



Legacy HR Support

Low Level Architecture

Working Document

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1. Introduction

1.1 Purpose of the document

This document contains the low-level architecture for the implementation of a new EID generator.

1.2 Intended Audience

The audience for this document is everyone in Enterprise Holdings Inc. who manages, is responsible for, develops, or uses the existing EID generation system; including any third parties engaged to work on behalf of Enterprise whose remit includes management and/or associated services relating to EID generation and consumption.

2. Project Overview

The intention of this project is to provide infrastructure and services to support EID generation.

2.1 Scope

2.1.1 In Scope

The following items are in scope for this document:

- Low-level system architecture for moving the EID generation off the AS/400 platform
- Low-level integration requirements suitable for business and development partners to allow initial high-level estimates to be produced.

2.1.2 Out of Scope

The following sections in the low-level document have not been reviewed:

- Any changes outside the migration of the EID generation process from the AS/400 platform.
- Low-level design for either the PeopleSoft or AS/400 application.¹

¹ The integration between EID and these systems is documented but the engineering for the PS or AS/400 work will come from the appropriate team

2.2 Related documents

[EID Generation High Level Architecture](#)

2.3 Assumptions

The following assumptions are being made:

1. A DB link will exist between the PS and ERD system for the execution of the EID generator code residing on the ERD database

2.4 Dependencies

The following dependencies have been identified:

- ERD Oracle database
- PeopleSoft Application
- AS400

2.5 Constraints

Development lifecycles for other systems – e.g. HR replacement project, AS400 migration, TempMast.

3. EID Generation Proposed State Overview

3.1 Logical overview of new EID generation system

Below is the low-level overview of the replacement system.

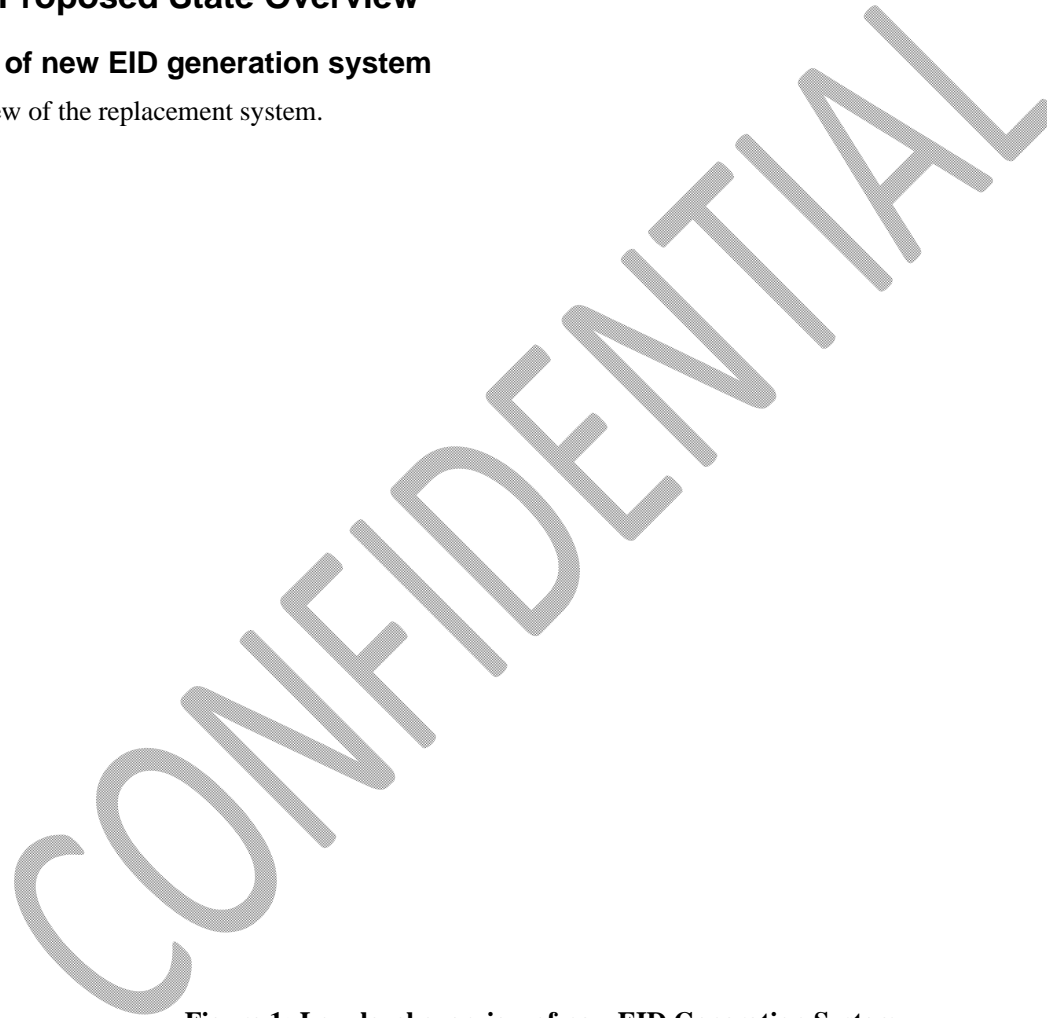


Figure 1: Low-level overview of new EID Generation System

3.1.1 Proposed architecture highlights

The proposed system consists of a new PL/SQL function that generates an EID on demand. The HRMS system (PeopleSoft) will request a new EID from the new EID generator and add it to the HR record prior to sending hire or new hire event notifications to the AS/400 or other systems.

