

# OpenShift Commons Gathering

Day Zero at KubeCon NA  
Virtual | 17 November 2020



# Deep Dive into Red Hat OpenShift On Amazon (ROSA)

**Speaker:**

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# About me

Andy Cathrow

- Sr Director of Product Management  
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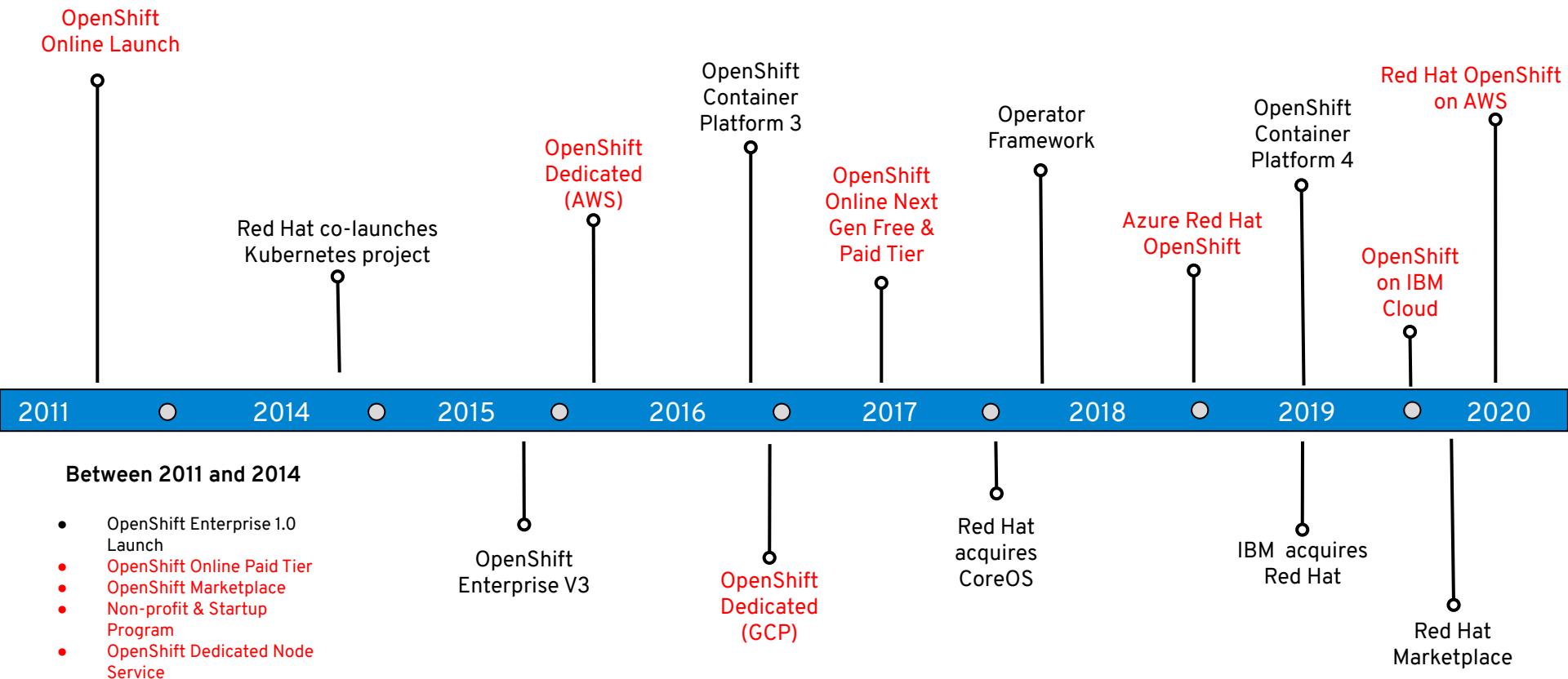
email: aic@redhat.com



