




EVERY APP
ANYWHERE

Advanced Visibility, Analytics and Management in an App-Centric World

Charles Chong Solution Architect, APCJ

赞助商:  HUAWEI

 aws

 vmware

 神州数码
Digital China

 HOLYZONE
圣域网络

 神州云科
Yunke China

 n-compass

 四联

 博云
BoCloud

F5支持公益:

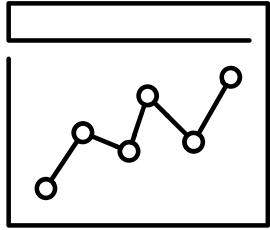




There's an app for (almost) everything!

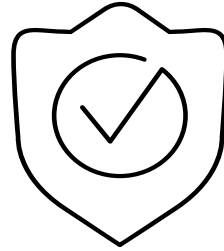
EVOLVING IT LANDSCAPE AND CHALLENGES

Evolving Application Landscape



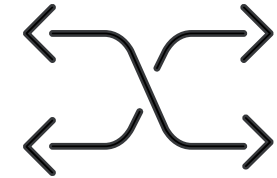
Explosion In Apps Demands Scalable Operations

- New app growth will increase 19% CAGR by 2021¹
- Enterprises have on average 200 apps² and smartphone users have more than 80 apps on their phone³



Increasing Web Application Attacks

- 36% with less than 25% of their apps protected with a WAF.²
- Web App Attacks are the #1 Source of Data Breaches (29%)⁴
- 3B Credentials Reported Stolen in 2016⁵



App Teams Require Fast Time to Market

- 40% of IT spend on apps today are based on DevOps Model⁶
- More than 70% of configuration and deployment steps are automated⁶

¹Source: Cisco Global Cloud Index (2016 – 2021)

²Source: F5 2018 SOAD Report

³Source: [Techcrunch Jan 17 2018 article](#)

⁴Source: [Verizon 2017 Data Breach Investigations Report](#)

⁵Source: [Shape 2017 Credential Spill Report](#)

⁶Source: F5 2018 SOAD Report and 2017 State of DevOps Report

Slido Survey

**Does your company have DevOps
or App Team?**

Yes/ No / In Planning Stage



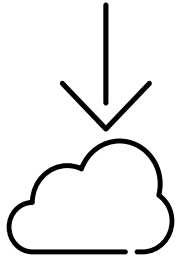
Percentage of
DevOps who
circumvent IT
due to lack of
self-service
provisioning

65%

- Push-button provisioning is a requirement to satisfy today's need for speed.
- Self-service enablement was cited by 65% of DevOps as influencing their decision to 'go around' IT and seek out cloud or open source solutions.
- **Avoiding IT means circumventing security**, which puts the business and other systems at risk.

NetOps Needs To Collaborate With App Team

And Adapt Quickly To Automate and Deliver App Services To Internal Customers



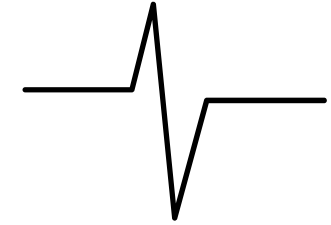
Frictionless Access And Right-Sized Offers

- Fast and flexible instantiation
- Faster development & deployment
- Better alignment to capacity needs with autoscale



Development Integration and Openness

- Private and Public cloud platform support
- Deployment without deep domain expertise
- Greater automation through published REST APIs



Agility and Per-App Visibility

- Self-service deployments that conform to corporate standards
- Simplified upgrades
- App-centric performance and analytics

INTRODUCING BIG-IP CLOUD EDITION

Introducing BIG-IP Cloud Edition

Industry-Leading Application Services,
Now Easier To Use And Dedicated For Any App, Anywhere



