



WELCOME

MongoDB's Architectural Advantages



Mark Porter

Chief Technology Officer
MongoDB

Builder's Fest

June 9, 2022 | New York City

MongoDB World '22













35 years of nerd / data / systems background



- Developer
- Designer
- Executive
- DBA
- Founder
- General Manager
- Consumer CTO
- Board Advisor
- Board Member

- **Chief Technology Officer of MongoDB**

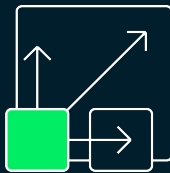
| | | | |
|---------|---|---|---|
| '84-'88 |  | Caltech |  |
| '88-'01 | ORACLE® |  | Oracle Media Server |
| '11-'13 | News Corp | BILL & MELINDA GATES foundation | |
| '13-'18 | aws |  | AWS Database Migration Service  |
| '18-'20 | Grab |  |    |
| '19-now |  | MongoDB. | |



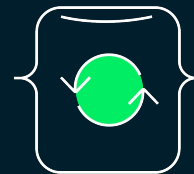
MongoDB Architectural Advantages



Developer
Experience



Performance
and Scale



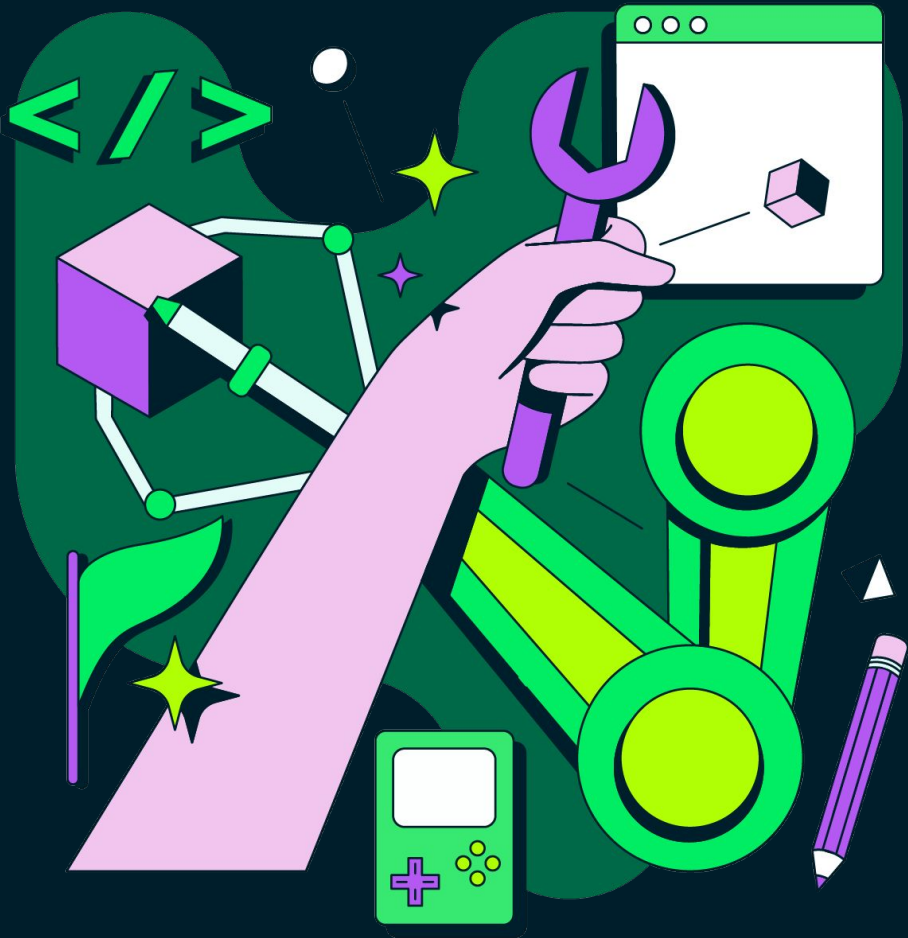
Resilience



Security



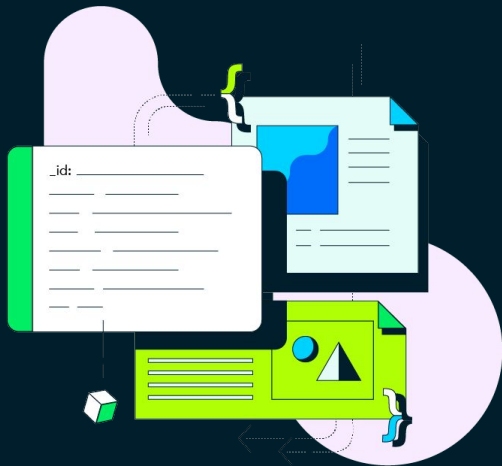
Run
Anywhere



Developer Experience



DEVELOPER EXPERIENCE



The Document Model

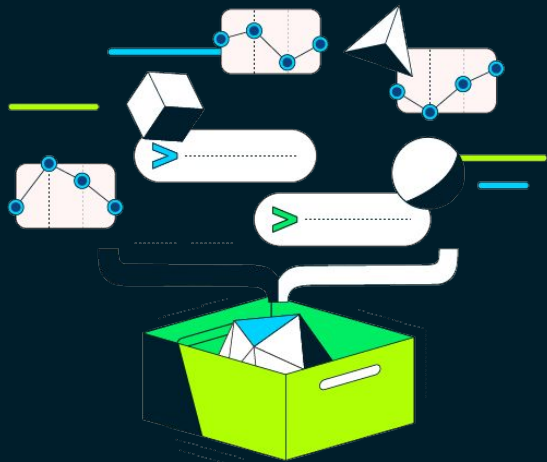
- Putting related data together is simply better
- Intuitive, and easier for developers to reason about

JSON

- Our JSON support is much more mature than others
- BSON supports rich data types, and is massively more performant
- JSON Schema Enforcement



DEVELOPER EXPERIENCE



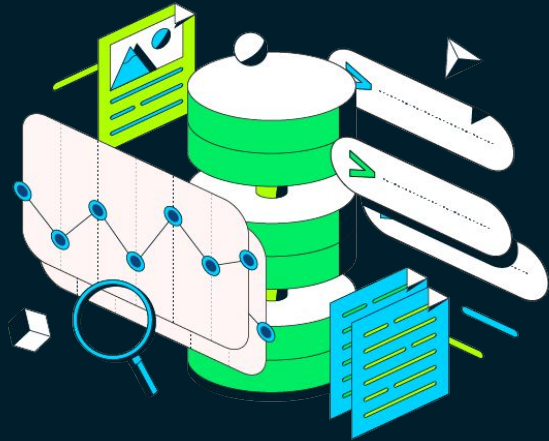
Easier to program against

- Work naturally in your preferred programming language
- Official drivers for 14 languages, plus many community drivers

