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Introduzione a ROSA – Red Hat OpenShift Service on AWS

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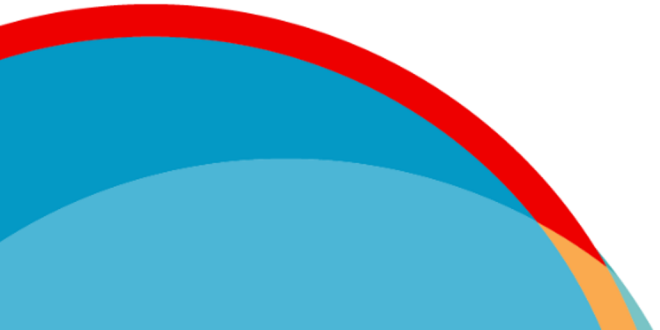
Introduzione a ROSA – Red Hat OpenShift Service su AWS

Agenda:

- Modern Application Services Landscape
- AWS & Red Hat Partnership
- What is Red Hat OpenShift
- ROSA – Red Hat OpenShift on AWS
- Options for Modern Applications
- Conclusions



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Why modernizing?

Common questions we hear from customers

How can I **move my workloads** to the **cloud**?

How can I **modernize** my applications?

How do I give my developers a self-service platform?

How do I get consistent **tooling** and **governance**?

How do I **optimize my speed** and **reduce cost**?

How can I meet **changing** demands?

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CIO's say 80% of developers' time is spent in operations and manteinance of applications and only 20% is spent on **innovation**

Strategic Operations (Modern and innovative stuff)

Product Releases

Application Security

Organizational Structures

Software Supply Chain

Customer Connectivity

Tactical Operations (Boring and repetitive stuff)

Kubernetes Builds

Scaling + Availability

Infrastructure Reliability

Authentication + Security

Backups and Resiliency

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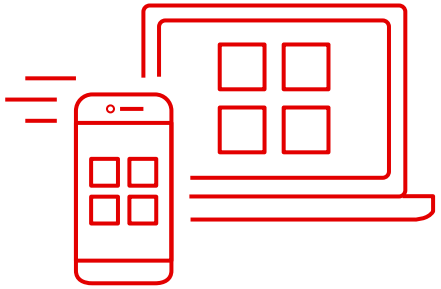
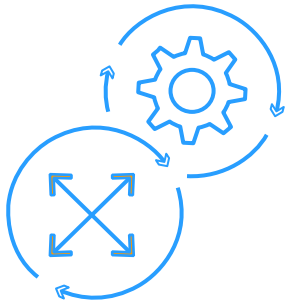
What customers ask for?



Build applications,
not infrastructure

Manage infrastructure
to their requirements



Scale quickly
and seamlessly

Security and
isolation by design

Increasing developer productivity
(**innovation**) is the main priority
now for customers

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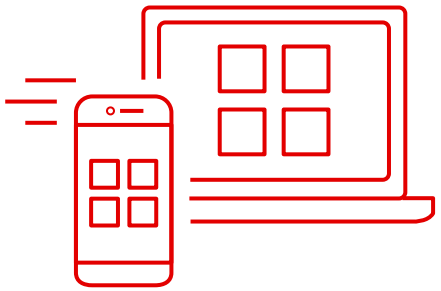
How is the modern application?



Build applications,
not infrastructure

Improve ROI & Reduce TCO

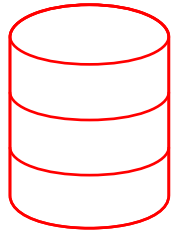
Scales to millions of users

Increase efficiency of developers

Has global availability

Increase business agility

Responds in milliseconds



Handles petabytes of data

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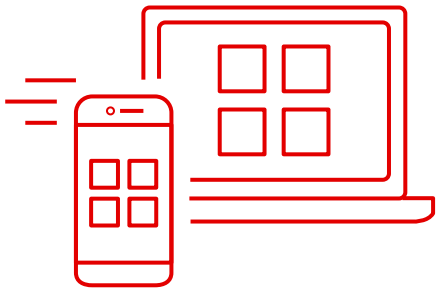
What are the customers building with containers?



