



# Red Hat OpenShift Service on AWS 4

## What's new

Highlights of what is new and what has changed in Red Hat OpenShift Service on AWS



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## Abstract

The release notes for Red Hat OpenShift Service on AWS summarize all new features and enhancements, notable technical changes, major corrections, and any known bugs upon general availability.

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# CHAPTER 1. WHAT'S NEW WITH RED HAT OPENSIFT SERVICE ON AWS

Red Hat OpenShift Service on AWS (ROSA) is a fully-managed, turnkey application platform that allows you to focus on delivering value to your customers by building and deploying applications. Red Hat and AWS site reliability engineering (SRE) experts manage the underlying platform so you do not have to worry about the complexity of infrastructure management. ROSA provides seamless integration with a wide range of AWS compute, database, analytics, machine learning, networking, mobile, and other services to further accelerate the building and delivering of differentiating experiences to your customers.

Red Hat OpenShift Service on AWS clusters are available on the [Hybrid Cloud Console](#). With the Red Hat OpenShift Cluster Manager application for ROSA, you can deploy Red Hat OpenShift Service on AWS clusters to either on-premises or cloud environments.

## 1.1. NEW CHANGES AND UPDATES

### 1.1.1. Q3 2024

- **Upgrade multiple nodes simultaneously.** You can now configure a machine pool to upgrade multiple nodes simultaneously. Two new machine pool parameters, **max-surge** and **max-unavailable**, give you greater control over how machine pool upgrades occur. For more information, see [Upgrading ROSA with HCP clusters](#).
- **ROSA with HCP Graviton (ARM) instance types.** You can now use Amazon Web Services (AWS) Arm-based Graviton instance types for your workloads in Red Hat OpenShift Service on AWS (ROSA) with hosted control planes (HCP) clusters created after 24 July, 2024, see [AWS Graviton \(ARM\) instance types](#).
- **ROSA CLI update.** The ROSA CLI (**rosa**) was updated to a new version. For information about what has changed in this release, see the [ROSA CLI release notes](#). For more information about the ROSA CLI (**rosa**), see [About the ROSA CLI](#).

### 1.1.2. Q2 2024

- **Approve additional principals for ROSA with HCP clusters.** You can approve additional user-roles to connect to your cluster's private API server endpoint. For more information, see [Additional principals on your ROSA with HCP cluster](#).
- **ROSA CLI update.** The ROSA CLI (**rosa**) was updated to a new version. For information about what has changed in this release, see the [ROSA CLI release notes](#). For more information about the ROSA CLI (**rosa**), see [About the ROSA CLI](#).
- **Approved Access for ROSA clusters.** Red Hat Site Reliability Engineering (SRE) managing and proactively supporting ROSA Clusters will typically not require elevated access to customer clusters as part of the normal operations. In the unlikely event should Red Hat SRE (Site Reliability Engineer) need elevated access, the *Approved Access* functionality provides an interface for customers to review and *approve* or *deny* access requests. Elevated access requests to ROSA clusters and the corresponding cloud accounts can be created by Red Hat SRE either in response to a customer-initiated support ticket or in response to alerts received by a Red Hat SRE, as part of the standard incident response process. For more information, see [Approved Access](#). This is applicable to ROSA and Red Hat OpenShift Service on AWS (classic architecture).