Per-App VE

- *Dedicated*
- *Right-sized*
- *Industry-Leading ADC & WAF*



Enhanced BIG-IQ Management

- *Per-App Analytics*
- *Autoscale and Multi-Cloud Presence*
- *Self-Service*

Four Key Use Cases To Enhance Your Apps Delivery



**Dedicated Services and
Visibility
For Apps**

*Easiest To Use
And Operate*



**Cost Effective Security
Services For Next Tier
Of Apps**

*Best Protection
For More Apps*



**Self-Service
For App Team**

*Agile
App Services*



**AutoScale
When Needed**

*On Demand
Scalability*

KEY FEATURES AND BENEFITS

Key Use Cases



**Dedicated Services
For Apps**

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Deliver Dedicated F5 App Services For Each App

Break down barriers to deploying existing and new apps faster

Proven F5 Per-App Services For NetOps & App Teams

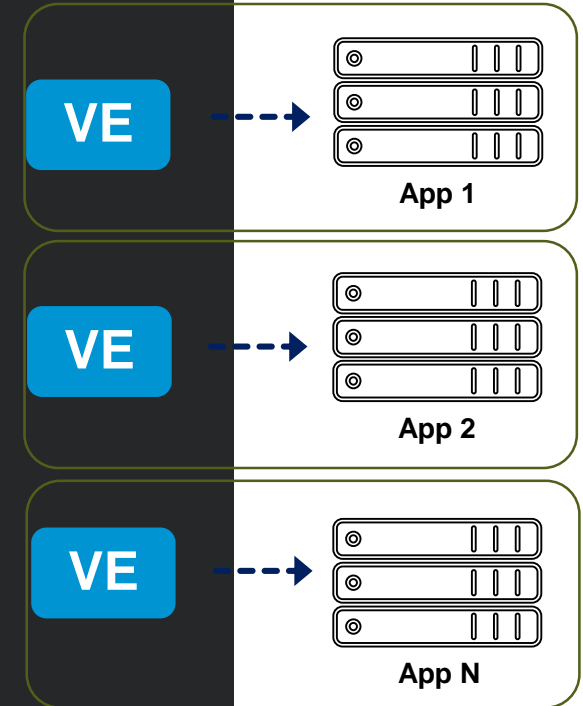
- Industry-leading dedicated traffic management and app protection for existing apps
- Cost effective F5 app services for the next tier of apps

Benefits

- Right-sized to enable per app deployment of services
- Isolation of service failure reduces impacts to business operations
- Improved productivity with automated provisioning
- Advance protection for all apps

