F5 Unveils 2017 Cloud Strategy and Roadmap

F5 Networks, one of the world’s leading providers of application delivery infrastructure, recently unveiled its 2017 cloud strategy and roadmap. F5 will grow the number of public cloud providers that it partners with to allow users to apply its BIG-IP application delivery services to workloads in the public cloud. F5 also plans to introduce several new technologies in 2017 that will enhance an enterprise’s ability to leverage BIG-IP services in public and private clouds. Specifically, F5 expanded the choice of form factors that users will have for consuming BIG-IP services in the public cloud by creating an option for applying hardware-based services from a colocation center to workloads in the public cloud. Also, users will be able to apply lightweight F5 traffic management services to container-based private clouds.

Cloud Technologies Demand New Approach to Application Delivery Services

Like many of its peers, F5 Networks began as a hardware appliance vendor. BIG-IP appliances were deployed as middle boxes, where they could apply load balancing and other services to multiple downstream application servers. This model for application delivery services worked well in traditional data centers that were dominated by north-south traffic patterns and monolithic applications. However, modern infrastructure has disrupted this deployment model.

Enterprises have started to migrate many applications to public cloud environments, where local application delivery appliances are unavailable. Instead, enterprises have had to work with the limited feature sets of native load balancing services offered by cloud providers. Virtualized data centers and private cloud environments have also disrupted traditional application delivery appliances. These modern data centers are far more dynamic, and application architectures are much more distributed. North-south traffic patterns are no longer the dominant traffic flow. As developers deconstruct applications into micro-services, east-west traffic patterns have started to put pressure on traditional network architecture. Statically deployed BIG-IP appliances can’t serve all application workloads in such an environment. Application delivery services must be deployed closer to individual application workloads, and they must be able to migrate with those workloads.

F5 has responded to these shifts in recent years by offering virtual software instances of its BIG-IP platform. The company also introduced Silverline cloud-based application services that IT organizations can customize and configure so they can be implemented in a manner consistent with on-premises BIG-IP products. While these were helpful advancements for enterprises that needed more deployment flexibility for cloud architectures, there was still more to do. Cloud architects need more options, including high-performance capabilities in the public cloud and lightweight and orchestrated services in the private cloud.
F5 Innovations for Public Cloud Application Delivery

F5 unveiled a 2017 cloud solution roadmap that outlines how enterprises can consume fully automated BIG-IP services natively from within multiple public cloud environments. F5 currently offers a compatible version of its application delivery services for Amazon Web Services (AWS) cloud environments, and this year it is adding similar support for Microsoft Azure. Next year, F5 will advance from compatible versions of BIG-IP to fully integrated, templated and automated BIG-IP services in 2017. This shift will make it easier for enterprises to purchase, install and operate BIG-IP software in the public cloud. F5 will also expand the number of public clouds through which it offers BIG-IP. F5 will reveal those new providers in 2017. Thanks to F5’s broad architecture, these services will be able to be configured and managed in a manner consistent with any F5 solutions that are deployed in an enterprise’s on-premises data centers.

F5 also announced a new innovation that will give enterprises the ability to apply hardware-based BIG-IP services to workloads in the public cloud by leveraging new agent software and a partnership with colocation data center operator Equinix. Given that many enterprises establish direct WAN connections to public clouds through a colocation data center, F5 plans to release a new software agent, Application Connector, in 2017. When deployed in a public cloud, Application Connector automatically creates a reverse-path tunnel to the nearest colocation facility operated by Equinix. All cloud application traffic then hairpins to a BIG-IP appliance in the colocation data center, where F5’s application delivery services are then applied. This architecture will give cloud-based workloads access to the high-performance capabilities of a BIG-IP appliance. It will be especially useful for cloud applications that serve large numbers of concurrent users.

F5 Innovations for Containerized Private Clouds

Also due to arrive in 2017 are a pair of technologies that will allow enterprises to apply BIG-IP application delivery services to containerized private cloud environments: Container Connector and Application Services Proxy. Container Connector is a software extension that integrates with leading container orchestration tools, allowing users to apply BIG-IP services to containerized applications via integration with container frameworks like Mesos and Kubernetes. When a user spins up a containerized application with Mesos or Kubernetes, it will automatically trigger the instantiation of BIG-IP services.

Those BIG-IP services will be instantiated by F5’s Application Services Proxy, a lightweight load balancing and traffic management technology based technology from F5’s acquisition of Linerate Systems. The proxy software serves as a containerized services engine that allows enterprises to deploy load balancing, application security, and other basic services into highly distributed microservices architectures.

EMA Perspective

Enterprises are well aware that the load balancing, security, and other application delivery services natively offered by public cloud providers are typically too primitive to meet their requirements, especially if they are deploying hybrid cloud architectures that demand a uniform approach to such services across public and private cloud environments. They expect vendors like F5 to enable enterprise-grade application delivery services that are deployable in public and private clouds.

F5’s current roadmap represents a welcome step forward for BIG-IP and the industry. F5 will offer its software natively in a wider variety of public clouds, The partnership with Equinix to apply hardware-based services to public cloud applications will be especially welcome to customers that are struggling with the performance of application delivery software in the cloud. And enterprises that are adopting containers in the private cloud will be pleased by F5’s innovations with Container Connector and Application Services Proxy.
Beyond the cloud strategy reviewed here, F5 is well positioned to add significant value to cloud performance analytics. Given its position as an application services platform that sits between compute resources and networks, F5 has always been able to collect a tremendous amount of Layer 2–7 performance data. EMA believes F5 has improved this position even more with its latest cloud developments. Particularly, the Application Connector technology will enable F5’s BIG-IP appliances to potentially serve as probes that can measure network and application performance between colocation data centers and cloud service provider data centers and between colocation data centers and enterprise networks. F5 will have the opportunity to offer enterprises its own analytics platform to provide valuable insight into cloud application performance, or at the very least add value to users by making that data available to third-party analytics platforms.

Overall, F5’s 2017 cloud roadmap is very encouraging. Enterprises that are interested in leveraging some of these technologies should contact F5 and explore whether they can get involved in early trials.