Alexa:
Am I Well Architected and Secure?

Darren Weiner
darren@cloudbutton.net
LinkedIn:

OWASP®

www.csacolorado.org

Monthly in-person meetups – free to attend!

Annual 1-day Fall Summit

- Well Architected:
  - What it is
  - Why it's important.
- Demo:
  - Create
  - Interrogate
  - Attack
  - Break
  - Identify
  - Remediate.
  - Destroy

Slides!

Prizes!

Live Demo!

Time Sensitive!

Alexa!

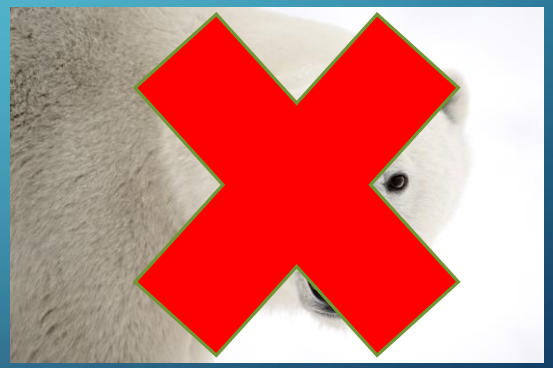
What can possibly go wrong?

Well Architected Framework

In the cloud it's easy to do things fast. It's another thing entirely to do them well

- Operational Excellence
- Security
- Reliability
- Performance Efficiency
- Cost

Sustainability



(Operational) Excellence

The BIG idea: **IAC**

Reusable

Repeatable

The Soft Stuff: Incremental Changes

Continuous improvement

Prepare for..and learn from…failure

Security

IAM: Identity and Access Management

Strong Observability: Log all the things, Monitor, Alert

Defense in Depth

Protect data in transit and at rest – by default ☑

Compartmentalize. Reduce the blast radius

Automate!

Reliability

Test disaster recovery procedures – through automation

Automatically recover from failure – through automation

Scale horizontally – through automation

Performance Efficiency

Services not systems

- Democratize Advanced Technologies
- Mitigate Undifferentiated heavy Lifting and focus on the business

Mechanical Sympathy: The right tool for the job

Serverless! Microservices for everyone!

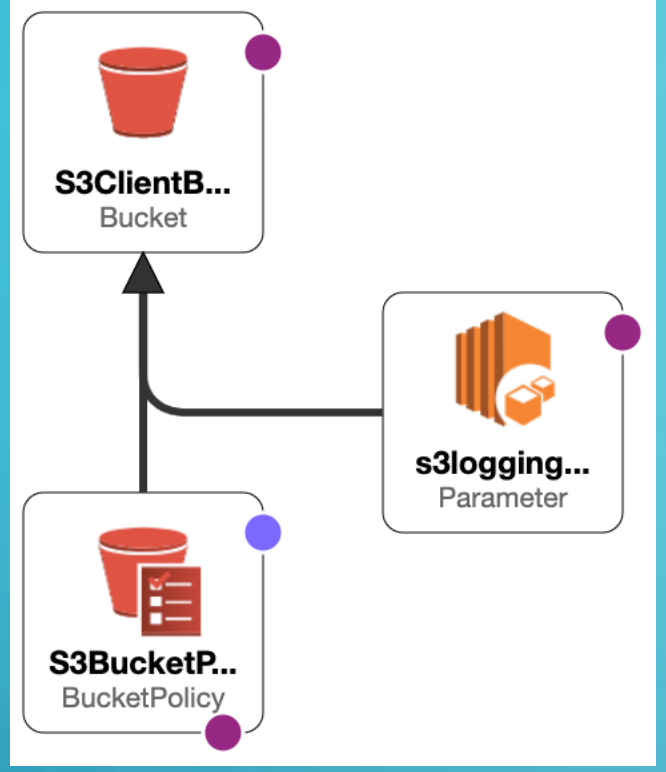
Experiment! Innovate! Do it fast!

