Phase 7: Integration & External Access

PetCare CRM

A Salesforce-Based Pet Shop Management System for Customer Engagement and Service Automation

The goal of this phase is to enable the Salesforce application to connect and exchange data with external systems, ensuring that the solution can integrate smoothly with outside services such as insurance verification, customer portals, or external databases. The following components were implemented and documented.

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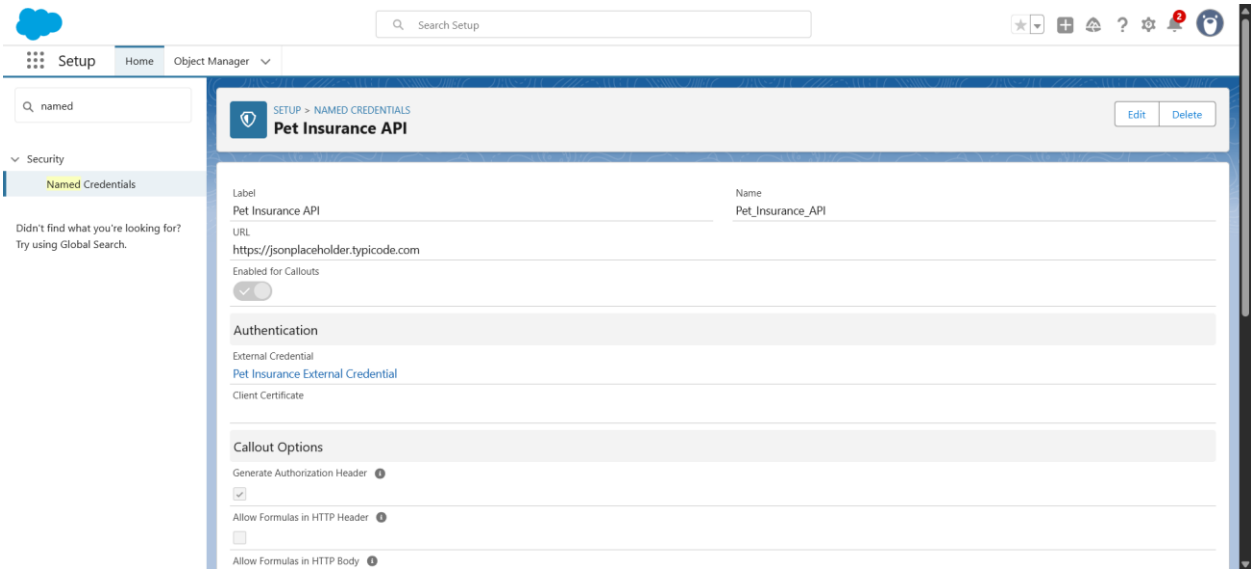
1. Named Credentials

Named Credentials provide a secure way to store API endpoint details and authentication information.

Steps:

1. Navigate to **Setup → External Credentials → New External Credential**.
2. Provide details:
    - Label: Pet Insurance External Credential
    - Name: Pet_Insurance_External_Credential
    - Authentication Protocol: No Authentication (for testing)
    - Save.
3. Create a **Principal** for the External Credential:
    - Principal Name: DemoPrincipal
    - Identity Type: Named Principal
    - Save.
4. Navigate to **Setup → Named Credentials → New Named Credential**.
5. Provide details:
    - Label: Pet Insurance API

- Name: Pet_Insurance_API
- URL: https://jsonplaceholder.typicode.com (mock endpoint for demonstration)
- External Credential: select Pet Insurance External Credential
- Save.
  This setup allows the org to make authenticated callouts without hardcoding sensitive information.



2. External Services

External Services in Salesforce allow declarative connection to APIs using schema definitions.

- For demonstration, the mock API endpoint is registered using the Named Credential created above.
- This enables the system to use API operations in Flows or Apex without manual request handling.

3. Web Services (REST/SOAP)

Salesforce supports REST and SOAP callouts for external integrations.

- A sample REST callout was tested using Apex:

```
Http http = new Http();

HttpRequest req = new HttpRequest();
```

req.setEndpoint('callout:Pet_Insurance_API/posts/1');

req.setMethod('GET');

HttpResponse res = http.send(req);

System.debug('Response: ' + res.getBody());

This retrieves data from the external endpoint using the secured Named Credential.

