horizontal line

ADvTECH - Lead Integration Custom Middleware App SOW

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[**INTRODUCTION 3**](#_81wbsf444tad)

[**SYSTEM COMPONENTS SUMMARY 3**](#_yykj8v51ycgh)

[**SCOPE OF WORK 4**](#_8ccro7midf6z)

[Deduplication 4](#_6kgwnbnb918b)

[Chapter 1: Lead Creation and Updation in SIMS 5](#_sdhrs6ueaj85)

[Event-Driven Integration 5](#_2k6otlo9enw2)

[Lead Creation and Updates 5](#_ur50kjttya9b)

[Unique EventID Generation and Tracking 6](#_n7ee2skiii7f)

[Chapter 2: Application Creation and Updation in SIMS 6](#_lsbjdwjgaqm2)

[Event-Driven Integration 6](#_bbpg7l26a0e5)

[Application Creation and Updates - (Freshsales → SIMS) 6](#_8z31x47q1v6)

[Deal Creation and Updation - (SIMS → Freshsales) 6](#_ci7el4d3z514)

[Unique EventID Generation and Tracking 7](#_2ofi9gefa3ex)

[Chapter 3: Student Creation and Updation in SIMS 7](#_az72qn2iugm4)

[Event-Driven Integration 7](#_s8ejpwme48ep)

[Student Record Creation and Updates - (Freshsales → SIMS) 8](#_xxg1kp5qygvv)

[Deal Creation and Updation - (SIMS → Freshsales) 8](#_hs6nik42tx0x)

[Unique EventID Generation and Tracking 8](#_euhfo174a9j6)

[Freshsales Custom App 8](#_ekzzm3vh158l)

[Middleware Processing 9](#_btgazooiqsjy)

[Freshsales → SIMS 9](#_mcf7bbahwmxk)

[SIMS → Freshsales 9](#_mdafe8wgo54i)

[SQS Queue Processing 10](#_r85o6xfqkoee)

[Polling Mechanism to Track Status 10](#_7r8tulr5hidy)

[Retry Mechanism Logic 11](#_7zm5hqcleun8)

[Bi-Directional Field Mapping: Freshsales to SIMS (School Level) 11](#_yh50m4mkh9mm)

[Lead mapping 11](#_16bbvig813h0)

[Application mapping 14](#_cg8tldfhamtv)

[Student Mapping 27](#_7rjyhyc2nzc4)

[Bi-Directional Field Mapping: Freshsales to SIMS (Tertiary Level) 28](#_gosafqcwjd45)

[Lead Mapping 29](#_gln1oedzzjm2)

[Application Mapping 32](#_uz58nb3j74b2)

[Student mapping 45](#_1j6dq1yyu11t)

[Additional Conditions 47](#_gxtkqwqmcadw)

[**COMPONENTS 49**](#_48eg0ueautt4)

[AWS SQS Lead Creation Sample Payload: (Freshsales to SIMS) 49](#_iuafgk7v8sh0)

[AWS SQS Application Creation Sample Payload: (Freshsales to SIMS) 51](#_hu8mzjjytndz)

[AWS SQS Student Creation Sample Payload: (Freshsales to SIMS) 53](#_lgnqi9r6i8vu)

[AWS SQS Success queue: (Freshsales to SIMS) 54](#_kyglta67d1vx)

[AWS SQS Error queue: (Freshsales to SIMS) 54](#_fl7lniat92j3)

[SIMS to Freshsales Queue (YTD) 54](#_ldeimhe679tn)

[**DELIVERABLES 55**](#_5wlb73hniwpr)

[**SPECIFIC EXPECTATIONS 55**](#_76cu7fjiefjy)

[**SQS and SIMS API expectations 55**](#_hjs0tey4gtd2)

[**LIMITATIONS 56**](#_2njskpoha0zi)

[**ASSUMPTIONS 56**](#_brqr7fwirgx2)

[**EFFORT ESTIMATIONS 59**](#_oy8rjtbc12cs)

[One-Time Development Cost 59](#_87xrp5kp3q0b)

[Timeline 59](#_spt9vxmupx29)

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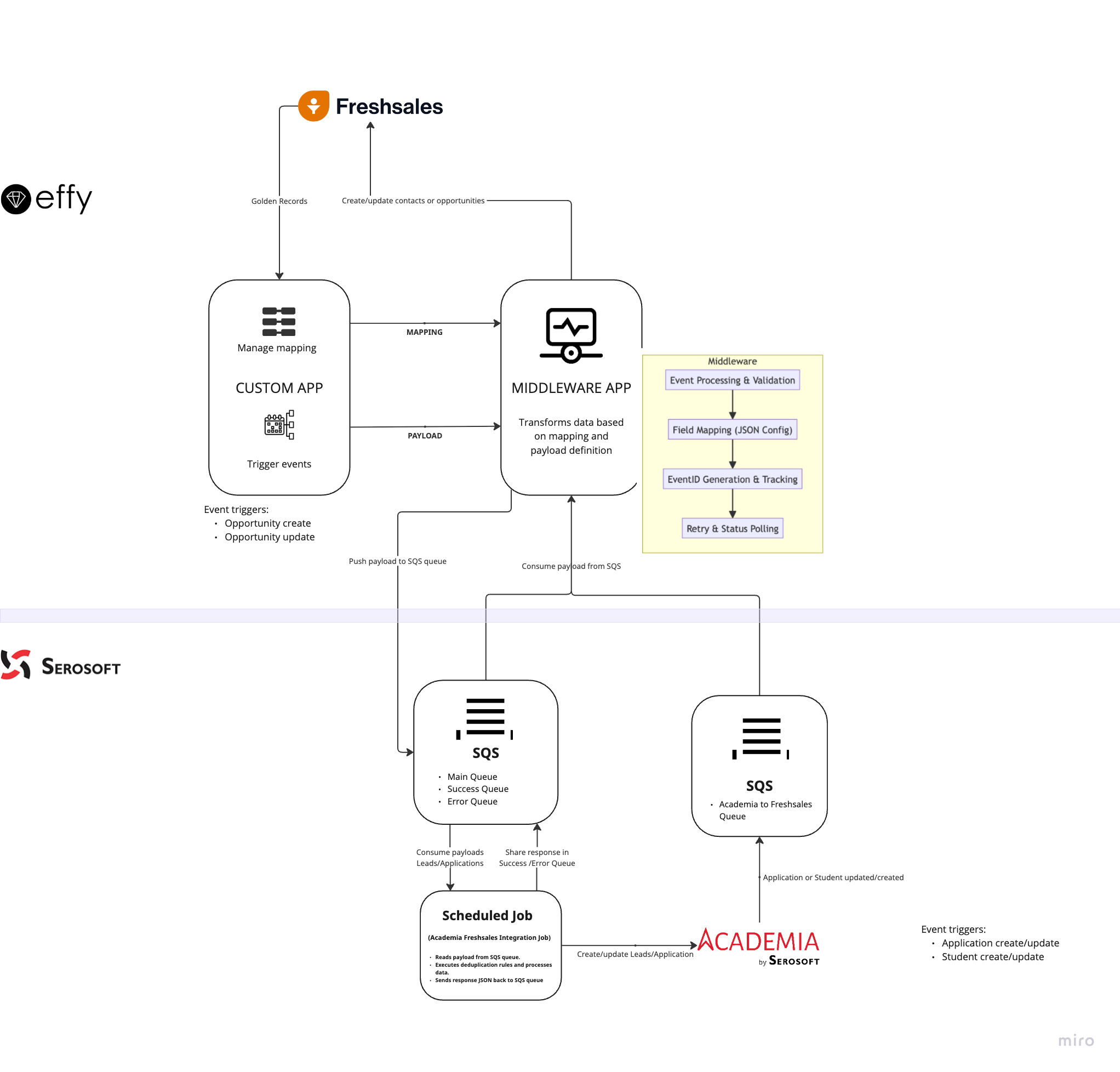
# INTRODUCTION

This is a custom middleware development engagement that encompasses integration between Freshsales and SIMS for syncing.

* Leads (Freshsales to SIMS)
* Application (Bi-directional)
* Students (Bi-directional)

# SYSTEM COMPONENTS SUMMARY

| **Component** | **Description** | **Key Responsibilities** | **Owner** |
| --- | --- | --- | --- |
| **Freshsales CRM** | Cloud-based CRM platform for managing contacts and opportunities. | - Trigger events (OnContactCreate, OnDealUpdate, etc.)  - Serve as the UI layer for custom apps | Freshworks |
| **Freshsales Custom App** | A custom UI component built inside Freshsales to manage field mapping and listen to events. | - Provide a Mapping Configuration Page for field mappings (stored as JSON)  - Listen to Freshsales product events and send payloads to the middleware | effy |
| **Middleware** | Backend service layer that processes and routes integration data. | - Receive payloads from the Freshsales custom app  - Validate and transform payloads  - Generate and track EventID  - Push data to AWS SQS queues  - Maintain job tracking (via JSON or DB)  - Execute polling  - Reprocess failed events (max 3 attempts)  - Update retry count and status | effy |
| **AWS SQS** | Cloud-based messaging queue for asynchronous job handling. | - Temporarily hold payloads for lead, application, and student flows  - Use dedicated queues for each direction (Freshsales → SIMS and SIMS → Freshsales)  - Provide success and error queues for outcome tracking | Serosoft |
| **SIMS** | Academic ERP system for managing leads, applications, and student records. | - Consume payloads from SQS to create/update records  - Generate outbound updates to Freshsales via a dedicated SQS queue | Serosoft |



# SCOPE OF WORK

## Deduplication

effy’s middleware does not perform deduplication.

The deduplication logic has been implemented as per customer requirements, with the SQS queue managing the deduplication rules by Serosoft.

To ensure data consistency and avoid duplicate records during the lead creation process, certain fields are designated as deduplication fields. These fields play a key role in identifying whether a lead is a new record or an update to an existing one.

A **custom deduplication app**, built by **Freshsales**, is responsible for tagging and filtering duplicate records. Only **golden opportunities**—opportunities **not flagged as duplicates**—will be considered for integration into SIMS. This ensures that duplicate records do not skew metrics, reporting, or cause inconsistencies in the data flow.

## Chapter 1: Lead Creation and Updation in SIMS

The integration enables seamless creation, update, and synchronization of Lead records in SIMS based on the creation and update of Contact and Opportunity records in Freshsales. It uses Amazon SQS and middleware to ensure periodic updates.

### Event-Driven Integration

The integration starts when the following Freshsales events are triggered:

* OnContactCreate
* OnContactUpdate
* OnDealCreate
* OnDealUpdate

These events trigger the middleware to process the event payload. Upon receiving these events, the integration performs the following:

* **Payload Handling:** The event payload is processed through middleware to ensure the correct format and field alignment for SIMS.
* **SQS Queue Processing**: The transformed payload is sent to an Amazon SQS queue for creating the lead in SIMS.