The following events have been identified as part of the generation workflow.

PS Database

- HR Event detected
 - New Hire
 - Re Hire
- Upon insert from the existing PS business logic into the appropriate trigger table the following actions occur
 - New Hire
 - § EID generator is called
 - § Verify that there is no existing cross-reference
 - EID is placed in the appropriate cross-reference table if not null
 - Re-Hire
 - § Appropriate cross-reference table is checked to see if the a PSID to EID record exists
 - If it does not exist
 - EID generator is called
 - EID is placed in the appropriate cross-reference table
 - If it exists
 - No action
- Updates follow the same logic using a different trigger

PS Application

- Modification of Bridge Export (Hire/Re-hire) workflows
 - Record in the trigger table(s) are found with a pending process flag set
 - § Trigger Tables
 - PS_ZHRT_INTTRIGGER
 - Employee
 - PS_ZHRT_ALTRIGGER
 - Non-employees and Multiple EIDs
 - § Check made for New Hire or Re-Hire event
 - If not either of these events
 - Process as normal
 - If either of these events
 - Check for EID in the appropriate cross-reference table
 - § If that exists
 - Process as normal
 - § Otherwise
 - Wait a defined period and then recheck
 - Modification of Legacy Bridge
 - Add EID element to Hire and New-Hire Method ZHRI101A

AS/400 Application

- Modification of HRZ101A to support EID element sent from PeopleSoft Application
- Modification of HRZ101A to not generate EID element in the AS/400

3.2 EID Generator Component Overview

Below is the proposed systems low-level logical overview

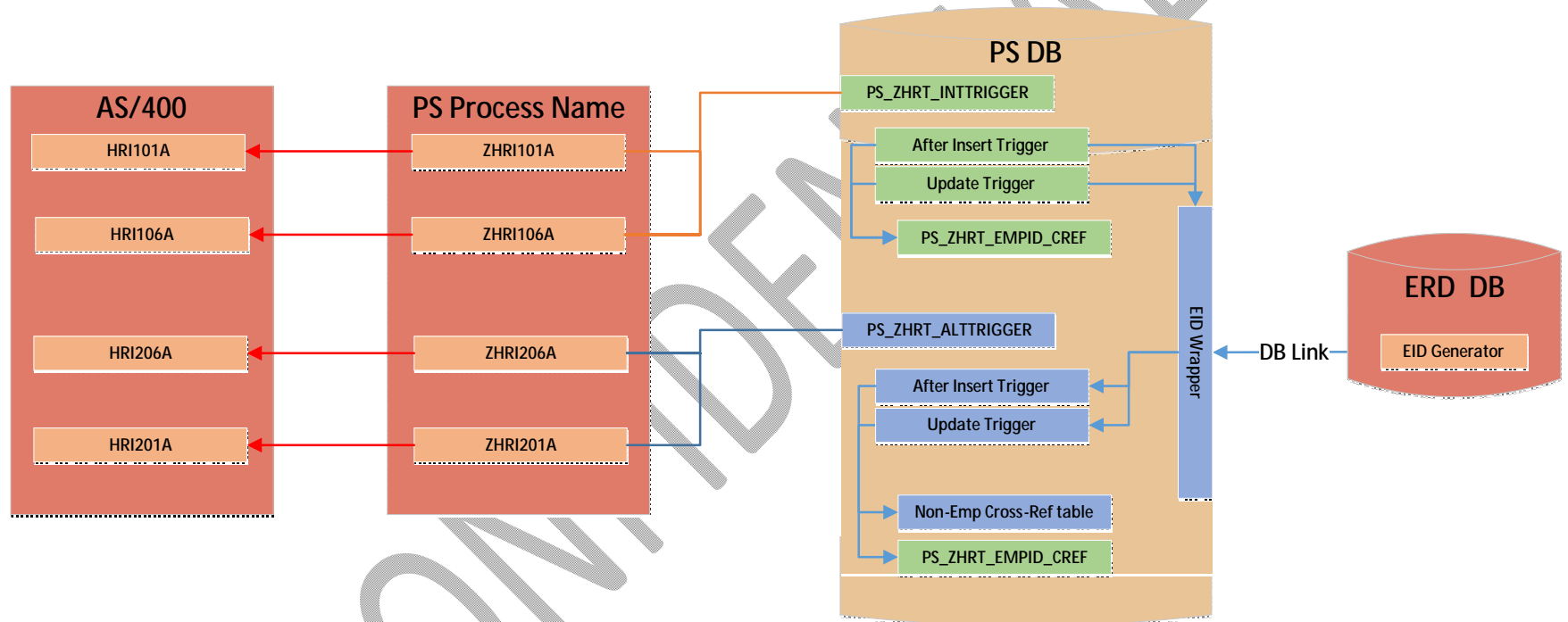


Figure 2: Low-level component overview of the new EID Generation System

4. PeopleSoft Workflows

This section describes the workflows for the PeopleSoft HRMS.

