Your company's infrastructure team provides different storage solutions such as Block, NAS, Object storage, Google Cloud disks, AWS disks and more.

There need to be a consistent way to deal with all these storage types

What is Kubernetes solution for it?

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Persistent Volume (PV)
Persistent Volume Claim (PVC)

Concept

Udemy

Objectives

Concept

a. Why Persistent Volumes (PV)

b. What is Persistent Volume (PV) and Persistent Volume Claim (PVC)

c. PV Lifecycle

d. Types of provisioning PV

- Static PV
- Dynamic PV

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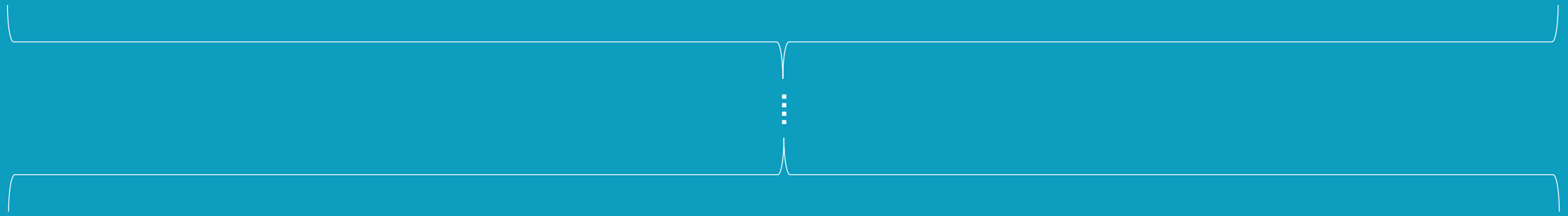
Think time...

GCEPersistentDisk
AWSElasticBlockStore
AzureDisk
Cinder (OpenStack block storage)
FC (Fibre Channel)
RBD (Ceph Block Device)
Flocker

NFS
iSCSI
CephFS
Glusterfs
AzureFile
Flexvolume

VsphereVolume
Quobyte Volumes
HostPath
Portworx Volumes
ScaleIO Volumes
StorageOS



Block Storage **NFS** **Object storage** **Others**

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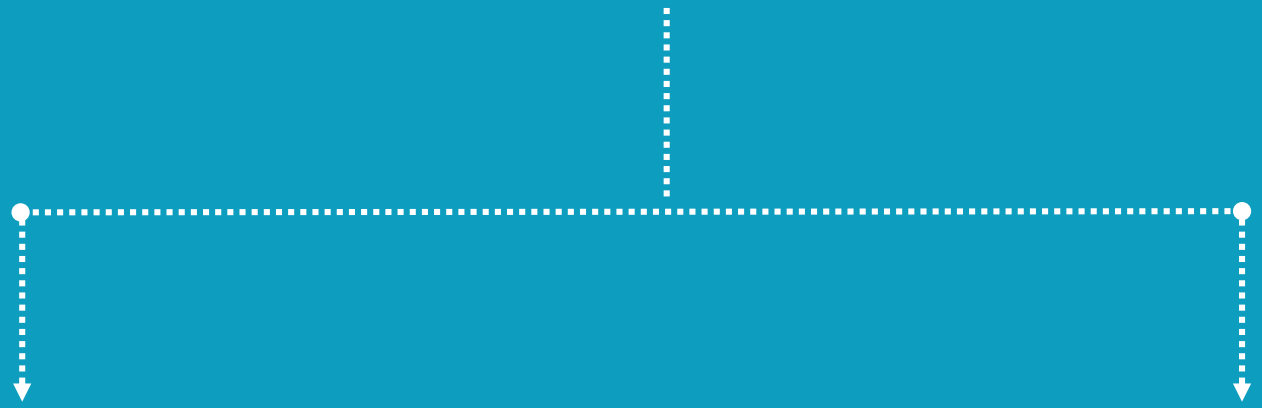
Persistent Volumes

- Abstracts details of how storage is provided from how it is consumed



Persistent Volume (PV)
(Piece of Storage in Cluster)

Persistent Volume Claim (PVC)
(Request for storage)

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Lifecyle of a Persistent Volume

