WSO2 Con 2025 - Choreo Tutorial

Prerequisites

1. A GitHub Account
2. Git installed in your workstation
3. A recent version of Google Chrome, Mozilla Firefox
4. Microsoft Visual Studio (VSCode)
5. Choreo Account
6. NodeJS installed (above v20.11.0)
7. DBeaver or any other postgresql client

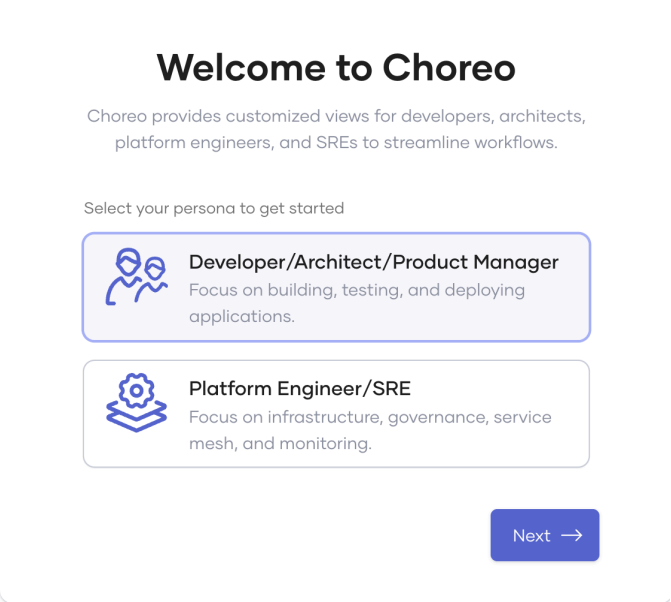
Introduction

The application includes a backend service written in **Go**, a **ReactJS** frontend, and a **MySQL** database. This tutorial demonstrates how Choreo supports both developers and platform engineers by enabling secure deployments, managed APIs, and built-in observability. By the end, you'll have a working application running on Choreo and a clear understanding of how its platform capabilities accelerate delivery and improve operational visibility.

Section 1: Deploying a Microservice in Choreo

Create the database

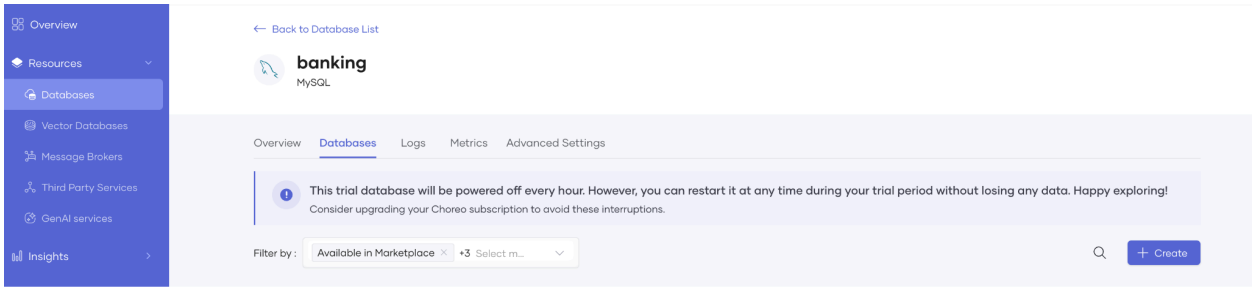
1. Login to Choreo (https://console.choreo.dev/). Make sure you are in the “Developer” view If you are signing in for the first time. Select “Developer/Architect/Product Manager” during the sign up process. Select “US” as the Region.



