CENTRALSQUARE

TECHNOLOGIES

Operational Scenario Document (OSD)

Gwinnett Tracker SAFE Interface

Version 1.1

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Revisions

Date	Rev. No.	Author	Comments
7/15/2021	1	Robbin Massey	Initial
7/21/2021	1.1	Robbin Massey	1. Updated to include Initial Locker Location requirement for Property Items to Tracker. 2. Added Assumption 5 and 6. 3. Added note on step 4 in the workflow that items where the Initial Locker Location field has not been completed then the Property Item will be excluded from the publish. 4. Updated item d under number 7 in the workflow to indicate that there will not be a merge process for Property Items. 5. Added Property Item Configuration item under 4b in the workflow. 6. Updated action trigger to button press event. 7. Configuration section to include new options for items.

Overview

Export From:	Records Enterprise
Import To:	Tracker Products SAFE
Module:	Case, Person and Property Item Data
Data Transfer Medium:	HTTP Get/Put/Post Web RESTful API
File Format:	JSON syntax, Tracker-defined schema
Action Trigger:	Button Press from Action Dropdown (Submit to SAFE) This will include Person Data, Case and Property Items where the Initial Locker Location field has been completed.

Description

The CentralSquare Tracker Publisher interface (the “Publisher”) will publish case, person and property item data to SAFE evidence tracking software implemented by Tracker Products. This integration is designed to support continuing evidence and asset management in SAFE.

The Publisher primarily consists of a publisher component integrated into the CentralSquare Publisher which uploads case, person and property item data in JSON format to a Web API endpoint. This endpoint is hosted by the Tracker Products SAFE evidence and asset management product.

The customer is responsible for the Records Enterprise instance and manages the incident with person and property item data hosted by that system.

As incident report person is modified, the Interface exports the person data and case number to SAFE. Property item data will be sent to SAFE based on user initiated button press via the Action Drop down on Incident Reports.

It should be noted that Records Enterprise maintains two kinds of records: Reports and Summaries. In effect, these are two versions of the same report. A “Report” is the data record containing a report, which may be in the process of review. When the review is completed, this record becomes read-only and represents the initial version of the report. Upon completion, a summary version is created that allows a user to continue working with and make changes to the record. Additional supplemental reports (with the same report number) would accumulate their data in the same summary record. The Publisher publishes the Report’s person record as it is modified. In effect, the Interface acts on the person data of an incident during the initial data entry process.

Assumptions

1. Records Enterprise has been implemented prior to delivery of the Interface.
2. No modifications to existing CentralSquare products are required for the Interface.
3. A data entry template is defined in Records Enterprise providing for all the necessary fields required for successful acceptance by the SAFE system.
4. The Publisher resides on a conventional or virtualized server platform as described in the CentralSquare System Planning Document.
5. The Initial Locker Location code descriptions in RMS will need to match how this is displayed in the Tracker SAFE system.
6. The officer email addresses in Records Enterprise and Tracker Safe match.

CentralSquare Responsibilities

1. CentralSquare will complete the installation, training, and support of the Interface remotely.
2. CentralSquare will configure the Interface as required to operate in the Client environment.
3. CentralSquare will provide an overview of the operation and monitoring of the Interface.
4. CentralSquare will provide verification of the successful operation of the Interface.

Client Responsibilities

1. The client is responsible for obtaining the appropriate services and access to Tracker Products SAFE.
2. The Client is responsible for the integrity of the data being submitted via the Publisher.
3. The Client will provide a secure, reliable connection that has been properly configured to operate this Publisher.
    a. A TCP/IP connection between the Publisher host machine and the Records Enterprise application server, primarily using the HTTP protocol.
    b. A TCP/IP connection between the Publisher host machine and the SAFE API service, primarily using the HTTP protocol secured by TLS and API access tokens.
4. The Client will obtain and provide access credentials and API tokens necessary for uploading person data to the SAFE Web API.

