

# System Analysis Document

Amend the currency of transaction between the Ireland and UK subsidiaries

Version	Date	Description	Author
1.0	2022-11-16	Initial	SA
1.1	2022-12-13	Update table schema	SA

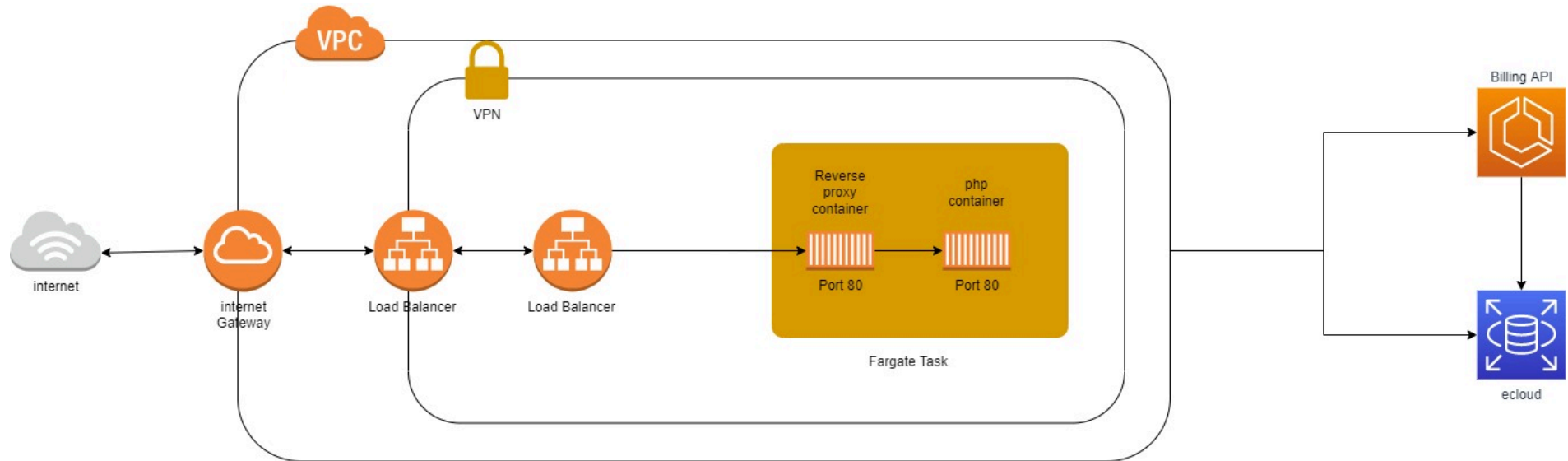
Reference Doc/Link

Doc Name	Path
URD	<a href="https://YWdpbGVwb2ludC5lY2xvdWR2YWxsZXkuY29tL0FwcGxpY2MTFERDQ0NkZGRjBCM0Q4JlJlcG9ydFZpZXc9WUVT">https://YWdpbGVwb2ludC5lY2xvdWR2YWxsZXkuY29tL0FwcGxpY2MTFERDQ0NkZGRjBCM0Q4JlJlcG9ydFZpZXc9WUVT</a>

