Creating Simple DynamoDB Tables

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What Is DynamoDB?

Fully managed noSQL database service

Designed with elasticity in mind

Highly redundant data storage

Basic Table Components

Item

Equivalent to a row in relational databases

Attribute

Equivalent to a column in relational databases

Table

Same as relational database

Basic Table Components

```
{
   "Name": "Bob",
   "Age": 26,
   "Company": "Globomantics",
   "Position": "DevOps"
}
```

Basic Table Components

```
{
   "Name": "Peter",
   ...
},
{
   "Name": "Jane",
   ...
},
```

```
{
   "Name": "Lucy",
   ...
},
{
   "Name": "Andy",
   ...
},
```

DynamoDB Primary Keys

```
{
  "Name": "Bob",
  "Age": 26,
  "Company": "Globomantics",
  "Position": "DevOps"
}
```

DynamoDB Primary Keys

```
{
  "Name": "Bob",
  "Age": 26,
  "Company": "Globomantics",
  "Position": "DevOps"
}
```

```
{
  "Name": "Bob",
  "Age": 44,
  "Company": "Globomantics",
  "Position": "Administrator"
}
```

DynamoDB Primary Keys

```
{
  "Name": "Bob",
  "Age": 26,
  "Company": "Globomantics",
  "Position": "DevOps"
}
```

```
{
  "Name": "Bob",
  "Age": 44,
  "Company": "Globomantics",
  "Position": "Administrator"
}
```

