



mongoDB

Agenda

- ✓ What is Big Data ?
- ✓ What is NoSQL ?
- ✓ Job Trends
- ✓ What is MongoDB ?
- ✓ Why MongoDB ?
- ✓ Industries using MongoDB
- ✓ Tools of MongoDB



BigData

NoSQL

MongoDB

Big Data

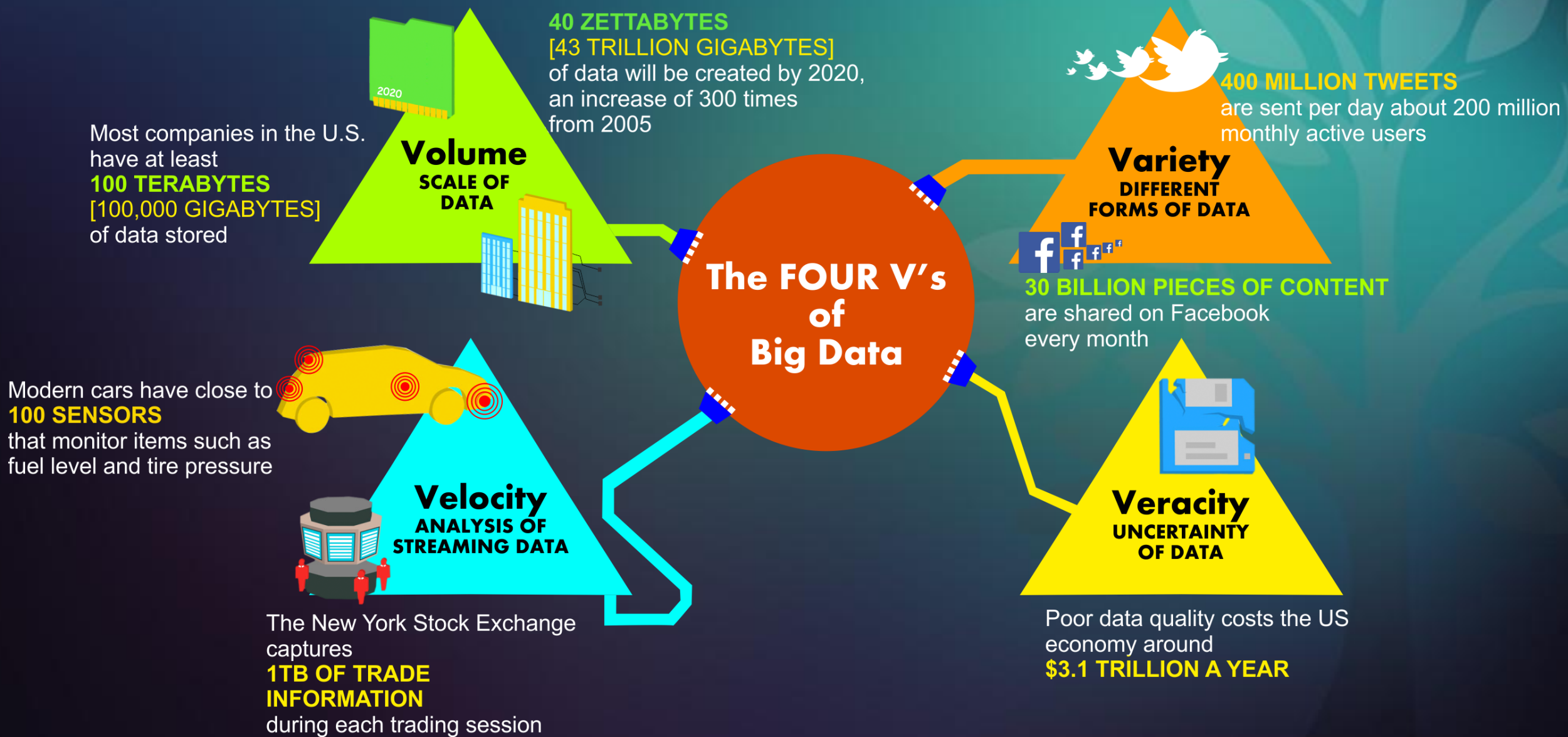
Big Data

Definition of Big Data

Big Data is the term for a collection of datasets so large and complex that it becomes difficult to process using on-hand database management tools or traditional data processing applications.

4 V's of Big Data

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Different Types of Big Data

Different Types of Big Data

Structured Data

Structured Data refers to information with a high degree of organization, such that inclusion in a relational database is seamless and readily searchable.