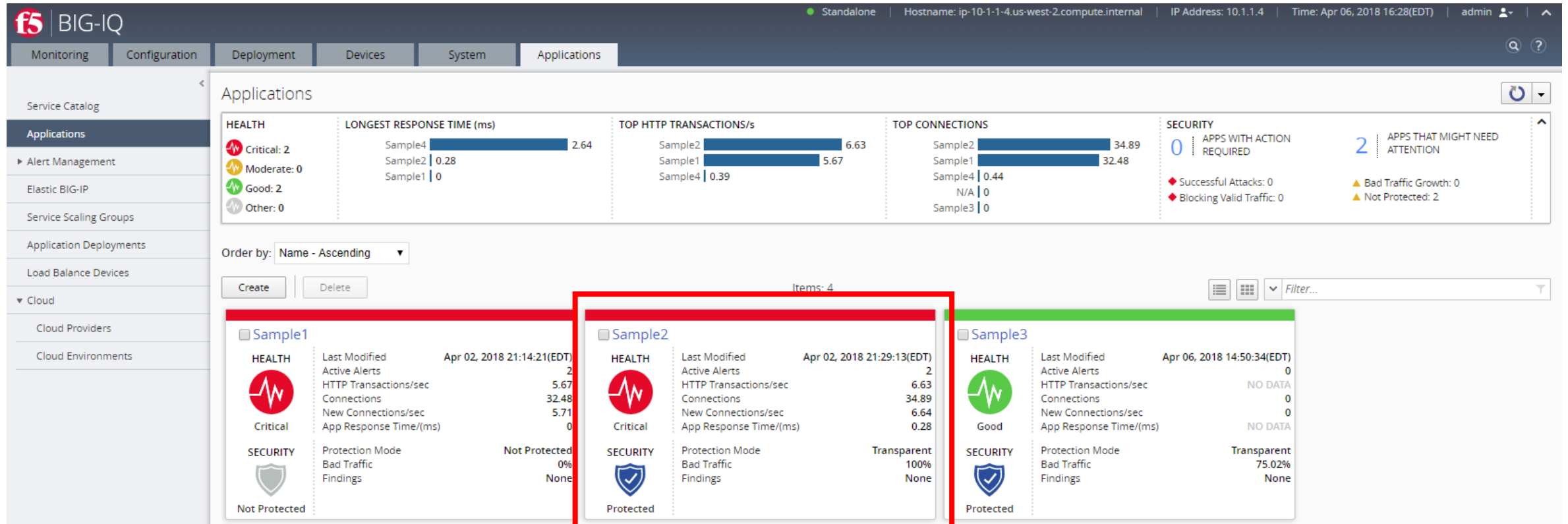
Per-App vADC

L7 Traffic Mgmt
and App Protection
(LTM, Adv. WAF)



Comprehensive, Easy To View Application Dashboard

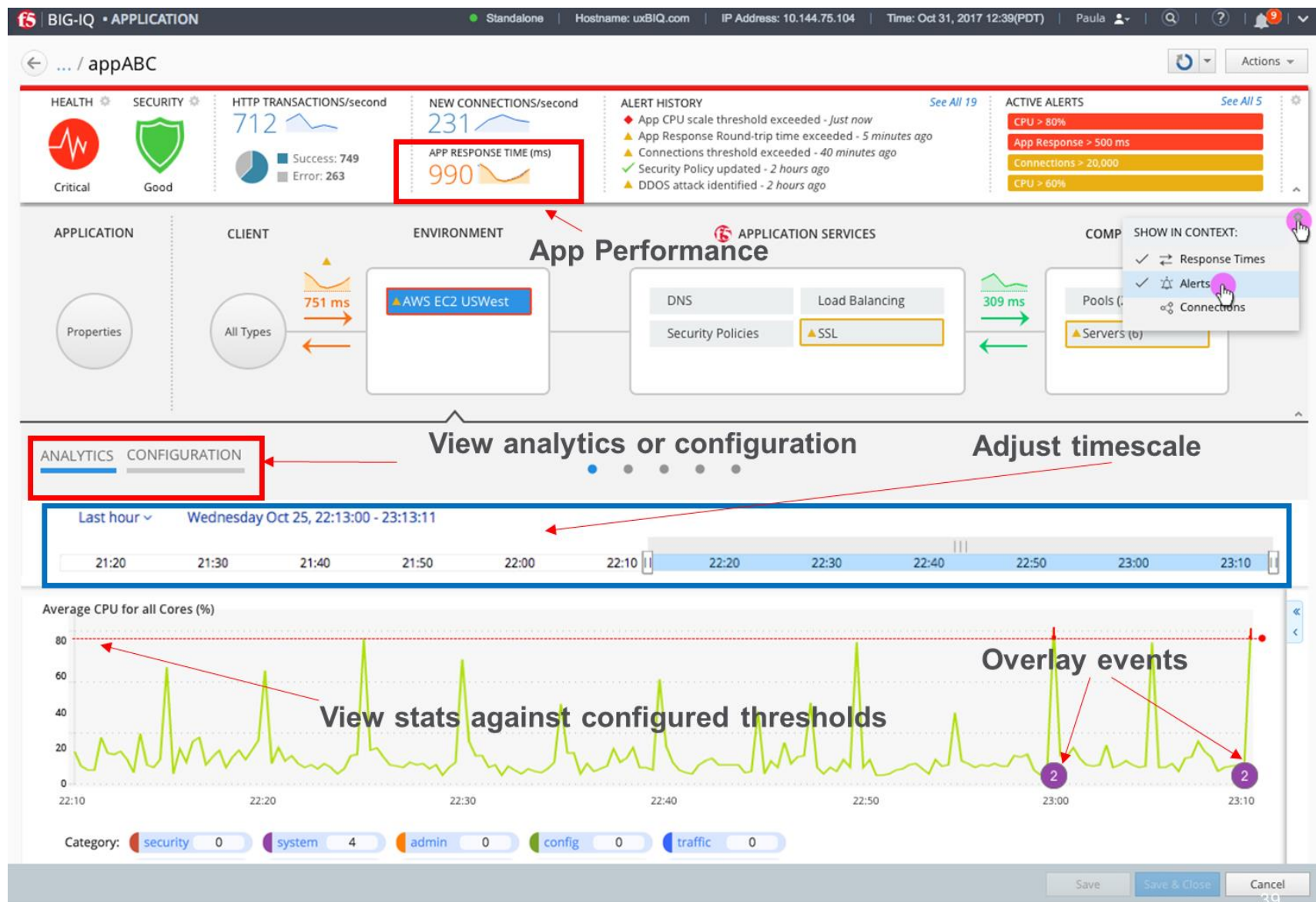
Drill Down To App Health, Key Metrics and Events/Alerts