Build applications,
not infrastructure

Applications

Mobile & web applications
Back-end web services
Open Banking - Mobile

Operational Expertise

CI/CD
IaaS
Management, security, & governance
Logging & monitoring

Enterprise app migration

.NET Classic **Windows** apps
Linux apps
Third-party applications

Machine learning

Autonomous vehicle
IoT - Data - AI/ML
Recommendation engines
Fraud detection
Chatbots

SO CONTAINERS ARE FOCUSING NOW MORE ON DEVELOPMENT

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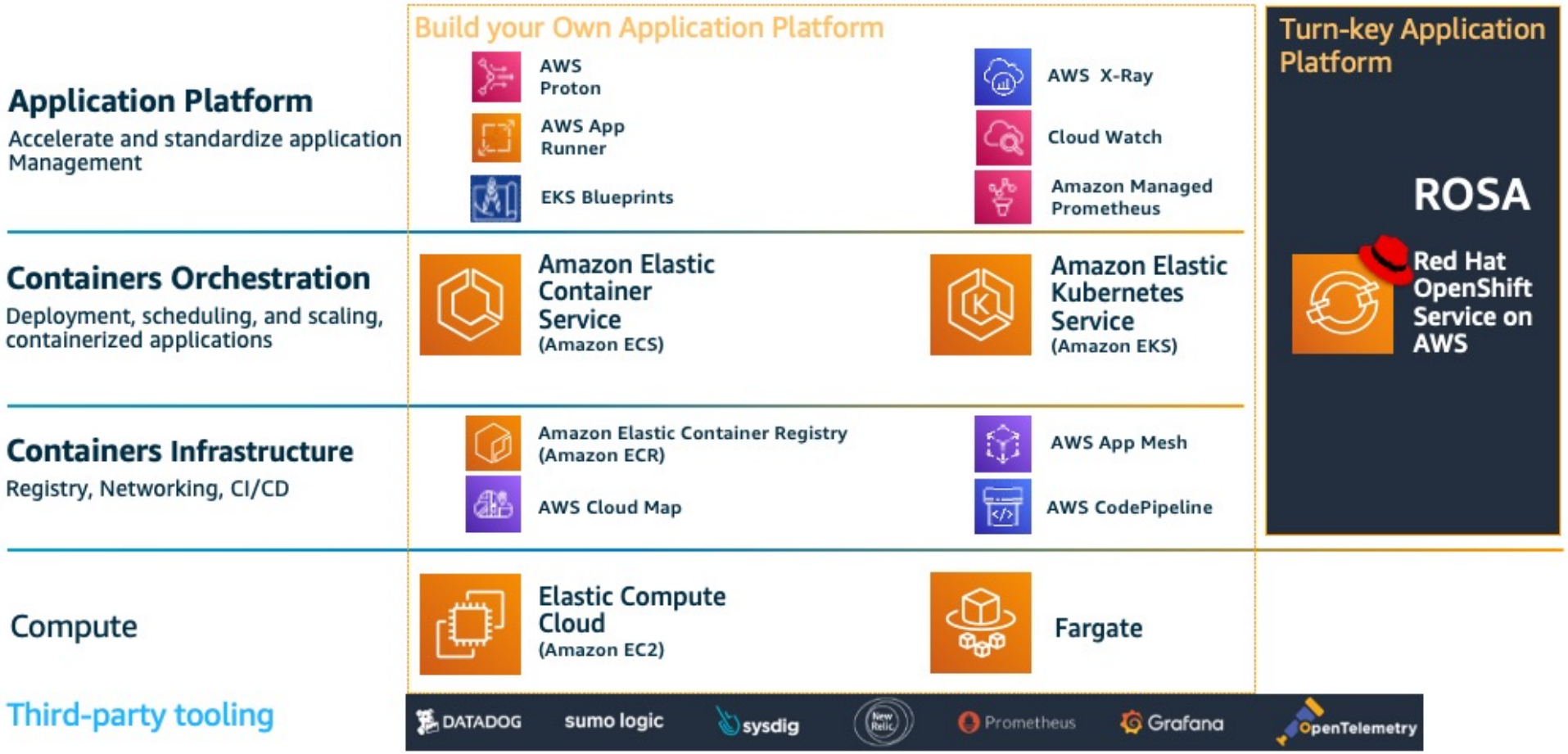
Modern Application Computing Services Landscape



AWS and Red Hat Partnership Helps Customers Meet Digital Needs

Red Hat and AWS are industry leaders with extensive experience in **IT infrastructure, hybrid cloud, digital transformation, and open source innovation.**

Through **collaborative engineering** activities, they offer integrated, certified solutions to meet modern, digital business needs.