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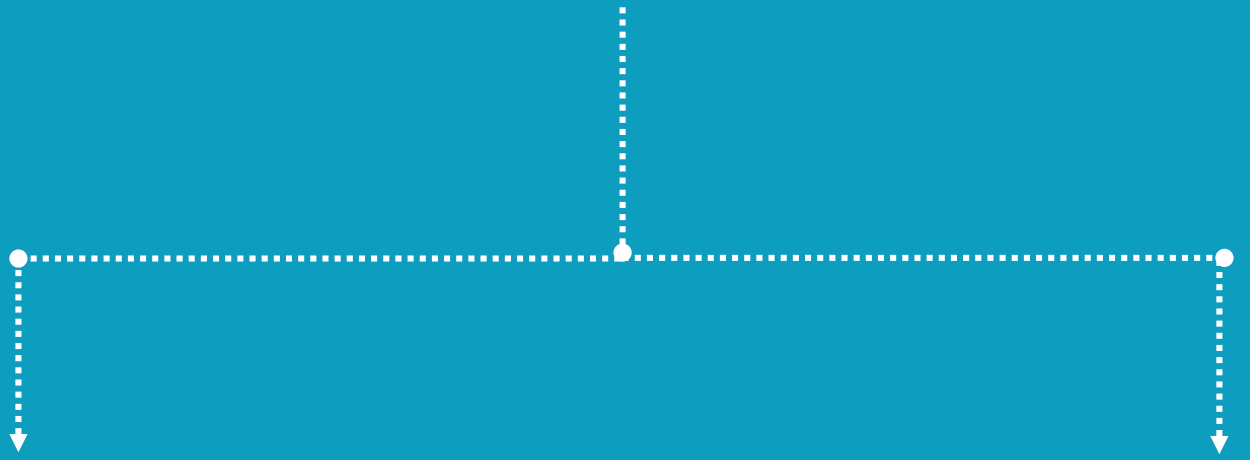
Provisioning → Binding → Using → Reclaiming

Provisioning



Static

PV needs to be **created before** PVC

Dynamic

PV is **created at same time** of PVC

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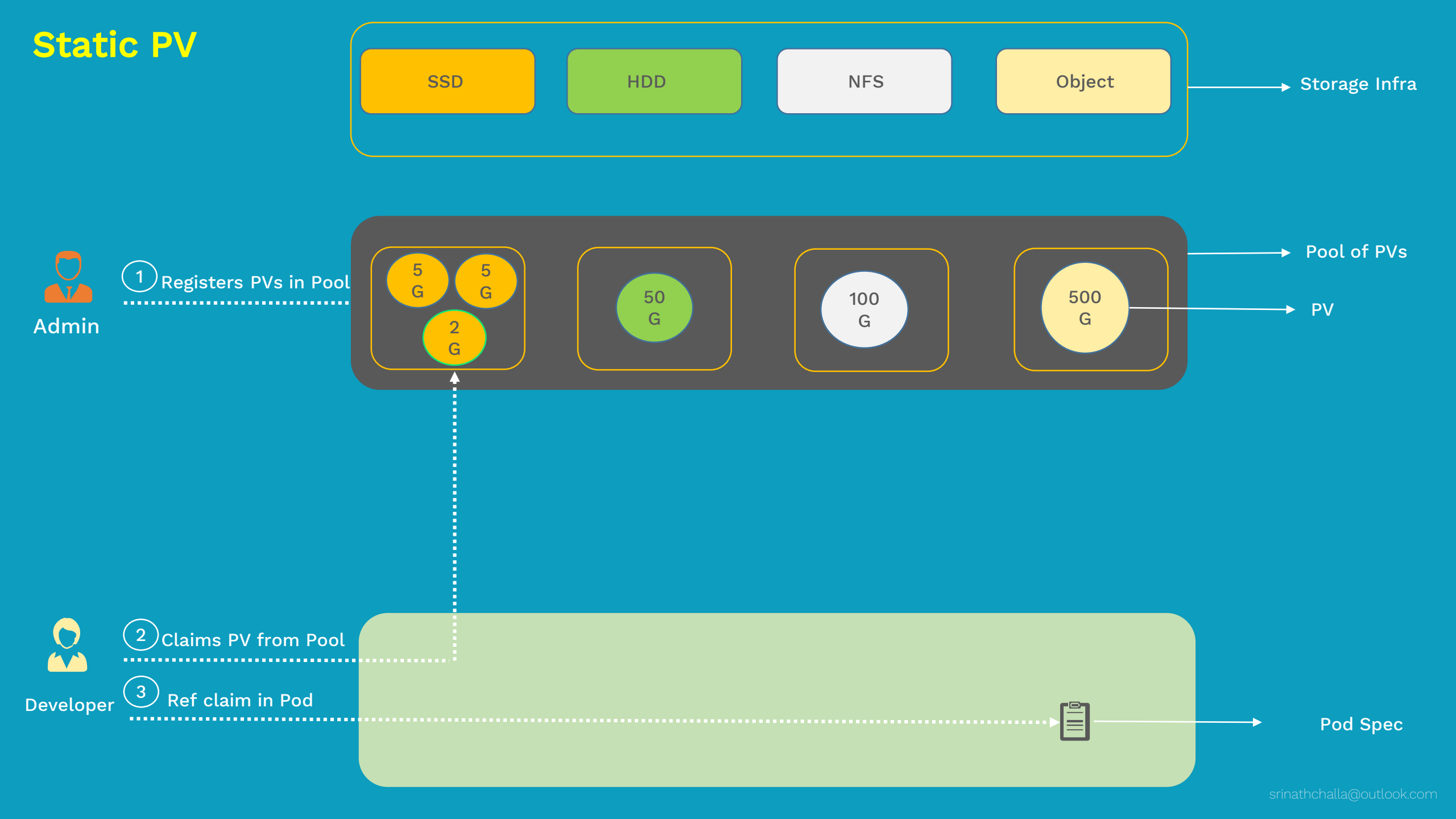
Static PV