# Agenda

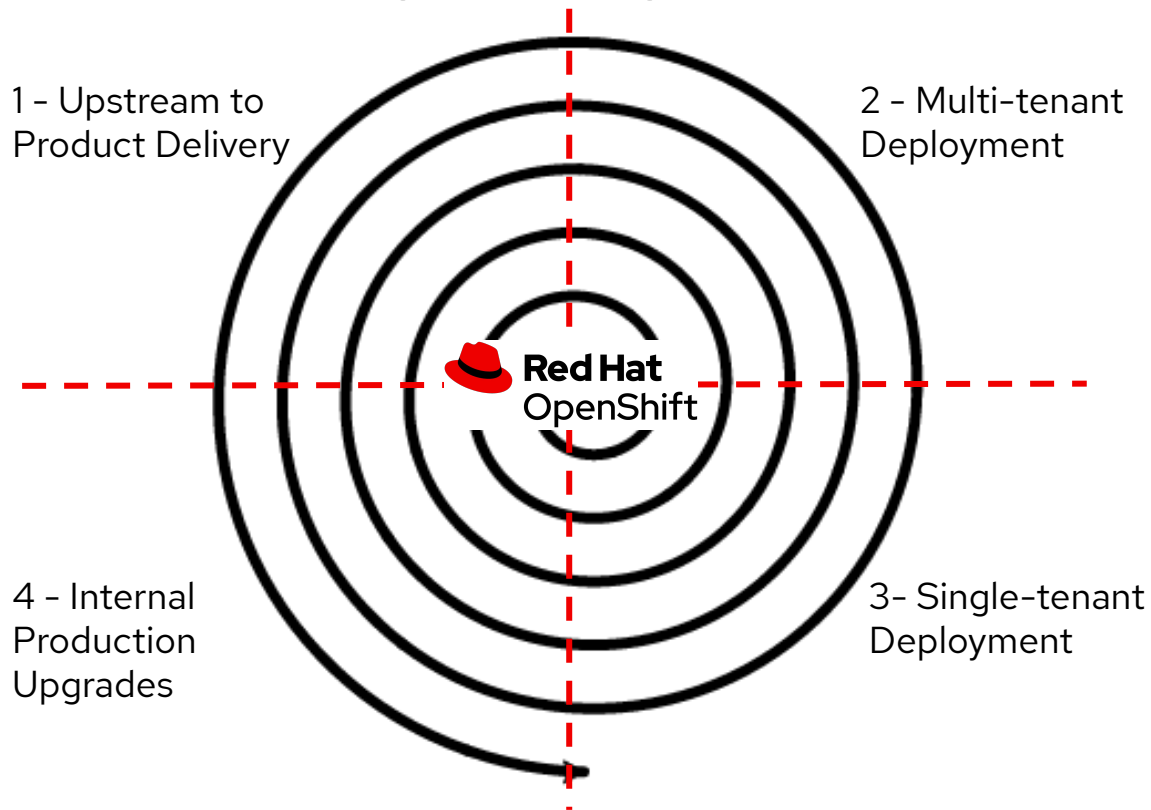
- Red Hat Managed Services ?
- Red Hat OpenShift Dedicated
- Red Hat OpenShift on AWS
- Demo

# Managed OpenShift - A Brief History



# The Managed OpenShift Model

## SRE Engineering Product Feedback Spiral



- One SRE | Support | Eng team
- Multi Cloud Footprint
- Production services like
  - Quay.io
  - Openshift.com
  - Cloud.redhat.com
  - Telemetry services
  - Red Hat Insights
- Continuous development and deployment model

# OpenShift offers the broadest set of hybrid cloud services

Developer Experience

Productivity

Enterprise Readiness

**Red Hat OpenShift**



**Red Hat OpenShift  
Dedicated  
Red Hat OpenShift on  
AWS**

**Azure Red Hat  
OpenShift**

**Red Hat  
OpenShift  
Dedicated**

**Red Hat  
OpenShift on IBM  
Cloud**

**OpenShift  
Container  
Platform**

Managed By Red Hat  
Jointly supported by AWS  
and Red Hat  
or  
OCP Customer Managed

Jointly Managed &  
supported by Microsoft  
and Red Hat  
or  
OCP Customer Managed