Broader use case coverage

- Why have separate technologies for managing key-value, graph, geospatial, time series, columnar, documents, and relational data?

DEVELOPER
EXPERIENCE



Atlas is DBaaS, But Better

- Multi-cloud natively
- Data Sovereignty
- Add search functionality with a single click
- Unified, integrated experience for Charts, Data Federation, Triggers, and more





Performance and Scale

PERFORMANCE AND SCALE



Scalable By Design

- MongoDB scales writes without limit
- You can have thousands of writable nodes with MongoDB - most other DBs struggle with more than one node!
- We run petabyte databases
- Atlas Serverless scales from 0 to whatever you need - you pay only for the operations you run





Distributed Data Architecture enables unique Performance & Scale

- Most Powerful Read and Write capabilities
 - Choose the durability you want to wait for
 - Specify where you need the data
- Run the Storage you want
 - NVME, Network SSD, Cloud Object Storage
- Developers don't have to write (and rewrite, and debug) distributed systems code
 - Eg. Retryable Writes
 - Failovers are *much* faster
- Run your analytics without interrupting OLTP - and without copying the data



Resilience

RESILIENCE



High Availability By Design

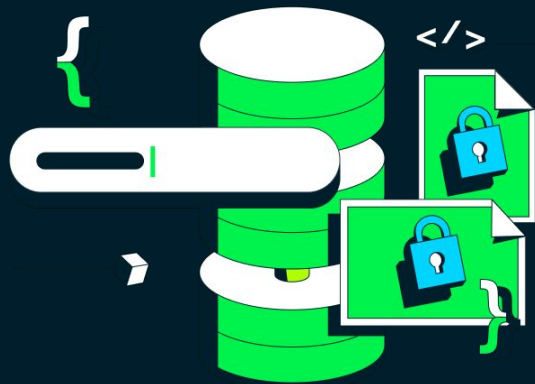
- 3+ node high availability is built into the software
- Write-unavailability times for planned elections are 840ms - almost every Atlas election occurs within 6 seconds
- Clusters span availability zones, regions, and cloud providers



