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Demo Environment – ASM and Advanced WAF

PRESENTED BY:

Gagan Delouri, Systems Engineer

WE MAKE APPS GO FASTER. SMARTER. SAFER.

Quick Summary : About the Labs

Summary

- Self-service testing of F5 LTM and ASM (WAF) in AWS

- Includes Docker install and automated build of F5 LTM (HA mode) and ASM (Auto Scale)
  - Automates entire build process with creation of VPCs, Security Groups, F5 VEs
  - Purge and repurpose the instances with a single command

- User runs multiple use cases for:
  - testing HA deployment of F5 LTM, auto scale of F5 ASM (WAF),
  - ASM functionality / advanced protection scenarios
    - SQL Injection, other OWASP vulnerabilities,
    - BoT, Proactive BoT, DoS & Brute Force Protection,
    - App Level Encryption

About the environment

Lab Guide available at - https://github.com/gagandelouri/f5-gd-public-cloud-labs-waf/

ASM Use Cases

Postman Scripts

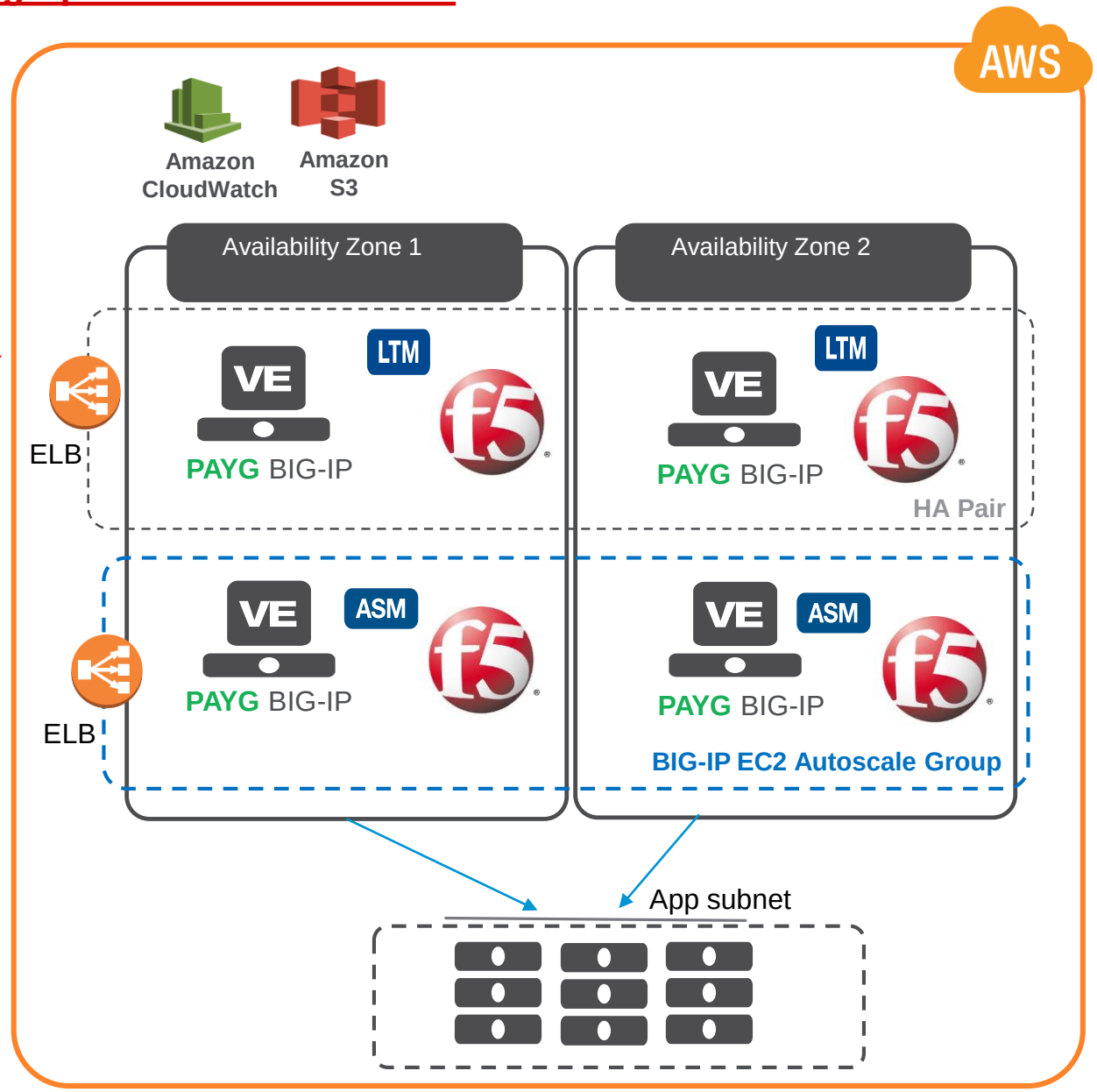
Ansible

List of Use Cases to test

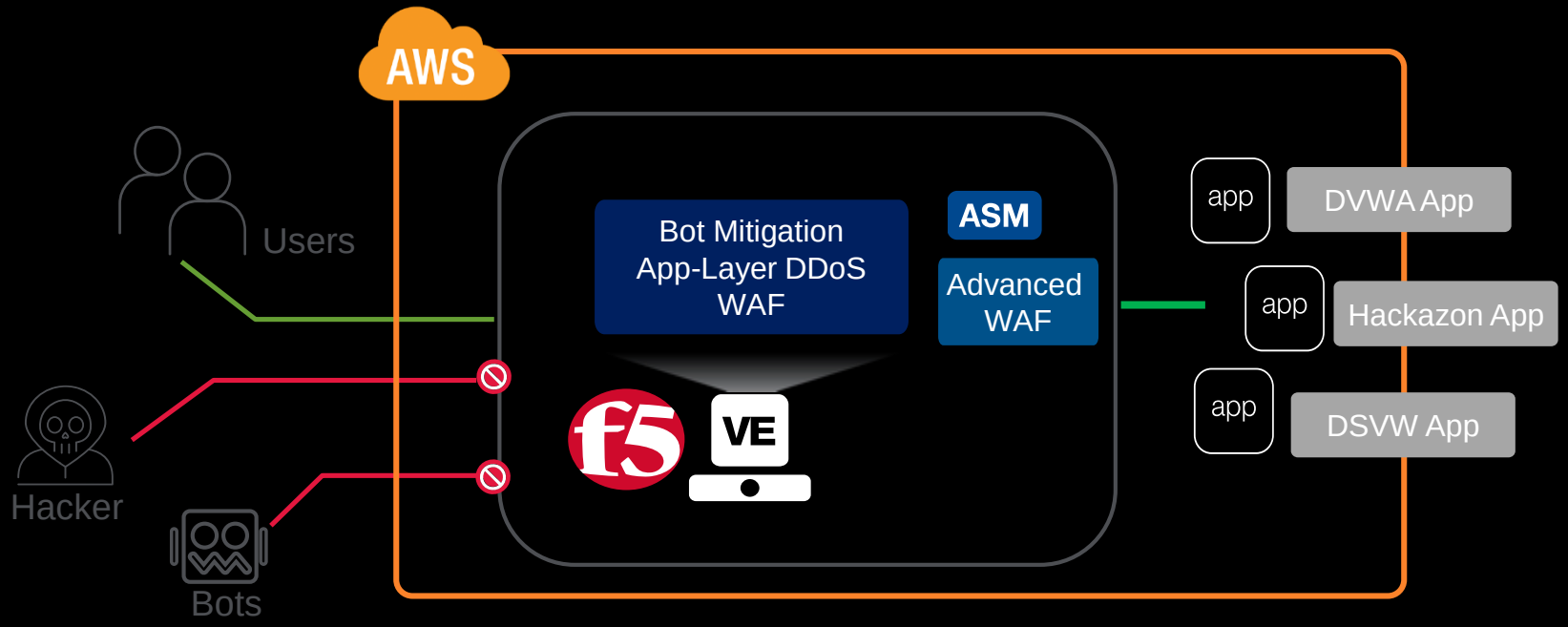
User's Ubuntu / Centos Image

F5 Super-Net-Ops Container

Terraform, AWS CFT, AWS CLI



ASM and Advanced WAF – Use Cases



Web Application Firewall (WAF)

ASM
- Bot Mitigation
- Web Scraping
- L7 DDoS mitigation
- Data Leakage
- ISO Compliance
- OWASP Top 10

Advanced WAF
- App-level encryption
- Anti Bot Mobile SDK
- Credential Stuffing

Use Case	Test Type
SQL Injection / other OWASP Mitigation	Ansible
BoT Protection	Postman
Proactive BoT / DoS / Brute Force Protection	
App-level Encryption	

