

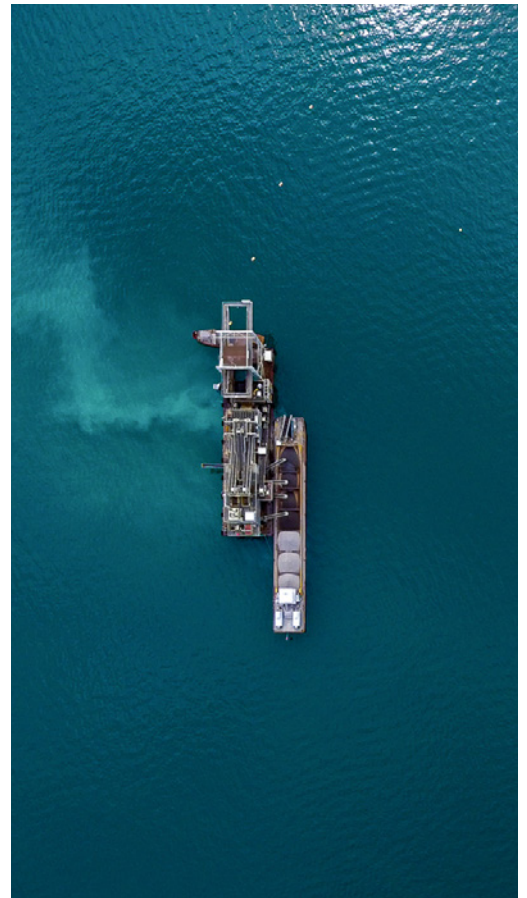
# MongoDB Enterprise Advanced with IBM

Build apps faster, deploy flexibly and improve  
operations with a modern database



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# Executive summary

MongoDB Enterprise Advanced with IBM® enables developers to build apps faster and distribute data to where it needs to be, with the freedom to run anywhere. This modern database provides enterprise tooling to support mission-critical, highly secure and always-on deployments. MongoDB helps you promote operational visibility and automate administration to stay on top of your database performance. Organizations can implement MongoDB as part of a data fabric architecture with IBM Cloud Pak® for Data. With our OEM agreement, you can enjoy a one-stop shop at IBM for your MongoDB needs including licensing, procurement and support while accelerating time to value with your database implementation.

## Challenges for application developers

Companies increasingly need to support modern-day use cases, such as the Internet of Things (IoT), mobile access and more, to deliver operational and insight applications that leverage data residing in multiple, relational and nonrelational data sources while harnessing the power of ML and AI. As such, ML and AI models have become an integral part of the application development lifecycle.

However, three challenges remain when delivering these applications from a developer's standpoint:

1. **Development experience:** There's an unprecedented need for collaboration across team members and roles, such as data engineers, data scientists, business analysts and application developers, working on ML, streaming and visual analytics. Furthermore, developers need to work with rapidly changing and variable data models—one of the main characteristics of modern-day applications.
2. **Insight activation:** Developers need comprehensive, integrated tools for activating insights from analytics and AI.
3. **Application management:** The requirements driving the delivery of insight applications are rapidly changing business needs, resulting in a continual reduction of cycle times. Application developers need to easily and quickly test and migrate applications from development to production environments.

MongoDB Enterprise Advanced is a comprehensive suite of products and services that put your engineering teams in control of your self-managed MongoDB databases, helping them drive security, performance and operational efficiency. Thousands of organizations around the world use Enterprise Advanced to support their critical production workloads, accelerate time to value, reduce risks and costs, and identify opportunities to exploit their data and technology for competitive advantage. Enterprise Advanced includes MongoDB Enterprise Server—the commercially licensed edition of the MongoDB database—along with the most comprehensive support and the best SLA available when you run MongoDB yourself.

# MongoDB Enterprise

## Advanced capabilities

### Operational visibility and control

**Ops Manager** is the self-managed platform that makes it easy for operations teams to manage their deployments from one place. Simplify and automate the deployment, monitoring and alerting, backup, upgrading and scaling of MongoDB.

**MongoDB Enterprise Operator for Kubernetes** gives you full orchestration control over your MongoDB deployment from a single Kubernetes control plane.

**MongoDB Connector for BI** lets you use MongoDB as a data source for your existing SQL-based BI and analytics tools such as Tableau, Looker, and others.

**The MongoDB in-memory storage engine** delivers high throughput and predictable low latency for workloads with stringent response-time SLAs.

**Enterprise software integrations** ensure MongoDB fits easily into your existing IT infrastructure and processes.

### Data security and compliance

**MongoDB Enterprise Server** provides additional security features that build on our comprehensive security framework, including Role-based Access Control, x.509 certificates, TLS and more.

MongoDB can be configured to run with a FIPS 140-2 certified library for OpenSSL by default, or from the command line as needed.

**The MongoDB encrypted storage engine** provides native, at-rest encryption in storage and backups, eliminating the complexity and overhead of integrating encryption options.

**Kerberos and LDAP** authentication enable you to defend, detect, and control access to your data.

**Granular auditing** allows administrators to track system activity for deployments with multiple users and applications, with capabilities for auditing schema, replica set and sharded cluster, access, and CRUD operations.