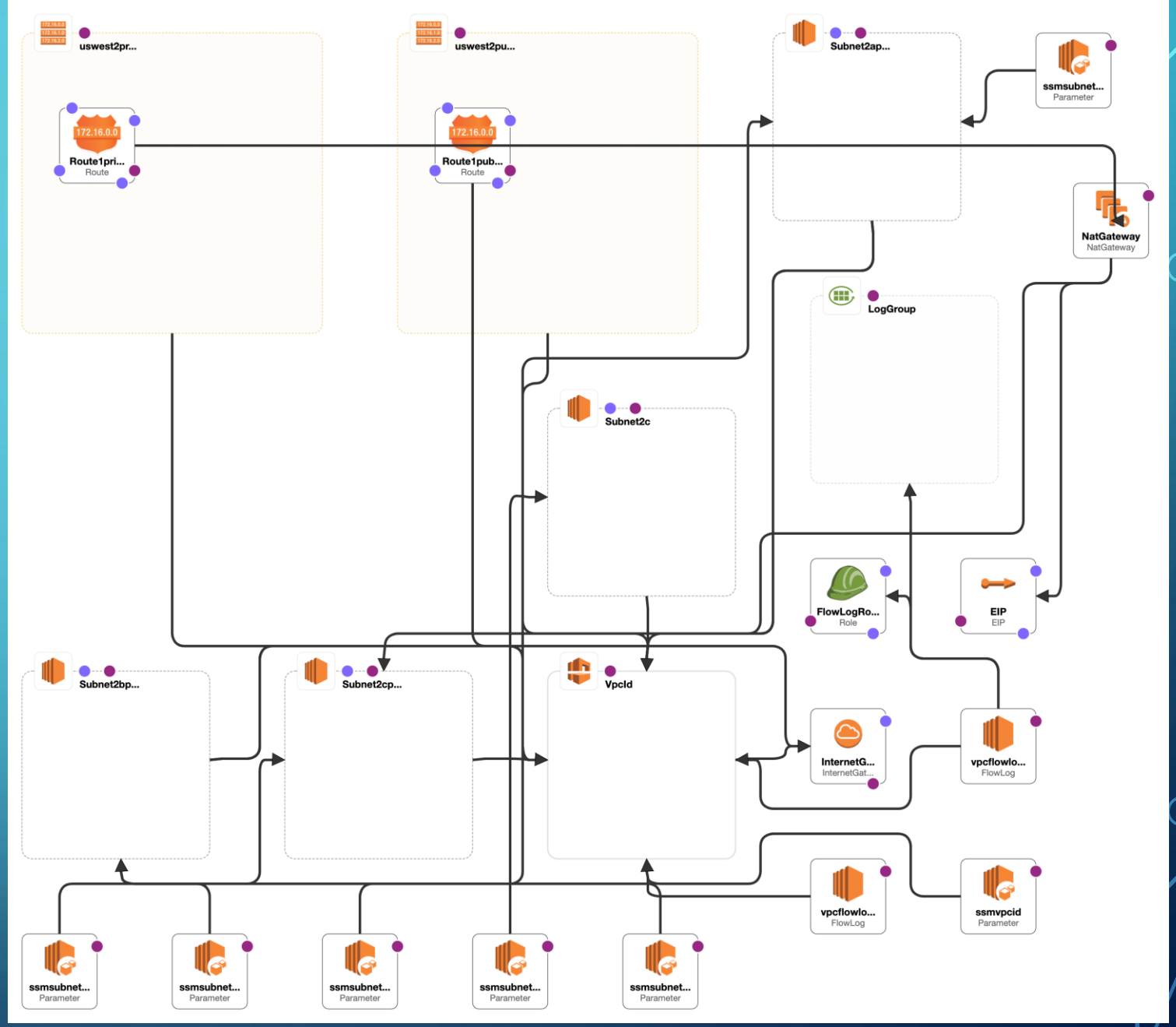
Cost

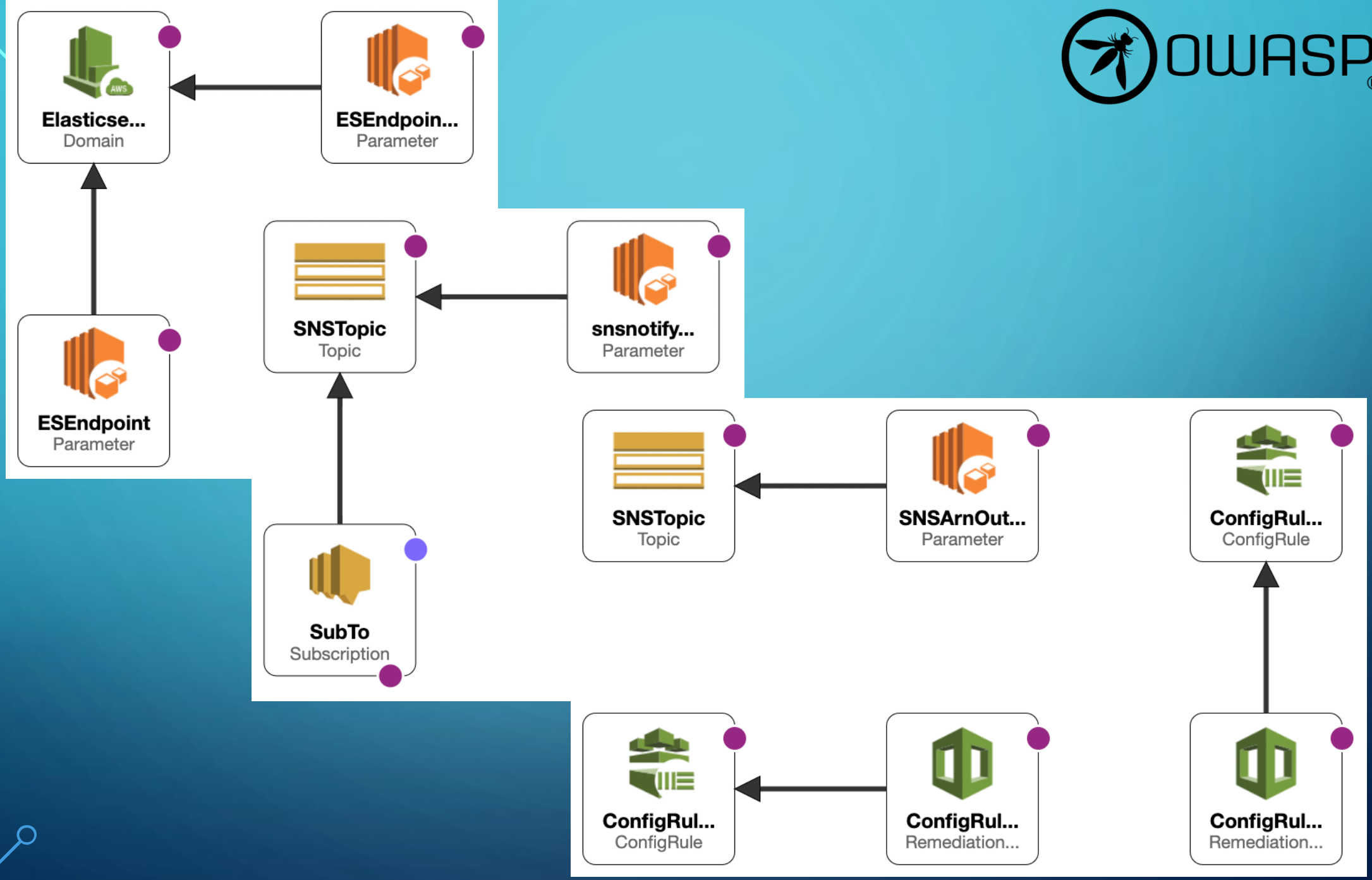
Pay by the second. Pay by the GB. Sometimes by the I/O

