

## Phase 1: Problem Understanding & Industry Analysis

### Define the Business Problem

The primary challenge is managing the growing network of Electric Vehicle (EV) charging stations efficiently. This includes:

- **Station Management:** Tracking location, status (operational, maintenance), and technical specifications of charging stations.
- **Slot Availability:** Real-time monitoring and display of individual charging slot availability within each station.
- **Bookings:** Allowing customers to find available slots, reserve charging times, and manage their bookings.
- **Payments:** Securely processing payments for charging sessions based on duration or energy consumed.
- **User Management:** Handling different user types (Customers, Station Managers, Admins) and their specific needs.
- **Reporting:** Generating insights on station utilization, revenue, and customer behavior.

### Identify Stakeholders

- **Admin:** Oversees the entire system, manages users, configurations, and overall platform health. Needs full access and reporting capabilities.
- **Customer:** The end-user who searches for stations, books slots, manages their vehicle information, makes payments, and potentially provides feedback. Needs a simple, intuitive interface.
- **Station Manager:** Responsible for one or more charging stations. Needs to monitor slot status, view bookings for their station(s), manage local issues, and potentially oversee maintenance schedules.
- **Technician:** Handles maintenance and repairs. Needs access to station/slot technical details and maintenance schedules/cases.

## Map the Business Process Flow

1. **Customer Search/Discovery:** Customer uses an app/website to find nearby stations and check slot availability.
2. **Booking:** Customer selects a station, slot, and time, then confirms the booking.
3. **Slot Allocation:** The system marks the chosen slot as 'Reserved' or 'Occupied' for the booked time.
4. **Charging Session:** Customer arrives, authenticates (if needed), and starts the charging session. System monitors duration/energy.
5. **Session End & Payment Calculation:** Charging stops. System calculates the cost based on predefined rates.
6. **Payment Processing:** Customer pays via integrated payment gateway (or pre-paid balance). System records the transaction.
7. **Slot Update:** System marks the slot as 'Available' again.
8. **(Optional) Feedback:** Customer provides a rating or feedback on the experience.

## Industry Analysis

- **EV Charging Ecosystem:** The market is rapidly expanding with government incentives and growing EV adoption. Key players include hardware manufacturers, network operators (like ours), EV manufacturers, and utility companies. Interoperability and standardization (e.g., charging connectors, payment protocols) are major trends.
- **Competitors (India Example):**
  - **Tata Power EZ Charge:** Large network, focuses on public charging infrastructure across various location types. Often partners with businesses and municipalities. Offers app-based booking and payment.

- **ChargeGrid (Magenta):** Provides charging solutions for residential, public, and fleet segments. Focuses on technology and integrated hardware/software solutions.
- **Ather Grid:** Primarily supports Ather electric scooters but is expanding. Known for its fast-charging network and user-friendly app.
- **Statiq:** A growing network aggregator providing access to multiple charging providers through one app.
- **Key Differentiators:** Potential areas for our CRM to add value include superior reliability tracking, dynamic pricing models, seamless booking experience, integrations with fleet management, and advanced analytics for station owners.