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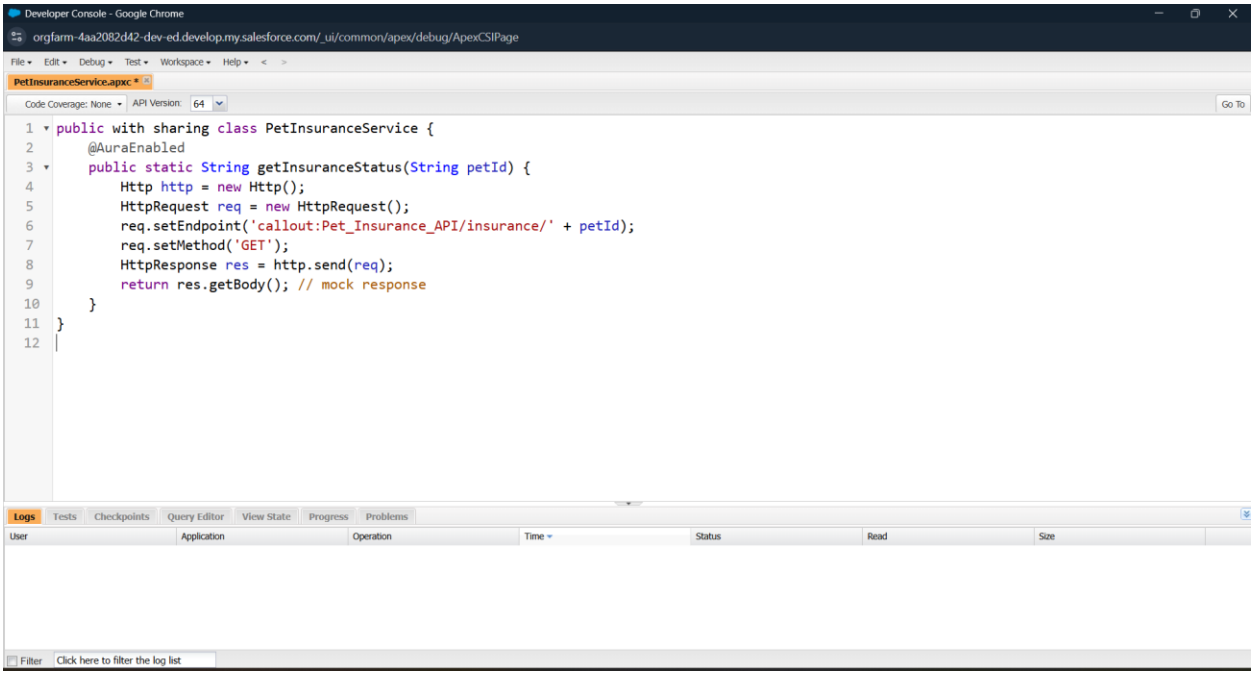