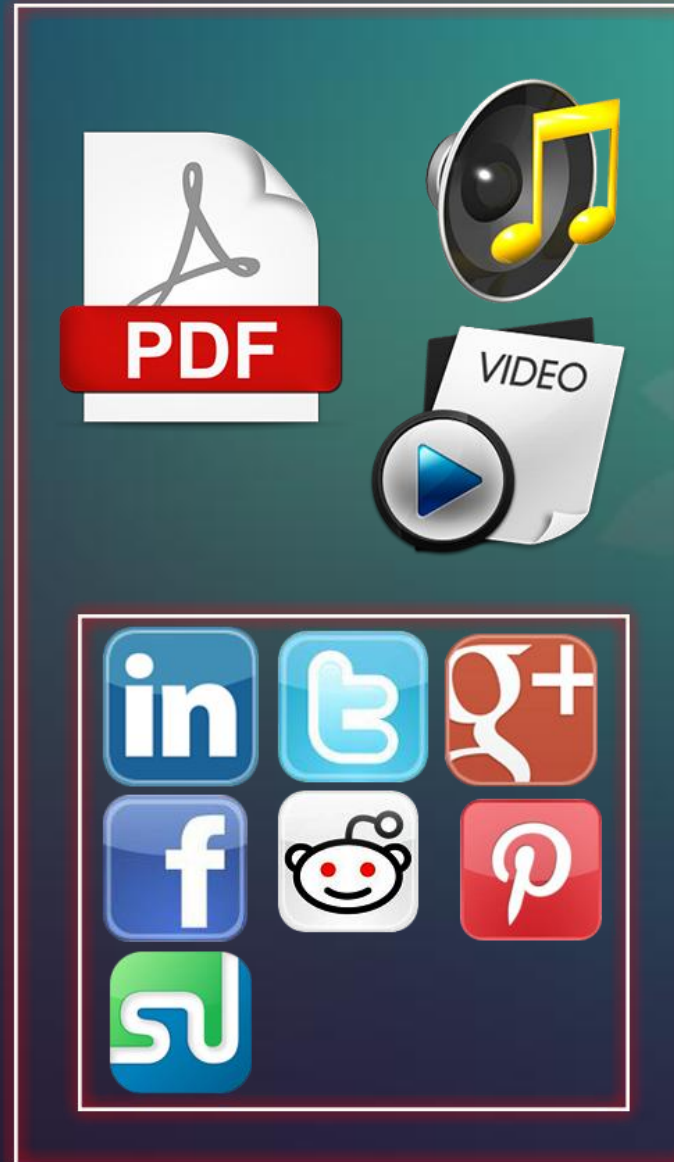
Structured Data

ID								
	A	B	C	D	E	F	G	H
1	ID	Name	Longitude	Latitude	Longitude	Latitude2	Elevation	NS Unce
2	38545	LE-MARS	-96.2	42.8	-96.2	42.8	364	0.0
3	36784	DEFIANCE MEMORIAL AP	-84.429	41.338	-84.429	41.338	215.4	0.000
4	30098	DAVIS DAM # 2	-114.567	35.19165	-114.567	35.19165	181.35	0.008
5	167028	AVIANO (USAF)	12.60826	46.02519	12.60826	46.02519	121.275	0.00868
6	35563	PERKASIE	-75.3	40.3667	-75.3	40.3667	121.9	0.0000
7	152091	KALAMUNDA BICKLEY	116.1345	-32.0115	116.1345	-32.0115	384.275	0.00597
8	15894	BALLYHAISE, CAVAN	-7.3	54.05	-7.3	54.05	79	0.00
9	13711	DUMONT FRE-BASE	140.017	-66.667	140.017	-66.667	41	0.000
10	156345	NAROK	35.8466	-1.10876	35.8466	-1.10876	1890	0.02473
11	18008	RAMOS ARIZPE, COAHUILA	-100.97	25.5525	-100.97	25.5525	1399	0.00
12	160618	HEARNE MUNI AP	-96.6194	30.86929	-96.6194	30.86929	86.9352	0.00279
13	15388	COLO KUDUS	111.0833	-6.66667	111.0833	-6.66667	32.24	0.00833
14	28013	KITE	-82.5414	32.7125	-82.5414	32.7125	94.7928	0.0000
15	39786	OMER	-83.8333	44.0333	-83.8333	44.0333	187.7568	0.0000
16	3502	LUNCHERON HILL FORCE	145.15	-41.15	145.15	-41.15	340	0.00

Unstructured Data

Unstructured Data refers to information that either does not have a pre-defined data model or is not organized in a pre-defined manner. It can represent any data that does not have a recognizable structure.

