Project HealthConnect 360

Phase 7: Integration & External Access
HealthConnect 360 Project
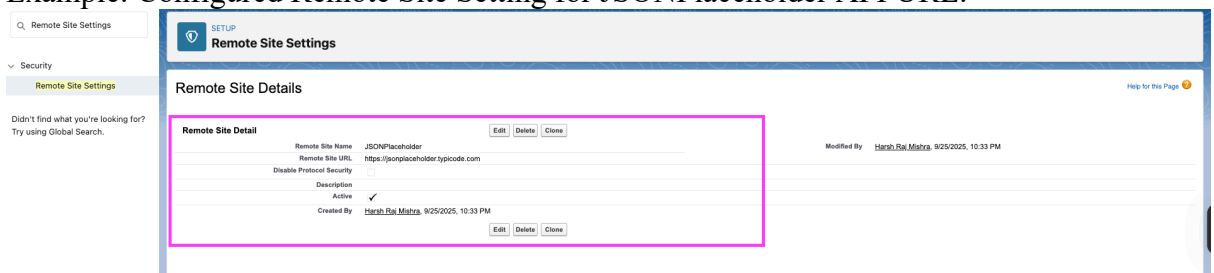Prepared by: **Harsh Raj Mishra**

About Phase 7

Phase 7 focuses on enabling HealthConnect 360 to connect, communicate, and synchronize data with external systems and within Salesforce itself. This integration layer ensures that patient data and clinical workflows are realtime, responsive, and scalable across varied platforms and services.

In this phase, the architecture transitions from standalone data management to event-driven and service-oriented integration, covering API callouts, event subscriptions, and external system connections. This foundation supports future expansions such as automated care coordination, external data federation, and advanced telemetry.

Web Services (REST/SOAP)

- Remote Site Settings ensure that Salesforce is allowed to call external URLs securely.
- Must whitelist external API endpoints before apex callout code can successfully execute.
- Example: Configured Remote Site Setting for JSONPlaceholder API URL.

Callouts

- Implemented robust HTTP callouts using Apex HTTP classes.
- Published real test events and tracked responses synchronously.
- Laid groundwork for real-time external data fetch and update pipelines.

TestApiCallout.apxc

Code Coverage: None ▾   API Version: 64 ⌄

```apex
public with sharing class TestApiCallout {
    public static String getPosts() {
        HttpRequest req = new HttpRequest();
        req.setEndpoint('https://jsonplaceholder.typicode.com/posts');
        req.setMethod('GET');

        Http http = new Http();
        HttpResponse res = http.send(req);

        if (res.getStatusCode() == 200) {
            return res.getBody();
        } else {
            return 'Error: ' + res.getStatusCode();
        }
    }
}
```

TestApiCallout.apxc   Log executeAnonymous @26/09/2025, 11:08:49

USER_DEBUG   1/9 ^ ⌄ ✕

Execution Log

Timestamp	Event	Details
11:08:49.074	METHOD_EXIT	[1]|01pgc00000SfYW1|TestApiCallout.getPosts()
11:08:49.074	SYSTEM_MODE...	false
11:08:49.074	VARIABLE_ASSI...	[1]|response|"[\n {\n \"userId\": (27500 more) ..."
11:08:49.074	STATEMENT_EX...	[2]|
11:08:49.074	HEAP_ALLOCATE	[2]|Bytes:14
11:08:49.074	HEAP_ALLOCATE	[2]|Bytes:27534
11:08:49.074	USER_DEBUG	[2]|DEBUG|API Response: [
11:08:49.000	USER_DEBUG	{
11:08:49.000	USER_DEBUG	"userId": 1,
11:08:49.000	USER_DEBUG	"id": 1,
11:08:49.000	USER_DEBUG	"title": "sunt aut facere repellat provident occaecati excepturi optio reprehenderit",
11:08:49.000	USER_DEBUG	"body": "quia et suscipit\nsuscipit recusandae consequuntur expedita et cum\nreprehenderit molestiae ut ut quas totam\nnostrum rerum est autem sunt rem eveniet architecto"
11:08:49.000	USER_DEBUG	},
11:08:49.000	USER_DEBUG	{
11:08:49.000	USER_DEBUG	"userId": 1,
11:08:49.000	USER_DEBUG	"id": 2,
11:08:49.000	USER_DEBUG	"title": "qui est esse",
11:08:49.000	USER_DEBUG	"body": "est rerum tempore vitae\nsequi sint nihil reprehenderit dolor beatae ea dolores neque\nfugiat blanditiis voluptate porro vel nihil molestiae ut reiciendis\nqui aperiam non debitis possimus qui neque nisi nulla"
11:08:49.000	USER_DEBUG	},
11:08:49.000	USER_DEBUG	{
11:08:49.000	USER_DEBUG	"userId": 1,
11:08:49.000	USER_DEBUG	"id": 3,
11:08:49.000	USER_DEBUG	"title": "ea molestias quasi exercitationem repellat qui ipsa sit aut",
11:08:49.000	USER_DEBUG	"body": "et iusto sed quo iure\nvoluptatem occaecati omnis eligendi aut ad\nvoluptatem doloribus vel accusantium quis pariatur\nmolestiae porro eius odio et labore et velit aut"
11:08:49.000	USER_DEBUG	},
11:08:49.000	USER_DEBUG	{
11:08:49.000	USER_DEBUG	"userId": 1,
11:08:49.000	USER_DEBUG	"id": 4,

