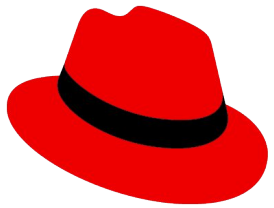
Red Hat Summit

Connect

Pod'y, VM'ki i cała reszta

jak zrobić kopię zapasową, a nawet odtworzyć

Red Hat



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Marek Martofel

Cloud Native and Container Platform Lead
Red Hat

Disaster Recovery and Backup

Backup Solutions

-Protection against logical failures

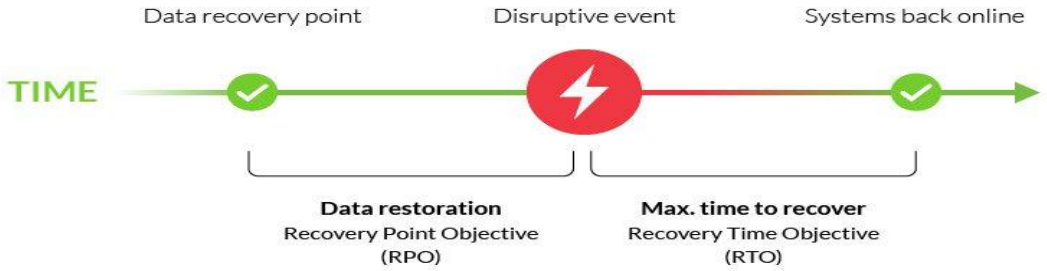
-Restore to the previous point-in-time copy of the data and/or the application state

Disaster Recovery Solutions

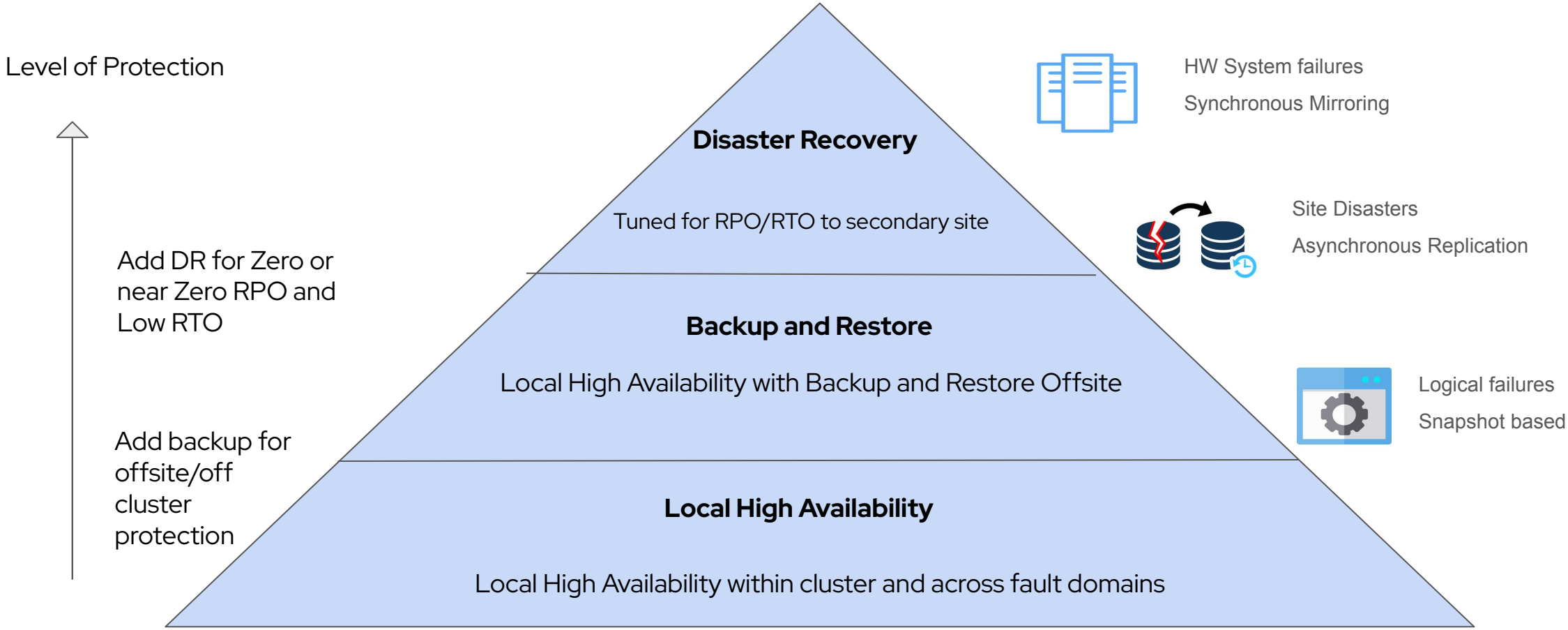
-Protection against physical HW failures and Data Center disasters

-Failover to remote Cold (Standby) or Hot Site

- **Recovery Point Objective (RPO)** : Amount of acceptable data loss defined from the point of disaster to last known backup or recovery point.
- **Recovery Time Objective (RTO)** : Amount of time that an application can be down before it significantly impacts business.



