

Salesforce Center of Excellence

**<*Project Name*> Technical Design Document**

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With this acknowledgement, the undersigned hereby agree to the form, content and overall integrity of the accompanying document.

Each section of this document has been thoroughly reviewed by technical, business leads and subject matter expert groups that have communicated their support for the document content to each of the signatories listed below. Signatories, in turn, are those individuals that speak on behalf of their respective subject matter experts, technical and business leads.

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# Document Overview & Description

This document provides the configuration and customization settings that have been implemented. This configuration and customization will serve as the baseline for a full release.

* Only sections that have modifications over Salesforce out-of-the-box (OOB) settings are documented.
* This document is laid out in a consistent manner with the Salesforce customize and configuration settings accessed from Setup | Customize in the Salesforce application.
* This document does not detail standard Salesforce functionality unless such functionality is requested via a requirement.

The document will provide an in-depth technical understanding of the customization and configuration made to the Salesforce application. This section is intended to provide guidance to future developers by providing an understanding of the modifications that were made to the Salesforce objects, fields, profiles, roles, etc. In addition, this section includes an understanding of how to execute the batch upload, with screen shots and troubleshooting tips for common errors that are encountered.

There are five main sections in the document:

* **High-Level Data Model** – defines the underlying data structure for CRM Implementation application.
* **Custom Functionality Detail Design** – Provides the details of some custom components/functionalities that have been developed.
* **Customize** – defines the application customizations in terms of labels, workflows, user management, apex, triggers, VisualForce components, reports and dashboards. This section will be defined in Phase
* **Security** – defines the PCI compliance security configurations, Salesforce security settings and details of PCI Audit log configurations.

## Related Documentation

* **Requirements:***URL reference based on project management tool****.***
* **Use Cases:** *URL reference based on project management tool.*
* **To-Be Process Flows:***URL reference based on project management tool.*
* **Data Dictionary:**  *URL reference based on project management tool.*

# High-Level Data Model

The following high-level data model defines the underlying data structure for the Implementation application. Detailed object structure (fields, data types, field lengths, and pick-list values) are detailed in the attached data dictionary. In addition, the following data model does not include standard objects that are not being used by the Implementation prototype application. Please refer to the Salesforce ERD document.



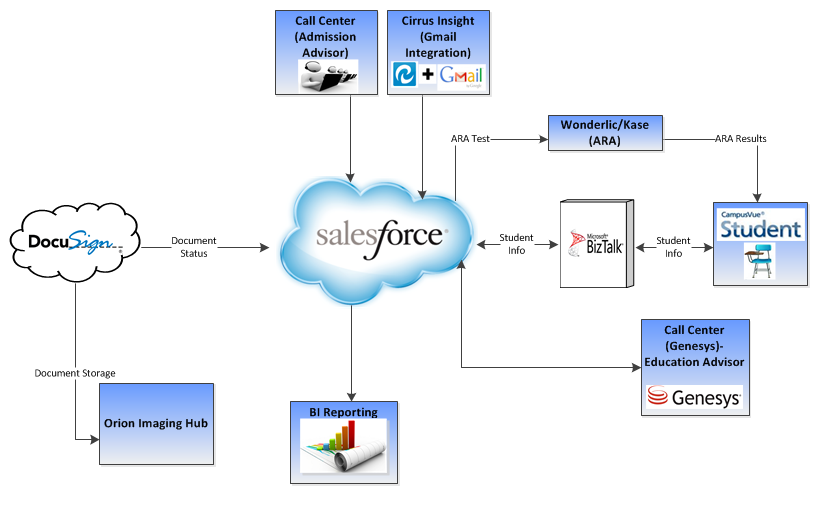
## Object Definitions

The following objects are part of the data model and have been customized for the application. Taken together, the following sections compose the Data Dictionary of Salesforce fields.

|  |  |
| --- | --- |
| **Data Subject** | **Descriptions** |
| **Account** |  |

## HIgh level Architecture

Below given image is for sample reference.



## Key Assumptions

| **Assumption ID** | **Description** | **Assumption Type** |
| --- | --- | --- |
|  |  |  |

# Custom Functionality Detail Design

This section defines the detailed solution component design. It will form the basis of the development team’s implementation effort.