Consistent, enterprise-grade platforms with advanced security and management features help organizations build IT infrastructure that supports their business efficiently and cost-effectively and adapts on their schedule.

Red Hat and AWS by the numbers

Partners since
2008

>60,000
of AWS customers consume Red Hat products and solutions

"Given that Red Hat is the world's leading provider of open-source solutions, our enterprise customers have been passionate about seamlessly running Red Hat Enterprise Linux and various other Red Hat solutions on AWS."

Andy Jassy | CEO, Amazon

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BUYERS FOCUS ON INNOVATION AND BUSINESS ADDED VALUE

Manage Workloads

Build Cloud-native apps

Developer Productivity

Red Hat OpenShift Container Platform

Platform Services

Service Mesh | Serverless
Builds | CI/CD Pipelines
Full Stack logging
Chargeback

Application Services

Databases | Languages
Runtimes | Integration
Business automation
100+ ISV services

Developer Services

Developer CLI | VS Code
Extensions | IDE Plugins
CodeReady Workspaces
CodeReady Containers

Red Hat OpenShift Kubernetes Engine

Cluster Services

Automated Ops | Over-the-air updates | Monitoring | Registry | Networking | Router | Virtualization | OLM | Helm

Kubernetes

Red Hat Enterprise Linux CoreOS

Physical

Virtual

Private Cloud

Managed Cloud

Edge

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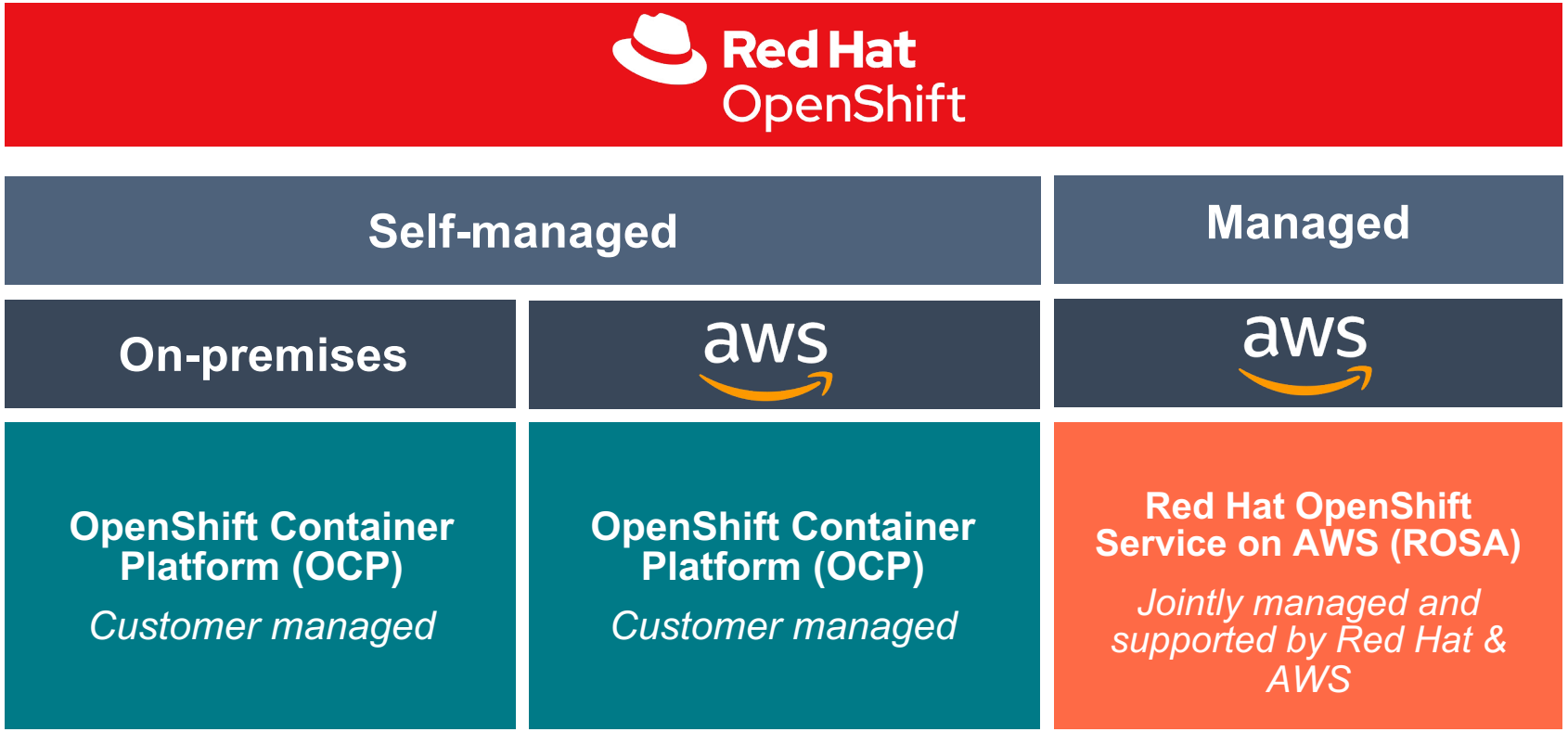
OpenShift & AWS offer the broader set of hybrid cloud services



