

Maximize your data with Red Hat and certified partner solutions

Red Hat works closely with its data ecosystem partners to test, certify, and integrate the technologies you need to support modern use cases and diverse data models so you can build scalable, cloud-native applications.

Did you know?

55% of organizations run stateful applications in containers in production.¹

Six of the top ten commercially available images running in containers are databases and data analytics workloads.²

85% of enterprises use or plan to use Kubernetes.³

Data is growing rapidly—in volume as well as velocity, variety, complexity, and connectedness—forcing the need for more and different types of databases. In addition, new cloud-native applications require the ability to store massive amounts of new types of data, process millions of requests per second with millisecond latency, and scale to support millions of users around the world.

An open, adaptable database architecture can help you build highly scalable distributed applications based on actual use cases. This architecture requires several key technologies:

- ▶ Consistent and software-defined infrastructures to provide resources across hybrid cloud environments, including datacenter, public cloud, and edge.
- ▶ Container platforms to provide a consistent foundation for deploying databases, data analytics tools, and cloud-native applications across infrastructure.
- ▶ Databases, data lakes, and data warehouses to store data to use in cloud-native applications.
- ▶ Data ingestion and preparation tools to ingest, process, and analyze data from a variety of sources to deliver insights.

Start with a solid database foundation

When building any solution, it is important to start with supported, enterprise platforms. With Red Hat® Enterprise Linux®, Red Hat OpenShift®, Red Hat OpenShift Data Foundation, Red Hat Application Services, and Red Hat Ansible® Automation Platform you can build a consistent database foundation that runs across bare metal to cloud.

Consistent and software-defined infrastructure

Red Hat Enterprise Linux can help you increase the performance, manageability, and security of critical database workloads. Red Hat Enterprise Linux is a robust and security focused foundation for running all types of applications in—and out of—containers.

Red Hat OpenShift Data Foundation offers scalable and resilient software-defined storage for running containerized workloads, including databases and data stack components. It fosters deterministic performance for data workloads such as archives, data lakes, and databases like PostgreSQL, data warehouses, and IBM Db2 Warehouse.

Red Hat Application Services includes frameworks, integration, runtimes, and programming languages for cloud-native application development and deployment. Red Hat Data Grid is an in-memory, distributed, NoSQL datastore solution. Your applications can access, process, and analyze data at in-memory speed for faster results.

Red Hat Ansible Automation Platform, together with partner technologies, help you build, monitor, and manage a modern data infrastructure. Database admins can quickly deploy, configure, and update databases and implement self-service and on-demand data activities. Ansible includes hundreds of database modules for database partners.

¹ "CNCFSurvey2020." *Cloud Native Computing Foundation (CNCF)*, 2020.

² "11 Facts About Real-World Container Use." *Datadog*, November 2020.

³ "2020 Flexera State of the Cloud Report." *Flexera*, April 2020.

About Red Hat

Red Hat helps customers standardize across environments, develop cloud-native applications, and integrate, automate, secure, and manage complex environments with [award-winning](#) support, training, and consulting services.

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Container platform

Red Hat OpenShift integrates with many database and data analytics products from certified ecosystem partners. Many partners also offer certified Kubernetes operators to simplify deployment and life-cycle management. Deploying data workloads on Red Hat OpenShift gives you:

- ▶ Agility—deploy and manage modularized databases anywhere with speed, allowing faster project execution and more frequent updates.
- ▶ Elastic scaling—dynamic scaling of compute resources to meet the changing needs of database workloads.
- ▶ Consistency and portability—a unified platform that works consistently across development, test, and production environments and life-cycle phases.
- ▶ Automated operations—Kubernetes operators and Helm charts automate Day 1 and Day 2 operations like deployment and updates, as well as operations like provisioning, scaling, and backup.

Create applications derived from actual use cases with certified Red Hat data ecosystem partners

Red Hat works closely with database and data analytics ecosystem partners to certify integrations with Red Hat products, so you can focus on creating value from your data. Examples of the types of databases certified with Red Hat include:

- ▶ Relational databases: eCommerce applications, traditional applications, enterprise resource management (ERM), customer relationship management (CRM), finance, operational databases, and data warehousing.
- ▶ Key value: mobile apps, high-traffic web pages, e-commerce systems, gaming applications, and real-time bidding.
- ▶ Search engine: leaderboards, social media, search engines, and geospatial applications.
- ▶ In memory: user and session history management, caching, leaderboards, geospatial, and real-time analytics.
- ▶ Document: internet of things (IoT) apps, real-time analytics, user profile personalization, content management, catalogs, and user profiles.
- ▶ Wide column: transactional logging/user history, fraud detection, data lineages, equipment maintenance, fleet management, and route optimization.
- ▶ Graph: fraud detection, social networking, and recommendation engines.
- ▶ Time series: IoT applications, DevOps, and industrial telemetry.
- ▶ Data ingest and aggregation: collects and streams data from various sources and moves it to a destination (database, data lake, data warehouse).
- ▶ Data virtualization: provides a unified view of data from various sources and databases.
- ▶ Data processing: in-stream and batch processing to connect data sources, and for in-place query, data cleansing, and data preparation.

[Learn more about the data partner ecosystem.](#)