### Lead Creation and Updates

* **New Lead Creation:** A new Lead is created in SIMS when a new Contact and Opportunity in the **“*Lead stage”*** are created and linked in Freshsales.
* **Lead Update:** If a new Opportunity is linked to an existing Contact, Lead creation is triggered in SIMS.
* **Overwrite in SIMS:** If any Lead data is updated in SIMS, those changes are overwritten by the data from Freshsales.

### 

### Unique EventID Generation and Tracking

The EventID is a unique UUID generated for each Lead and is essential for tracking.

## Chapter 2: Application Creation and Updation in SIMS

The integration enables seamless creation, update, and synchronization of Application records in SIMS based on the creation and update of Contact and Opportunity records in Freshsales. Thisis a two-way sync, meaning data flows both from Freshsales to SIMS and from SIMS to Freshsales.

### Event-Driven Integration

The integration starts when the following Freshsales events are triggered:

* OnContactCreate
* OnContactUpdate
* OnDealCreate
* OnDealUpdate

These events trigger the middleware to process the event payload. Upon receiving these events, the integration performs the following:

* **Payload Handling:** The event payload is processed through middleware to ensure the correct format and field alignment for SIMS.
* **SQS Queue Processing**: The transformed payload is sent to an Amazon SQS queue for creating the application in SIMS and vice versa.

Additionally, a custom app will provide a user interface within the Opportunity view in Freshsales. This interface includes an **Apply** button, which, when clicked, will trigger the application creation or update process.

### Application Creation and Updates - (Freshsales → SIMS)

* **New Application Creation:** A new application is created in SIMS when a new Contact and Opportunity in the **“*Application stage”*** are created and linked in Freshsales.
* **Application Record Update:** If a new Opportunity is linked to an existing Contact, the system checks if a new Application needs to be created or if the existing Lead should be updated.
* **Overwrite in SIMS:** If any Application data is updated in SIMS, those changes are overwritten by the data from Freshsales.

### Deal Creation and Updation - (SIMS → Freshsales)

To support a two-way sync, the integration also processes events originating from SIMS:

* **SIMS Trigger:** When a new Application is created or updated in SIMS, the corresponding record is pushed to a separate SQS queue (SIMS-to-Freshsales Queue).
* **Middleware Processing:** The SIMS application payload is processed, transformed into Freshsales format, and used to:
  + Create or update an Opportunity in Freshsales based on the Application ID.
  + Associate the Application data with the correct Contact.

This ensures Freshsales is always in sync with SIMS even when SIMS is the point of origin.

### Unique EventID Generation and Tracking

The EventID is a unique UUID generated for each application and is essential for tracking.

## Chapter 3: Student Creation and Updation in SIMS

The integration enables seamless creation, update, and synchronization of **Student records in SIMS** based on the creation and update of **Contact and Opportunity records** in Freshsales. This is a two-way sync, meaning data flows both from Freshsales to SIMS and from SIMS to Freshsales.

### Event-Driven Integration

The integration starts when the following Freshsales events are triggered:

* OnContactCreate
* OnContactUpdate
* OnDealCreate
* OnDealUpdate

These events trigger the middleware to process the event payload. Upon receiving these events, the integration performs the following:

* **Payload Handling:** Middleware parses and transforms the payload to align with SIMS student creation requirements.
* **SQS Queue Processing**: The processed payload is pushed to an **Amazon SQS queue** for creating or updating **student records in SIMS**, and vice versa for SIMS-originated updates.

### Student Record Creation and Updates - (Freshsales → SIMS)

* **New Student Creation:** A new **Student record** is created or updated in SIMS when a Contact and Opportunity move to the **“*Student stage”*** in Freshsales.
* **Student Record Update:** If a new Opportunity is linked to an existing Contact, the system checks if a new Student needs to be created or if the existing Opprtunity should be updated based on the external student id field in freshsales.

### Deal Creation and Updation - (SIMS → Freshsales)

To support a two-way sync, the integration also processes events originating from SIMS:

* **SIMS Trigger:** When a Student is created or updated in SIMS, a corresponding event is pushed to a dedicated SQS queue (SIMS-to-Freshsales).
* **Middleware Processing:** The SIMS student payload is processed, transformed into Freshsales format, and used to:
  + Create or update an Opportunity in Freshsales based on the Student ID.
  + Associate the Student data with the correct Contact.

This ensures Freshsales is always in sync with SIMS even when SIMS is the point of origin.

### 

### Unique EventID Generation and Tracking

The EventID is a unique UUID generated for each application and is essential for tracking.

## Freshsales Custom App

A Freshsales custom application will obtain and store Freshsales, Middleware, and SQS credentials.

To enhance flexibility in data mapping, a **Mapping Configuration Page** will be introduced in the custom app settings. This page will allow users to define and manage field mappings efficiently. The data collected from this configuration will be stored in **JSON format for** easy processing and integration.

* The mapping configuration will be stored in JSON format.
* Each mapping entry will define:
  + Source Field (Freshsales)
  + Destination Field (SIMS)
  + Choice mappings (If it is a dropdown field)
* The customers can add, update, and delete field mappings as needed, with necessary validations in place.

A serverless application will be built to listen to the following product events

* OnContactCreate
* OnContactUpdate
* OnDealCreate
* OnDealUpdate

## 

## Middleware Processing

### Freshsales → SIMS

When an event (Contact/Opportunity creation or update) is triggered in **Freshsales**, the following processing steps occur in the middleware:

* **Data Transformation**: The middleware transforms the event payload (Contact/Deal data) into the format required by SIMS, including proper field alignment, type formatting, and value normalization.
* **Job Queue Creation**: The transformed payload is pushed to an **SQS queue (Freshsales-to-SIMS)** for processing in SIMS. Each record corresponds to a specific operation—Lead, Application, or Student creation/update—depending on the Deal stage.
* **EventID Tracking**: A **unique EventID** (UUID) is attached to each job, which enables deduplication, processing status tracking, and retry management.

This ensures all data flowing from Freshsales to SIMS is structured, traceable, and queued for reliable delivery.

### SIMS → Freshsales

To support **bi-directional sync**, the middleware also processes events originating from **SIMS** when Application or Student records are created or updated. The flow is as follows:

* **SIMS Event Trigger**: When an Application or Student record is created or updated in SIMS, the system pushes a payload to a separate **S*QS queue (SIMS-to-Freshsales)***.
* **Queue Polling**: The middleware periodically polls the ***SIMS-to-Freshsales queue*** to retrieve new or updated payloads.
* **Data Transformation**: Retrieved payloads are transformed into Freshsales-compatible format—mapping SIMS fields to Freshsales fields and applying necessary value conversions.
* **Freshsales Record Processing**:
  + If a Contact or Opportunity does not exist, it is created.
  + If it already exists, the record is updated based on deduplication logic.
* **EventID Tracking**: Each SIMS-originated payload is assigned a **unique EventID** and is tracked through the process, with success or failure status updates written to log or tracking files for visibility.

## SQS Queue Processing

* **Queue Mechanism:** The SQS queue processes jobs automatically periodically, ensuring periodic synchronization between Freshsales and SIMS.
* **Success/Failure Tracking:** Once processed, results (success or error) are placed into respective success or error queues. Each job is identified and tracked using its eventID.

## Polling Mechanism to Track Status

* **Job Tracking File Structure:** When a new event (e.g., lead creation) occurs in Freshsales, an ***eventID*** is generated, and the event details are added to the job\_queue.json file with an initial status of pending. Each job that is processed will have an associated record in a file. For simplicity, we can use a JSON file where each entry corresponds to a lead event.
  + **eventID:** Unique identifier for each job/event.
  + **status:** Indicates the current status of the job (pending, success, or error).
  + **payload**: The payload is sent for processing.
  + **created\_at:** Timestamp of when the event was created.
  + **updated\_at:** Timestamp of the last status update.
  + **retry\_count:** The number of retries for the job.
* **Polling for Status Updates:** 
  + To track the status of jobs, a scheduled job (e.g., every 1 minute) will read the job queue file and check the status of each job.
  + The job will check for pending jobs and update their status based on the processed results.
  + Success Queue or Error Queue in SQS will be read to determine the status of each job.
    - If a success message is received for a job, the status will be updated to success, and the ***LeadID/ApplicationID/StudentID is updated in the opportunity record in Freshsales.***
    - If an error message is received, the status will be updated to an error with the relevant error message.
* **Delete the event data from the Queue:**
  + The event data is deleted from the success/error queue after the status is updated.

## Retry Mechanism Logic

A retry cron job runs every ***5 minutes*** to handle failed jobs. The process follows these steps:

* The cron job fetches jobs from the file queue that have an error status and a ***retry\_count*** of less than 3.
* Each fetched job is retried by resubmitting its payload for processing.
* After each retry attempt, the ***retry\_count*** is incremented by 1.
* Each job is retried up to three times. If it still fails after the third attempt, it remains in the error queue for further investigation.

## Bi-Directional Field Mapping: Freshsales to SIMS (School Level)

This section outlines the bi-directional field mapping between **Freshsales** and **SIMS** for **school-level** records. It defines how data is transferred, updated, and synchronized across both systems for key entities like **Contact**, **Opportunity**, **Lead**, and other related student data at the school level. The mapping ensures data consistency and supports the integration workflows between Freshsales and SIMS.

**Freshsales opportunity record endpoint:** [https://advtechgroup-staging.myfreshworks.com/crm/sales/api/deals/{{deal\_id}}](https://advtechgroup-staging.myfreshworks.com/crm/sales/api/deals/%7B%7Bdeal_id)

**Freshsales contact record endpoint:** [https://advtechgroup-staging.myfreshworks.com/crm/sales/api/contacts/{{contact\_id}}](https://advtechgroup-staging.myfreshworks.com/crm/sales/api/contacts/%7B%7Bcontact_id)