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Benefits of ROSA – Turn-Key Application Platform

Developers

Fully managed clusters in minutes to build, deploy, and run applications using built-in developer UI that abstract the complexity of Kubernetes.

Collaborate across teams via shared projects.

Administrators

Standardized and streamlined operations across on-prem and cloud environments.

Built-in monitoring, logging, and networking

Choose platform version upgrades as required for the business.*

Business Leaders

Consolidated billing and cost management across the business.

Consumption based pricing for surge and R&D usage.

24x7 full-stack management and support

Financially backed 99.95% SLA

*Security patches are applied automatically – major and minor version upgrades are customer controlled

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Accelerate Migration to Cloud with Integrated AWS Services

ROSA

Application Development and Monitoring

AWS **DynamoDB**

AWS **RDS**

Amazon Aurora

Amazon API Gateway

AWS CodeCommit

AWS EventBridge

Cloud Watch

Ongoing updates to integrations available via AWS Controllers for Kubernetes on Operator Hub

Infrastructure and Operations

Amazon **EC2**

Amazon **EBS**

Amazon **EFS**

Amazon **FSx**

Amazon **ELB**

Amazon **VPC**

Route 53

AWS Private Link

Amazon Elastic Container Registry (ECR)

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ROSA – Joint Offering from AWS & Red Hat

Who's responsible for what

	On-premises	Cloud	
	OpenShift Container Platform (OCP)	**OpenShift Container Platform (OCP) on AWS**	**Red Hat OpenShift Service on AWS (ROSA)***
Control Plane	Customer	Customer	Red Hat
Compute	Customer	Customer	Red Hat
Data Plane	Customer	Customer	Red Hat
Support	Red Hat	Red Hat	Red Hat aws *
Billing	Red Hat	Red Hat	aws

Fully Managed

* AWS Business Support Plan required
Detailed Responsibility Matrix: https://docs.openshift.com/rosa/rosa_policy/rosa-policy-responsibility-matrix.html

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ROSA – Consumption based Pricing

https://aws.amazon.com/rosa/pricing/

ROSA Service Fees

- Accrue on demand per 4vCPU/hour for Worker Nodes
- Plus per cluster per hour

+

AWS Infrastructure Fees

- Infra, Worker, and Control plane EC2 nodes and EBS volumes by region
- Data transfer costs for multi-AZ deployments

=

Pay As you Go and Private Offers

- 1 and 3 year subscriptions
- Reserved Instance Savings and EDP

Pricing for Red Hat OpenShift Service on AWS is the same for all AWS supported regions.

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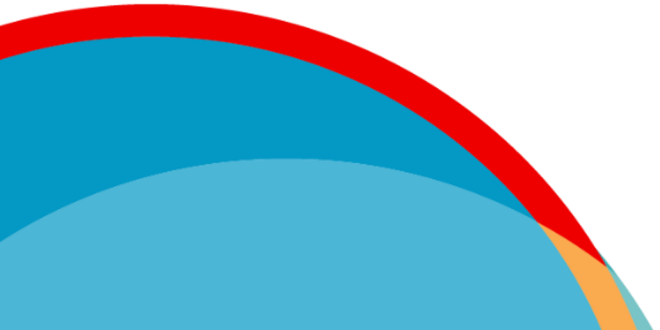
Options for Modern Application Platforms