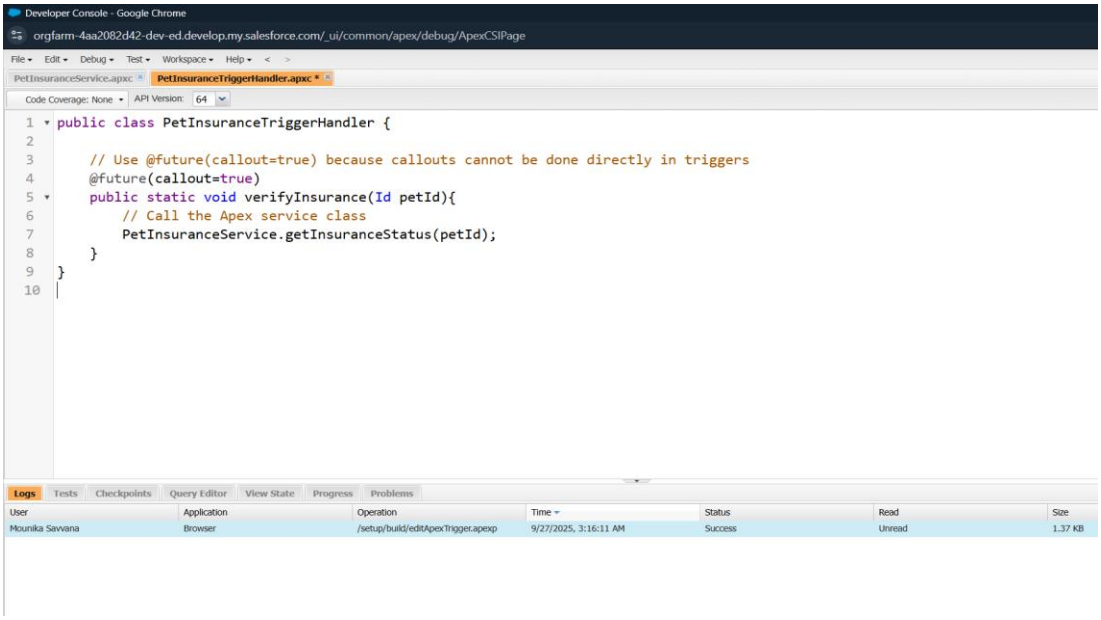
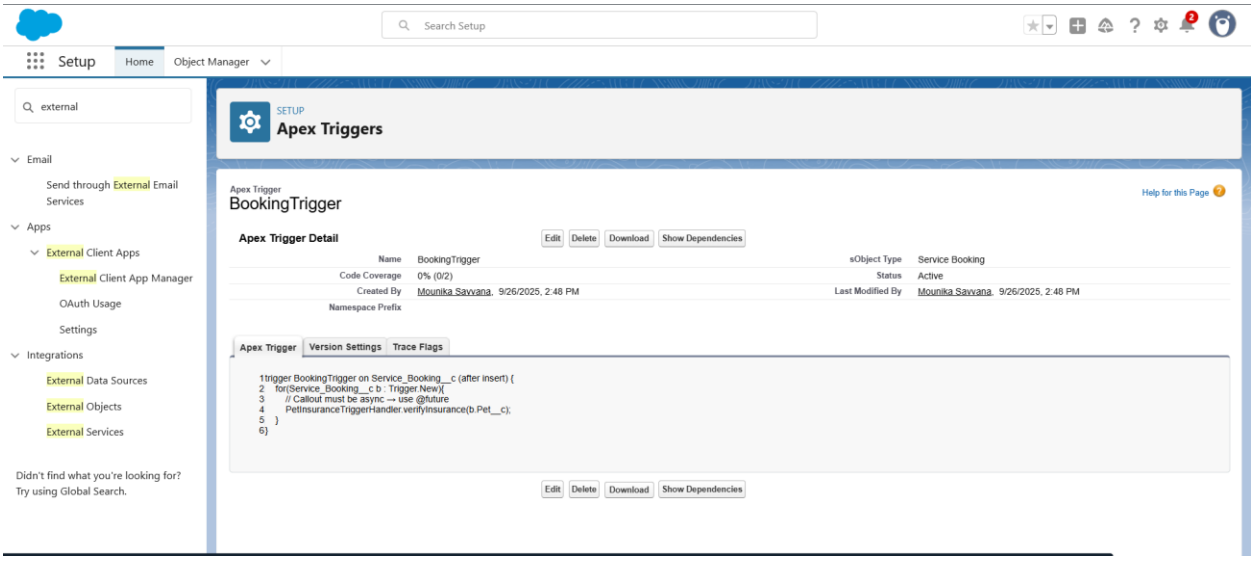
4. Callouts