Lab Guide:

https://github.com/gagandelouri/f5-gd-public-cloud-labs-waf/

G.delouri@f5.com

Architecture – UC-2 Test auto scale F5 ASM in AWS

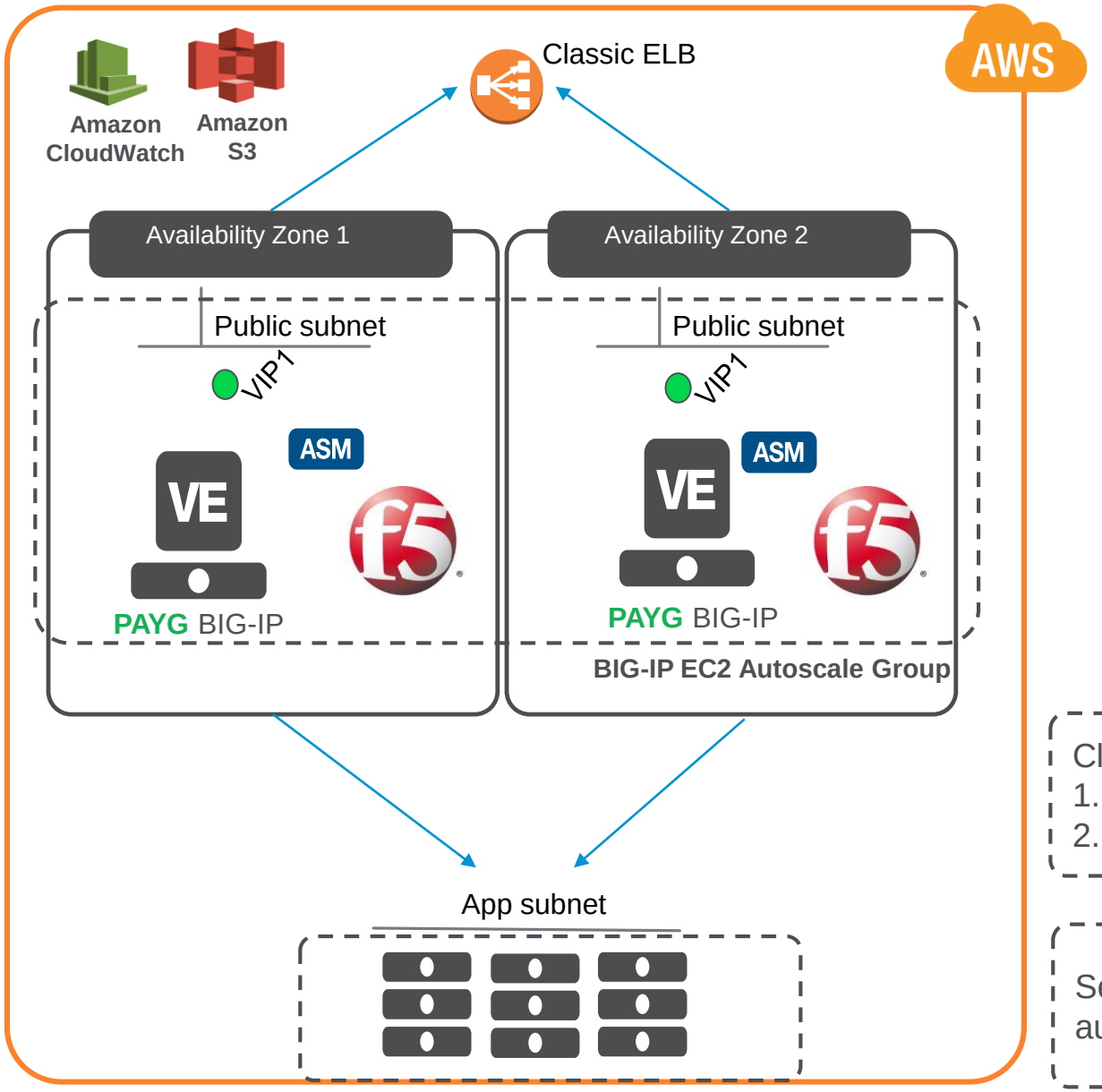
ELB Port – 80, 443 (HTTPS) and 8080
ELB nodes – ASM BIG-IP Auto Scale
Health Check – Port 443 (for application health check)

CloudWatch Alarm for Auto-Scaling – based on **min** and **max bytes** throughput threshold

Hackazon App – Port 443
Damn Small Vulnerable App – Port 80
DVWA – Damn Vulnerable App – Port 8080