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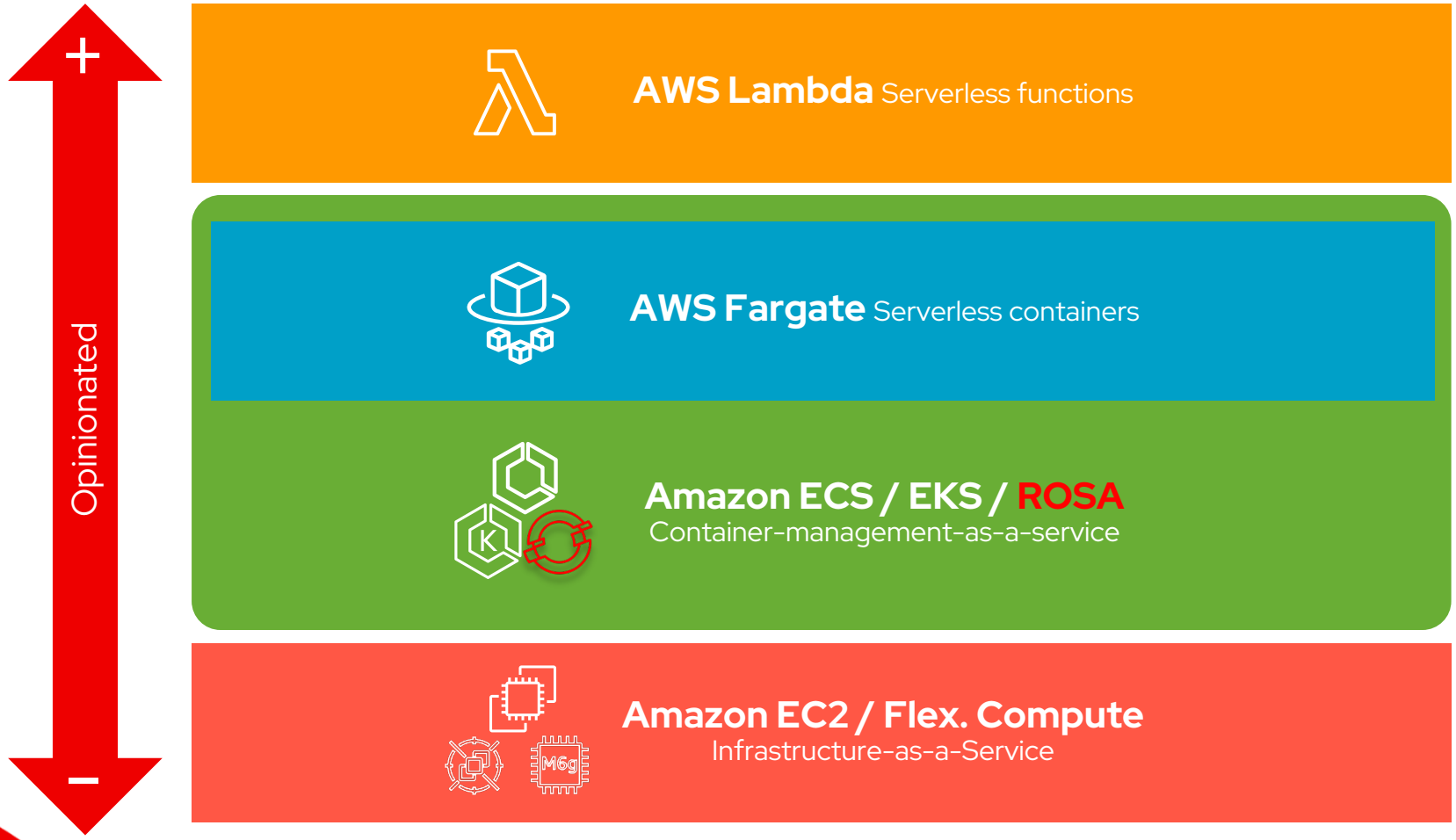
COMPUTE AND OPERATIONS: NOT AN EASY QUESTION



Container Orchestration Services: EKS, ECS and ROSA

ECS

Powerful simplicity

AWS-opinionated way to run containers at scale

Reduce decisions without sacrificing scale or features

Reduce time to build, deploy, and migrate applications

EKS

Open flexibility

AWS-optimized managed upstream Kubernetes with four supported versions

Build your custom platform for compliance and security, with AWS services and community solutions

Accelerate your containerization and modernization with canonical patterns using AWS Blueprints

ROSA

Turn-key Platform

Integrated Kubernetes based application platform with built-in CI/CD, monitoring, and developer tools.