- **ROSA command enhancement.** The **rosa describe** command has a new optional argument, **--get-role-policy-bindings**. This new argument allows users to view the policies attached to STS roles assigned to the selected cluster. For more information, see [describe cluster](#).
- **Expanded customer-managed policy capabilities.** You can now attach customer-managed policies to the IAM roles required to run both ROSA (classic architecture) and ROSA clusters. Furthermore, these customer-managed policies, including the permissions attached to those policies, are not modified during cluster or role upgrades. For more information, see [Customer-managed policies](#).
- **Permission boundaries for the installer role policy.** You can apply a policy as a *permissions boundary* on the ROSA installer role. The combination of policy and boundary policy limits the maximum permissions for the Amazon Web Services(AWS) Identity and Access Management (IAM) entity role. ROSA includes a set of three prepared permission boundary policy files, with which you can restrict permissions for the installer role since changing the installer policy itself is not supported. For more information, see [Permission boundaries for the installer role](#). This is applicable only to Red Hat OpenShift Service on AWS (classic architecture).
- **Cluster delete protection.** You can now enable the cluster delete protection option, which helps to prevent you from accidentally deleting a cluster. For more information on using the cluster delete protection option with the ROSA CLI, see [edit cluster](#). For more information on using the cluster delete protection option in the UI, see [Creating a cluster with the default options using OpenShift Cluster Manager](#).
- **ROSA with HCP regions added.** Red Hat OpenShift Service on AWS (ROSA) with hosted control planes (HCP) is now available in the following regions:
  - Zurich (**eu-central-2**)
  - Hong Kong (**ap-east-1**)
  - Osaka (**ap-northeast-3**)
  - Spain (**eu-south-2**)
  - UAE (**me-central-1**)For more information on region availabilities, see [Regions and availability zones](#).
- **Added support for external authentication providers.** You can now create clusters configured with external authentication providers, such as Microsoft Entra ID and KeyCloak. For more information, see [Creating ROSA with HCP clusters with external authentication](#).
- **Longer cluster names enhancement.** You can now specify a cluster name that is longer than 15 characters. For cluster names that are longer than 15 characters, you can customize the domain prefix for the cluster URL by using the **domain-prefix** flag in the ROSA CLI (**rosa**) or by selecting the **Create custom domain prefix** checkbox in the Red Hat Hybrid Cloud Console. For more information, see [create cluster in Managing objects with the ROSA CLI](#).
- **Additional Security Groups for ROSA with HCP.** Starting with ROSA CLI version 1.2.37, you can now use the **--additional-security-group-ids <sec\_group\_id>** when creating machine pools on ROSA with HCP clusters. For more information, see [Creating a machine pool using the ROSA CLI](#) and the [create machinepool](#) section of the ROSA CLI reference.
- **Node management improvements.** Now, you can perform specific tasks to make clusters more efficient. You can cordon, uncordon, and drain a specific node. For more information, see [Working with nodes](#).



- **Node drain grace periods.** You can now configure node drain grace periods in Red Hat OpenShift Service on AWS (ROSA) with hosted control planes (HCP) clusters with the **rosa** CLI.  
For more information about configuring node drain grace periods, see [Configuring node drain grace periods in Red Hat OpenShift Service on AWS \(ROSA\) with hosted control planes \(HCP\)](#).

### 1.1.3. Q1 2024

- **Machine pool update.** You can now upgrade machine pools that are configured on ROSA with HCP clusters. For more information, see [upgrade machinepool](#).
- **ROSA with HCP regions added.** Red Hat OpenShift Service on AWS (ROSA) with hosted control planes (HCP) is now available in the following regions:
  - Hyderabad (**ap-south-2**)
  - Milan (**eu-south-1**)
  - London (**eu-west-2**)
  - Mumbai (**ap-south-1**)
  - Cape Town (**af-south-1**)
  - Seoul (**ap-northeast-2**)
  - Stockholm (**eu-north-1**)For more information on region availabilities, see [Regions and availability zones](#).
- **ROSA CLI update.** The ROSA CLI (**rosa**) was updated to a new version. For information about what has changed in this release, see the [ROSA CLI release notes](#). For more information about the ROSA CLI (**rosa**), see [About the ROSA CLI](#).
- **Log linking is enabled by default.** Beginning with Red Hat OpenShift Service on AWS 4.15, log linking is enabled by default. Log linking gives you access to the container logs for your pods.
- **Availability zone update.** You can now optionally select a single availability zone (AZ) for machine pools when you have a multi-AZ cluster. For more information, see [Creating a machine pool using the ROSA CLI](#).
- **Log linking is enabled by default-** Beginning with Red Hat OpenShift Service on AWS 4.15, log linking is enabled by default. Log linking gives you access to the container logs for your pods.
- **Availability zone update.** You can now optionally select a single availability zone (AZ) for machine pools when you have a multi-AZ cluster. For more information, see [Creating a machine pool using the ROSA CLI](#).
- **Delete cluster command enhancement.** With the release of ROSA CLI (**rosa**) version 1.2.31, the **--best-effort** argument was added, which allows you to force-delete clusters when using the **rosa delete cluster** command. For more information, see [delete cluster](#).

