# Elastic BeanStalk

### Todays' Agenda

- Intro about Elastic BeanStalk
- Deployment Types
- Demo

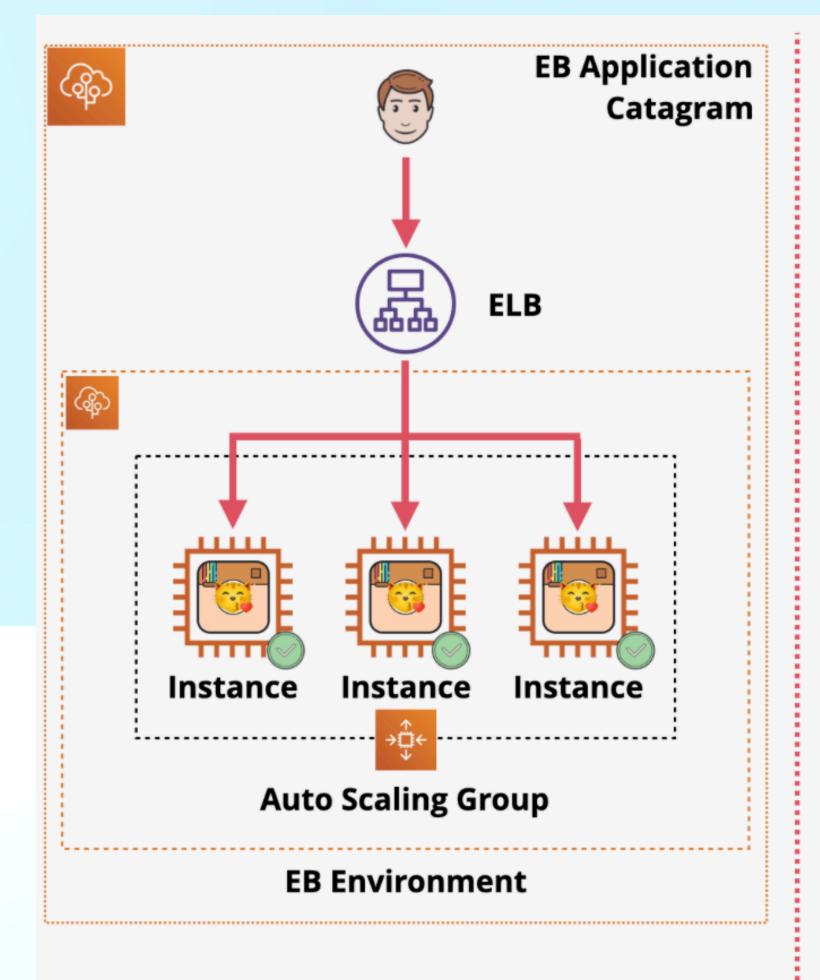
#### **Elastic BeanStalk**

- PAAS
- User provided Code & EB handles the environment
- Low infrastructure overhead
- Fully Customisable Doesn't come entirely Free
- Built in Languages and Docker