#### Lead mapping

| **Schools Division Contact and Opportunity to Lead Field Level Mapping Requirements** | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| **Field group** | **SIMS Field Name** | **Field Options** | **Mandatory** | **Freshsales Module** | **Freshsales Field Name** | **Logic** |
| **Primary Fields** | eventID |  | YES | N/A | N/A | Generate UUID in Middleware and send with Payload (Always unique) |
| eventTime |  | YES | N/A | N/A | Current Timestamp |
| eventType |  | YES | N/A | N/A | Static: ENQUIRY\_CREATE |
| trigger |  | YES | N/A | N/A | Static: ENQUIRY |
| contactId |  | YES | Contact | id | Contact ID |
| opportunityId |  | YES | Opportunity | id | Opportunity ID |
| enquiredBy |  | YES | N/A | N/A | Static: PROSPECTIVE\_STUDENT |
| leadType |  | YES | N/A | N/A | N/A |
| **Primary Lead Details** | stage | **Freshsales Opportunity Status → SIMS Lead Stage**  -------------------------------------------------------------------------------  New/Uncontacted → Not Yet Contacted  Contacted → Contacted  Contacted (Unreachable) → Contacted  Contacted (Interested) → Contacted  Qualified → Qualified | YES | Opportunity | deal\_stages | **Mapping between Freshsales Opportunity Status and SIMS Lead Stage:**  - New/Uncontacted → Not Yet Contacted  - Contacted → Contacted - Contacted (Unreachable) → Contacted  - Contacted Interested → Contacted  - Qualified → Qualified for Application |
| userCode |  | YES | Opportunity | owner\_id |  |
| enquiryDate |  | YES | Opportunity | cf\_offer\_initiated\_date |  |
| **Parent/Guardian Details** | fatherSalutation | **Freshsales Parent/Guardian Title → SIMS Parent/Guardian Title**  ------------------------------------------------------------  Dr. → Dr.  Mr. → Mr.  Mrs. → Mrs.  Mx. → Mx.  Other → Other  Prof. → Prof. | YES | Contact | cf\_parentguardian\_title | Not present in sandbox |
| fatherFirstName |  | YES | Contact | cf\_parentguardian\_first\_name | Not present in sandbox |
| fatherMiddleName |  | NO | Contact | cf\_parentguardian\_middle\_names | Not present in sandbox |
| fatherSurname |  | YES | Contact | cf\_parentguardian\_surname | Not present in sandbox |
| fatherMobileCountryCode |  | YES | Contact | phone\_numbers | Extract only the country code from the mobile number |
| fatherMobileNo |  | YES | Contact | phone\_numbers | Extract only the phone number and exclude country code |
| fatherEmail |  | YES | Contact | cf\_parentguardian\_email | Not present in sandbox |
| studentAlternateCountryCode |  | NO | Contact | N/A |  |
| studentAlternateNo |  | NO | Contact | work\_number |  |
| **Additional Information** | enquirySource | **Freshsales Brand Exposure → SIMS Brand Exposure**  ------------------------------------------------  Activations(Mall/Exhibition) → Activations(Mall/Exhibition)  Cinema → Cinema  ElectronicCommunication(SMS/Email/WhatsApp) → ElectronicCommunication(SMS/Email/WhatsApp)  Magazine → Magazine  Newspaper → Newspaper  OnlineBannerAdverts → OnlineBannerAdverts  OnlineSearchEngine(GoogleSearch/Bing) → OnlineSearchEngine(GoogleSearch/Bing)  OutdoorMedia → OutdoorMedia  Radio → Radio  SchoolPresentation → SchoolPresentation  SocialMedia(Facebook,InstagramandTwitter) → SocialMedia(Facebook,InstagramandTwitter)  Television → Television  Website → Website  WordofMouth/Referral → WordofMouth/Referral  YouTube → YouTube | YES | Opportunity | cf\_brand\_exposure |  |
| sourceOfEnquiry | **Freshsales Brand Exposure → SIMS Source of Entry**  ------------------------------------------------  Cinema → Cinema  DirectMarketing → DirectMarketing  InternetSearch → InternetSearch  Magazine → Magazine  Newspaper → Newspaper  OpenDay → OpenDay  OutdoorMedia → OutdoorMedia  Radio → Radio  SchoolPresentation → SchoolPresentation  SocialMedia → SocialMedia  Television → Television  WebsiteBannerAdverts → WebsiteBannerAdverts  WordofMouth → WordofMouth | YES | Opportunity | cf\_point\_of\_entry |  |
| comment |  | NO | Opportunity | cf\_comment |  |
| **Student Details** | studentSalutation | **Freshsales Student Title → SIMS Student Title**  ------------------------------------------------------------  Dr. → Dr.  Mr. → Mr.  Mrs. → Mrs.  Mx. → Mx.  Other → Other  Prof. → Prof. | YES | Opportunity | cf\_title |  |
| studentFirstName |  | YES | Opportunity | cf\_student\_first\_name |  |
| studentMiddleName |  | NO | Opportunity | cf\_student\_middle\_name |  |
| studentSurname |  | YES | Opportunity | cf\_student\_surname |  |
| nationalId |  | YES | Contact | cf\_parentguardian\_national\_idpassport |  |
| studentDOB |  | YES | Opportunity | cf\_date\_of\_birth\_of\_student |  |
| studentGender | **Freshsales Gender → SIMS Gender**  -------------------------------  Female → Female  Male → Male | NO | Opportunity | cf\_gender |  |
| **Admission Requirement Detail** | academyName |  | YES | Opportunity | cf\_institute |  |
| locationName |  | YES | Opportunity | cf\_brand\_campus |  |
| programName |  | YES | Opportunity | cf\_qualification |  |
| intakeYear |  | YES | Opportunity | cf\_intake |  |
| seatType |  | YES | Opportunity | cf\_seat\_type |  |
| **Closure Details** | academyName |  | YES | Opportunity | cf\_institute |  |
| locationName |  | YES | Opportunity | cf\_brand\_campus |  |
| programName |  | YES | Opportunity | cf\_qualification |  |
| intakeYear |  | YES | Opportunity | cf\_intake |  |
| seatType |  | YES | Opportunity | cf\_seat\_type |  |
| closureDate |  | YES | Opportunity | closed\_date |  |
| closureReason |  | YES - if the Lead is being Closed and is Open | Opportunity | deal\_reasons |  |
| reopenDate |  | YES - if the Lead is being Reopened and is Closed | Opportunity | Updated\_at |  |
| reopenReason |  | YES - if the Lead is being Reopened and is Closed | Opportunity | deal\_pipeline\_id | **Values:**  **- Company not willing to sponsor**  **- Lost to Other IIE Brand - Lost/Cancelled**  **- No Employment**  **- No Finance - No Longer Interested**  **- Not Available - Not Contactable**  **- Lost to Private School/College - Lost to Public School/University** |
| externalReferenceNumber |  | NO | Opportunity | id | Opportunity ID |
| **SIMS to Freshsales** | Lead ID |  | N/A | Opportunity | cf\_lead\_id | SIMS to Freshsales |

