OpenShift Platform Plus 4

Architecture

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Last Updated: 2024-09-09

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Abstract

An overview ofOpenShift Platform Plus.

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CHAPTER 1. OPENSHIFT PLATFORM PLUS OVERVIEW

OpenShift Platform Plus is a single hybrid-cloud platform for enterprises. Use it to build, deploy, run, and manage intelligent applications securely for multiple infrastructures. It is based on Red Hat Enterprise Linux (RHEL), Kubernetes, and Red Hat OpenShift Container Platform and includes the following products:

- Red Hat Advanced Cluster Management for Kubernetes - Controls clusters and applications from a single console.
- Red Hat Advanced Cluster Security for Kubernetes - Provides information about cluster security, visibility management, and security compliance.
- Red Hat Quay - Stores, builds, and deploys container images.
- Red Hat OpenShift Data Foundation Essentials - Provides a permanent place for data storage when clusters start and stop for multiple environments.

1.1. OPENSHIFT PLATFORM PLUS DESCRIPTION AND ARCHITECTURE

OpenShift Platform Plus builds on the capabilities of OpenShift Container Platform with the following features:

- Multi-cluster security
- Complete management capabilities
- Integrated data management
- A global container registry

OpenShift Platform Plus protects and manages applications for open hybrid cloud environments and application lifecycles.

OpenShift Platform Plus supports these additional capabilities:

- Platform services
  - Service mesh, serverless
  - Builds, CI/CD pipelines
  - GitOps, Distributed tracing
  - Log management
  - Cost management
  - Vulnerability management
  - Compliance
- Application services
  - Languages and runtimes
  - API management

    - Integration
    - Messaging
    - Process automation
- Data services
    - Databases and cache
    - Data ingest and preparation
    - Data analytics
    - AI/ML
- Developer services
    - Developer CLI/IDE
    - Plug-ins and extensions
    - Red Hat OpenShift Dev Spaces
    - Red Hat OpenShift Local

1.2. INSTALL OPENSHIFT PLATFORM PLUS PRODUCTS

To install OpenShift Platform Plus, you must install OpenShift Container Platform followed by Red Hat Advanced Cluster Management. Install the additional products by applying the Red Hat Advanced Cluster Management policy sets: Red Hat Quay, Red Hat OpenShift Data Foundation Essentials, and Red Hat Advanced Cluster Security.

See the Red Hat OpenShift Platform Plus policy set for detailed information about installing the products.

Additional resources

- Supported installation methods for different platforms
- Installing Red Hat Advanced Cluster Management

1.2.1. Installing OpenShift Platform Plus by using policy sets

The OpenShift Container Platform installation uses two policy sets to install additional products.

NOTE

Edit the **policyGenerator.yaml** file to remove any products that you do not want to install. You can delete the product entries or comment out the lines.

To install the policy sets using gitops, follow the steps in Deploying policies using gitops . Use the actual path to the policy set instead of the path in the example path **policygenerator/policy-sets/stable/openshift-plus**.

Use the following procedure to install the policy sets by using CLI:

Procedure

1. Install the **PolicyGenerator** plugin by following the instructions in *Installing and using the PolicyGenerator Kustomize plug-in*.
2. Clone the **policy-collection** repository:

```
$ git clone https://github.com/stolostron/policy-collection
```

3. Navigate to the policy set directory:

```
$ cd policy-collection/policygenerator/policy-sets/stable/openshift-plus
```

4. Generate and apply the policies by using the following command:

```
$ kustomize build --enable-alpha-plugins | oc apply -f -
```

The policy sets install the remaining products on the OpenShift Container Platform cluster.

1.3. OPENSHIFT PLATFORM PLUS PRODUCT RELEASE NOTES

The release note information for each product is accessible from the following list:

- OpenShift Container Platform
- Red Hat Advanced Cluster Management for Kubernetes
- Red Hat Quay Release Notes
- Red Hat Advanced Cluster Security for Kubernetes 4.4
- Red Hat OpenShift Data Foundation

1.4. OPENSHIFT PLATFORM PLUS PRODUCT RELEASE COMPATIBILITY MATRIX

OpenShift Platform Plus is based on OpenShift Container Platform 4.16. To find the verified release number for each OpenShift Platform Plus product, see the following information:

OpenShift Container Platform	Red Hat Advanced Cluster Management	Red Hat Advanced Cluster Security	Red Hat Quay	Red Hat OpenShift Data Foundation Essentials
4.16	2.11	4.5	3.12	4.16
4.15	2.10	4.4	3.11	4.15
4.14	2.9	4.3	3.10	4.14
4.13	2.8	4.0	3.8	4.12

4.12	2.7	3.7.4	3.8	4.12

1.5. GET SUPPORT FOR OPENSHIFT PLATFORM PLUS

Red Hat offers cluster administrator tools for gathering data, monitoring, and troubleshooting your cluster.

If you need help with your OpenShift Platform Plus solution, log a case in the appropriate product by using its subscription name. See the Red Hat customer support portal to open a support case.