Understand the cost dimensions. Design in a tuneable way

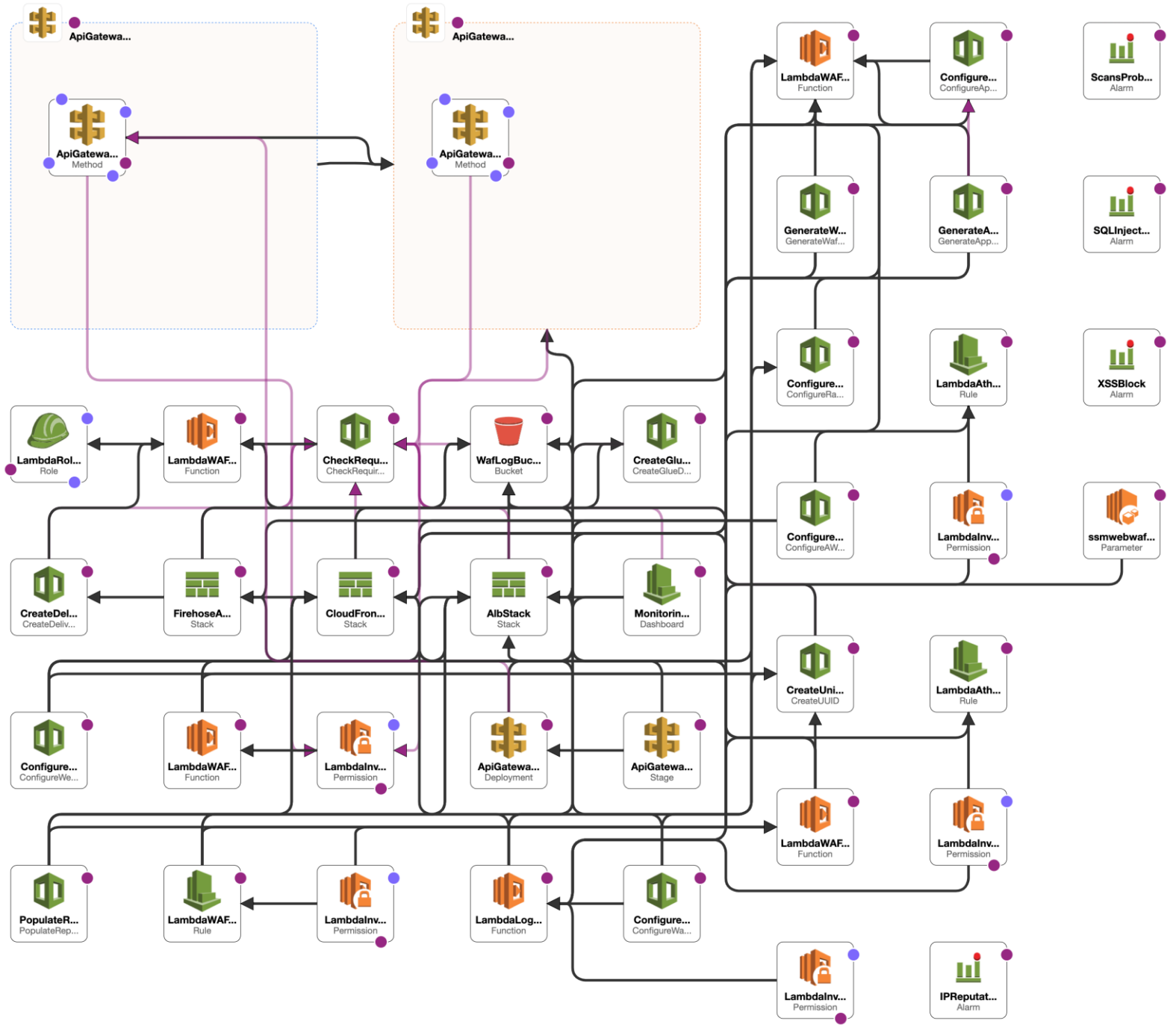
Tag all the things


S3ClientB...
Bucket
s3logging...
Parameter
S3BucketP...
BucketPolicy

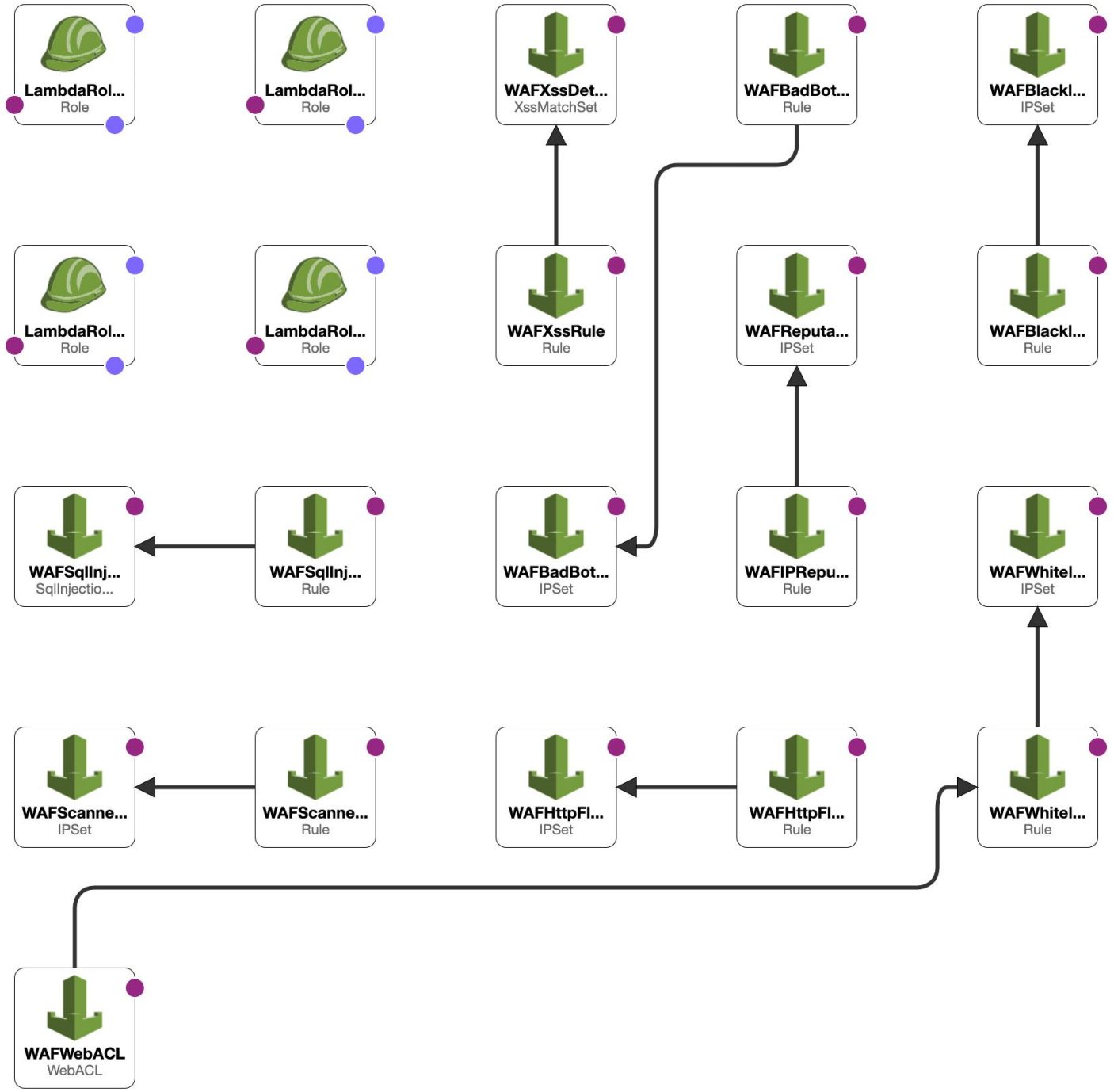

uswest2pr...
uswest2pu...
Subnet2ap...
ssmsubnet...
Parameter
172.16.0.0
Route1pri...
Route
172.16.0.0
Route1pub...
Route
NatGateway
NatGateway
LogGroup
Subnet2c
FlowLogRo...
Role
EIP
EIP
Subnet2bp...
Subnet2cp...
VpcId
InternetG...
InternetGat...
vpcflowlo...
FlowLog
vpcflowlo...
FlowLog
ssmvpcid
Parameter
ssmsubnet...
Parameter
ssmsubnet...
Parameter
ssmsubnet...
Parameter
ssmsubnet...
Parameter
ssmsubnet...
Parameter

