Chinook Web App

Architecture Documentation

Version wip, 2025-03-30

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Architecture

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.arc42help::before {content: "?";}
.arc42help:hover {width:auto; height: auto; z-index: 100; padding: 10px;}
.arc42help:hover::before {content: "";}
@media print {
    .arc42help {display:none;}
}
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About arc42

arc42, the template for documentation of software and system architecture.

Template Version 8.2 EN. (based upon AsciiDoc version), 2025-03-30

.1. Introduction and Goals

This is a starter template for React Router based applications. It should address the needs of a smaller web-app that features a lot of create-read-update-delete type applications.

.1.1. Requirements Overview

The main requirements are

- provide consistent and easy form handling
- support strong table handling
- provide authentication mechansims based on OIDC
- provide role-base-access-control (RBAC) for authorization
- provide database schema management
- expose a business API
- fetch external data via a REST API
- provide internationalization of the UI
- provide guidelines to integrate with Java Backends
- integrate a documentation system

.1.2. Quality Goals

- provide concepts that (Java) backend developers can relate to
    - provide full type safety
    - inversion of control
    - separation of concerns
- provide good practices

.1.3. Stakeholders

Role/Name	Expectations
Developer	Ability to have a template to start coding
Solution Architect	Template that provides good guidelines for implementing CRUD applications

.2. Architecture Constraints

Constraint	Explanation
Fullstack Typescript	We want to minimize the changing of ecosystems for creating a simple web-app
Spring Boot for Backend for integration requirements	Familiarity with the Java / Spring Boot Ecosystem

.3. Context and Scope

.3.1. Business Context

<Diagram or Table>

<optionally: Explanation of external domain interfaces>

.3.2. Technical Context

<Diagram or Table>

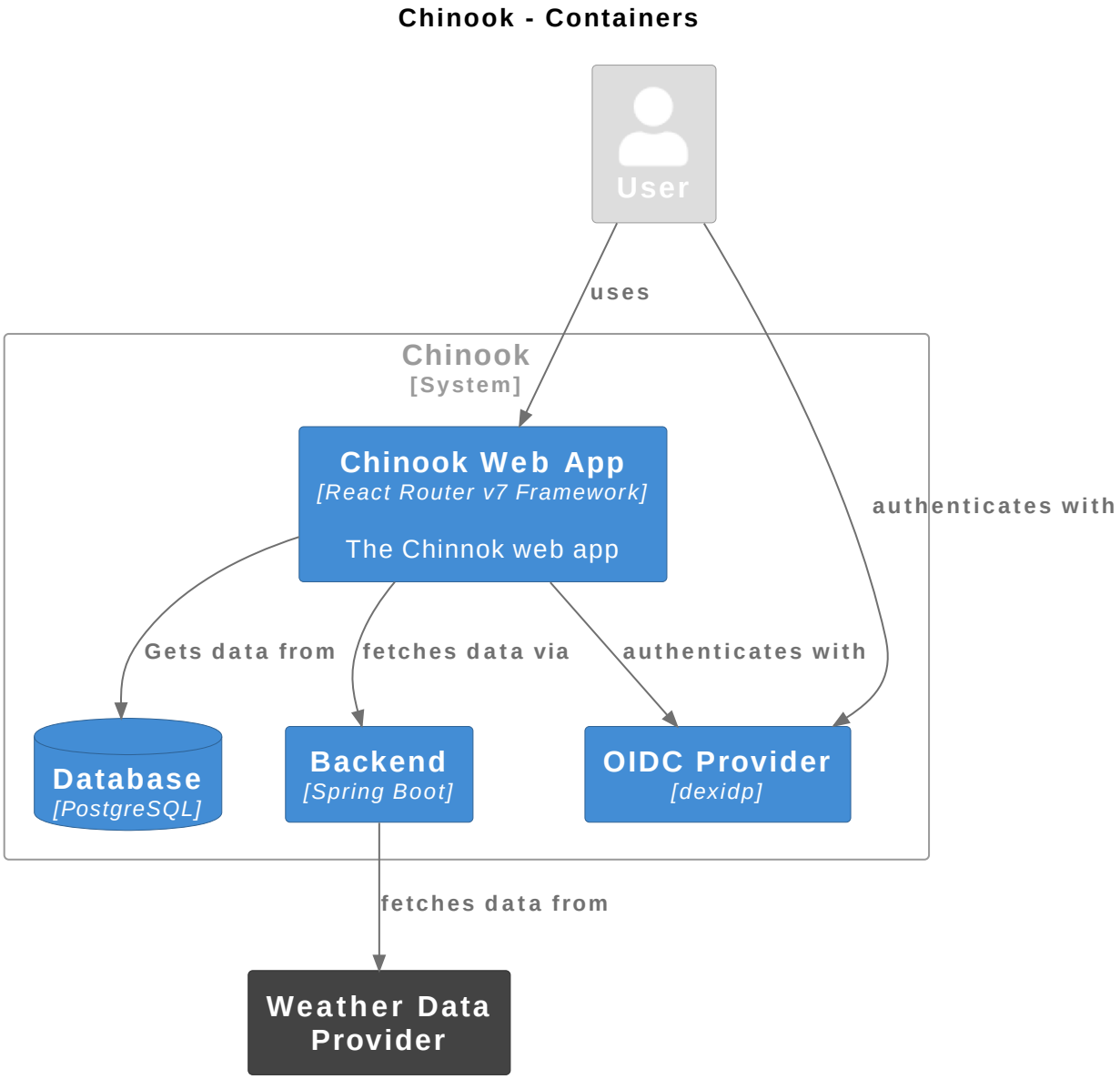
<optionally: Explanation of technical interfaces>

<Mapping Input/Output to Channels>

.4. Solution Strategy

.5. Building Block View

.5.1. Whitebox Overall System



This shows the basic interaction patterns between the user, the application and different parts.

Name	Responsibility
<black box 1>	*<Text>*
<black box 2>	*<Text>*

.5.2. Level 2

.6. Runtime View

.6.1. <Runtime Scenario 1>

- *<insert runtime diagram or textual description of the scenario>*
- *<insert description of the notable aspects of the interactions between the building block instances depicted in this diagram.>*

.6.2. <Runtime Scenario 2>

.6.3. ...

.6.4. <Runtime Scenario n>

.7. Deployment View

.7.1. Infrastructure Level 1

<Overview Diagram>

Motivation

<explanation in text form>

Quality and/or Performance Features

<explanation in text form>

Mapping of Building Blocks to Infrastructure

<description of the mapping>

.7.2. Infrastructure Level 2

<Infrastructure Element 1>

<diagram + explanation>

<Infrastructure Element 2>

<diagram + explanation>

...

<Infrastructure Element n>

<diagram + explanation>

.8. Cross-cutting Concepts

.8.1. *<Concept 1>*

<explanation>

.8.2. *<Concept 2>*

<explanation>

...

.8.3. *<Concept n>*

<explanation>

.9. Architecture Decisions

.10. Quality Requirements

.10.1. Quality Tree

.10.2. Quality Scenarios

.11. Risks and Technical Debts

.12. Glossary

Term	Definition
<Term-1>	*<definition-1>*
<Term-2>	*<definition-2>*