Boost Agility and Automation with F5 Cloud Solution Templates

It's no secret that cloud adoption is growing at an unprecedented rate, with more and more applications making their way to the cloud every single day. And in many cases application owners are choosing to deploy these applications across multiple public and private cloud platforms, adding to the IT management nightmare that is multi-cloud sprawl. Regardless of their location within this multi-cloud world, these applications require very specific services, and for many IT staff and developers, configuring and deploying these services into cloud environments can be an incredibly daunting task. There can be many complex, time-consuming steps to follow, which are further complicated by huge toolset differences across cloud providers, different configuration requirements for particular applications, and varying technical expertise within organizations.

Cloud solution templates speed migration

F5 cloud solution templates eliminate migration worries by enabling F5 users to deploy fully configured, operational F5® BIG-IP® virtual editions (VEs) into public and private cloud environments with the confidence of an F5 expert. By leveraging the native resource-management services available on each of the leading cloud platforms, F5 has created a catalog of templates that enable the instantiation of various BIG-IP VE solutions and topologies in a matter of minutes, freeing organizations to focus on more pressing business matters.

More specifically these templates include the following:

- Amazon Web Services (AWS) CloudFormation Templates
- Microsoft Azure Resource Manager Templates
- Google Cloud Deployment Manager Templates
- Heat Orchestration Templates for OpenStack

Other than minimal user-specific input parameters, the templates contain every cloud resource necessary to support a variety of BIG-IP VE use cases. When launched, everything from the virtual infrastructure and supporting cloud services to the BIG-IP configuration and run-time parameters are fully defined—enabling traffic to immediately start flowing to your application servers.

For example, F5 has an AWS CloudFormation Template (CFT) designed to deploy a web application firewall (WAF) solution that scales automatically to match application throughput. When deployed, the template implements AWS EC2 instances, BIG-IP VE instances, an AWS Auto Scaling group, AWS CloudWatch Alarms, S3 buckets, and various other resources. In addition, the CFT also defines how these resources interact with one another to form a completely autonomous solution. This complex setup (see figure 1) would take days, if not weeks, for cloud architects to configure manually, but by leveraging the template, this solution can be functioning in an AWS virtual private cloud (VPC) in under an hour.
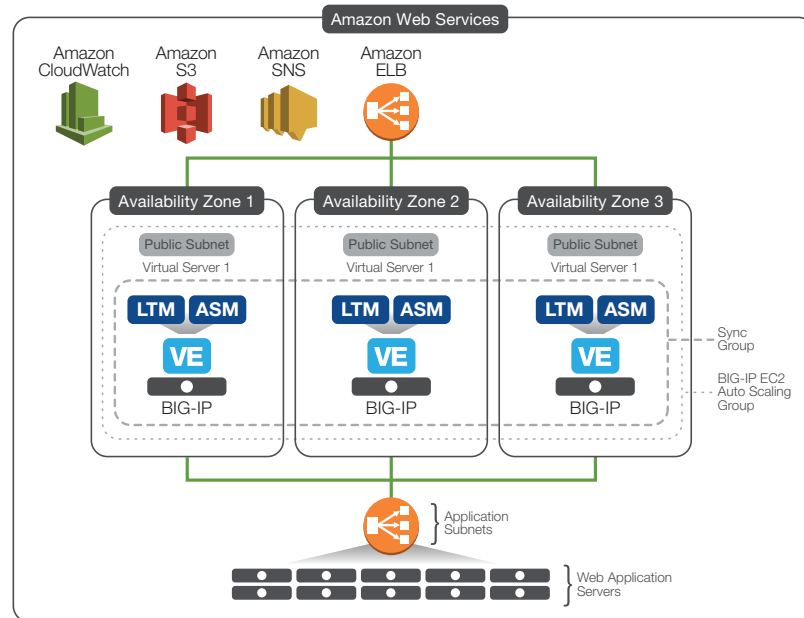

Figure 1: Auto-scale WAF CloudFormation Template for AWS

As there are innumerable use cases for application delivery services, F5 continuously develops new templates to expand upon an already extensive set of offerings. Furthermore, the templates are customizable, enabling users to increase a template's base capability by inserting their own custom scripts between the *Start Custom Configuration* and *End Custom Configuration* lines of the template's code.

All templates currently offered are located within the F5 repository on GitHub where they are publically available free of charge, and, as they are open-source, users are able to recommend improvements by submitting pull requests to the F5 team. For simplicity, the templates are separated by cloud platform (AWS, Azure, Google, and OpenStack), before being further segregated into one of two sub-categories: F5_*supported* or F5_*experimental*.

F5 supported templates: These templates have been designed, tested, and verified by F5 engineers, enabling all users with F5 support subscriptions to receive assistance should they need it. It is important to note that any customization of template code outside the designated customization areas of templates will result in the template no longer being available for F5 support.

F5 experimental templates: These templates, on the other hand, have also been designed by F5 engineers but have not been tested or verified and are subject to change. As such, these templates do not fall within the realm of F5 support, nor are they endorsed by F5 for production environments.

Cloud solution templates benefits

Reduced deployment time

Agility in the cloud is crucial to enhancing business performance. Complex cloud solutions that could take days or weeks to configure manually can be deployed in minutes using F5 cloud solution templates. Even the most experienced cloud architects can reduce implementation time by up to 80%, enabling precious working hours to be re-allocated to more pressing business matters.

Automation/orchestration of application services

As cloud architectures evolve and become more multifaceted, the need for orchestration and automation increases in order to support faster, more reliable operations. When combined with third-party automation tools such as Chef, Puppet, and Ansible, F5 cloud solution templates can be leveraged in orchestrated workflows, allowing application services to be autonomously spun up and configured without the need for human interjection.

Confident deployments

Even the most experienced and skilled network operators can make mistakes, and when applications and application services are involved, mistakes often lead to multiple hours of downtime and huge losses in revenue. F5 cloud solution templates have been designed by F5 experts and have also been extensively tested by numerous engineers to ensure they operate exactly as expected—deploying specific BIG-IP VE topologies correctly and leaving nothing to chance.

Multi-cloud template parity

Intense competition between cloud vendors is triggering price wars, as well as fast-paced evolution of the cloud-native services on offer. For this reason, many businesses are reluctant to commit entirely to one cloud platform in case a better deal, or new innovative services, can be found elsewhere. Across each major cloud vendor, F5 is striving toward complete template parity; that is, all templates available in AWS will (if they don't already) have a near-identical template available for all of the other cloud environments, allowing for the replication of application services across cloud platforms and further enhancing portability and flexibility.

In summary: F5 helps you streamline your cloud deployments

The process of manually deploying and configuring application services in the cloud can be daunting, time-consuming, and prone to human error, making it unsustainable when driving toward fully automated cloud environments. With F5 cloud solution templates, organizations can spin up application services across a variety of cloud platforms automatically, and in a fraction of the time needed for manual deployments.

Designed and fully tested by F5 engineers, these templates enable organizations to deploy application services with absolute confidence, regardless of the level of in-house F5 expertise. All F5 cloud solution templates can be used in conjunction with BIG-IP VE evaluation licenses, which makes it easier than ever to become familiar with the world's most trusted set of application services.

For more information on how F5 cloud solution templates can help your business, please visit these resources:

- DevCentral Article: Cloud Solution Templates
- F5 GitHub: AWS CloudFormation Templates
- F5 GitHub: Microsoft Azure Resource Manager Templates
- F5 GitHub: Google Cloud Deployment Manager Templates
- F5 GitHub: Heat Orchestration Templates for OpenStack