### 1.1.4. Q4 2023

- **ROSA CLI update.** The ROSA CLI (**rosa**) was updated to a new version. For information about what has changed in this release, see the [ROSA CLI release notes](#). For more information about the ROSA CLI (**rosa**), see [About the ROSA CLI](#).

- **Delete cluster command enhancement.** With the release of ROSA CLI (**rosa**) version 1.2.31, the **--best-effort** argument was added, which allows you to force-delete clusters when using the **rosa delete cluster** command. For more information, see [delete cluster](#).
- **Red Hat OpenShift Service on AWS (ROSA) with hosted control planes (HCP)** ROSA with HCP is now generally available. For more information, see [Creating ROSA with HCP clusters using the default options](#).
- **Configurable process identifier (PID) limits.** With the release of ROSA CLI (**rosa**) version 1.2.31, administrators can use the **rosa create kubeletconfig** and **rosa edit kubeletconfig** commands to set the maximum PIDs for an existing cluster. For more information, see [Changing the maximum number of process IDs per pod \(podPidsLimit\) for ROSA](#).
- **Configure custom security groups.** With the release of ROSA CLI (**rosa**) version 1.2.31, administrators can use the **rosa create** command or the OpenShift Cluster Manager to create a new cluster or a new machine pool with up to 5 additional custom security groups. Configuring custom security groups gives administrators greater control over resource access in new clusters and machine pools. For more information, see [Security groups](#).
- **Command update.** With the release of ROSA CLI (**rosa**) version 1.2.28, a new command, **rosa describe machinepool**, was added that allows you to check detailed information regarding a specific ROSA cluster machine pool. For more information, see [describe machinepool](#).
- **Documentation update.** The Operators section was added to the ROSA documentation. Operators are the preferred method of packaging, deploying, and managing services on the control plane. For more information, see [Operators overview](#).
- **OpenShift Virtualization support.** The release of OpenShift Virtualization 4.14 added support for running OpenShift Virtualization on ROSA Classic clusters. For more information, see [OpenShift Virtualization on AWS bare metal](#) in the OpenShift Container Platform documentation.

### 1.1.5. Q3 2023

- **ROSA CLI update.** The ROSA CLI (**rosa**) was updated to a new version. For information about what has changed in this release, see the [ROSA CLI release notes](#). For more information about the ROSA CLI (**rosa**), see [About the ROSA CLI](#).
- **Cluster autoscaling.** You can now enable cluster autoscaling using ROSA clusters. Cluster autoscaling automatically adjusts the size of a cluster so that all pods have a place to run, and there are no unneeded nodes. You can enable autoscaling during and after cluster creation using either OpenShift Cluster Manager or the ROSA CLI (**rosa**). For more information, see [Cluster autoscaling](#).
- **Shared virtual private clouds.** ROSA now supports installing clusters into VPCs shared among AWS accounts that are part of AWS organizations. AWS account installing ROSA cluster can now use shared subnets owned by a management account. For more information, see [Configuring a shared virtual private cloud for ROSA clusters](#).
- **Machine pool disk volume size.** You can now configure your machine pool disk volume size for additional flexibility. You can select your own sizing for the disk volumes of their worker machine pool nodes. For more information, see [Configuring machine pool disk volume](#).
- **Machine pool update.** You can now add taints to the machine pool that is automatically generated during cluster creation. You can also delete this machine pool. This new feature provides more flexibility and cost-effectiveness for cluster administrators, specifically in regards

to scaling infrastructure based on changing resource requirements. For more information, see [Creating a machine pool](#).