4.1 ZHRT_INTTRIGGER Table Triggers

4.1.1 Post Insert Trigger

As records are put into the PS_ZHRT_ALTTRIGGER table they are analyzed for either a HIRE or REHIRE event and processed accordingly.

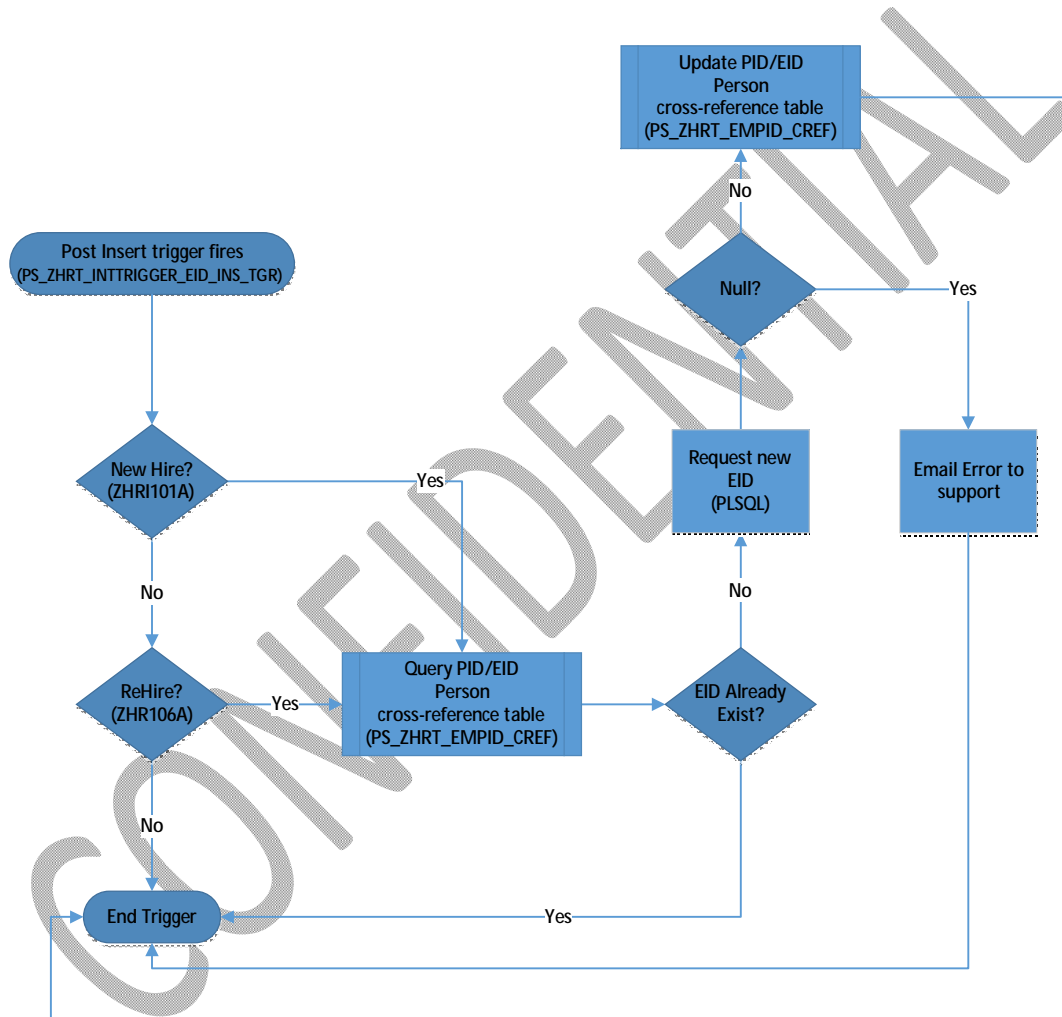


Figure 3: Workflow for EID Generator Call Post Insert Trigger Employee Person Events

4.1.2 After Update Trigger

To automate failures an update trigger has been inserted so that in the event of a failure a simple update to the same trigger record² will cause an EID to be generated if none exists.