#### Application mapping

| **School Division Contact and Opportunity to Application Field Level Mapping Requirements** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Common Field Name** | **SIMS** | | | **Freshsales** | | | **Flow of Information** |
| **Field name** | **Mandatory?** | **Field Options** | **Freshsales** | **Module** | **Field options** |
| Student Number | studentID | Optional on Application | N/A | cf\_student\_number | Opportunity | N/A | SIMS to Freshsales |
| Application ID | applicationCode | Mandatory | N/A | cf\_application\_id | Opportunity | N/A | SIMS to Freshsales |
| Application Date | Application Date | Mandatory | N/A | created\_at | Opportunity | N/A | Bi-Directional |
| Application Status | applicationStatus | Mandatory | -Payment Pending  -Submitted  -Approved  -Rejected  -Withdrawn  -Direct Admission  -Admission Granted | deal\_stage\_id/deal\_reason\_id | Opportunity | Application Stage:  Application Payment Pending  Application – Will Pay  Application Paid  Application Confirmed & Offer Letter Due  Offer Letter Issued  Offer Accepted  Offer Accepted & Paid  Offer Declined  Offer Expired  Escalated  Escalated Offer Reviewed  Waiting List  Admission Granted  Admission Declined  Withdrawn | SIMS to Freshsales |
| Offer Status | Offer Status | Mandatory | -Active  -Admitted  -Escalated Offer Reviewed  -Offer Expired  -Offer Letter Accepted  -Offer Letter Due  -Offer Letter Issued  -Offer Letter Rejected  -Rejected  -Waiting List  -Withdraw After Accepting Offer Letter  -Withdrawn | deal\_stage\_id/deal\_reason\_id | Opportunity | Application Stage:  Application Payment Pending  Application – Will Pay  Application Paid  Application Confirmed & Offer Letter Due  Offer Letter Issued  Offer Accepted  Offer Accepted & Paid  Offer Declined  Offer Expired  Escalated  Escalated Offer Reviewed  Waiting List  Admission Granted  Admission Declined  Withdrawn | SIMS to Freshsales |
| Admission Status | Admission Status | Mandatory | -Admission In Progress  -Admission Confirmed  -Registered with Conditions  -Admitted On Trial Basis  -Withdraw After Confirmed  -Withdraw After Admission  -Withdraw After Trial  -Withdraw After Provision  -Provisional Admission Declined  -Withdrawn | deal\_stage\_id/deal\_reason\_id | Opportunity | Application Stage:  Application Payment Pending  Application – Will Pay  Application Paid  Application Confirmed & Offer Letter Due  Offer Letter Issued  Offer Accepted  Offer Accepted & Paid  Offer Declined  Offer Expired  Escalated  Escalated Offer Reviewed  Waiting List  Admission Granted  Admission Declined  Withdrawn | SIMS to Freshsales |
| Application Owner | userId | Mandatory | N/A | owner\_id | Opportunity | User List | Freshsales to SIMS |
| Admission Commitment Fee Status | Admission Commitment Fee Status | N/A | -Null  -FULLY\_PENDING  -SETTLED  -CANCELLED | cf\_admission\_comitment\_fee\_status | Opportunity | - -  -Fully Pending  -Settled  -Cancelled | SIMS to Freshsales |
| Brand | academyId | Mandatory | Crawford International | cf\_brand | Opportunity | Crawford International | Bi-Directional |
| Campus | locationId | Mandatory |  | cf\_campus | Opportunity |  | Bi-Directional |
| School Phase | Program Group | Mandatory | -Pre-Primary  -Preparatory  -College | cf\_school\_phase | Opportunity | -Pre-Primary  -Preparatory  -College | Bi-Directional |
| Grade | programId | Mandatory |  | cf\_grade | Opportunity |  | Bi-Directional |
| Intake | intakeYearId | Mandatory |  | cf\_grade\_intake | Opportunity |  | Bi-Directional |
| Seat Type | seatTypeCode | Mandatory | -General  -Corporate/Expatriate | cf\_seat\_type | Opportunity | -General  -Corporate/Expatriate | Bi-Directional |
| Student First Name | studentFirstName | Mandatory | N/A | cf\_student\_first\_name | Opportunity | N/A | Bi-Directional |
| Student Middle Name(s) | studentMiddleName | Optional | N/A | cf\_student\_middle\_name | Opportunity | N/A | Bi-Directional |
| Student Surname | studentSurname | Mandatory | N/A | cf\_student\_surname | Opportunity | N/A | Bi-Directional |
| Gender | genderId | Mandatory | -Female  -Male | cf\_gender | Opportunity | -Female  -Male | Bi-Directional |
| Student Date of Birth | birthDate | Mandatory | N/A | cf\_date\_of\_birth\_of\_student | Opportunity | N/A | Bi-Directional |
| Country | countryId | Mandatory | As per provided Country List | cf\_country | Opportunity | As per provided Country List | Bi-Directional |
| Nationality | nationalityId | Mandatory | As per provided Nationality List | cf\_nationality | Opportunity | As per provided Nationality List | Bi-Directional |
| National ID | nationalId | Mandatory | N/A | cf\_national\_idpassport | Opportunity | N/A | Bi-Directional |
| Disabilities | disabilityIds | Mandatory |  | cf\_disabilities | Opportunity |  | Bi-Directional |
| Current Education Interventions | Current Education Interventions | Optional |  | cf\_current\_education\_interventions | Opportunity |  | Bi-Directional |
| Current or Last School Attended | instituteName | Mandatory | As per Schools List | cf\_current\_or\_last\_school\_attended | Opportunity | As per Schools List | Bi-Directional |
| Is Student SA Citizen | isStudentCitizen | N/A | N/A | cf\_south\_african\_citizen | Opportunity | N/A | Bi-Directional |
| Home Language | homeLanguage | Mandatory |  | cf\_home\_language | Opportunity |  | Bi-Directional |
| Second Language | secondLanguage | Mandatory |  | cf\_second\_language | Opportunity |  | Bi-Directional |
| Religion | Required | Optional |  | cf\_religion | Opportunity |  | Bi-Directional |
| Ethnicity | castCategoryId | Mandatory |  | cf\_ethnicity | Opportunity |  | Bi-Directional |
| Siblings | studentSiblingname | Optional | N/A | cf\_siblings | Opportunity | N/A | Bi-Directional |
| Comment | comment | Optional | N/A | cf\_application\_comment | Opportunity | N/A | Bi-Directional |
| Street Address | address | Mandatory | N/A | cf\_street\_address | Opportunity | N/A | Bi-Directional |
| Country | countryId | Mandatory | As per provided Country List | cf\_country\_address | Opportunity | As per provided Country List | Bi-Directional |
| Province | countryRegionId | Mandatory |  | cf\_province\_address | Opportunity |  | Bi-Directional |
| City | cityId | Mandatory | As per City List | cf\_city | Opportunity | As per City List | Bi-Directional |
| Postal Code | pincode | Optional | N/A | cf\_postal\_code\_address | Opportunity | N/A | Bi-Directional |
| Parent/Guardian 1 Title | fatherSalutation | Mandatory |  | cf\_parentguardian\_title | Contact |  | Bi-Directional |
| Parent/Guardian 1 First Name | fatherFirstName | Mandatory | N/A | cf\_parentguardian\_first\_name | Contact | N/A | Bi-Directional |
| Parent/Guardian 1 Middle Name(s) | fatherMiddleNames | Optional | N/A | cf\_parentguardian\_middle\_names | Contact | N/A | Bi-Directional |
| Parent/Guardian 1 Surname | fatherSurname | Mandatory | N/A | cf\_parentguardian\_surname | Contact | N/A | Bi-Directional |
| Parent/Guardian 1 Email Address | fatherEmail | Mandatory | N/A | cf\_parentguardian\_email | Contact | N/A | Bi-Directional |
| Parent/Guardian 1 Mobile Number Country Code | fatherMobileCountryCode | Mandatory | N/A | N/A | Contact | N/A | N/A |
| Parent/Guardian 1 Mobile Number | fatherMobileNo | Mandatory | N/A | phone\_numbers | Contact | N/A | Bi-Directional |
| Parent/Guardian 1 WhatsApp Number Country Code | fatherWhatsappNumberCountryCode | Optional | N/A | N/A | Contact | N/A | N/A |
| Parent/Guardian 1 WhatsApp Number | fatherWhatsappNumber | Optional | N/A | cf\_parentguardian\_1\_whatsapp\_number | Contact | N/A | Bi-Directional |
| Parent/Guardian 1 ID Type | fatherIdType | Mandatory | ] | cf\_parentguardian\_1\_id\_type | Contact | ] | Bi-Directional |
| Parent/Guardian 1 National ID/Passport | fatherNationalIDOrPassport | Mandatory | N/A | Parent/Guardian 1 National ID/Passport | Contact | N/A | Bi-Directional |
| Alumni of an ADvTECH School | fatherAlumniOfADvTECHSchool | N/A | -Yes  -No | cf\_parentguardian\_1\_is\_an\_alumni\_of\_an\_advtech\_school | Contact | -Yes  -No | Bi-Directional |
| School Attended | fatherSchoolAttended | Mandatory if “Alumni of an ADvTECH School” is “Yes”. | N/A | cf\_school\_attended\_by\_parentguardian\_1 | Contact | N/A | Bi-Directional |
| Parent/Guardian 2 Title | motherSalutation | Optional | ] | cf\_parentguardian\_2\_title | Contact | \ | Bi-Directional |
| Parent/Guardian 2 First Name | motherFirstName | Optional | N/A | cf\_parentguardian\_2\_first\_name | Contact | N/A | Bi-Directional |
| Parent/Guardian 2 Middle Name(s) | motherMiddleNames | Optional | N/A | cf\_parentguardian\_2\_middle\_names | Contact | N/A | Bi-Directional |
| Parent/Guardian 2 Surname | motherSurname | Optional | N/A | Parent/Guardian 2 Surname | Contact | N/A | Bi-Directional |
| Parent/Guardian 2 Email Address | motherEmailAddress | Optional | N/A | cf\_parentguardian\_2\_email\_address | Contact | N/A | Bi-Directional |
| Parent/Guardian 2 Mobile Number Country Code | motherMobileNumberCountryCode | Optional | N/A | N/A | Contact | N/A | N/A |
| Parent/Guardian 2 Mobile Number | motherMobileNumber | Optional | N/A | cf\_parentguardian\_2\_mobile\_number | Contact | N/A | Bi-Directional |
| Parent/Guardian 2 Alternate Number Country Code | motherAlternateNumberCountryCode | Optional | N/A | N/A | Contact | N/A | N/A |
| Parent/Guardian 2 Alternate Number | motherAlternateNumber | Optional | N/A | cf\_parentguardian\_2\_whatsapp\_number | Contact | N/A | Bi-Directional |
| Parent/Guardian 2 ID Type | motherIdType | Optional |  | cf\_parentguardian\_2\_id\_type | Contact |  | Bi-Directional |
| Parent/Guardian 2 National ID | motherNationalIDOrPassport | Optional | N/A | cf\_parentguardian\_2\_national\_idpassport | Contact | N/A | Bi-Directional |
| Alumni of an ADvTECH School | motherAlumniOfADvTECHSchool | Optional | -Yes  -No | cf\_parentguardian\_2\_is\_an\_alumni\_of\_an\_advtech\_school | Contact | -Yes  -No | Bi-Directional |
| School Attended | motherSchoolAttended | Optional | N/A | cf\_school\_attended\_by\_parentguardian\_2 | Contact | N/A | Bi-Directional |
| Emergency Contact First Name | emergencyContactfirstName | Optional | N/A | cf\_emergency\_contact\_first\_name | Contact | N/A | Bi-Directional |
| Emergency Contact Surname | emergencyContactsurname | Optional | N/A | cf\_emergency\_contact\_last\_name | Contact | N/A | Bi-Directional |
| Emergency Contact Number Country Code | emergencyContactcontactNumberCountryCode | Optional | N/A | N/A | Contact | N/A | N/A |
| Emergency Contact Number | emergencyContactcontactNumber | Optional | N/A | cf\_emergency\_contact\_number | Contact | N/A | Bi-Directional |
| Point of Entry | sourceId | Mandatory |  | cf\_point\_of\_entry\_schools | Opportunity |  | Bi-Directional |
| Source of Entry | enquiryModeIds | Mandatory |  | cf\_brand\_exposure\_schools | Opportunity |  | Bi-Directional |
| Boarding Required | isHostelRequired | N/A | -Yes  -No | cf\_the\_student\_requires\_boarding | Opportunity | -Yes  -No | Bi-Directional |
| **Primary Field mappings** | | | | | | | |
|
| **Primary Fields** | eventID | YES | N/A | N/A | Generate UUID in Middleware and send with Payload (Always unique) | | |
| eventTime | YES | N/A | N/A | Current Timestamp | | |
| eventType | YES | N/A | N/A | Static: APPLICATION\_CREATE | | |
| trigger | YES | N/A | N/A | Static: APPLICATION | | |
| contactId | YES | Contact | id | Contact ID | | |
| opportunityId | YES | Opportunity | id | Opportunity ID | | |

#### Student Mapping

| **School Division Contact and Opportunity to Student Field Level Mapping Requirements** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Common Field Name** |  | | | **Freshsales** | | | **Flow of Information** |
| **Field name** | **Mandatory?** | **Field Options** | **Freshsales** | **Module** | **Field options** |
| Student Number | studentID | Optional on Application | N/A | cf\_student\_number | Opportunitity | N/A | SIMS to Freshsales |
| Admission Number | admissionID | Mandatory | N/A | cf\_admission\_number | Opportunitity | N/A | SIMS to Freshsales |
| Student Status | status | N/A | -Active  -Inactive | deal\_stage\_id/deal\_reason\_id | Opportunitity | Student:  Registration – Pending  Registration – Request Received  Registration – Enrolled  Graduated  Cancelled | SIMS to Freshsales |
| Admission Status | Status | Mandatory | -Active  -Inactive | deal\_stage\_id/deal\_reason\_id | Opportunitity | Student:  Registration – Pending  Registration – Request Received  Registration – Enrolled  Graduated  Cancelled | SIMS to Freshsales |
| Registration Status | Enrollment status | Mandatory | -Pending  -Completed | deal\_stage\_id/deal\_reason\_id | Opportunitity | Student:  Registration – Pending  Registration – Request Received  Registration – Enrolled  Graduated  Cancelled | SIMS to Freshsales |
| Pass Out Status | Pass out | Mandatory | -Pass Out  -Pending  -In Process  -Rejected | deal\_stage\_id/deal\_reason\_id | Opportunitity | Student:  Registration – Pending  Registration – Request Received  Registration – Enrolled  Graduated  Cancelled | SIMS to Freshsales |
| Brand | academyId | Mandatory | Crawford International | cf\_brand | Opportunitity | Crawford International | SIMS to Freshsales |
| Campus | locationId | Mandatory |  | cf\_campus | Opportunitity |  | SIMS to Freshsales |
| School Phase | Program group | Mandatory | -Pre-Primary  -Preparatory  -College | cf\_school\_phase | Opportunitity | -Pre-Primary  -Preparatory  -College | SIMS Freshsales |
| Grade | programId | Mandatory |  | cf\_current\_grade | Opportunitity |  | SIMS to Freshsales |
| Intake | intakeYearId | Mandatory | -2025  -2026  -2027  -2028  -2029  -2030 | cf\_current\_intake | Opportunitity | -2025  -2026  -2027  -2028  -2029  -2030 | SIMS to Freshsales |
| Seat Type | seatTypeCode | Mandatory | -General  -Corporate/Expatriate | cf\_seat\_type | Opportunitity | -General  -Corporate/Expatriate | SIMS to Freshsales |
| External System Reference | externalSystemReferenceOne | Optional | N/A | Opportunity ID | Opportunitity | N/A | Freshsales to SIMS |
| **Primary Field mappings** | | | | | | | |
|
| **Primary Fields** | eventID | YES | N/A | N/A | Generate UUID in Middleware and send with Payload (Always unique) | | |
| eventTime | YES | N/A | N/A | Current Timestamp | | |
| eventType | YES | N/A | N/A | Static: Student Confirmed | | |
| trigger | YES | N/A | N/A | Static: Students | | |
| contactId | YES | Contact | id | Contact ID | | |
| opportunityId | YES | Opportunity | id | Opportunity ID | | |

## 

## Bi-Directional Field Mapping: Freshsales to SIMS (Tertiary Level)

This section outlines the bi-directional field mapping between **Freshsales** and **SIMS** for **Tertiary Level** records. It specifies how data related to **Contact**, **Opportunity**, **Lead**, and other student records at the tertiary level are transferred, updated, and synchronized across both systems. The mapping ensures consistency and supports the seamless flow of information between Freshsales and SIMS throughout the integration process.

