iScore TA

iScore TA SAD Design Document

Prepared for

iScore

Last Updated: 06-08-2019

Version 0.6 Draft

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Contributors

Revision and Signoff Sheet

Change Record

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Date | Author | Position | Version | Change Reference |
| 15.07.2019 | Hany F. Mohammed | Architect | 0.1 | Initial Version |
| 16.07.2019 | Hany F. Mohammed | Architect | 0.2 | Minor modifications |
| 18.07.2019 | Hany F. Mohammed | Architect | 0.3 | Integration Servers modifications. |
| 30.07.2019 | Hany F. Mohammed | Architect | 0.4 | Minor modifications. |
| 06.08.2019 | Hany F. Mohammed | Architect | 0.5 | Minor modifications.  Added notes section with more technical details. |
| 18.09.2019 | Hany F. Mohammed | Architect | 0.6 | Minor modifications.  Session management. |

Reviewers

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| Name | Version Approved | Position | Date |
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1. Logical View
   1. Overview

These are the different modules of the system, with integration overview with different user roles and other systems.



* 1. Components
     1. iScore TA Admin Web App

The [Admin Web App] will be used by iScore users to manage their respective user, and various configurations. Sections will be enabled based on applied privileges, according to each role.

* + 1. iScore TA Entities Admin Web App

The [Admin Web App] will be used by Financial Entities users to manage their respective user, and various configurations. Sections will be enabled based on applied privileges, according to each role.

* + 1. iScore TA Transactions Web App

The [Transactions Web App] will be used by iScore and Financial Entities users to manage and track their created transactions (*Vehicle Requests*), in addition to the needed reports.

* + 1. iScore TA Automated Service

The [Automated Service] will monitor the pending transactions that needs automated actions, like sending reviewed transactions to TA services, and auto rollback obsolete transactions according to their configurable inactive durations.

* + 1. iScore TA Integration Web Service

The [Integration Web Service] will be used to receive updated confirmation from TA services, in order to update the relevant transactions with status and required metadata.

* + 1. iScore TA Web Service

The [Internal Web Service] will be the main internal API layer, used for all of the other components, to include all the needed internal layers, namely [*Business and Data Layers*]. And it should be the one responsible to integrate with [Oracle DB] for instance.

* + 1. iScore TA Admin Web Service

The [Internal Admin Web Service] will be the internal API layer for administrative tasks, used for all of the web application components, to include all the needed internal layers, namely [*Business and Data Layers*]. And it should be the one responsible to integrate with internal systems, like [LDAP] and [Oracle DB] for instance.

* 1. Notes
     1. Audit Trail
  + Will be stored initially in our Oracle DB.
  + [iScore TA Automated Service] will have a sub-routine, responsible for transferring this audit trail to [SysLog Server].
  + Transferred audits will be deleted from our system once transferred to SysLog.
  + SysLog API for submitting Audit Trail is still pending from iScore team.
    1. System Logs
  + Each server will contain their system logs locally.
  + Initially system logs will work in [Trace] Sensitivity (*including Trance, Info, Warnings, and Errors*).
  + After the soft launch, we will revert the system logs sensitivity to [Warnings] (*including Warnings and Errors*).
    1. LDAP
  + We will have 2 manage the connection to both production and DR deployment of LDAP instances.
  + This will be handled by storing both configurations in the DB, and having a switch (*provided in the web UI or by external tool*) to control which LDAP will be used going forward.
  + Only one LDAP server will be used for both deployment instances (Production & DR).
    1. confidentiality
  + For sensitive configurable credentials (like DB connection strings and LDAP servers) these needs to be stored in encrypted.
  + For user roles in the system, their credentials will be stored only in LDAP.
    1. System Codes (App Codes)
  + There will be shared list of system codes, between iScore and TA (*like Vehicle models list, for instance*).
  + This list, will be updated on daily basis from both sides (TA, and iScore).
  + Based on that, there will be a sync service for selected list of [system codes], to enable updating both systems with their counterpart updates.

1. Deployment View
   1. Overview



* 1. Details
     1. Web Servers
* Servers (*identical*):
  + [VM.WebApps-01]
  + [VM.WebApps-02]
* Session management
  + Both web applications should be connecting to the same session service deployed on the first server.
* Will contain the logical components:
  + [iScore TA Entities Admin Web App]
  + [iScore TA Transactions Web App]
* Will integrate with the following components.
  + External users (iScore admins and Financial Entities users) through dedicated VPN.
  + [Internal Application Service] through direct reference to its [Load Balancer].
  + [Logs] server to save system logs via FTP.
* Recommended to have the following specs
  + Windows Server 2016 (*or later*), with IIS 10.x (*or later*).
  + RAM: 16+ GB
  + Processor: 4+ Cores
  + Storage: 100 GB
    - System Partition: 40 GB
    - Deployment Partition: 20 GB
    - Logs Partition: 40 GB
* Network
  + VPN network (*for Financial Entities*).
  + Load Balanced.
* Ports
  + Reserved Ports range in each server will be from [8880 to 8890] (*10 total ports*)
* Platform
  + .Net Framework 4.6
    1. Integration Servers
* Servers (*identical*):
  + [VM.IntegrationServer-01]
  + [VM.IntegrationServer-02]
* Will contain the logical components:
  + [iScore TA Automated Service]
  + [iScore TA Integration Web Service]
* Will integrate with the following components.
  + TA services through dedicated VPN.
  + [Internal Application Service] through direct reference to its [Load Balancer].
  + [Logs] server to save system logs via FTP.
* Recommended to have the following specs
  + Windows Server 2016 (or later), with IIS 10.x (or later).
  + RAM: 16+ GB
  + Processor: 4+ Cores
  + Storage: 100 GB
    - System Partition: 40 GB
    - Deployment Partition: 20 GB
    - Logs Partition: 40 GB
* Network
  + VPN network (for TA Integration).
  + Load Balanced.
* Ports
  + Reserved Ports range in each server will be from [8880 to 8890] (*10 total ports*)
* Platform
  + .Net Framework 4.6
    1. Application Service
* Servers (*identical*):
  + [VM.WebService-01]
  + [VM. WebService-02]
* Will contain the logical components:
  + [iScore TA Web Service]
  + [iScore TA Admin Web Service]
  + [iScore TA Admin Web App]
* Will integrate with the following components.
  + DB Servers.
  + LDAP Servers.
  + [Logs] server to save system logs via FTP.
* Recommended to have the following specs
  + Windows Server 2016 (*or later*), with IIS 10.x (*or later*).
  + RAM: 16+ GB
  + Processor: 4+ Cores
  + Storage: 100 GB
    - System Partition: 40 GB
    - Deployment Partition: 20 GB
    - Logs Partition: 40 GB
* Network
  + Windows Cluster.
* Ports
  + Reserved Ports range in each server will be from [8880 to 8890] (*10 total ports*)
* Platform
  + .Net Framework 4.6
    1. Database
* Oracle 12c Release 2 (*Or later,* *Recommended*).
* Oracle DBs configured for High Availability.
* Will be managed by iScore team.
* Storage: 200 GB (*+10% each year*)
  + 1. LDAP
* Will be managed by iScore team.
  + 1. Sys Log Server
* Sys Log Server for Audit Trail.
* Will be managed by iScore team.