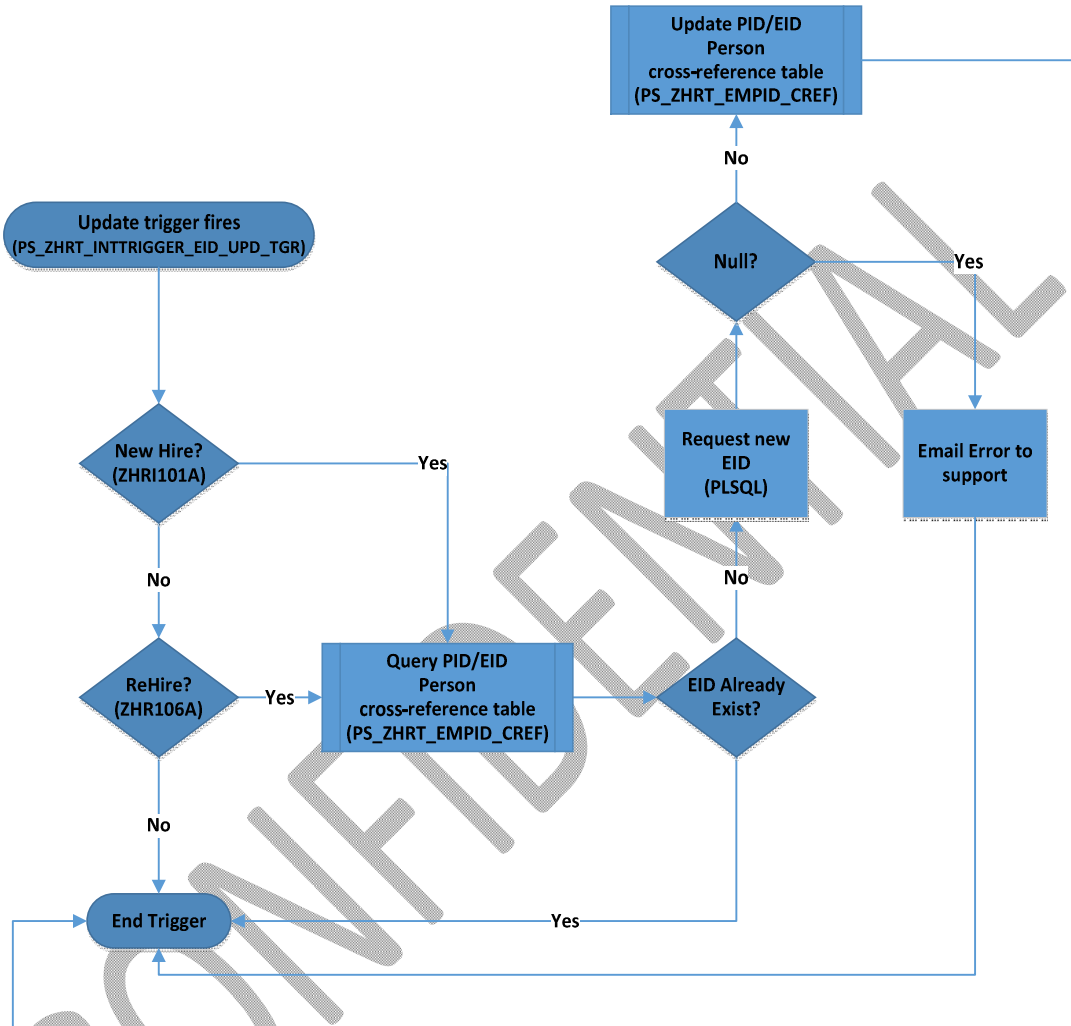


Figure 4: Workflow for EID Generator Call Update Trigger Employee Person Events

² The trigger fires when the TASK_FLAG is updated on a record.

4.2 ZHRT_ALTTRIGGER Table Triggers

4.2.1 Post Insert Trigger

Post insert trigger for non-person/non-employee HIRE and REHIRE events.