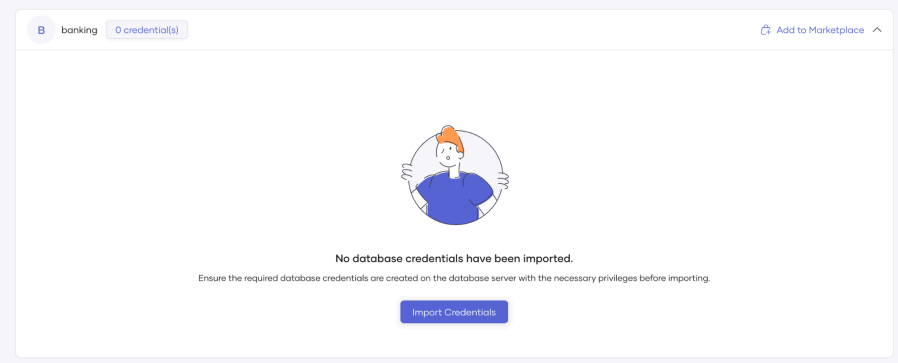
2. Go to the Organization home page.
3. From the left menu select Resources → Databases
4. Use the following data to create a database server

Field	Value
Select Storage	MySQL
Service Name	banking
Select Cloud Provider	Digital Ocean
Select Region	United States
Select Service Plan	Hobbyist

5. Click on the "**Create**" Button. Creating the database will take a couple of minutes.
6. Navigate to the newly created "banking" database service. Switch to the "Databases" tab. Click on the "**Create**" button.

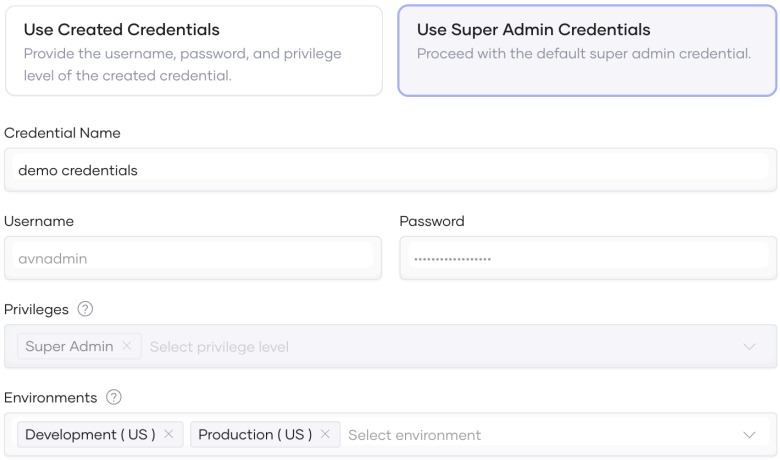


7. Create a new database called “**banking**”.
8. Expand the database drop down and click on “**Import Credentials**”.

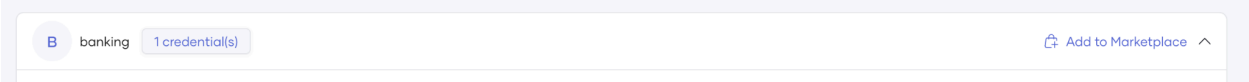


9. Fill the dialog box using the following information and Click on **Save** button.

Field	Value
Credential	Use Super Admin Credentials
Credential Name	demo credentials
Environments	Development, Production