Activate ROSA and continue with existing OpenShift skills and processes from on-prem environments to the cloud

Accelerate application migration and modernization by re-hosting, re-platforming, or re-factoring workloads

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Amazon EKS

The Opensource flexibility

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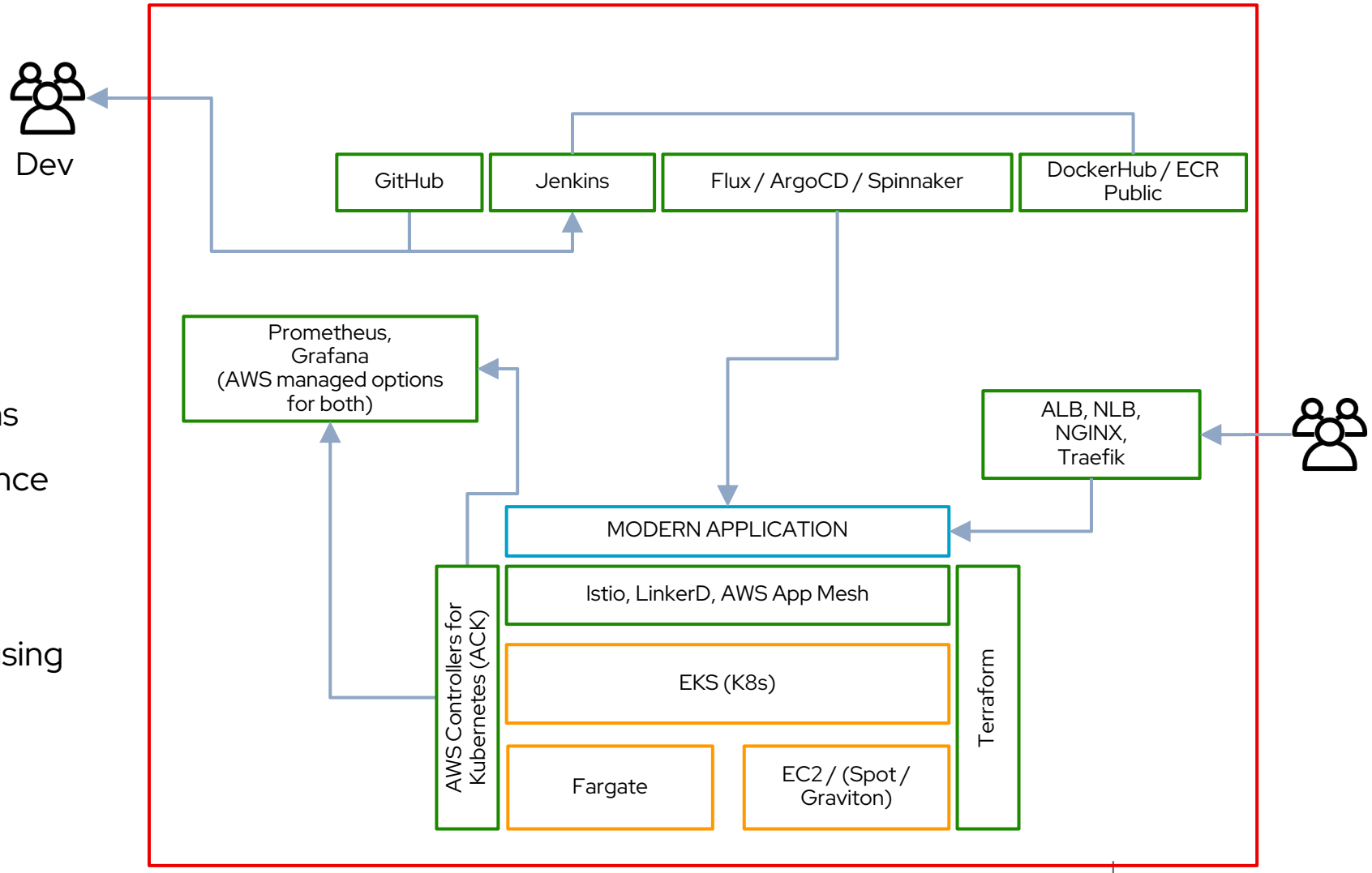