Managed By Red Hat  
or  
OCP Customer Managed

Managed by IBM  
Supported by IBM and  
Red Hat

OCP Customer Managed

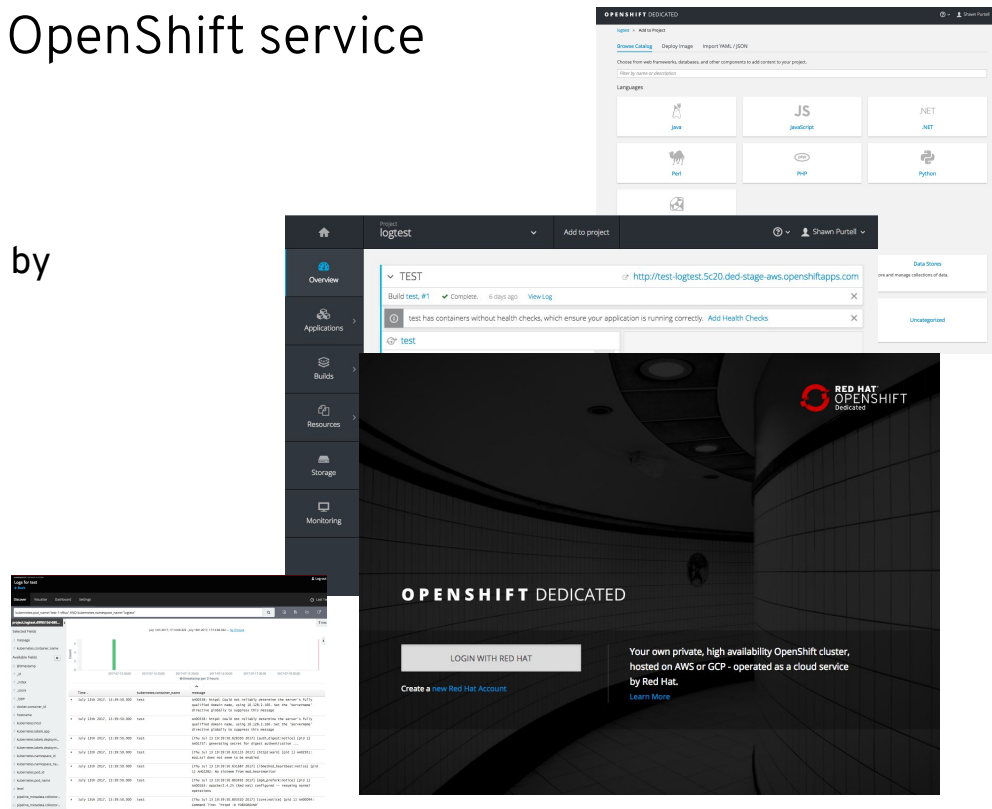


# OpenShift Dedicated

## A fully managed OpenShift service

OpenShift Dedicated offers managed OpenShift clusters, hosted on AWS or Google and operated by Red Hat:

- Installed and maintained by Red Hat
- Red Hat owned or customer-owned AWS account
- Choice of region, node size, AZ distribution
- Authentication integration
- Integrated logging and metrics
- OpenShift Cluster Manager (OCM)
- Managed upgrades and patching
- VPN and VPC peering
- Premium Red Hat support