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# 1. System Architecture



## 2. Requirements of Software/Hardware

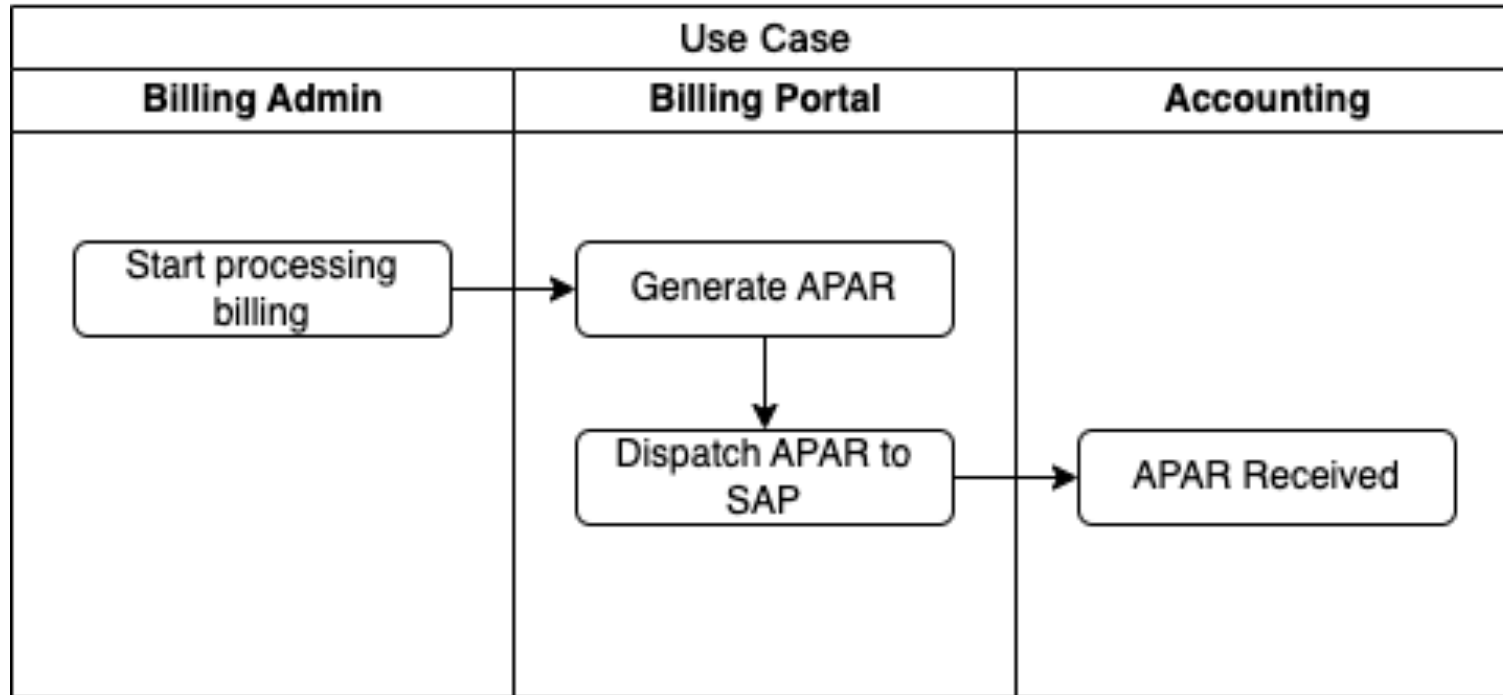
### Hardware:

infra	AWS Services
Computing	EC2, Fargate, ECS, Lambda
Distributing	ALB
Database	RDS
Repository	Code Commit, ECR