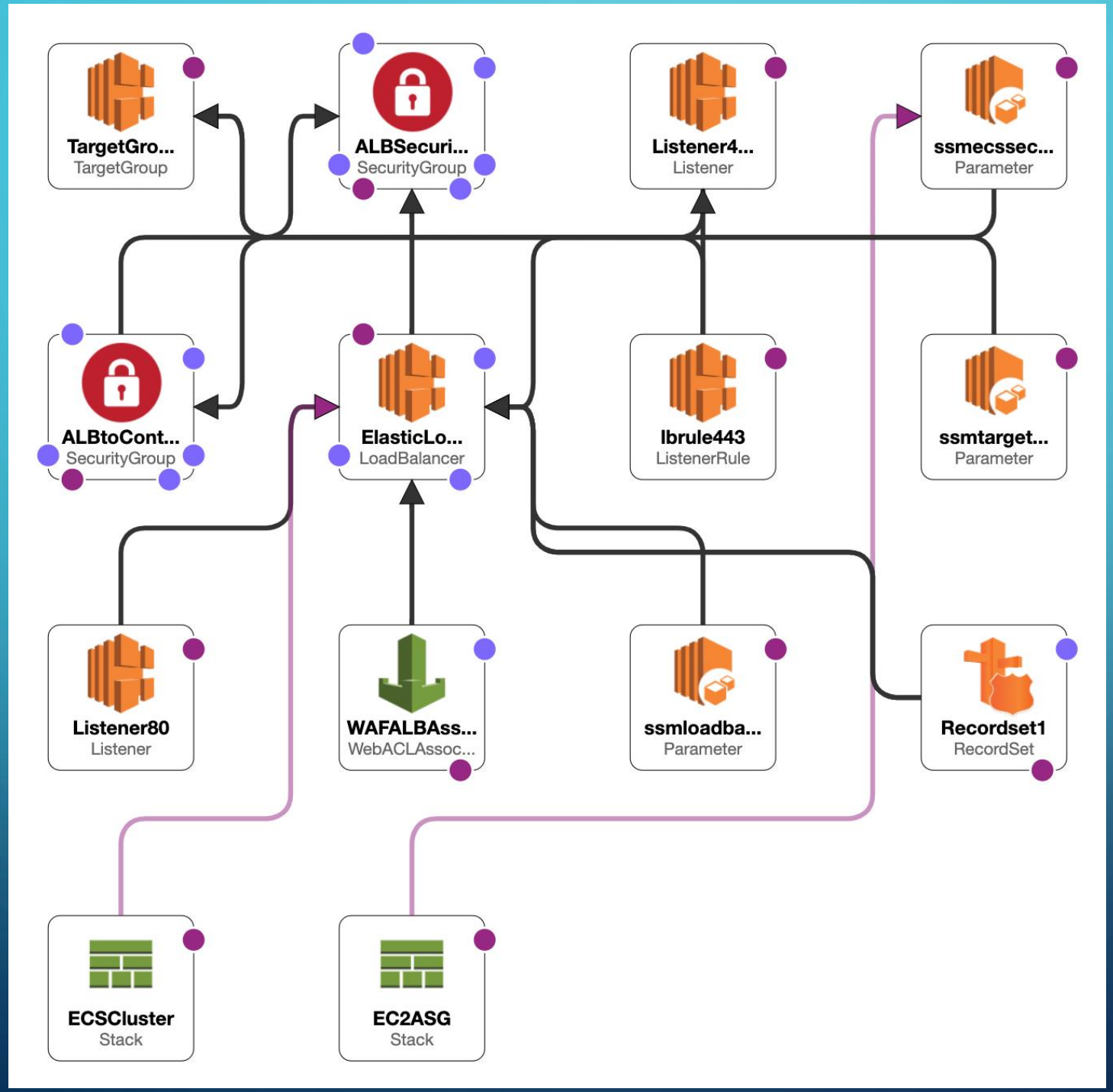

Elasticse...
Domain
ESEndpoin...
Parameter
ESEndpoint
Parameter
SNSTopic
Topic
snsnotify...
Parameter
SubTo
Subscription
SNSTopic
Topic
SNSArnOut...
Parameter
ConfigRul...
ConfigRule
ConfigRul...
ConfigRule
ConfigRul...
Remediation...
ConfigRul...
Remediation...