Unstructured Data

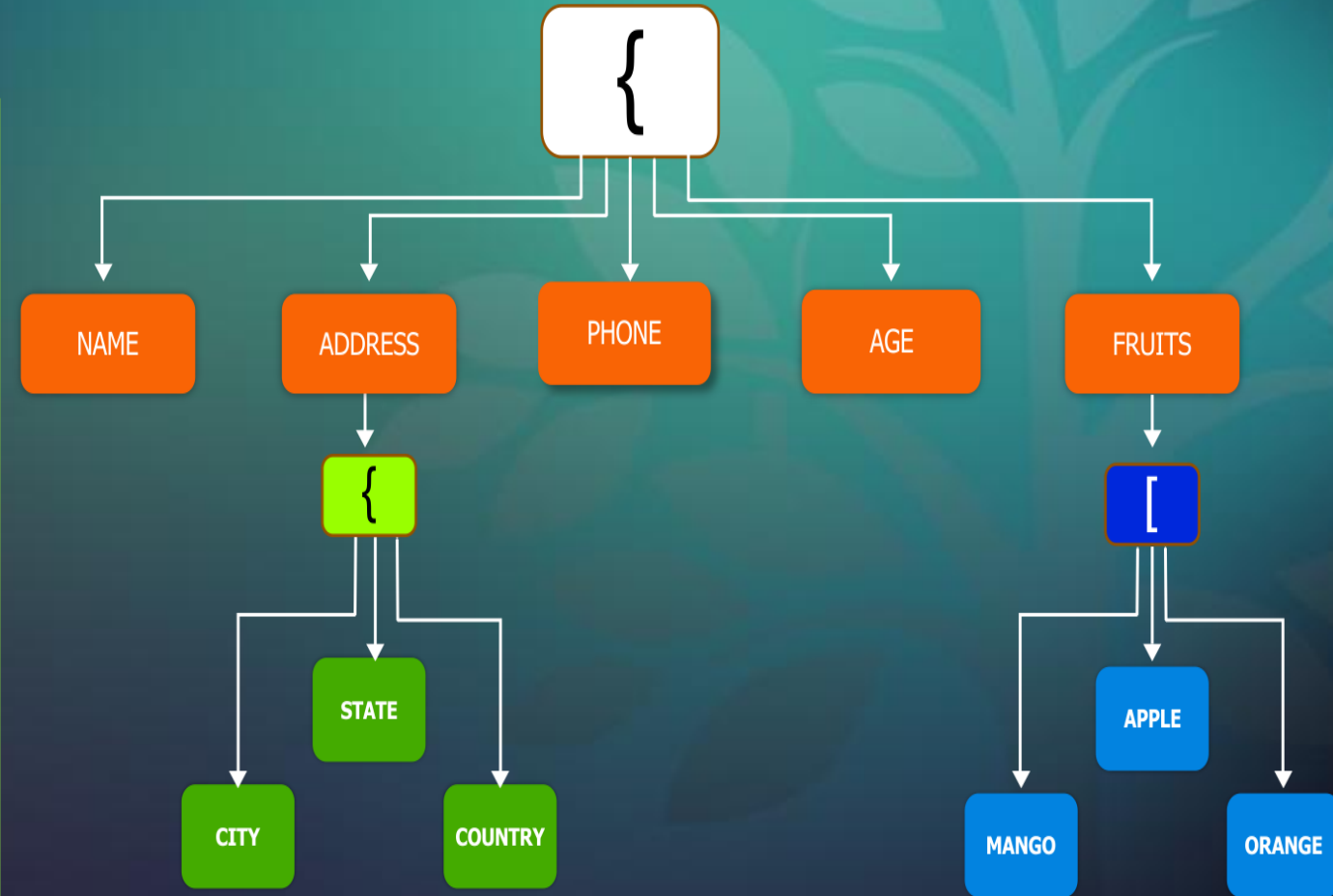


Semi-Structured Data

Semi-Structured Data is that data which is neither row data nor typed data in a conventional database system. The data may be irregular or have a structure that may change rapidly or unpredictably.

Example

```
{  
  "NAME" : "mary",  
  "AGE" : 22,  
  "PHONE" : 9876543210,  
  "ADDRESS" :  
    {  
      "CITY" : "Gurgaon",  
      "STATE" : "Haryana",  
      "COUNTRY" : "India"  
    },  
  "FRUITS" : ["MANGO", "ORANGE",  
    "APPLE"]  
}
```



NoSQL

NOTOG

NoSQL is an approach to data management & database design that's useful for every large sets of distributed data. NoSQL is a class of DBMS that adds some more functionalities to relational DBMS.

Types of NoSQL Databases

Types of NoSQL Databases

Types of NoSQL Databases

- ✓ Key-Value Store Database
- ✓ Wide-Column Store Database
- ✓ Graph Store Database
- ✓ Document Store Database

Document Store Database

It is the database in which data is stored in documents instead of rows and columns. It is simply stored in JavaScript like JSON (JavaScript Object Notation) and the language of database that is used internally is JavaScript.