☐ This Frame ☐ Executable ☐ Debug Only ☐ Filter Click here to filter the log

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time ▾	Status	Read	Size
Harsh Raj Mishra	Unknown	/services/data/v64.0/tooling/executeAnonym...	26/09/2025, 11:08:49	Success		31.07 KB

☐ Filter Click here to filter the log list

Platform Events

- Created custom Platform Events for patient updates (`PatientUpdateEvent`).
- Designed Apex triggers to asynchronously process event data.
- Tested event publishing and confirmed subscription handling in Salesforce logs.

Q Platform Events

∨ Integrations

   Platform Events

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SETUP
Platform Events

Platform Event
PatientUpdateEvent

Standard Fields [4] | Custom Fields & Relationships [0]

Help for this Page ?

Platform Event Definition Detail   Edit   Delete

Singular Label	PatientUpdateEvent	Description	Event to notify about patient record updates in HealthConnect360
Plural Label	PatientUpdateEvents	Deployment Status	Deployed
Object Name	PatientUpdateEvent		
API Name	PatientUpdateEvent__e		
Event Type	High Volume i		
Publish Behavior	Publish Immediately i		
Created By	Harsh Raj Mishra, 9/25/2025, 10:51 PM	Modified By	Harsh Raj Mishra, 9/25/2025, 10:51 PM

Standard Fields

Action	Field Label	Field Name	Data Type	Controlling Field	Indexed
	Created By	CreatedBy	Lookup(User)		
	Created Date	CreatedDate	Date/Time		
	Event UUID	EventUuid	Text(36)		
	Replay ID	ReplayId	External Lookup		

Custom Fields & Relationships   New

Action	Field Label	API Name	Data Type	Indexed	Controlling Field	Modified By
Edit	Del	PatientId	PatientId__c	Text(18)			Harsh Raj Mishra, 9/25/2025, 11:01 PM
Edit	Del	UpdateTimestamp	UpdateTimestamp__c	Date/Time			Harsh Raj Mishra, 9/25/2025, 11:05 PM
Edit	Del	UpdateType	UpdateType__c	Text(10)			Harsh Raj Mishra, 9/25/2025, 11:05 PM

Change Data Capture

- Outlined CDC enablement for core patient and appointment objects.
- CDC planned as automatic event trigger on record changes.
- Set stage for real-time data sync and integration workflows.

```
File ▾   Edit ▾   Debug ▾   Test ▾   Workspace ▾   Help ▾   <   >

AppointmentTrigger.apxt ×   AppointmentHandler.apxc ×   AppointmentHandlerTest.apxc ×   TestRun @ 1:18:39 am ×   PatientUpdateEventTrigger.apxt ×   Log executeAnonymous @26/09/2025, 11:54:37 ×

Code Coverage: None ▾   API Version:  64 ▾

1 ▾ trigger PatientUpdateEventTrigger on PatientUpdateEvent__e (after insert) {
2 ▾     for (PatientUpdateEvent__e eventRecord : Trigger.New) {
3           System.debug('Received PatientId (Appointment Id): ' + eventRecord.PatientId__c);
4           System.debug('Update Type: ' + eventRecord.UpdateType__c);
5           System.debug('Update Timestamp: ' + eventRecord.UpdateTimestamp__c);
6       }
7 }
8 |
```

Salesforce Connect

- Introduced Salesforce Connect concept for external data integration.
- Prepped for using external objects to reflect live clinic and healthcare system records.
- Facilitates seamless external system integration without data duplication.

Summary

Phase 7 equips HealthConnect 360 with critical integration capabilities essential for modern healthcare ecosystems. External API communication and native Salesforce event systems create a unified, responsive patient data platform. Future improvements include CDC and Salesforce Connect deployments to enhance data consistency and access.

This integration foundation enables HealthConnect 360 to evolve with demands for connected care, operational efficiency, and scalable healthcare management.