## **AppExchange References**

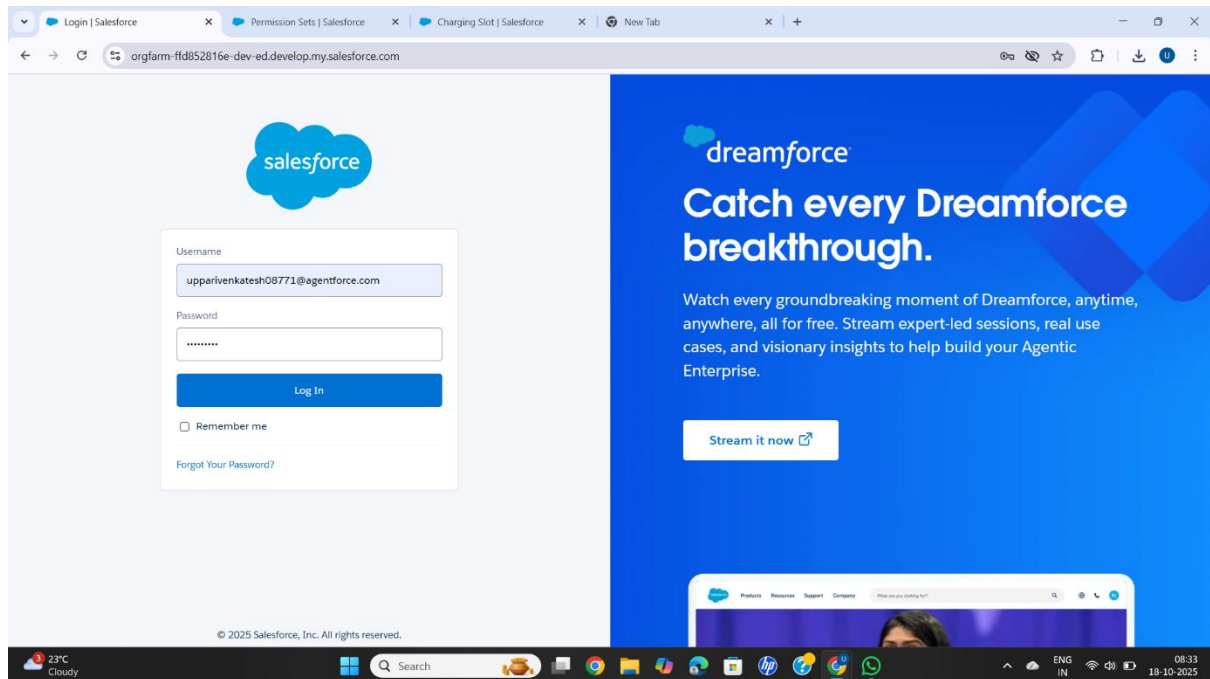
While dedicated EV Charging CRMs might be niche, functionalities can be drawn from related AppExchange apps:

- **Field Service Management Apps:** (e.g., Salesforce Field Service, ServiceMax) - Useful for managing technician dispatch, maintenance schedules, and asset tracking (stations/slots).
- **Booking/Scheduling Apps:** (e.g., Appointment Scheduler tools) - Provide inspiration for calendar views, resource allocation, and booking confirmations.
- **Subscription Billing/Payment Apps:** (e.g., Chargebee, Zuora, Stripe Connector) - Offer robust solutions for managing recurring payments, different pricing models, and payment gateway integration.

