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BATCH : B 303

AWS-DEVOPS



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Storage Class

The interaction between PVs and PVCs

Provisioning

There are two ways PVs may be provisioned: statically or dynamically.

Static

A cluster administrator creates a number of PVs. They carry the details of the real storage, which is available for use by cluster users. They exist in the Kubernetes API and are available for consumption.

Dynamic

When none of the static PVs the administrator created match a user's PersistentVolumeClaim, the cluster may try to dynamically provision a volume specially for the PVC. This provisioning is based on StorageClasses.

The interaction between PVs and PVCs

Static



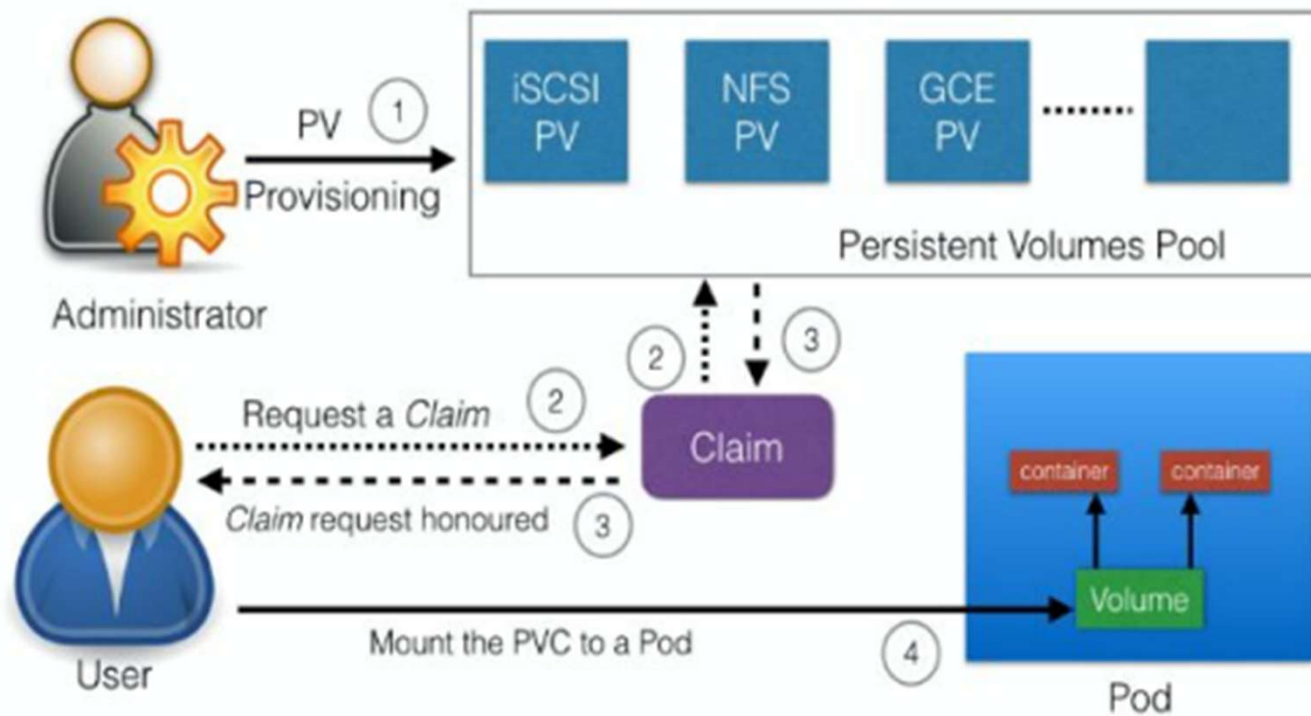
Dynamic



Static PV Provisioning

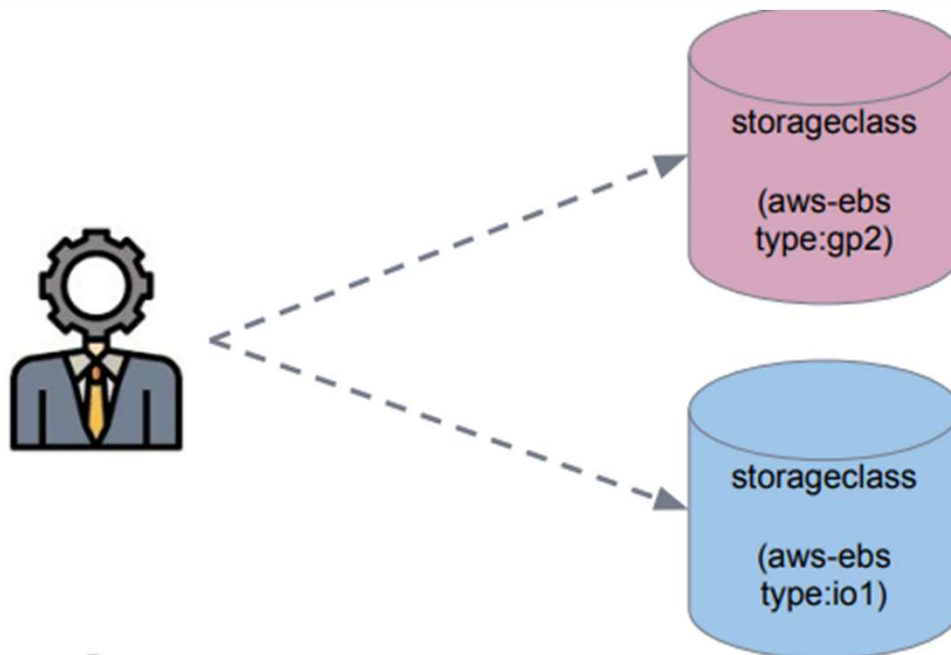


Static PV Provisioning

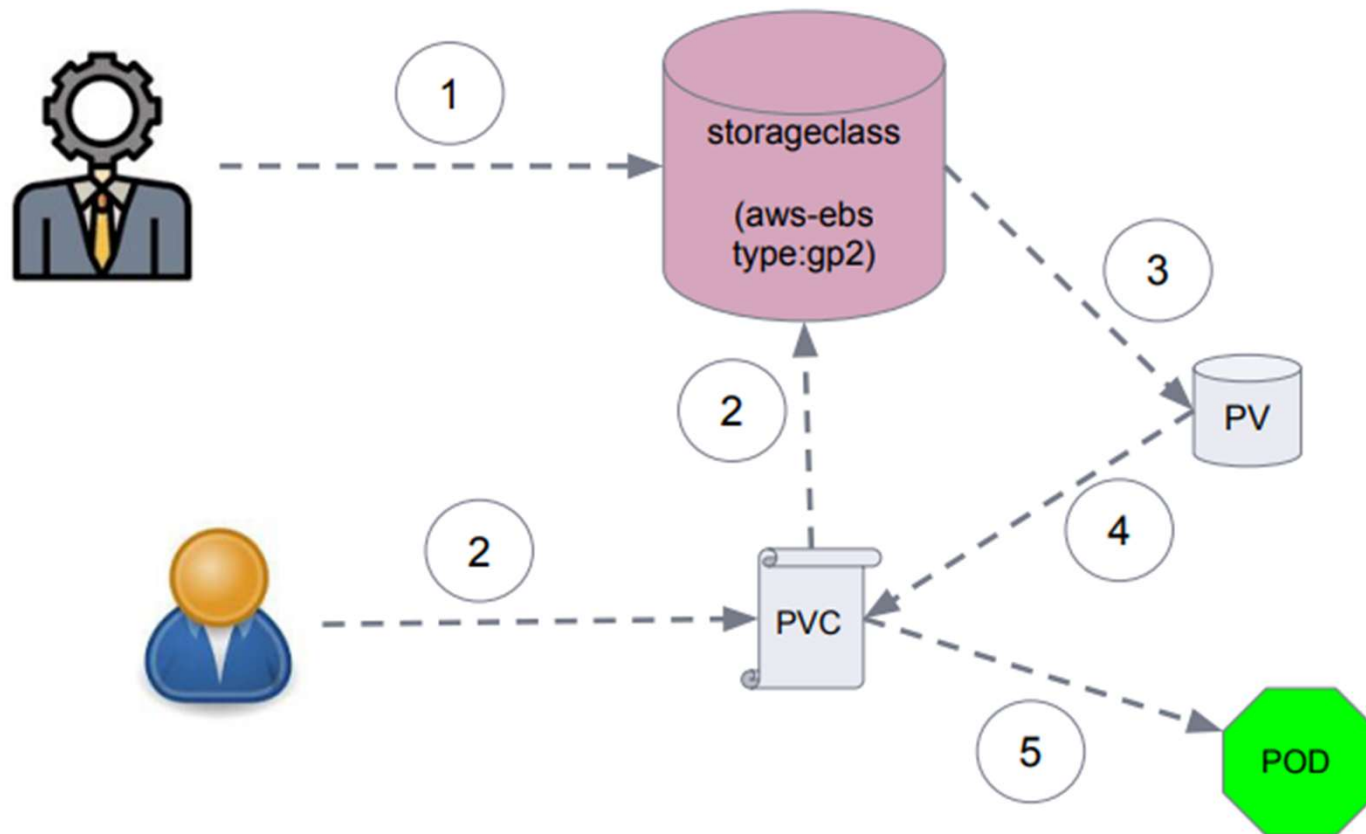


Dynamic PV Provisioning

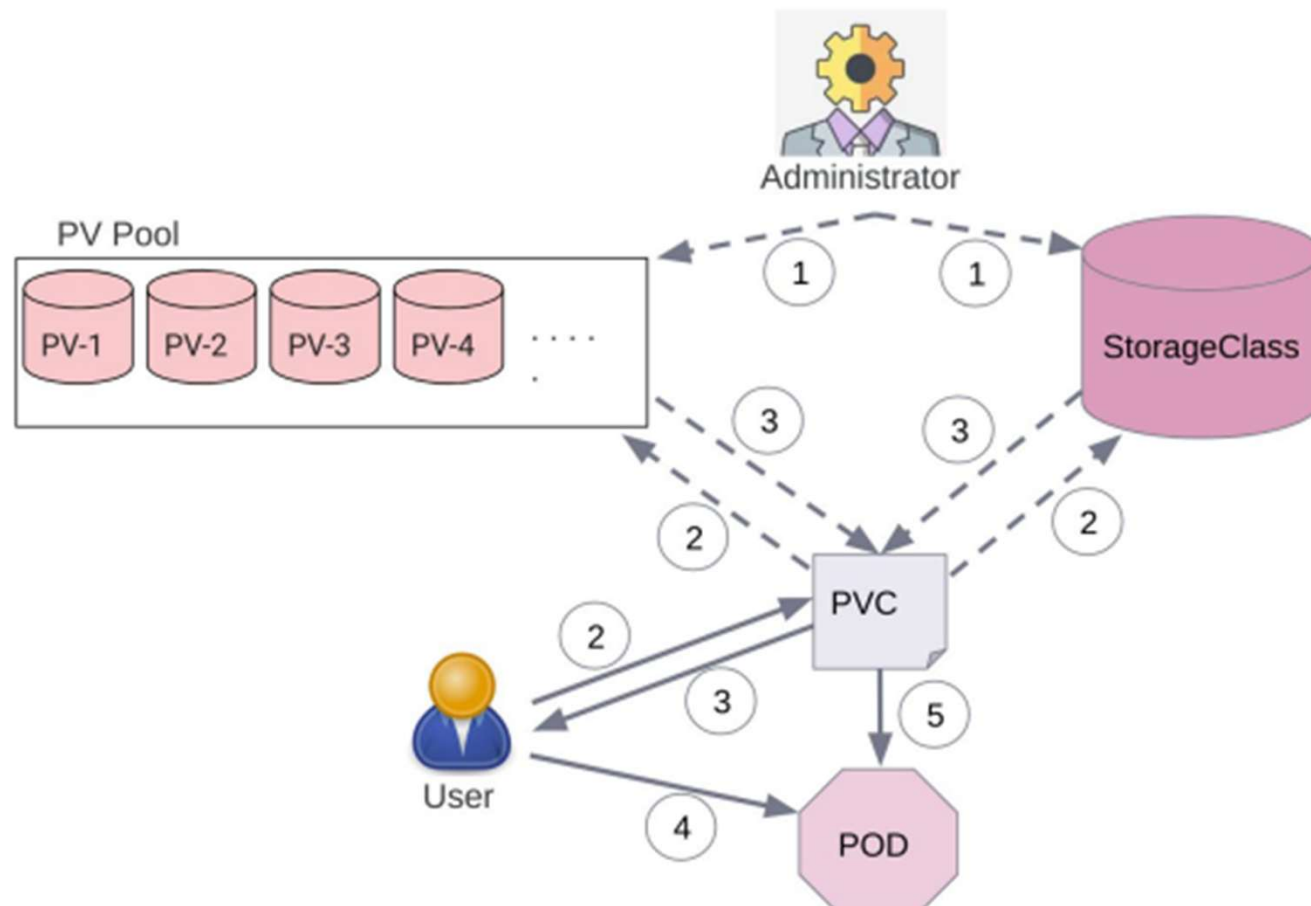
A StorageClass provides a way for administrators to describe the "classes" of storage they offer.



Dynamic PV Provisioning



PV Provisioning



Storage Class

Provisioner:

Each StorageClass has a provisioner that determines what volume plugin is used for provisioning PVs.

Parameters:

Storage Classes have parameters that describe volumes belonging to the storage class. Different parameters may be accepted depending on the provisioner

```
kind: StorageClass
apiVersion: storage.k8s.io/v1
metadata:
  name: aws-standard
  annotations:
    storageclass.kubernetes.io/is-default-class:
      "true"
provisioner: kubernetes.io/aws-ebs
parameters:
  type: gp2
  fsType: ext4
```



