



# Introducing F5 BIG-IP Cloud Edition

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PRESENTED BY:

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WE MAKE APPS  FASTER.  
SMARTER.  
SAFER.

# Agenda

- **Evolving IT landscape and challenges**
- **Introducing F5 BIG-IP Cloud Edition use cases**
- **Key features and benefits**
- **BIG-IP Cloud Edition overview**
- **Summary**

# EVOLVING IT LANDSCAPE AND CHALLENGES



# Evolving Application Landscape



## Explosion in apps demands scalable operations

- New app growth will increase 19% CAGR by 2021<sup>1</sup>
- Enterprises have on average 200 apps<sup>2</sup> and smartphone users have more than 80 apps on their phone<sup>3</sup>

<sup>1</sup>Source: Cisco Global Cloud Index (2016–2021)

<sup>2</sup>Source: F5 2018 SOAD Report



## Increasing web application attacks

- 36% with less than 25% of their apps protected with a WAF<sup>4</sup>
- Web app attacks are the #1 source of data breaches (29%)<sup>4</sup>
- 3B credentials reported stolen in 2016<sup>5</sup>

<sup>4</sup>Source: [Verizon 2017 Data Breach Investigations Report](#)

<sup>5</sup>Source: [Shape 2017 Credential Spill Report](#)

<sup>5</sup>Source: [Techcrunch Jan 17 2018 article](#)



## App teams require fast time to market

- 40% of IT spend on apps today are based on DevOps model<sup>6</sup>
- More than 70% of configuration and deployment steps are automated<sup>6</sup>

<sup>6</sup>Source: F5 2018 SOAD Report and 2017 State of DevOps Report

# 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 automation

- 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



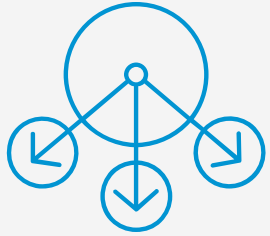
## **Enhanced BIG-IQ management**

Per-app analytics

AutoScale and multi-cloud presence

Self-service

# Four Key Use Cases



**Dedicated  
services  
for apps**

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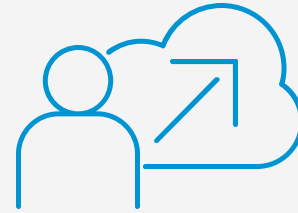
Easiest to use  
and operate



**Cost Effective  
services for next  
tier of apps**

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Best protection  
for more apps



**Self-Service  
for app  
team**

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Agile  
app services



**AutoScale  
when  
needed**

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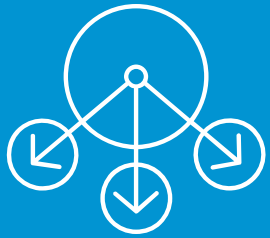
On-demand  
scalability



# KEY FEATURES AND BENEFITS



# Four Key Use Cases



## **Dedicated Services for Apps**

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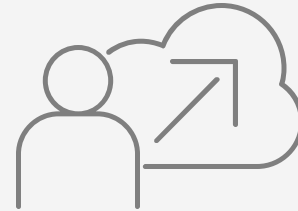
Easiest to use  
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## **Cost Effective Services for Next Tier of Apps**

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Best protection  
for more apps



## **Self-Service for App Team**

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Agile  
app services



## **AutoScale When Needed**

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On-demand  
scalability

# Deliver Dedicated F5 App Services For Each App

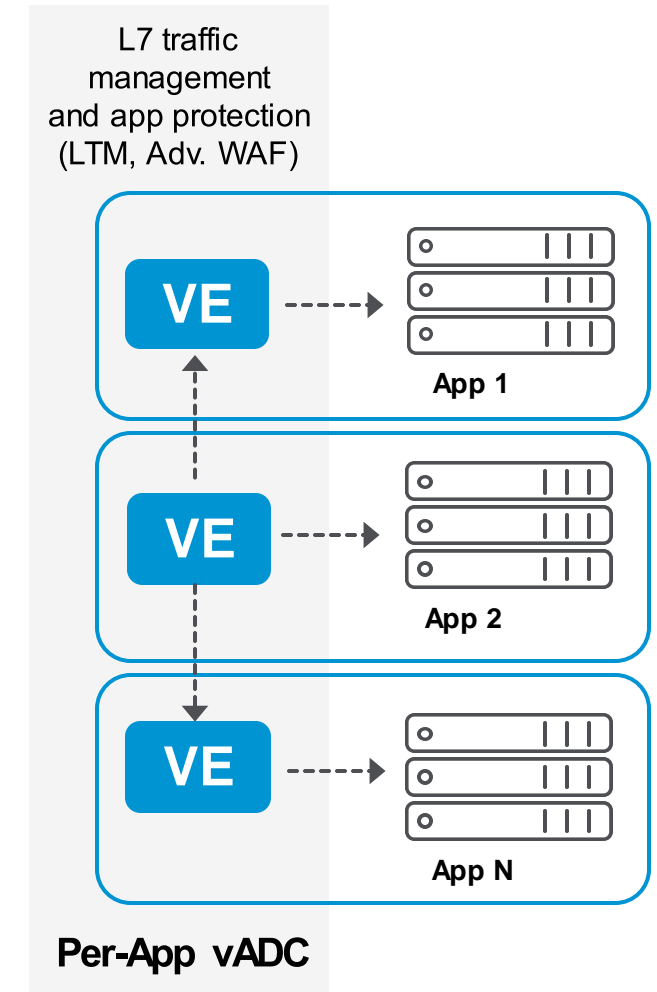
Break down barriers to deploying existing and new apps faster

