

4 tips for maximizing your data

Every application needs modern databases to handle and process data. Learn four tips to help you start monetizing and gaining intelligence from your data.

1 Adopt a more flexible approach

Data is growing rapidly, in volume as well as velocity, variety, complexity, and connectedness. You can adopt a more flexible approach for your data by moving the database to a hybrid cloud container platform. This approach allows:

- Alignment of database strategy to application strategy.
- Flexibility, scalability, and portability to deploy and move between any cloud or on-premise.
- One standard experience for developers, without worrying about where the database resides.
- Ability to use the container platform to systematically break down and break apart applications into microservices as you see fit.

An open, adaptable database architecture can help you build use-case driven, highly scalable distributed applications. The architecture contains several key technologies, including:

- Container and Kubernetes platforms for deploying databases, data analytics tools, and cloud-native applications across infrastructure, as well as self-service capabilities for developers and integrated compute acceleration.
- Consistent and software-defined underlying infrastructures to provide resources across hybrid cloud environments.
- 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.

2 Start with a solid foundation

Your underlying database infrastructure should include these features and benefits:

- **Agility**—the ability to deploy and manage modularized databases anywhere with speed, allowing faster project execution and more frequent updates.
- **Elastic scaling**—dynamic scaling of compute and storage resources to meet the changing needs of database workloads.
- **Consistency and portability**—the ability to deploy all cloud-native application components, including databases, on a unified platform that works consistently across all development, test, and production environments and application life cycle phases, from on-premise to cloud.
- **Automated operations**—the ability to automate the Day 1 and Day 2 operations like deployment, updates, and complex operations such as provisioning, scaling, and backup. It should also support self-service or on-demand data activities.

Red Hat's portfolio helps address these needs:

- [Red Hat® OpenShift®](#) is a leading container and Kubernetes platform trusted across industries by thousands of enterprise innovators in the world.
- [Red Hat OpenShift Data Foundation](#) offers scalable and resilient software-defined storage for containerized workloads.
- [Red Hat Enterprise Linux®](#) can help increase performance, manageability, and security of critical database workloads.
- [Red Hat Ansible® Automation Platform](#), in combination with partner solutions, provides database automation to deploy, configure, and update databases and implement self-service and on-demand data activities.

3 Use the right tools

New cloud-native applications have requirements that a single type of database cannot provide. It's important to choose the right tools to support database use cases like:

- Relational databases for e-commerce, traditional applications, finance, operational databases, and data warehousing.
- Key value for mobile apps, web pages, e-commerce, gaming, and real-time bidding.
- Search engines for leaderboards, social media, search engine creation, and geospatial.
- In memory for user and session history, caching, leaderboards, geospatial, and real-time analytics.
- Document databases for Internet of Things (IoT) apps, real-time analytics, user profiles, content management, and catalogs.
- Wide-column databases for transact logging history, fraud detection, data lineages, high-scale industrial apps, fleet management, and route optimization.
- Graph databases for fraud detection, social networking, and recommendation engines.
- Time series for IoT applications, DevOps, and industrial telemetry.
- Data ingestion and aggregation to collect and stream data from various sources.
- Data virtualization for a unified view of data from various sources and databases.
- Data processing for in-stream and batch processing to connect data sources, in-place query, data cleansing, and data preparation.

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

4 Choose solutions from a certified ecosystem

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

Ecosystem partners are:

- Curated. Red Hat carefully selects and vets software partners then collaborates to address business challenges and pain points with software that is not only compatible with, but written for and optimized to run on Red Hat infrastructure.
- Certified. Certified solutions from database ecosystem partners are built using Red Hat recommended best practices for Red Hat platforms.
- Supported. Partner solutions are supported by a collaborative effort between the partner, a third-party technical support alliance network (TSANet), and Red Hat.
- Easy to find. [Red Hat Marketplace](#) makes it easy to discover, try, and purchase certified software and Kubernetes Operators for container-based environments. Red Hat Marketplace apps can be instantly deployed on Red Hat OpenShift clusters running on the cloud environment of your choice.

Learn more

See how the [Red Hat data partner ecosystem](#) can help your organization find the right partner solutions for its workloads.

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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