Example of Document Store Database

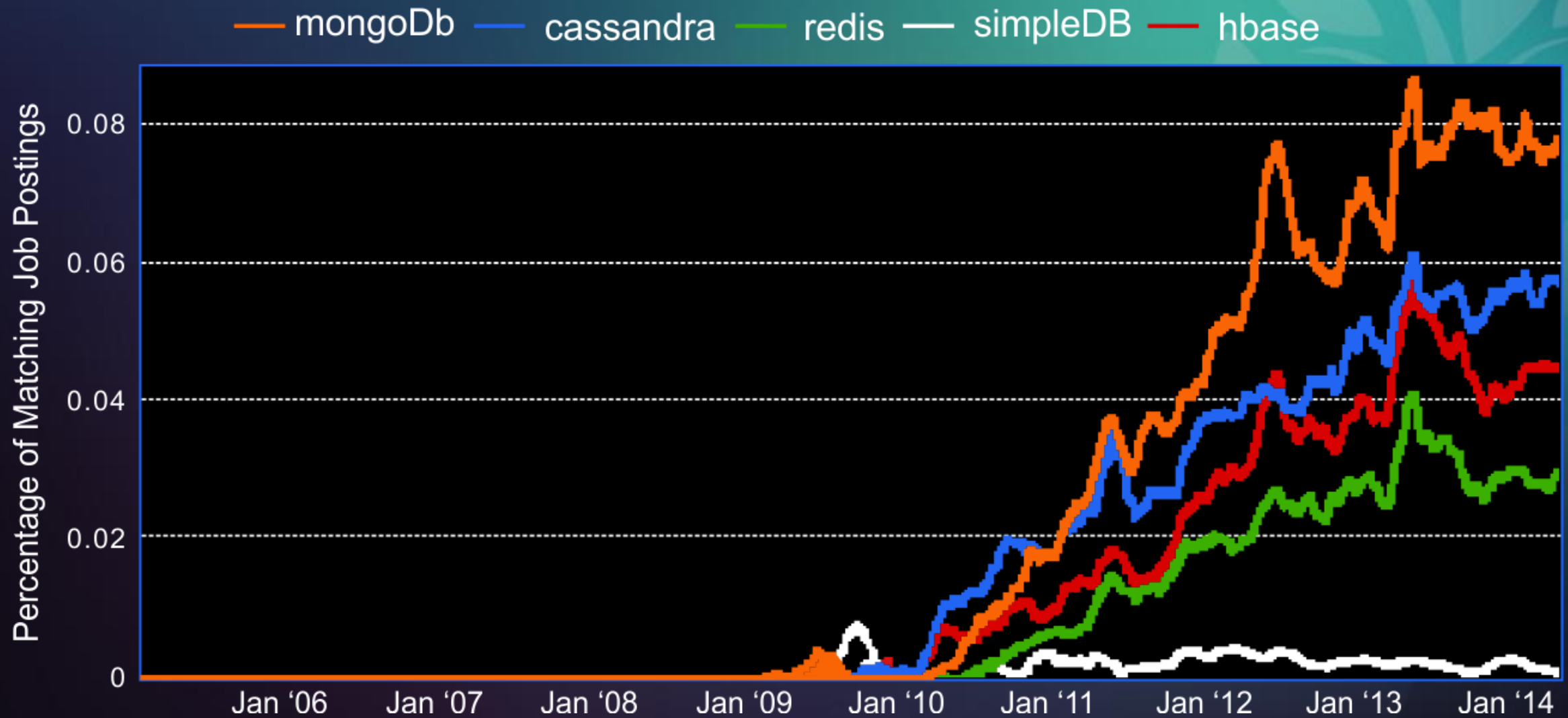


mongoDB

Job Trends

TOP TRENDS

Job Trends

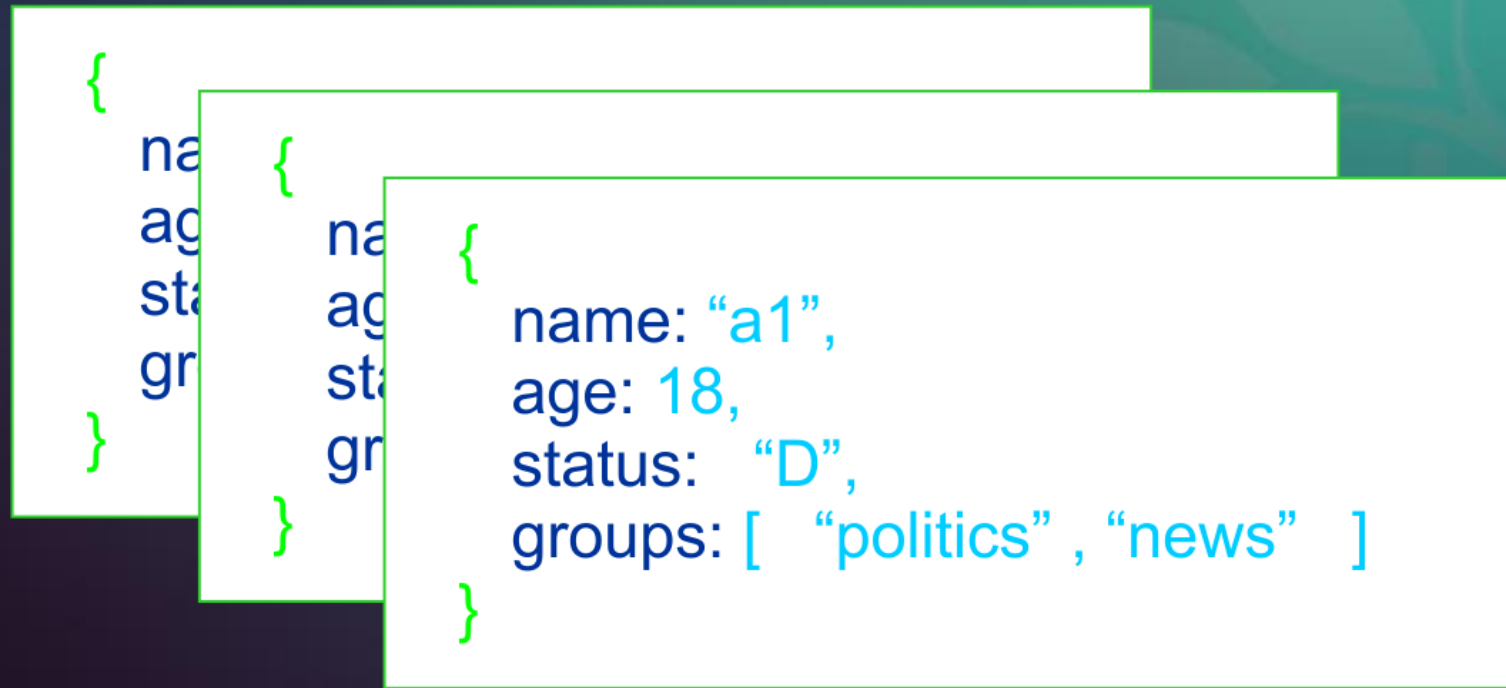


What is MongoDB ?

WHAT IS MONGODB :

What is MongoDB ?

MongoDB is a powerful, flexible and scalable general-purpose database . It is an agile database that allows schemas to change quickly as applications evolve. It is a NoSql Database.



Collection

History of MongoDB

HISTORY OF MONGODB



The database was
ripped out of
10gen's appengine.

Hu'mongo'us

"MongoDB" the name
choice comes from the
word humongous.



Started working on an
application platform for
the cloud

2010

Production stable version 1.4

2009

The company shifted to an open source
development model with commercial
and other supports.

2008

The application 10gen's appengine
was named Babble and database was
named MongoDB

2007

10gen company
was established.

Founded by Dwight
Merriman, Kevin p. Ryan
and Eliot Horowitz

Why MongoDB ?

എന്തുകൊണ്ട് ?