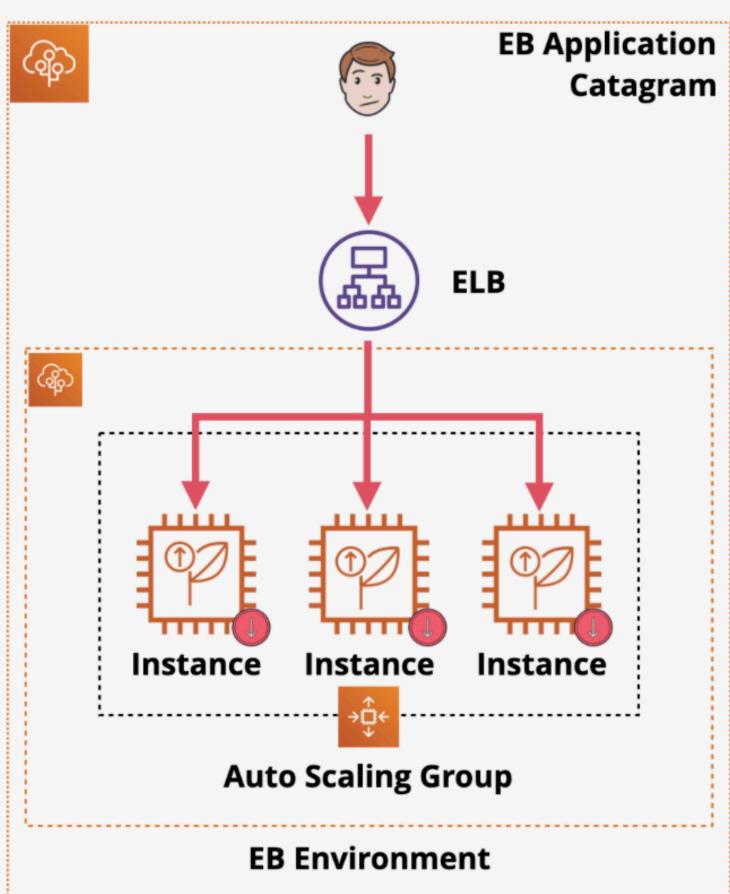
#### **EB Deployment Architecture**

**Application Versions are a specific labeled** An Elastic Beanstalk application is a collection of version of deployable code for an application. things relating to an application - a container / folder The source bundle is stored on S3 **Each Environment has its Elastic Beanstalk Application** own CNAME - a CNAME **SWAP** can exchange two **App Versions can** Web and Worker tiers communicate environment DNS be deployed to via SQS Queues. Worker tiers scale environments based on queue messages **ENV: PROD ENV: PROCESSING** Each environment is either a web server tier or a worker **Environments are containers of** tier. This controls the structure infrastructure and configuration for a specific application version 