## Forecast

##### Custom Functionality Details

Assumptions

Associated Components

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Related Classes** | **Test Classes** | **Associated Triggers** | **Related VF Pages** | **Related Button/ Link** |

# Customize

## Tab Names & Labels

##### Tabs & Labels

| **Tab & Object Name** | **Display Label** | **Singular** | **Plural** |
| --- | --- | --- | --- |

## Custom Apps

|  |  |
| --- | --- |
| **Custom App Details** | |
| Label |  |
| Logo |  |
| Description |  |
| Included Tabs | Home |
|  | |
|  |  |
|  |  |

## Home

##### Home Page Components

**Custom Components**

|  |  |  |
| --- | --- | --- |
| Name | Type | *Body* |
| Banner | HTML Area |  |
| Users | HTML Area |  |
| Logo | Image |  |

##### Custom Links

|  |  |  |  |
| --- | --- | --- | --- |
| **Label** | **Name** | **Behavior** | **Content Source** |

## OBJECTS

##### 4.4.1. **STANDARD OBJECTS:**

##### **4.4.1.1. OPPORTUNITY**

Opportunity is the chance to sell a product or service to a customer or account

##### 4.4.1.1.1 OPPORTUNITYRequirements Summary

|  |  |
| --- | --- |
| **Req.** | **Note** |

###### 4.4.1.1.2 OPPORTUNITY Fields

###### 4.4.1.1.3 OPPORTUNITYValidation Rules

|  |  |
| --- | --- |
| **Validation Rule Name** | **Configuration Notes** |

##### 4.4.1.1.4 OPPORTUNITY RELATED LISTS

|  |
| --- |
| **Related List Functionality:** |

###### 4.4.1.1.5 OPPORTUNITYPage Layouts

|  |  |
| --- | --- |
| **Page Layout Name** | **Description** |

###### 4.4.1.1.6. OPPORTUNITYSearch Layouts

|  |  |  |
| --- | --- | --- |
| **Layout Name** | **Columns Displayed** | **Button Displayed** |

##### OPPORTUNITYButtons & Links

This section details the buttons and links that are applicable and used on the Opportunity object.

**Standard Buttons**

|  |  |  |
| --- | --- | --- |
| **Label** | **Name** | **Overridden?** |
| Edit | Edit |  |
| Delete | Delete |  |
| Clone | Clone |  |
| Sharing | Sharing |  |

**Links**

|  |  |  |
| --- | --- | --- |
| **Label** | **Name** | **Overridden?** |
|  |  |  |

###### 4.4.1.1.7 OPPORTUNITY List Views

In order to view list of records satisfying certain criteria separately create a list view for each of them.

The users can update these views to further filter down to specific types of records as needed.

|  |  |
| --- | --- |
| **List View Type** | **Filter Criteria** |

###### 4.4.1.1.8 OPPORTUNITY Apex Sharing Reasons

###### 4.4.1.1.9 OPPORTUNITY Field Sets

##### 4.4.1.1.10. Triggers

##### 4.4.1.1.11. Opportunity Record Types

###### 4.4.1.1.12 Page Layout Assignment

##### 4.4.2. **CUSTOM OBJECTS:**

## Workflow & Approvals

##### Workflow Rules

|  |  |  |  |
| --- | --- | --- | --- |
| **Rule Name** | **Description** | **Object** | **Logic** |

##### Field Updates

|  |  |
| --- | --- |
| **Name** | Update Owner To Licensed Agent Queue |
| **Requirements** |  |
| **Description** |  |
| **Object** |  |
| **Field to Update** |  |
| **Field Data Type** |  |
| **New Field Value** |  |

##### Email Alert

|  |  |  |
| --- | --- | --- |
| **Name** | Account Rejected | |
| **Email Template** | |  |
| **Description** | |  |
| **Object** | |  |
| **Additional Emails** | |  |
| **Recipient Type** | |  |
| **From Email Address** | |  |

## User Management

This section describes user management within Salesforce. It will describe the SFDC profiles, hierarchies and the user settings.

##### User Role Hierarchy

These roles are the Production hierarchies and support the “live” system, where live data would be captured and worked. As teams move into production, new roles are created and added to the hierarchy and the appropriate user assignments are made to the system. This includes roles for testing and temp agents.

##### Role Settings

The following role Opportunity Access settings have been made:

|  |  |
| --- | --- |
| **Role** | **Opportunity Access** |

##### Queues

|  |  |  |  |
| --- | --- | --- | --- |
| **Label** | **Queue Name** | **Supported Object** | **Queue Email** |

##### Organization Wide Defaults (OWD)

Organization Wide Defaults control the default access users have to each other's data and have been configured as follows:

| **Object** | **Default Access** |
| --- | --- |
| Lead | Private |

##### Public Groups

| **Group** | **Members** | **Comments** |
| --- | --- | --- |

##### User Profiles

A profile defines a user's **Permission** to perform different functions within Salesforce. Profiles also control the following:

* Which page layouts the user sees
* The field-level security access that the user has to view and edit specific fields
* Which tabs the user can view
* Which record types are available to the user