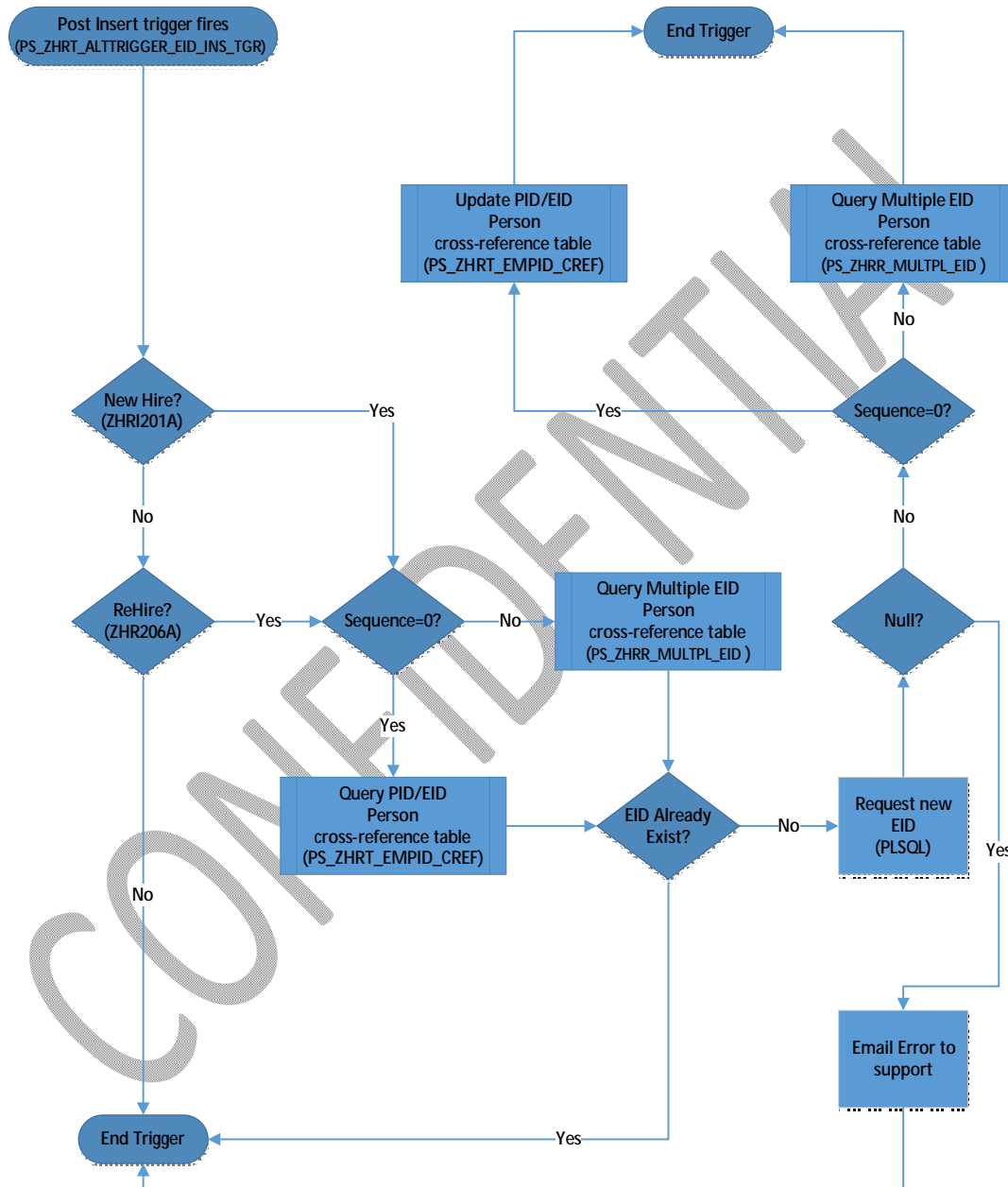


Figure 5: Workflow for EID Generator Call – PS for Non-Employee Person Events

4.2.2 After Update Trigger

To automate failures an update trigger has been inserted so that in the event of a failure a simple update to the same trigger record³ will cause an EID to be generated if none exists.

