

The Road Warrior Functional Architecture

Document Reference	The Road Warrior Architecture
Date	15 September 2023
Author	Billwa Nath Pal
Total Pages	7
Issued by	LearningMate QSG
Approved by	LearningMate PEG

Table of Contents

Table of Contents	2
Revision History	3
Introduction	4
Purpose & Scope	4
Executive Summary	4
System Overview	5
Design Constraints	5
Design Overview	5
Architectural Goals and Constraints	5
The Road Warrior Functional Architecture	6
The Road Warrior Infra Architecture	7
External Interfaces	8
Non-Functional Requirements (NFRs)	8

Revision History

Version #	Date	Changes	Prepared/ Changed By	Reviewed/ Approved By
V1.0	Sep. 14, 2023	Baseline	Billwa Nath Pal	Ayanjit Shome
E1000	Sept 15, 2023	Ready for Release	Billwa Nath Pal	Ayanjit Shome

Introduction

Purpose & Scope

This document describes the design details of The Road Warrior portal. The application is to be catered to meet the requirements of Road Warrior portal users, mainly travelers and different levels of administrative users. This document will not specify any actual testing strategies of the application.

Executive Summary

LearningMate will be engaged with The Road Warrior team for the development of the next generation online trip management portal.

LearningMate attended a workshop with the The Road Warrior team as a first step to gain an in-depth understanding of the new online trip management platform. The purpose of the workshop was to get familiarized with the use cases, understand the integration systems and decide the solutions for the target platform.

Based on the findings of the workshop, LearningMate has arrived at an indicative plan to build the online trip management portal (both web & mobile application).

System Overview

List of systems & processes to be developed as part of the online trip management portal:

1. Travelers Registration
2. Authentication & Authorization
3. Travelers Dashboard
4. Manage Reservations (Add/Edit/Delete/List/Group by Trip)
5. Social Sharing
6. Airlines, Hotels & Car Rentals - Integration
7. SABRE & APOLLO - Integration
8. Poll Emails
9. Filter & Whitelist Emails
10. Summary Reports
11. Analytical Data Collection & Reporting System

Design Constraints

The Road Warrior portal will consist of a list of features as depicted in the Architecture Diagram along with associated CMS/Admin functionalities and integration with Airline, Hotels, Car Rentals, SABER and APOLLO APIs integration. It will consolidate all B2C online trip management activities in a centralized portal for better usability, accessibility and maintainability.

