



# OpenShift Cluster GitOps with Advanced Cluster Manager

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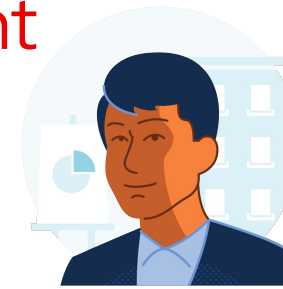
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# Advanced Application Lifecycle Management

## Simplify your Application Lifecycle

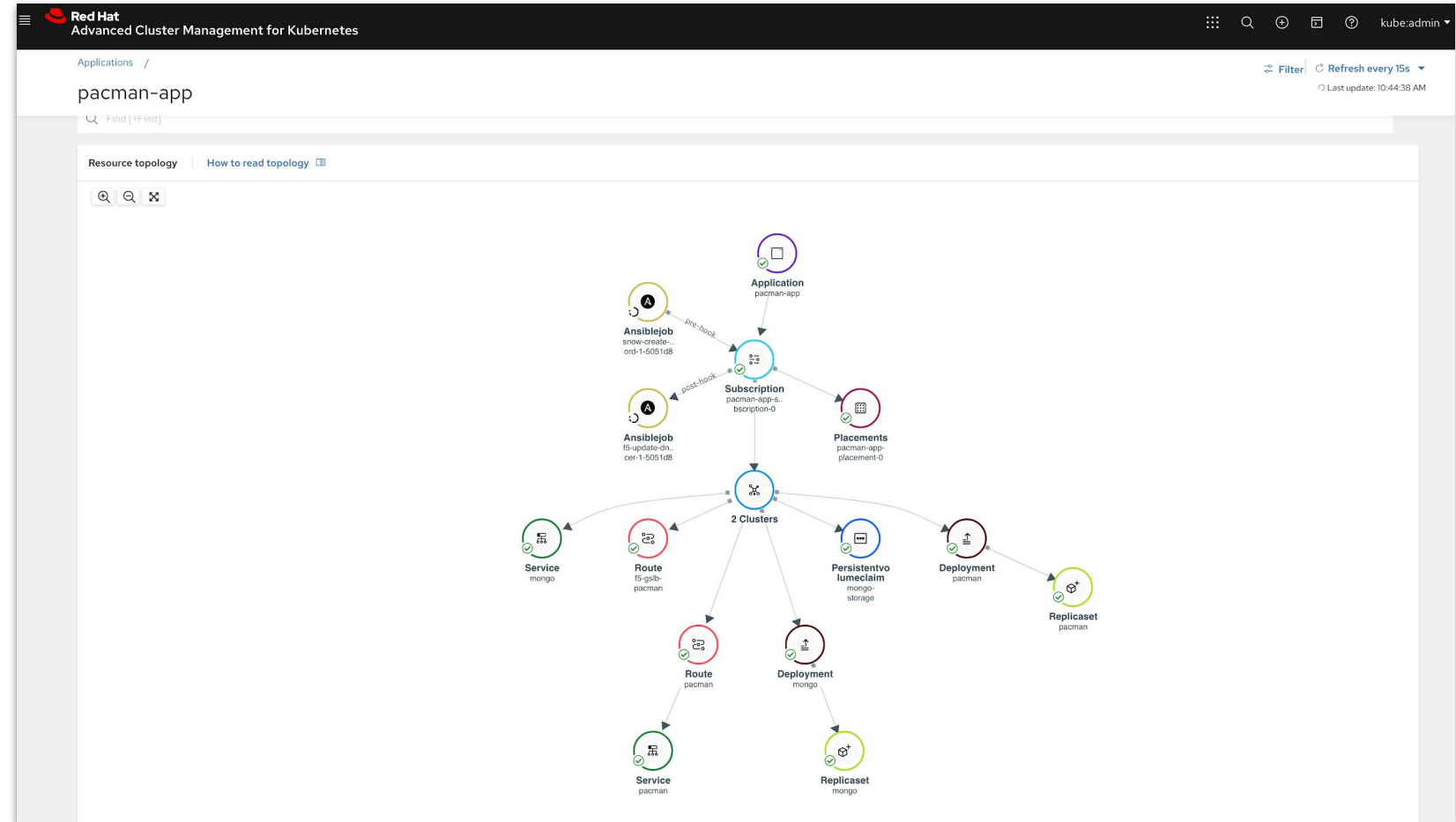
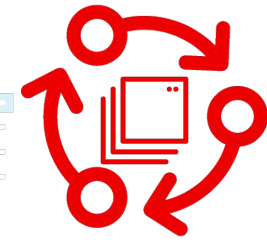
- Deploy Applications at Scale
- Deploy Applications from Multiple Sources and Clusters
- Quickly Visualize Application Relationships
- Integrate with the Red Hat Ansible Automation Platform