## Proven F5 per-app services for NetOps and 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



## Drill down to app health, key metrics and events/alerts

The screenshot shows the BIG-IP Applications page. The left sidebar contains navigation links: Service Catalog, Applications, Alert Management, Elastic BIG-IP, Service Scaling Groups, Application Deployments, Load Balance Devices, Cloud, Cloud Providers, and Cloud Environments. The main content area is titled 'Applications' and shows a list of application samples. The 'Sample2' application is highlighted with a red box, indicating it is the selected application. The page displays various metrics for each sample, including Health, Security, and Performance.

HEALTH	LONGEST RESPONSE TIME (ms)	TOP HTTP TRANSACTIONS/s	TOP CONNECTIONS	SECURITY
Critical: 2	Sample4: 2.64	Sample2: 6.63	Sample2: 34.89	0 APPS WITH ACTION REQUIRED
Moderate: 0	Sample2: 0.28	Sample1: 5.67	Sample1: 32.48	2 APPS THAT MIGHT NEED ATTENTION
Good: 2	Sample1: 0	Sample4: 0.39	Sample4: 0.44	Successful Attacks: 0
Other: 0			N/A: 0	Blocking Valid Traffic: 0
			Sample3: 0	Bad Traffic Growth: 0
				Not Protected: 2

Order by: Name - Ascending

Create Delete

Items: 4

Filter...

Sample1	Sample2	Sample3
HEALTH	HEALTH	HEALTH
Last Modified: Apr 02, 2018 21:14:21(EDT)	Last Modified: Apr 02, 2018 21:29:13(EDT)	Last Modified: Apr 06, 2018 14:50:34(EDT)
Active Alerts: 2	Active Alerts: 2	Active Alerts: 0
HTTP Transactions/sec: 5.67	HTTP Transactions/sec: 6.63	HTTP Transactions/sec: NO DATA
Connections: 32.48	Connections: 34.89	Connections: 0
New Connections/sec: 5.71	New Connections/sec: 6.64	New Connections/sec: 0
App Response Time/(ms): 0	App Response Time/(ms): 0.28	App Response Time/(ms): NO DATA
Critical	Critical	Good
SECURITY	SECURITY	SECURITY
Protection Mode: Not Protected	Protection Mode: Transparent	Protection Mode: Transparent
Bad Traffic: 0%	Bad Traffic: 100%	Bad Traffic: 75.02%
Findings: None	Findings: None	Findings: None
Not Protected	Protected	Protected

- Drill down to specific app
- App health, performance stats, and security status

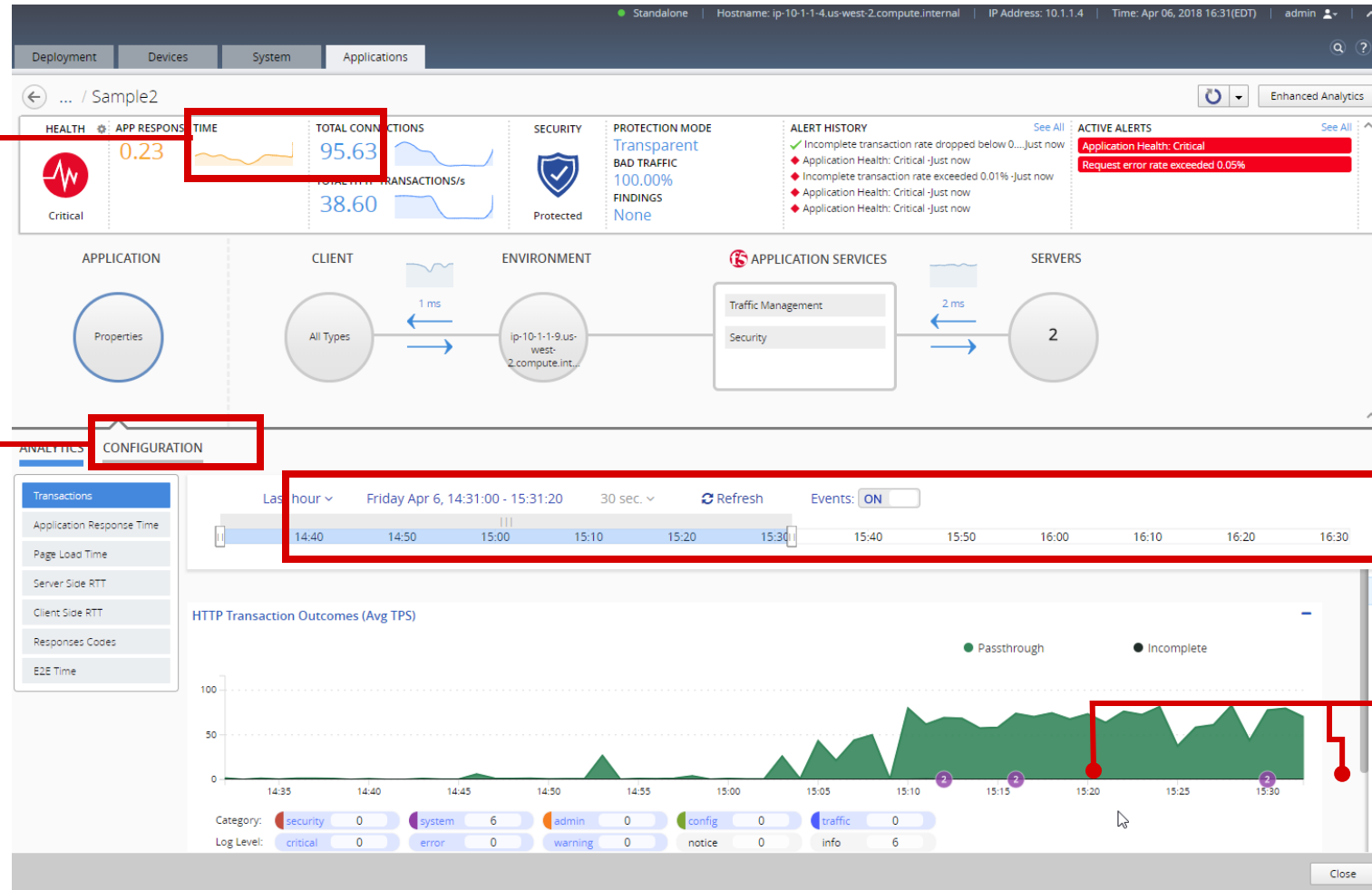
# Application-Specific Analytics For App Team