Ingress



Ingress

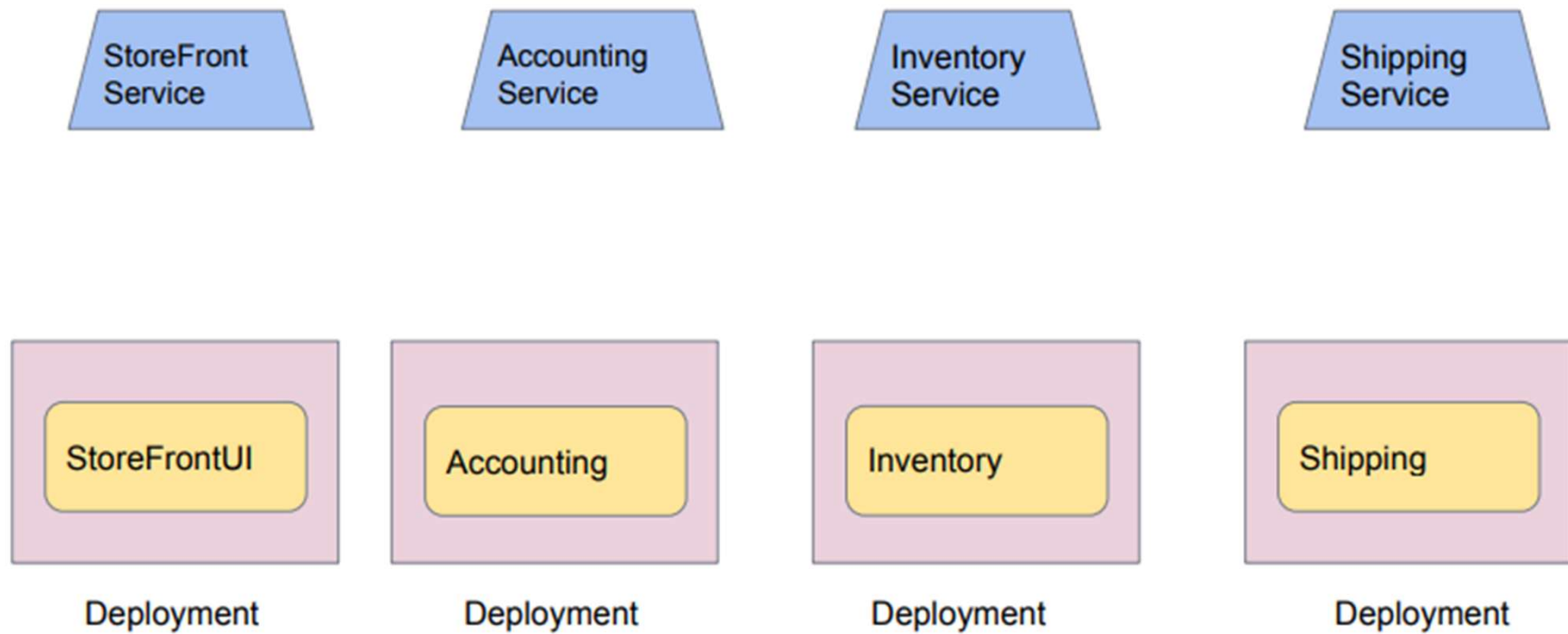
StoreFrontUI

Accounting

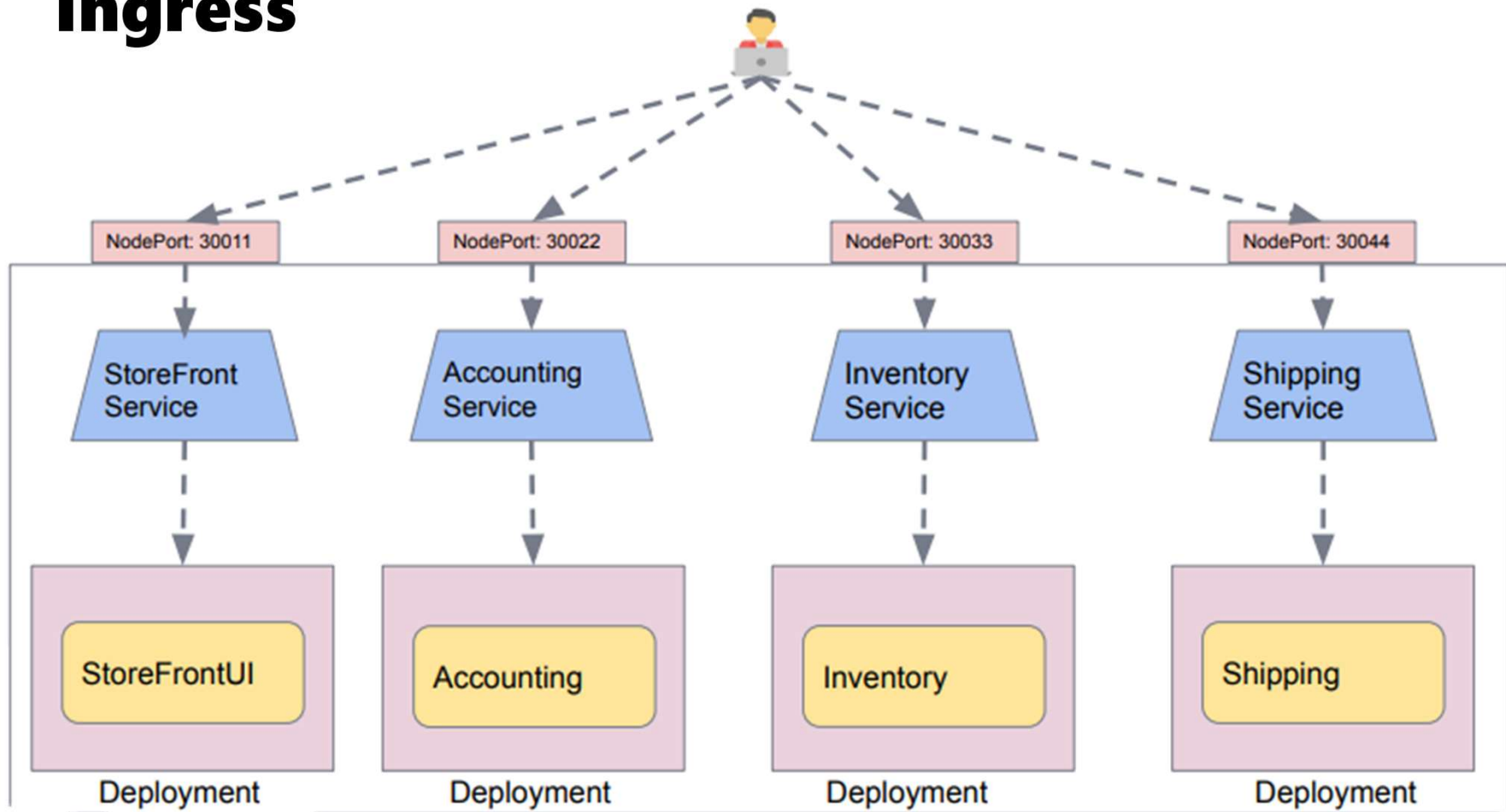
Inventory

Shipping

