

LoanEase: Salesforce Loan Management CRM

Phase 7: Integration & External Access

Named Credentials & External Credential

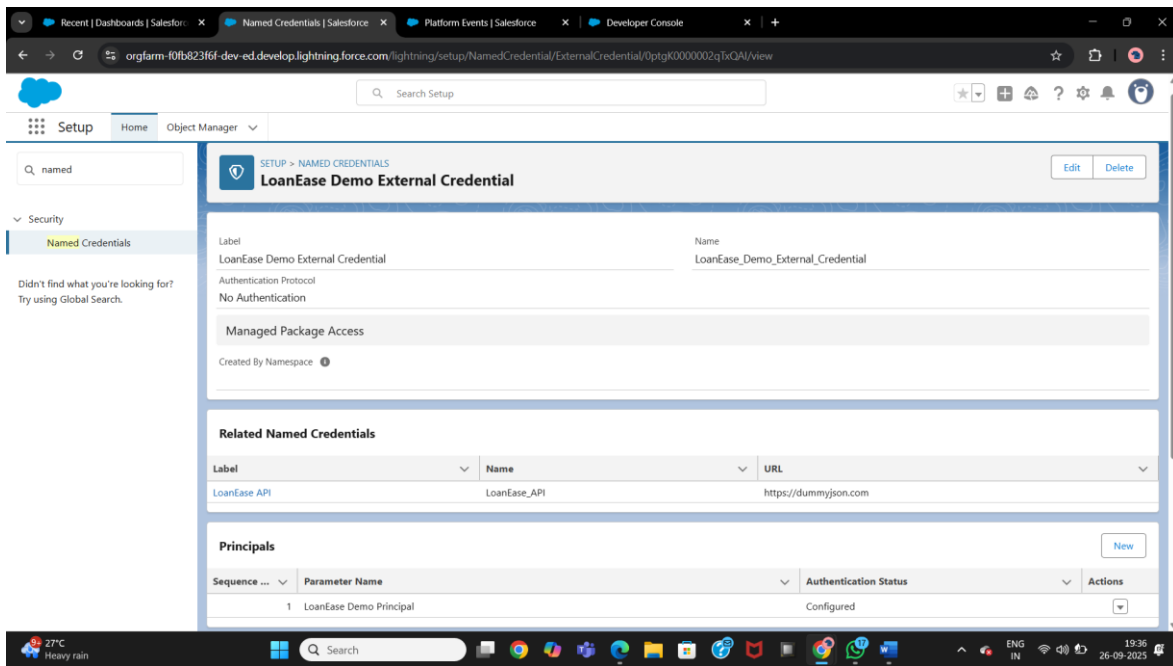
- Created **External Credential**: LoanEase_Demo_Ext_Credential.
- Created **Permission Set**: LoanEase API Permissions.
- Mapped Permission Set to the External Credential.
- Assigned Permission Set to the Salesforce user.
- Created **Named Credential**: LoanEase_API pointing to https://dummyjson.com.
- Used the Named Credential in **Apex callouts** (LoanEaseAPIService).

The screenshot shows the Salesforce Setup page for Named Credentials. The left sidebar has a search bar with 'named' and a list of categories including Security, with 'Named Credentials' selected. The main content area is titled 'Named Credentials' and shows a table with one item: 'LoanEase API' of type 'Secured Endpoint' pointing to 'https://dummyjson.com' using the 'LoanEase Demo External Credential'. The bottom of the screen shows a Windows taskbar with a weather widget (27°C Cloudy) and system clock (19:35 26-09-2025).

Label	Type	URL	External Credential	Actions
LoanEase API	Secured Endpoint	https://dummyjson.com	LoanEase Demo External Credential	