Fast issue resolution with granular per-app analytics

UI subject to change

App Performance

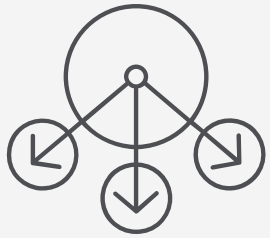
View analytics or configuration



Adjust timescale

Overlay events

# Four key use cases



## **Dedicated Services for Apps**

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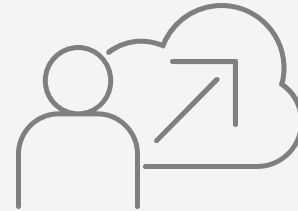
Easiest to use  
and operate



## **Cost Effective Services for Next Tier of Apps**

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Best protection  
for more apps



## **Self-Service for App Team**

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Agile  
app services



## **AutoScale When Needed**

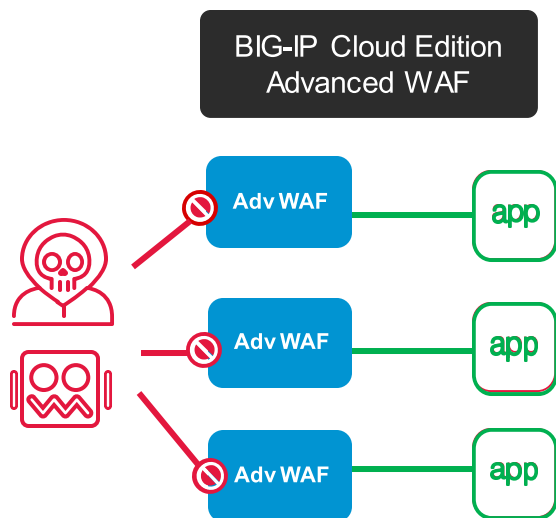
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On-demand  
scalability



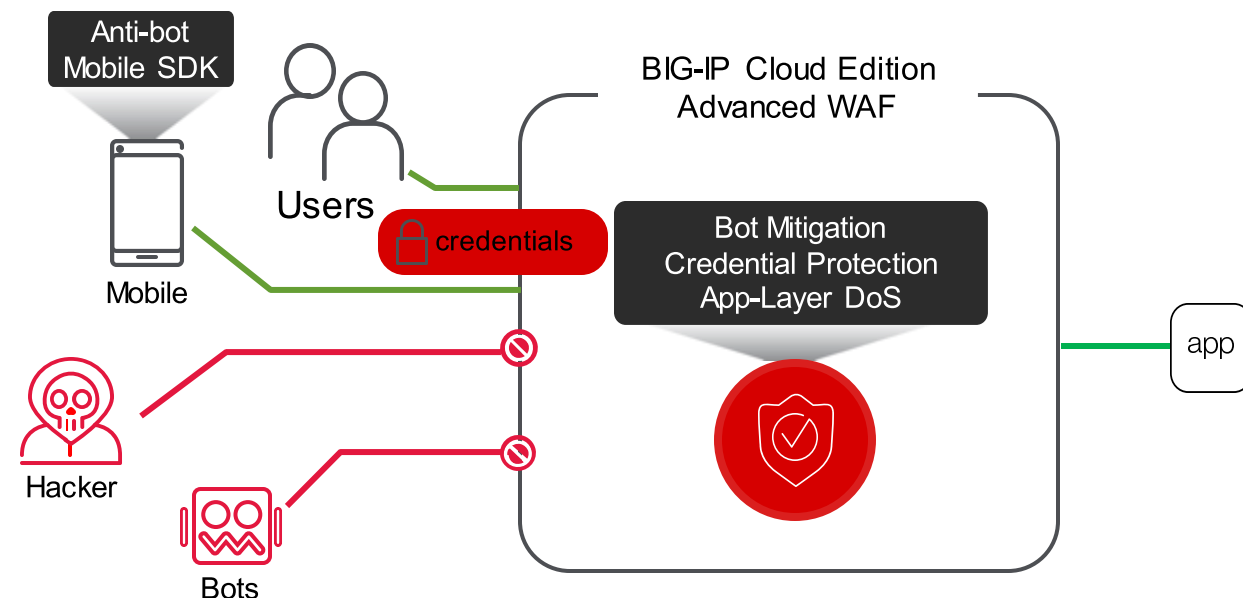
# Advanced Protection For More Applications