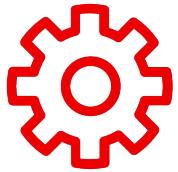
Essentials Capabilities for Data Protection Solutions



Red Hat Openshift API for Data Protection (OADP)

OpenShift

OpenShift helps you bring your big ideas to life on a security-focused hybrid cloud platform open to any app, team, or infrastructure.



OpenShift API for Data Protection

OpenShift API for Data Protection (OADP) features provide options for backing up and restoring applications.

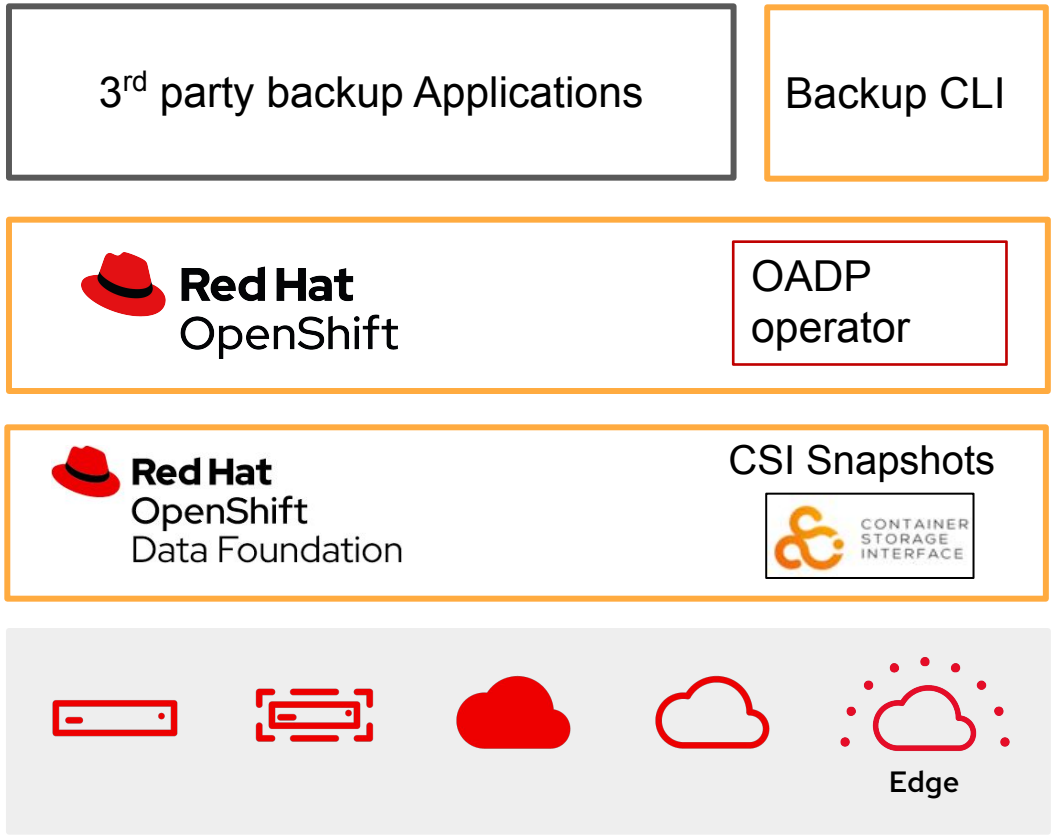
Bucket

OADP provides default Velero plug-ins that are integrated with storage providers to support backup and snapshot operations.

Some Facts about OADP

- Initiated OCP Backup API offering as supported Operator in **February 2022**
- **#13 on list of Top Red Hat Operators**, with top 5 growth in accounts and clusters.
- Critical component for ACM, ODF and OCP SaaS offering
- **Upstream Community** (Velero)
- **Red Hat focuses on Integrated Service Provider**
- Red Hat focuses on OADP as a backup/recovery feature of ACM

Red Hat Openshift Application Backup – Key Features



- **RBAC Policy**
  - Handles RBAC policy management, backup scheduling, retention and restore management and data movement
- **OADP – OpenShift App Data Protection API**
  - Enables namespace or label scoped backups with all ensuing cluster resources and application data (PVs)
  - Ensures OCP version independence and works across storage providers (via plug-ins)
- **ODF PV Snapshots via CSI**
  - PV/PVC backups of ODF volumes through standard CSI interfaces

