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.
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.

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.

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](http://f5.com/cisco).