Automate Your Business with F5 and Puppet

KEY BENEFITS

- End-to-end automation from provisioning to application deployment

- Improved consistency, reliability, and automation speed when managing large infrastructures

- Detailed visibility and reporting for compliance and decision making

- Ease of use in managing, monitoring, and maintaining desired BIG-IP configuration states

- Seamless integration between BIG-IP APIs and the Puppet F5 module

In today's fast-moving world, enterprises seek to become more agile by deploying applications in every combination of public, private, and hybrid cloud. And as enterprise applications grow in size and number, the networks supporting them are also expanding quickly. In the face of increasingly complex deployments, organizations search for ways to manage their infrastructure faster, smarter, and safer.

To accomplish the complete network automation required to realize operational efficiencies and extend DevOps practices, network devices such as Application Delivery Controllers (ADCs) must be programmable. F5—with its highly programmable ADCs—and Puppet—with its open-source automation tools—have partnered to provide a compelling solution that enables organizations to increase the velocity of application deployment through automated provisioning and deployment of enterprise-grade application services on F5 devices in heterogeneous environments.

F5 and Puppet: increasing agility, ensuring consistency

As the market leader in delivering cloud and security solutions that allow enterprises to embrace the application infrastructure they choose without sacrificing speed and control, F5 helps organizations deliver applications through API-enabled platforms that support the automation and orchestration capabilities businesses demand. Puppet offers an open-source tool that can be used in a client/server architecture with the Puppet master application providing management and automation, while the Puppet agent application acts as a proxy that communicates with the F5® BIG-IP® device. Together, F5 and Puppet help organizations automate their networks to deploy applications faster and with more consistency.

Here's how it works: The Puppet application communicates with a declarative language in Domain Specific Language (DSL) files called manifests to manage device configurations across private and public cloud environments. All F5 devices—whether they are fixed-form-factor appliances, bladed chassis, or virtual editions—are built with rich, programmable REST APIs that allow them to communicate with Puppet.

A purpose-built Puppet F5 module offers a series of API integrations. Initially, the Puppet master has a BIG-IP configuration manifest with resources from the F5 module as building blocks. The Puppet master compiles a catalog based on this manifest and then sends it to the Puppet agent. This catalog contains API-based resources as well as the dependencies to bring the BIG-IP device to the desired state. Once the Puppet agent configures the BIG-IP device using the catalog, it also monitors and maintains the achieved state by periodically sending facts to the master and requesting a catalog. By using Puppet to simply and consistently manage their BIG-IP devices, organizations can save a significant amount of time and resources.
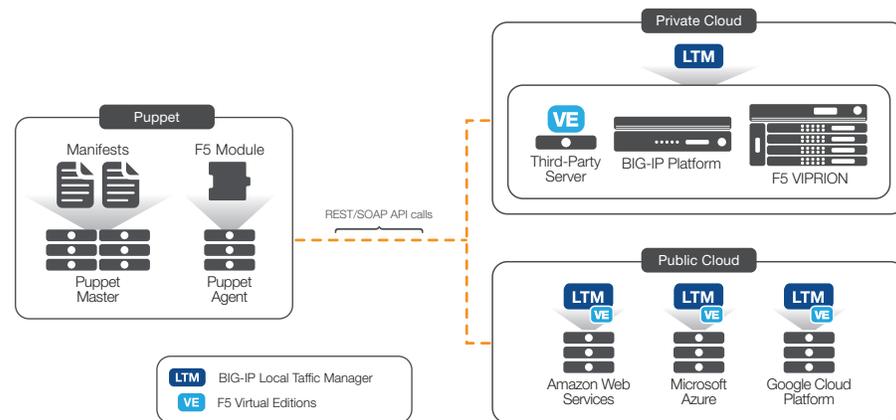

Figure 1: Puppet can manage F5 devices in both private and public clouds.

Automating your network with F5 and Puppet: use cases

Initial configurations

Organizations can use resources in the Puppet F5 module to automate initial BIG-IP configurations and network objects, including hostname, NTP, DNS, VLANs, self IPs, and more. F5 users can also create a BIG-IP device group and configure a pair of BIG-IP devices for high availability.

Reverting to desired configurations

Configuring an ADC is complex. When out-of-band temporary changes are made by an admin, keeping track of the changes (and reverting to the original configurations) can become a cumbersome task. Using Puppet, organizations can revert to the desired BIG-IP device configurations automatically.

Application deployment

Leveraging the Puppet resources, F5 users can create and manage BIG-IP objects, including the virtual servers, pools, and nodes that are required for typical application deployment. Puppet even facilitates automating complex application deployments through the use of F5 iApps® templates.

LEARN MORE

To learn more about how F5 and Puppet can help your organization, visit forge.puppet.com/f5/f5.