The following are the custom profiles created

| **Profile Name** |
| --- |

##### Profile Permissions

Populate the following table for each profile that will be deployed as part of the solution

| Profile Name: **System** **Administrator** | |
| --- | --- |
| Visible Tabs | Home |
| Administrative Permissions | API Enabled |
| General User Permissions | Activate Contracts |
| Standard Object Permissions | Accounts – Read, Create, Edit, Delete |
| Custom Object Permissions | Account Plans – Read, Create, Edit, Delete |

##### Permission Set

Populate the following table for each permission sets that will be deployed as part of the solution.

| **Permission** Name: **System** **Administrator Permission Set** | |
| --- | --- |
| Visible Tabs | Home |
| System Permissions | API Enabled |
| General User Permissions | Activate Contracts |
| Standard Object Permissions | Accounts – Read, Create, Edit, Delete |
| Custom Object Permissions | Position\_\_c – Read, Create, Edit, Delete |

##### Field Level Security

##### Object Permissions

##### Record Types

##### Tab visibility

##### User Settings

|  |  |
| --- | --- |
|  |  |
|  | Enable Collapsible Sections |
|  | Show Quick Create |
|  | Enable Hover Details |
|  | Enable Related List Hover Links |
|  | Enable Inline Editing |
|  | Enable Enhanced Lists |
|  | Enable Floating Report Headers |
|  | Enable Printable List Views |
|  | **Sidebar:** |
|  | Enable Collapsible Sidebar |
|  | Show Custom Sidebar Components on All Pages |
|  | **Calendar:** |
|  | Enable Home Page Hover Links for Events |
|  | Enable Drag-and-Drop Editing on Calendar Views |
|  | Enable Hover Links for My Tasks list |

## Apex Classes

Apex classes sections describes the Apex class created and the purpose of the functions are included.

|  |  |  |
| --- | --- | --- |
| **Apex Class Name** | **Apex Class Method Name(s)** | **Description** |
| **FirstClass** | **Method** | **Description** |

## Triggers

##### ValidateAccountCountryFields

|  |  |  |
| --- | --- | --- |
| **Trigger Name** | **Object** | **Trigger Condition** |

|  |  |
| --- | --- |
| **No.** | **Requirement Satisfied** |
| 1 |  |

## VisualForce Pages

##### Accountplan

| **Page Name** | **Description** |
| --- | --- |
|  |  |
| Snapshot: | |
| Code:  See Appendix A | |

|  |  |
| --- | --- |
| **No.** | **Requirement Satisfied** |
| 1 |  |

## Static Resource

| **Name** | **Description** | **File** | **Cache Control** |
| --- | --- | --- | --- |
| N/A |  |  |  |

Apex sharing reasons for individual custom objects are as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **File** | **Cache Control** |
| N/A |  |  |  |

## Custom Report Type

Custom report types can be created using an object, it`s object relationships, and fields.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Report Type label** | **Report Type Name** | **Description** | **Store in category** | **Selected Related Objects** |
|  |  |  |  |  |

## Custom Labels

Custom labels are custom text values that can be accessed from Apex classes or Visualforce pages.

Following are the custom labels used here:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Short Description** | **Name** | **Categories** | **Value** | **Protected Component** |
|  |  |  |  |  |
|  |  |  |  |  |

## Custom Settings

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Label** | **Object Name** | **Settings Type** | **Visibility** | **Description** |

## 4.14. Visualforce components

|  |  |  |
| --- | --- | --- |
| **Label** | **Name** | **Description** |

## 4.15. Translation Workbench

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Language** | **Setup Component Name** | **Object** | **Value** | |
| Label | Translated Value |

## 4.16. Email Templates

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Folder Name** | **Letterhead** | **Type** |
|  |  |  |  |

## 4.17. Letterhead

|  |  |
| --- | --- |
| **Label** | **Description** |
|  |  |

# Reports & DASHBOARDS

|  |  |  |  |
| --- | --- | --- | --- |
| **Report/Dashboard Name** | **Folder Name** | **Folder Access** | **Description** |
|  |  |  |  |

# Email Service

Email services are automated processes that use Apex classes to process the contents, headers, and attachments of inbound email. For example, you can create an email service that automatically creates contact records based on contact information in messages. Each email service has one or more email service addresses that can receive messages for processing.