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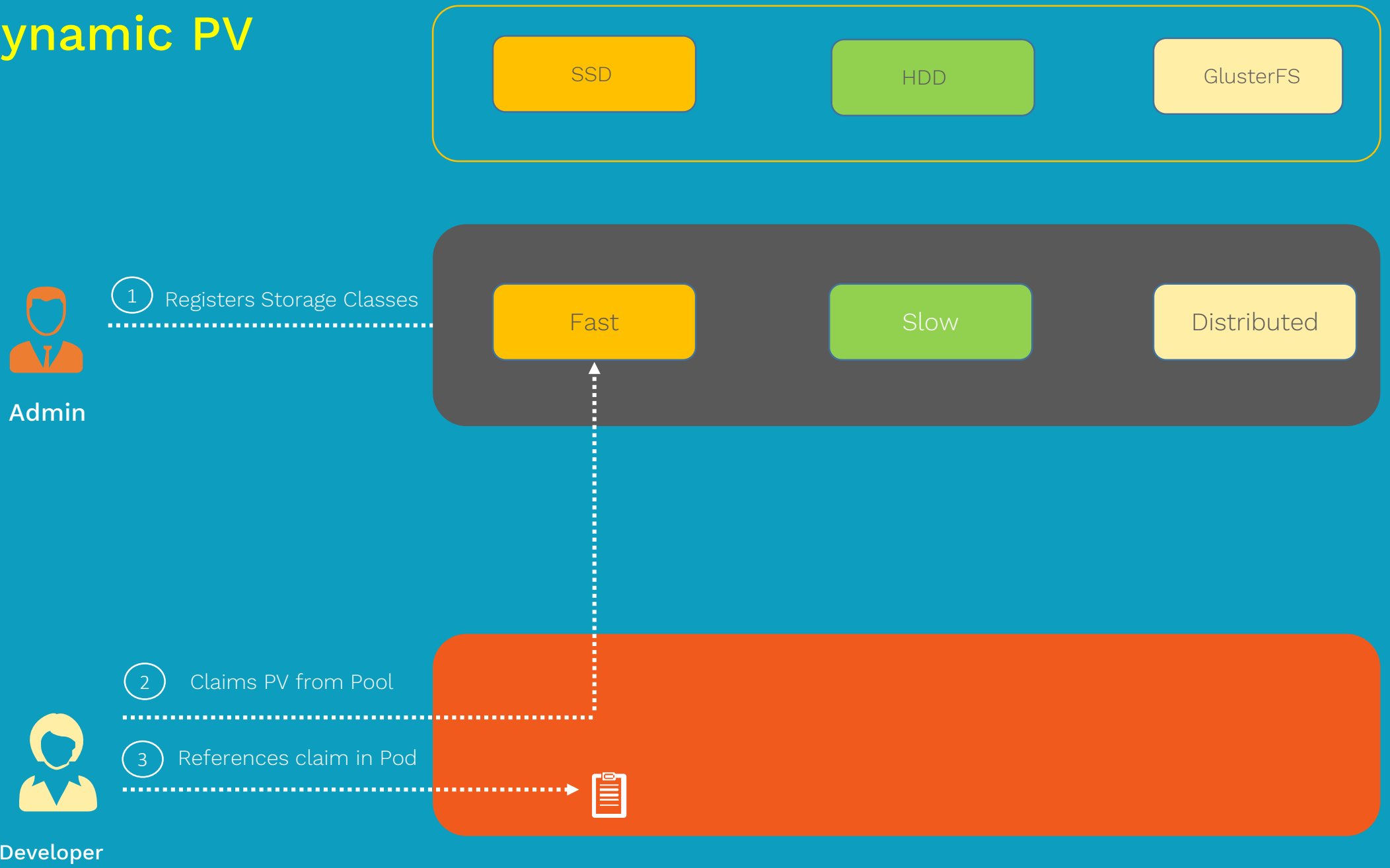
Dynamic PV



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Summary

Concept

a. Why Persistent Volumes (PV)

b. What is Persistent Volume (PV) and Persistent Volume Claim (PVC)

c. PV Lifecycle

d. Types of provisioning PV

- Static Provisioning
- Dynamic Provisioning

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Coming up...

Static PV

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