Introduction to Server Side Apps

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Nicolas El Khoury
DevOps Consultant

Overview

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→ Databases: DBMS, Data Model, Database Types.

→ NK-backend Service.

→ Demo: Deploy the NK-backend service on AWS.

Databases

Databases

→ Database Management System: Software programs that enable the creation and management of databases.

→ Data Model: allows the developers to logically structure this data in different tables and collections.

→ Database Types: Relational Databases, Document Databases, Graph Databases.

Relational Databases

Students (Table)

ID	Name (String)	Age (Integer)
111	Jhon	25
25	Peter	87

Courses (Table)

ID	Name	isAvailable
124	Introduction to Fullstack	true
629	Introduction to DevOps	true

ID	studentID	courseID
1	629	25
2	629	111

StudentsToCourses (Table)

Document Databases

```
{
  name: "Jhon",
  age: 25,
  email: "peter@example.com",
  address: "Some Address",
  id: 44
},
{

  name: "Peter",
  age: 87,
  id: 589
}
```
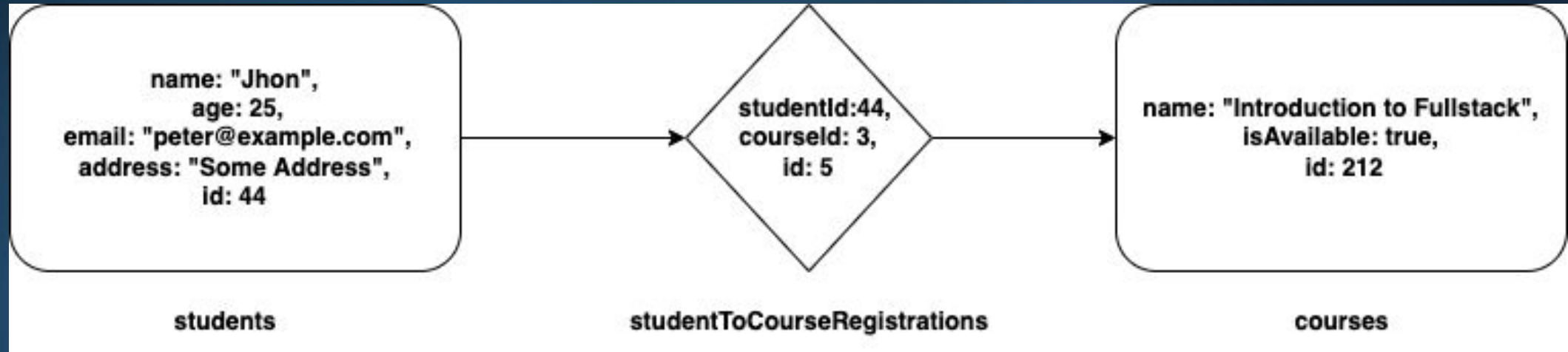
Students (Table)

```
{
  name: "Introduction to Fullstack",
  isAvailable: true,
  id: 212
},
{

  name: "Introduction to DevOps",
  isAvailable: true,
  id: 3
}
```

Courses (Table)

```
{
  studentId:44,
  courseId: 3,
  id: 5
},
{

  studentId: 589,
  isAvailable: 3,
  id: 776
}
```
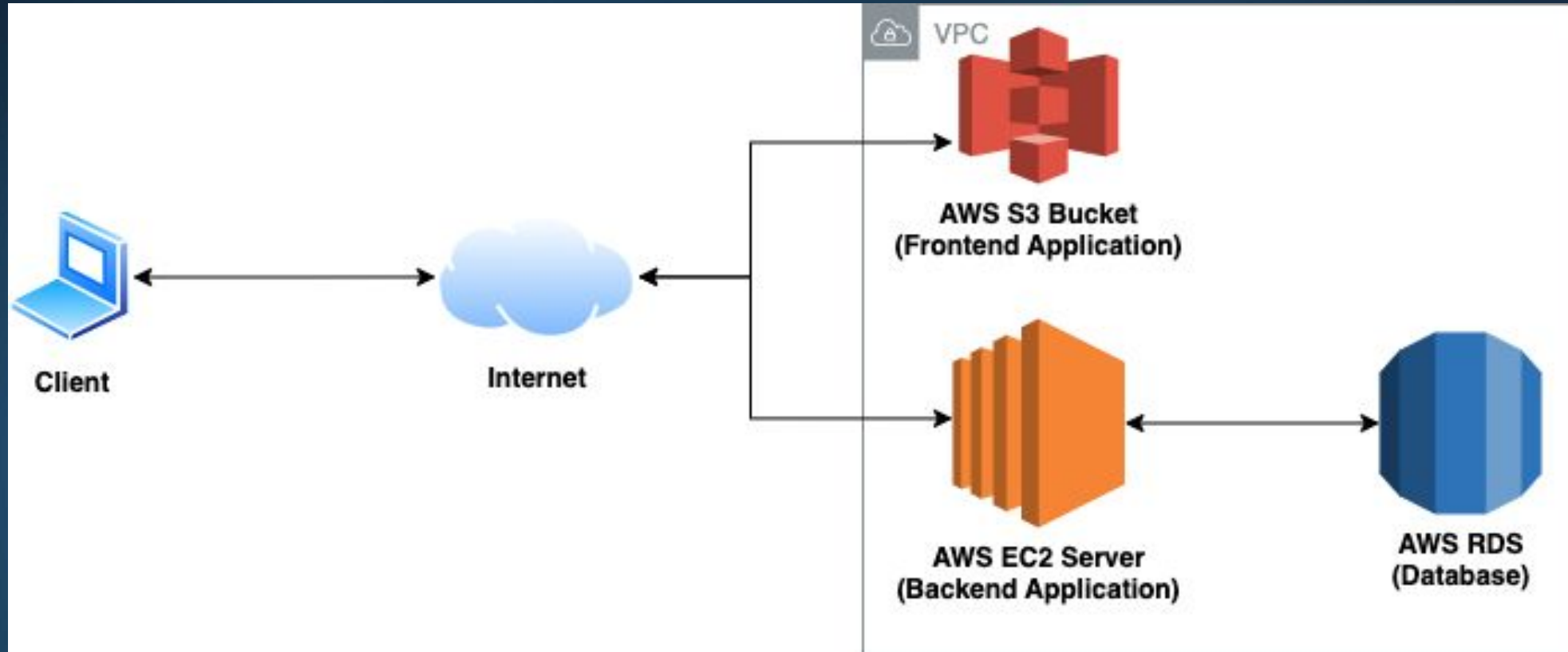
StudentsToCourses (Table)

Graph Databases

Connecting the Dots

How Everything Works Together

NK-backend
Service

NK-Backend Service

Open Source Project developed using NodeJS and SailsJS

uses ArangoDB to store and manage its data.

RESTful service, and exposes CRUP APIs to manage "Persons".

- **GET /health**: The health endpoint of the service.

- **POST /person**: Creates a Person Record in the database.

- **GET /persons**: Fetches all existing persons from the database.

- **DELETE /person/:id**: Deletes a person record from the database.

Demo

NK-Backend Service Deployment

- **Create the AWS required resources.**

- **Configure the virtual machine with the necessary pre-requiresites.**

- **Deploy the database and connect to it using a client.**

- **Deploy the backend application.**

- **Perform API requests.**

Thank You