# OpenShift Dedicated

## Automation

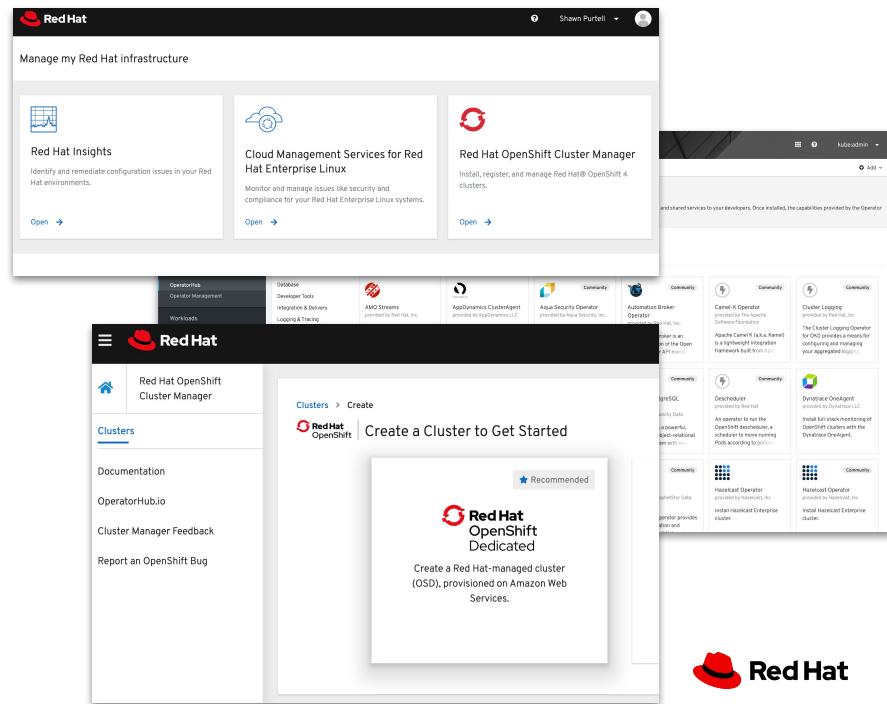
- More frequent updates
- Operator-based master and infra services

## Operator Support

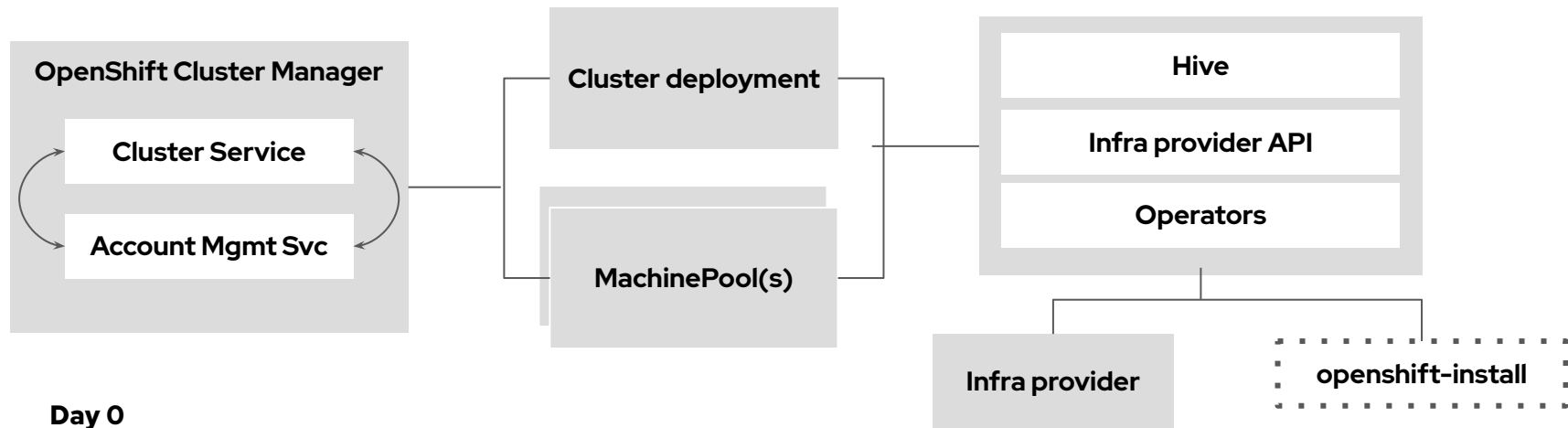
- Operator Framework
- OperatorHub & Certified ISVs

## Self-Service

- OpenShift Cluster Manager (cloud.redhat.com)
- Provisioning clusters
- Dedicated-admin management
- Node scaling