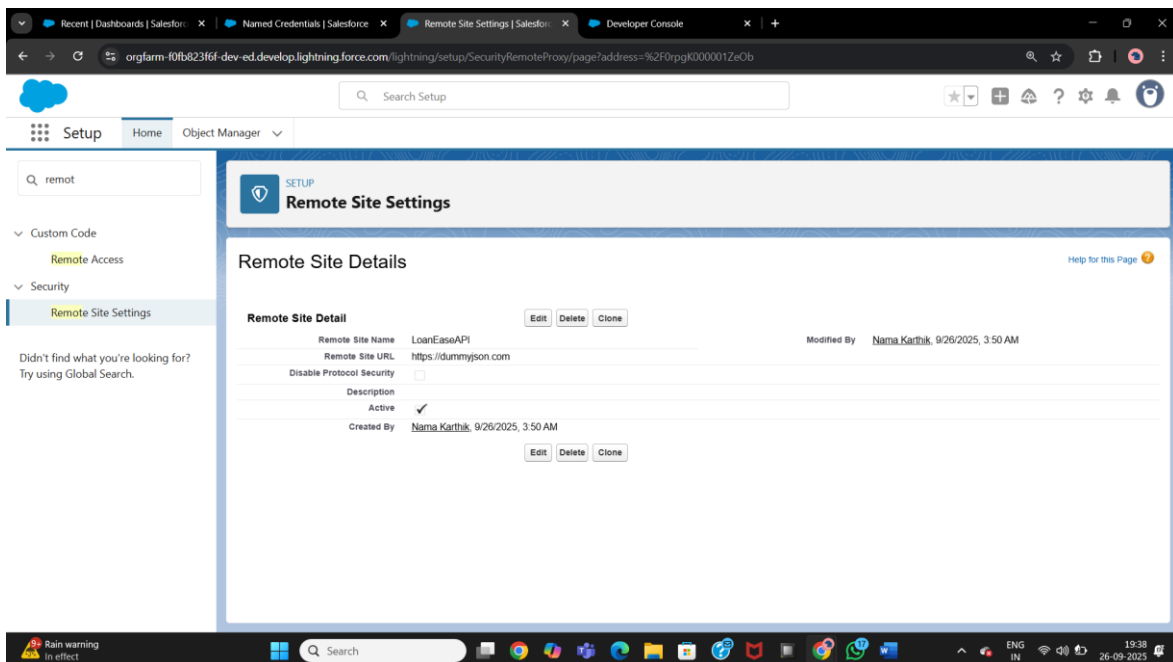
The screenshot shows the Salesforce Setup page for Permission Sets. The left sidebar has a search bar with 'permi' and a list of categories including Users, with 'Permission Sets' selected. The main content area is titled 'Permission Sets' and shows the 'LoanEase API Permissions' permission set. The 'Permission Set Overview' section shows the API Name 'LoanEase_API_Permissions', Namespace Prefix, Created By 'Nana Karthik', and Last Modified By 'Nana Karthik'. The 'Apps' section lists various permissions including Assigned Apps, Assigned Connected Apps, Object Settings, App Permissions, Apex Class Access, and Visualforce Page Access. The bottom of the screen shows a Windows taskbar with a weather widget (Rain warning in effect) and system clock (19:37 26-09-2025).

API Name	LoanEase_API_Permissions
Namespace Prefix	
Created By	Nana Karthik, 9/26/2025, 3:58 AM
Last Modified By	Nana Karthik, 9/26/2025, 3:58 AM



Remote Site Settings

- Created **Remote Site**: LoanEaseAPI
- URL: https://dummyjson.com
- Active checkbox selected



Custom Objects & Fields

- Created **Loan__c**, **EMI__c**, **Payment__c**, **API_Call_Log__c** objects.
- Added fields based on project requirements:
- **Loan__c Fields**: Customer_Name__c, Loan_Number__c, Loan_Type__c, Loan_Amount__c, Interest_Rate__c, Start_Date__c, End_Date__c, Tenure__c, Status__c, API_Loan_Id__c
- **EMI__c Fields**: EMI_Amount__c, EMI_Due_Date__c, Installement_Number__c, Loan__c (lookup), Status__c, API_EMI_Id__c
- **Payment__c Fields**: Payment_Name__c, Payment_Date__c, Payment_Mode__c,

Amount_Paid__c, Status__c, EMI__c (lookup), Loan__c (lookup),
API_Payment_Id__c

- **API_Call_Log__c Fields:** API_Endpoint__c, Status_Code__c, Response_Body__c, Error_Message__c