**Automatic client-side field level encryption** delivers the strongest privacy and security controls. MongoDB drivers encrypt the sensitive fields in your documents before they leave the application.



## Enterprise-grade support

**Enterprise-grade support** gives you access to proactive, consultative experts from development through to production.

MongoDB Technical Services Engineers provide more than just break/fix. They can guide you on upgrades, deployment plans, configuration and optimization, new features and more.

Your team can ask Support an unlimited number of questions, 24 x 365, globally with a 1-hour response-time SLA. Support also includes emergency patches for MongoDB.

## Data fabric overview

A data fabric is an architectural approach to simplify data access in an organization to facilitate self-service data consumption. This architecture is agnostic to data environments, processes, utility and geography, all while integrating end-to-end data-management capabilities. A data fabric automates data discovery, governance and consumption, enabling enterprises to use data to maximize their value chain. With a data fabric, enterprises elevate the value of their data by providing the right data, at the right time, regardless of where it resides.

## IBM Cloud Pak for Data

IBM Cloud Pak® for Data helps improve productivity and reduce complexity. Build a data fabric connecting siloed data distributed across a hybrid cloud landscape.

This product offers a wide selection of IBM and third-party services spanning the entire data lifecycle. Deployment options include on-premises software version built on the Red Hat® OpenShift® container platform, public cloud options including IBM® Cloud, Amazon Web Services, Microsoft Azure and Google Cloud.

# IBM Cloud Pak for Data with MongoDB Enterprise Advanced overview

To help customers manage and gain insights from many data sources or a hybrid, multicloud environment, IBM has accelerated integration of end-to-end scenarios with Cloud Pak for Data with the MongoDB Enterprise Advanced add-on.

This add-on extends the ability for users to explore and use JSON data with MongoDB's powerful tools, natively on Cloud Pak for Data. These capabilities help users better cope with rapidly changing data models or schemas and support modern-day use cases.

When customers provision MongoDB Enterprise Advanced, they have the option to integrate the database automatically with the governance capabilities of the Cloud Pak for Data platform, allowing analytics users access to self-service data stored on MongoDB.

Technically, this delivery is enabled by an administrative environment that supports:

- Rapid, multinode MongoDB server deployments
- A Kubernetes and Docker infrastructure, controlling repeatable, container-driven processes
- Management tools, including integration with MongoDB Ops Manager

## Features and benefits

1. Infuse MongoDB Enterprise Advanced applications with data science and AI. Build, deploy, manage and govern ML models to help improve business outcomes (for example: personalized recommendations, customer churn, cross-sell and upsell, and predictive maintenance).
2. Shift to cloud-native architecture and deploy MongoDB Enterprise Advanced virtually anywhere:
  - Provision and scale in minutes
  - Build once, deploy essentially anywhere with multicloud support
  - Built-in automation and collaboration to increase productivity
3. Leverage smart governance to enable self-service analytics and accelerate time to value with MongoDB Enterprise Advanced. Autodiscover metadata and manage and enforce governance rules and policies to mitigate risk and accelerate compliance.

