Red Hat Level Up Program

Customer welcome guide

Red Hat OpenShift

Red Hat OpenShift is built on the foundation of Red Hat Enterprise Linux, providing the same stability, ecosystem, and enhanced security that you know and expect. Just as Red Hat brought Linux to the enterprise, we offer the same with container platforms—your innovation platform for now and the future.

Did you know?

–> Red Hat OpenShift is completely open source, without proprietary add-ons or plugins. All code can be accessed via the OKD project.

Overview

Welcome to Red Hat® OpenShift®. Thank you for activating your free Red Hat OpenShift and Red Hat Application Foundations (RHAF) entitlements offered through the Red Hat Level Up Program. This welcome guide is designed to get you and your team up and operational with Red Hat OpenShift Platform Plus or Red Hat OpenShift Dedicated and RHAF as quickly and easily as possible.

Red Hat OpenShift Platform Plus (OPP) is an open source container application platform based on the Kubernetes container orchestration system, designed to improve the way containerized applications are developed, deployed and managed. Built on the trusted foundation of Red Hat Enterprise Linux, OPP inherits the security, stability and ecosystem partnerships that you know and expect. This self-managed platform contains several integrated technology solutions to provide consistency throughout the software supply chain, including:

- Red Hat OpenShift Container Platform: A consistent hybrid cloud foundation for building and scaling containerized applications.

- Red Hat Advanced Cluster Security for Kubernetes: Built-in Kubernetes-native security that provides multicluster governance through the entire application life cycle.

- Red Hat Advanced Cluster Management for Kubernetes: Application life-cycle management and governance and across multiple Kubernetes clusters from a single console.

- Red Hat OpenShift Data Foundation: Persistent software-defined storage and essential data services integrated with and optimized for Red Hat OpenShift.

- And Red Hat Quay: A scalable, central registry to provide a single source of truth of available software and distribute it efficiently to multiple clusters.

Red Hat OpenShift Dedicated, the alternative option in this program, is a fully managed Red Hat service that can be placed on public cloud environments. OpenShift Dedicated allows you to reduce operational complexity and focus on building and scaling applications that add more value to your business.

Red Hat Application Foundations has everything you need to speed up application development and delivery, modernize and accelerate your business for hybrid scenarios. It includes a set of 16 different technologies (across 12 categories) to migrate, design, build,

deploy, connect, scale, integrate, authenticate and focus on the delivery of your application in a unified platform in a secured fashion. It allows you to balance choice and flexibility with operational control and security.

Capabilities include

1. **API Management:** Share, secure, distribute, and control your APIs across their entire life cycle

2. **Data transformation and Integration:** Develop data transformation across legacy and cloud-native applications easily

3. **Service composition and Integration:** Accelerate the development and scalability of connected applications and services

4. **Real-time messaging and data streaming:** Create, discover, and connect to real-time data streams to unlock event-driven and data analytics patterns.

5. **Change Data Capture**: Detect database changes and react in order to avoid disruption across legacy and modern applications.

6. **Enterprise Integration**: Stable and secured event message system with Quality of Service and assurance of delivery.

7. **In-Memory, Distributed and NoSQL Datastore**: Allows the data to get closer to where it's more needed and enhance the user experience.

8. **Single Sign-On (SSO):** Secure web applications with SSO based on popular standards such as SAML 2.0, OpenID Connect, and OAuth 2.0

9. **Runtimes and Frameworks**: Supported and integrated in order to help you diagnose problems and speed up cloud-native development and operations.

10. **Java Application Servers:** Allows to streamline basic operations and focus on business requirements using Java standards (e.g. Java EE).

11. **Business Constraint Solver**: Delivers more effective plans and schedules in order to solve optimization problems.

12. **Migration Toolkit**: Allows to diagnose your existing legacy application and plan migration tasks in order to better organize your available resources.