- Quick dashboard view of applications
- Drill down to specific app
- App health, performance stats, and security status

Application Specific Analytics For App Team

Fast issue resolution with granular per-app analytics

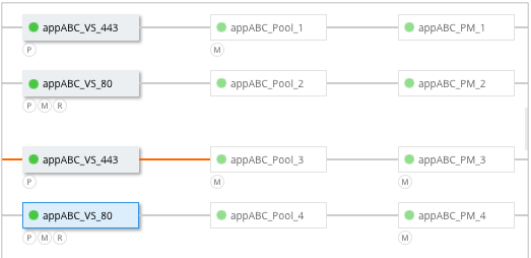
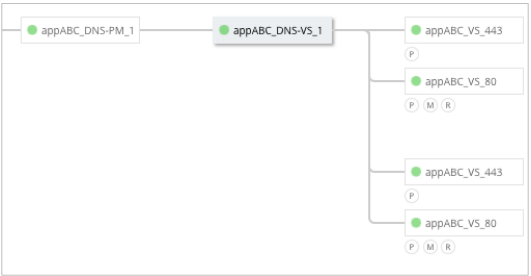
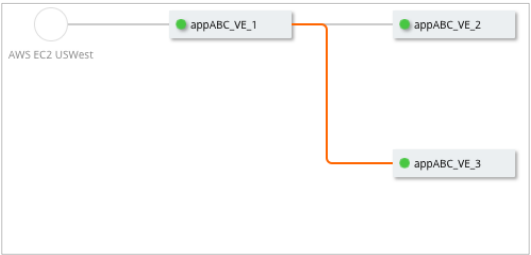


UI subject to change

Application Specific Analytics For NetOps Team

Fast issue resolution with network environment and topology view

Each Node = topology map



BIG-IQ | Standalone | Host: ABC_BIG-IQ1.com | IP: 10.145.195.158 | Time: 9/25/2016 3:30PM | Admin | Marco_A

Monitoring | Configurations | Deployment | Devices | System | Applications

... / appABC

HEALTH: 27 Critical | SECURITY: 43 Moderate | HTTP TRANSACTIONS/second: 712 | NEW CONNECTIONS/second: 231 | APP RESPONSE TIME (ms): 990

RECENT SIGNIFICANT EVENTS: CPU scale threshold exceeded - Just now, App Response Round-trip time exceeded - 5 minutes ago, Connections threshold exceeded - 40 minutes ago, Security Policy updated - 7 hours ago, DDOS attack identified - 8 hours ago

ACTIVE ALERTS: CPU > 80%, App Response > 500 ms, Connections > 20,000, CPU > 60%

APPLICATION SERVICES: DNS, Traffic Management, Security Policies, SSL

COMPUTE POOLS: WestCoastPool1, EC2-USWestPool1

Environment

Properties

Devices

Status	Device Name	IP Address	Services	Version
●	appABC_VE_1	10.144.74.137	DNS, LTM	BIG-IP 13.0.0 Build 0.0.1645...
●	appABC_VE_2	10.144.74.136	LTM, ASM	BIG-IP 13.0.0 Build 0.0.1645...
●	appABC_VE_3	10.144.74.135	LTM, ASM	BIG-IP 13.0.0 Build 0.0.1645...