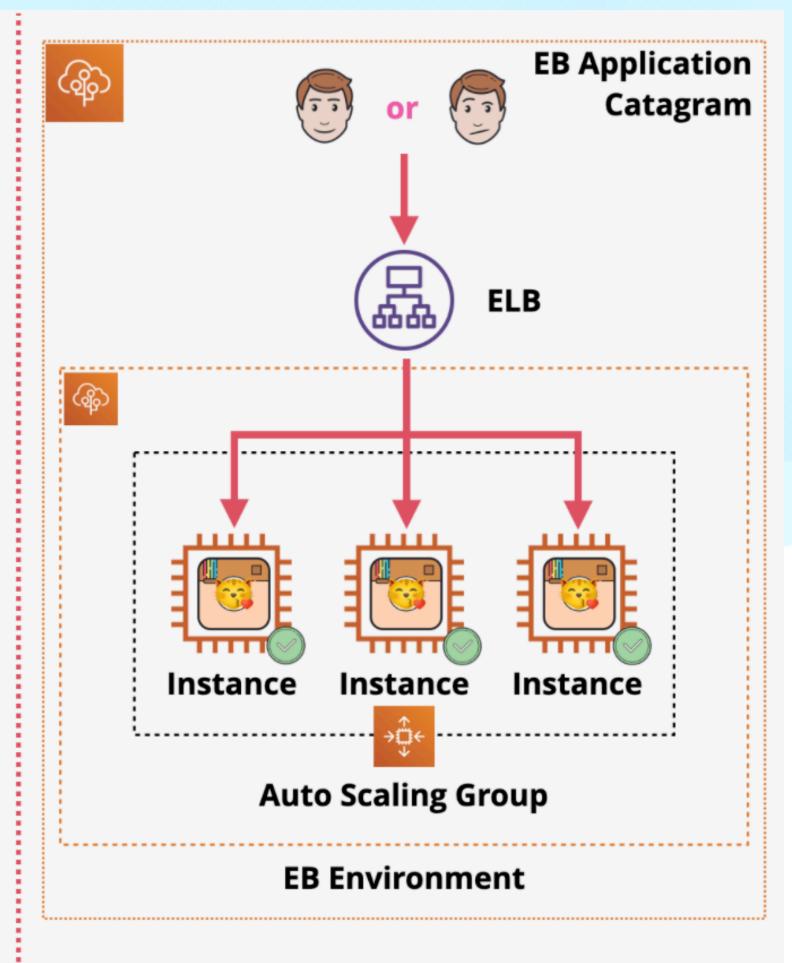
### EB Deployment Type - All at once



**Deployment Starts** 

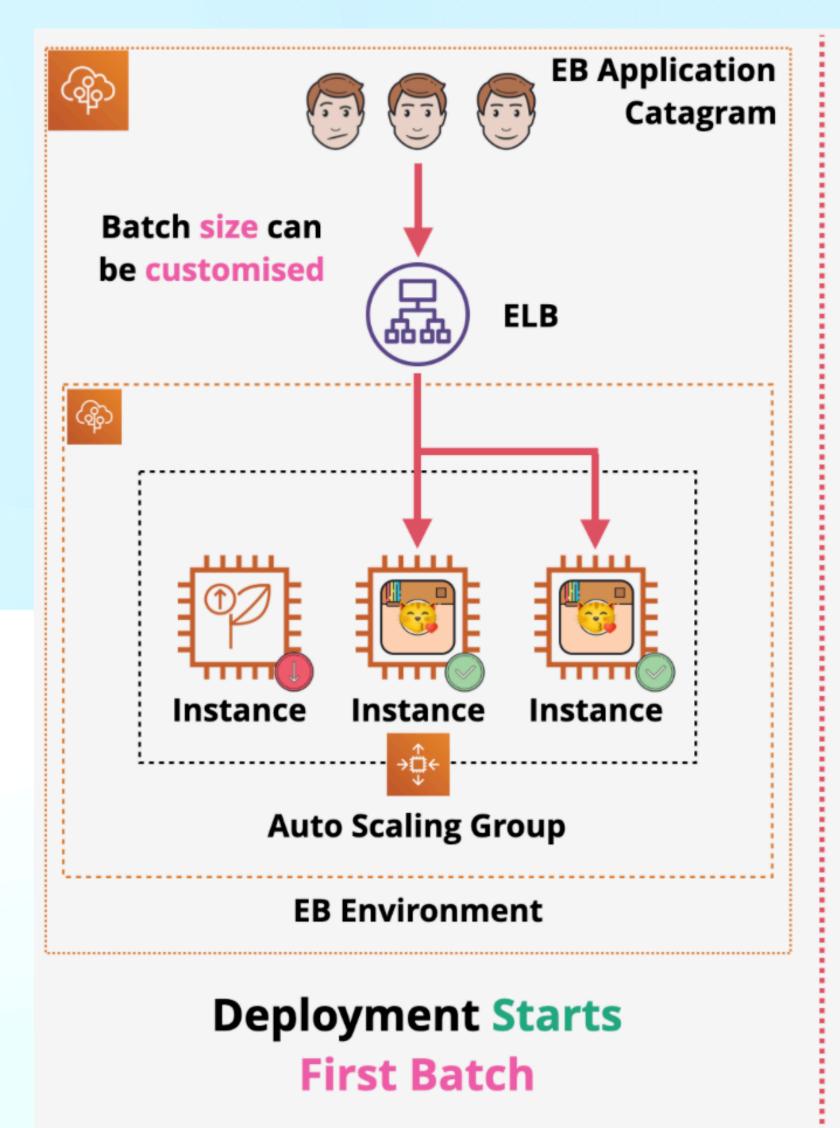


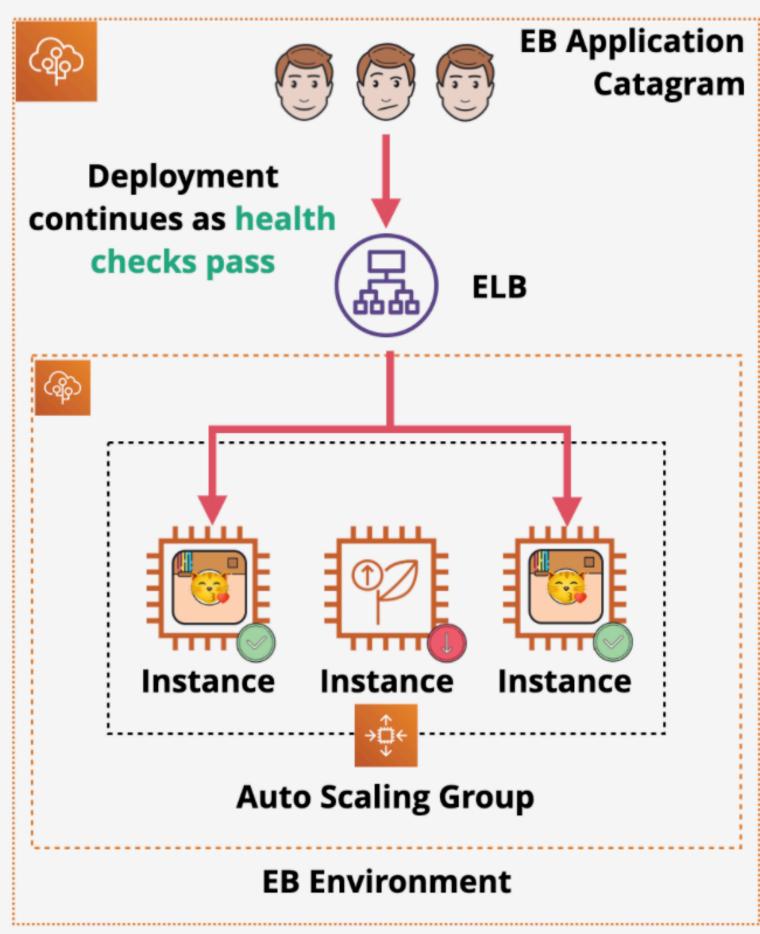
Deployment In-Progress
Application is offline - All instances