Learn how to leverage the hybrid cloud

Interactive Learning Scenarios

Our Red Hat Hybrid Cloud learning hub allows you to experiment, explore Red Hat OpenShift, and see how it can help solve real-world problems. Choose from more than a dozen short courses including Using OpenShift, Linux Container Fundamentals, and Developing on OpenShift.

No-cost Training

- Running Containers with Red Hat Technical Overview (RH065)

- Containers, Kubernetes and Red Hat OpenShift Technical Overview (DO080)

- Red Hat Learning Subscription, 7-day free trial

Complimentary, single-day roadshow

Modern Application Development Roadshow: A single-day complimentary experience, the Modern Application Development Roadshow caters to developers, operations practitioners, and business leaders with tailored hands-on labs that explore modern tooling, techniques, and architectures. Look for a session happening near you. Customers can request a company-specific session through their Red Hat account team.

Learn more: Red Hat OpenShift Platform Plus

Installation

To install OpenShift Platform Plus, you must install two products in a specific order. Install OpenShift Container Platform first. Then, install Red Hat Advanced Cluster Management. It does not matter what order you install the remaining products.

See the following detailed installation information for each product:

- OpenShift Container Platform

- Red Hat Advanced Cluster Management

- Red Hat Advanced Cluster Security

- Red Hat OpenShift Data Foundation Essentials

- Red Hat Quay

Learn more: Red Hat OpenShift Dedicated

Get started

Whether you are a platform administrator or a developer, you can get started with OpenShift Dedicated quickly. Cluster installation is all self-service and managed through an intuitive form in our Red Hat OpenShift cluster manager Once you have been accepted into the program, please create and configure an appropriate AWS or GCP account for OpenShift Dedicated usage. The necessary configuration for your cloud account can be found in our customer cloud subscription documentation:

- AWS account configuration
- GCP account configuration

Once you have the credentials available, you can follow our deployment documentation to install your cluster.

Administrators and developers can use the Red Hat OpenShift command-line interface (CLI) or the web console to log in to the newly created OpenShift Dedicated cluster and start creating applications.

Get started with the CLI.

Technical documentation

A full range of technical documentation for Red Hat OpenShift Dedicated is available

[online](#) on Red Hat Customer Portal. This includes deployment material, as well as configuration, development, and monitoring documentation.

Learn more: Red Hat Application Foundations (RHAF)

Installation

RHAF gives your organization the ability to modernize and accelerate your business. You can choose which components to use from the list below.

API Management

- **3scale API Management**: provides capabilities to share, secure, distribute, control, and monetize your APIs.

Data Transformation and Integration

- **Camel K**: Use the integration capabilities of Apache Camel and its vast component library in the Quarkus runtime, optimizing for peak application performance with fast start up time.

Single Sign-On

- **Single Sign-On**: Enable to secure web applications and enable authentication and authorization in order to easily integrate with the rest of applications on your organization.

Enterprise Integration

- **AMQ Broker**: a high-performance messaging implementation based on ActiveMQ Artemis. It uses an asynchronous journal for fast message persistence, and supports multiple languages, protocols, and platforms.

Real-time Messaging and Data Streaming

- **AMQ Streams**: provides a scalable, distributed, and high-performance data streaming platform based on the Apache Kafka project.

Service Composition and Integration

- **Red Hat build of Apicurio Registry**: A datastore for sharing standard event schemas and API designs across API and event-driven architectures.

In-Memory, Distributed, NoSQL Datastore

- **Red Hat Data Grid**: Caching technology to get relevant information closer to the user, enhancing and optimizing the user experience.

Business Constraint Solver

- **Red Hat build of OptaPlanner**: solves task assigning, employee rostering, order picking, call center scheduling, vehicle route planning, cloud optimization, maintenance scheduling, and more optimization problems.

Migration Toolkit

- **Migration Toolkit for Applications**: an assembly of open source tools for large-scale application migrations and modernizations.

Change Data Capture

- **Red Hat build of Debezium**: converts information from your existing databases

into event streams, enabling applications to detect, and immediately respond to row-level changes in the databases.