Schema-less

Document 1

```
{  
  "Name" : "Joe", "state" : "Delhi", "phone" :  
  9999900011, "age" : 23, "email" :  
  "joe@abc.com"  
}
```

Document 2

```
{  
  "Name" : "Mary" , "salary" : 20,000  
}
```

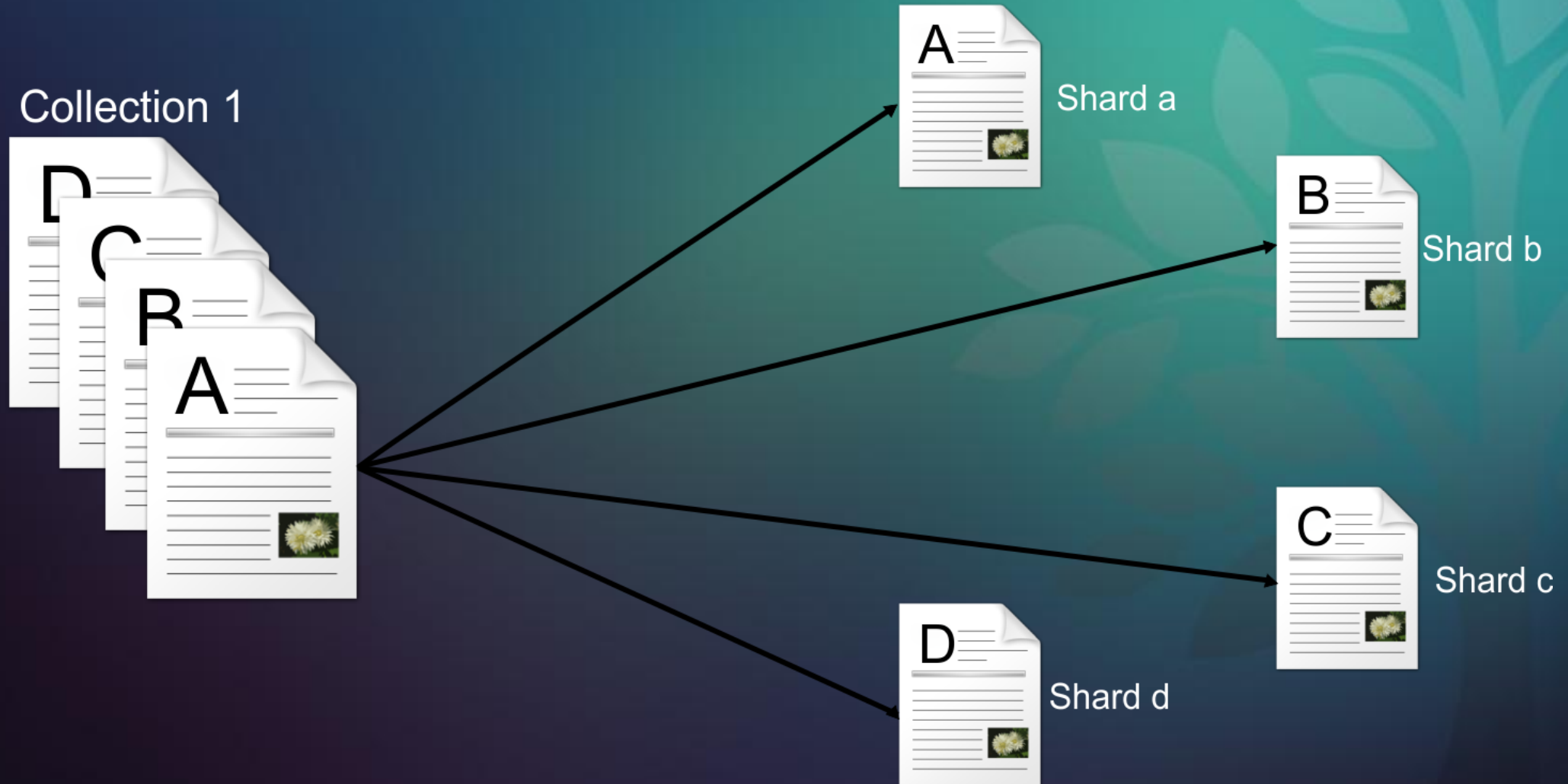
Employee collection

```
{  
  "Name" : "Joe", "state" : "Delhi",  
  "phone" : 9999900011, "age" : 23,  
  "email" : "joe@abc.com"  
}  
{  
  "Name" : "Mary" , "salary" : 20,000  
}
```