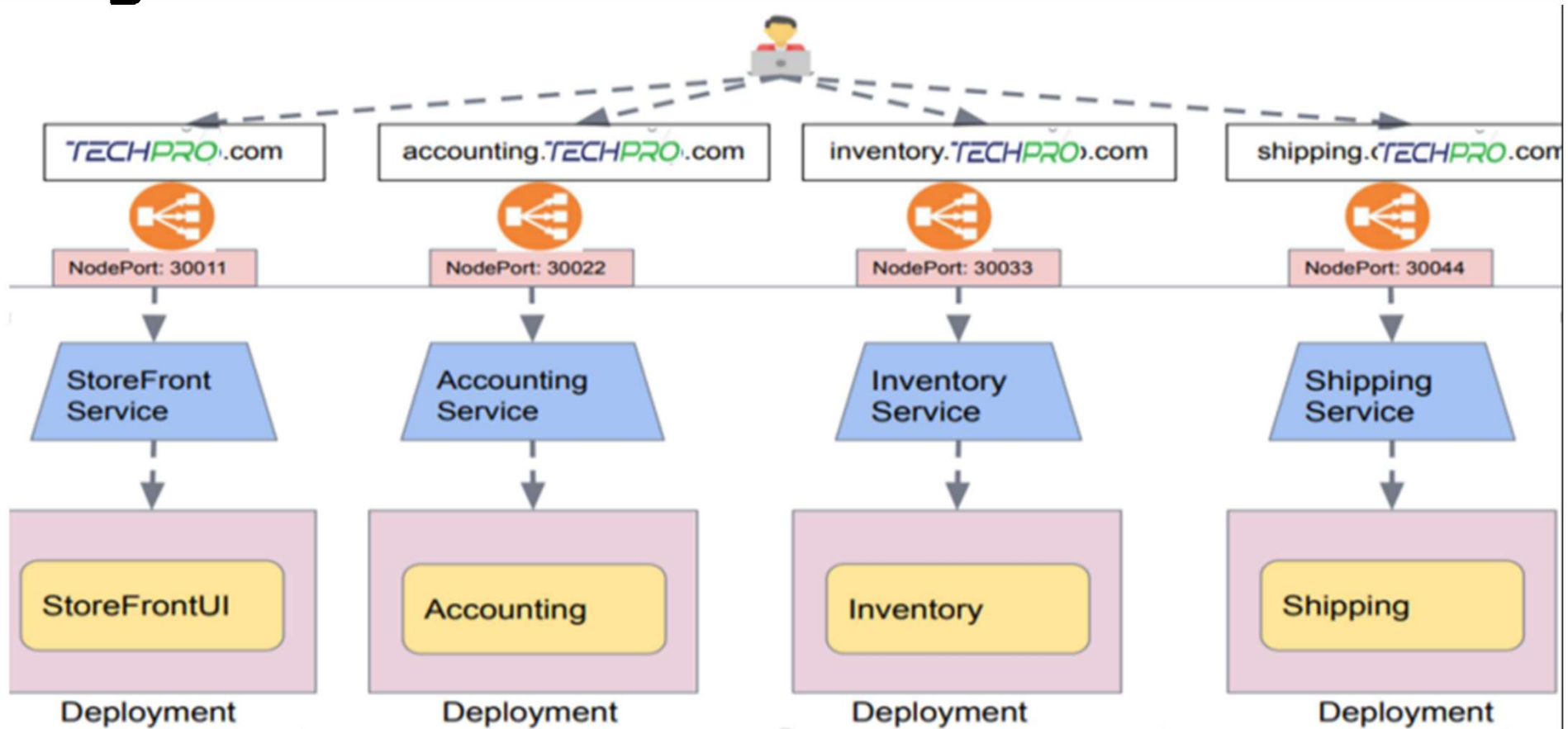
Ingress



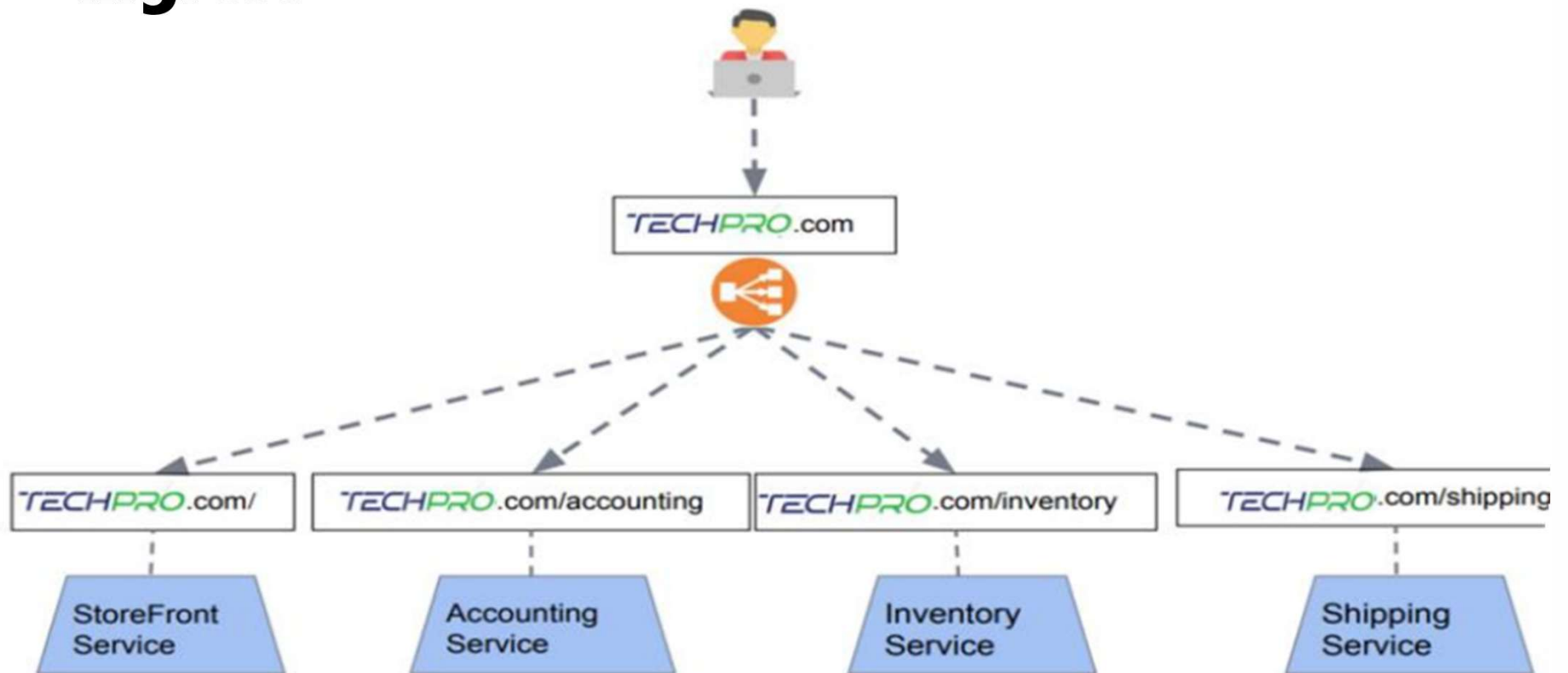
Ingress



Ingress

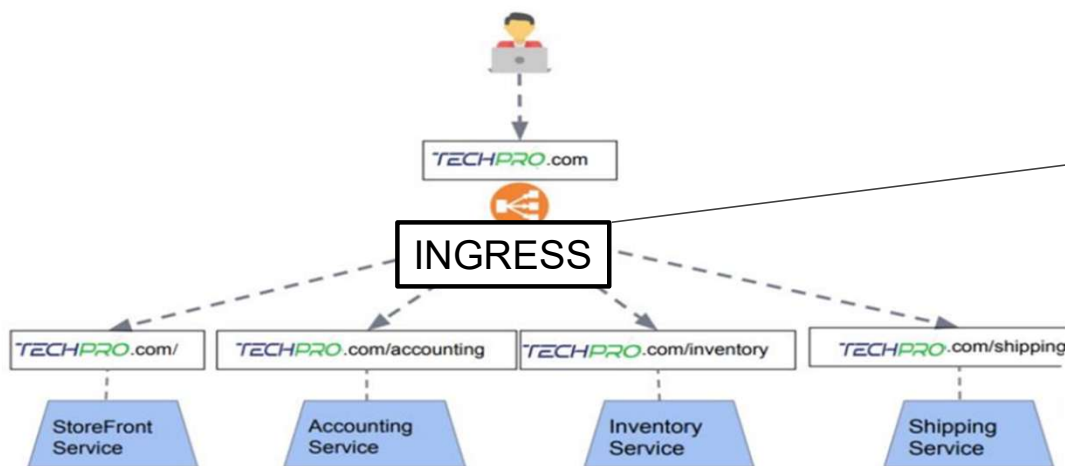


Ingress



Ingress