## Phase 2: Org Setup & Configuration

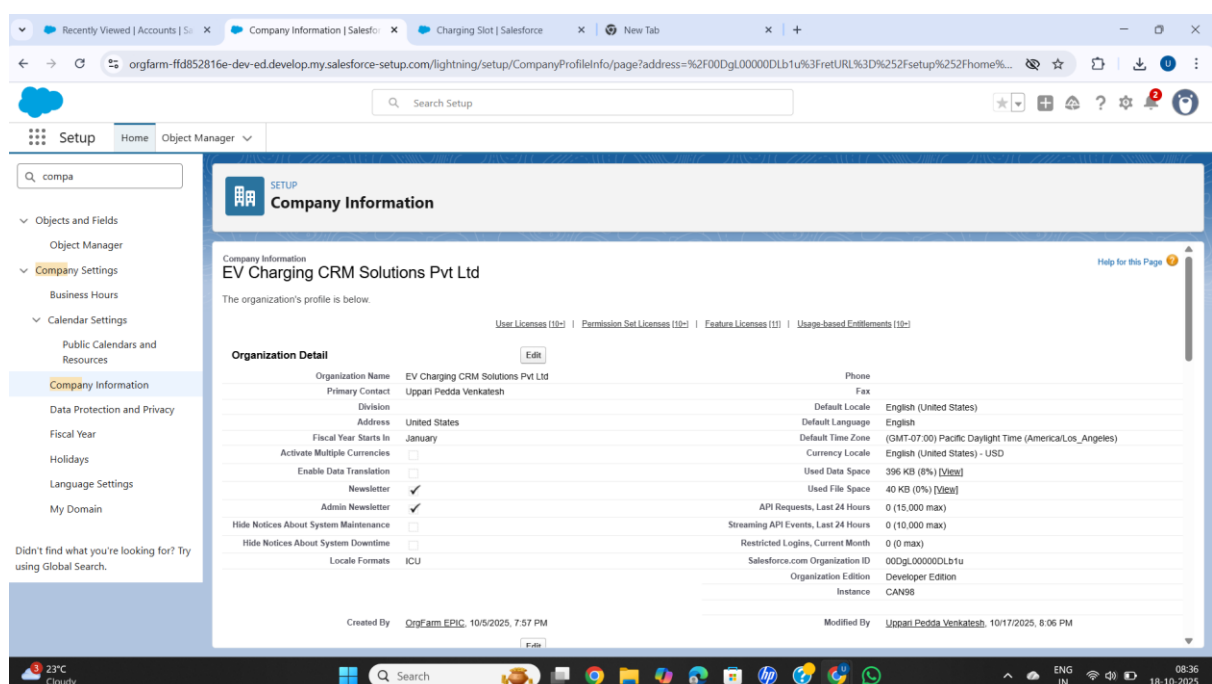
### Document Your Salesforce Org Setup

- **Edition Used:** Developer Edition

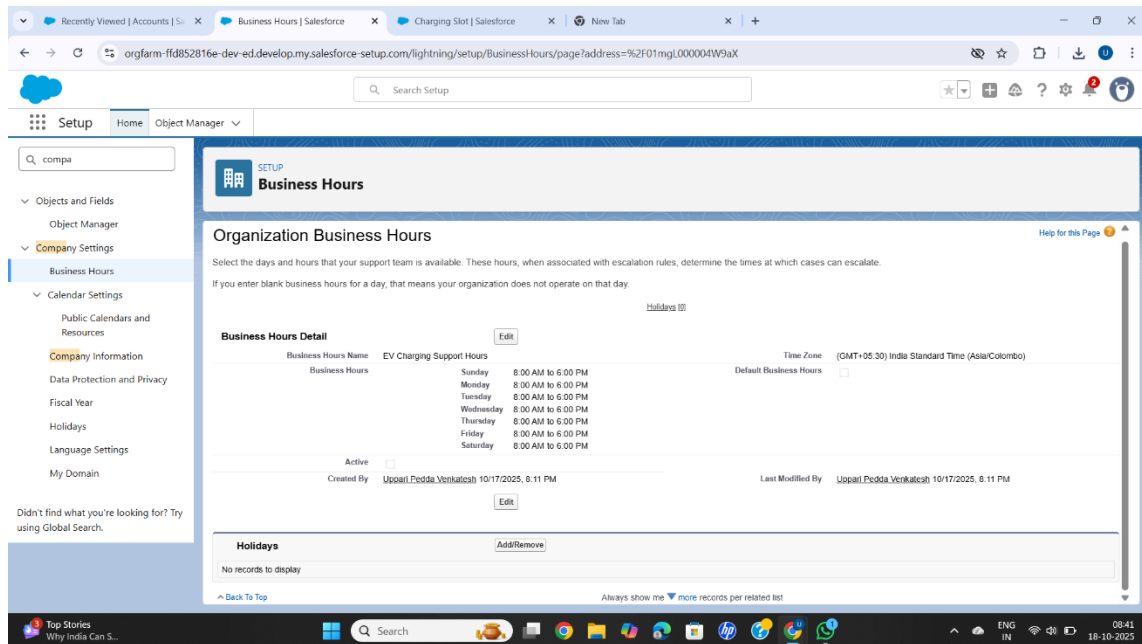


### Company Profile & Business Hours

- **Company Information:** Basic company details (Name, Address, Primary Contact) configured. Time zone set appropriately for operations