# Service Delivery Management Plane



Day 0

Day 2



# Introducing



## Red Hat OpenShift on AWS (ROSA)

Fully-managed Red Hat OpenShift service on AWS, jointly managed and supported by both Red Hat and AWS



### **Reduce operational complexity**

Fully-managed OpenShift service, backed by enterprise class SLA enabling customers to focus on applications, not infrastructure



### **Empower developers to innovate**

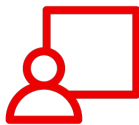
Quickly build and deploy applications by launching OpenShift through the AWS console



### **Flexible consumption based pricing**

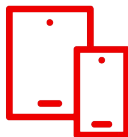
Scale as per your business needs and pay as you go with flexible pricing including hourly billing

# Red Hat OpenShift on AWS



## Native AWS service

- Create OpenShift clusters from the AWS console
- AWS integrated experience for cluster creation and management
- Foundation based on RHEL, providing a stable and secure platform for hybrid deployments



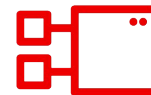
## Unified bill

- Leverage your existing AWS commitment to use OpenShift
- Get a single unified bill from AWS for both OpenShift and AWS consumption



## Joint Support

- Integrated support systems
- Contact Red hat or AWS support
- Built on Red Hat and AWS' decades of enterprise IT knowledge and experience



## Integration with AWS Services

- Build containerized applications that integrate natively with the more than 170 AWS cloud-native services

# User Experience

## AWS Management Console

### AWS services

#### Find Services

You can enter names, keywords or acronyms.

Example: Relational Database Service, database, RDS

#### Recently visited services

-  [Elastic Kubernetes Service](#)
-  [AWS Marketplace Subscriptions](#)
-  [IAM](#)
-  [EC2](#)
-  [AWS Organizations](#)

#### All services

##### Compute

- [EC2](#)
- [Lightsail](#)
- [Lambda](#)
- [Batch](#)
- [Elastic Beanstalk](#)
- [Serverless Application Repository](#)
- [AWS Outposts](#)
- [EC2 Image Builder](#)

##### Containers

- [Elastic Container Registry](#)
- [Elastic Container Service](#)
- [Elastic Kubernetes Service](#)
- [Red Hat OpenShift](#)

##### Developer Tools

- [CodeStar](#)
- [CodeCommit](#)
- [CodeBuild](#)
- [CodeDeploy](#)
- [CodePipeline](#)
- [Cloud9](#)
- [X-Ray](#)

##### Customer Enablement

- [AWS IQ](#)
- [Support](#)
- [Managed Services](#)

##### Robotics

- [AWS RoboMaker](#)

##### Machine Learning

- [Amazon SageMaker](#)
- [Amazon CodeGuru](#)
- [Amazon Comprehend](#)
- [Amazon Forecast](#)
- [Amazon Fraud Detector](#)
- [Amazon Kendra](#)
- [Amazon Lex](#)
- [Amazon Machine Learning](#)
- [Amazon Personalize](#)
- [Amazon Polly](#)
- [Amazon Rekognition](#)
- [Amazon Textract](#)
- [Amazon Transcribe](#)
- [Amazon Translate](#)
- [AWS DeepLens](#)
- [AWS DeepRacer](#)

##### Mobile

- [AWS Amplify](#)
- [Mobile Hub](#)
- [AWS AppSync](#)
- [Device Farm](#)

##### AR & VR

- [Amazon Sumerian](#)



##### Application Integration

- [Step Functions](#)
- [Amazon AppFlow](#)
- [Amazon EventBridge](#)
- [Amazon MQ](#)
- [Simple Notification Service](#)
- [Simple Queue Service](#)

Red Hat OpenShift is found in the AWS Console along with other container services

# User Experience

Containers

## Amazon Red Hat OpenShift

Fully managed Red Hat® OpenShift® service on AWS

Amazon Red Hat OpenShift allows you to deploy fully operational and managed Red Hat OpenShift clusters while leveraging the full breadth and depth of AWS.