DynamoDB Primary Keys

Simple Primary Key

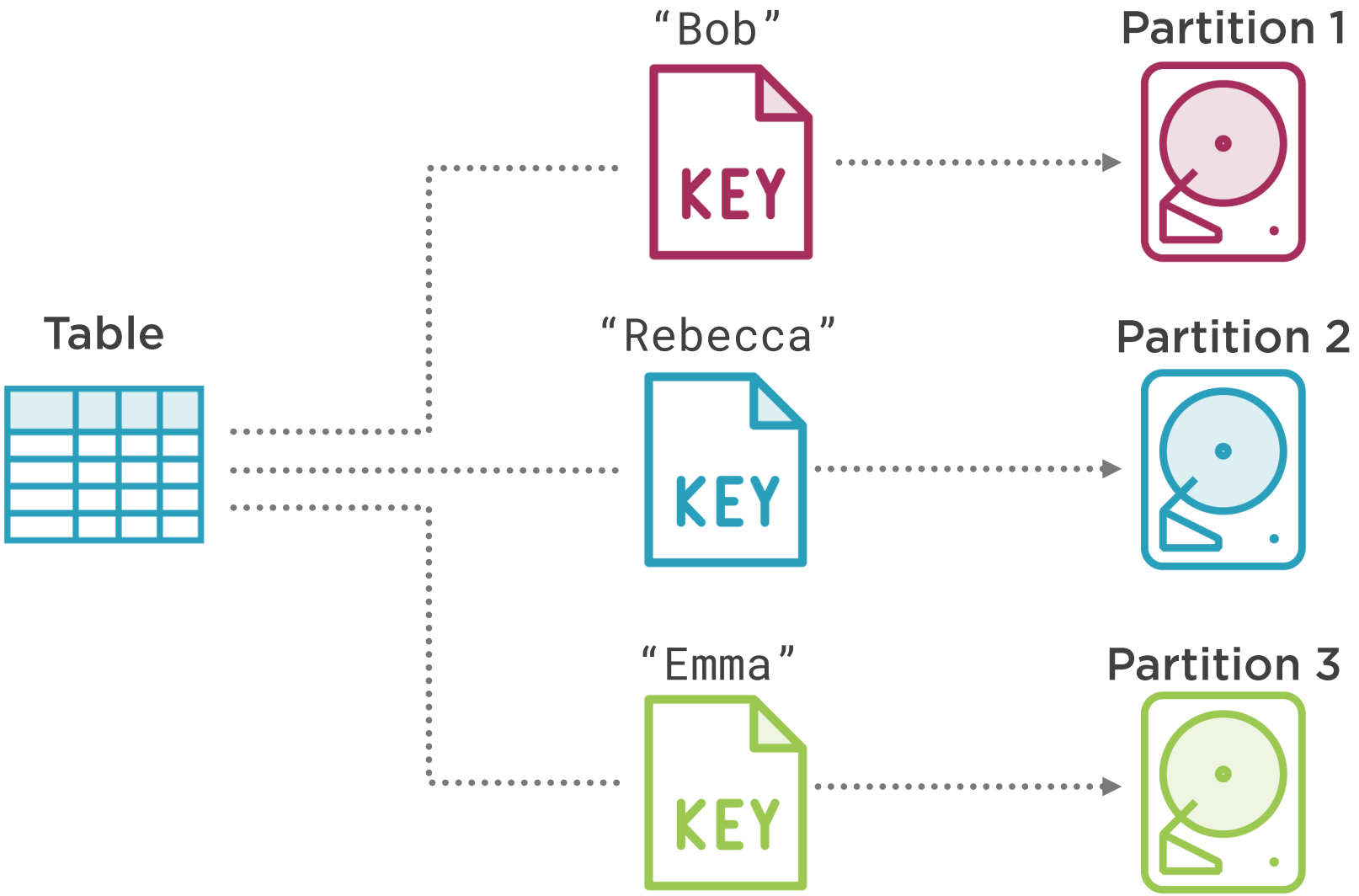
Partition Key

Composite Primary Key

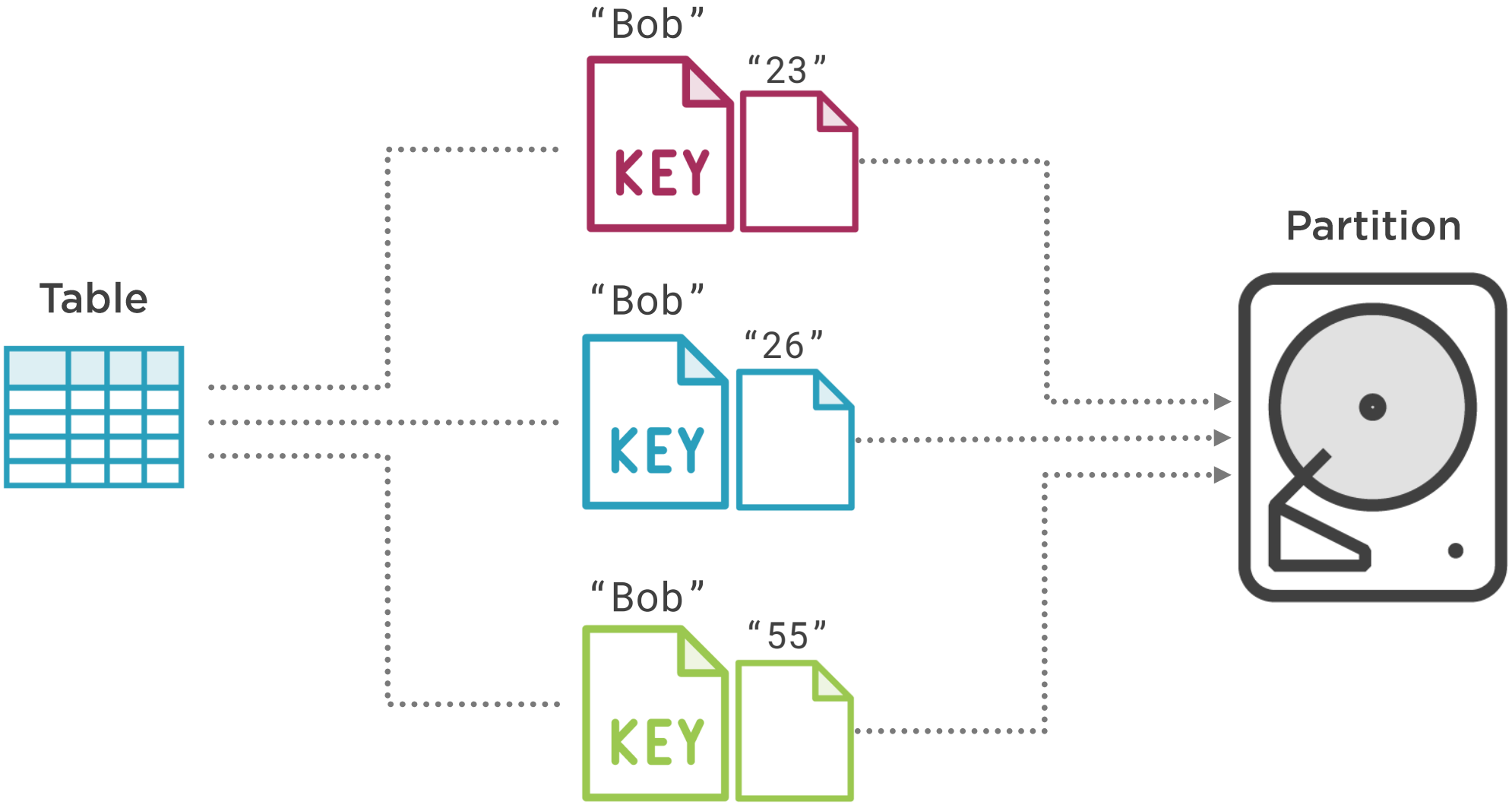
Partition Key

Sort Key

Understanding DynamoDB Partitioning



Understanding DynamoDB Partitioning



Allowed Datatypes

Scalar

One value at a time

Document

Multiple values of different types

Set

Multiple values of the same type

Scalar

```
{
   "Name": "Bob",
   "Age": 26,
   "Company": Null,
   "Employed": False
}
```

- String
- Integer
- Null
- Boolean

Document Type

```
{
   "Name": "Bob",
   "Employed": False
   "Hobbies": [
      ”Skiing”,
      ”Baseball”,
      3.14
   ]
}
```

◀ List

Document Type

```
{
   "Name": "Bob",
   "KitchenTools": [
      { "Spoons": 5 },
      “Pan”,
      “Dishwasher”
   ]
}
```

◀ Map

Sets

```
{
   "Name": "Bob",
   "LotteryNumbers": [
      34,
      22,
      45
   ]
}
```

- Integer set

