Crew Link MVP

Technical Approach Document

February 20, 2019  
Version 0.1

**DOCUMENT CONTROL**

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| **Prepared by** | Dharmendra Kumar Singh | **Designation** | Associate Architect |
| **Date** | Feb 20, 2019 | **Signature** |  |

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| **Reviewed by** | Kiran Chakravarthy | **Designation** |  |
| **Date** |  | **Signature** |  |

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| **Approved by** |  | **Designation** |  |
| **Date** |  | **Signature** |  |

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# Introduction

ATPI CrewLink™ is a travel workflow management tool, specifically designed for the international Shipping and Energy industries. ATPI CrewLink™ will integrate with internal or third-party crew management tools and enables you to manage the entire travel life cycle from scheduling, via travel management to reporting. All in one global platform.

Using ATPI CrewLink™ leads to better control, greater process compliance and optimised traveler safety. With incremental cost savings as a result.

* Operational efficiencies around labor intensive, manual processes and double work
* Cost efficiencies by eliminating disparity of systems and enhanced quality control
* Optimized travel policy compliance
* Visibility of crew or traveler whereabouts and risk control
* Transparency of total cost of travel and opportunity for savings
* Improved forecasting capabilities
* Streamlined communications
* Consolidation of multiple (3rd party) systems in one single global platform
* Automated sourcing of the lowest fare available in the market in accordance with travel policy
* Automated search for the highest possible airline seat availability

# Why Transforming?

Please find some major issues which leads to transform the existing CL to new Technology stack.

* Ticket Window
* Sync issues, Sometimes CrewLink is completely down.
* Synchronization calls while creating the PNR’s by using the auto & manual bookings
* Email alerts issues
* Booking alerts, E- Ticket alerts, General alerts, group email alerts
* Work flow process issues
* Sometimes status are not changed appropriate,
* When user has 1PNR,2Quotes, and when customer approves PNR the Quotes are not moving into the Reject status for flight and hotel bookings
* Search issues
* Search button is not working properly on travel Request booking page.
* Search response is very slow under travel request search booking page
* Improper search results : When user clicks on search button under travel request page, Travel request is directly getting opened instead of producing exact search result.
* In Advanced search, while adding existing passengers: Advanced search link is not working.
* Login issues
* Login page loading is taking more than expected time
* Performance issues in all the pages
* Page loading issues in almost all the web pages, Page refreshing is very slow and error pop-up displays
* Page redirection errors: When user clicks on Customer Region/When user selects Customer region from dropdown in customer setup>Getting HTTP status 500 Error
* Page renderings on big bookings
* Compatibility issues
* Drop down navigation links are overlapping on main navigation,
* Alignment issues
* Filed box is not aligned properly for “Journey Type” filed in Flight – Itinerary Details section.
* Validation issue
* While TR booking, change the customer name and try to click on “Proceed to Booking”, pop-up is displaying with Manual Mod or Semi Auto Mode, after clicking on   manual mode, it is displaying error i.e, mandatory fields to be filled.
* Actual error: Pop-up is opening to select the mode to booking
* Expected Error: Without filling the mandatory fields in the screen, it should not open the pop-up for booking mode (Without giving last name, proceed to booking pop-up is displayed)
* Improper error messages
* Error Description for the errors found is not provided in all the pages.

* Issues with the loading the pages- Hanging the system
* Map & Calendar view issues for the rig booking
* No spinners are rendering in the application.
* Menu item issues
* No significance place for enhancements, same enhancements are here and there example email configurations

# Purpose

With successful transformation of ATPI application, below things are required to achieve

* Optimize the existing operations to present better user interface
* Sort and organize the core functions in a well manner to increase user’s journey towards the application
* Establish the flexibility across the functions within the page rather prompting for new tabs.
* Provide better product support and information to customers
* Presents different interfaces as per roles
* Equip the system with new enhancements where ever required to boost up the process and increase responsiveness across all modules

**Objectives**

The key objectives for the website redesign project is to

* Systemize the application by concerning the business projections and needs in all areas.
* Improve search functions and optimize the responsiveness.
* Increase/Reduce the flows of process between components, and stream line the forms by abolishing duplicates
* Propose sample designs of “to-be” implementations.