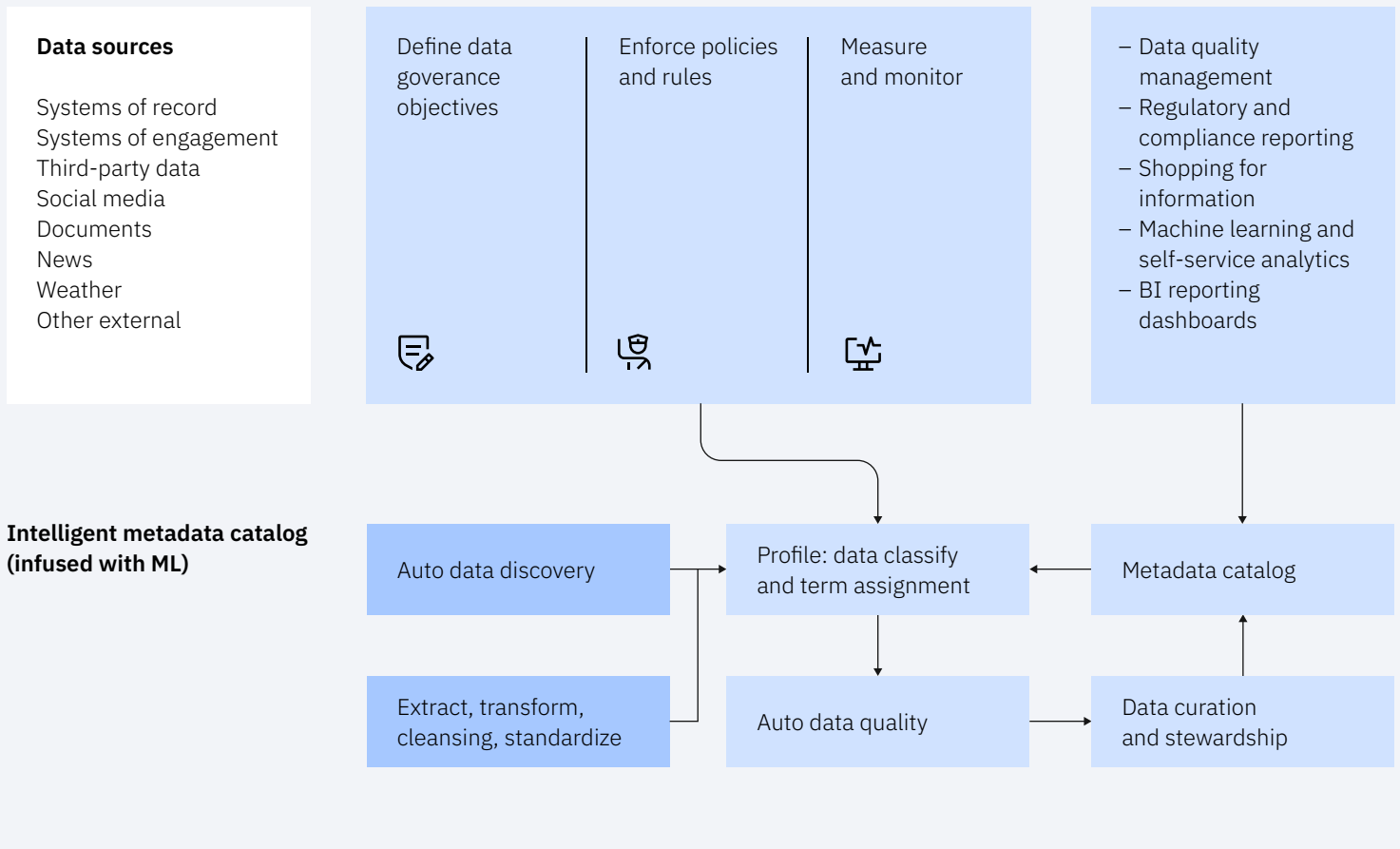


Figure 1: This system diagram shows the path to governed data and analytics using IBM Cloud Pak for Data.

Figure 1 illustrates the end-to-end process for governing data from various sources to achieve analytic insights. MongoDB Enterprise Advanced database can be used as one of the data sources that feeds data through a curation process.

Data is subjected to the policies, rules and business terms defined by the enterprise and put into an intelligent metadata catalog by a data steward. This process allows data scientists or engineers to use this data to develop dashboards and analytics applications.

## The added advantage of IBM

IBM brings a single unified experience with strong integration capabilities and a global presence to improve the value provided by MongoDB.

### Integration into your data fabric

IBM allows the deployment of multiple databases from multiple vendors on a unified AI architecture so that data can be brought together within a hybrid environment for self-service analytics with integrated governance.

### One-stop shopping, support and industry expertise

Choose the best databases for your workloads, condensing multiple vendor interactions into one.

With decades of client history spanning thousands of engagements in over 175 countries and with support for 127 languages, IBM can provide end-to-end guidance for all your infrastructure and database issues, both through support and consulting. From a single source, IBM experts can provide support for individual technologies to entire architectures spanning multiple offerings to help you maintain a more seamless environment. In this way, you can leverage IBM's previous experience to double-check your options and preparedness prior to or even after selecting a solution.

### **Accelerate your journey to AI**

Leverage immediate access to IBM Watson® services and IBM Cloud Pak® for Data for end-to-end enablement of your journey to AI.

Many organizations struggle to track and manage risk in the form of security vulnerabilities, license conflicts, compliance and reliability. By providing level 1 support and consultation in addition to multivendor support, IBM can help reduce support and maintenance costs.

### **Global presence**

As a global company, with a presence in over 175 countries and support for 127 languages, IBM understands various geographic challenges and opportunities better than providers who limit themselves to a single market. The advice shared in consultations and support reflects that knowledge. In addition, having data centers around the globe can benefit customers in two key ways. First, locating data nearer to where it will be used reduces latency and helps provide insights more quickly. Second, some regulations require that data is stored in the country of origin. This cannot be done by vendors who are absent from particular markets. For more information and to learn more about MongoDB Enterprise Advanced with IBM, [schedule time with an IBM expert](#) for a no-cost, 30-minute discussion.







## Conclusion

MongoDB Enterprise Advanced with IBM helps companies more rapidly deliver insights to applications and unlock business potential by leveraging a hybrid, multicloud environment. Clients can:

- Accelerate data monetization
- Operationalize data science, AI and ML
- Shift to next-generation workloads
- Enforce data-driven governance

## Why IBM

Through our OEM agreement, MongoDB Enterprise Advanced customers can enjoy the following IBM capabilities:

- Support for **clients around the world**
- Commitment to **open-source requirements**
- Support for **hybrid cloud** architectures and solutions
- **Integration** of virtually all data repositories
- Tools needed to manage **heterogeneous** data environments
- World-class data and AI expertise

## For more information

[Try IBM Cloud Pak for Data today →](#)

[Learn more about MongoDB Enterprise Advanced →](#)

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Produced in the  
United States of America  
June 2022

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