Virtual Server – 0.0.0.0
Port – 80, 443, 8080
Pool – HTTP port 80, 443 and 8080
Nodes – via Auto Discovery

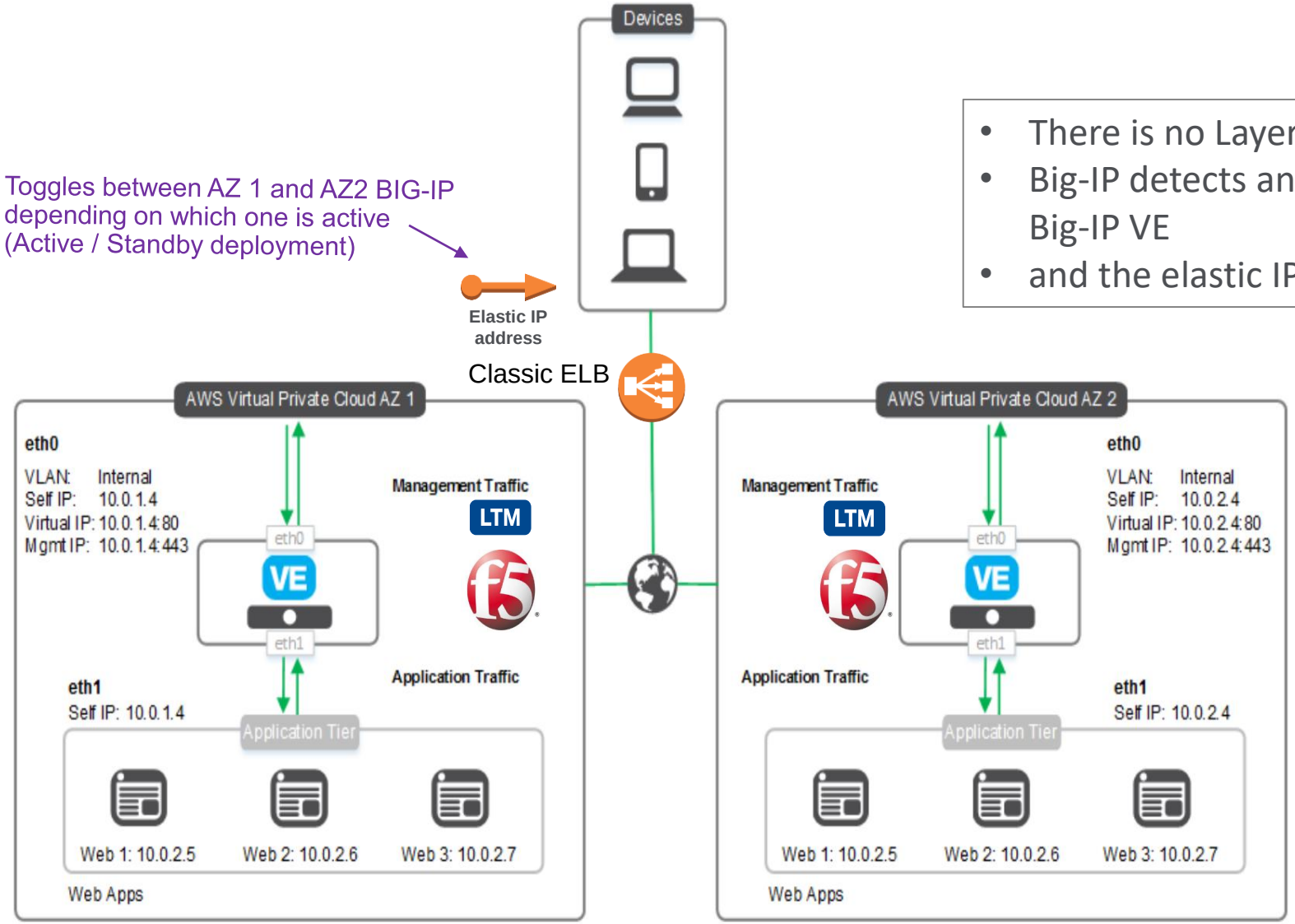
Docker App Containers
Port 80, 443 and 8080



Cloud Init:
1. Initialize BIG-IP (bootstrap)
2. Config Sync

Service Discovery iApp to auto discover workloads

Architecture – UC-1 Test HA Deployment Across AZs in AWS



- There is no Layer 2 connectivity in the cloud across AZ
- Big-IP detects an availability zone outage or trouble with a Big-IP VE
- and the elastic IP will ‘float’ over to the new active device

Service Discovery iApp to auto discover workloads