Details

Architecture

The Interface consists of a .NET 4.8 Windows service that listens for event notifications, initiated by the below events within the Records Enterprise Incident Module on the Records Enterprise message bus.

1. Person Modification Event - Upon receiving incident report person modification events from RMS the interface will read the person data for submission to SAFE. The interface sends each person as edited to Tracker SAFE via the Web API.
2. Button Press Event – Upon user initiated button press from the Action Dropdown, the interface will send property items where the Initial Locker Location field has been completed to Tracker SAFE.
3. Summary Transfer – Upon receiving an incident summary transfer event, the interface will send the person data to the Tracker SAFE Web API.

Workflows

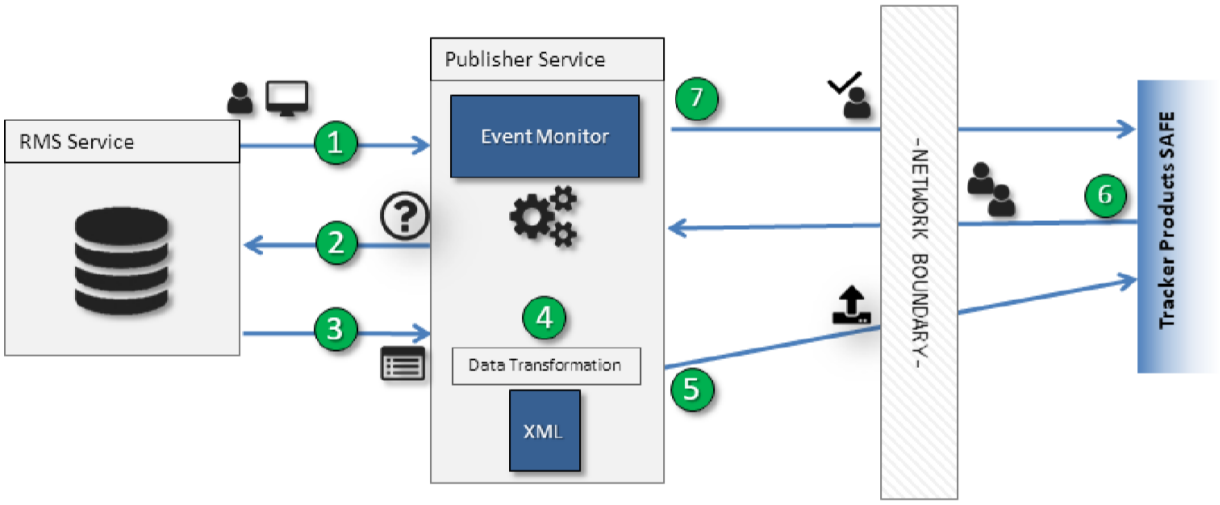

Figure 1 Tracker SAFE Publishing Workflow

1. Records Enterprise emits an event signaling based on one of the above configured event triggers.

   Note:

   a. During data entry, the RMS user is prompted with potential master name and master property item matches. The user can select the desired record and attach the Master Identifier in the report at that time.

   b. If the Master Identifier is not selected during Report entry, one is assigned to the Summary when the Report transfers. When an Incident Report transfers to a Summary, all persons on the report are processed as a modification. This provides that a master name link assigned during the transfer process will be populated as “user-data” in SAFE.