**Freshsales opportunity record endpoint:** [https://advtechgroup-staging.myfreshworks.com/crm/sales/api/deals/{{deal\_id}}](https://advtechgroup-staging.myfreshworks.com/crm/sales/api/deals/%7B%7Bdeal_id)

**Freshsales contact record endpoint:** [https://advtechgroup-staging.myfreshworks.com/crm/sales/api/contacts/{{contact\_id}}](https://advtechgroup-staging.myfreshworks.com/crm/sales/api/contacts/%7B%7Bcontact_id)

#### Lead Mapping

| **Tertiary Division Contact and Opportunity to Lead Field Level Mapping Requirements** | | | | | | |
| --- | --- | --- | --- | --- | --- | --- |
| **Field group** | **SMIS Field Name** | **Field Options** | **Mandatory** | **Freshsales Module** | **Freshsales Field Name** | **Logic** |
| **Primary Fields** | eventID |  | YES | N/A | N/A | Generate UUID in Middleware and send with Payload (Always unique) |
| eventTime |  | YES | N/A | N/A | Current Timestamp |
| eventType |  | YES | N/A | N/A | Static: ENQUIRY\_CREATE |
| trigger |  | YES | N/A | N/A | Static: ENQUIRY |
| contactId |  | YES | Contact | id | Contact ID |
| opportunityId |  | YES | Opportunity | id | Opportunity ID |
| enquiredBy |  | YES | N/A | N/A | Static: PROSPECTIVE\_STUDENT |
| leadType |  | YES | N/A | N/A | N/A |
| **Primary Lead Details** | stage | **Freshsales Opportunity Status → SIMS Lead Stage**  -------------------------------------------------------------------------------  New/Uncontacted → Not Yet Contacted  Contacted → Contacted  Contacted (Unreachable) → Contacted  Contacted (Interested) → Contacted  Qualified → Qualified | YES | Opportunity | deal\_stages | **Mapping between Freshsales Opportunity Status and SIMS Lead Stage:**  - New/Uncontacted → Not Yet Contacted  - Contacted → Contacted - Contacted (Unreachable) → Contacted  - Contacted Interested → Contacted  - Qualified → Qualified for Application |
| userCode |  |  | YES | Opportunity | owner\_id |
| enquiryDate |  |  | YES | Opportunity | cf\_offer\_initiated\_date |
| **Student Details** | studentSalutation | **Freshsales Student Title → SIMS Student Title**  ------------------------------------------------------------  Dr. → Dr.  Mr. → Mr.  Mrs. → Mrs.  Mx. → Mx.  Other → Other  Prof. → Prof. | YES | Opportunity | cf\_title |  |
|  | studentFirstName |  | YES | Opportunity | cf\_student\_first\_name |  |
|  | studentMiddleName |  | NO | Opportunity | cf\_student\_middle\_name |  |
|  | studentSurname |  | YES | Opportunity | cf\_student\_surname |  |
|  | studentEmail |  | YES | Opportunity | email |  |
|  | studentMobileCountryCode |  | YES | Opportunity | mobile\_number | Extract only the country code from the mobile number |
|  | studentMobileNo |  | YES | Opportunity | mobile\_number | Extract only the phone number and exclude country code |
|  | studentAlternateCountryCode |  | NO | Opportunity | N/A |  |
|  | studentAlternateNo |  | NO | Opportunity | work\_number |  |
|  | studentDOB |  | NO | Opportunity | cf\_student\_date\_of\_birth |  |
|  | studentGender | **Freshsales Gender → SIMS Gender**  -------------------------------  Female → Female  Male → Male | NO | Opportunity | cf\_student\_gender |  |
|  | isStudentSouthAfricanCitizen |  | NO | Opportunity | cf\_are\_you\_a\_south\_african\_citizen |  |
|  | nationalId |  | NO | Contact | cf\_parentguardian\_national\_idpassport |  |
| **Parents Details** | fatherSalutation | **Freshsales Parent/Guardian Title → SIMS Parent/Guardian Title**  ------------------------------------------------------------  Dr. → Dr.  Mr. → Mr.  Mrs. → Mrs.  Mx. → Mx.  Other → Other  Prof. → Prof. | NO | Contact | cf\_parentguardian\_title | Not present in sandbox |
| fatherFirstName |  | NO | Contact | cf\_parentguardian\_first\_name | Not present in sandbox |
| fatherMiddleName |  | NO | Contact | cf\_parentguardian\_middle\_names | Not present in sandbox |
| fatherSurname |  | NO | Contact | cf\_parentguardian\_surname | Not present in sandbox |
| fatherMobileCountryCode |  | NO | Contact | phone\_numbers | Extract only the country code from the mobile number |
| fatherMobileNo |  | NO | Contact | phone\_numbers | Extract only the phone number and exclude country code |
| **Additional Information** | instituteName |  | NO | Opportunity | cf\_institute |  |
| enquiryModes | **Freshsales Brand Exposure → SIMS Brand Exposure**  ------------------------------------------------  Activations(Mall/Exhibition) → Activations(Mall/Exhibition)  Cinema → Cinema  ElectronicCommunication(SMS/Email/WhatsApp) → ElectronicCommunication(SMS/Email/WhatsApp)  Magazine → Magazine  Newspaper → Newspaper  OnlineBannerAdverts → OnlineBannerAdverts  OnlineSearchEngine(GoogleSearch/Bing) → OnlineSearchEngine(GoogleSearch/Bing)  OutdoorMedia → OutdoorMedia  Radio → Radio  SchoolPresentation → SchoolPresentation  SocialMedia(Facebook,InstagramandTwitter) → SocialMedia(Facebook,InstagramandTwitter)  Television → Television  Website → Website  WordofMouth/Referral → WordofMouth/Referral  YouTube → YouTube | NO | Opportunity | cf\_brand\_exposure |  |
| sourceOfEnquiry | **Freshsales Brand Exposure → SIMS Source of Entry**  ------------------------------------------------  Cinema → Cinema  DirectMarketing → DirectMarketing  InternetSearch → InternetSearch  Magazine → Magazine  Newspaper → Newspaper  OpenDay → OpenDay  OutdoorMedia → OutdoorMedia  Radio → Radio  SchoolPresentation → SchoolPresentation  SocialMedia → SocialMedia  Television → Television  WebsiteBannerAdverts → WebsiteBannerAdverts  WordofMouth → WordofMouth | YES | Opportunity | cf\_point\_of\_entry |  |
| isCompanySponsored |  | NO | Opportunity | cf\_company\_sponsored |  |
| financeMode |  | NO | Opportunity | cf\_finance |  |
| comment |  | NO | Opportunity | cf\_comment |  |
| **Education Details** | examPassedNameField |  | YES | Opportunity | cf\_highest\_education\_level\_completed |  |
| Other Highest Education level Completed |  | NO | Opportunity | cf\_other\_highest\_educaiton\_level\_completed |  |
| instituteName |  | YES | Opportunity | cf\_institute |  |
| yearOfExamination |  | YES | Opportunity | cf\_year\_of\_completion |  |
| **Admission Requirement Details** | academyName |  | YES | Opportunity | cf\_institute |  |
| locationName |  | YES | Opportunity | cf\_brand\_campus |  |
| modeOfDelivery |  | YES | Opportunity | cf\_mode\_of\_delivery |  |
| isBatchPartTime |  | YES | Opportunity | cf\_registration\_type | If cf\_registration\_type == "Full Time" return true else return false |
| programName |  | YES | Opportunity | cf\_qualification |  |
| intakeYear |  | YES | Opportunity | cf\_intake |  |
| fieldOfInterest |  | YES - if programName is Other | Opportunity | cf\_field\_of\_interest |  |
| seatType |  | YES | Opportunity | cf\_seat\_type |  |
| **Closure Details** | academyName |  | YES | Opportunity | cf\_institute |  |
| locationName |  | YES | Opportunity | cf\_brand\_campus |  |
| programName |  | YES | Opportunity | cf\_qualification |  |
| intakeYear |  | YES | Opportunity | cf\_intake |  |
| seatType |  | YES | Opportunity | cf\_seat\_type |  |
| closureDate |  | YES | Opportunity | closed\_date |  |
| closureReason |  | YES - if the Lead is being Closed and is Open | Opportunity | deal\_reasons |  |
| reopenDate |  | YES - if the Lead is being Reopened and is Closed | Opportunity | Updated\_at |  |
| reopenReason |  | YES - if the Lead is being Reopened and is Closed | Opportunity | deal\_pipeline\_id | **Values:**  **- Company not willing to sponsor**  **- Lost to Other IIE Brand - Lost/Cancelled**  **- No Employment**  **- No Finance - No Longer Interested**  **- Not Available - Not Contactable**  **- Lost to Private School/College - Lost to Public School/University** |
| externalReferenceNumber |  | NO | Opportunity | id | Opportunity ID |
| **SIMS to Freshsales** | Lead ID |  | N/A | Opportunity | cf\_lead\_id | SIMS to Freshsales |