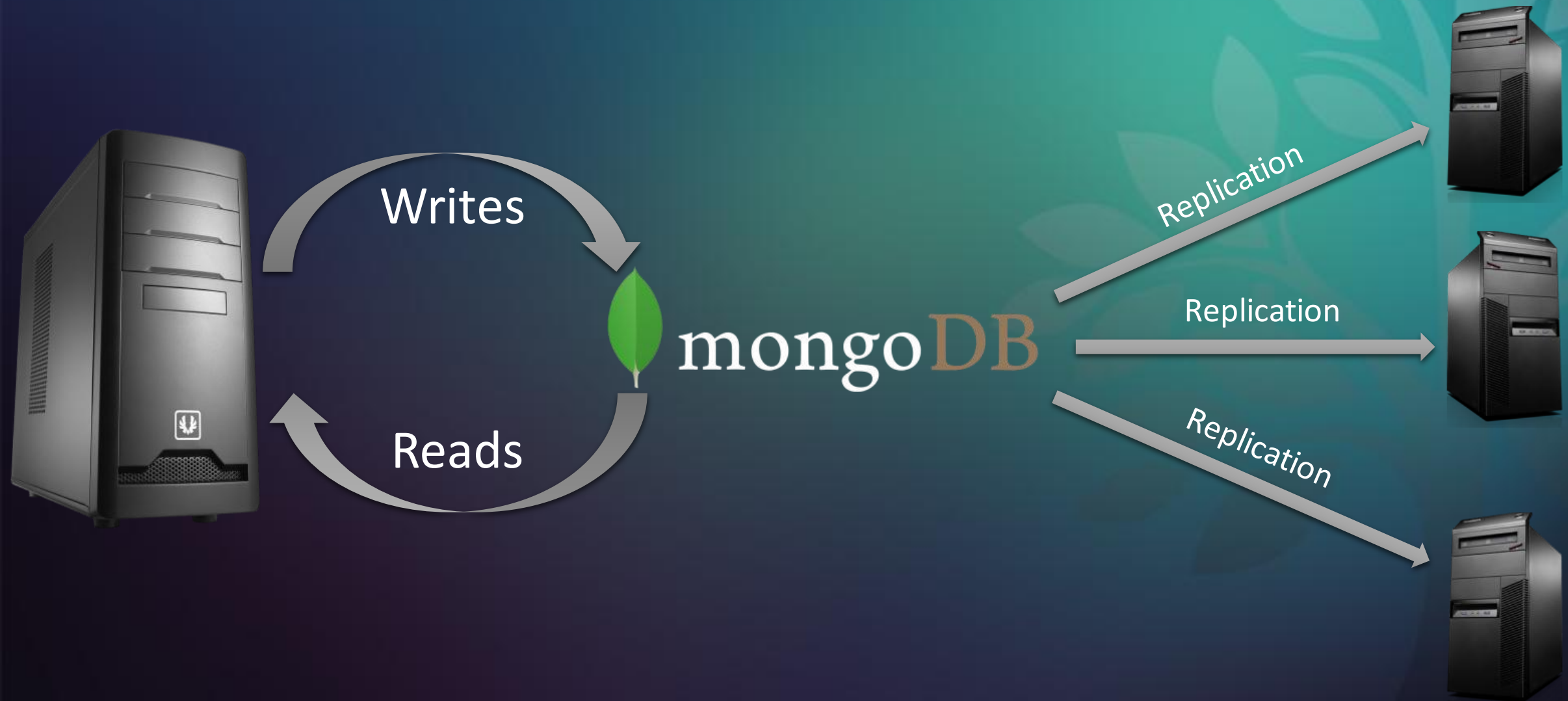
Extensive Driver Support



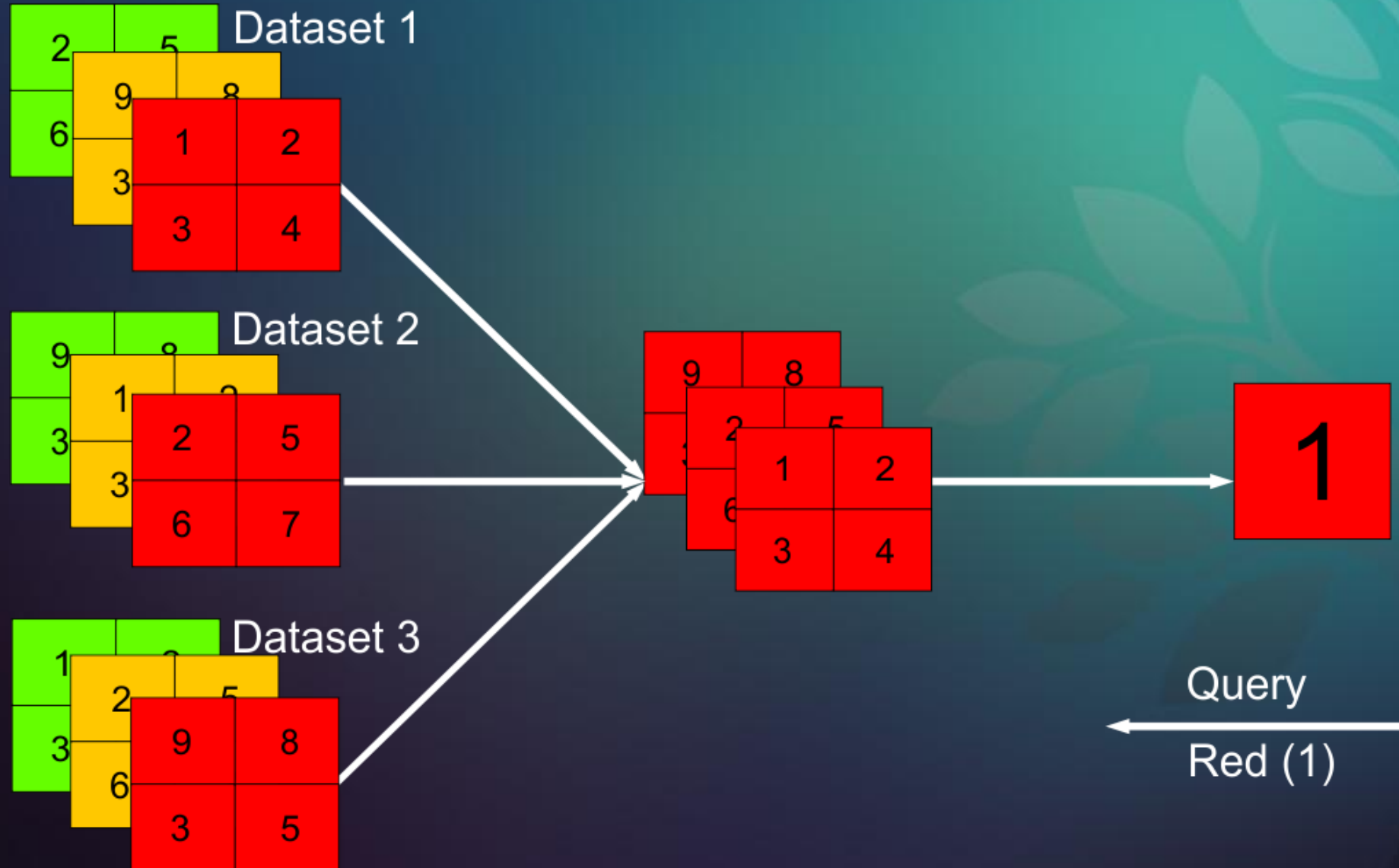
Auto-Sharding



Replication and High-Availability



Aggregation



Document Oriented Storage

```
{  
  name: "c1",  
  age: 24,  
  status: "A",  
  groups: [ "politics" , "news" ]  
}
```

Document Oriented Storage

```
{  
  name: "c1",  
  age: 24,  
  status:  
  groups:  
}  
  {  
    name: "b1",  
    age: 21,  
    status: "D",  
    groups: [ "politics", "news" ]  
  }
```

Document Oriented Storage

```
{  
  name: "c1",  
  age: 24,  
  status:  
  groups:  
}
```

```
{  
  name: "b1",  
  age: 21,  
  status:  
  groups:  
}
```

```
{  
  name: "a1",  
  age: 18,  
  status: "D",  
  groups: [ "politics", "news" ]  
}
```