Reduce security risk for all apps



## Protect all applications

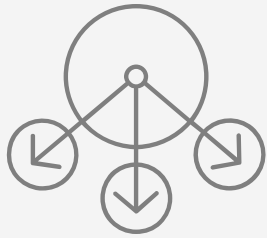
- Prevent attacks, takeover, or data exfiltration through unprotected web and mobile apps
- Stop L7 DDoS attacks that impact app performance and availability
- Centralize policies and audit logs ensure consistency for compliance reporting



## 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

# Four Key Use Cases



## Dedicated Services for Apps

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Easiest to use and operate



## Cost Effective Services for Next Tier of Apps

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Best protection for more apps



## Self-Service for App Team

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Agile app services



## AutoScale When Needed

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On-demand scalability

# App Team Uses Simple Templates To Deploy New Apps

Self-service provisioning in seconds

UI subject to change

## 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

f5 | BIG-IQ Applications

... / Create Application

Select an Application Template

Template

Filter

- f5-https-waf-lb
- Termmarc-HTTPS-WAF
- f5-fastl4-udp-lb
- f5-fasthttp-lb
- Termmarc-HTTPS-AFM-WAF

Application Services defined for this application:

Load Balancing

Security Policies Web Application: ASM\_Default\_Policy

Certificate Management

Host Servers for Compute Pool #1

Add from a file... Add from account

IP Address  Port  Connection Limit  + x

Host Servers for Compute Pool #2

Add from a file... Add from account

IP Address  Port  Connection Limit  + x

# App Team Uses Approved Security Policies

NetOps/SecOps publishes WAF policies for specific apps

UI subject to change

## Deploy WAF confidently

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

Name	Partition	Type	Application Language	Parent	Enforcement Mode	...
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
c_asm_policy	Common	Security	utf-8	N/A	Blocking	18 2
parent_policy_example	Common	Parent	utf-8	Parent		0 0
r_policy_ssdfsdf	Common	Security	utf-8	N/A	Blocking	2 2
s_policy_sokso9888	Common	Security	utf-8	N/A	Blocking	6 5
t_policy_sdfsdf	Common	Security	utf-8	N/A	Blocking	4 2
u_policy_sdfsdf	Common	Security	utf-8	N/A	Blocking	0 0
v_policy_sdfsdf	Common	Security	utf-8	N/A	Blocking	4 2

List of WAF policies

“Published” security policies

Web Application Security

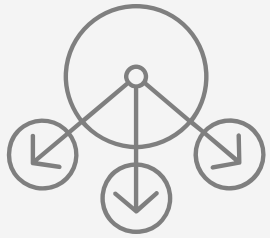
Policy: ASM\_Policy\_AAA

Virtual Server: App VirtualServer 1

☒ Required

Enforces the selected WAF policy for this template

# Four Key Use Cases



## **Dedicated Services for Apps**

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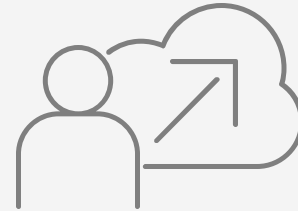
Easiest to use  
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## **Cost Effective Services for Next Tier of Apps**

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Best protection  
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## **Self-Service for App Team**

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Agile  
app services



## **AutoScale When Needed**

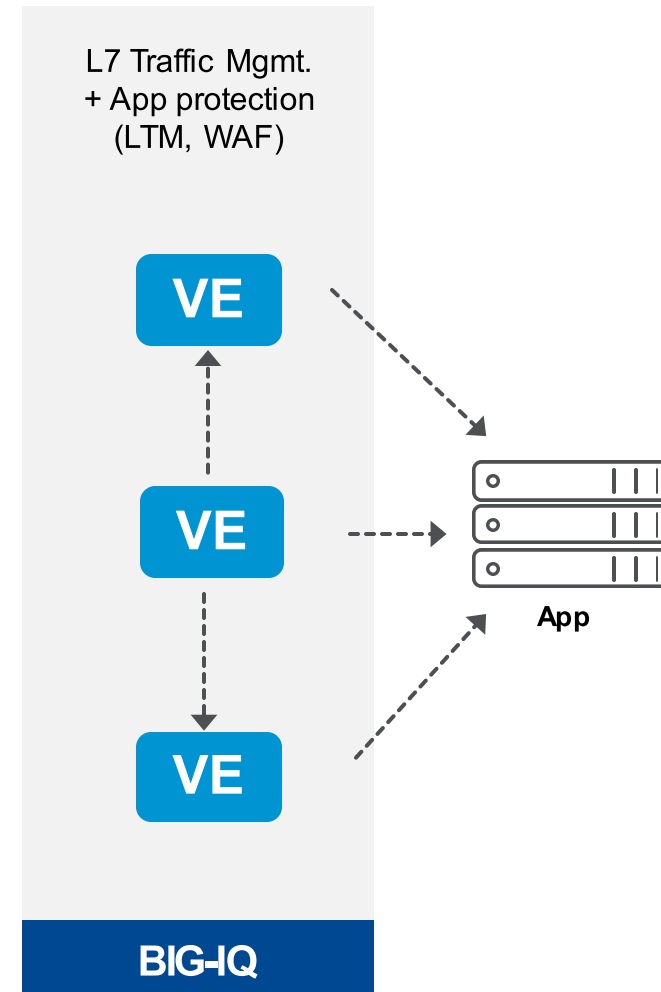
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On-demand  
scalability

