

DataShapes React

Role-based login system with React



DataShapes

ROLE-BASED LOGIN SYSTEM WITH REACT

A Multi-tenant SaaS application with SSO functionality

Project Overview

DataShapes is a three-phase project – Frontend, Backend and Database – that was undertaken by Celestial Systems. A multi-tenant SaaS application developed with Single Sign-On functionality to generate edge intelligence data and inject it into the IoT devices.

Business Requirements

- ▶ To build an end-to-end DataShapes management platform that can generate edge intelligence data and inject it into the IoT devices
- ▶ Create a product that can be used in various domains to solve various edge device problems and also to analyze unstructured data
- ▶ To add the feature of multi-tenancy to the SaaS application
- ▶ To add Single Sign-On functionality

Challenges

Laying the basic structure of the architecture with multi-tenancy and SSO functionality was the initial challenge. Creating dashboards for each user was yet another challenge that we had successfully tackled in the later phase.

Celestial Solution

Celestial team has assisted in planning and designing the architecture of DataShapes application with multiple functionalities within a short span of time.

The project was divided into 2 phases. In the initial phase, we had designed 2 modules.

- Organizational module
- User module

The second phase is about creating the device module. Here the enterprise application is developed with multiple features like login-based accessibility and dedicated database resources.

Key Features

SSO Functionality

Implemented Single Sign-On functionality that will improve access to different platforms and resources.

Multi-tenancy

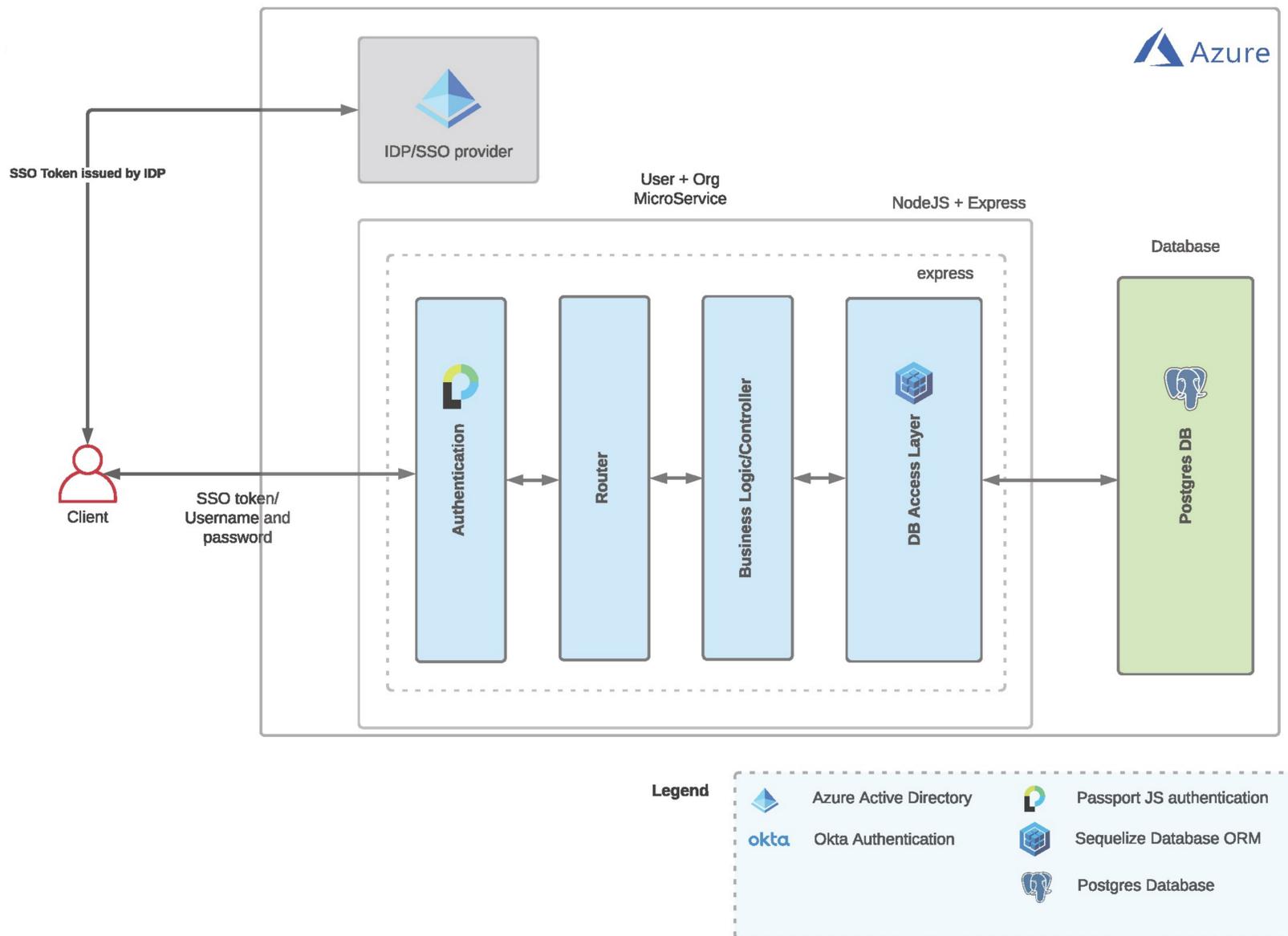
The architecture should be able to provision dedicated and isolated resource set (Frontend service, Backend Service and Database) for each newly added tenant.

Role-based Logins

User roles are classified into 4 parts – Super Admin, Org Admin, Org Member, and Normal User.

According to the roles assigned each user can have separate view of the dashboard and different accessibility

Architecture



USER ROLES AND APIS

There are three sets of APIs that the backend application provides in DataShapes. First one for the super-admin to record/enter the details of the organization that needs to be deployed and also to manage normal users.

Another set of APIs for the org-admin to configure their organization along with the APIs for org-members.

Final set of APIs for the normal users or users who are not part of any organization to sign-up and use the application.

Technologies



In Short

- ▶ Integrated Single sign-on functionality
- ▶ Created a Role-based login system
- ▶ Designed a Multi-tenant architecture
- ▶ Created separate dashboards for each user