collection

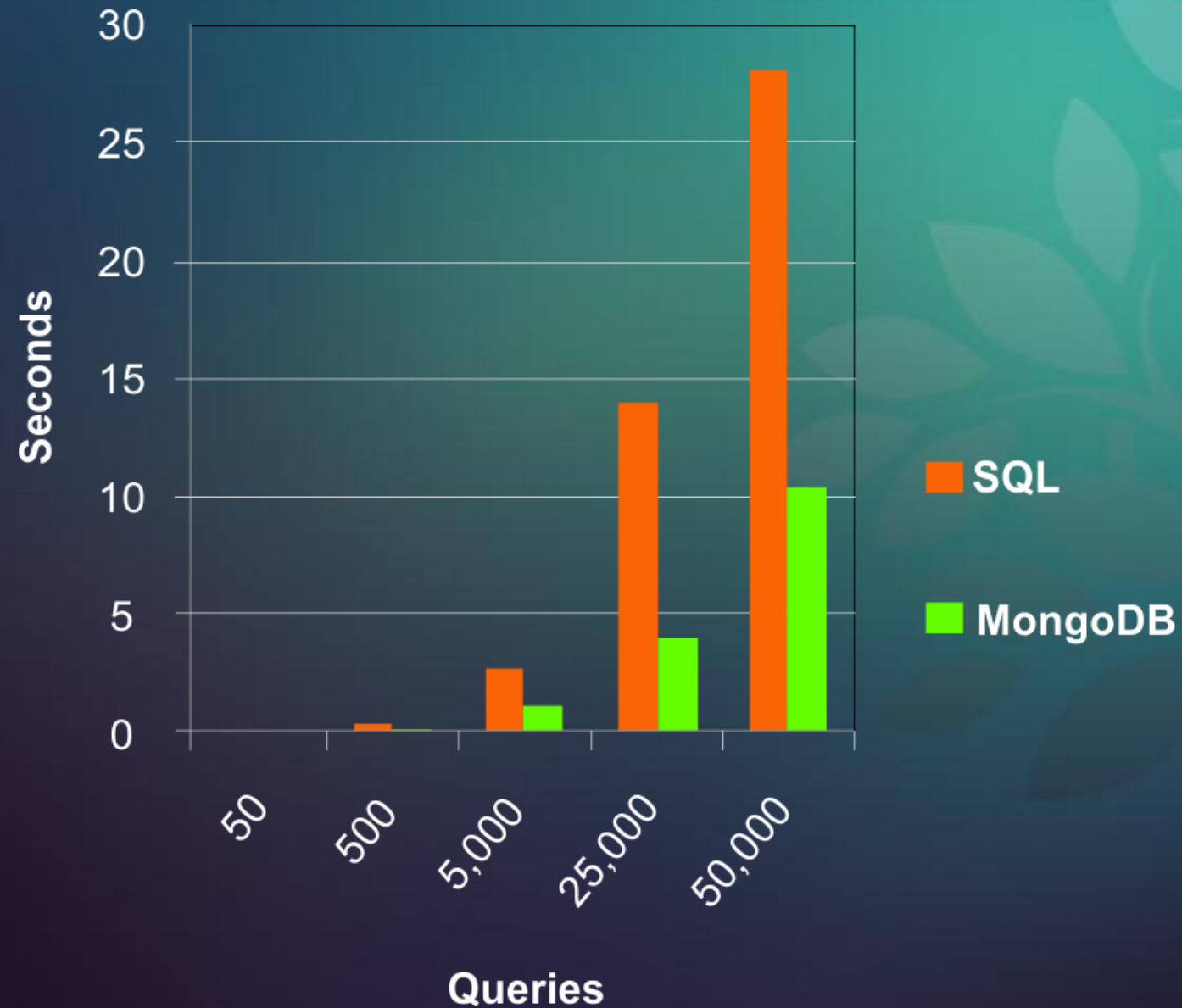
Advantages of MongoDB

Flexibility

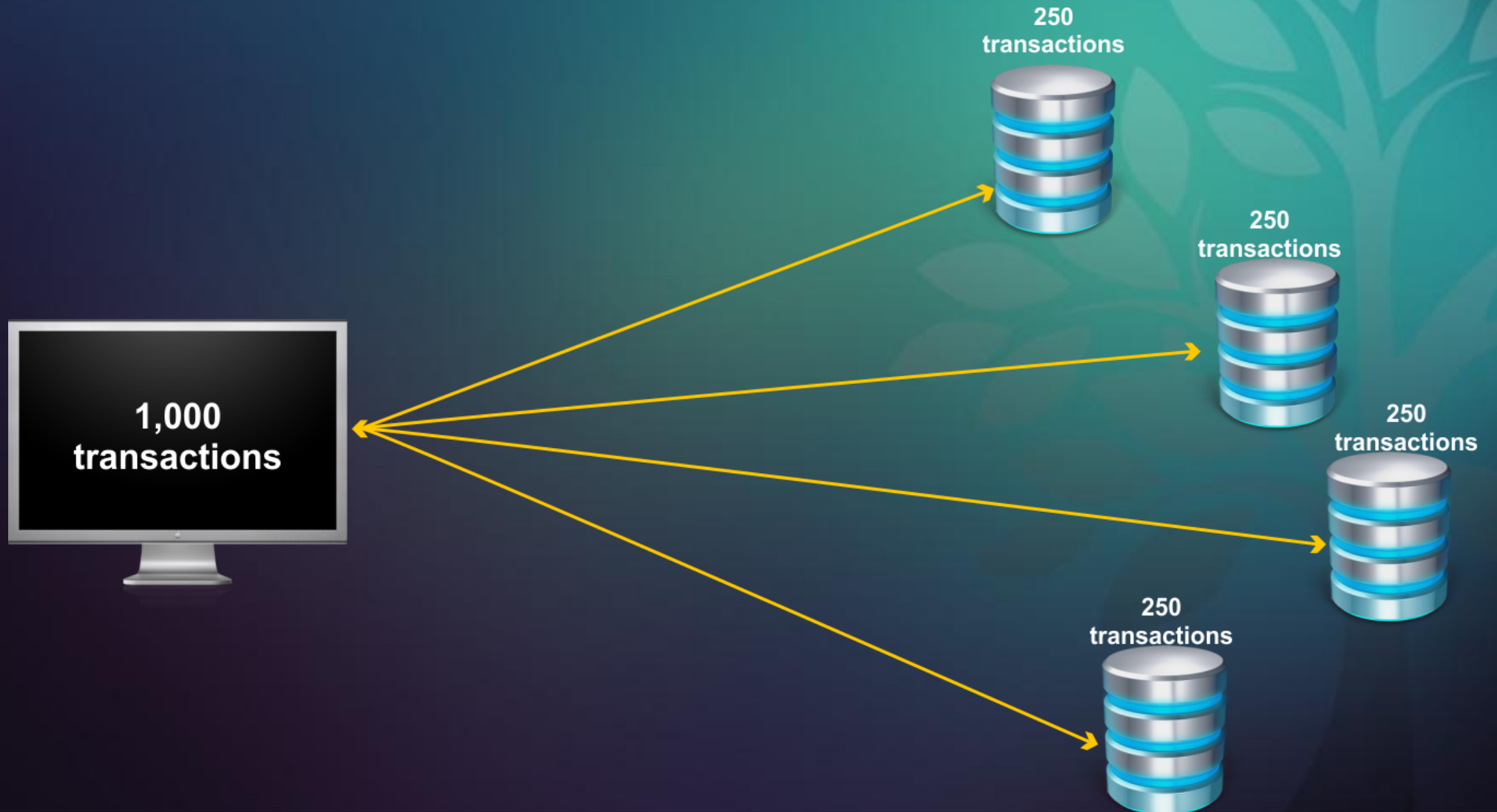


You can dynamically modify the schema without downtime. You spend less time in preparing your data for the database, and more time putting your data to work.

Performance



Scalability



Industries Using MongoDB

INDUSTRIES USING MONGODB





MetLife



ebay

Tools of MongoDB

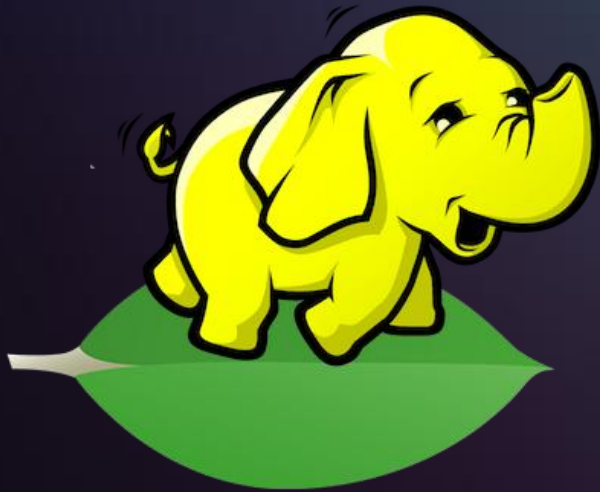
TOOLS OF MONGODB

MongoDB Tools



Robomongo

PHPMoAdmin



Hands - On

Hands - On



What we offer...

What we offer...





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Thank you for watching the Demo.
You can always contact us on:

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Your queries are always welcome