Sets

```
{
   "Name": "Bob",
   "Kids": [
      “Rebecca”,
      “Emma”,
      “Andy”
   ]
}
```

- String set

```
{
    "Name": "Bob",
    "Secret": "c2VjcmV0",
    "LifeSecrets": [
        "amFuYQ==",
        "bHVjaWE=",
        "cGV0ZXI=",
        "YW5kcmVq"
    ]
}
```

Binary Data

- Binary scalar
- Binary set

Allowed Datatypes

```
{
  "Name": "Bob",
  "Kids": [
      "Rebecca",
      "Emma",
      "Andy"
  ]
}
```

Allowed Datatypes

```
{
   "Name": "Jane"
}
```

Allowed Datatypes

```
{
   "Name": "Peter",
   "KitchenItems": {
       "Spoons": 7,
       "Forks": 10,
       "Knives": 4
    }
}
```

Demo

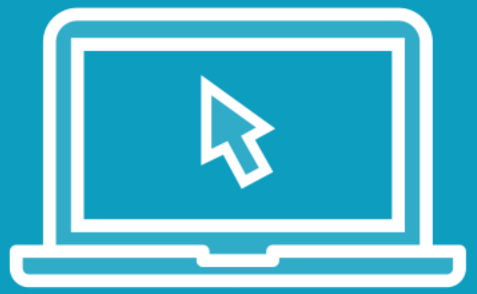


Table prerequisites:

- Table name – `simple_employee_table`
- Partition Key – `Name`
- Sort Key - `Age`

Summary

What is DynamoDB

Basic Table Components

DynamoDB Primary Keys

Storage Partitioning

Allowed Datatypes

Creating Simple Table