Red Hat OpenShift on AWS

Shared Services Platform AKA PaaS

- Integrated Kubernetes based application platform with built-in CI/CD, monitoring, and developer tools.
- Activate ROSA and continue with existing OpenShift skills and processes from on-prem environments to the cloud
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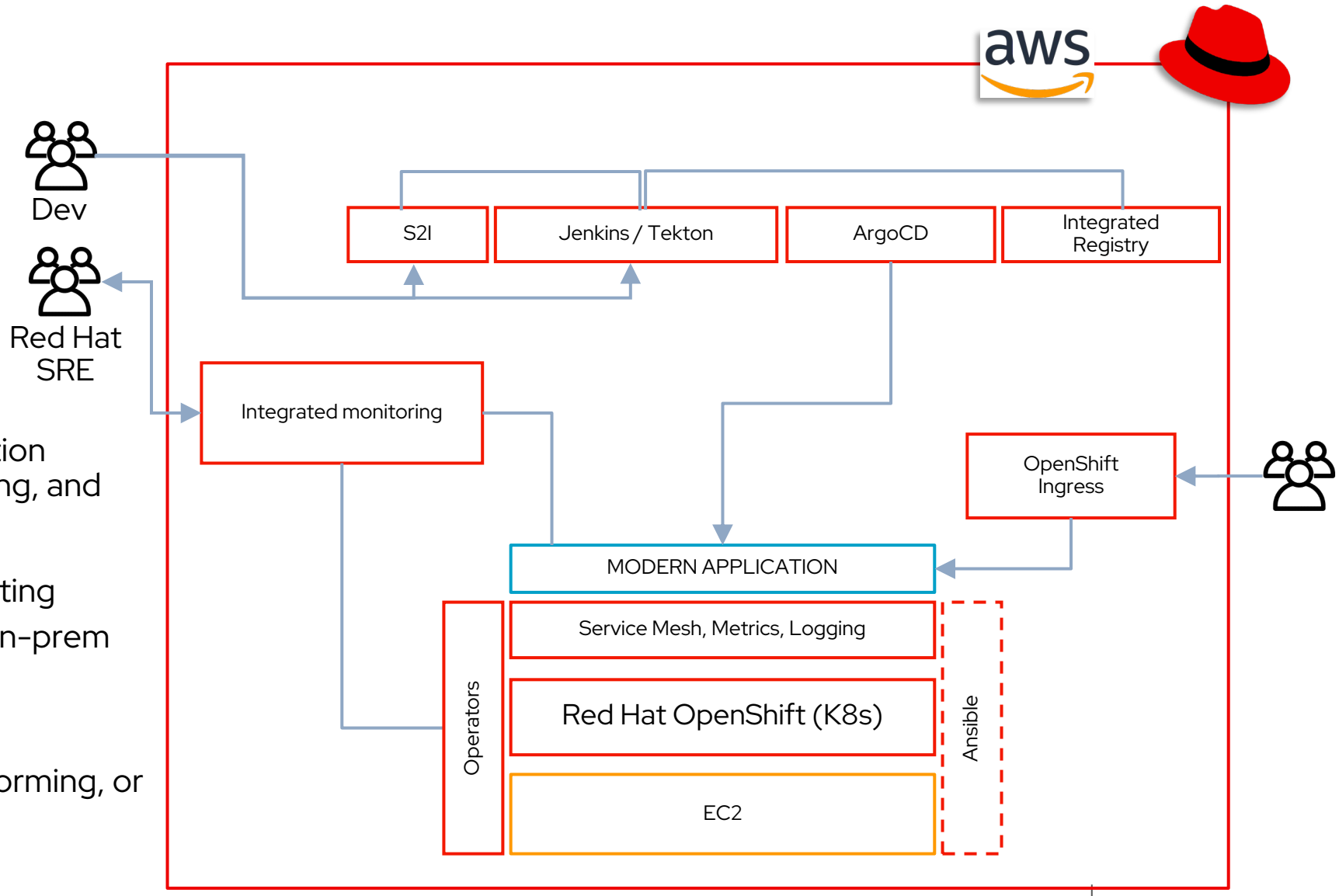