#### Application Mapping

| **Tertiary Division Contact and Opportunity to Application Field Level Mapping Requirements** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Common Field Name** | **SIMS** | | | **Freshsales** | | | **Flow of Information** |
| **Field name** | **Mandatory?** | **Field Options** | **Field name** | **Module** | **Field options** |
| Application ID | applicationCode | Mandatory | N/A | cf\_application\_id | Opportunity | N/A | SIMS to Freshsales |
| Application Date | applicationDate | Mandatory | N/A | created\_at | Opportunity | N/A | Bi-Directional |
| Application Status | applicationStatus | Mandatory | -Payment Pending  -Submitted  -Approved  -Rejected  -Withdrawn  -Direct Admission  -Admission Granted | deal\_stage\_id/deal\_reason\_id | Opportunity | Application Stage:  Application Payment Pending  Application – Will Pay  Application Paid  Application Confirmed & Offer Letter Due  Offer Letter Issued  Offer Accepted  Offer Accepted & Paid  Offer Declined  Offer Expired  Escalated  Escalated Offer Reviewed  Waiting List  Admission Granted  Admission Declined  Withdrawn | SIMS to Freshsales |
| Offer Status | Offer Status | Mandatory | -Active  -Admitted  -Escalated Offer Reviewed  -Offer Expired  -Offer Letter Accepted  -Offer Letter Due  -Offer Letter Issued  -Offer Letter Rejected  -Rejected  -Waiting List  -Withdraw After Accepting Offer Letter  -Withdrawn | deal\_stage\_id/deal\_reason\_id | Opportunity | Application Stage:  Application Payment Pending  Application – Will Pay  Application Paid  Application Confirmed & Offer Letter Due  Offer Letter Issued  Offer Accepted  Offer Accepted & Paid  Offer Declined  Offer Expired  Escalated  Escalated Offer Reviewed  Waiting List  Admission Granted  Admission Declined  Withdrawn | SIMS to Freshsales |
| Admission Status | Admission Status | Mandatory | -Admission In Progress  -Admission Confirmed  -Registered with Conditions  -Admitted On Trial Basis  -Withdraw After Confirmed  -Withdraw After Admission  -Withdraw After Trial  -Withdraw After Provision  -Provisional Admission Declined  -Withdrawn | deal\_stage\_id/deal\_reason\_id | Opportunity | Application Stage:  Application Payment Pending  Application – Will Pay  Application Paid  Application Confirmed & Offer Letter Due  Offer Letter Issued  Offer Accepted  Offer Accepted & Paid  Offer Declined  Offer Expired  Escalated  Escalated Offer Reviewed  Waiting List  Admission Granted  Admission Declined  Withdrawn | SIMS to Freshsales |
| Lost Application Status | Lost Application Status | N/A | -Lost  -Reapplied | deal\_stage\_id | Opportunity | Application Stage:  Application Payment Pending  Application – Will Pay  Application Paid  Application Confirmed & Offer Letter Due  Offer Letter Issued  Offer Accepted  Offer Accepted & Paid  Offer Declined  Offer Expired  Escalated  Escalated Offer Reviewed  Waiting List  Admission Granted  Admission Declined  Withdrawn | SIMS to Freshsales |
| Lost Application Status Reason | Lost Application Status Reason | N/A | -Company not willing to sponsor  -Lost to Other IIE Tertiary Brand  -Lost/Cancelled  -No Employment  -No Finance  -No Longer Interested  -Not available  -Not Contactable  -Not Eligible  -Other  -Private College  -Public University | deal\_reason\_id | Opportunity | -Company not willing to sponsor  -Lost to Other IIE Brand  -Lost/Cancelled  -No Employment  -No Finance  -No Longer Interested  -Not Available  -Not Contactable  -Lost to Private School/College  -Lost to Public School/University  -Other  -Not Eligible | SIMS to Freshsales |
| Offer Expiry Date | Offer Expiry Date | N/A | N/A | cf\_offer\_expiry\_date | Opportunity | N/A | SIMS to Freshsales |
| Application Owner | userId | Mandatory | N/A | owner\_id | Opportunity | User List | Freshsales to SIMS |
| Admission Commitment Fee Status | Admission Commitment Fee Status | N/A | -Null  -FULLY\_PENDING  -SETTLED  -CANCELLED | cf\_admission\_comitment\_fee\_status | Opportunity | - -  -Fully Pending  -Settled  -Cancelled | SIMS to Freshsales |
| Brand | academyId | Mandatory |  | cf\_brand | Opportunity |  | Bi-Directional |
| Campus | locationId | Mandatory |  | cf\_campus | Opportunity |  | Bi-Directional |
| Qualification | programId | Mandatory | As per Qualification List | cf\_qualification | Opportunity | As per Qualification List | Bi-Directional |
| Qualification Group | Programgroup | Mandatory |  | cf\_qualification\_group | Opportunity |  | Bi-Directional |
| Mode of Delivery | modeOfDeliveryId | Mandatory | -Contact  -Distance | cf\_mode\_of\_delivery | Opportunity | -Contact  -Distance | Bi-Directional |
| Registration Type | isBatchPartTime | Mandatory | -Full Time  -Part Time | cf\_registration\_type | Opportunity | -Full Time  -Part Time | Bi-Directional |
| Intake | intakeYearId | Mandatory |  | cf\_intake | Opportunity |  | Bi-Directional |
| Seat Type | seatTypeCode | Mandatory | -General  -International | cf\_qualification\_seat\_type | Opportunity | -General  -International | Bi-Directional |
| Student Title | studentSalutationId | Mandatory |  | cf\_student\_title | Opportunity |  | Bi-Directional |
| Student First Name | studentFirstName | Mandatory | N/A | cf\_student\_first\_name | Opportunity | N/A | Bi-Directional |
| Student Middle Name(s) | studentMiddleName | Optional | N/A | cf\_student\_middle\_name | Opportunity | N/A | Bi-Directional |
| Student Surname | studentSurname | Mandatory | N/A | cf\_student\_surname | Opportunity | N/A | Bi-Directional |
| Student Mobile Country Code | studentMobileCountryCode | Mandatory | N/A | N/A | Opportunity | N/A | Bi-Directional |
| Student Mobile Number | studentMobileNo | Mandatory | N/A | cf\_student\_mobile\_number | Opportunity | N/A | Bi-Directional |
| Student WhatsApp Number Country Code | studentAlternateCountryCode | Optional | N/A | N/A | Opportunity | N/A | Bi-Directional |
| Student WhatsApp Number | studentAlternateNo | Optional | N/A | work\_number | Opportunity | N/A | Bi-Directional |
| Student Email Address | studentEmail | Mandatory | N/A | emails | Opportunity | N/A | Bi-Directional |
| Student Gender | genderId | Mandatory | -Female  -Male  -Non-Binary | cf\_gender | Opportunity | -Female  -Male | Bi-Directional |
| Student Date of Birth | birthDate | Mandatory | N/A | cf\_date\_of\_birth\_of\_student | Opportunity | N/A | Bi-Directional |
| ID Type | Required | Mandatory |  | cf\_id\_type | Opportunity |  | Bi-Directional |
| National ID/Passport Number | nationalId | Mandatory | N/A | cf\_national\_idpassport | Opportunity | N/A | Bi-Directional |
| Student is a South African Citizen? | isStudentCitizen | N/A | N/A | cf\_are\_you\_a\_south\_african\_student | Opportunity | -Yes  -No | Bi-Directional |
| Permanent Resident? | isPermanentResident | N/A | -Yes  -No | cf\_is\_the\_student\_a\_permanent\_resident | Opportunity | -Yes  -No | Bi-Directional |
| Asylum Seeker? | isAsylumSeeker | N/A | -Yes  -No | cf\_is\_the\_student\_an\_asylum\_seeker | Opportunity | -Yes  -No | Bi-Directional |
| Nationality | nationalityId | Mandatory | As per provided Nationality List | cf\_nationality | Opportunity | As per provided Nationality List | Bi-Directional |
| Disabilities | disabilityIds | Mandatory |  | cf\_disabilities | Opportunity |  | Bi-Directional |
| Disabilities Description | studentDisabilities | Optional |  |  | Opportunity |  | Bi-Directional |
| Home Language | homeLanguage | Mandatory |  | cf\_home\_language | Opportunity |  | Bi-Directional |
| Race | castCategoryId | Mandatory | -African  -Coloured  -Indian/Asian  -White | cf\_ethnicity | Opportunity | -African  -Coloured  -Indian/Asian  -White | Bi-Directional |
| Do you require accommodation? | isHostelRequired | Optional | -Yes  -No | cf\_does\_the\_student\_require\_accommodation | Opportunity | -Yes  -No | Bi-Directional |
| Do you require financial assistance? | NA | Optional | -Yes  -No | cf\_does\_the\_student\_require\_financial\_assistance | Opportunity | -Yes  -No | Bi-Directional |
| Comment | comment | Optional | N/A | cf\_application\_comment | Opportunity | N/A | Bi-Directional |
| Street Address | address | Mandatory | N/A | cf\_street\_address | Opportunity | N/A | Bi-Directional |
| Country | countryId | Mandatory | As per provided Country List | cf\_country\_address | Opportunity | As per provided Country List | Bi-Directional |
| Province | countryRegionId | Mandatory |  | cf\_province\_address | Opportunity |  | Bi-Directional |
| City | cityId | Mandatory | As per provided City List | cf\_city\_address | Opportunity | As per provided City List | Bi-Directional |
| Postal Code | pincode | Optional | N/A | cf\_postal\_code | Opportunity | N/A | Bi-Directional |
| Parent/Guardian Title | fatherSalutationId | Mandatory |  | cf\_parentguardian\_title | Contact |  | Bi-Directional |
| Parent/Guardian First Name | fatherFirstName | Mandatory | N/A | cf\_parentguardian\_first\_name | Contact | N/A | Bi-Directional |
| Parent/Guardian Surname | fatherSurname | Mandatory | N/A | cf\_parentguardian\_surname | Contact | N/A | Bi-Directional |
| Parent/Guardian Email Address | fatherEmail | Mandatory | N/A | cf\_parentguardian\_email | Contact | N/A | Bi-Directional |
| Parent/Guardian Mobile Number Country Code | fatherMobileCountryCode | Mandatory | N/A | N/A | Contact | N/A | Bi-Directional |
| Parent/Guardian Mobile Number | fatherMobileNo | Mandatory | N/A | phone\_numbers | Contact | N/A | Bi-Directional |
| Parent/Guardian Gender | Parent/Guardian Gender | Mandatory | -Female  -Male  -Non-binary  -Prefer not to disclose | cf\_parentguardian\_gender | Contact | -Female  -Male  -Non-binary  -Prefer not to disclose | Bi-Directional |
| Relationship | Relationship | Mandatory | -Parent/Guardian 1  -Parent/Guardian 2  -Parent/Guardian 3  -Parent/Guardian 4 | cf\_relationship | Contact | -Parent/Guardian 1  -Parent/Guardian 2  -Parent/Guardian 3  -Parent/Guardian 4 | Bi-Directional |
| Emergency Contact First Name | emergencyContactfirstName | Optional | N/A | cf\_emergency\_contact\_first\_name | Contact | N/A | Bi-Directional |
| Emergency Contact Surname | emergencyContactsurname | Optional | N/A | cf\_emergency\_contact\_last\_name | Contact | N/A | Bi-Directional |
| Emergency Contact Number Country Code | emergencyContactsurname | Optional | Country Code List | N/A | Contact | N/A | Bi-Directional |
| Emergency Contact Number | emergencyContactcontactNumberCountryCode | Optional | N/A | cf\_emergency\_contact\_number | Contact | N/A | Bi-Directional |
| Point of Entry | sourceId | Mandatory |  | cf\_point\_of\_entry | Opportunity |  | Bi-Directional |
| Source of Entry | enquiryModeIds | Mandatory |  | cf\_brand\_exposure | Opportunity |  | Bi-Directional |
| Highest Education Level | examPassedID | Mandatory |  | cf\_highest\_education\_level | Opportunity |  | Bi-Directional |
| Other Highest Education Level | examPassedOther | Mandatory if “Other” is selected for the Highest Education Level | N/A | cf\_other\_highest\_education\_level | Opportunity | N/A | Bi-Directional |
| Year of Completion | cf\_year\_of\_completed | Mandatory | 1950-2024 | cf\_year\_of\_completed | Opportunity | 1950-2024 | Bi-Directional |
| School/Institute | instituteName | Mandatory | As per Schools List | cf\_current\_or\_last\_school\_attended | Opportunity | As per Schools List | Bi-Directional |
| School Priority | School Priority | Mandatory |  | cf\_school\_priority | Opportunity |  | Bi-Directional |
| **Primary Field mappings** | | | | | | | |
|
| **Primary Fields** | eventID | YES | N/A | N/A | Generate UUID in Middleware and send with Payload (Always unique) | | |
| eventTime | YES | N/A | N/A | Current Timestamp | | |
| eventType | YES | N/A | N/A | Static: APPLICATION\_CREATE | | |
| trigger | YES | N/A | N/A | Static: APPLICATION | | |
| contactId | YES | Contact | id | Contact ID | | |
| opportunityId | YES | Opportunity | id | Opportunity ID | | |

