# Red Hat Application Foundations

## Benefits

▸ A solution that offers both flexibility to use the right tools for the requirement and fast time to market can help your application development teams ensure they are spending time innovating and delivering value.

▸ Allows you to deliver efficient execution between distributed teams and across hybrid cloud environments as you modernize applications for strategic use.

▸ Helps you build, connect and deploy applications and services across on-premise, private cloud, and public cloud environments.

▸ Application Foundations along with Red Hat OpenShift provides a platform for policy-driven management that allows distributed teams to build and deploy applications with low friction and increasing frequency while also minimizing vulnerabilities and protecting employee, customer, and citizen data.

## Overview

Red Hat® Application Foundations includes frameworks and capabilities you need for designing, building, deploying, connecting, safeguarding, and scaling cloud-native applications. When combined with Red Hat OpenShift®, Application Foundations creates a platform for development and operations teams to build and modernize applications efficiently and safely while balancing developer choice and flexibility with operational control and security.

Application Foundations includes capabilities to help your teams adopt modern and cloud-native architectures, including foundational patterns like microservices, application programming interface (API)-first, and data streaming. And when combined with other technologies allows them to adopt more complex patterns such as event driven architecture and artificial intelligence and machine learning (AI/ML) that unlock new, innovative capabilities for their organizations.

## Features of Applications Foundations

Application Foundations helps you create a platform for building and deploying modern cloud-native applications and support your developers by offering higher productivity and innovation. These tools allow operations to be more efficient by making code in production more reliable, performant, and scalable, and fully equip business leaders by supporting agile development, integration, and automation.

### As part of its comprehensive portfolio, Application Foundations include:

▸ Application and API connectivity

▸ Data transformation

▸ Service composition and orchestration

▸ Real-time messaging and data streaming

▸ Java (TM) application frameworks

▸ In-memory distributed datastore

▸ Single sign-on

▸ Migration toolkit for applications

▸ Java application servers

▸ Enterprise integration

▸ Change data capture

▸ Data transformation and integration

**Red Hat Application Foundations' capabilities have demonstrated success:[1]**

▸ According to IDC, customers have linked the use of Red Hat application frameworks that are included with Red Hat Application Foundations to more than doubling the number of new applications they can deliver[1] (126% more on average) as well as more frequently providing the business with new features (54% more on average). Visit the product page for more information about Application Foundations.

▸ IDC research has shown customers using Red Hat integration capabilities that are included with Red Hat Application Foundations, were able to increase the number of features developed by 63%, the number of API endpoints by 40%, and the number of applications by 38%. While accomplishing this output, they also improved their IT staff efficiency.

## Accelerate innovation

With Application Foundations, you can combine continuous integration and continuous delivery (CI/CD) efficiencies with innovation to speed the delivery of new applications, improve customer experiences, internal processes, and command a competitive advantage with the experiences and capabilities you will be able to deliver to your customers. Application Foundations includes tools that provide modern and cloud-first approaches to architecture, giving development teams the ability to focus on innovation.

## Modernize cloud management

Resolve the complexities associated with maintaining both existing and new applications using open cloud-native approaches. Application development and operations (DevOps) teams have a streamlined experience that combines container orchestration, developer efficiency and flexibility, and pipeline efficiency.

## Adapt to changing requirements

Help application teams act as valued business partners who can drive organizational growth and success through technology and innovation. When the demands or requirements for applications shift, Application Foundations can provide the flexibility to help developers adapt quickly and accelerate time to market. With the comprehensive set of tools in Application Foundations, you can future-proof your application development and at the same time reduce costs over time when integrating the next big disruptive technology comes along.

## Hybrid and multicloud

Realize a unified application environment designed to support and streamline the complex reality of hybrid cloud operations and modernization to the cloud. Through a consistent experience across cloud environments, operations and development teams can efficiently and predictably deliver new capabilities to stakeholders to meet organizational needs.

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**1** *IDC White Paper, sponsored by Red Hat. "The business value of a unified application development and delivery platform with Red Hat," Document# #US49844722. December 2022.*

# Create a platform for applications

When combined with Red Hat OpenShift, Application Foundations organizations can create a platform for DevOps teams to build and modernize applications efficiently and safely while balancing developer choice and flexibility with operational control and security.

## Included technologies

| Category | Application Foundations leading components | Application Foundations supporting components |
|---|---|---|
| API management | • Red Hat 3scale API Management | • Red Hat build of Apache Camel<br>• Red Hat build of Keycloak<br>• Red Hat build of APIcurio Registry |
| Enterprise integration | • Red Hat build of Apache Camel | • Red Hat AMQ broker<br>• Red Hat build of Quarkus |
| Data streaming | • streams for Apache Kafka | • Red Hat build of Apache Camel<br>• Red Hat build of Debezium<br>• Red Hat build of Apicurio Registry |
| Application frameworks and servers | • Red Hat JBoss® Enterprise Application Platform<br>• Red Hat build of Quarkus<br>• Red Hat build of OpenJDK<br>• Node.js<br>• Spring Boot | • Red Hat JBoss Web Server<br>• Red Hat Data Grid |
| Application migration and modernization | • Red Hat Migration Toolkit for Applications | |
| Application security | • Red Hat build of Keycloak<br>• Red Hat 3scale API Management | |

## 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 develop cloud-native applications, integrate existing and new IT applications, and automate and manage complex environments. A trusted adviser to the Fortune 500, Red Hat provides award-winning support, training, and consulting services that bring the benefits of open innovation to any industry. Red Hat is a connective hub in a global network of enterprises, partners, and communities, helping organizations grow, transform, and prepare for the digital future.

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🐦 @RedHat
in linkedin.com/company/red-hat

**North America**
1 888 REDHAT1
www.redhat.com

**Europe, Middle East, and Africa**
00800 7334 2835
europe@redhat.com

**Asia Pacific**
+65 6490 4200
apac@redhat.com

**Latin America**
+54 11 4329 7300
info-latam@redhat.com