*ROSA visual explanation in 12min video

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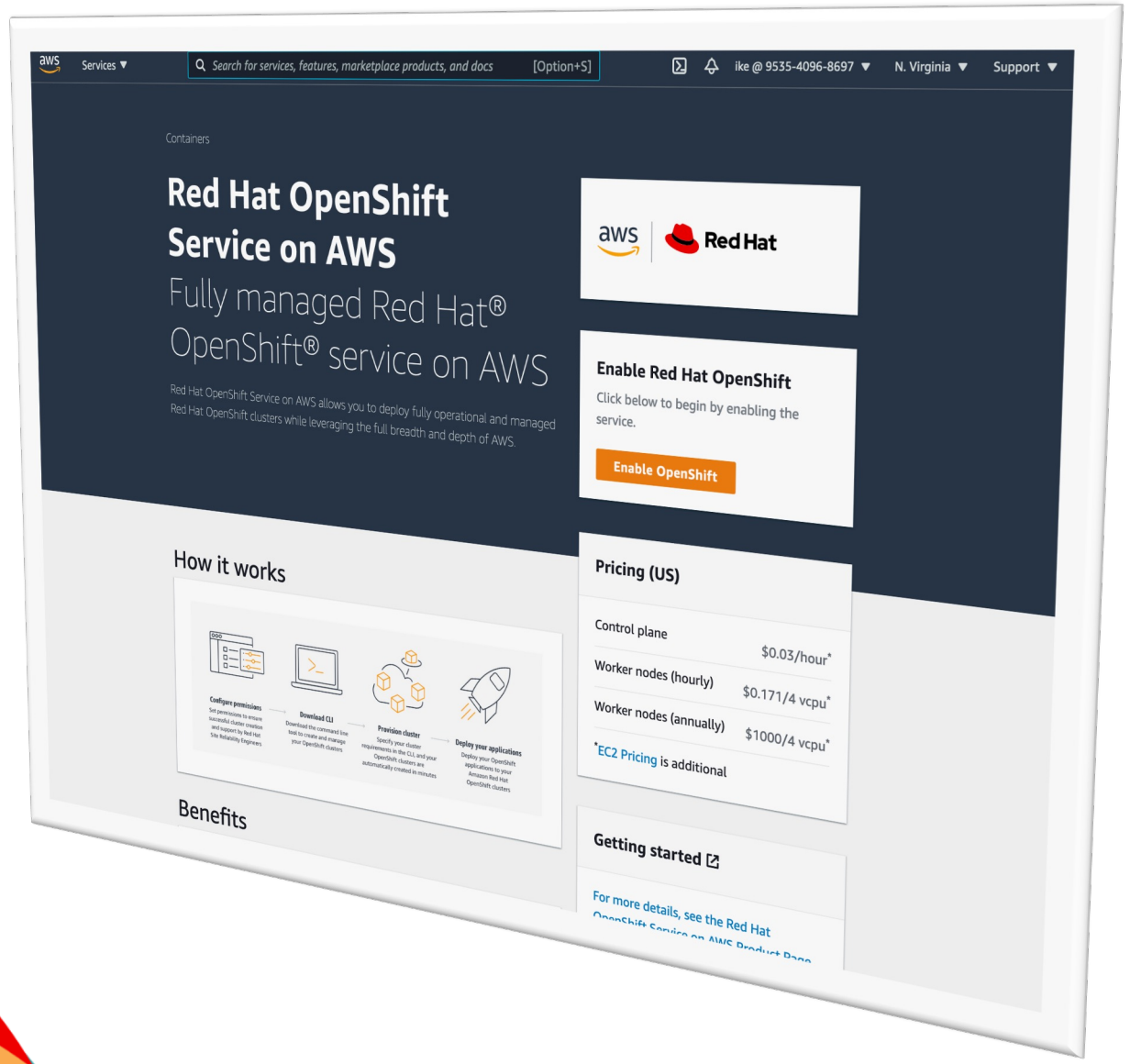
ROSA private cluster architecture

Console page for ROSA



ROSA is AWS Market place service based in a Red Hat Product

Joint Managed Service

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AWS Consulting Partners for ROSA

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Conclusion

Most customers choose to run OpenShift on AWS because they want to keep existing tools and practices while leveraging investments in the vast AWS services portfolio

ROSA is the easiest and most convenient way to pay for and deploy fully supported and managed OpenShift clusters on AWS

Find out more!

AWS ROSA PRODUCT PAGE
https://aws.amazon.com/it/rosa/

ROSA Docs
https://docs.openshift.com/rosa/welcome/index.html

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Grazie!

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