Celtrino for Transport Plus

Vehicle Tracking System

Document Description

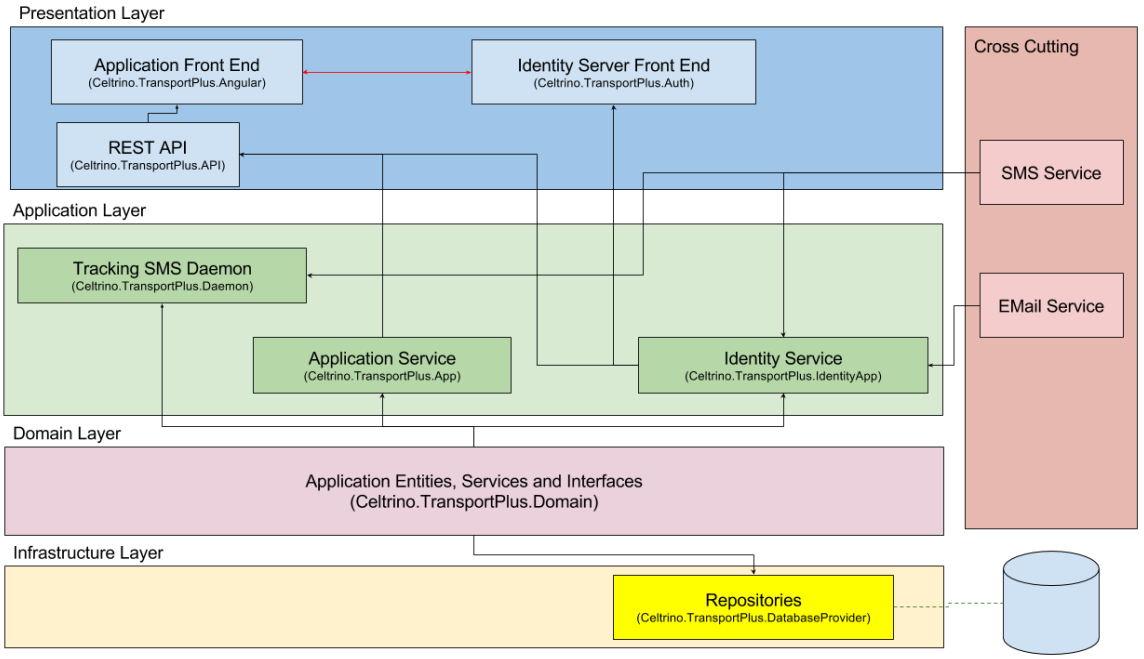
This document is intended to provide the basic concept for a vehicle tracking system, to monitor Transport Plus fleet in a map. The GPS Data is provided by a GPS with GPRS modem module, sending and receiving position data by SMS messages.

Technologies Used

- Linux Server | Windows Server | Mac Server
- PGSQL Server | MSSQL Server
- ASP.NET Core 1.1
- Identity Framework with Identity Server 4
- Entity Framework with npgsql | MsSqlServer.
- AngularJS.
- Bootstrap.
- Google Maps API.
- Send/Receive SMS API.

Project development premises:

- Model Driven Design.
- Layered Project Organization.
- Client Side Front End based in AngularJS.
- Back End accessed by JSON REST API.
- API / Code First.



The application consists of a daemon that verifies new positions from a SMS service each a setted time interval, the message is associated with the SIM card number that represents an vehicle entity in data model, this information is stored in a database.

The user interface is developed using AngularJS with Google Maps API to display the data into a map to user, the user have ability to manage the vehicles by the front end.

The user interface communicate with the domain by a REST API, the access control is made my Token, generated by Identity Server, when the user get into the application without a token , it's redirected to Identity server that provide the user authentication and give back to Application front end the token of authentication.

The Application front end uses the token to send requests to REST API that checks with the Identity Server the Token and validate the user privileges.

The application front end retrieves the last know position from the database.