# 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

UI subject to change

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

The image displays two screenshots of a web-based autoscaling interface. The top screenshot, titled 'Scaling Rules', shows configuration options for 'Scale-Out' and 'Scale-In' rules. A dropdown menu for 'Scale-In' is open, listing metrics: 'CPU Utilization', 'Memory Utilization', 'Throughput (IN)', and 'Throughput (OUT)'. Red annotations point to this menu with the text 'Select trigger metric'. The bottom screenshot, titled 'Scale Out Rules', shows a table with one rule: 'CPU Utilization' with a condition of 'Greater than 80 %'. A red annotation points to this rule with the text 'Automatic scale out'. To the right of the bottom screenshot is a 'Scale-out Now' button, with a red annotation pointing to it and the text 'Initiate manual scale out'. At the bottom of the bottom screenshot are 'Save', 'Save & Close', and 'Cancel' buttons.

Scaling Rules

Scale-Out	Scale-Out Cooldown Period	Scale-In	Scale-In Cooldown Period
Select...	15 Minute(s)	Select...	Minute(s)

Notifications

Send Notifications On

Email Notifications

Send email

Scale Out Rules ⓘ

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

Scale-out Now

Save Save & Close Cancel

Select trigger metric

Automatic scale out

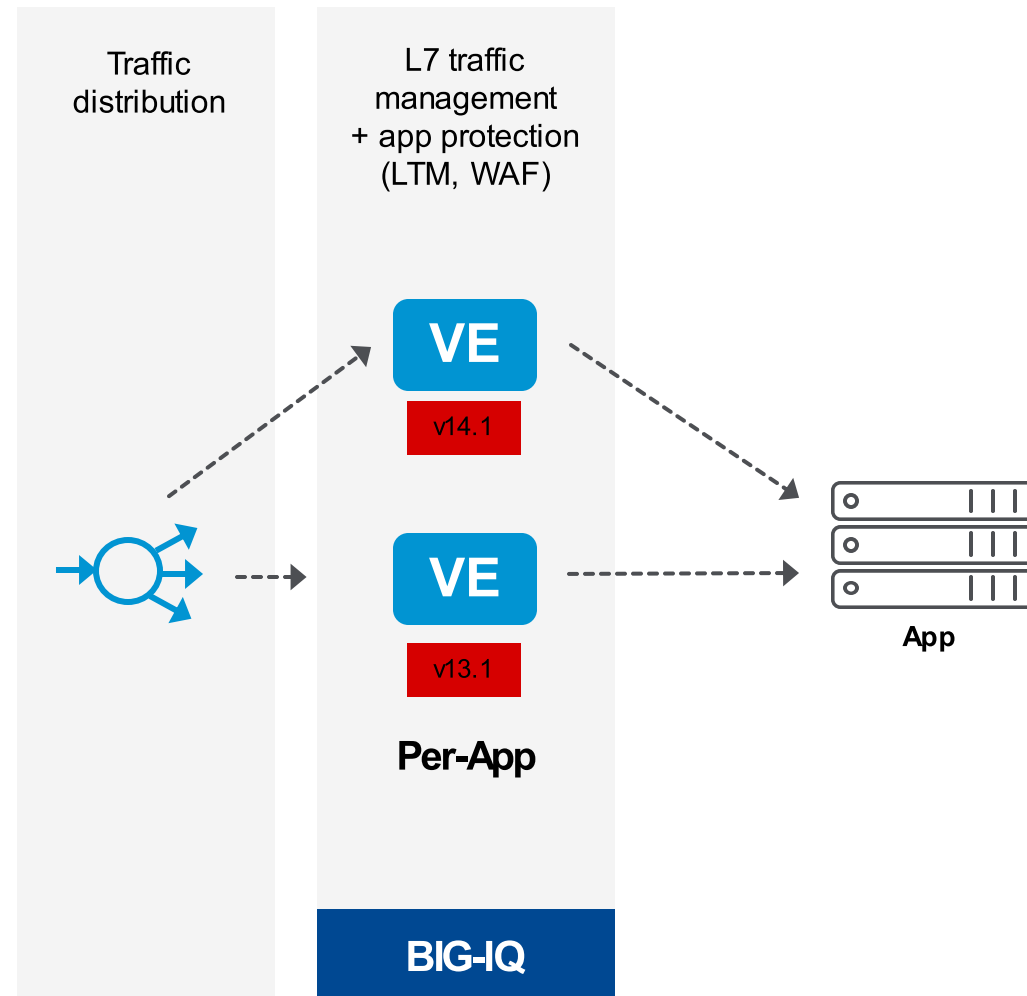
Initiate manual scale out

\* - Additional environments planned

# Seamless Update To New Software Version

Traditional in-place upgrades go away

- Automated rolling upgrades
- Eliminate manual upgrades
- Supported in VMware and AWS\*