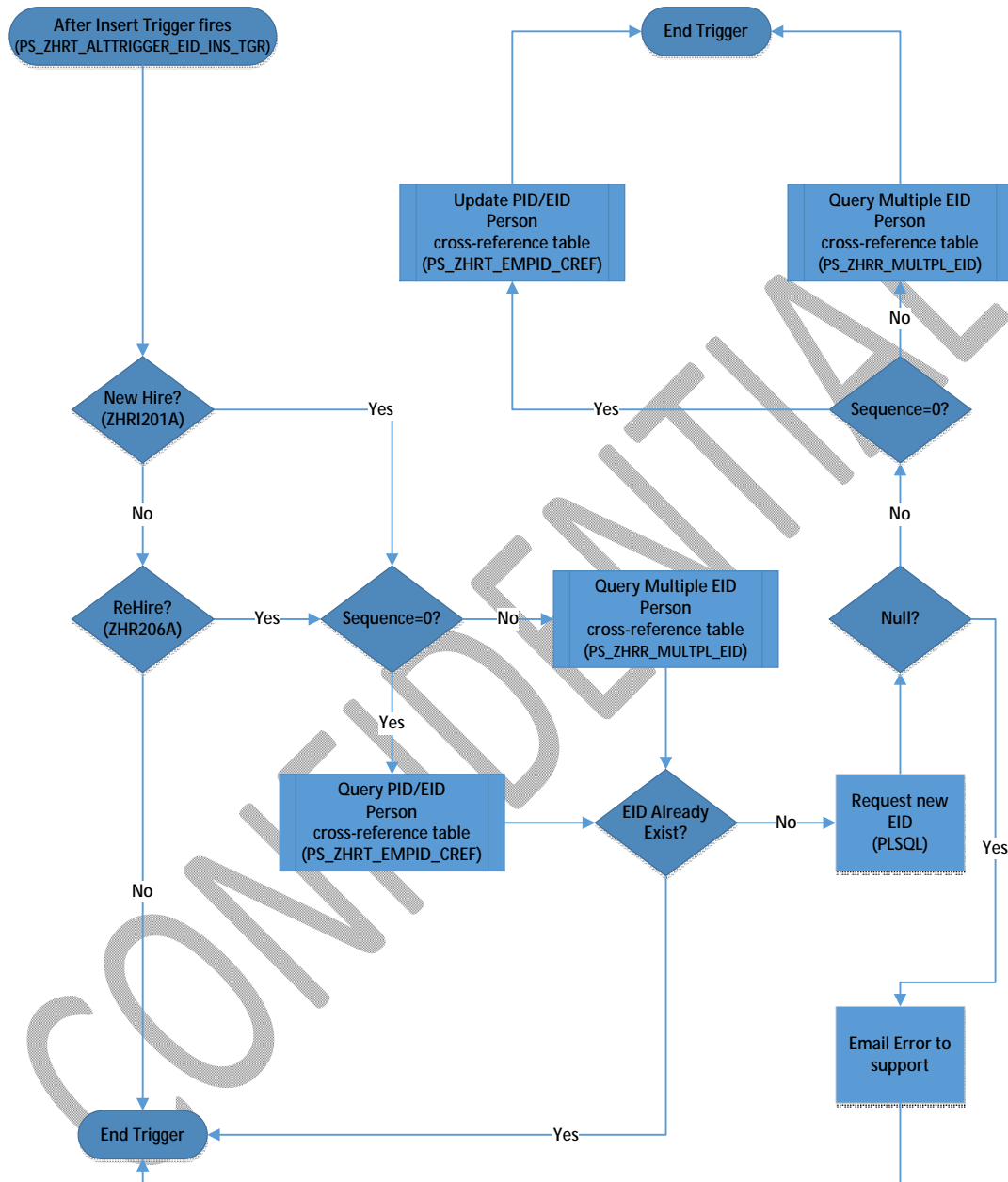


Figure 6: Workflow for After Update Trigger Non-Employee Events

³ The trigger fires when the TASK_FLAG is updated on a record.

4.3 Insert new EID Process

This section describes the Request New EID Process.

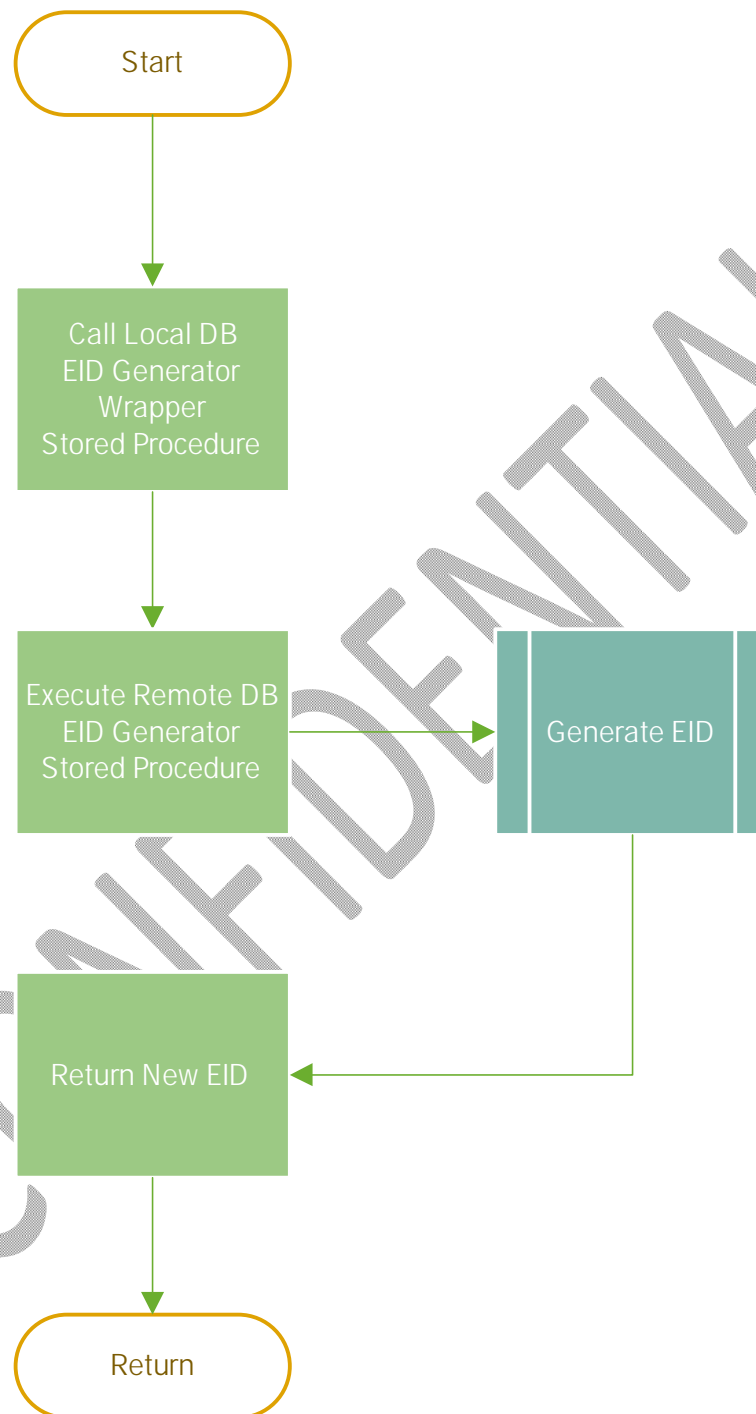


Figure 7: New EID Process

4.4 PeopleSoft Bridge Process Workflow

This section describes the changes to the PeopleSoft Legacy Bridge which pushes data to the AS/400 system.