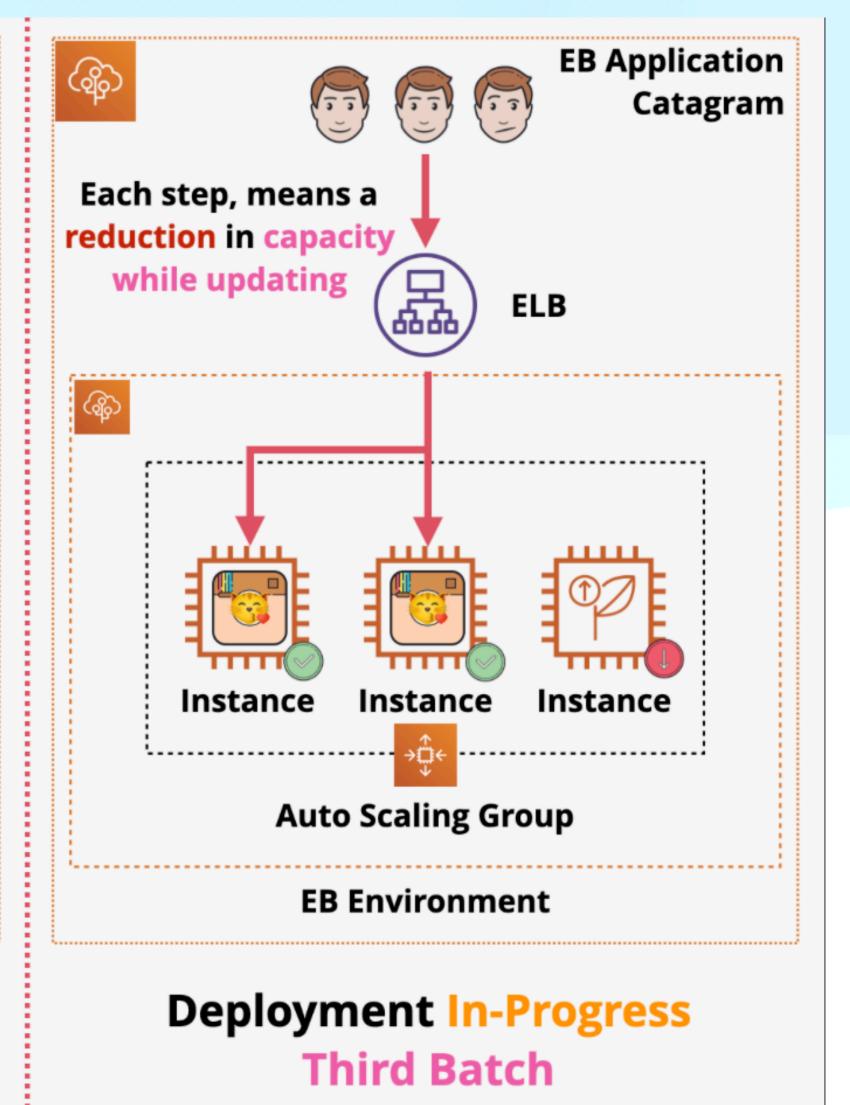
Deployment Complete
Online if OK ... Offline if failed