IT Operations

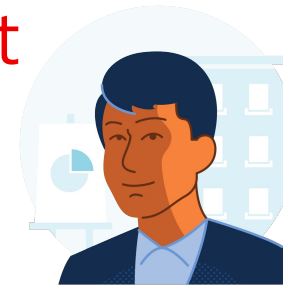


DevOps/SRE



# Advanced Application Lifecycle Management

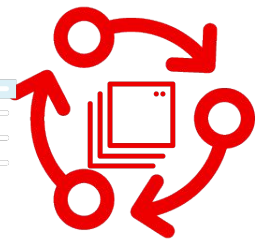
## Subscriptions Bring Enterprise to Kubernetes



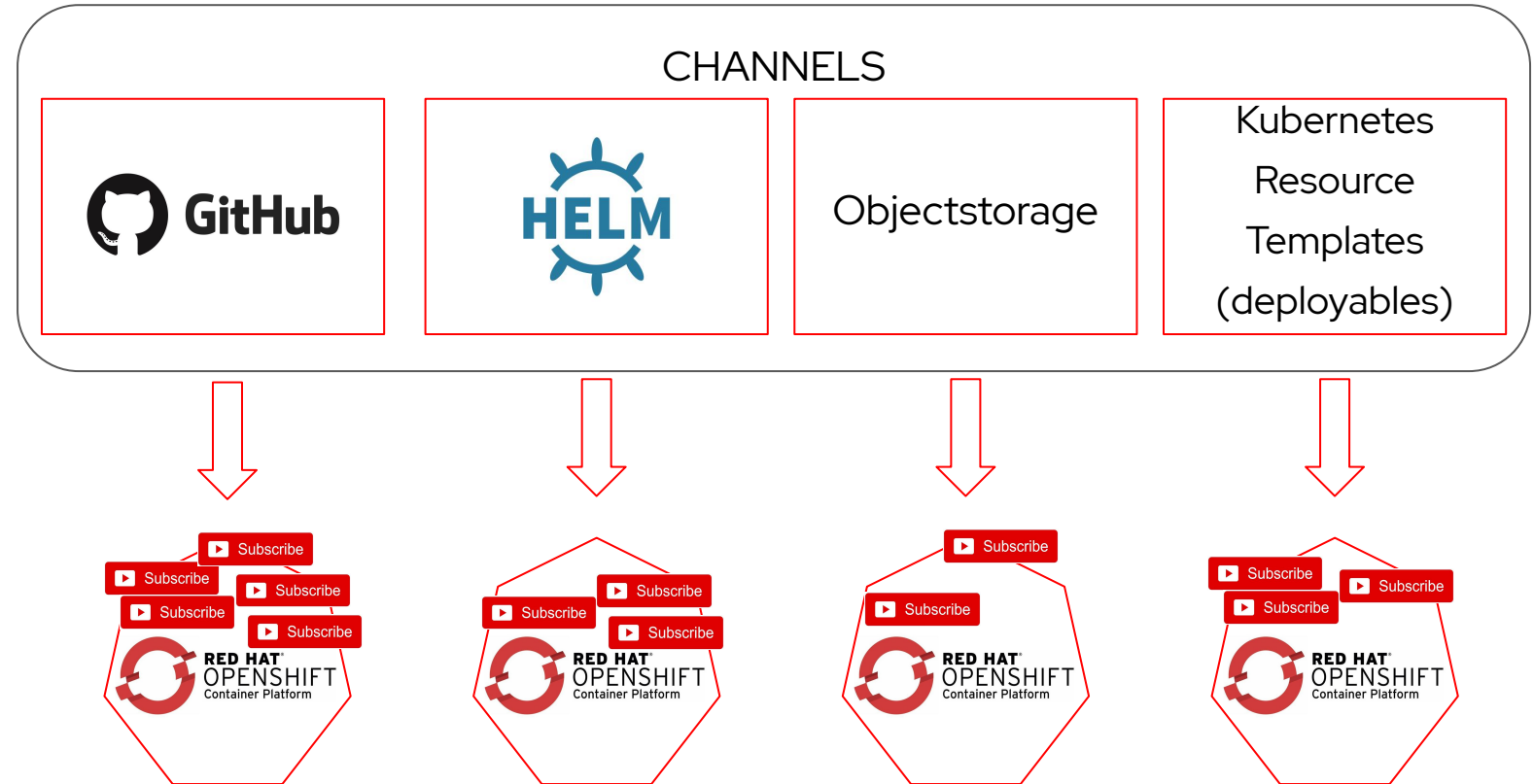
IT Operations



DevOps/SRE



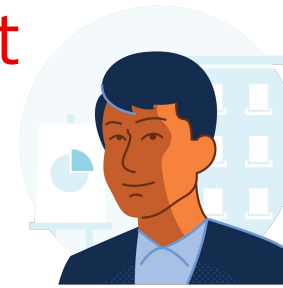
- Extending the best of Enterprise into a desired state methodology
- Time Windows: New releases during your maintenance windows
- Rolling Updates: Control the rate and load on your growing infrastructure