Ingress exposes HTTP and HTTPS routes from outside the cluster to services within the cluster.

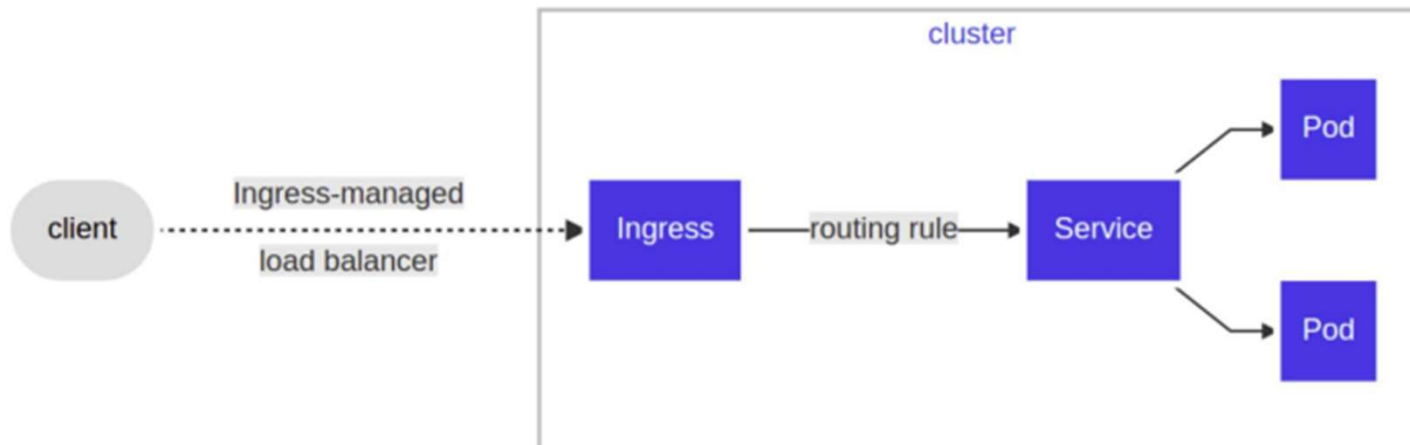


Rules:

1. techpro.com
2. Techpro.com/accounting
3. Techpro.com/inventory
4. Techpro.com/shipping

Ingress

"An Ingress is a collection of rules that allow inbound connections to reach the cluster Services."