**Target Users**

* Agents
* Customers

# Definitions, Acronyms and Abbreviations

## Definitions

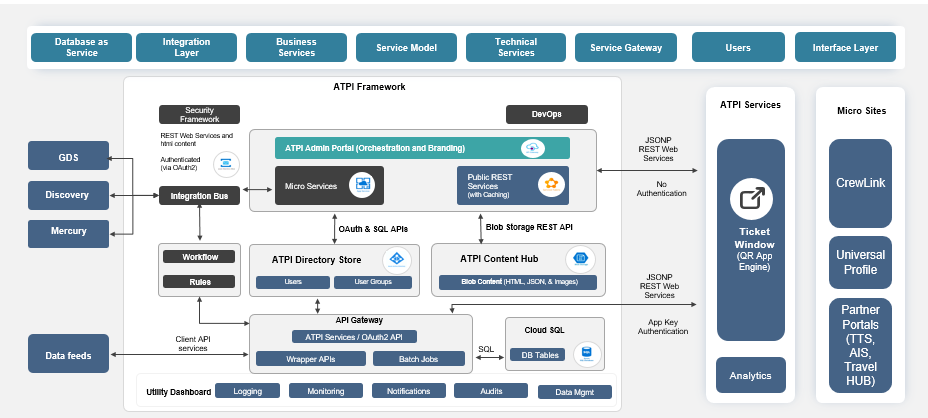
|  |  |
| --- | --- |
| **Terms** | **Definition** |
|  |  |
|  |  |

## Acronyms and Abbreviations

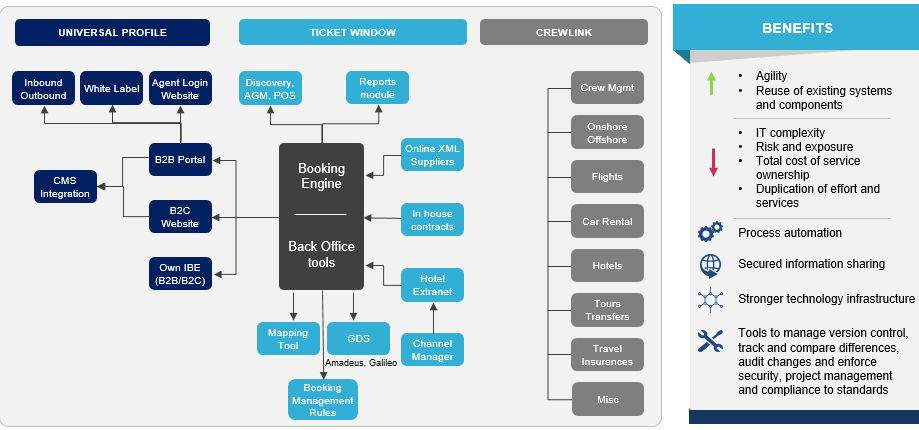
|  |  |
| --- | --- |
| **Acronym** | **Meaning** |
| AD | Active Directory |
| API | Application Programming Interface |
| CDN | Content Delivery Network |
| UX | User Experience |
| UI | User Interface |
| GDS | Global Distribution System |
| CL | Crew Link |

# Architectural Representation

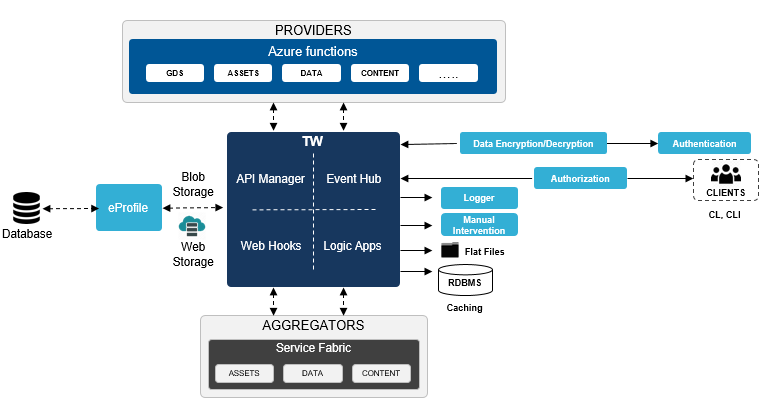
## Proposed technical architecture – ATPI application framework