### EB Deployment Type - Rolling





Deployment In-Progress Second Batch



### EB Deployment Type - Rolling with Batch

**Deployment Not Started** 

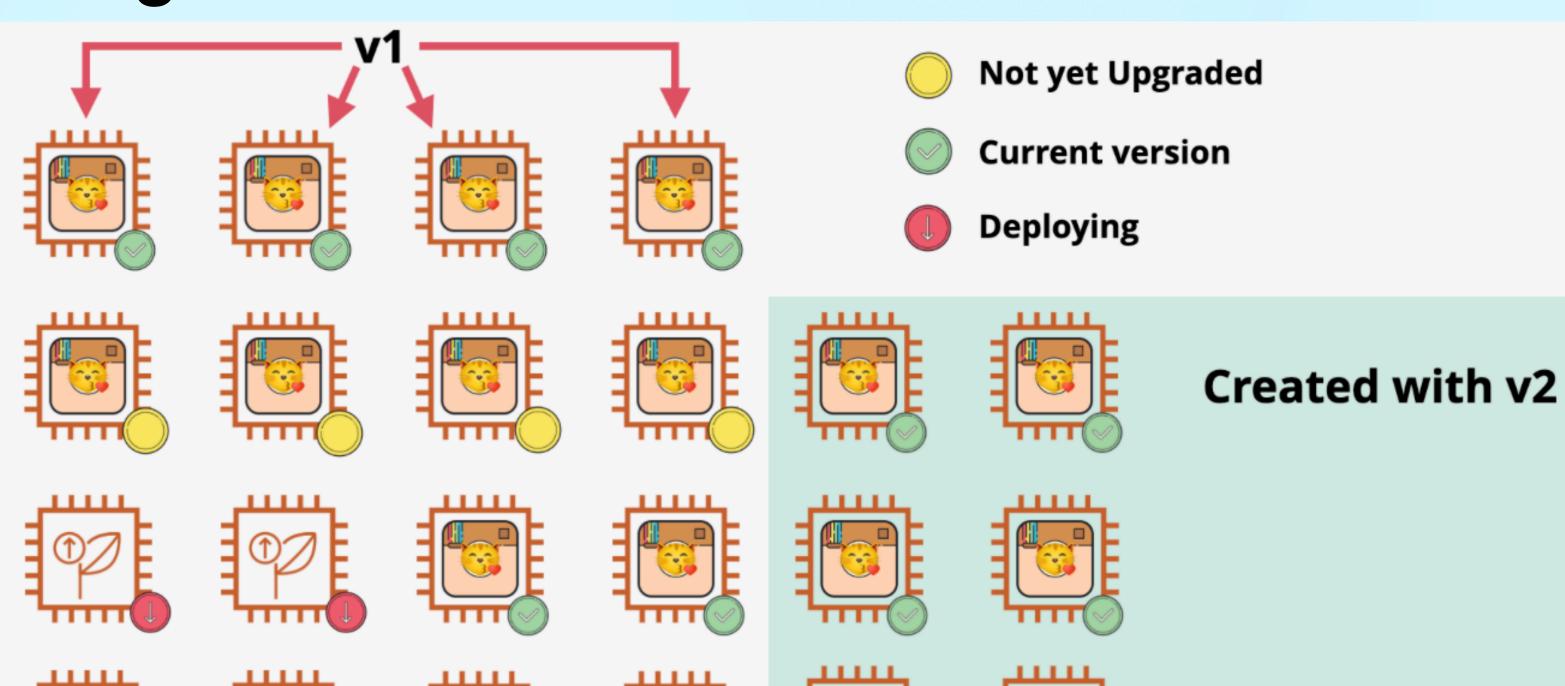
Deployment Starts
Additional Batch Added (v2)

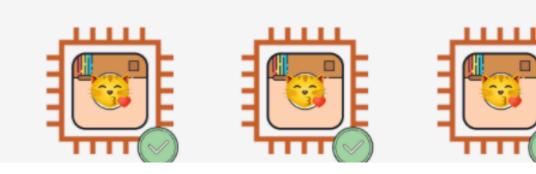
Deployment In-Progress
Upgrade Batch, 100% Capacity