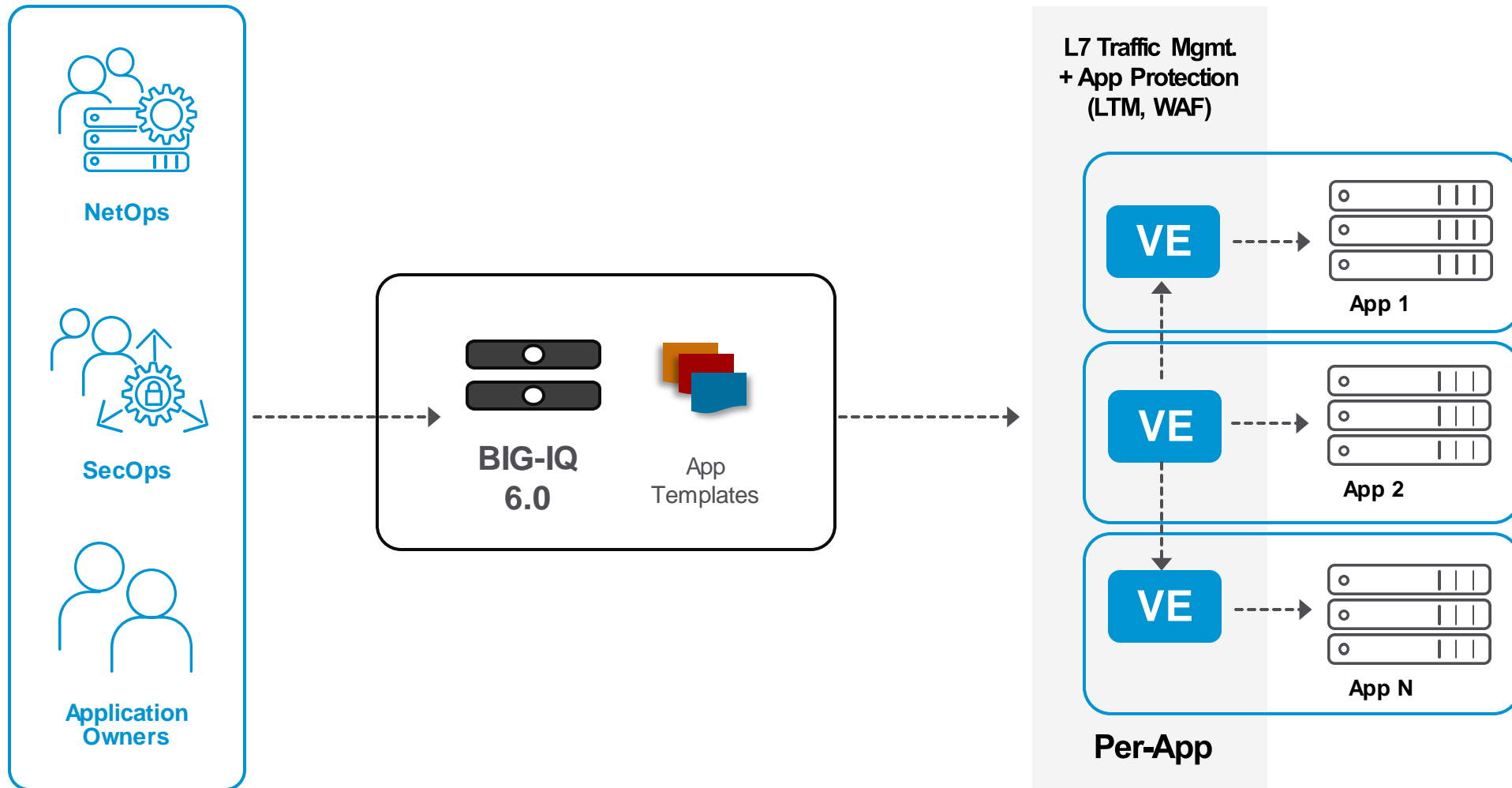


# PRODUCT OVERVIEW



# BIG-IP Cloud Edition Overview

Lifecycle management of app services and security



# BIG-IP Cloud Edition Details

Dedicated  per application

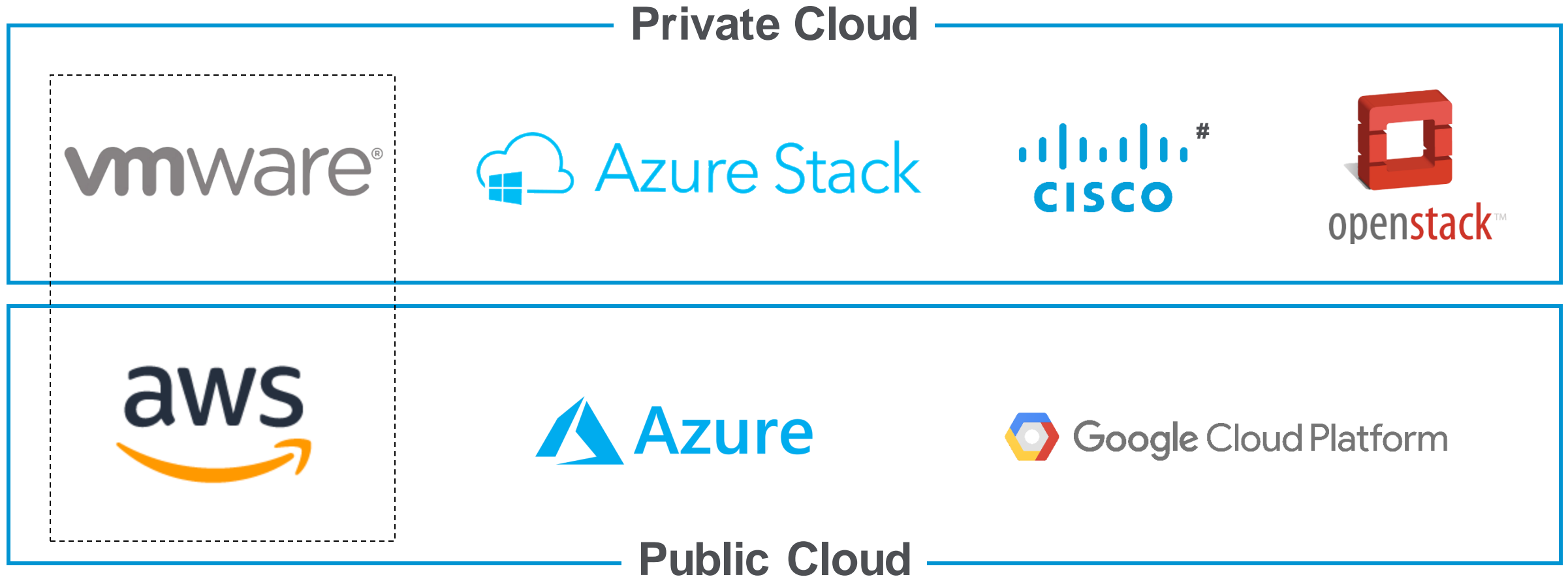
**Targeted to a single application. Deployable with the application.**

BIG-IP Per-App VE	LTM and advanced WAF
Performance	25Mbps and 200Mbps
Config limits	1 virtual IP, 3 virtual servers (1 wildcard VS out of 3 VS)
BIG-IQ management	Enhanced lifecycle management, analytics, autoScale
BIG-IP VE service scaling	Traffic distribution for autoscaling/rolling upgrades (VMware)
Consumption models	Perpetual, subscription, and ELA (*)
Min BIG-IP version	13.1.0.5 or later
Min BIG-IQ version	6.0 or later

\*Min quantity or \$ deal size requirements will apply

# BIG-IP Cloud Edition Availability In Public/Private Clouds

Providing consistent app services across cloud environments



\*Full enablement of CE lifecycle management. Other clouds planned. | <sup>#</sup> ACI Unmanaged Mode.



# 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.

# Understanding Per-App VE Compared To Standard VE

	Per-App VE	VE
# of applications supported	1 Virtual IP* 3 virtual servers	No Limit
App services	<ul style="list-style-type: none"><li>• LTM</li><li>• Adv WAF</li></ul>	GBB (all app services)