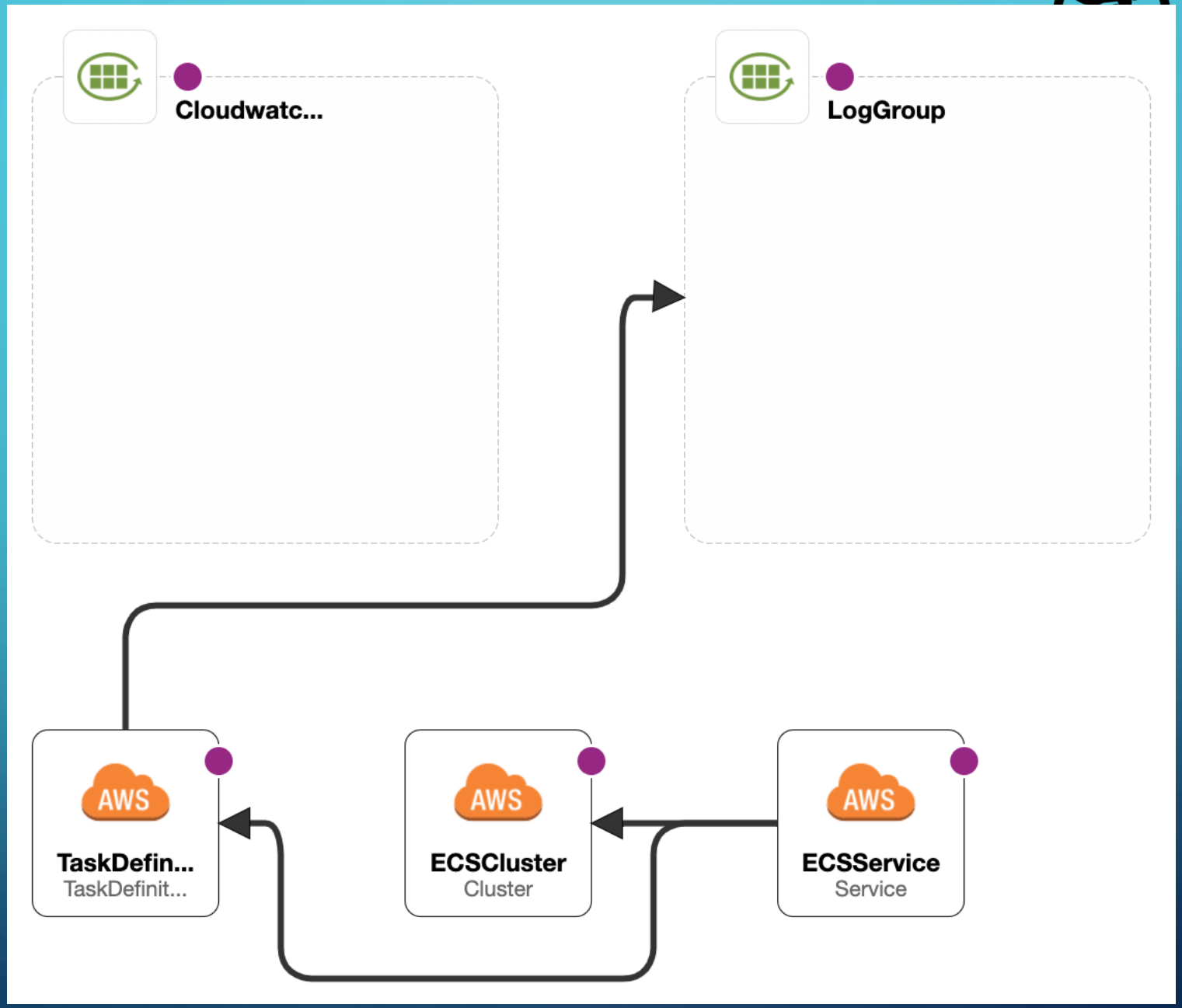
WASP®


ApiGatewa...
ApiGatewa...
Method
ApiGatewa...
Method
LambdaWAF...
Function
Configure...
ConfigureAp...
ScansProb...
Alarm
GenerateW...
GenerateWaf...
GenerateA...
GenerateApp...
SQLInject...
Alarm
Configure...
ConfigureRa...
LambdaAth...
Rule
XSSBlock
Alarm
LambdaRol...
Role
LambdaWAF...
Function
CheckRequ...
CheckRequir...
WafLogBuc...
Bucket
CreateGlu...
CreateGlueD...
Configure...
ConfigureAW...
LambdaInv...
Permission
ssmwebwaf...
Parameter
CreateDel...
CreateDeliv...
FirehoseA...
Stack
CloudFron...
Stack
AlbStack
Stack
Monitorin...
Dashboard
CreateUni...
CreateUUID
LambdaAth...
Rule
Configure...
ConfigureWe...
LambdaWAF...
Function
LambdaInv...
Permission
ApiGatewa...
Deployment
ApiGatewa...
Stage
LambdaWAF...
Function
LambdaInv...
Permission
PopulateR...
PopulateRep...
LambdaWAF...
Rule
LambdaInv...
Permission
LambdaLog...
Function
Configure...
ConfigureWa...
LambdaInv...
Permission
IPReputat...
Alarm

OWASP®


LambdaRol...
Role
LambdaRol...
Role
