F5 Synthesis: Fast, Fluent and Flexible

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#sdas #sddc #sdn #devops #mobile F5 Synthesis 1.5 brings more performance, greater application fluency and increased flexibility for both application and mobile network providers.

Are you ready for millions of mobile visitors? With 20% of web traffic in the US and Canada coming from smartphones and tablets (Chitika) it's time to turn some cycles toward this growing segment and focus on more than just the BYOD.

Mobile visitors are just as easily frustrated by poorly performing applications as their traditional laptop and desktop visiting counterparts (and, in fact, they probably are the same consumers transitioning to more modern devices). The growth in device propagation also means its a growth market for attackers. And even if malware and viruses aren't running rampant on mobile device platforms that doesn't mean that applications and services can't leak data to mobile devices or that they can't participate in DDoS attacks. And phishing attacks work just as well in browsers on mobile devices as they do in browsers on the desktop.

Interestingly enough, while mobile platforms introduce some new challenges to ensuring security and performance of applications and data, many of the challenges and threats remain the same because they're really about data and applications and networks, not the end user device.

Addressing these challenges is made more difficult by the limited domains over which application providers have control. Consider that of the four most likely culprits of poor performance and security breaches, only one and a half are under the complete control of the application provider.


ENTERPRISE / APPLICATION PROVIDER AREAS of CONTROL
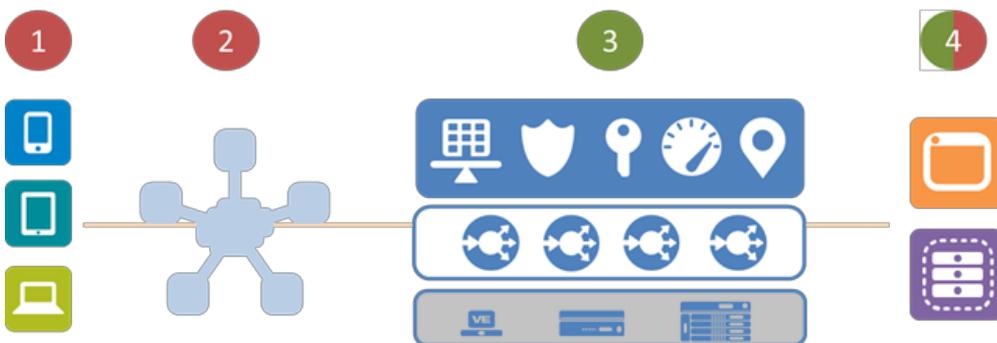
If we add cloud into the mix, the areas of control become even smaller. Generally speaking, applications deployed in cloud environments are not deployed along with the critical application services they need to ensure expectations of performance and security by end users and the business alike.

Increasingly, consumers often blame mobile network operators for poor performance, so it's important to note that they only have one of the four domains under their control: the mobile network. While they can and do offer services to improve the performance and security of applications traversing their networks, these services are not often capitalized upon by end-users or application providers.

MOBILE NETWORK OPERATOR AREAS of CONTROL
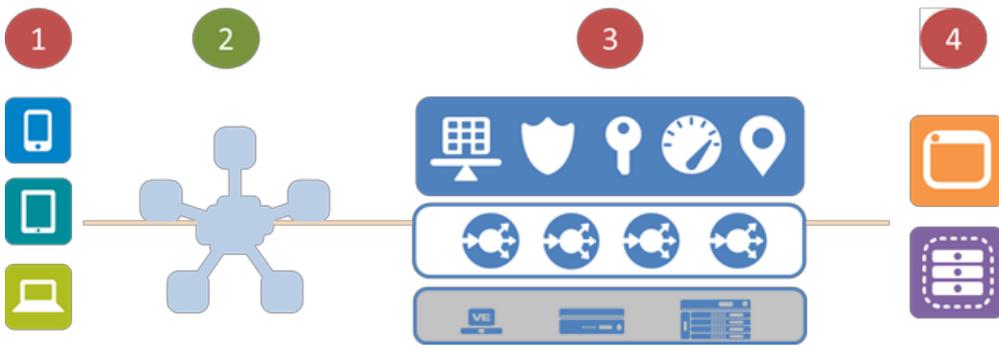
F5 Synthesis enables cloud and application providers as well as mobile network operators the architectural framework necessary to ensure the performance, reliability and security of applications. The latest release of Synthesis, v1.5 with a focus on the enterprise, adds performance and security-related capabilities and services along with greater flexibility in management and orchestration to ensure that no matter what domains are under your control, you can deploy the application services appropriate to your applications.

This release is about fast, fluent and flexible Software Defined Application Services.

Fast

- We've added a variety of TCP optimizations that improve performance for all applications that have an even greater impact on mobile application delivery. WebP conversion reduces the size of images, a per-application dedicated cache that uses HTML5 Local Storage capabilities and support for MPTCP ensure both application providers and mobile network operators can take advantage of Synthesis' performance services.
- More SSD-enabled appliances means the F5 Synthesis High Performance Service Fabric gains greater multi-tenancy and improves the performance of application services, which in turn benefits application performance,
- Simplified DNS deployment and optimized DNS resolution ensure DNS is never a bottleneck. F5 Synthesis' High Performance Service Fabric can support up to 418M DNS resolutions per second. That means it can resolve addresses for the equivalent of every site on the Internet in 2 seconds[1].

Fluent

- As important as content level visibility is application fluency: the ability to not only inspect, but understand the unique languages of applications. F5 Synthesis now speaks more languages than ever, including TDS/MS SQL, FIX, and BER/DER.
- We've added support for AES-GCM and ECC ciphers for TLS version 1.2 as well as supporting the ciphers needed for Perfect Forward Secrecy.
- Our new Secure Web Gateway service speaks the language of the web, filtering URLs and inspecting web content for malware, and can do so even when it's hidden within SSL connections.

Flexible

- New cloud connector capabilities enable services across data centers and clouds supported by VMware, AWS, and OpenStack technologies, ensuring the migration to cloud doesn't result in the loss of critical application services needed for security and performance.
- Synthesis v1.5 makes available BIG-IQ Device, part of Synthesis' Intelligent Service Orchestration, that enables automated discovery, licensing, inventory and UCS backup and restore capabilities for the Synthesis High Performance Services Fabric.
- Also announced is the availability of iControl REST, our control plane API in a modern, accessible model. iControl REST enables organizations and mobile network operators to integrate, automate, orchestrate and dynamically manage Synthesis High Performance Service Fabric from virtually any HTTP-capable scripting or programming language.
- We've taken Synthesis' Simplified Business Models and expanded them to include new streamlined license management for virtual editions of our platforms. License pools enable VE provisioning and decommissioning on-demand to enable broader use of services for burst capacity, testing, proof of concepts, or new development.

Synthesis v1.5 has a plethora of new capabilities, services and enhancements that enable application providers and mobile network operators to take advantage of the economy of scale afforded by the combination of a High Performance Service Fabric and Intelligent Service Orchestration to ensure that no matter which parts of the data path between users and applications are under control, they can be optimized and secured.

Additional Resources:

- F5 Synthesis Site
- iControl REST Wiki on DevCentral
- F5 Synthesis related posts on DevCentral

[1] Based on number of sites collected by Netcraft Web Server Survey, Jan 2014