|  |  |  |
| --- | --- | --- |
| **Name** |  | |
| **Email Service Information** | | |
| **Apex Class** | |  |
| **Accept Attachments** | |  |
| **Accept Emails From** | |  |
| **Advanced Email Security Settings** | |  |
| **Active** | |  |
| **Convert Text Attachments to Binary Attachments** | |  |
| **Truncate Oversize Email (Text and HTML)** | |  |
| **Failure Response Settings** | | |
| **Over Email Rate Limit Action** | |  |
| **Deactivated Email Address Action** | |  |
| **Deactivated Email Service Action** | |  |
| **Unauthenticated Sender Action** | |  |
| **Unauthorized Sender Action** | |  |
| **Enable Error Routing** | |  |
| **Route Error Emails to This Email Address** | |  |

|  |  |  |
| --- | --- | --- |
| **Name** | <Name> | |
| **Email Service Information** | | |
| **Apex Class** | |  |
| **Accept Attachments** | |  |
| **Accept Emails From** | |  |
| **Advanced Email Security Settings** | |  |
| **Active** | |  |
| **Convert Text Attachments to Binary Attachments** | |  |
| **Truncate Oversize Email (Text and HTML)** | |  |
| **Failure Response Settings** | | |
| **Over Email Rate Limit Action** | |  |
| **Deactivated Email Address Action** | | Discard/Bounce Message |
| **Deactivated Email Service Action** | | Discard/Bounce Message |
| **Unauthenticated Sender Action** | | Discard/Bounce Message |
| **Unauthorized Sender Action** | | Discard/Bounce Message |
| **Enable Error Routing** | | Discard/Bounce Message |
| **Route Error Emails to This Email Address** | |  |

# Integration

This section describes the architecture, data flow and components for integration related components build in the system.

## 7.1. Types Of Integrations

##### 7.1.1. Middleware Integration

Salesforce.com is designed to work with all major integration middleware solutions, TIBCO being one of them. It provides an exhaustive Web services API based on SOAP and REST protocols.

For e.g. TIBCO provides flexibility for systems to make real-time and batch interactions. Time taken to develop, test and deploy these solutions is faster when compared to the time taken to do custom development of Apex Web services. It provides greater transaction control, security and flexibility.

##### 7.1.2. URL Integration

Some business processes require users to click on a link from a custom Visualforce page or from a record’s detail page. For such interfaces, the URL that takes the user to target system is stored in Salesforce.com. Target URL’s can be stored in Custom Links section of the sidebar, on custom fields of URL type, on form level fields of a custom Visualforce page.

##### 7.1.1. WebServices Integration

Salesforce.com Web services API is a simple yet powerful programmable interface that provides secure programmatic access to information. This API can be used with all systems that support SOAP web services; this is achieved using more than 20 different calls provided by the standard API.

It provides methods to create, edit, and delete information from Salesforce.com interface. Enterprise WSDL generated from Salesforce.com instance contains all metadata information (for both Standard and Custom objects).

Salesforce.com Web services API is designed to conform to the following standards

|  |  |
| --- | --- |
| **Standard Name** | **Website** |
| **Simple Object Access Protocol (SOAP) 1.1** |  |
| **Web Service Description Language (WSDL) 1.1** | <http://www.w3.org/TR/2001/NOTE-wsdl-20010315> |
| **WS-I Basic Profile 1.1** | <http://www.ws-i.org/Profiles/BasicProfile-1.1-2004-08-24.html> |

The API works with all SOAP development platforms, including, but not limited to Visual Studio .Net 2005.

Development platforms vary in their SOAP implementations. Implementation differences in certain development platforms might prevent access to some or all features in the API. While using Visual Studio for .NET development, it is recommended to use Visual Studio 2003 or higher.

Considerations while using Enterprise WSDL for making calls to Salesforce.com:

* As the WSDL is strongly typed, and new WSDL should be regenerated if there are any changes to custom object and custom fields
* It should be regenerated if any installed app is upgraded to a new version

## 7.2. Integration Architecture/Design

Belo given image is for reference purpose.



## 7.3. Installed Package

|  |  |  |
| --- | --- | --- |
| **Package Name** | **Publisher** | **Version Number** |

# Error Logging

This object is to capture errors that occur due to exceptions that occur in apex code.

# Exception Handling

Exception handling is used to log all the errors occurred in Apex code execution with complete trace of the error. Also it fires email to the selected developers/users with the details.

## 9.1 Apex Components

|  |  |
| --- | --- |
| **Name** | **Description** |
| MyClassException | This class contains logic to build exception message and insert the exception’s detail in Exception\_\_c object. |

## 9.2. Object

|  |  |
| --- | --- |
| **Name** | **Description** |
| Exception\_\_c | This object is to capture errors that occur due to exceptions that occur in apex code. |

# Appendix A: Apex, Triggers and VisualForce Code

## Apex Class Code

## Trigger Code

## VisualForce Code

# Appendix B – Integration Code

## Interface ComponentCode