The screenshot shows the Salesforce Setup interface for the 'API Call Log' object. The left sidebar contains navigation links: Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Restriction Rules, and Scoping Rules. The main area displays the 'Fields & Relationships' section with 8 items, sorted by Field Label. The fields are listed in a table:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
API Call Log Name	Name	Text(80)		✓
API Endpoint	API_Endpoint__c	Text(255)		
Created By	CreatedById	Lookup(User)		
Error Message	Error_Message__c	Long Text Area(32768)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Response Body	Response_Body__c	Long Text Area(32768)		
Status Code	Status_Code__c	Number(18, 0)		

Apex Class Implementation

- Created **LoanEaseAPIService** class.
- Features implemented:
 - Bulk fetch for **Loan, EMI, Payment** data via REST API.
 - Deserialization of JSON response into Apex wrapper classes.
 - Insert records into Salesforce objects.
 - Log API call results in **API_Call_Log__c**.
 - Publish **Platform Event** Loan_Fetched__e after inserting Loan__c records.

The screenshot shows the Salesforce Developer Console with the Apex code for the **LoanEaseAPIService** class. The code is as follows:

```
142 Payment_Date__c = p.paymentDate,
143 Payment_Mode__c = p.paymentMode,
144 Amount_Paid__c = p.amountPaid,
145 Status__c = p.status,
146 EMI__c = [SELECT Id FROM Emi__c WHERE API_EMI_Id__c = :p.emiId LIMIT 1].Id,
147 API_Payment_Id__c = p.id
148 );
149 insert pay;
150 } else {
151     logApiCall('Payment', 'LoanEase_API/payments/' + paymentId, res.getStatusCode(), res.getBody(), null);
152 }
153 } catch(Exception e) {
154     logApiCall('Payment', 'LoanEase_API/payments/' + paymentId, 0, null, e.getMessage());
155 }
156 }
157 }
158 private static void logApiCall(String type, String endpoint, Integer statusCode, String responseBody, String errorMessage) {
159     API_Call_Log__c log = new API_Call_Log__c();
160     log.API_Endpoint__c = endpoint;
```

The bottom of the console shows a table of logs:

User	Application	Operation	Time	Status	Read	Size
Nama Karthik	Unknown	/services/data/v64.0/tooling/executeA...	9/26/2025, 7:07:54 PM	Success		42.49 KB
Nama Karthik	Unknown	/services/data/v64.0/tooling/executeA...	9/26/2025, 7:02:51 PM	Success		23.92 KB
Nama Karthik	Unknown	/services/data/v64.0/tooling/executeA...	9/26/2025, 6:45:28 PM	Success		12.06 KB
Nama Karthik	Unknown	/services/data/v64.0/tooling/executeA...	9/26/2025, 6:17:13 PM	Success	Unread	5.13 KB
Nama Karthik	Browser	/setup/build/editApexClass.apexp	9/26/2025, 6:15:15 PM	Success	Unread	374 bytes
Nama Karthik	Browser	/setup/build/editApexClass.apexp	9/26/2025, 6:15:04 PM	Success	Unread	1.36 KB

Platform Event

- Created **Platform Event**: Loan_Fetched__e.
- Custom Fields: Loan_Number__c, Customer_Name__c, Status__c
- High Volume and Publish Immediately settings enabled
- Published after inserting Loan__c records to notify downstream processes LoanRecordDisplay: Displays comprehensive list and details of Loan records using wire service for reactive data fetching from Apex.

The screenshot shows the Salesforce Setup interface for Platform Events. The left sidebar contains navigation links for Setup, Home, Object Manager, and a search bar. The main content area is titled 'Platform Events' and shows details for the 'Loan Fetched' event. The event is defined with a singular label 'Loan Fetched', plural label 'Loan_Fetcheds', object name 'Loan_Fetched', API name 'Loan_Fetched__e', event type 'High Volume', and publish behavior 'Publish Immediately'. The event is created by 'Nama Karthik' on 9/26/2025 at 6:27 AM. Below the event details, there are two tables: 'Standard Fields' and 'Custom Fields & Relationships'.