Throughput instances	25M, 200M	25M, 200M, 1G, 3G, 5G, 10G, Hi Perf#
Consumption models	Subscription, ELA, Perpetual	Subscription, ELA, Perpetual, PAYG
Code base (TMOS)	Same	
Ecosystem support (Private/public cloud, container integration)	Same	
BIG-IQ 6.0 later—visibility, management & analytics	Same	

\*1 wild-card included in Virtual IP | # No license limitations on throughput

# BIG-IP Cloud Edition Consumption Models

	ELA/subscription	Perpetual
BIG-IP per-app virtual edition (LTM, Adv WAF)	✓	✓
BIG-IQ management and analytics	✓	✓
AutoScale	Unlimited VEs	Fixed number of pre-purchased VEs
BIG-IP VE service scaling (required for autoscaling in VMware) w/optional AFM add-on	✓	✓
Contract required	✓	✗
Min purchase	Min deal size requirements	20 Per-App VEs
Purchase	Frictionless	Individual RegKeys
Reporting required	✓	✗

# Reduced BIG-IP VE/Per-App VE Spin-up Time & Image Size\*



## Spin-up time

Up to 50% reduction in spin-up time for LTM  
Up to 40% reduction in spin-up time for ASM  
Faster time to production  
Improved agility for DevOps



## Disk image size

40–50% smaller disk image size  
Reduced CapEx/OpEx costs

- Single slot image formats are introduced only in qcow2 & OVA formats in BIG-IP 13.1.0.2
- Two slot image sizes are reduced in BIG-IP 13.1.0.2

