

F5 Synthesis: A New Application Services Delivery Model for Cloud Providers

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Introduction

It's the great ROI promise of cloud provider utility models: move costs from capital expenditure to operational expenditure while maintaining a lean balance sheet with optimum cash flow. However, there remains significant trepidation in the face of migrating production services to cloud provider platforms.

Common among those evaluating the suitability of cloud-based services is the practice of deploying development or test systems onto provider infrastructure. These environments aren't Internet facing, nor do they use live data. As a result, they do not require the same stringent sign-off processes as those privately maintained.

However, presenting an enterprise-grade cloud offering for production services requires the provider to deliver nearer functional parity with that of the organizations private data center architecture. And they must do it without introducing complexity, which adds exhaustive operational overhead.

Increasing customer-adoption potential—by decreasing risk and simplifying the journey to a cloud-based architecture—relies heavily upon reducing the technology gap between sought after utility models and production deployment expectations. Done correctly, this presents an opportunity for providers to differentiate by offering data center services not yet commonplace in the cloud.

The Business Problem

The development of cloud platforms has been largely focused on flexible licensing and the commoditization of compute resources. Niche expertise in these areas, coupled with extensive integration and automation of management systems and processes, has led to proven time and cost saving opportunities for cloud-platform customers. However, to increase business value and remain competitive, cloud providers are forced to compete with aggressive pricing models while also increasing their portfolio of differentiating services. Also, providers must do it all in the most cost effective manner with minimal up-front exposure.

Missing from many cloud-based offerings are Application Delivery Services—the technological competency of ensuring applications are always fast, highly available, and secure. Application delivery is focused beyond the simple connectivity services of traditional networking—switching, routing, load-balancing, and network firewalling—to deliver on end-user experience expectations, service availability, and data protection.



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With the addition of application delivery services cloud providers can offer their customers:

- A significantly improved end-user experience for their employees and customers across both fixed and mobile networks.
- The elimination of many of the common failure domains behind brand-damaging outages.
- Reduced exposure to the myriad data theft vulnerabilities that are not protected by traditional network security technologies.

Managing the end-user experience extends beyond the provider infrastructure. Much of the performance degrading impact occurs in the “last-mile” of delivery—the network directly connected to the consumer. Localized performance-enhancing technologies, residing in the provider infrastructure, lack coherency of the vast inefficiencies of service delivery across both public and private networks.

Improving service availability is a multifaceted competence starting with intelligent, service-aware DNS; application fluent traffic inspection and monitoring; and resilient connectivity services. Most important is the reliance of these competencies upon each other to act as an integrated application services platform, not as lesser-effective isolated systems.

Data theft occurs beyond the firewall by exploiting both application and browser vulnerabilities. It typically occurs over sanctioned data paths opened through network security devices. Failing to provide data security through an application fluent security technology leaves cloud-based services exposed to brand-damaging, and occasionally legal, consequences.

Delivering Application Services in the Cloud

Most traditional application services are not designed for cloud-based delivery. They require specific platforms, up-front licensing costs, and immature management API's that often fall short of automation and integration expectations. To support cloud-based delivery a flexible array of platforms is required. Both physical and virtual platforms must work as a unified fabric to provide options capable of growing with demand as needed.

In addition to a unified fabric, providers are required to deliver services to meet both managed and hosted requirements. On one hand, we have organizations with extensive application delivery experience and who have ratified numerous technologies across many different competencies. These organizations often build deployment standards around these technologies and maintain strict adherence. They often look for a hosted platform on which they can bring their own configuration and management expertise.





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On the other hand are organizations seeking the assurances of application delivery services, but without the skillset or resources to self-manage and maintain. These organizations often look to external providers to offer managed end-user experience and application security solutions.

Whichever the background, opportunity exists for cloud providers to address the entire range of requirements by delivering both hosted and managed application delivery service offerings.

The Solution

Driving the standard for application delivery services, F5 understands the intricate details and requirements for delivering applications and services in a flexible and cost effective manner. That understanding includes whether the requirements are for a hosted application delivery platform or a fully managed subscription-based offering.

F5 Synthesis™ is a new model for cloud providers to deliver device, network, and application services without constraints. Comprised of intelligent services orchestration, a high-speed services fabric, and flexible business models, Synthesis enables cloud service providers to address customer needs, whether long-term subscribers or short-term demand-driven resource consumers. It delivers:

- Speed to market via readily available infrastructure to enable businesses to address market opportunities faster than traditional IT
- Cost reduction and optimization through better cost alternatives to owning and maintaining private data center technology, and redirected application delivery costs from CapEx to OpEx
- Flexibility and efficiency by deploying what's needed, when it's needed, and not paying for unused resources

The F5 Synthesis unified fabric; an array of platforms including virtual editions, appliances, and chassis; enables workload provisioning and migration across a range of platforms while maintaining multi-tenancy and isolation where required.

Hosted Application Services

For organizations with application delivery expertise, and very specific requirements, a provider-hosted application delivery controller (ADC) allowing customers to bring their own configuration, and, if desired license will best meet their needs.

Alternatively, through F5's Cloud Licensing Program, a utility license may also be offered to the service consumer.



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Managed Application Services

Organizations without application delivery expertise, that lack the operational resources to manage it, or that simply require more basic functionality often prefer a managed solution. F5's broad range of platforms, functionally rich API's, and flexible licensing options match service consumer expectations while avoiding unnecessary capital expenditure. This enables the provider to craft custom application service solutions via a utility model.

F5's Cloud Licensing Program

Whether delivering a hosted or managed offering, F5's flexible licensing is designed to support workloads for any customer scenario, from small businesses to large enterprise. These include everything from small-scale test launches to large enterprise requirements with variable demand.

For some businesses, a metered usage or subscription option will help them get the solution they need with minimal investment and commitment up front. For others, an ownership model that allows perpetual use makes better sense. Some circumstances may call for a combination of the two.

Whichever licensing requirement best suits a business model, F5 has a program that will fit both cloud service provider and consumer needs—be it a managed or hosted offering. F5's Cloud Licensing Program delivers both consumer bring-your-own-license and utility licensing for pay-as-you-go use cases.

Prevalent among organizations today, F5 delivers a reliable, consistent, repeatable platform for application performance, availability, and security. Synthesis in the cloud creates an extendable application platform across both private and public architectures and supports application and service migration to cloud platforms.





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Conclusion

F5 Synthesis is a new model for delivering device, network, and application services that is comprised of a high performance services fabric, intelligent services orchestration, and simplified business models. A proven strategy for customer focused service providers; it ensures that application performance, availability, and security services expectations can be met for cloud consumers of all types and sizes.

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