Deployment In-Progress
Upgrade Next Batch, 100% Capacity

Deployment Finalised
Upgrade Final Batch, 150% Capacity

Deployment Complete
Additional Batch Removed





Longer deployment, capacity maintained, safer, good for prod

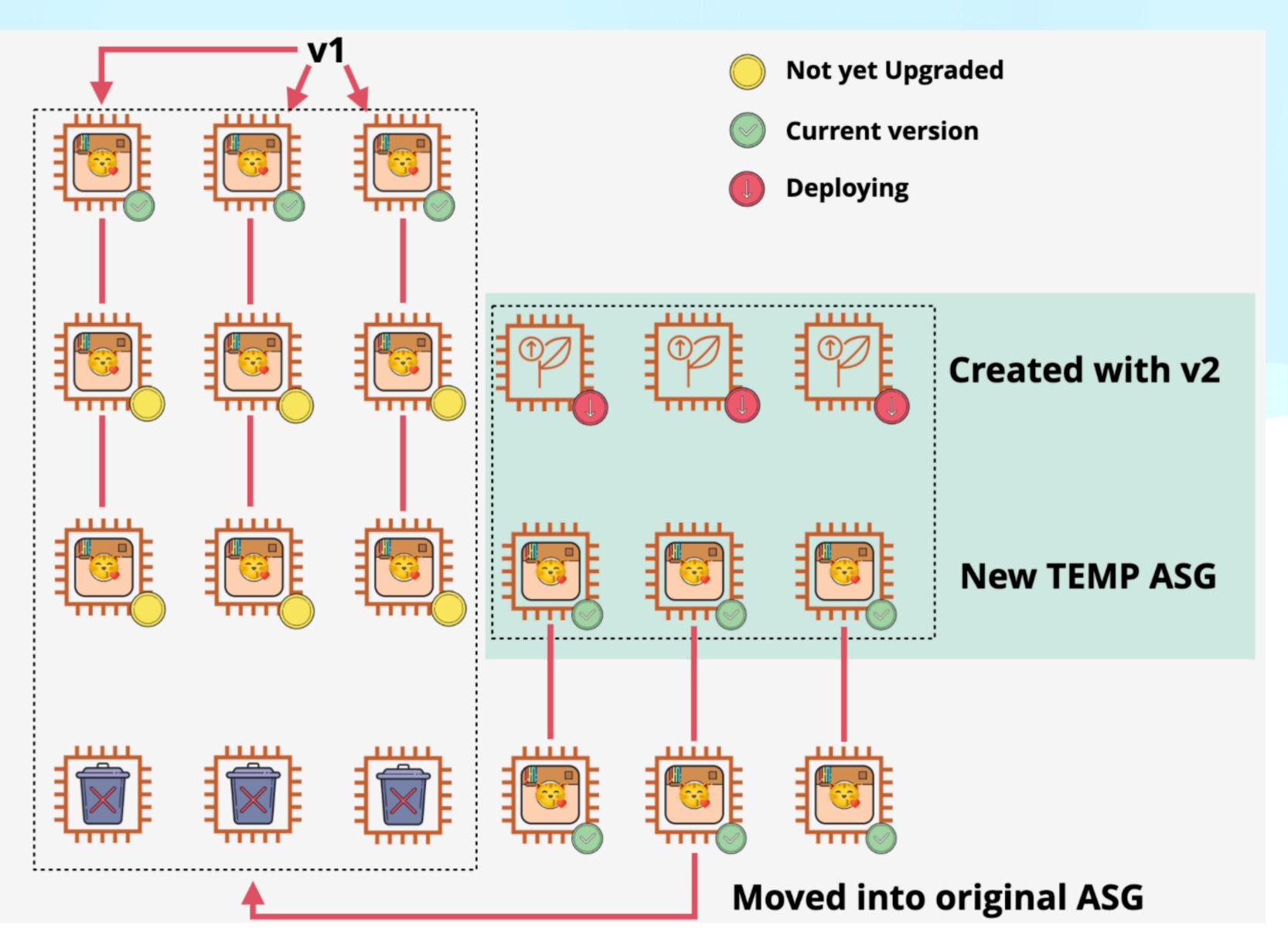
#### EB Deployment Type - Immutable

**Deployment Not Started** 

Deployment Starts
New set of instances deployed

Deployment In-Progress