2. The Publisher responds by requesting the Incident Report data from Records Enterprise.
3. Records Enterprise returns the Report data to the Publisher.
4. The Publisher transforms and packages the Incident person and property item data into a JSON-syntax document formatted according to the API specification of SAFE.
    a. The kinds of persons on the report may be filtered by configuration options. Three options are provided to allow or prevent publishing the Suspect, Victim, or Other Persons Involved records on the report.
    b. Property items can be configured to allow or prevent publishing of items.
    c. The report is processed only if the Agency ORI is in the Agency ORI List configuration. This provides that only the desired agency report data are submitted to SAFE when multiple agencies are using RMS.
    d. Property Items where the Initial Locker Location field has not been completed will be excluded from the publish.
5. The Publisher queries the person or property item data using API RESTful API instructions to search person or property item by its “user-data” or “item-data” value in SAFE which identifies the person or property item in RMS. Two search queries may be sent, one for the person or property item unique identifier and one for only the person Master Name Id (if assigned). With these queries, the Publisher can discover if a SAFE record already exists that corresponds with the RMS person or property item being exported.
    a. A person identifier or property item unique identifier is transmitted as a custom “user data” or “item-data” 1 field to be retained by the SAFE software for synchronizing the record on each side.
    b. A user-data and item-data field is defined in SAFE with a custom form and a custom text field defined on the form. The form and field names are configuration options for the Interface.
6. SAFE returns the results of the queries for inspection by the Publisher.
7. The Interface compares the “user data” or “item-data” provided by SAFE to the identifying data on the person or property item it is submitting.
    a. The Interface will create a case in SAFE, if needed, using the case number on the Incident Report.
        i. To satisfy the SAFE requirement that a case officer is provided, the Interface will look up in SAFE the user who corresponds with the RMS officer listed in the officer section as Reporting involvement type. Note that an officer must be entered early on the report so that the Interface is able to create a case associated with the persons edited on the report. The correspondence will be determined by one of two methods:
            1. userid - concatenating the RMS login ID with an email domain that is set in the configuration to match with the email address of a SAFE user. For example, if RMS user login sjones is used with a configured email domain of “@co.state.us”, the Tracker look-up

will be performed with sjones@co.state.us. The officer involvement type is a configuration option.

2. email – using the email address field of the officer directly as the look-up value

ii. For Suspects and Victim Persons, the Interface associates with the case SAFE Person Type values of “Suspect” and “Victim”, respectively; these values are configurable in the code mapping table.

iii. For Other Involved Persons, the Interface attempts to map the Involvement Type code to the SAFE Person Type code. If the mapping cannot be determined, the Person Type of the Other person on the case is set to Unknown. A configurable mapping table is provided in the Interface for this purpose.

1. If the Involvement Type exists as a SAFE Person Type, the Interface will use the code unmapped; otherwise,
2. If the Involvement has a code mapping in the table, the Interface will use the mapped code; otherwise,
3. The Interface uses the default value defined for the code table, which is expected to be the value “Unknown”.

iv. The minimum data necessary for the Interface to create a case are:

1. Case Number
2. Case Officer – the email query must resolve to a user in SAFE
3. Offense Type – the Offense Type value in the Interface configuration must resolved to an Offense Type in SAFE

b. If no SAFE person or property item is found with the queries, the Interface will submit an insert request that adds the person or property item as a new record in SAFE using the POST people/postDuplicate API. Items are added to SAFE using the POST items API. The Report Person or Property item Identifier or the Master Identifier is provided as user-data or item-data. The case number will be associated with the newly created person using the addpersontocase API.

i. The minimum data necessary for the Interface to create an item are:

1. Description
2. Category
3. Item Location
4. Custody Reason
5. Primary Case Number
6. Recovered By Officer
7. Recovery Date
8. Recovery Location

c. If one SAFE person or property item record is found, the Interface will submit an update request to update the selected record in SAFE using the PUT people/putDuplicate API. If the RMS record has a Master Identifier, this is updated on the userdata or itemdata in SAFE. Items are updated using the SAFE PUT items API.

d. If two SAFE person records are found, this means that the RMS person record had been previously added to SAFE without a Master Name Identifier, and the Master Name Identifier was assigned to it which already exists in SAFE. The Interface will:

    i. Merge the two SAFE person records using the POST mergePeople API where:

        1. The record having the Person Record Identifier is the source; and,

        2. The record having the Master Person Identifier is the target.

    ii. Update the SAFE record having the Master Person Identifier using the PUT people API.

    iii. Property Items will be sent if the Initial Location Field in Records Enterprise has been completed and will not have a merge process.

e. The person's address is synchronized to the default address on the SAFE person record. If there is no SAFE default address, the Interface adds a new address and makes it the default. Because the merge process copies over the addresses from the source to the target person, there exists the potential for addresses to be duplicated by being entered for the "same" person on two reports, The Interface will check for any addresses that duplicate the default address and delete any that exist.