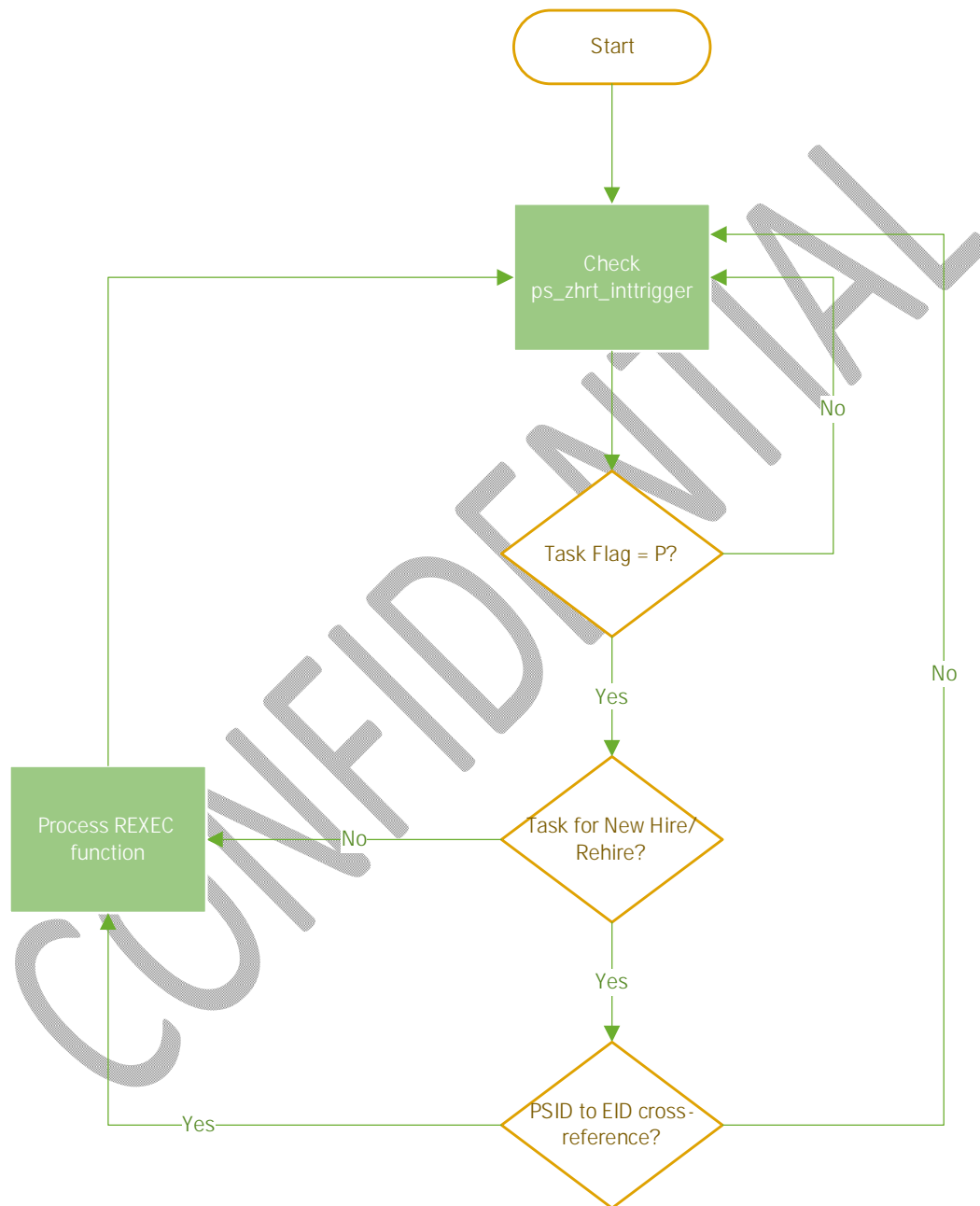


Figure 8: PS Legacy Bridge Process

5. EID Generator Workflow

This section describes the workflow for the PeopleSoft HRMS.