Callouts can be triggered from Apex classes, Flows, or Processes.

- In this project, callouts are intended to be executed after a booking is created, ensuring external verification (such as insurance validation) occurs automatically.
- The mock API was used to simulate this scenario.



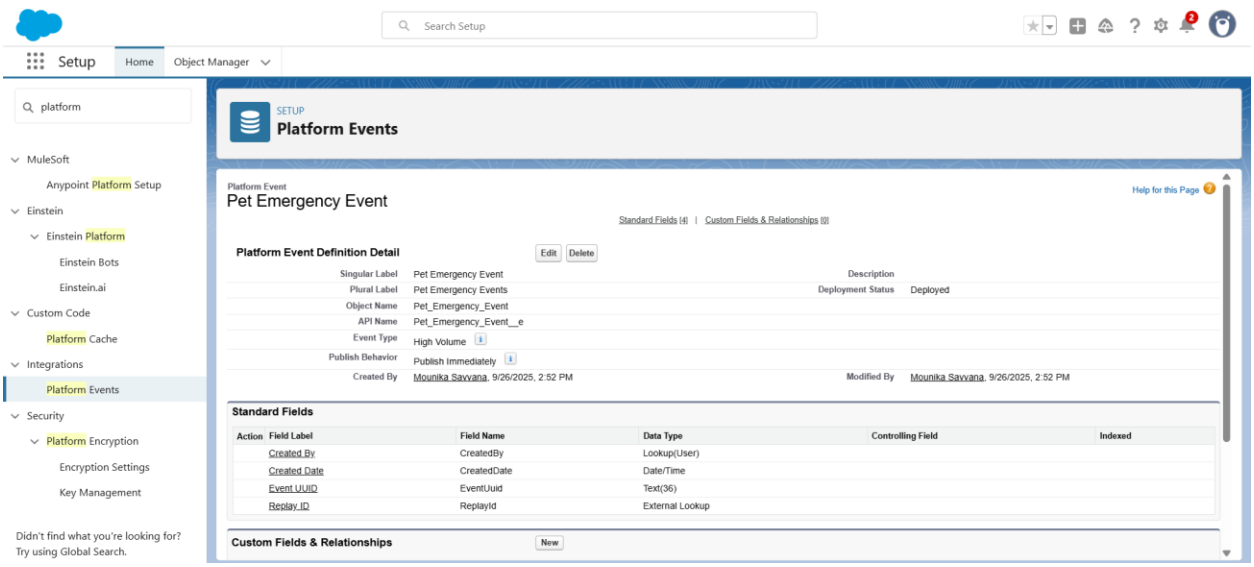




5. Platform Events

Platform Events allow the system to notify external services about key events.

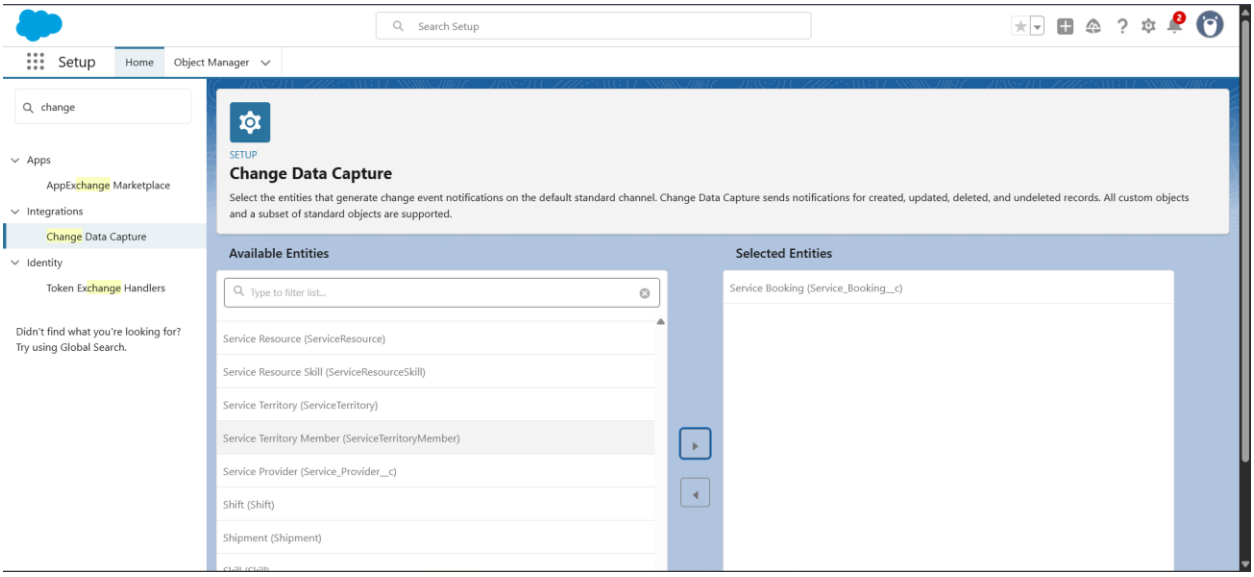
- Example: A Platform Event is published when a car breakdown is reported, ensuring subscribers (internal or external) can respond in real-time.