Runtimes and Frameworks

- **Red Hat build of OpenJDK**: Free and open source implementation of the Java Platform, Standard Edition.

- **Red Hat build of Node.js**: Write server-side JavaScript applications.

- **Red Hat build of Quarkus**: Run Java applications that deal in serverless, microservices, containers, Kubernetes, FaaS, or the cloud.

- **Red Hat Data Grid**: Access, process, and analyze data at in-memory speed to deliver a superior user experience.

- **Red Hat Single sign-on (SSO)**: provides Web single sign-on and identity federation based on SAML, OpenID Connect, and OAuth specifications.

- **Red Hat support for Spring Boot**: Create stand-alone Spring-based applications and (Micro)services.

Java Application Servers

- **JBoss Web Server (JWS)**: Supported and integrated Tomcat server
- **JBoss Enterprise Application Platform (EAP)**: Collection of Java standards (based on Java EE) to streamline applications and focus on what makes the application important.
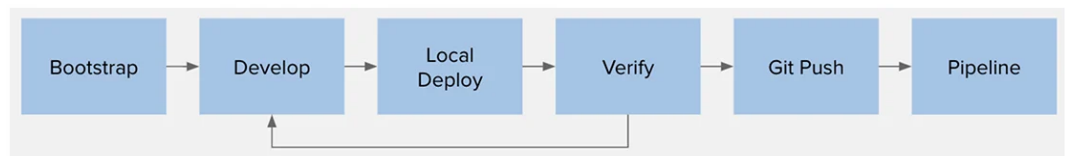
Red Hat OpenShift for developers

Why Red Hat OpenShift?

As a developer, you need to stop changing how you work to fit the platform. With Red Hat OpenShift, you can automate once and run anywhere by developing on a Kubernetes platform instead of coding to the specifics of your existing infrastructures, whether they are on-premise, public cloud, or hybrid. Regardless of the infrastructure, the OpenShift interface remains the same. Get familiar with one application-centric user interface that lets you quickly build code, deploy containers, and link services.

Built for your workflows

To achieve your continuous integration/continuous delivery (CI/CD) objectives, you need a platform that enables your automated processes, driving software through a path of building, testing, and deploying. Whether you transition to use Red Hat OpenShift Pipelines, integrate with your existing tools and workflows, or some combination of both, Red Hat OpenShift helps you achieve whatever level of automation you desire. And, if those processes involve deploying to multiple Red Hat OpenShift infrastructures, you can do so easily.

Bootstrap → Develop → Local Deploy → Verify → Git Push → Pipeline

Visit https://developers.redhat.com/openshift to find out more.

Straight from the source—engage with Red Hat experts

Red Hat OpenShift shows

We are hosting a number of live shows about OpenShift, app modernization, cloud native development and more. Check out our show calendar or access all playlists.

Access all playlists

Additional resources

Additional Red Hat OpenShift materials

Get best practices, expert tips, and free tools to help you quickly build, launch, and scale container-based applications.

- Videos
- Red Hat Summit Sessions
- Customer Success Stories
- Red Hat OpenShift e-books

Still have questions? Red Hat Support has answers.

Supporting success, exceeding expectations

Red Hat OpenShift entitlements in the Level Up Program come with one year of Standard Support. Through this subscription, you have access to a global network of experienced, motivated, and knowledgeable technical support engineers. This expertise can virtually extend your in-house expertise and help you deploy with confidence. You are not limited to issue resolution with a Red Hat subscription: we are here to help you avoid issues from the start.

- Support cases—get answers quickly by opening a support case.
- Live chat—directly access our support engineers during weekday business hours.
- Call us—speak directly with a Red Hat support expert by phone.

About Red Hat
Red Hat is the world's leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers integrate new and existing IT applications, develop cloud-native applications, standardize on our industry-leading operating system, and automate, secure, and manage complex environments. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500. As a strategic partner to cloud providers, system integrators, application vendors, customers, and open source communities, Red Hat can help organizations prepare for the digital future.

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