- **ROSA regions added.** Red Hat OpenShift Service on AWS (ROSA) is now available in the following regions:
  - Spain (**eu-south-2**)
  - Hyderabad (**ap-south-2**)
  - Melbourne (**ap-southeast-4**)
  - Zurich (**eu-central-2**)
 For more information on region availabilities, see [Regions and availability zones](#).
- **Documentation update.** The CLI Tools section was added to the ROSA documentation and includes more detailed information to help you fully use all of the supported CLI tools. The ROSA CLI section can now be found nested inside the CLI Tools heading. For more information, see [CLI tools overview](#).
- **Documentation update.** The Monitoring section in the documentation was expanded and now includes more detailed information to help you conveniently manage your ROSA clusters. For more information, see [About Red Hat OpenShift Service on AWS monitoring](#).

### 1.1.6. Q2 2023

- **ROSA CLI update.** The ROSA CLI (**rosa**) was updated to a new version. For information about what has changed in this release, see the [ROSA CLI release notes](#). For more information about the ROSA CLI (**rosa**), see [About the ROSA CLI](#).
- **ROSA region added.** Red Hat OpenShift Service on AWS (ROSA) is now available in the United Arab Emirates (**me-central-1**) region. For more information on region availability, see [Regions and availability zones](#).
- **Hosted control planes.** Red Hat OpenShift Service on AWS (ROSA) with hosted control planes (HCP) clusters are now available as a [Technology Preview](#) feature. This new architecture provides a lower-cost, more resilient ROSA architecture. For more information, see [Creating ROSA with HCP clusters using the default options](#).



#### IMPORTANT

ROSA with HCP is a Technology Preview feature only. Technology Preview features are not supported with Red Hat production service level agreements (SLAs) and might not be functionally complete. Red Hat does not recommend using them in production. These features provide early access to upcoming product features, enabling customers to test functionality and provide feedback during the development process.

For more information about the support scope of Red Hat Technology Preview features, see [Technology Preview Features Support Scope](#).

### 1.1.7. Q1 2023

- **OIDC provider endpoint URL update.** Starting with ROSA CLI version 1.2.7, all new cluster OIDC provider endpoint URLs are no longer regional. Amazon CloudFront is part of this implementation to improve access speed, reduce latency, and improve resiliency. This change is

only available for new clusters created with ROSA CLI 1.2.7 or later. There are no supported migration paths for existing OIDC provider configurations.

## 1.2. KNOWN ISSUES

- If you configure your cluster using external OIDC configuration and set the `--user-auth` flag to **disabled**, the console pods might enter a crash loop. ( [OCPBUGS-29510](#) )
- The OpenShift Cluster Manager roles (**ocm-role**) and user roles (**user-role**) that are key to the ROSA provisioning wizard might get enabled accidentally in your Red Hat organization by another user. However, this behavior does not affect the usability.
- The **htpasswd** identity provider does not function as expected in all scenarios against the **rosa create admin** function.

## 1.3. UPDATING THE ROSA CLI TOOL

To use the latest version of the Red Hat OpenShift Service on AWS (ROSA) CLI, **rosa**, download the ROSA CLI (**rosa**) from the Hybrid Cloud Console. If you already have this tool, the procedure is the same for updates.

### Procedure

1. Download the file from the [Hybrid Cloud Console](#).
2. Unzip the downloaded file.
3. Move the file to the `/usr/bin/rosa` directory by running the following command:

```
$ sudo mv rosa /usr/bin/rosa
```

4. Confirm your version by running the following command:

```
$ rosa version
```

### Example output

```
<version>  
Your ROSA CLI is up to date.
```

## 1.4. DEPRECATED AND REMOVED FEATURES

Some features available in previous releases have been deprecated or removed. Deprecated functionality is still included in ROSA and continues to be supported; however, it will be removed in a future release of this product and is not recommended for new deployments.

- **ROSA non-STS deployment mode.** ROSA non-STS deployment mode is no longer the preferred method for new clusters. Instead, users must deploy ROSA with the STS mode. This deprecation is in line with our new ROSA provisioning wizard UI experience at <https://console.redhat.com/openshift/create/rosa/wizard>.

- **Label removal on core namespaces.** ROSA is no longer labeling OpenShift core using the **name** label. Customers should migrate to referencing the **kubernetes.io/metadata.name** label if needed for Network Policies or other use cases.