F5 Friday: Federating Application Network Services

Lori MacVittie, 2013-29-03

It's time to get serious about managing hybrid #cloud

We (as in the industry) talk a lot about federating cloud. Usually solutions for federating cloud (aka hybrid cloud) are presented from the perspective of the end-user. We want to make it easier to transition between applications in the cloud and focus on identity management, single-sign on, and transparent integration that seamlessly directs users to the best resource, regardless of its deployment location.

But what about federation of the actual infrastructure? The architectures that support such ease of use features and functions for end-users should also be transparent and seamless and integrated. The disparity at the management layer between private cloud and traditional data center and public cloud is definitely a source of frustration for operations. Devops are code-switching between Amazon APIs, VMware vCloud solutions, and their own cloud management scripts and toolsets. Such disconnected processes result in inconsistent policies and a lack of holistic visibility into the performance and availability of applications that span environments. Ultimately, it negates the gains in deployment agility by introducing new overhead in management.

An October 2012 survey conducted on behalf of Redwood Software reported that 63 percent of enterprises that have implemented cloud solutions report an improvement in agility for supporting the needs of the business. When this benefit is coupled with reduced costs, it is inevitable that more applications will be deployed within cloud computing environments in the future. Operations needs tools that enable them to adapt to this new paradigm and support both on- and off-premises cloud deployments, as well as maintain existing—and likely more traditional—application deployments.

The complexity of managing application network services through multiple consoles, APIs, and processes increases the potential for error and makes it difficult to support elasticity and new architectural models that span both on- and off-premises cloud computing environments.

The challenge then is to enable governance of application delivery - security, performance, and scalability - across multiple environments managed using different paradigms. That challenge requires new solutions exhibiting features, functions and characteristics that can address the challenges and mitigate the operational risk introduced by hybrid cloud models.

The data center architecture is evolving to support orchestration and automation, for reasons illustrated in a multitude of surveys, polls, and anecdotal evidence. For the network, this means dynamic, rapid deployment, holistic provisioning and management of the application network service infrastructure.

We're moving from a device-specific data center paradigm to a fabric-based approach across the entire data center stack. We're moving from an operationally-managed application approach to a joint, operations and application-owner (tenant) based approach. Self-service is key to taking advantage of mature cloud computing offerings, and self-service requires a new set of features, functions, and guiding principles in order to enable:

1. **Catalog** Provide a list of available deployments comprising an application and its associated application network services.

2. **Application** Obtain the holistic view of a specific application deployment.

3. **Tenant** Administer access and services for business or operational stakeholders responsible for deploying applications.
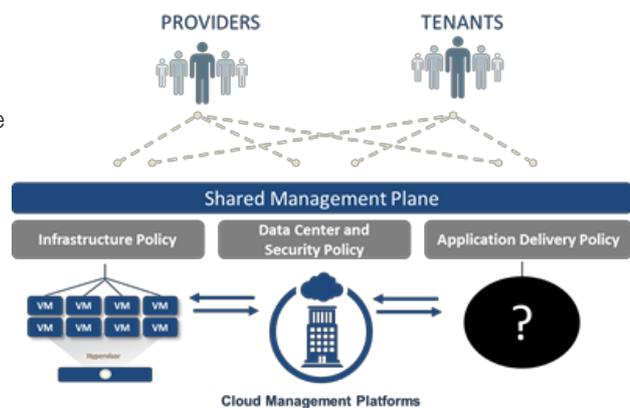
4. **Cloud Connectors** Enable integration with third-party orchestrators and cloud management frameworks.

5. **Service Management** Track, configure, and update physical or virtual application network service platforms.

F5 is poised to bridge the gap between usability and flexibility, between the application owner and operations, between the old paradigm and the new.

If you're going to be at Cloud Connect in Santa Clara (April 2-5) you'll want to stop by the F5 booth (#614) and get the scoop on what this next generation of dynamic data center management is going to look like. If you aren't able to attend, stay tuned ...

You won't be disappointed.

F5 Networks, Inc. | 401 Elliot Avenue West, Seattle, WA 98119 | 888-882-4447 | f5.com