



# Automate Configuration of Application Networking Services in the Cloud

Cloud computing can help organizations provide better services while reducing costs and streamlining IT. But while cloud computing offers many benefits, the provisioning, managing, and monitoring of applications and services in the cloud is not easy. It requires cooperation among many areas of IT to configure services, and this heightened coordination and manual provisioning can lead to deployment delays and errors. F5® BIG-IQ™ Cloud, an application networking services management solution for F5 BIG-IP®-enabled cloud infrastructure, addresses orchestration problems and automates application networking services in public, private, and hybrid cloud deployments.

## Speed Cloud Deployments with Automated Provisioning

Cloud computing, which enables IT departments to dynamically run apps and services in distributed data centers, helps organizations streamline IT workflow and achieve optimal simplicity and scale for systems and resources. But with the benefits of the cloud come significant new challenges for IT. First, your IT department needs to be able to migrate apps and services in and out of the cloud, to integrate with on-premises infrastructure, and to achieve cloud federation. Second, the ability to port applications and services to different cloud environments is key to taking advantage of the flexibility of the cloud. Finally, for maximum efficiency, your IT department needs to be able to centrally provision, manage, and gain insight into service usage through a central interface.

While many cloud management solutions address the problem of provisioning, automating, and orchestrating data center infrastructure such as compute and storage, they don't address interoperability among discrete cloud environments. This is important, because an organization's cloud strategy can comprise both private and public clouds. For instance, when demand for computing capacity spikes, you may "burst" through to a public cloud to take advantage of additional, on-demand resources. You may also sometimes take advantage of virtual server resources, and other times physical. This means that your application hosting infrastructure is distributed across multiple clouds and multiple types of resources—but without appropriate intelligence about application networking services, provisioning becomes a greater challenge.

In addition, for a cloud component to fit into the broader cloud architecture, it must be simple to manage and must connect with existing cloud automation and orchestration tools. This integration requires plug-ins to make it fit into open architecture frameworks. It also needs to be flexible enough to interoperate between varying cloud architectures.

F5 BIG-IQ Cloud is an application networking services management solution that automates and orchestrates F5 BIG-IP Application Delivery Controller (ADC) services in cloud architectures. BIG-IQ Cloud is hypervisor-agnostic and facilitates the insertion of BIG-IP ADC services into open architecture cloud automation tools through the REST API framework. BIG-IQ Cloud exposes a predefined catalog of applications in a cloud management interface

## Key features

- **iApps Lifecycle Management**—Performs create, read, update, and delete (CRUD) operations on application network services
- **Provider and Tenant Self-Service Portal**—Provides a comprehensive view of devices, apps, tenants, and cloud connectors in a single UI
- **Cloud Connectors**—Includes REST API-based cloud connectors to VMware vCloud Director and Amazon EC2
- **Cloud Bursting**—Extends resources to and interconnects your private cloud with a public cloud, without losing visibility or control
- **Service Health and Performance Monitoring**—Enables you to see app health status in provider and tenant views to assist with fault isolation

## Key benefits

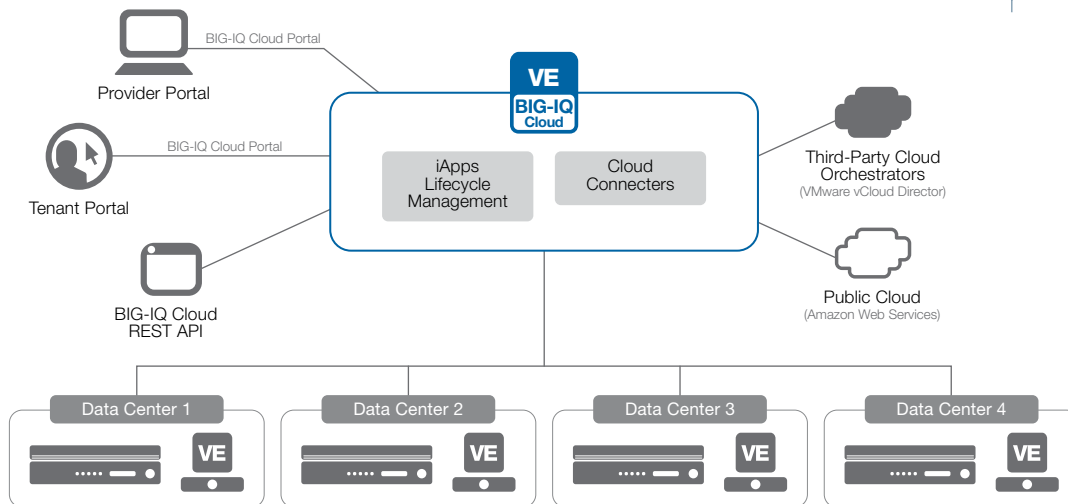
- **Simplify Provisioning**—Manage and self-provision multiple application networking services through a catalog of iApps Templates
- **Consolidate Management**—Speed provisioning from weeks to minutes with a single management interface
- **Gain Cloud Visibility**—Get a view into application health with health status visibility across private, public, and hybrid clouds
- **Integrate Flexibly**—Enable cloud bursting with the BIG-IQ REST API, and use cloud connectors to connect with third-party orchestration tools

and automates provisioning of applications to multiple tenants. Through a central dashboard view, BIG-IQ Cloud gives your IT department insight into all available BIG-IP devices (virtual or physical) in any cloud.

### Solution

F5 BIG-IQ Cloud enables enterprise IT departments to automate the configuration of application networking services in the cloud by providing:

- **Catalog of application networking services**—BIG-IQ Cloud maintains a catalog of F5 iApps® Templates—flexible, app-centric templates that enable you to quickly deploy services using optimal configurations. With iApps Templates, an administrator uses a central interface to easily deploy apps in multiple tenants, and can attach different services to each application.
- **Provider and tenant user interface**—A centralized dashboard view gives you end-to-end visibility of devices, tenants, applications, connectors, and application health monitoring.
- **BIG-IQ Cloud REST API**—Through the REST API, you can integrate with third-party cloud automation, management, and orchestration tools, and you can integrate BIG-IP ADC services into the cloud orchestration framework.
- **Cloud connectors**—BIG-IQ Cloud delivers custom connectors for VMware vCloud Director and Amazon EC2 public cloud. Using these connectors, you can insert the provisioning of BIG-IP ADC services into the cloud stack. This saves significant administration time and consolidates cloud management and monitoring tools into a single dashboard for full visibility into cloud orchestration.



F5 BIG-IQ Cloud components integrate and collaborate to provide consistent, cross-environment management of application network services.

### Learn more

For more information about BIG-IQ Cloud, please see the following resource or use the search function on [f5.com](https://f5.com).

### White paper

[Managing the Cloud with BIG-IQ Cloud](#)

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