MAP QUICK EDIT

appABC_VE_1: Active, CPU 50%, Mem 40%, Concu.Conne.

UI subject to change

Key Use Cases



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*Agile
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**AutoScale
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Percentage of developers aware they are pushing vulnerable code into production, but are not actively doing anything about it.

IBM & Arxan | Mobile & IoT Study 2017

44%

- 28% of organizations consider the difficulty of securing applications one of their top security challenges.
- **When developers move at speed, security is often sacrificed.**
- Providing security 'on demand' reduces the risk of developers forgoing security entirely or turning to external, unproven solutions

App Team Uses Approved Security Policies

NetOps/SecOps Publishes WAF Policies For Specific Apps

List of WAF policies

Deploy WAF Confidently

- Existing or new security policy is attached to app template
- WAF policy deployed automatically for each app

Big-IQ interface showing the 'Policies' list. The table lists various security policies with columns for Name, Partition, Type, Application Language, Parent, Enforcement Mode, App Templates, and Applications. The policy 'bb_asm_policy' is selected.

<input type="checkbox"/>	Name	Partition	Type	Application Language	Parent	Enforcement Mode	App Templates	Applications
<input type="checkbox"/>	abc_asm_policy	Common	Security	utf-8	N/A	Blocking	2	0
<input checked="" type="checkbox"/>	bb_asm_policy	Common	Security	utf-8	N/A	Transparent	4	2
<input type="checkbox"/>	c_asm_policy	Common	Security	utf-8	N/A	Blocking	18	2
<input type="checkbox"/>	parent_policy_example	Common	Parent	utf-8	Parent		0	0
<input type="checkbox"/>	r_policy_ssdfsdf	Common	Security	utf-8	N/A	Blocking	2	2
<input type="checkbox"/>	s_policy_ookio9888	Common	Security	utf-8	N/A	Blocking	6	5
<input type="checkbox"/>	t_policy_sdfsdf	Common	Security	utf-8	N/A	Blocking	4	2
<input type="checkbox"/>	u_policy_sdfsdfddss	Common	Security	utf-8	N/A	Blocking	0	0
<input type="checkbox"/>	v_policy_sdfsdf00	Common	Security	utf-8	N/A	Blocking	4	2

Web Application Security configuration page. The 'Policy' dropdown is set to 'ASM_Policy_AAA' and the 'Virtual Server' dropdown is set to 'App_VirtualServer_1'. The 'Required' checkbox is checked.