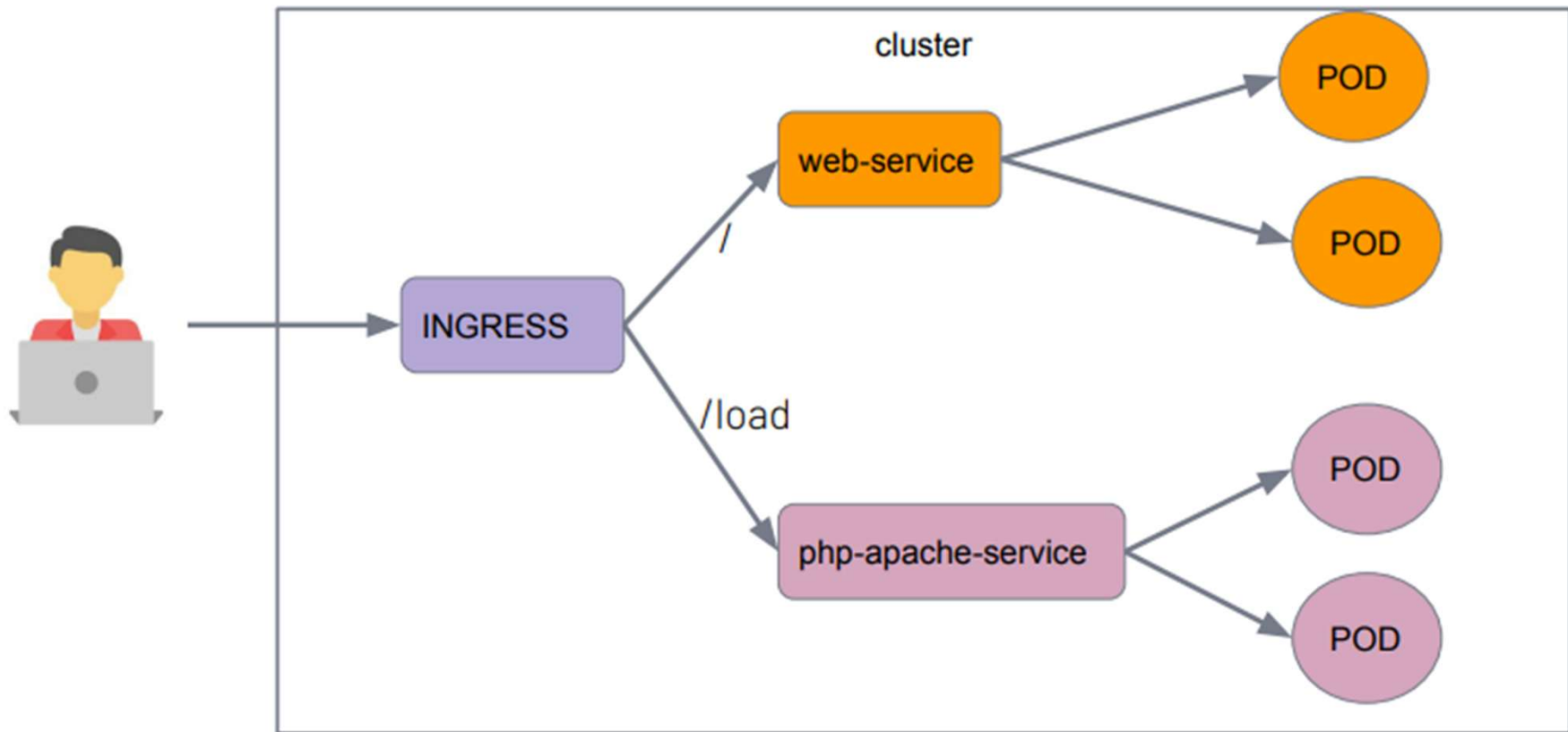


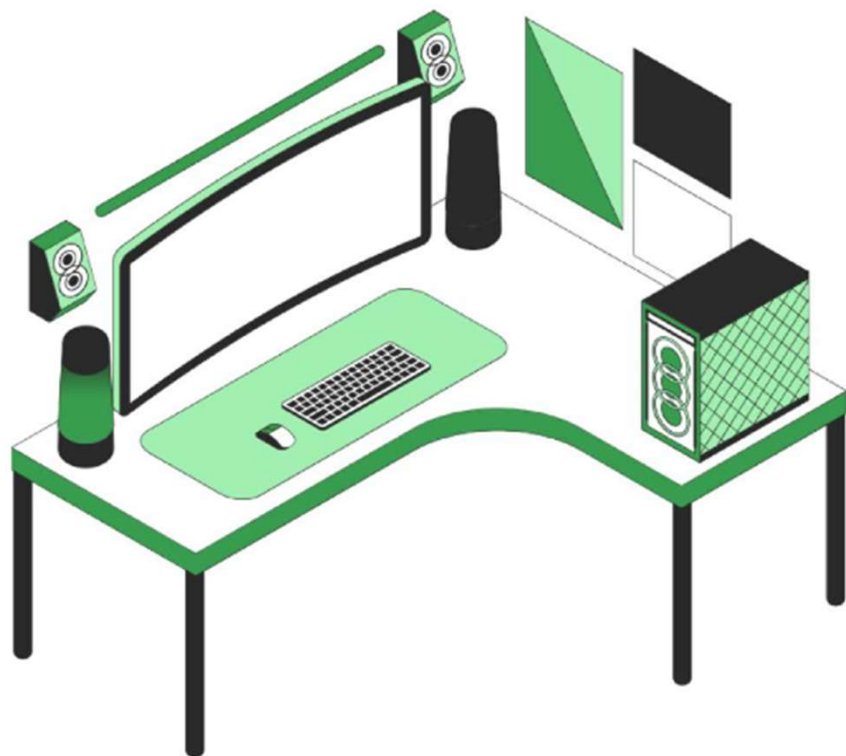
Ingress

With Ingress, users do not connect directly to a Service. Users reach the Ingress endpoint, and, from there, the request is forwarded to the desired Service.

```
apiVersion: networking.k8s.io/v1
kind: Ingress
metadata:
  name: ingress-service
  annotations:
    kubernetes.io/ingress.class: 'nginx'
spec:
  rules:
    - http:
        paths:
          - path: /
            pathType: Prefix
            backend:
              service:
                name: web-service
                port:
                  number: 3000
          - path: /load
            pathType: Prefix
            backend:
              service:
                name: php-apache-service
                port:
                  number: 80
```

Ingress-Handson





Do you have any questions?

Send it to us! We hope you learned something new.