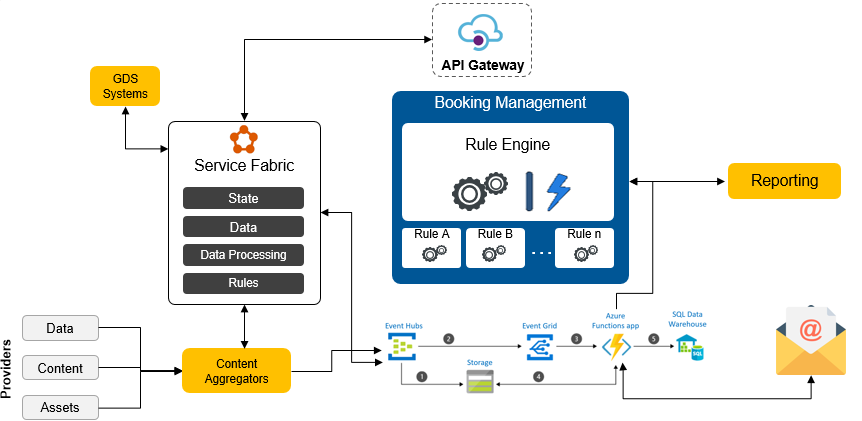
## Proposed functional Architecture



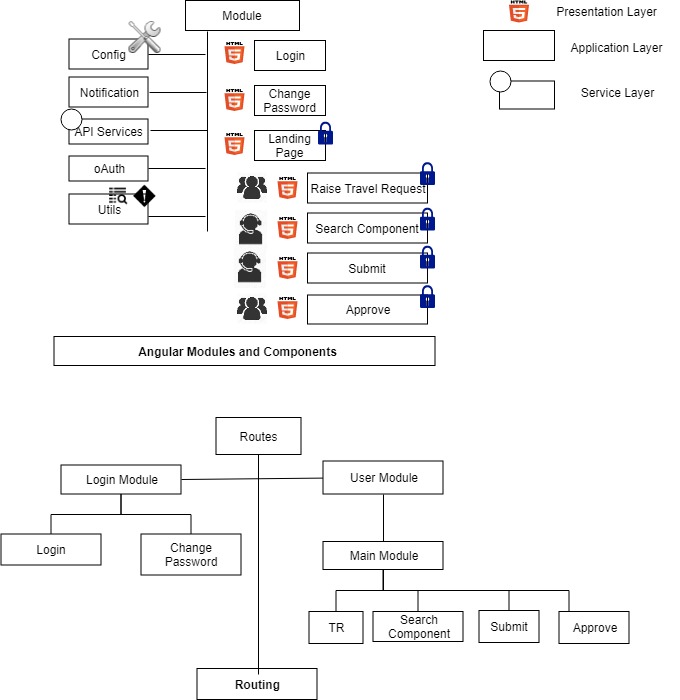
## Technical – Functional relationship



## Component level Technical – Functional relationship



## Frontend (Angular) Architecture



## Customer Process Flow

## Agent Process Flow

# Scope

## Scope of work

* UX and UI Development
* Authentication and Authorization
  + Customer and Agent roles one each
* Travel request generation limited to Flights
* GDS integration as provided by ATPI
* Request Processing for GDS
* Notifications via email

## Assumption

* GDS implemented services will be provided by ATPI
* CL MVP backend interacts with the above services to fetch data
* Basic Master Data required for the current scope will be implemented.
* Manual on boarding limited to user login, roles

# Proposed Technology Stack

* Hosted Blob Storage
* Service fabric Clusters
* Load balancing
* API Management
* Database implementation
* DB Schema
* Email Notifications
* Logic Apps

# Development Tool

## Front End Development

* Node.js version 8.x or 10.x
* npm packages
* npm client
* Visual Studio Code

## Middleware Development

* Visual Studio 2017 Professional
* Azure Subscription

## Backend Development

* Sql Server 2014 and above

## Source Control

* Git

# Non Functional Requirement

* Security
* Logging
* Storage
* Configuration
* Performance
* Flexibility
* Disaster recovery
* Accessibility