10. Click on the “Add to Marketplace” button and list this database Choreo’s marketplace.



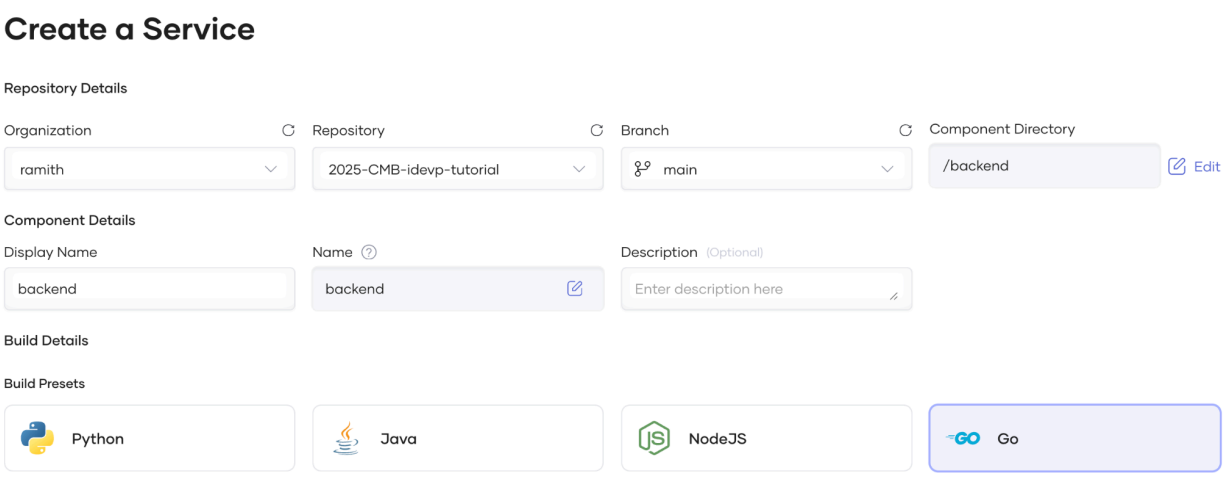
Create the service component

1. Fork https://github.com/wso2con/2025-CMB-idevp-tutorial/. Keep the "**Copy the main branch only**" checkbox unchecked.
2. Clone the forked repo to your workstation

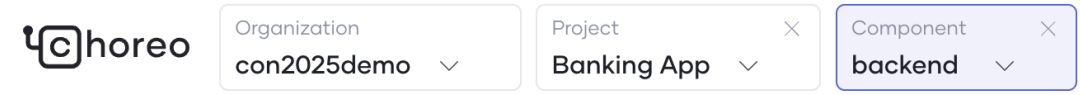
```
None
git clone <REPO_URL>
```

3. Open a new browser tab and go to https://console.choreo.dev/ and Sign in
4. Go to the Organization home page
5. Create a project named "Banking App".
6. Go to "Banking App" project. And click on "**Create Component**" button
7. Click on the **"Service"** card to create new service component

Field	Value
Component Name	backend
Connect Your Repository	<YOUR_FORKED_REPO>
Buildpack	Go
Go Project Directory	/backend
Language Version	1.x

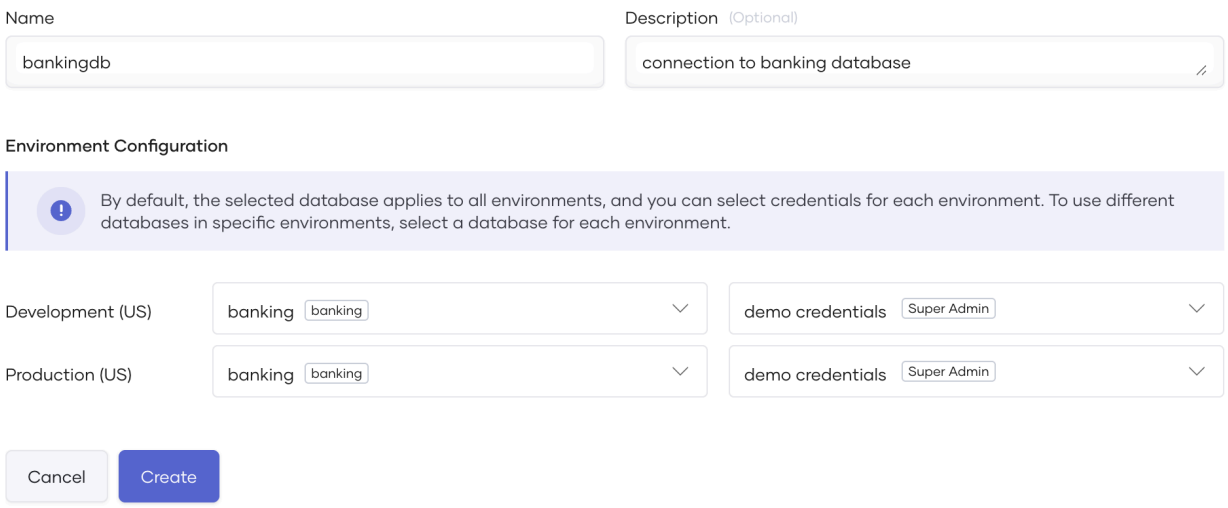


11. Make sure you are on the “backed” service’s component dashboard.



12. Select **Build** in the left menu. The initial build should have already started. If not please click on the “**Build Latest**”.
13. Select “**Connections**” in the left menu. Click on the “**Database**” card. Select “banking” MySQL database.
14. Complete the dialog using the following information. Click on “**Create**”