Backup
-Name: String
-Include/Exclude Namespaces: String[]
-Include/Exclude Resources: String[]
-Include Cluster Resources: Bool
-Label Selector: String
-SnapshotVolumes: Bool
-StorageLocation: String
-VolumeSnapshotLocations: String[]
-TTL: Duration
-Hooks

Restore
-BackupName: String
-Include/Exclude Namespaces: String[]
-Include/Exclude Resources: String[]:
-LabelSelector: String
-IncludeClusterResources: Bool
-RestorePVs: Bool
-NamespaceMapping: String[][]

BackupStorageLocation
-Provider
-Coordinates/Credentials

Where to store Kubernetes Resource YAML

Target: Object Storage

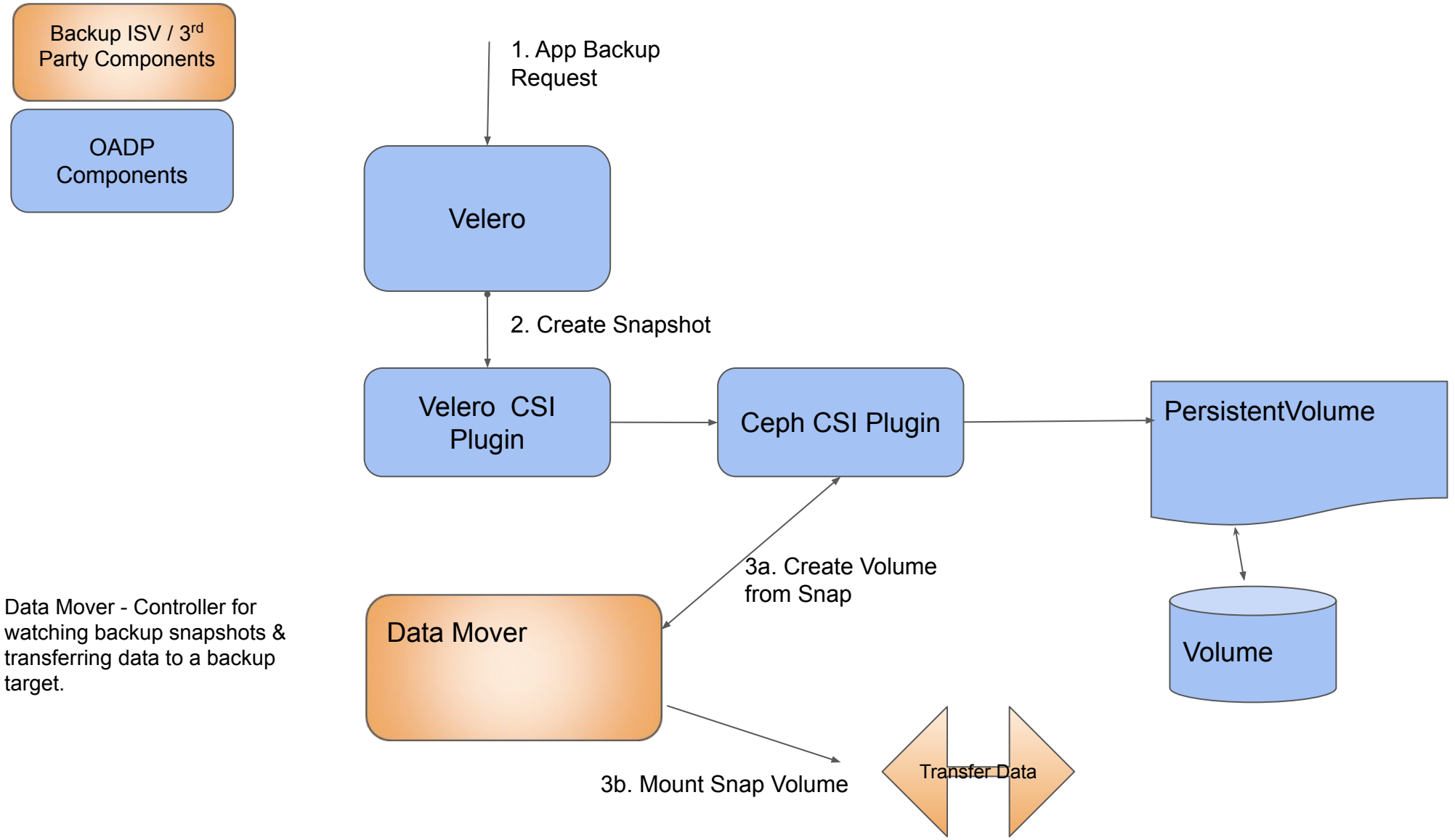
VolumeSnapshotLocation
-Provider
-Coordinates/Credentials

Configuration for PV Snapshots

Target: Persistent Volume Data

Schedule
-Template (*Same data as in Backup Resource*)
-Schedule

OADP – ODF Storage Plug-in



Data Mover - Controller for watching backup snapshots & transferring data to a backup target.

Demo

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