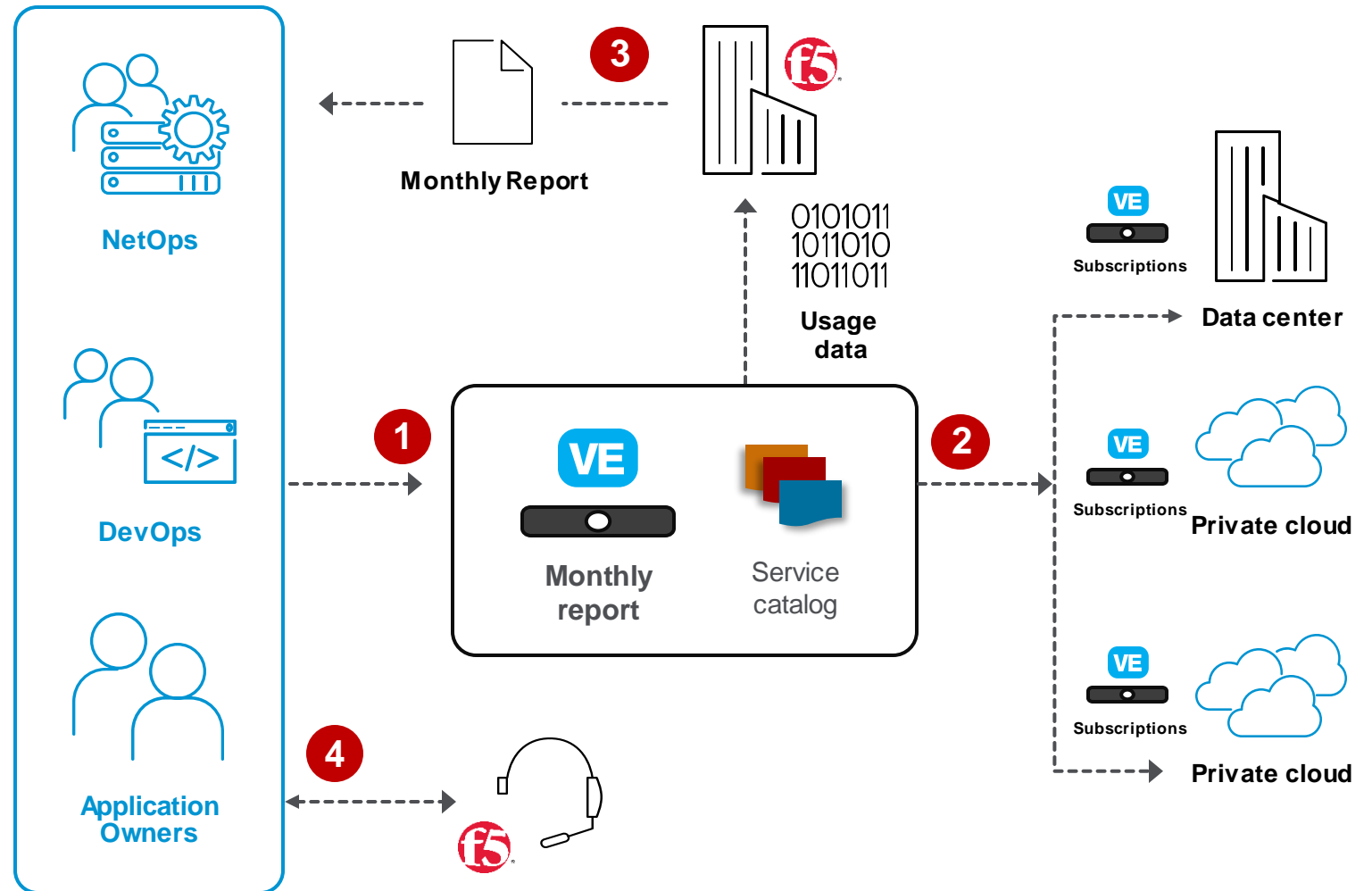
\*Applies to both Per-App VE and standard VE

# Self-licensing Of App Services And Security

Utilizing **BIG-IQ CM** or license manager (subscription or ELA)

## Operational process

1. Initial order of licenses populated on BIG-IQ License Manager, available for immediate deployment
2. Additional licenses on-demand through self-service
3. Activity report and billing report for incremental purchases that are prorated and co-termed (subscription) or capture against ELA
4. Per-app VE via (subscription or ELA) automatically covered with 24x7 F5 premium support and software upgrades



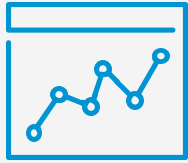


# BIG-IQ Role-Based Management

Network engineer	Security Manager	App 1 Team	App 2 Team...
<ul style="list-style-type: none"><li>• Assigns roles</li><li>• Device management</li><li>• App templates and service catalog</li><li>• System management</li></ul>	<ul style="list-style-type: none"><li>• Set security policy</li><li>• Assign roles</li><li>• Manage security templates</li><li>• Security alerting and reporting</li></ul>	<ul style="list-style-type: none"><li>• Visualization-centric application management</li><li>• Lightweight editing</li></ul>	<ul style="list-style-type: none"><li>• Visualization-centric application management + lightweight editing</li></ul>
Sample roles			

# New Challenges Emerge

IT unable to support business growth at scale



## Explosion in apps demands scalable operations

- Inability to deploy and scale app services efficiently
- Lack of visibility into each app's availability and health



## Increasing web application attacks

- Every unprotected app is a potential security vulnerability
- Compliance gaps due to non-standard policies



## App teams require fast time to market

- Multi-tenant app services model inhibits flexibility and control
- IT-dependency and security requirements slow time to service

<sup>1</sup>Source: Cisco Global Cloud Index (2016–2021)

<sup>2</sup>Source: F5 2018 SOAD Report

<sup>4</sup>Source: [Verizon 2017 Data Breach Investigations Report](#)

<sup>5</sup>Source: [Shape 2017 Credential Spill Report](#)

<sup>6</sup>Source: F5 2018 SOAD Report and 2017 State of DevOps Report