Web Application Security

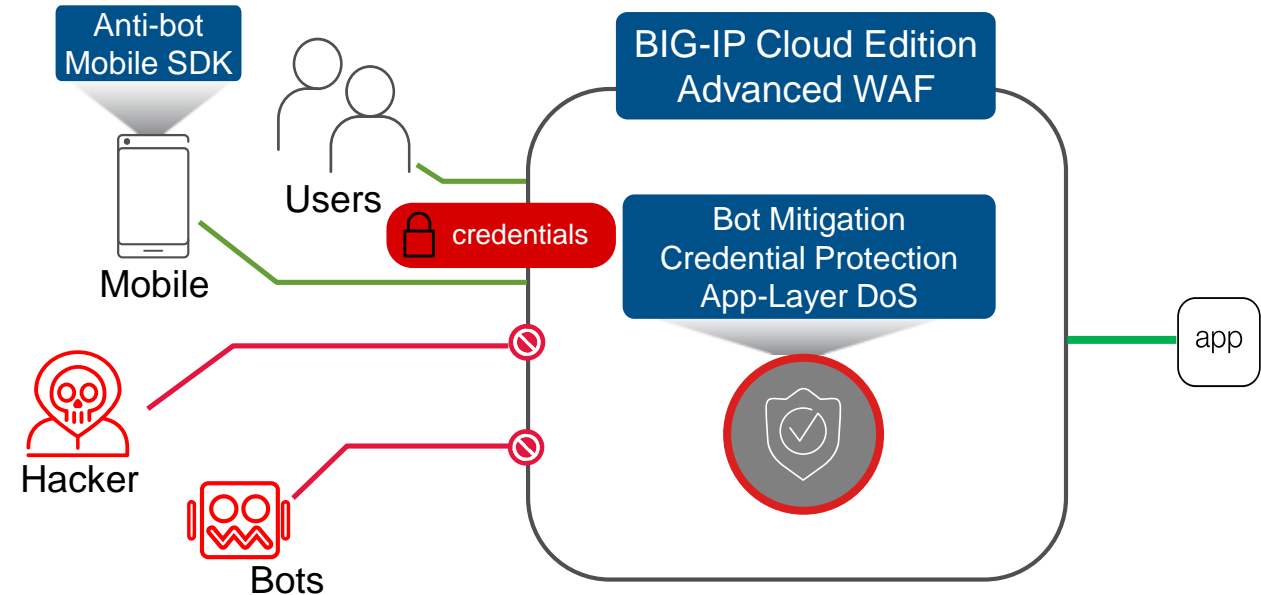
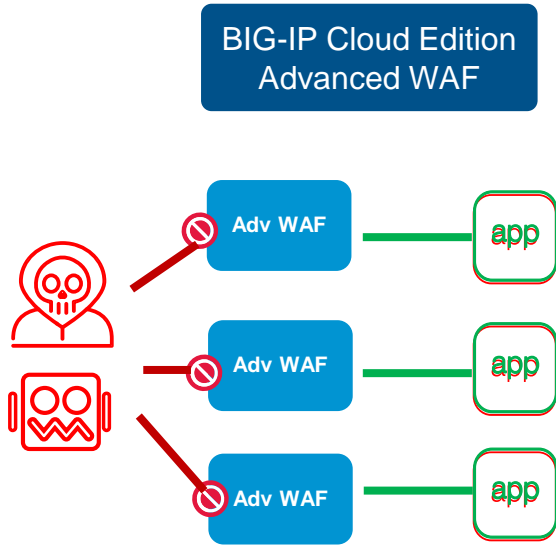
Policy: ASM_Policy_AAA Virtual Server: App_VirtualServer_1 + x ☒ Required

Enforces the selected WAF policy for this template

UI subject to change

Advanced Protection For More Applications

Reduce Security Risk For All Apps



Protect All Applications

- Prevent attacks, takeover, or data exfiltration through unprotected web and mobile apps
- Stop L7 DDoS attacks that impact app performance and availability
- Centralize policies and audit logs ensure consistency for compliance reporting

Advanced Protection: Stop New, Evolving Attacks

- Only leading per-app advanced WAF to protect against sophisticated attacks
- Policy builder auto-tunes blocking for a wide range of attacks
- Proactive bot detection and mitigation
- Prevention of credential theft and stuffing

Key Use Cases



**Dedicated Services
For Apps**

***Easiest To Use
And Operate***



**Cost Effective Services
For Next Tier Of Apps**

Percentage of production outages
caused by upgrades and migration
of applications

***Best Protection
For More Apps***



**Self-Service
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***Agile
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When Needed**

***On Demand
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Percentage of
production
outages caused
by upgrades and
migration of
applications

51%

- Continuous Integration (CI) is part of the DevOps philosophy and requires automated testing of applications before delivery. Too often applications are tested in a vacuum, without the application services that will be used in production
- The average BIG-IP hosts 123 virtual servers. Customers are often reluctant to upgrade or apply patches because of the potential for disaster.

App Team Uses Simple Templates To Deploy New Apps

Self-Service Provisioning In Seconds

Pre-Built And Approved App Templates For Easy Deployment

- Catalog of templates for common deployments
- Templates based on approved policies/configurations
- Easy deployment via GUI or single API
- No networking expertise needed

App owner selects and populates the fields required

UI subject to change

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**AutoScale
When Needed**

*On Demand
Scalability In
Multi Cloud
Environment*



Percentage of
customers that
requires auto
scaling support in
multi cloud
environment

