based on business policies, data center and cloud service conditions, user location, and application performance.

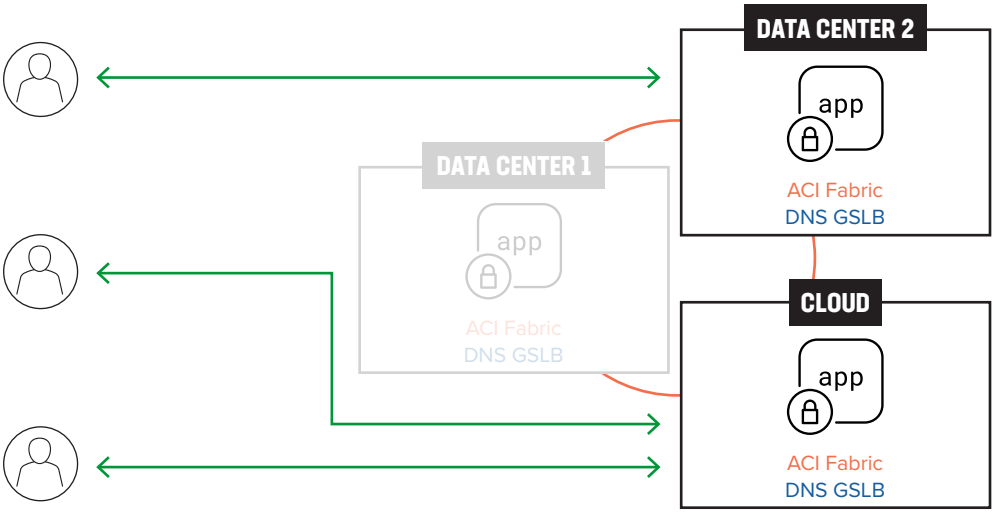


Figure 1: F5 Global Server Load Balancing (GSLB) for Cisco ACI Multi-Site

Load Balancing for a Single Site

Organizations using Cisco ACI Single Pod for software-defined networking can benefit from local traffic management provided by F5 to ensure app responsiveness no matter the demand, while realizing operational benefits and increased application security.

F5® BIG-IP® Local Traffic Manager™ (LTM)
Cisco ACI Single Pod and F5 BIG-IP Design Guide
F5 ACI ServiceCenter

Load Balancing for Multiple Sites

Keep applications available for global users by automatically redirecting app traffic when a site goes down in a Cisco ACI Multi-Site/Multi-Pod environment.

Tiered GSLB uses load balancing algorithms, topology-based routing, and iRules to control and distribute traffic to the LTM.

F5 BIG-IP® DNS
F5 BIG-IP Local Traffic Manager
Cisco ACI Multi-Site/Multi-Pod and F5 BIG-IP Design Guide

Local and Global Traffic Management

Intelligent load balancing
Support app requirements across servers, data centers, and cloud environments.

Always-on availability
Automatically distribute app traffic across servers or sites to efficiently respond to customer queries.

Infrastructure monitoring
Monitor infrastructure health to eliminate single points of failure and route traffic away from poorly performing resources.

Robust container apps
Monitor and target specific container cluster applications.

Global Traffic Management

Location-based routing
Route clients to the nearest data center with geolocation-based load balancing for optimal user experience.

Automated failover
Redirect traffic to a backup data center and initiate site-wide failover or selectively control affected applications.

Wide area persistence
Automatically synchronize data, propagate local DNS, and maintain session integrity to ensure user connections persist across apps and data centers.

Custom topology mapping
Configure topology based on intranet app traffic policies by defining and saving custom region groupings that align with your internal infrastructure.

Go Beyond Traffic Management with F5 BIG-IP DNS

As part of the F5 integration for global server load balancing for Cisco ACI Multi-Site and Multi-Pod, F5 BIG-IP DNS offers a wealth of additional high-value capabilities.

Superior DNS performance
Manage query responses with multicore scalability, handling spikes in DNS query volumes.

DNS security
Validate query requests, mitigate malicious communications, absorb DDoS attacks, encrypt end to end with SSL, and more.

Reporting and analytics
Access detailed DNS and GSLB data, statistics, and graphs for in-depth analysis through logging, reporting, and analytics capabilities.

DNS health monitor
Out-of-the-box health monitoring support available for applications.

3G, 4G, and 5G 3GPP support
Support NAPTR DNS nodes and services to drive faster service instantiation.

IPv6 and DNS64 support
Translate traffic for consumption by either IPv4 or IPv6 endpoints.

Learn more about F5 and Cisco's partnership at f5.com/cisco.

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