### Software:

Stack	Languages
Frontend	Php,
Backend	C#
Data processing	Python

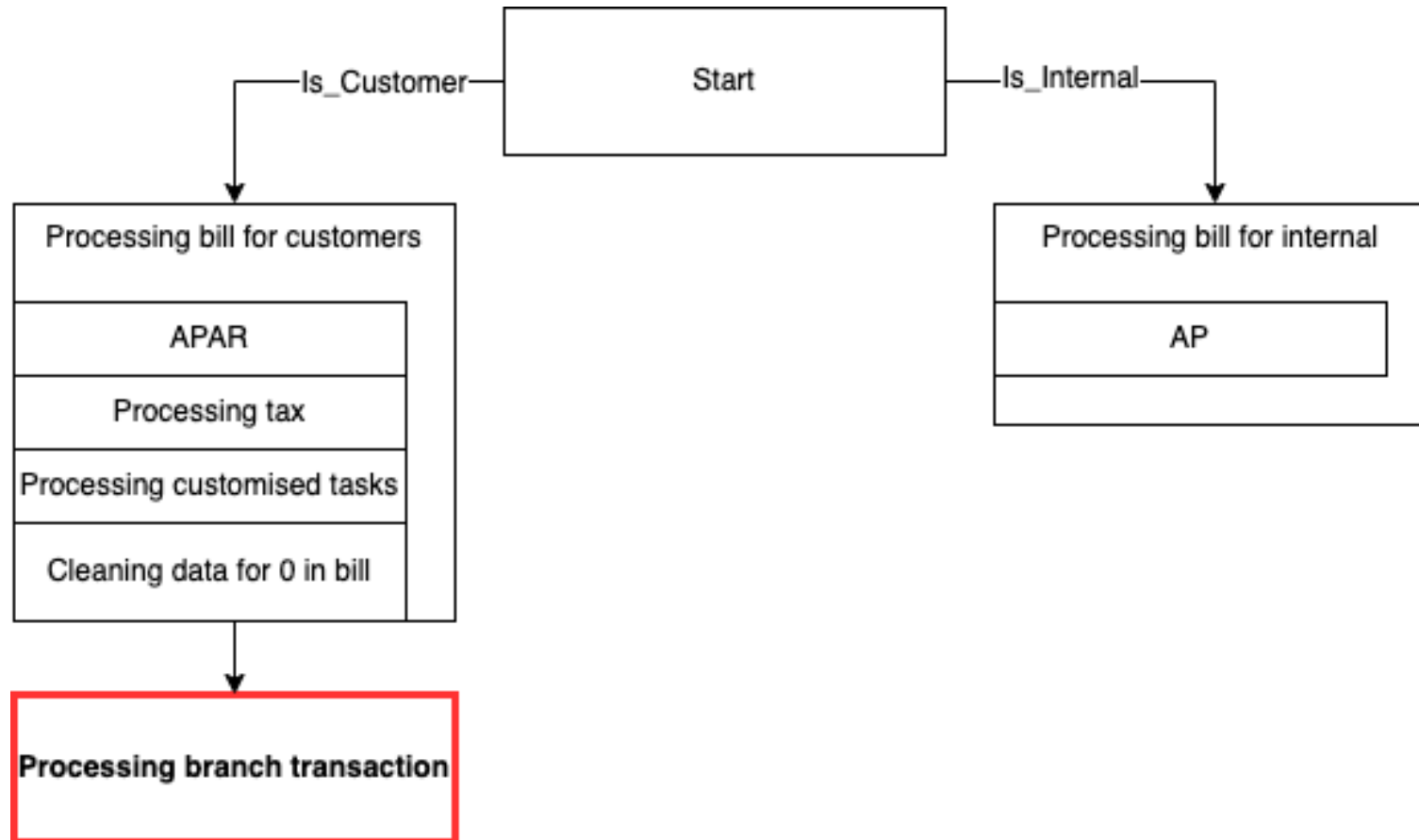
### 3. Use Case



### 4. UI Layout(Optional)

## 5. Diagram (Optional)

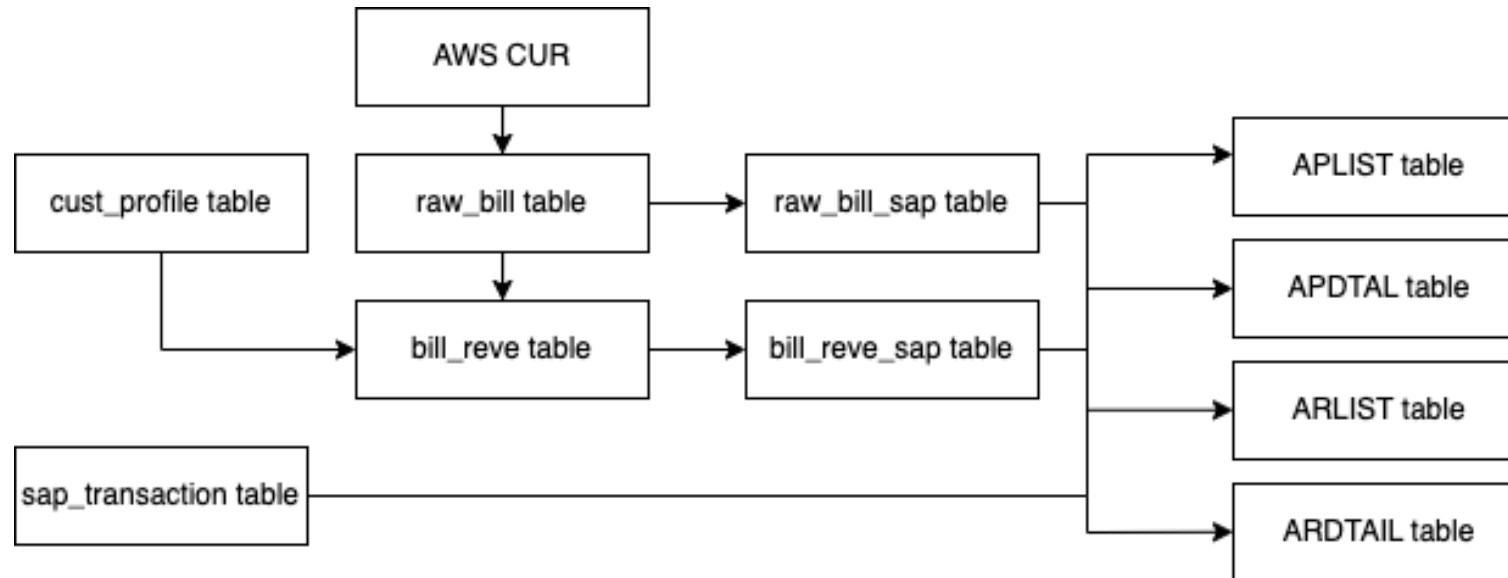
Sequence Diagram:



## 6. Hints of the Transaction Function (Python)

- Currently, there is no separate processing of inter-company transactions between Ireland and the UK branch, as well as between New Zealand and Australia.
- The currency in APLIST and ARLIST (APAR primary data) is hard-coded as USD, and the currency rate is hard-coded as 1.
- In APDTAL (AP detail data), the "cost\_total" field is calculated from
  - $((\text{cost\_total} - \text{discount}) / \text{currency\_rate}) * (1 - \text{keep\_point})$

## 7. Data Flow (Optional)



## 8. DB Schema (Optional)

- It is required to add a new field to the 'sap\_transaction' table.
- Present:

TableName: sap_transaction				
Field	Type	Null	Key	Default
branch	varchar(3)	NO	PRI	
branch_code	int(5)	NO		
payment_branch	varchar(3)	NO		
payment_branch_code	int(5)	NO		
keep_points	decimal(3,2)	NO		
invoice_merge_no	varchar(10)	NO		

- After:

TableName: sap_transaction				
Field	Type	Null	Key	Default
branch	varchar(3)	NO	PRI	
branch_code	int(5)	NO		
payment_branch	varchar(3)	NO		
payment_branch_code	int(5)	NO		
keep_points	decimal(3,2)	NO		
invoice_merge_no	varchar(10)	NO		
<b>currency</b>	<b>varchar(12)</b>	<b>NO</b>		

## 9. Resource & Schedule

Phase	Task	Output	Owner	Due
Requirement Discuss	To discuss requirements and draft a requirement document	URD	Accounting coordinator & Billing PM	
SA/SD	To analyze systems of Billing Portal and APAR generator	SA Report	System analyst	
Implement	Add new logic to the function and add a new field in the table	ST Report	Data Engineer & System analyst	
	Test APAR system			
SIT	Implement integrated testing with the SAP system	SIT Report	QA & Data Engineer	
UAT	User test	UAT Report	Accounting coordinator & Billing admin	
Production	Release	Release Note	DevOps and Data Engineer	

R&D Dep. Supervisor \_\_\_\_\_