#### 

#### Student mapping

| **Tertiary Division Contact and Opportunity to Student Field Level Mapping Requirements** | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Common Field Name** |  | | | **Freshsales** | | | **Flow of Information** |
| **Field name** | **Mandatory?** | **Field Options** | **Freshsales** | **Module** | **Field options** |
| Student Number | studentID | Optional on Application | N/A | cf\_student\_number | Opportunitity | N/A | SIMS to Freshsales |
| Admission Number | admissionID | Mandatory | N/A | cf\_admission\_number | Opportunitity | N/A | SIMS to Freshsales |
| Student Status | status | Mandatory | -Active  -Inactive | deal\_stage\_id/deal\_reason\_id | Opportunitity | Student:  Registration – Pending  Registration – Request Received  Registration – Enrolled  Graduated  Cancelled | SIMS to Freshsales |
| Admission Status | status | Mandatory | -Active  -Inactive | deal\_stage\_id/deal\_reason\_id | Opportunitity | Student:  Registration – Pending  Registration – Request Received  Registration – Enrolled  Graduated  Cancelled | SIMS to Freshsales |
| Enrollment Status | Enrollment Status | Mandatory | -Pending  -Request Received  -Enrolled | deal\_stage\_id/deal\_reason\_id | Opportunitity | Student:  Registration – Pending  Registration – Request Received  Registration – Enrolled  Graduated  Cancelled | SIMS to Freshsales |
| Graduation Status | Pass Out | Mandatory | -Graduation Pending  -Graduation in process  -Graduated  -Rejected | deal\_stage\_id/deal\_reason\_id | Opportunitity | Student:  Registration – Pending  Registration – Request Received  Registration – Enrolled  Graduated  Cancelled | SIMS to Freshsales |
| N/A | N/A | N/A | N/A | cf\_student\_category | Opportunitity | -New Student  -Returning Student  -Returning Graduate | SIMS to Freshsales |
| Brand | academyId | Mandatory |  | cf\_brand | Opportunitity |  | SIMS to Freshsales |
| Campus | locationId | Mandatory |  | cf\_campus | Opportunitity |  | SIMS to Freshsales |
| Qualification | programId | Mandatory | As per Qualification List | cf\_final\_qualification | Opportunitity | As per Qualification List | SIMS to Freshsales |
| Qualification Group | programGroup | Mandatory |  | cf\_qualification\_group | Opportunitity |  | SIMS to Freshsales |
| Mode of Delivery | modeOfDeliveryId | Mandatory | -Contact  -Distance | cf\_mode\_of\_delivery | Opportunitity | -Contact  -Distance | SIMS to Freshsales |
| Registration Type | isBatchPartTime | Mandatory | -Full Time  -Part Time | cf\_registration\_type | Opportunitity | -Full Time  -Part Time | SIMS to Freshsales |
| Intake | intakeYearId | Mandatory |  | cf\_final\_intake | Opportunitity |  | SIMS to Freshsales |
| Seat Type | seatTypeCode | Mandatory | -General  -International | cf\_qualification\_seat\_type | Opportunitity | -General  -International | SIMS to Freshsales |
| Semester | period | Mandatory |  | cf\_semester | Opportunitity |  | SIMS to Freshsales |
| Academic Term | Required | Mandatory |  | cf\_academic\_term | Opportunitity |  | SIMS to Freshsales |
| External System Reference | externalSystemReferenceOne | Optional | N/A | Opportunity ID | Opportunitity | N/A | Freshsales to SIMS |
| **Primary Field mappings** | | | | | | | |
|
| **Primary Fields** | eventID | YES | N/A | N/A | Generate UUID in Middleware and send with Payload (Always unique) | | |
| eventTime | YES | N/A | N/A | Current Timestamp | | |
| eventType | YES | N/A | N/A | Static: Student Confirmed | | |
| trigger | YES | N/A | N/A | Static: Students | | |
| contactId | YES | Contact | id | Contact ID | | |
| opportunityId | YES | Opportunity | id | Opportunity ID | | |

## 

## Additional Conditions

* **Lead Type:** Determined by selected Qualification: WQ/SLP for standard, NQ/SLP for “Other” with a Field of Interest.
* **Lead ID:** SIMS will be the source of Lead ID, integrated with the Freshsales Opportunity record.
* **Status:** Updated based on Opportunity Pipeline status. For “Not Interested”, the SIMS status becomes “Closed Unsuccessfully”. For the Application stage, it becomes “Closed Successfully”.
* **Lead Stage:** The Freshsales Opportunity status maps to the SIMS Lead stage.
* **Lead Owner:** Sales Owner in Freshsales integrated as Lead Owner in SIMS.
* **Date of Enquiry:** Freshsales Opportunity “Created On” Date becomes the Date of Enquiry in SIMS.
* **Student Details:** Title, First Name, Middle Name, Last Name, Email, Mobile No., Country Code, Date of Birth, and Gender are mapped directly.
* **Parent Details:** Parent Title, First Name, Last Name, Email, Mobile Number, etc., mapped directly from Freshsales to SIMS.
* **Additional Information:** School, School Priority, Brand Exposure, Point of Entry, and Company Sponsored are integrated.
* **Education Details:** Highest Education Level, School/College/Institute, Year of Completion integrated.
* **Admission Requirement Details:** Brand, Campus, Mode of Delivery, Registration Type, Qualification, Intake, and Seat Type mapped from Freshsales.
* **Closure Details:** Brand, Campus, Qualification, Intake, Seat Type, Closure Date, and Reason mapped from Freshsales for closed leads.
* **Reopen Details:** Reopen Date and Reason for leads that transition back to active status.

The following fields are considered deduplication fields:

* FatherFirstName
* FatherMiddleName
* FatherLastName
* MotherSalutation
* MotherFirstName
* MotherMiddleName
* MotherLastName
* AlternateMobileNo
* AlternateMobileCountryCode
* IsLearnerSACitizen
* FatherEmailId
* FatherPhoneNo
* FatherPhoneCountryCode
* SouthAfricanStudentId
* Remark

**Null or Empty Fields**

* Null/Empty fields should be treated as mismatches during the deduplication check.

# 

# COMPONENTS

### AWS SQS Lead Creation Sample Payload: (Freshsales to SIMS)

**Queue URL (UAT):** <https://sqs.us-east-1.amazonaws.com/064646179885/BuzzUatSQS.fifo>  
**Payload:**

| aws sqs send-message \  --queue-url "https://sqs.us-east-1.amazonaws.com/064646179885/BuzzUatSQS.fifo" \  --message-body '{  "eventID": "678954a94-68e6-462e-82bf-9ffc5bc49be78",  "eventTime": "05/03/2025 15:32:22",  "eventType": "ENQUIRY\_CREATE",  "trigger": "ENQUIRY",  "contactId": "45687767",  "opportunityId": "24088878",  "leadType": "Admission",  "academyName": "Varsity College",  "locationName": "VC Durban North",  "intakeYear": "2025",  "stage": "",  "modeOfDelivery": "Contact",  "isBatchPartTime": true,  "programName": "Bachelor of Accounting",  "enquiryDate": "2025-03-05",  "studentSalutation": "Ms.",  "studentFirstName": "Priyanka",  "studentMiddleName": "Test",  "studentSurname": "Test123",  "studentEmail": "priyankatest123@serosoft.in",  "studentMobileCountryCode": "+91",  "studentMobileNo": 9739607999,  "studentAlternateCountryCode": "+91",  "studentAlternateNo": 6699099999,  "studentDOB": "2025-02-10",  "studentGender": "Male",  "enquiryModes": "Newspaper",  "isStudentSouthAfricanCitizen": true,  "nationalId": "TyY90459578",  "comment": "Comment",  "fatherSalutation": "Mr.",  "fatherFirstName": "vijay",  "fatherMiddleName": "kuu",  "fatherSurname": "Pal",  "fatherMobileCountryCode": "+91",  "fatherMobileNo": 9355799999,  "fatherEmail": "academia@serosoft.in",  "motherSalutation": "Ms.",  "motherFirstName": "Mother First Name",  "motherMiddleName": "Mother Middle Name",  "motherSurname": "Mother Surname",  "sourceOfEnquiry": "Event",  "enquiredBy": "PROSPECTIVE\_STUDENT",  "campaignCode": "",  "enquiryCode": "",  "whetherCompanySponsored": true,  "campaignSchoolName": null,  "schoolPriorityName": null,  "fieldOfInterest": "Interested Fields Info",  "examPassedName": "",  "examPassedOther": "",  "yearOfExamination": 2020,  "instituteName": "International School of Commerce",  "seatType": "General",  "enquirySource": null,  "closureDate": null,  "closureReason": null,  "reasonRemark": "",  "reopenDate": "",  "reopenReason": "",  "externalReferenceNumber": null,  "financeMode": null,  "isCompanySponsored": false,  "school": "",  "schoolPriority": "",  "examPassedNameField": "",  "examPassOtherField": "",  "instituteNameField": "",  "yearOfExaminationField": "",  "userCode": ""  }' \  --message-group-id "ett-5000-uooo9" \  --message-deduplication-id "$(date +%s)" |
| --- |

