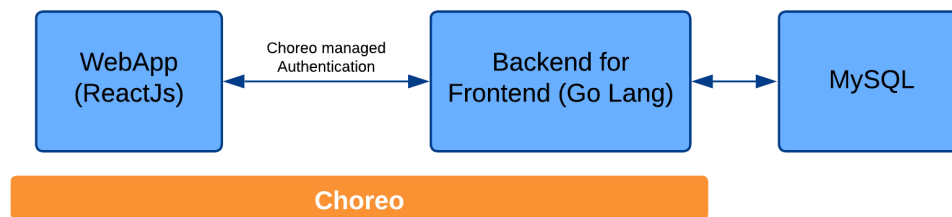


WS02 Con 2025 - Choreo Tutorial

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



In this tutorial, we'll walk through building and deploying a full-stack sample application on **WS02 Choreo**. The application includes a backend service written in Go lang, 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.

Welcome to Choreo

Choreo provides customized views for developers, architects, platform engineers, and SREs to streamline workflows.

Select your persona to get started



Developer/Architect/Product Manager

Focus on building, testing, and deploying applications.



Platform Engineer/SRE

Focus on infrastructure, governance, service mesh, and monitoring.

Next →

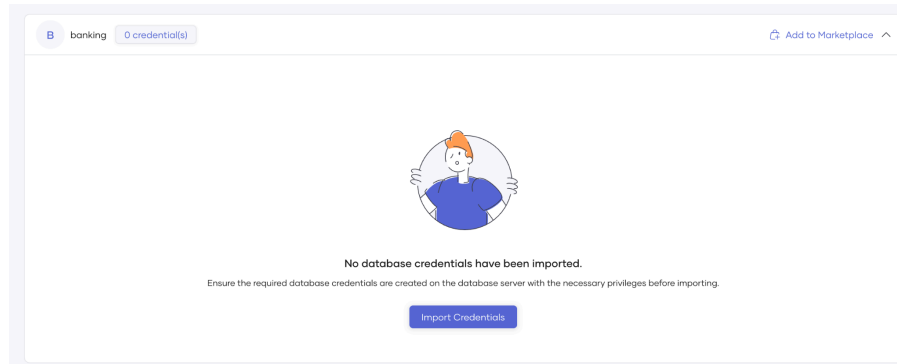
2. Go to the Organization home page.
3. From the left menu select Resources → Databases
4. Use the following data to create a database server

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.

The screenshot shows the Choreo interface. On the left is a sidebar with a menu: Overview, Resources (expanded), Databases (selected), Vector Databases, Message Brokers, Third Party Services, GenAI services, and Insights. The main content area is titled 'banking MySQL' and has a 'Back to Database List' link. Below the title are tabs for Overview, Databases (active), Logs, Metrics, and Advanced Settings. A message box states: 'This trial database will be powered off every hour. However, you can restart it at any time during your trial period without losing any data. Happy exploring! Consider upgrading your Choreo subscription to avoid these interruptions.' At the bottom, there is a 'Filter by' section with 'Available in Marketplace' selected, a '+3 Select m...' dropdown, a search icon, and a '+ 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

Use Created Credentials
Provide the username, password, and privilege level of the created credential.

Use Super Admin Credentials
Proceed with the default super admin credential.

Credential Name

Username

Password

Privileges ?

Super Admin ×

Select privilege level

▼

Environments ?

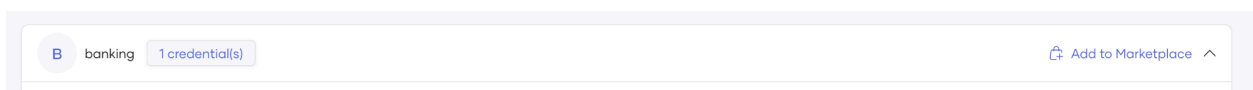
Development (US) ×

Production (US) ×

Select environment

▼

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

Create a Service

Repository Details

Organization	Repository	Branch	Component Directory	
ramith	2025-CMB-idevp-tutorial	main	/backend	Edit

Component Details

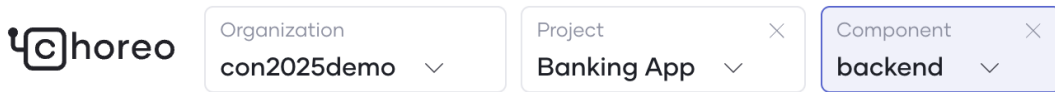
Display Name	Name	Description (Optional)
backend	backend	Enter description here

Build Details

Build Presets

 Python	 Java	 NodeJS	 Go
--	--	--	--

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	<table><tr><td>Database</td><td>banking</td></tr><tr><td>Credential</td><td>Demo credentials</td></tr></table>	Database	banking	Credential	Demo credentials
Database	banking				
Credential	Demo credentials				

Name

bankingdb

Description (Optional)

connection to banking database

Environment Configuration

!

By default, the selected database applies to all environments, and you can select credentials for each environment. To use different databases in specific environments, select a database for each environment.

Development (US)

banking banking

demo credentials Super Admin

Production (US)

banking banking

demo credentials Super Admin

Cancel

Create

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:



File Mount [Upload File](#)

Configuration File Name

config.js

```
1 window.configs = {
2 |   apiUrl: '/choreo-apis/v
3 | }
```

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