### Create OpenShift Cluster

Subscribe

[End User License Agreement](#)

| Pricing (per hour)            |        |
|-------------------------------|--------|
| M5.xlarge (4 vCPU, 16 GiB)    | \$0.22 |
| M5.2xlarge (8 vCPU, 32 GiB)   | \$0.22 |
| M5.4xlarge (16 vCPU, 64 GiB)  | \$0.22 |
| R5.xlarge (4 vCPU, 32 GiB)    | \$0.22 |
| R5.2xlarge (8 vCPU, 64 GiB)   | \$0.22 |
| R5.4xlarge (16 vCPU, 128 GiB) | \$0.22 |
| C5.2xlarge (8 vCPU, 16 GiB)   | \$0.22 |
| C5.4xlarge (16 vCPU, 32 GiB)  | \$0.22 |

### Getting started


For more details, see the [Amazon Red Hat OpenShift Product Page](#)

For a walkthrough of deploying an OpenShift cluster, see [Getting Started on the Red Hat OpenShift documentation site](#).

### More resources

- [Prerequisites](#)
- [Documentation](#)
- [FAQs](#)
- [Support forums](#)

### How it works



### Benefits

#### Fully Managed

Master, infrastructure, and compute nodes managed by Red Hat, backed by enterprise support.

#### Maximum availability

Deploy clusters across multiple Availability Zones in supported Regions to maximize availability.

A standard AWS Service Landing Page displays information about the service, including pricing, documentation and support information along with a link to download Red Hat's CLI

# User Experience

```
$ moactl describe cluster demo
Name:      demo
ID:        1f6sgg0sp1rbhjue8bshp12985jhlfp3
External ID: e2ccabdd-51ab-425d-be62-00acf51b182c
AWS Account: 021212686670
API URL:    https://api.demo.g6b3.p1.openshiftapps.com:6443
Console URL: https://console-openshift-console.apps.demo.f6b3.p1.openshiftapps.com
Nodes:      Master: 3, Infra: 3, Compute: 8
Region:     us-east-1
State:      ready
Created:     Aug 21, 2020
```

Users can create and manage clusters using the *moactl* command line utility



# Product Roadmap

OpenShift > Clusters > Create OpenShift Cluster

## Create cluster

### General configuration

**Cluster name**  
Enter a unique name for your OpenShift cluster.

**OpenShift Version**  
Select the OpenShift version to install.

4.5

**Role name** [Info](#)  
Select the IAM Role to allow OpenShift and the Kubernetes control plane to manage AWS resources on your behalf.

Aic-openShiftServiceRole

### Networking [Info](#)

**VPC** [Info](#)  
Select a VPC to use for your OpenShift Cluster resources.

vpc-1224ba76 - 172.31.0.0/16

**Subnets** [Info](#)  
Choose the subnets in your VPC where your worker nodes will run.

Find subnet

| <input checked="" type="checkbox"/> | Subnet          | Name | Availability Zone | Subnet IPv4 CIDR |
|-------------------------------------|-----------------|------|-------------------|------------------|
| <input checked="" type="checkbox"/> | subnet-a0b09788 |      | us-west-2d        | 172.31.48.0/20   |

aws Services Resource Groups

Andrew Cathrow Oregon Support

OpenShift > Clusters

Clusters (2) [Refresh](#) [Delete](#) [Create cluster](#)

Find clusters by name

| Cluster name | OpenShift Version | Status |
|--------------|-------------------|--------|
| Dev          | 4.4.0             | Active |
| feb2020      | 4.4.1             | Active |

Users will be able to create, delete, list and manage clusters within the Amazon console as well as the CLI and OpenShift Cluster Manager (OCM)

Integration with AWS IAM for SSO into OpenShift Console

More and deeper AWS Service Integration

# Thank you



<http://linkedin.com/company/Red-Hat>



<http://facebook.com/RedHatinc>



<http://youtube.com/user/RedHatVideos>



<https://twitter.com/RedHat>



<https://www.openshift.com/products/amazon-openshift/faq>



<https://github.com/openshift/moactl>