Field	Value
Name	bankingdb
Description	Connection to banking database
Environment Configuration	**Database**: banking **Credential**: Demo credentials



15. **Note:** Choreo will show you a developer guide on the code modifications required to access the database (e.g. reading environment variables). These changes are already done in the code repository.

16. Go to “**Deploy**” in the left menu. And click on “**Configure & Deploy**” button.
17. Complete the wizard and click on the “**Deploy**” button.
18. Go to Test → Console
19. Test the API by creating a new bank account. (I.e. You can send a POST request to /users/{userId}/accounts)

```JSON
{
  "account_no": "1",
  "balance": 1000,
  "bank_name": "HSBC",
  "id": 1,
  "owner": "1",
  "user_id": 1
}
```

20. Go to the Deploy page and click on the “**Promote**” button in the Development card.
21. From the configuration type pane select “**Define new configuration values**”. Complete the wizard.

Section 2: Deploying a web application on Choreo

Create the web application component

1. Make sure you are on “**Banking App**” project overview page
2. Click on the “**Create**” button and select the **Web Application** card. Use following details to create the component.

Field	Value
Connect Your Repository	<YOUR_FORKED_REPO>
Branch	main
Component Directory	/frontend
Display Name	Frontend
Build Preset	React
Build Command	npm run build
Build Path	/dist
Node Version	20

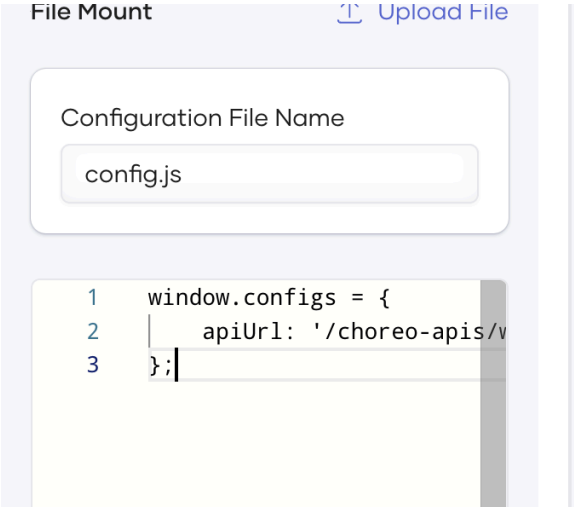
3. Go to **Connections** from the left menu → Click on “**Service**”. Select “**backend**” card. Use the following information to complete the wizard.

Field	Value
Name	Connection to backend
Access Mode	Public
Authentication Scheme	OAuth2

4. Copy the connection configuration value for use in deployment. This is necessary because we're using Choreo-managed authentication to authenticate with the backend.
   For example:

```
None
    window.configs = {
        apiUrl: '<<value from your connection>>',
    };
```

5. Go to the "**Build**" page and click on the "**Build Latest**" button.
6. Navigate to the "**Deploy**" page and select the "**Configure & Deploy**" button. Enter the value you copied earlier into the "Configure & Deploy" pane. It should appear as shown in the screenshot below:



7. Complete the wizard with default settings

Configure the Choreo Identity Provider

1. Go to Organization overview page
2. Go to **Settings** → **Application Security**.
3. Click on the **Manage** link on "**Choreo Built-in Identity Provider**" card
4. Select the file `YOUR_FORKED_REPO/userstore.csv` and click the "**Upload**" button to update the Choreo Identity Provider.
5. Navigate back to **"Web Portal"** → **Frontend** component. Then go to the **Deploy** page and click on the **Web App URL** in the development card.
6. Use following credentials to login and tryout the application

Field	Value
Username	john
Password	user@1234