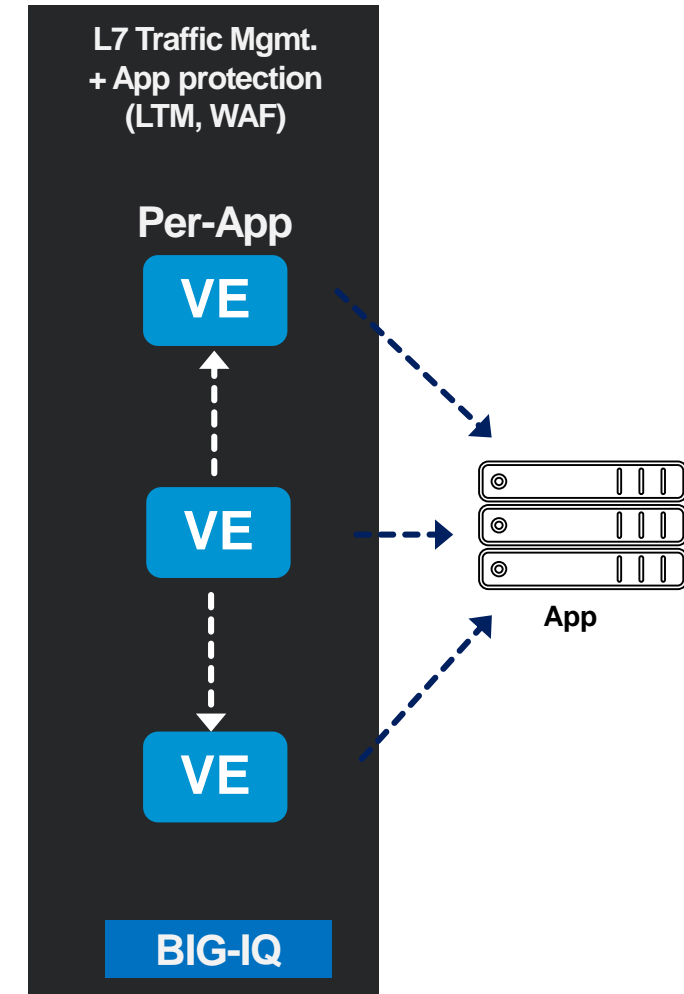
63%

- Customers often opt for resources on demand to reduce overall TCO.
- Most customers are looking for a solution that supports autoscaling in multiple environment, including private cloud, public cloud and on-premise data centres.

Highlight Autoscaling Of App Services

On Demand Scalability With No Need To Overprovision

- Quick response to increased load with auto-scaling of app services and security
- Auto-scale based on threshold policies
- Once traffic peak subsides, additional instances are spun down



Autoscaling Of App Services

- Template-based autoscaling policies
- Trigger based on CPU, memory, throughput - in/out
- Manual scale-out for pre-planned events
- Supported in VMware and AWS*

Scaling Rules

Scale-Out: Select... Greater than [] + x

Scale-Out Cooldown Period: 15 Minute(s)

Scale-In: Select... Less than [] + x

Scale-In Cooldown Period: [] Minute(s)

Notifications

Send Notifications On

Email Notifications

☐ Send email []

Select Trigger Metric

Scale Out Rules ⓘ

Metric	Condition
<input checked="" type="checkbox"/> CPU Utilization	Greater than 80 %

Automatic Scale Out

Scale-out Now

Save Save & Close Cancel

Initiate manual Scale Out

* - Additional environments planned

UI subject to change

BIG-IP Cloud Edition Availability In Public/Private Clouds

Providing consistent app services across cloud environments

Private Cloud

vmware®



Azure Stack

cisco

openstack™

amazon
web services™



Azure



Google
Cloud Platform

Public Cloud

* - Full enablement of CE lifecycle management. Other clouds planned.

- ACI Unmanaged Mode.

SUMMARY

Summary – BIG-IP Cloud Edition Delivers...

- Dedicated F5 App Services for each app
- Comprehensive, easy to view analytics for each app
- Best protection for more apps to close security gaps
- Simple app templates for app teams to deploy services in seconds
- Policy based autoscale to quickly meet capacity needs

Easy-To-Use F5 Per-App Services For Any App, Anywhere

WE MAKE APPS



FASTER. SMARTER. SAFER.