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)		
	Reply ID	ReplyId	External Lookup		

Action	Field Label	API Name	Data Type	Indexed	Controlling Field	Modified By
Edit Del	Customer Name	Customer_Name__c	Text(80)			Nama Karthik, 9/26/2025, 6:30 AM
Edit Del	Loan Number	Loan_Number__c	Text(80)			Nama Karthik, 9/26/2025, 6:29 AM
Edit Del	Status	Status__c	Text(80)			Nama Karthik, 9/26/2025, 6:30 AM

Callouts & Testing

- Callouts tested using **dummy API** <https://dummyjson.com>.
- Verified:
 - Loan__c, EMI__c, Payment__c records created correctly.
 - Platform Event Loan_Fetched__e published.
 - API_Call_Log__c captured errors or responses.

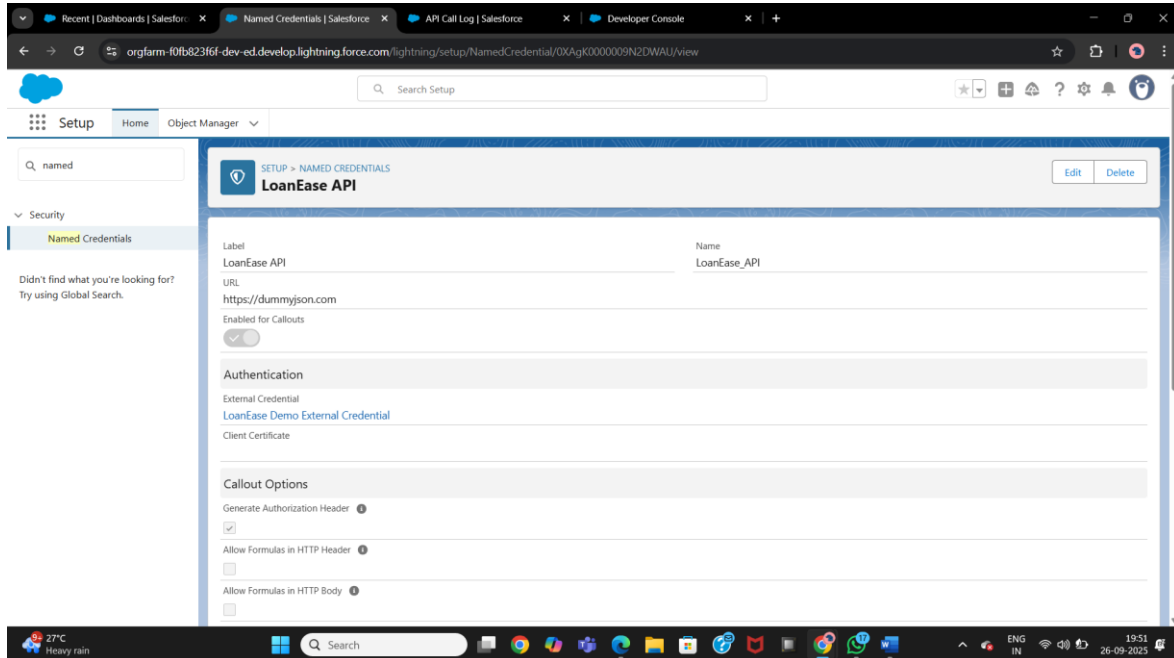
The screenshot shows the Salesforce Setup interface for the 'API Call Log' object. The left sidebar contains navigation links for Setup, Home, Object Manager, and a search bar. The main content area is titled 'API Call Log' and shows details for the object. The object is defined with a singular label 'API Call Log', plural label 'API Call Logs', and API name 'API_Call_Log__c'. The object is created by 'Nama Karthik' on 9/26/2025 at 6:27 AM. Below the object details, there are two tables: 'Standard Fields' and 'Custom Fields & Relationships'.

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Edit Del	Loan Number	Loan_Number__c	Text(80)			Nama Karthik, 9/26/2025, 6:29 AM
Edit Del	Status	Status__c	Text(80)			Nama Karthik, 9/26/2025, 6:30 AM

Security & Authentication

- OAuth / authentication managed automatically via **External Credential + Named Credential**.
- No credentials stored in Apex code.
- Secure API access ensured.



Optional / Future Enhancements

- Change Data Capture (track updates to Loan, EMI, Payment objects).
- Salesforce Connect (for live external data integration).
- External Services / SOAP integration.
- API usage monitoring and bulk optimization.