#### 

### AWS SQS Application Creation Sample Payload: (Freshsales to SIMS)

**Queue URL (UAT):** <https://sqs.us-east-1.amazonaws.com/064646179885/BuzzUatSQS.fifo>  
**Payload:**

| aws sqs send-message \  --queue-url "https://sqs.us-east-1.amazonaws.com/064646179885/BuzzUatSQS.fifo" \  --message-body '{  "eventID": "3b2f7bc2-2a3e-4a0d-9c5b-d8f9b7e48a0e",  "eventTime": "2025-03-03T10:00:00",  "eventType": "APPLICATION\_CREATE",  "trigger": "APPLICATION",  "contactId": "CON1234567",  "opportunityId": "OPP987657",  "enquiryCode": "ENQ1001",  "applicationID": "",  "applicationDate": "2025-03-03",  "applicationStatus": "Pending",  "applicationOwner": "goswami",  "brand": "Ambedkar Institute of Higher Education",  "campus": "Patna",  "schoolPhase": "International MBA",   "grade": "Bachelor Of Business Administration",  "intake": "2016-2018",  "modeOfDelivery": "Online",  "seatType": "General",  "studentSalutation": "Mr.",  "studentFirstName": "Nitin",  "studentMiddleName": "D",  "studentSurname": "Patel",  "studentGender": "Male",  "studentDateOfBirth": "2005-08-15",  "studentMobileCountryCode": "+1",  "studentMobileNo": "6551234567",  "studentEmail": "nitin@yopmail.com",  "studentAlternateCountryCode": "+1",  "studentAlternateNo": "5557654321",  "studentCountry": "India",  "studentNationality": "Indian",  "studentNationalID": "456-45-6789",  "studentDisabilities": "None",  "studentCurrentEducationInterventions": "struggles with reading skills",  "studentCurrentOrLastSchoolAttended": "SMA Advent Ciracas",  "studentHomeLanguage": "Hindi",  "studentSecondLanguage": "Hindi",  "studentReligion": "Christian",  "studentCastCategory": "Gen",  "studentSiblingname": "Jane Doe",  "studentSiblinggrade": "Grade 9",  "comment": "Application is under review.",  "studentStreetAddress": "123 Main St",  "studentCity": "Panaji",  "studentCountryRegion": "Goa",  "studentPostalCode": "10001",  "fatherSalutation": "Mr.",  "fatherFirstName": "James",  "fatherMiddleNames": "Edward",  "fatherSurname": "Doe",  "fatherEmailAddress": "james.doe@example.com",  "fatherMobileNumberCountryCode": "+1",  "fatherMobileNumber": "5559876543",  "fatherWhatsappNumberCountryCode": "+1",  "fatherWhatsappNumber": "5551122334",  "fatherIdType": "Passport",  "fatherNationalIDOrPassport": "P12345678",  "fatherSchoolAttended": "XYZ University",  "motherSalutation": "Mrs.",  "motherFirstName": "Emily",  "motherMiddleNames": "Ann",  "motherSurname": "Doe",  "motherEmailAddress": "emily.doe@example.com",  "motherMobileNumberCountryCode": "+1",  "motherMobileNumber": "5553456789",  "motherAlternateNumberCountryCode": "+1",  "motherAlternateNumber": "5554567890",  "motherIdType": "Passport",  "motherNationalIDOrPassport": "PASSPORT01",  "motherSchoolAttended": "ABC College",  "emergencyContactfirstName": "Mary",  "emergencyContactsurname": "Smith",  "emergencyContactcontactNumberCountryCode": "+1",  "emergencyContactcontactNumber": "5556789012",  "pointOfEntry": "Online", *//source*  "sourceOfEntry": "Newspaper",  "boardingRequired": false, *//hostel required*  "batchPartTime": true,  "permanentResident": true,  "studentSACitizen": true,  "motherAlumniOfADvTECHSchool": false,  "fatherAlumniOfADvTECHSchool": false,  "asylumSeeker": false }' \  --message-group-id "ett-5000-uooo9" \  --message-deduplication-id "$(date +%s)" |
| --- |

### AWS SQS Student Creation Sample Payload: (Freshsales to SIMS)

**Queue URL (UAT):** <https://sqs.us-east-1.amazonaws.com/064646179885/BuzzUatSQS.fifo>  
**Payload:**

| aws sqs send-message \  --queue-url "https://sqs.us-east-1.amazonaws.com/064646179885/BuzzUatSQS.fifo" \  --message-body '{ "eventID": "29755a94-68e6-462e-82bf-9ffc5bc49be3", "eventTime": "13/01/2025 05:32:22", "eventType": "Student Confirmed", "trigger": "Students", "contactId": "Freshsales Contact ID", "opportunityId" : "Freshsales Opportunity ID", "studentNumber": "S123456", "admissionNumber": "A789012", "studentStatus": "Active", "admissionStatus": "Confirmed", "periodEnrollmentStatus": "Enrolled", "passOutStatus": "Not Passed Out", "brand": "ADvTECH Schools", "campus": "Main Campus", "programGroup": "Primary", "program": "Grade 10", "batch": "2025 Spring", "period": "2025 Spring", "seatType": "Regular", "reasonCode": "Student Confirm", "exitDate": "2024/04/24",  "ExternalSystemReference": "EXT123456" }' \  --message-group-id "ett-5000-uooo9" \  --message-deduplication-id "$(date +%s)" |
| --- |

#### 

### AWS SQS Success queue: (Freshsales to SIMS)

**Queue URL (UAT):** <https://sqs.us-east-1.amazonaws.com/064646179885/BuzzUatSuccessSQS.fifo>

**Payload:**

| aws sqs receive-message \  --queue-url "https://sqs.us-east-1.amazonaws.com/064646179885/BuzzUatSuccessSQS.fifo" \  --max-number-of-messages 10 |
| --- |

#### 

### AWS SQS Error queue: (Freshsales to SIMS)

**Queue URL (UAT):** [https://sqs.us-east-1.amazonaws.com/064646179885/BuzzUatErrorSQS.fifo](https://sqs.us-east-1.amazonaws.com/064646179885/BuzzUatSuccessSQS.fifo)

**Payload:**

| aws sqs receive-message \  --queue-url "https://sqs.us-east-1.amazonaws.com/064646179885/BuzzUatErrorSQS.fifo" \  --max-number-of-messages 10 |
| --- |

### SIMS to Freshsales Queue (YTD)

**Note:** The SIMS-to-Freshsales integration logic has been defined; however, the specific queue configurations and technical details are **yet to be determined (YTD)**.

# DELIVERABLES

The deliverables of this integration are

1. Node-SOA code deployed on the server
2. Custom app provisioned on the Freshsales account

# SPECIFIC EXPECTATIONS

The following specific expectations are necessary to build the integrations.

| **Freshsales account** | During development and deployment, access to the staging and production Freshsales account will be required. |
| --- | --- |
| **SIMS account** | During development and deployment, access to the staging SIMS account will be required. |

## SQS and SIMS API expectations

Serosoft will be responsible for providing the following:

| **S.NO** | **Queues / API** | **Status** | **ETA** |
| --- | --- | --- | --- |
| **1** | Lead Creation/Updation **(Freshsales to SIMS)** | Queue received and tested | NA |
| **2** | Application Creation/Updation **(Freshsales to SIMS)** | Queue received and tested | NA |
| **3** | Application Creation/Updation **(SIMS to Freshsales)** | Queue yet to be received/tested | May 13, 2025 |
| **4** | Student Creation/Updation **(Freshsales to SIMS)** | Queue yet to be received/tested | May 13, 2025 |
| **5** | Student Creation/Updation **(SIMS to Freshsales)** | Queue yet to be received/tested | May 13, 2025 |
| **6** | API Details for ID Resolution | API yet to be received/tested | YTD |
| **7** | SIMS Staging Instance | The staging environment is fully operational. | NA |

**Note:**

*The testing of the integration queue is expected to require up to one week. Any delays in the delivery of required dependencies may result in corresponding delays to the testing and development timelines.*

# LIMITATIONS

Even though the system processes periodically via SQS, there may still be occasional delays due to issues such as network latency, load on the middleware, or failures in the processing chain.

The SQS queue is assumed to process jobs periodically without fail, ensuring timely synchronization between Freshsales and SIMS. It is also assumed that each job is tracked successfully through its EventID.

If any key deduplication field is missing or empty (e.g., missing Parent National ID or Mobile Number), it could prevent proper matching of duplicate leads, leading to erroneous lead creation or updates in SIMS.

If the error queue or success queue does not have the eventID response, then the Lead ID will not be updated.

Custom logic for individual fields cannot be added, only predefined mapping rules can be used.

# ASSUMPTIONS

The AWS SQS queues used for integration (both for Freshsales → SIMS and SIMS → Freshsales) are considered critical infrastructure and must remain active and accessible at all times during development, testing, and production.

Payload structures and message schemas used in the SQS queues must remain consistent with the agreed specifications. Any schema changes must be communicated in advance and jointly validated, and timelines for development shall be re-evaluated.

The SIMS staging instance must be available at full capacity throughout the development and UAT phases.

The environment should accurately mirror production conditions, including data models, validation rules, and user roles, to ensure reliable testing outcomes.

SIMS will correctly consume and acknowledge messages from AWS SQS in near-real-time.

The SIMS → Freshsales queue implementation is being developed by Serosoft, and it is assumed that Serosoft will deliver this component within the agreed project timelines, ensuring compatibility with the provided field mappings and data contracts.

Serosoft will provide timely updates and support the integration during development, UAT, and deployment.

The integration assumes that country codes and mobile numbers are standardized and provided consistently.

The deduplication logic has been implemented as per customer requirements, with the SQS queue managing the deduplication rules by Serosoft. Any Issues pertaining to the deduplication in the job must be handled by Serosoft.

All necessary fields must be populated in Freshsales (such as Title, First Name, Last Name, Mobile No., Email, etc.) to ensure proper lead creation and synchronization with SIMS.

Any null or empty fields in Freshsales may be treated as mismatches during the deduplication check. Missing data could affect the creation or update of a lead.

The SQS queue processes jobs and is periodically synchronized between Freshsales and SIMS. This means there may be a slight delay between when data is updated in Freshsales and when the changes are reflected in SIMS.

The SQS queue processing time is determined based on the customer’s requirements or the desired processing frequency.

The success and error tracking and the retry frequency may vary based on the SQS queue processing time. For now, this document assumes that the system checks the success and error queues every 1 minute for success and error tracking and 5 min for retry.

The format of data sent from SIMS to Freshsales is critical. If certain fields (e.g., gender) are sent as IDs instead of descriptive values (like “Male” or “Female”), then API details will be provided by Serosoft to fetch and map the corresponding values appropriately in Freshsales.

Dedicated SQS queues for the SIMS-to-Freshsales flow are assumed to be provided or confirmed in future stages. Currently, logic has been defined, but queue details are pending (YTD).

Data from SIMS is expected to follow a consistent schema. Any structural changes to the payload format (e.g., renaming fields and changing nesting levels) must be communicated in advance. Any such changes will affect the development timelines.

All required fields for Freshsales record creation (e.g., for Contacts, Opportunities) must be present in the payload from SIMS. Missing critical fields could result in job failure or incomplete data.

Any changes in data logic or SIMS field definitions should be communicated with sufficient lead time to allow for adjustment in the Freshsales integration logic.

Sufficient Product API limits and Platform limits will be set on Freshdesk by Freshworks for the integration to function.

Any revisions to the scope will be mutually agreed upon and the revised Statement of Work document will be signed off by the stakeholders.

This SOW and the associated cost include only one-time development and do not include post-delivery support.

The UAT schedule of two calendar weeks for the application testing will be diligently followed by the client as per the agreed timeline between the client and Effy. The date-wise timeline will be confirmed once the SOW is signed and the project is ready to commence.

The solution is built against the current versions of Freshsales and SIMS APIs. Any breaking changes to these APIs post-deployment will be considered out of scope and subject to a formal Change Request

Any request or issue that falls outside the scope of this work will be treated as a Change Request, and a separate SOW will be issued accordingly.

​​Any deviation from the assumptions listed may affect the delivery timeline and require a Change Request (CR).

This is a Freshworks Pass-Through engagement:

* Prerequisites that are applicable for Freshworks to process the invoice from effy (Purchase Order Number, Mavenlink ID, and/or any other prerequisites) will be required before the start of the development. Timelines shall be planned after the receipt of this information.