

# CRM

## CRM Integrations Study Guide

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### What is CRM?

CRM stands for:

## Customer Relationship Management

A CRM stores customer information and interaction history.

Common CRMs:

- Salesforce
  - Zendesk
  - ServiceNow
  - HubSpot
  - Microsoft Dynamics
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# Why CRM Integrations Matter

CRM integrations allow platforms like Glia to share customer data with business systems.

Example:

Glia ↔ CRM ↔ Banking System

This helps agents see:

- customer profile
- account details
- previous interactions
- open tickets
- case history

## Common CRM Integration Use Cases

Use Case	Description
Customer lookup	Find customer details when interaction starts
Screen pop	Automatically open customer record for agent
Ticket creation	Create case after chat/call
Interaction logging	Save chat/call history in CRM
Status updates	Update ticket or customer journey status
Routing logic	Route customer based on CRM data
Authentication context	Use logged-in user info to identify customer

# Basic CRM Integration Flow

Customer starts chat

↓

Glia receives customer ID

↓

Glia calls CRM API

↓

CRM returns customer data

↓

Agent sees customer profile

## Example CRM API Request

```
GET /api/customers/12345
```

```
Authorization: Bearer token
```

```
Content-Type: application/json
```

Purpose:

Retrieve customer profile from CRM.

## Example CRM API Response

```
{  
  "customerId": "12345",  
  "name": "Cesar Gonzalez",  
  "status": "premium",  
  "openCases": 2  
}
```

# Common Integration Patterns

Pattern	Description
API integration	Systems exchange data using REST APIs
Webhooks	CRM receives event notifications
Embedded widget	Glia embedded inside CRM
Screen pop	Customer record opens automatically
Data sync	Customer data synchronized between systems
SSO	Users authenticate once across systems

## CRM Integration With Webhooks

Example:

```
Chat completed
  ↓
Webhook sent to CRM
  ↓
CRM creates case summary
```

Webhook payload:

```
{
  "event": "chat_completed",
  "customerId": "12345",
  "agent": "agent01",
  "summary": "Customer asked about loan status"
}
```

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# CRM Integration With Screen Pop

Screen pop means:

automatically opening the customer record for the agent

Example:

Incoming interaction → CRM opens customer profile

This improves:

- agent speed
- personalization
- customer experience

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# CRM Integration With Routing

CRM data can influence routing.

Example:

Customer status = VIP



Route to priority queue

Other routing examples:

- language
- account type
- product
- region
- open case severity

# Common CRM Integration Problems

Problem	Likely Cause
Customer not found	Wrong customer ID or CRM record missing
Screen pop not working	Bad URL mapping or missing customer field
Ticket not created	API failure, bad payload, permissions issue
Data not syncing	Webhook failure or field mapping issue
401 Unauthorized	Invalid or expired token
403 Forbidden	Missing CRM permissions
400 Bad Request	Invalid JSON or missing required fields
Slow response	CRM latency or network issue

# CRM Integration Troubleshooting Flow

# Step 1 — Understand the Expected Flow

Ask:

What should happen?  
What actually happened?  
Where does the flow fail?

Example:

Expected: Chat ends → CRM ticket created  
Actual: Chat ends → No ticket appears

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# Step 2 — Identify the Integration Type

Check whether the issue involves:

- REST API
- webhook
- SSO
- screen pop
- embedded widget
- data sync

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# Step 3 — Check Authentication

Validate:

- OAuth token
- bearer token
- API key
- permissions
- scopes

Common errors:

- 401 = authentication problem
  - 403 = permission problem
- 

# Step 4 — Validate API Request

Check:

- endpoint URL
- HTTP method
- headers
- JSON payload
- required fields

Example:

```
POST /api/cases
Authorization: Bearer token
Content-Type: application/json
```

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# Step 5 — Validate Field Mapping

Field mapping means matching data between systems.

Example:

Glia Field	CRM Field
customerId	Contact ID
email	Email
interactionId	Case Reference
agentName	Owner
transcript	Case Notes

Common issue:

Glia sends customerId, but CRM expects contactId

## Step 6 — Review Logs

Check:

- API logs
- webhook delivery logs
- CRM logs
- timestamps
- request IDs
- correlation IDs

## Step 7 — Validate Network

Check:

- DNS
- firewall
- proxy
- HTTPS/TLS
- allowlists
- rate limits

# Step 8 — Test With Known Good Data

Use a test customer record.

Example:

```
Customer ID 12345 exists in CRM
```

Then validate:

- lookup works
  - screen pop works
  - ticket creation works
- 

# Step 9 — Escalate With Evidence

Before escalating, collect:

- timestamps
  - request/response examples
  - HTTP response codes
  - screenshots
  - affected users
  - correlation IDs
-

# Common Troubleshooting Scenarios

## Scenario 1 — CRM Customer Lookup Fails

Possible causes:

- wrong customer ID
- missing record
- incorrect endpoint
- expired token

Troubleshooting:

- verify customer exists in CRM
  - test API call manually
  - check 401/403/404 errors
  - validate field mapping
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## Scenario 2 — Ticket Creation Fails

Possible causes:

- missing required fields
- invalid JSON
- insufficient permissions
- CRM API outage

Troubleshooting:

- validate JSON payload
- check required fields
- review API response

- confirm CRM service status
- 

## Scenario 3 — Screen Pop Not Opening

Possible causes:

- browser pop-up blocked
- bad URL template
- missing customer identifier
- CRM permissions issue

Troubleshooting:

- validate URL format
  - confirm customer ID is passed
  - test manually in browser
  - check agent permissions
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## Scenario 4 — Webhook Not Updating CRM

Possible causes:

- webhook URL incorrect
- endpoint unavailable
- authentication failure
- TLS certificate issue

Troubleshooting:

- validate webhook delivery logs
  - check endpoint availability
  - verify HTTPS/TLS
  - inspect response codes
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# Scenario 5 — Slow CRM Response

Possible causes:

- CRM latency
- network delay
- rate limiting
- overloaded integration middleware

Troubleshooting:

- check API response time
- review rate limits
- validate middleware health
- compare with other requests

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## Good Interview Answer

### “How would you troubleshoot a CRM integration issue?”

“I would first confirm the expected workflow and identify where the failure occurs, whether it is API, webhook, SSO, screen pop, or data sync related. Then I would validate authentication, request payloads, field mapping, response codes, logs, network connectivity, and test with known good records before escalating with clear evidence.”

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## Key Terms To Know

Term	Meaning
CRM	Customer relationship management system

Term	Meaning
Screen pop	Auto-open customer record
Field mapping	Matching fields between systems
API integration	Systems exchanging data through APIs
Webhook	Event notification to another system
SSO	Single sign-on
Data sync	Keeping systems updated
Correlation ID	Tracking ID for troubleshooting
Rate limit	Maximum allowed API calls
Middleware	System between two applications

# Easy Memory Trick

CRM integration = customer context + automation

It helps agents know:

Who is the customer?  
What happened before?  
What should happen next?

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