# Advanced Application Lifecycle Management

## GitOps as the source of truth

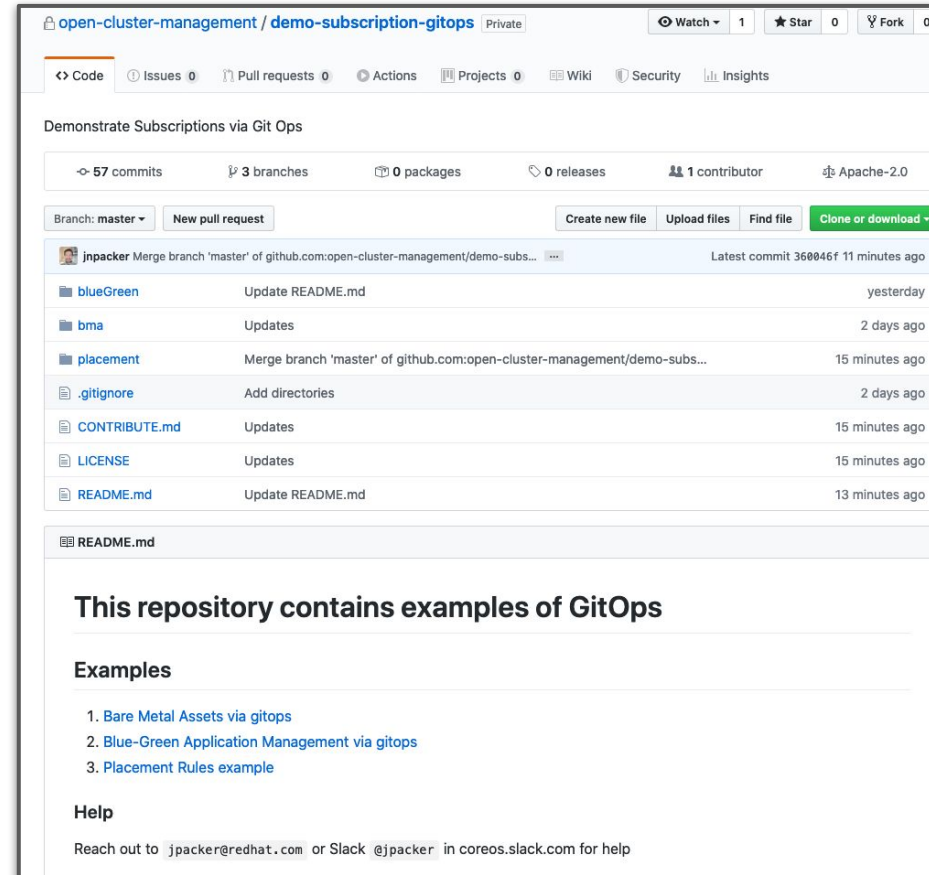
- Create, modify & delete, just as you would any source code. Git becomes your source of truth controlling your data center.
- Have a record of who, what & when for every change precipitated in your environments
- Through code Reviews & Approvals, take full control of all changes to your data center(s)
- Restore your environment, via the Git commit history (system of record)