Note: 1 "User data" is a term denoting data that a system's user (in this case, the Interface) owns and maintains. It is a field of custom information expected to be stored and maintained by the system (in this case, SAFE) along with the record's application data. The Interface makes use of this data for reconciling duplicate person candidates.

Person Correspondence

To minimize the amount of data cleanup that must be performed in SAFE due to duplicate person records, the Interface tracks multiple identifying fields of the RMS person in multiple corresponding records. This is necessary because persons must be submitted to SAFE before the report is approved and the person does not gain a Master Name link on his first entry into RMS until after the report is approved.

A person record in RMS can have three identifiers associated with it that the Interface uses to reconcile Incident persons with a person record stored in SAFE.

1. Report Person Identifier – a GUID value2 that identifies the person record in the RMS database. When an Incident person is entered for the first time on a Report, this value is the only identifying value available to the Interface. Each time the same person is entered on a new incident, he will gain a new Report Person Identifier (but the same Master Person Identifier. See below.)

2. Summary Person Identifier – a GUID value that identifies the corresponding person record after the report transfers to a Summary. As with the Report Person Identifier, every new Summary has a unique identifier for the "same" person.

   Note: A GUID is an alphanumeric text string of 36 characters in length, e.g. E7060A67-A300-4F19-BF49-7CA3A0C143EC

3. Master Person Identifier – a numeric value that links the person record to a Master Name record in the RMS Master Index tables. This is also known as Master Name Index (MNI).

   a. When a person is first entered into the system (without a Master Name record), a Master Person Identifier is not assigned until the Report is approved. Therefore, on the initial submission to SAFE, the Report Person Identifier is submitted as "user data".

   b. When the Report is later approved, it transfers to a Summary and the person will gain:

      i. A Summary Person Identifier for the corresponding record in the Summary

      ii. A Master Person Identifier for the linked Master Name information.

   c. When a person is entered a second time, the initial data entry will automatically create/update a person record in SAFE using the Report Person Identifier until the MNI is selected. Subsequent updates will either update the MNI on the SAFE person record if the MNI doesn't already exist or will merge the initial created record with the existing MNI record in SAFE if the MNI already exists.

On any submission to SAFE, the "user data" of the persons can be queried in SAFE to discover if the person has been submitted to SAFE before.

If the "user data" of a SAFE record matches any linked value of the person, the Interface submits the data as an update request, using the matching SAFE record identifier as the identifier for the update. If the Master Person Identifier has been assigned, this will be updated as the "user data" value of the SAFE record.

If the "user data" for the person is not found in SAFE, the Interface submits the data as an insert request. If the Master Person Identifier has been assigned, this will be provided as the "user data" value of the SAFE record.

The following scenarios summarize the insert/update behavior of the Interface against SAFE. On each modification of a Report Person Record, which has a Report Person Identifier and an optional Master Person Identifier, the Interface submits two queries to SAFE: one for the Report Person Identifier and one for the Master Person Identifier

Scenario	Behavior	API
Initial data entry of a new person	No MNI assigned for querying and no record found in SAFE with the Report Person Identifier	POST people (person 1)
Continual editing of a new report person	No MNI assigned for querying and one record found in SAFE with the Report Person Identifier	PUT people (person 1)
Report transfer to a Summary, and MNI is created for the new person.	One record is found in SAFE with the Report Person Identifier and no record is found with the MNI.	PUT people (person 1) The MNI replaces the Report Person Identifier on the SAFE user-data.
Initial data entry of a person's second encounter	No MNI assigned for querying and no record found in SAFE	POST people (person 2)

Scenario	Behavior	API
	with the Report Person Identifier	
Continual editing of the person in RMS, an MNI is assigned.	One record is found in SAFE with the Report Person Identifier (person 2) and one record is found with the MNI (person 1)	POST mergePeople (Source: person 2 Target: person 1) *Person 2 is deleted in SAFE* PUT people (person 1)
Continual editing of the person in RMS with the previously assigned MNI	No record is found in SAFE with the Report Person Identifier (person 2) and one record is found with the MNI (person 1)	PUT people (person 1)

Configuration Item Summary

The following configuration items provide for control of the business logic of the Interface.