5.1 EID Generator Flow Overview

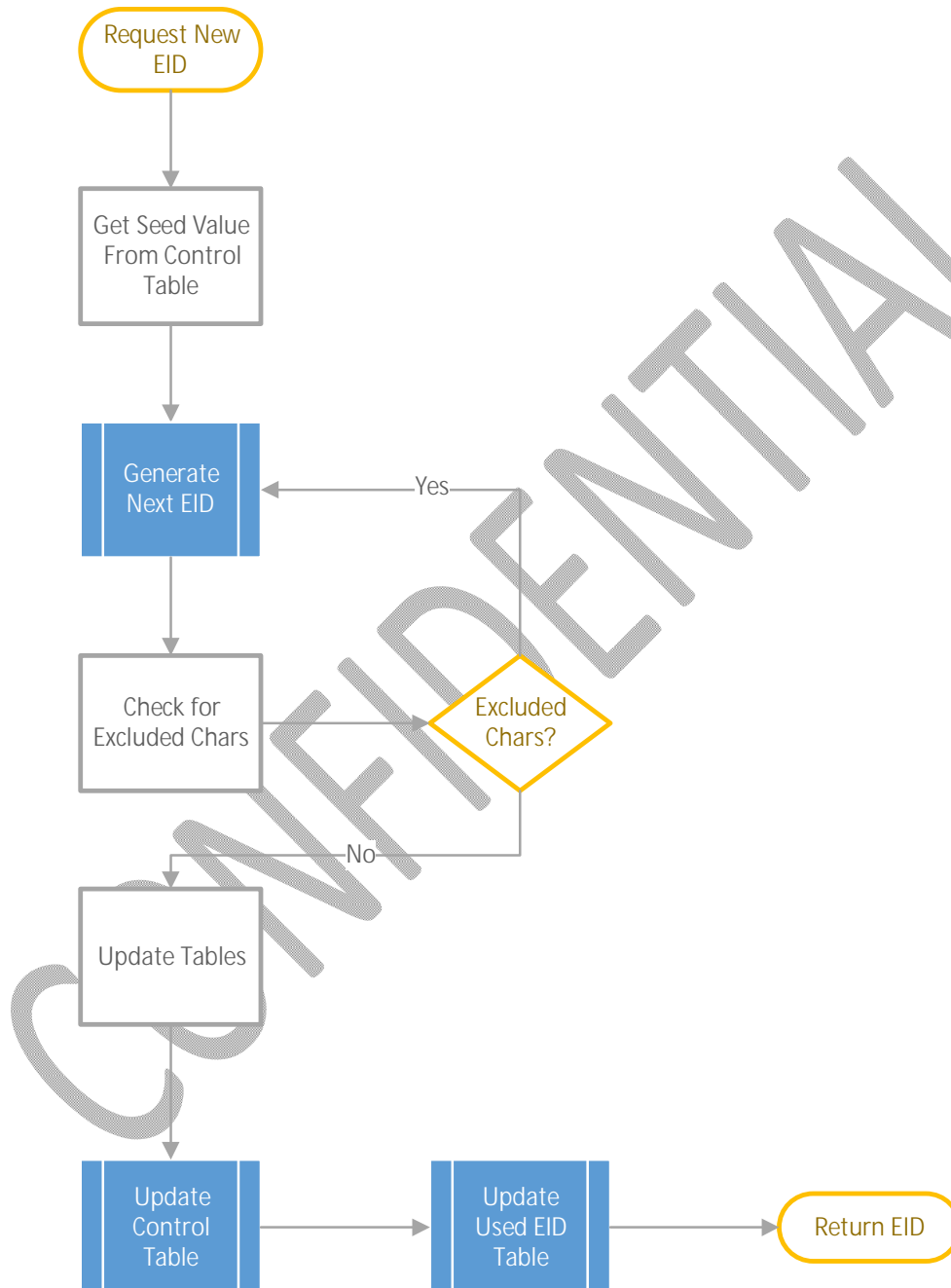


Figure 9: EID Generator Workflow

Appendix A – Business service classifications

Definitions, Acronyms and Abbreviations

The following abbreviations and acronyms have been used in this document.

Table 1: Definitions, Acronyms and Abbreviations

Term	Meaning
PS	People Soft
ERD	Employee Reference Data
SQL	Structured Query Language: language used to access data held in a database
TBD	To Be Determined
REST	Representational State Transfer: Interface standard that allows for interchanging data between systems via web services.
JSON	JavaScript Object Notation: a lightweight data-interchange format easily read by humans and processed by computers
ACL	Access Control List: a list that tells a computer system which access rights a user or client has to a particular data object such as allowed access to PII data elements
RESTful	Interfaces that implement a REST like service
DB	Database: a system used to store large record sets allowing for standard methods to manage CRUD operations.
CRUD	Create Retrieve Update Delete: a basic set of operations done on data sets
ETL	Method to Extract, Translate, Load data from one system to another

Table 2: Service Definitions

Characteristic	Aspect	Mission Critical	Business Critical	Business Operational	Administrative Services
Service Hours	Operational hours	7 x 24	7 x 24	5 x 24	5 x 8
	Maintenance window	4 hours / month	8 hours / month	48 hours / week	60 hours / week
Service Availability	Availability	99.99%	99.9%	99%	99%
	Backups	No impact to availability	No impact to availability	May impact availability	May impact availability
	Availability measurement	Required	Required	Required	Required
Reliability	Unplanned outage	1 / year	4 / year	8 / year	N/A
Customer Support	Maximum priority of helpdesk call	0	0	1	2
Service performance	Metrics defined in SLA	Required	Required	Required	Not required
	Backups	No impact to service performance	May impact service performance	May impact service performance	May impact service performance
	Restore metrics defined in SLA	Required	Required	Required	Not required
Change Management		Required	Required	Required	Not required
IT Service Continuity	DR Solution	Required with full operational capability	Required with full operational capability	Not required	Not required
	Availability in DR mode	99.99	99.5%	N/A	N/A
	Data loss	None	Some, defined in SLA	N/A	N/A
	Service recovery time	2 hours	72 hours	N/A	N/A
Security	Compliance	Required	Required	Required	Required
Service Reviews	Frequency	Monthly	Monthly	Six monthly	Not required