6. Change Data Capture

Change Data Capture streams changes in Salesforce records to external systems.

- Example: When a Service Booking is updated, an event is generated and external systems can be notified.
- This ensures external insurance providers remain updated with booking changes.



7. Salesforce Connect

Salesforce Connect enables integration with external databases.

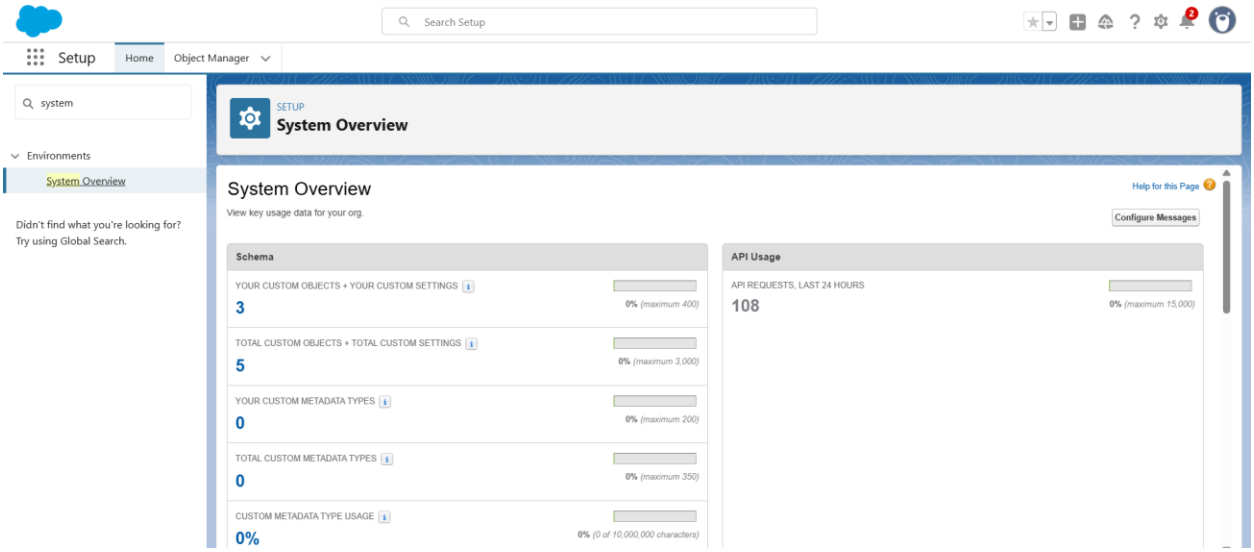
- In this project, Salesforce Connect can be used to link to an external database managing car details.

- External objects allow the org to view and use data stored outside Salesforce without duplication.

8. API Limits

Salesforce enforces daily API request limits.

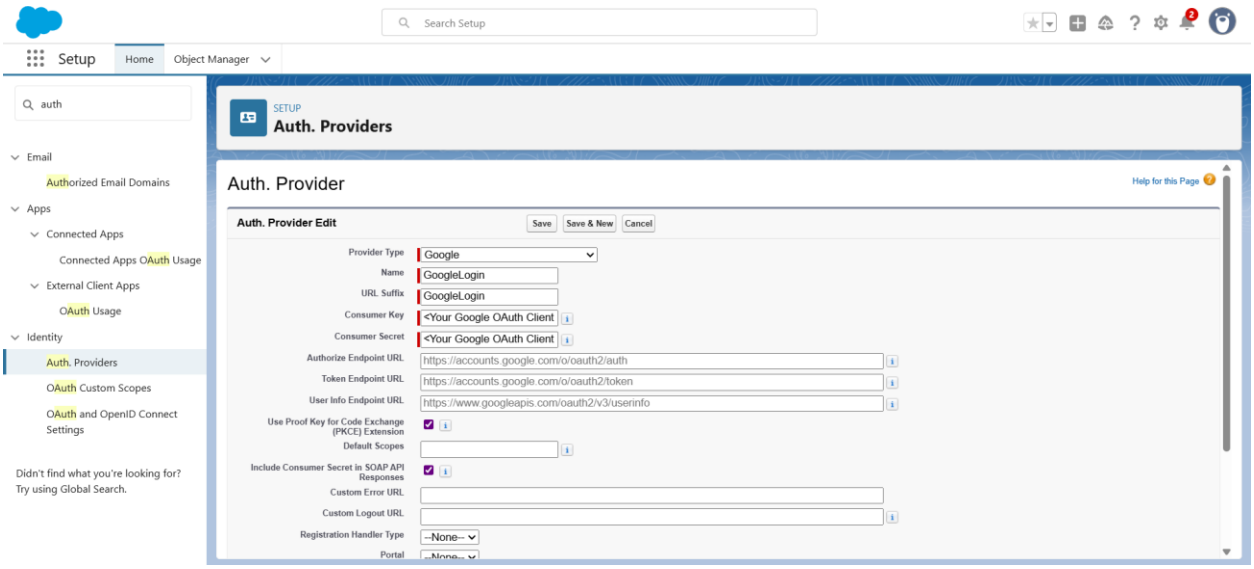
- The **System Overview** and **API Usage dashboards** are used to monitor API consumption.
- This ensures integrations remain within permitted usage.



9. OAuth & Authentication

For external portals or customer logins, Salesforce supports OAuth 2.0 authentication.

- External Credential setup can be extended to use OAuth instead of "No Authentication" for secure API connections.
- This ensures secure access and user identity verification when integrating third-party portals.

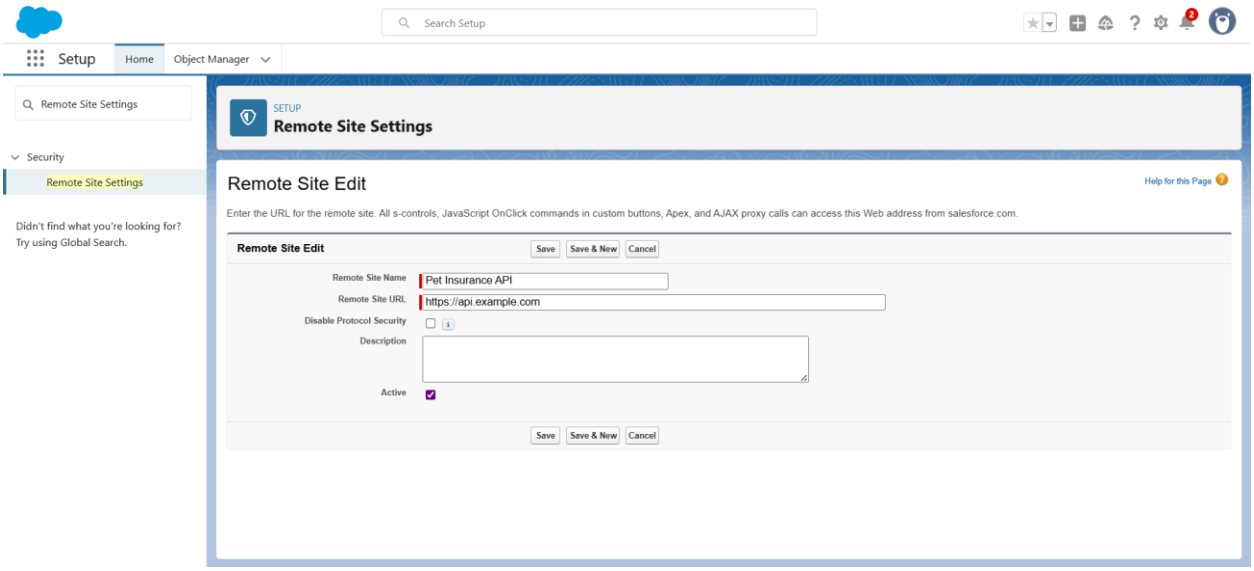
- 

10. Remote Site Settings

Salesforce requires explicit permission to call external domains.

Steps:

1. Navigate to **Setup → Remote Site Settings → New Remote Site**.
2. Provide details:
    - Remote Site Name: Insurance_API_Site
    - Remote Site URL: https://jsonplaceholder.typicode.com
    - Save.
      This allows Salesforce to call out to the specified external service endpoint.



Conclusion

Phase 7 establishes external connectivity by configuring Named Credentials, callouts, platform events, and Remote Site Settings. Even though mock APIs were used for demonstration, the setup mirrors a real-world integration scenario with insurance services, ensuring the Salesforce org can securely communicate with external systems.