UserDataFormName – the name of the person custom form in SAFE containing the user-data field for querying by RMS key.

UserDataFieldName – the name of the field on the person custom form in SAFE containing the user-data.

ItemDataFormName – the name of the item custom form in SAFE containing the user-data field for querying by RMS key.

ItemDataFieldName – the name of the field on the item custom form in SAFE containing the user-data.

MobilePhoneCode – the Phone Type code in RMS that controls whether the value is stored in the MobilePhone field of a user in SAFE. Any code not this value is stored as the OtherPhone field.

CaseOffenseType – the Offense Type in SAFE that is provided for all new cases created by the Interface.

CaseOfficerInvolvementType – the RMS involvement type code of the Officer on the report that is selected as the Case Officer for new cases created by the Interface.

CaseOfficerEmailDomain – the email domain to append to the officer RMS User Login to compose an email address with which to look up case officers in Tracker SAFE. The value may optionally begin with the '@' sign. If this value is not configured, the Interface uses the domain portion of the email field of the officer.

AgencyOriList – a comma-separated list of agencies ORIs to filter publishing against. Only Incident report edits from these ORIs are published through to Tracker SAFE.

PublishSuspect, PublishVictim, PublishOther – true/false values that control whether persons of the indicated type are published from the Incident report.

PublishItem - true/false values that control whether items are published from the Incident report.

ProcessSupplement – true/false values that control whether supplemental report data is processed

SafeOfficerResolveMethod – a value of "email" will attempt to resolve the SAFE officer from an RMS officer using the email field of the officer; a value of "userid" will construct an email from the RMS user login and the CaseOfficerEmailDomain setting.

Software

The following specifies the software that will be required to run the Publisher:

1. Operating System – Windows Server 2012 or later
2. Microsoft .NET Framework 4.8
3. Internet Information Services feature
4. Microsoft SQL Server 2008 R2 or later

The following lists the third-party external software components that CentralSquare software relies on to function.

1. FTP client application: WinSCP (if using)
    a. https://winscp.net/eng/index.php
2. Messaging service: RabbitMQ
    a. https://www.rabbitmq.com/
3. Messaging service host: Erlang/Open Telecom Platform
    a. http://www.erlang.org/

Security

Security for the Publisher will consist of the following:

1. Records Enterprise Application credentials for reading data from RMS.
2. Windows credentials for service process operation, writing files in the filesystem, and accessing the Publisher machine SQL Server instance.
3. Tracker Products SAFE Web API access tokens.

Passwords stored by Publisher components are encrypted using the Microsoft Enhanced Cryptographic Provider which is FIPS 140-2 Level 1 compliant.

Logging

All interface components make use of Apache Logging Services™ provided in the Apache log4net™ framework.

In addition, the Publisher logs its behavior for diagnostic purposes to its associated SQL Server database.

Logging can be configured to allow or filter messages according to the severity levels applied on each message. CentralSquare interface components use levels in the following way but note that not all levels may be used by any particular CentralSquare software component. Each level also enables the level above it in priority.

Fatal – the application encountered a catastrophic condition and is likely terminating

Error – a critical application error; the code cannot finish the task as required

Warning – validation failures and non-critical errors; the code encountered an unusual condition from which it is recovering from or continuing on with diminished capacity

Info – an informational message describing the normal expected behavior of the code

Debug – detailed execution information describing internal behavior of the code

Depending on the level being logged, each log event text can be written to a text file, the Windows Event Viewer, or sent via email to a configured address provided there is an SMTP server available.

Mapping

MAP – GA Gwinnett PD – Tracker _RMS

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