IT Operations



DevOps/SRE



<https://github.com/open-cluster-management/demo-subscription-gitops>

# Manage OpenShift Anywhere

## Overview



- OCP Cluster Lifecycle Management:
  - Provision new OCP 4.4.x - 4.6.x
  - Manage existing OCP 3.11, 4.4.x - 4.6.x
- Public cloud managed kubernetes: EKS, AKS, GKE, IKS, ROKS
  - Search, find and modify kubernetes resources.
  - Deploy applications, across clusters
  - Define security policy, compliance and violations
- Provision OCP to **Bare Metal** and **vSphere**
  - More opportunity to mix clouds (public / private)

Red Hat Advanced Cluster Management for Kubernetes

Clusters /

Create a cluster ⓘ  YAML-On Cancel Create

^ Configuration

Cluster name\* ⓘ

Enter cluster name

^ Distribution

Select the type of Kubernetes distribution to use for your cluster.

Red Hat OpenShift

Select an infrastructure provider to host your Red Hat OpenShift cluster.

Amazon Web Services  Google Cloud  Microsoft Azure

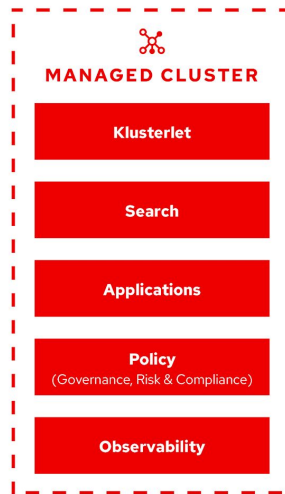
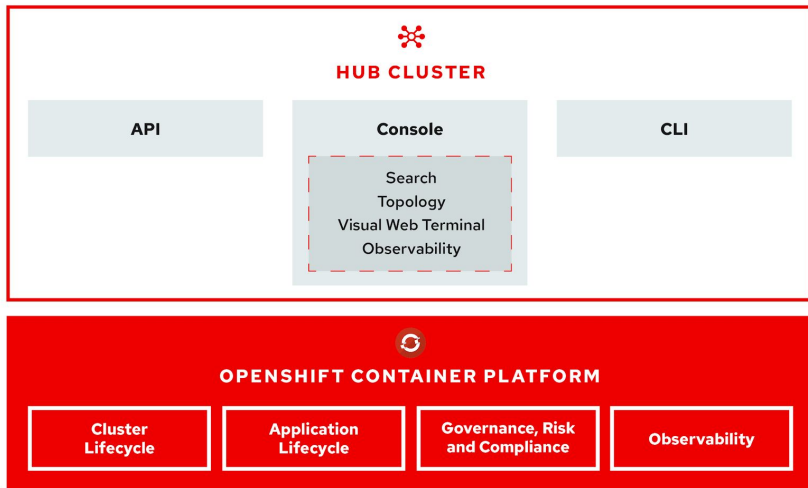
VMware vSphere  Bare Metal

```
Cluster
YAML
Reset
Cluster
YAML
1 apiVersion: hive.openshift.io/v1
2 kind: ClusterDeployment
3 metadata:
4   name:
5   namespace:
6   labels:
7     cloud: ''
8     vendor: 'OpenShift'
9 spec:
10  baseDomain:
11  clusterName:
12  controlPlaneConfig:
13    servingCertificates: {}
14  installed: false
15  platform:
16  provisioning:
17    installConfigSecretRef:
18      name: -install-config
19    sshPrivateKeySecretRef:
20      name: -ssh-private-key
21  pullSecretRef:
22    name: -pull-secret
23
24 apiVersion: cluster.open-cluster-management.io/
25 kind: ManagedCluster
26 metadata:
27   labels:
28     name:
29     vendor: OpenShift
30   name:
31 spec:
32   hubAcceptsClient: true
33
34 apiVersion: v1
35 kind: Secret
36 metadata:
37   name: -install-config
38   namespace:
```

# Architecture overview



IT Operations



## Hub architecture and components

Red Hat Advanced Cluster Management uses the multicluster-hub operator and runs in the open-cluster-management namespace

## Managed cluster architecture and components

Red Hat Advanced Cluster Management managed clusters use the multicluster-endpoint operator which runs in the open-cluster-management namespace

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# GitOps with ACM Demo

# Thank you

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