



# F5 Application Services in Microsoft Azure and Azure Stack

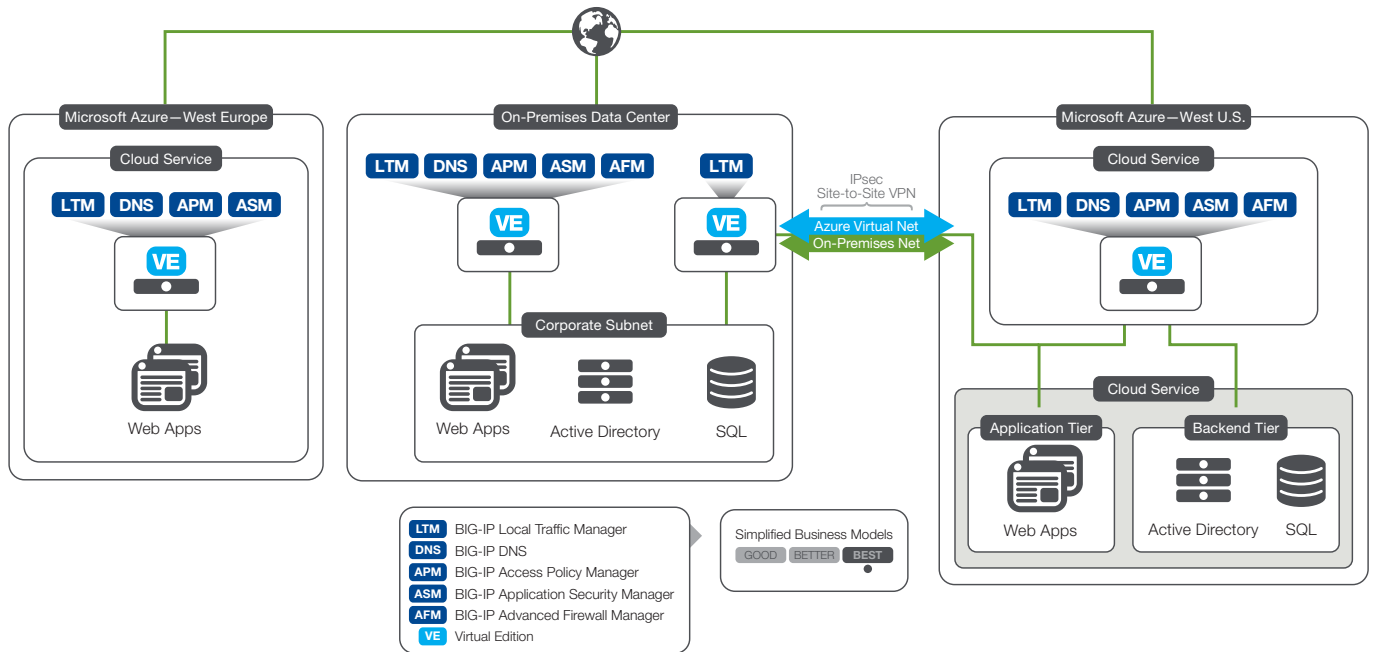
Enterprises are moving critical web applications to the public cloud in order to boost flexibility and scalability while reducing infrastructure and operational costs. BIG-IP® virtual editions (VEs) for Microsoft Azure enable you to provide consistent availability, security, and performance for your applications, regardless of their deployment location. At the same time, they help you maintain seamless continuity of application services and realize the benefits of a truly hybrid cloud architecture when used in concert with applications hosted in an Azure Stack environment.

## Challenge

Enterprises are under constant pressure to simplify management and enhance performance and scalability. Traditional data center architectures cannot provide this level of on-demand services. By moving mission-critical applications to the public cloud, organizations are able to boost IT and development agility and efficiency. Yet, despite the benefits of moving applications to a cloud environment, some enterprises are still wary of taking this big step. They are often concerned that their cloud-based applications won't have the same levels of performance and security as their on-premises applications.

## Solution

BIG-IP VEs for Microsoft Azure enable you to take advantage of the elasticity of the public cloud while continuing to manage and secure critical applications the same way you do when they're hosted on premises. Whether you want to move your applications entirely to the Azure cloud, use a hybrid private-public cloud network, or deploy a multi-cloud architecture, BIG-IP VEs for Microsoft Azure can help increase efficiency, optimize performance, and bolster security.



F5 offers enterprise-class local and global traffic management, web application firewall, and SAML federation wherever your applications reside.