# Pre-requisites

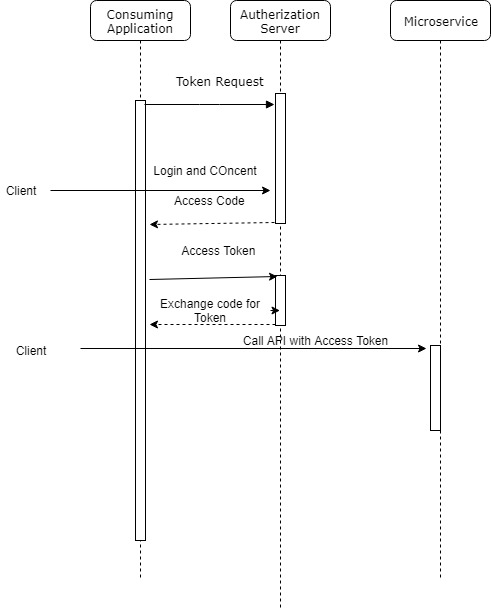
* Continued support on the following
  + Requirements analysis and design
  + Understanding of production issues
  + Database architecture and reports requirements
  + Requirements gathering and scheduling
  + Access to existing servers / services (IT and Networking)
* Azure platform for SaaS
* Access to existing source code and applications
  + SQL Server Database Access
  + Mercury Web service API’s source code
  + POS Plugin Web service API src / documentation
* Documents pertaining to
  + Current architecture
  + System integration (Application, Infra, Data, DevOps)
  + GDS API Documentation
* Initial knowledge transfer from PO for transition and support until completion of transformation, for application maintenance
* Support from Delphi engineers for migration
* Dedicated availability from Product Owner and key stakeholders, for smooth execution
* Software licenses, apart from the standard list of software provided by ValueLabs