Security

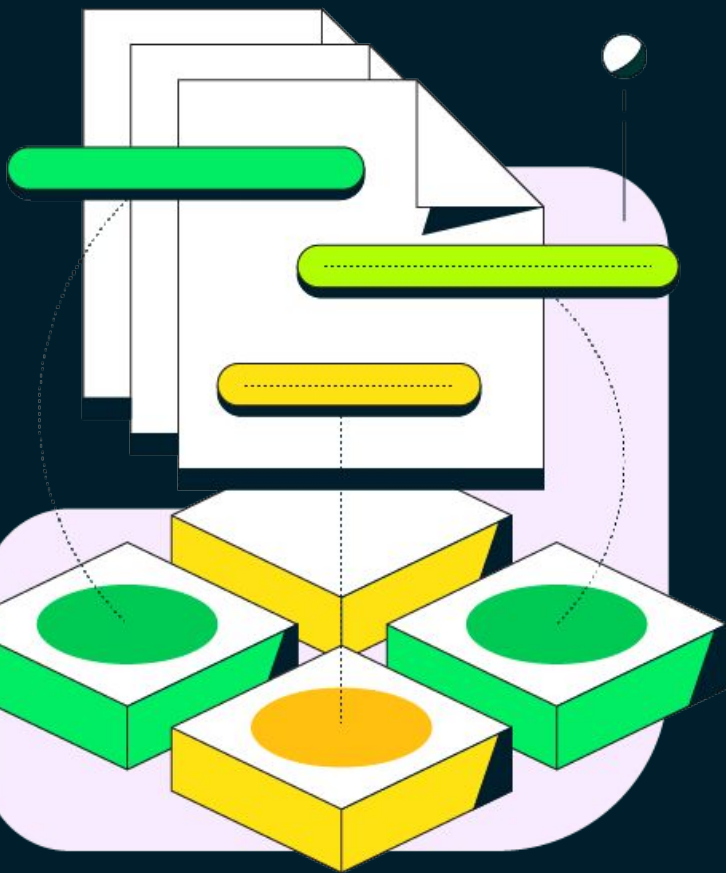


SECURITY



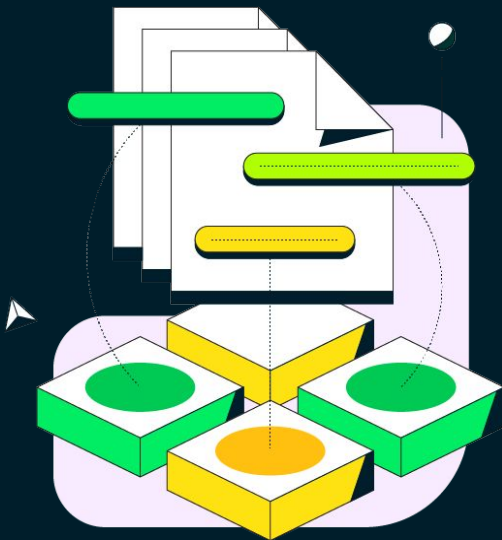
Enterprise-ready Security

- Encryption at-rest, in-transit, and in-use
- Queryable Encryption for in-use
 - MongoDB is the only provider offering this capability.
 - Rich expressive queries on encrypted data
 - Your circle of trust doesn't include your data platform or cloud provider
 - Open and published algorithms



Run
Anywhere

RUN ANYWHERE



MongoDB is Everywhere

- Use Atlas on all 3 major public clouds
- Use the core MongoDB database on 14 other regional and worldwide providers
 - ...and in your datacenter and on your laptop
- Distribute data according to access and availability needs
- Be ready for emerging data residency regulations





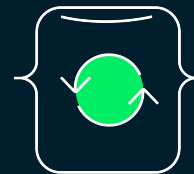
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Developer
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Performance
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Resilience



Security



Run
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Thank you for
your time.



Mark Porter

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MongoDB

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