**Enjoy enterprise-class security and performance in an Azure environment.**

BIG-IP VEs for Microsoft Azure enable you to maintain the same security policies and a consistent management interface for applications you move to the cloud. BIG-IP product modules provide a host of services for cloud-based applications, including policy-driven single-sign on (SSO), web application security, DDoS protection, SSL offloading, and stateful layer 4–7 traffic management.

**Increase flexibility and scalability with hybrid cloud networks.**

Integrating public cloud resources with an existing private cloud can give you a much-needed, on-demand platform to scale rapidly. Key advantages of a federated cloud configuration include the seamless redirection of application users, geolocation and acceleration technologies, and secure SSL VPN connections. The user experience remains unaffected regardless of the location from which applications are delivered.

**Improve performance and boost availability with global traffic management and federation.**

One of the advantages of public cloud computing is the potential to deliver applications from multiple locations across geographic regions. This can improve performance by reducing the distance between the user and the application. It can also increase availability by ensuring failover if an application in one region were to go down. BIG-IP VEs for Microsoft Azure make it easy for you to realize these benefits by balancing traffic across regions based on performance and availability metrics.

Moreover, BIG-IP VEs for Microsoft Azure help enterprises using a hybrid cloud model address the challenge of federating network, access, and application resources across locations. BIG-IP platforms use Security Assertion Markup Language (SAML), an XML-based, open standard data format for authentication and authorization. SAML eliminates the need to manage independent user accounts across Software-as-a-Service (SaaS) providers. It also enables web browser SSO and stronger authorization solutions, including two-factor authentication, IP geolocation enforcement, and device inspection.

### **Reduced deployment times with Azure Resource Manager (ARM) templates**

Leveraging Azure's native resource manager service, F5 has developed a series of templates to aid in the deployment of BIG-IP VEs in both Azure and Azure Stack. These automatically deployable templates, when executed upon, are able to instantiate fully functioning VEs in a matter of minutes, spanning a wide range of architectural topologies and use cases. Publicly available via F5's GitHub Repository, these templates have been designed and tested by F5 experts, allowing you to deploy with absolute confidence. An example ARM template is F5's auto-scaling WAF solution, whereby BIG-IP VE instances with BIG-IP Application Security Manager (ASM) and BIG-IP Local Traffic Manager (LTM) provisioned are autonomously spun up or down depending on traffic levels, ensuring optimal application protection and optimized operational expenditure.

### **Enjoy flexible licensing and consumption models**

To better align with public cloud-based usage models, BIG-IP VE offers four different options that give you the flexibility to meet operational needs.

- Pay-As-You-Go (PAYG) pricing is available for those looking to leverage F5 application delivery controller (ADC) services on a per-hour basis; this option is perfect for dev/test or short-term projects.
- F5's subscription licensing lets you to purchase 1-, 2-, or 3-year BIG-IP VE license subscriptions that you can deploy in any supported environment. You can self-license additional instances as needed with fees co-termed to a subscription contract period.
- F5's [Enterprise Licensing Agreement \(ELA\)](#) provides you with the architectural flexibility to deploy however many VEs you want, wherever you want, and whenever you want, with no retroactive penalties that can wreak havoc on budgets.
- F5's bring-your-own-license (BYOL) option is a perpetual license that lets you amortize acquisition costs over a longer period of time.

### F5 for Microsoft Azure Stack

Microsoft Azure Stack—an extension of Azure for on-premises deployments—has a multitude of customer use cases:

- Truly hybrid cloud architectures spanning both public and private cloud environments
- Running multiple disparate environments where Azure is not available
- Supporting latency-sensitive applications

F5 is able to build on all of these use cases by offering one set of consistent availability, security, and performance services for applications running across both Azure and Azure Stack in the public and private cloud. Azure Stack supports all Azure native services, including Azure Resource Manager, meaning F5's ARM deployment templates can also be leveraged in Azure Stack, allowing for fast replication of BIG-IP VE topologies across environments. BIG-IP VEs can currently be purchased through either BYOL (Bring-Your-Own-License) or subscription-based consumption models for Azure Stack.

### Conclusion

Migrating applications to the cloud offers many benefits to enterprises that are interested in increasing flexibility and scalability while cutting their infrastructure and operational costs. BIG-IP VEs for Microsoft Azure deliver the flexibility, security, and application control today's enterprises require while providing the consistency and scalability necessary for future growth. In addition, enterprises looking to implement a truly hybrid cloud through use of both Azure and Azure Stack, are able to leverage consistent application services across environments to improve overall availability and security of applications.