WAFXssDet...
XssMatchSet
WAFBadBot...
Rule
WAFBlackl...
IPSet
LambdaRol...
Role
LambdaRol...
Role
WAFXssRule
Rule
WAFReputa...
IPSet
WAFBlackl...
Rule
WAFSqlInj...
SqlInjectio...
WAFSqlInj...
Rule
WAFBadBot...
IPSet
WAFIPRepu...
Rule
WAFWhitel...
IPSet
WAFScanne...
IPSet
WAFScanne...
Rule
WAFHttpFl...
IPSet
WAFHttpFl...
Rule
WAFWhitel...
Rule
WAFWebACL
WebACL


TargetGro...
TargetGroup
ALBSecuri...
SecurityGroup
Listener4...
Listener
ssmecssec...
Parameter
ALBtoCont...
SecurityGroup
ElasticLo...
LoadBalancer
lbrule443
ListenerRule
ssmtarget...
Parameter
Listener80
Listener
WAFALBAss...
WebACLAssoc...
ssmloadba...
Parameter
Recordset1
RecordSet
ECSCluster
Stack
EC2ASG
Stack


Cloudwatc...
LogGroup
AWS
TaskDefin...
TaskDefinit...
AWS
ECSCluster
Cluster
AWS
ECSService
Service

Demo

Time

The Well Architected is a a useful system to help “Think Cloud”

It helps you Shift Left…for Everything

Automation is awesome. Dangerous, too.

Questions?

CLOUDBUTTON

OWASP®

Darren Weiner
darren@cloudbutton.net
LinkedIn: