Phase 7: Integration & External Access
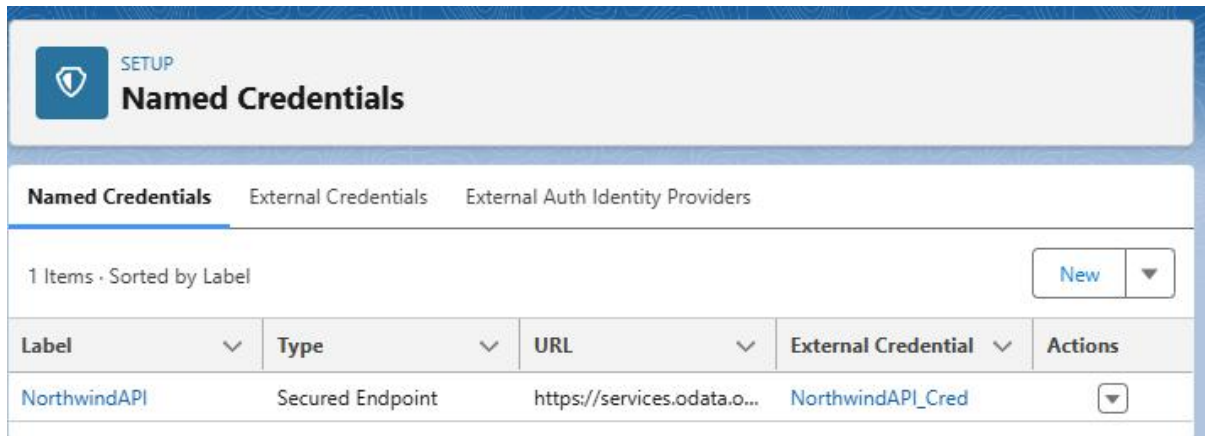
Visitor CheckIn System for Offices

1. Named Credentials

UseCase:
Named Credentials were used to securely store the endpoint URL and authentication details for accessing external APIs. In this project, we configured a Named Credential for the Northwind OData Service (https://services.odata.org/V4/Northwind/Northwind.svc/) to fetch sample external data.

Implementation:

- Created a Named Credential called NorthwindAPI.

- Configured the URL and enabled it for callouts.

- Connected it with an External Credential for authentication (Anonymous in this case).

2. External Services

UseCase:
External Services were set up to consume APIs without writing custom Apex. It maps external service definitions (Swagger/WSDL) into Salesforce actions that can be used in Flows or Apex.

Implementation:

- Connected Northwind OData service via External Service.

- Mapped available endpoints to invoke external data retrieval.

3. Web Services (REST/SOAP)

Use **Case:**
Apex classes were used to perform **REST callouts** to external services. This allowed Salesforce to integrate with APIs and bring in external data.

Implementation (Sample REST Callout):

```
public with sharing class NorthwindCallout {

    @AuraEnabled

    public static String getProducts() {

        Http http = new Http();

        HttpRequest req = new HttpRequest();

        req.setEndpoint('callout:NorthwindAPI/Products');

        req.setMethod('GET');

        HttpResponse res = http.send(req);

        return res.getBody();

    }

}
```

4. Callouts

UseCase:
Callouts were performed to send requests from Salesforce to external systems. The Visitor Management System can use callouts to fetch external visitor verification data or sync visitor info with other platforms.

Implementation:

- Added Remote Site Settings / Named Credential to allow the callout.

- Used Apex class for HTTP request/response handling.

Related

Northwind Products

Product Name	∨	Category	∨	Price
Chai		Beverages		18
Chang		Beverages		19
Aniseed Syrup		Condiments		10

Visitor Check-In

5. Platform Events

UseCase:
Platform Events were configured to publish and subscribe to real-time events inside Salesforce. In this project, we can publish an event when a Visitor checks in, and notify external systems.

Implementation:

- Created a custom Platform Event Visitor_CheckIn_Event__e.

- Published event after a visitor record was inserted.

- Subscribed via a Flow or Apex trigger.

6. Change Data Capture (CDC)

UseCase:
Change Data Capture allows real-time streaming of record changes to external systems. For Visitor Management, CDC ensures that every visitor check-in/update is sent to external apps.

Implementation:

- Enabled CDC for the Visitor__c object.

- Subscribed to CDC events using CometD client.

7. Salesforce Connect

UseCase:
Salesforce Connect was configured to access external data in real-time without storing it in Salesforce. For example, Northwind Orders could be displayed inside Salesforce without importing.

Implementation:

- Created an External Data Source pointing to Northwind API.

- Configured External Objects mapped to API entities.

8. API Limits

UseCase:
Salesforce imposes daily limits on API usage. Tracking API limits ensures integrations do not fail due to quota exhaustion.

Implementation:

- Navigated to System Overview → Monitored API calls.

- Ensured REST callouts to Northwind API stay within daily limits.

9. OAuth & Authentication

UseCase:

OAuth was used to securely authenticate external services. For APIs requiring tokens, Salesforce supports **OAuth 2.0** flows.

Implementation:

- Configured **External Credential** with OAuth.

- Used **Authorization Header** for callouts.

10. Remote Site Settings

UseCase:

Remote Site Settings were configured to **allow outbound connections** from Salesforce to external systems.

Implementation:

- Added https://services.odata.org to Remote Site Settings.

- This ensured Apex callouts to Northwind API were permitted.