Wait for health check on
new instances

**Deployment Completed Old Instances Terminated** 



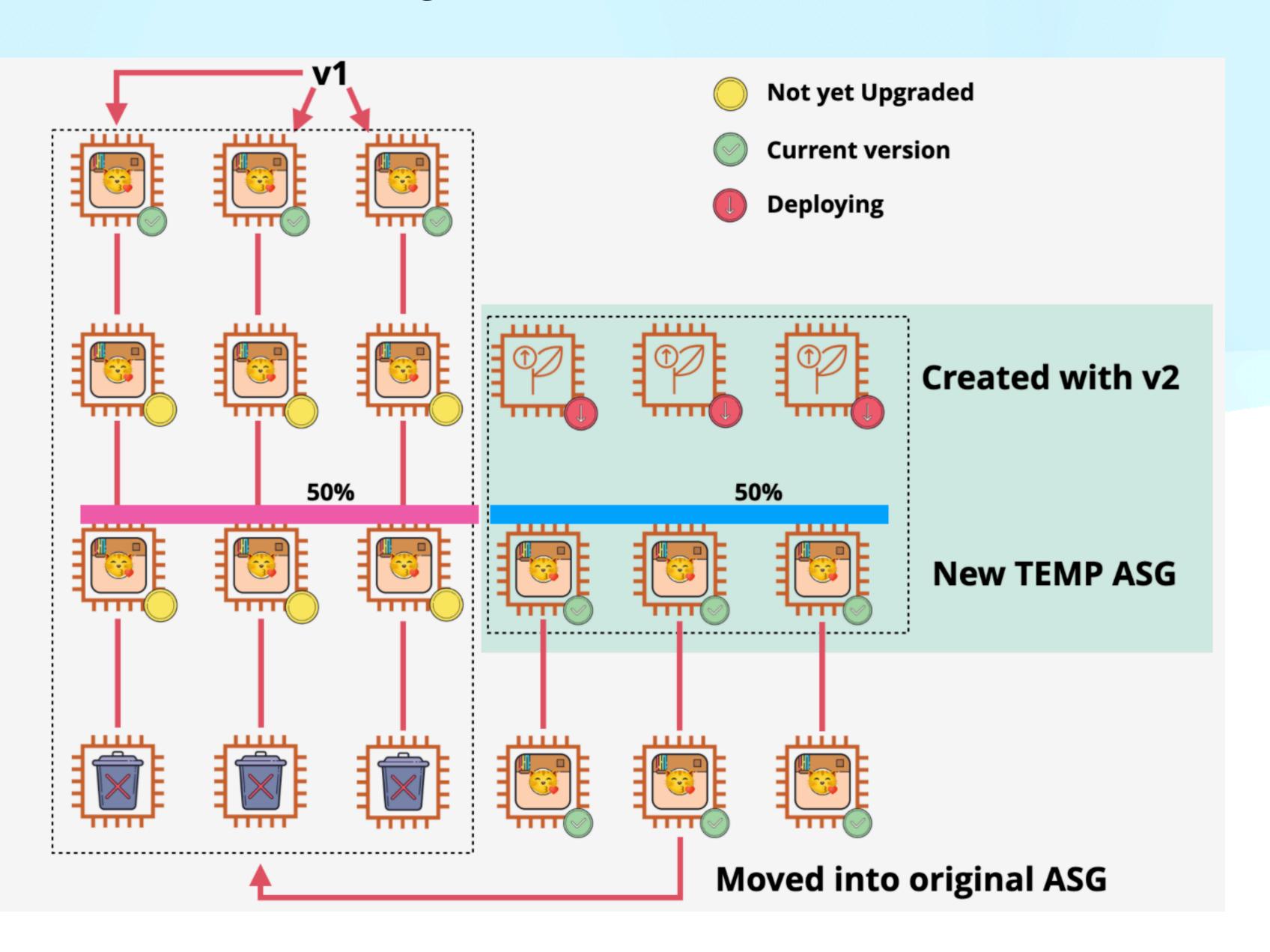
### EB Deployment Type - Traffic Splitting

**Deployment Not Started** 

Deployment Starts
New set of instances deployed

Deployment In-Progress
Wait for health check on
new instances

**Deployment Completed Old Instances Terminated** 



### QUIZ TIME

## Q&A