# Features

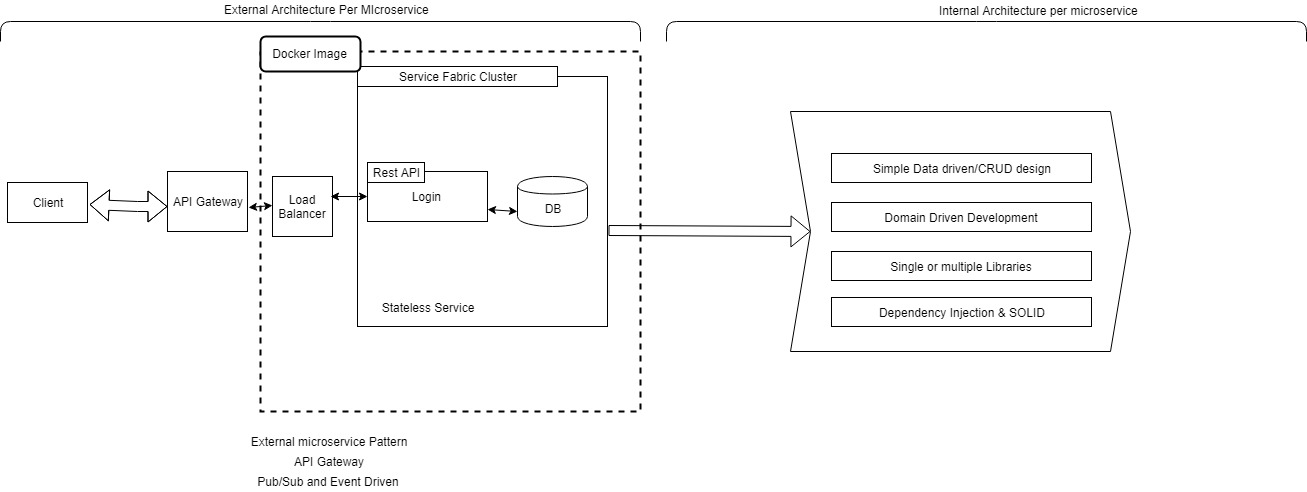
## Login

### Purpose

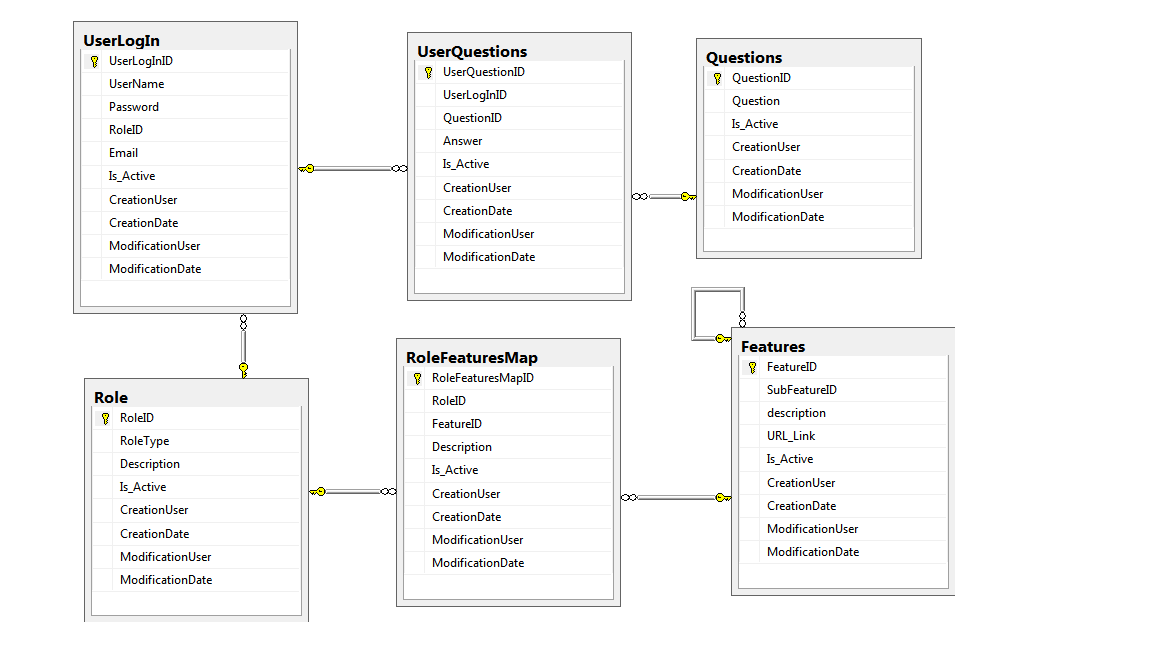
### Sequence Diagram



### Low level architecture



### Database Diagram



### GDPR and PbD Factor

## Authorization

### Purpose

### Approach

### Database Diagram

### GDPR and PbD Factor

## Customer - Landing Page

### Purpose

### Approach

### Database Diagram

### GDPR and PbD Factor

## Agent - Landing Page

### Purpose

### Approach

### Database Diagram

### GDPR and PbD Factor

## Customer – Raise Travel Request

### Purpose

### Approach

### Database Diagram

### GDPR and PbD Factor

## Customer – Approve Travel Request

### Purpose

### Approach

### Database Diagram

### GDPR and PbD Factor

## Agent – Search Travel Request

### Purpose

### Approach

### Database Diagram

### GDPR and PbD Factor

## Agent – Submit Travel Request

### Purpose

### Approach

### Database Diagram

### GDPR and PbD Factor

## Notification

### Purpose

### Approach

### Database Diagram

### GDPR and PbD Factor

# Third party integration

# Risks, Constraints, Limitations & Issues

## Risks

## Constraints

<Specify the Constraints>

## Limitations

<Limitations for the design need to be specified>

## Issues

## Dependencies

|  |  |
| --- | --- |
| **Item** | **Description/Reference** |
|  |  |

# Appendix

## Project Standards and Conventions

|  |  |
| --- | --- |
| **Item** | **Description/Reference** |
|  |  |

## Development Environment Parameters

|  |  |  |
| --- | --- | --- |
| **Environment** | **Parameter Name** | **Value** |
|  |  |  |

# Packaging and Installation Considerations

# Supplementary Information