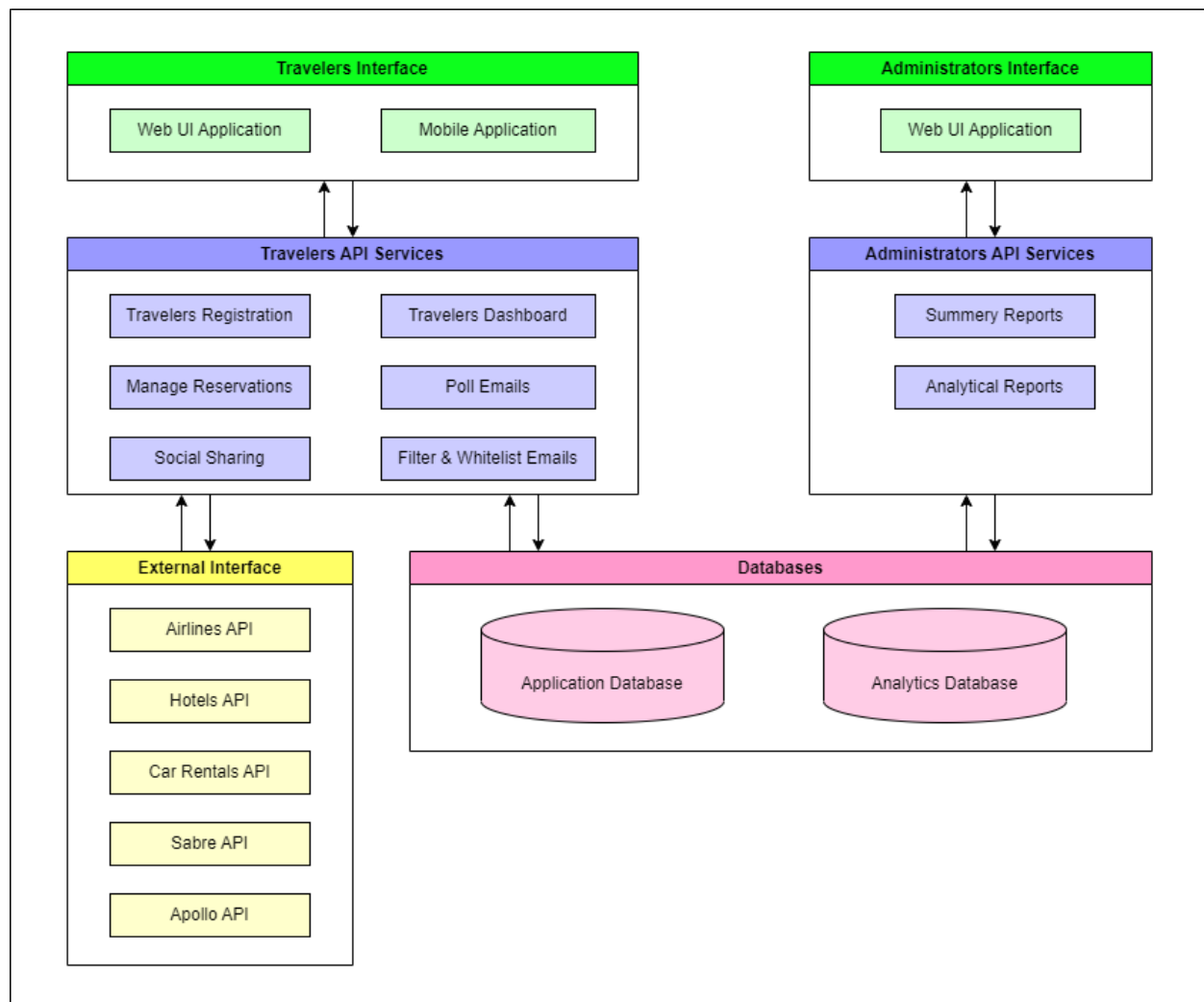
Design Overview

Architectural Goals and Constraints

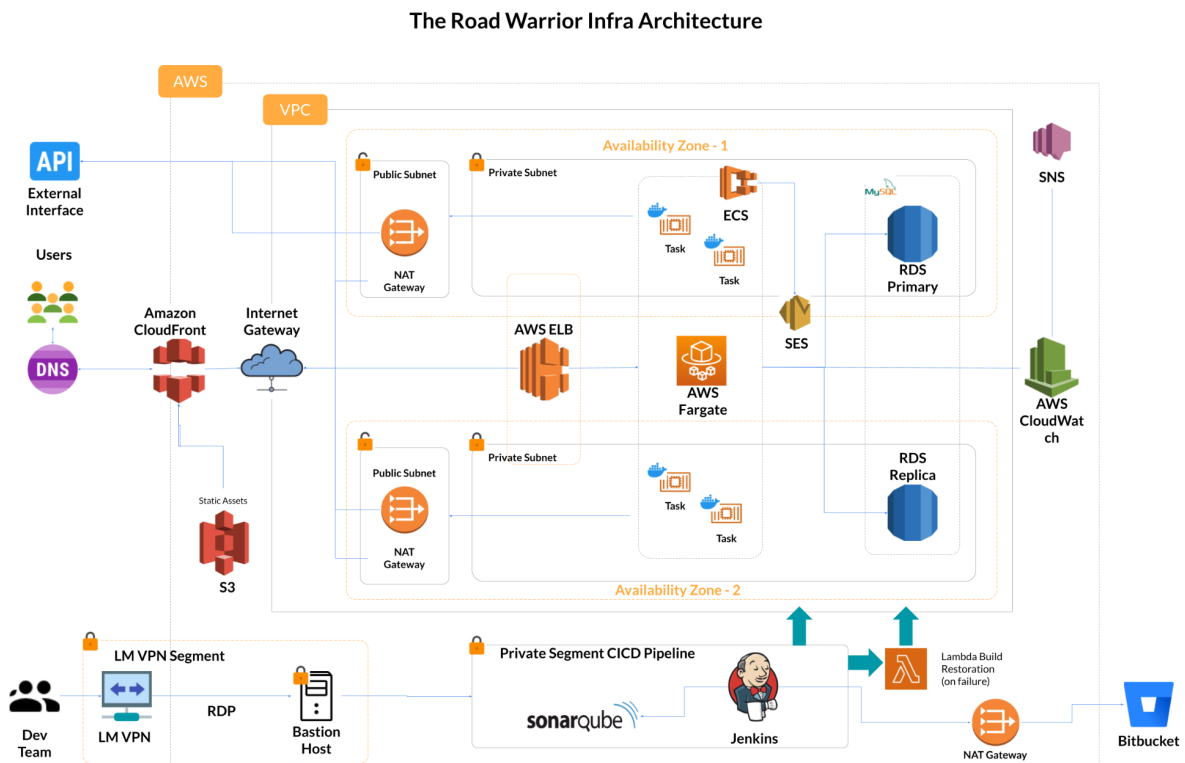
The overall architecture goals of the system is to provide web & mobile applications that can be used by the Road Warrior staff and Travellers.

The Road Warrior portal can be accessed from the browser on a laptop, desktop and handheld device's web browser (iOS, Android, iPad) along with native mobile applications for Android & iOS.

The Road Warrior Functional Architecture



The Road Warrior Infra Architecture



External Interfaces

External systems are any systems that are not within the scope of the system under development, regardless whether the other systems are managed by the organization or another firm.

The Road Warrior will be interacting with 3 types of external systems, those are as given below:

1. Existing Travel System (SABRE & APOLLO)
2. Preferred Travel Agency
3. Social Sharing

Non-Functional Requirements

1. Scalability
2. Accessibility
3. Capacity
4. Reliability
5. Performance
6. Recoverability
7. Maintainability & Manageability
8. Data Protection & Integrity
9. IT Security
10. Serviceability
11. Regulatory & Compliance

12. Usability

Specific NFR

- Active users/week: 2 million
- Total users: 15 million (user accounts)
- Service availability: 99.99%
- Travel updates must be presented in the app within 5 minutes of generation by the source
- Response time from web (800ms) and mobile (First-contentful paint of under 1.4 sec)