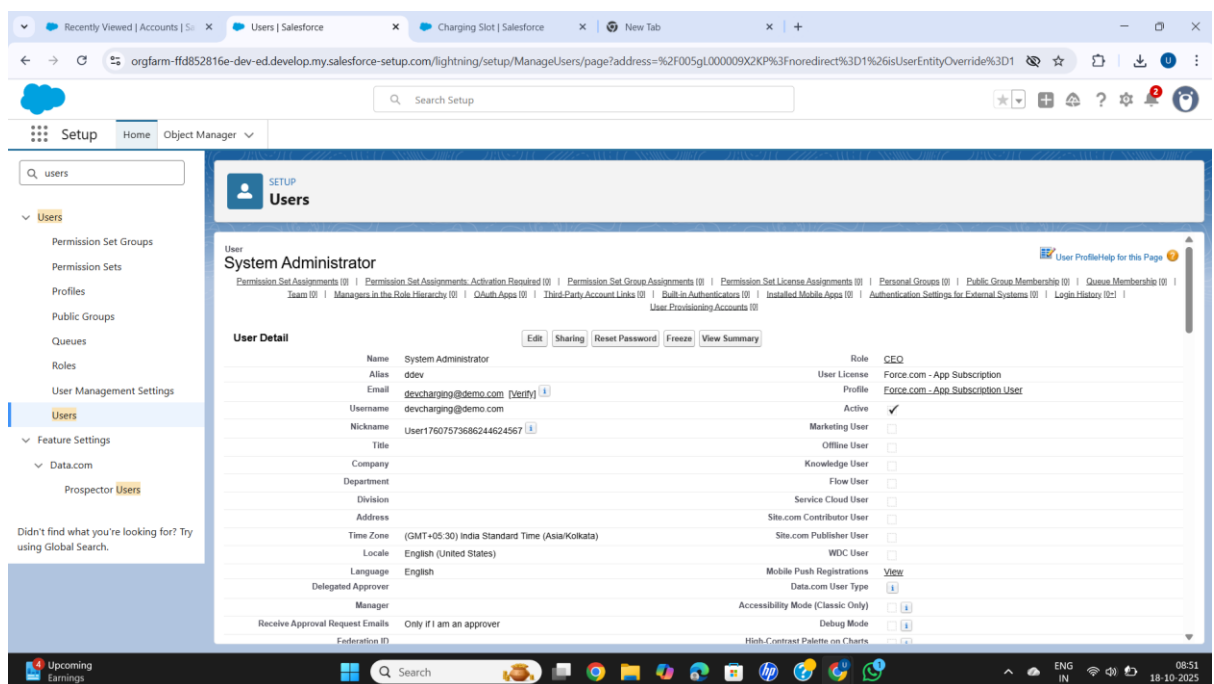
- **Business Hours:** Default business hours set (e.g., 9:00 AM to 6:00 PM, Monday-Friday, IST) for support/case management purposes. Specific station operating hours might be managed differently.



## User Creation :

Standard users created to represent key stakeholder roles:

- **System Administrator:** Full access user for configuration and development.



- **Station Manager:** Represents a Station Manager or Operations Manager profile

The screenshot shows the Salesforce Setup interface with the 'Users' section selected. The 'Station Manager' user profile is displayed. The user details are as follows:

User Detail		Role
Name	Station Manager	Station Manager
Alias	smana	User License
Email	managerfor@gmail.com [Verify]	Force.com - App Subscription
Username	managerfor@gmail.com	Force.com - App Subscription User
Nickname	User1760757225019536291	Active
Title		<input checked="" type="checkbox"/>
Company		Marketing User
Department		<input type="checkbox"/>
Division		Offline User
Address		<input type="checkbox"/>
Time Zone	(GMT+05:30) India Standard Time (Asia/Kolkata)	Knowledge User
Locale	English (United States)	<input type="checkbox"/>
Language	English	Flow User
Delegated Approver		<input type="checkbox"/>
Manager		Service Cloud User
Receive Approval Request Emails	Only if I am an approver	<input type="checkbox"/>
Federation ID		Site.com Contributor User
		<input type="checkbox"/>
		Site.com Publisher User
		<input type="checkbox"/>
		WDC User
		<input type="checkbox"/>
		Mobile Push Registrations
		<input type="checkbox"/>
		Data.com User Type
		<input type="checkbox"/>
		Accessibility Mode (Classic Only)
		<input type="checkbox"/>
		Debug Mode
		<input type="checkbox"/>
		High Contrast Palette on Charts
		<input type="checkbox"/>

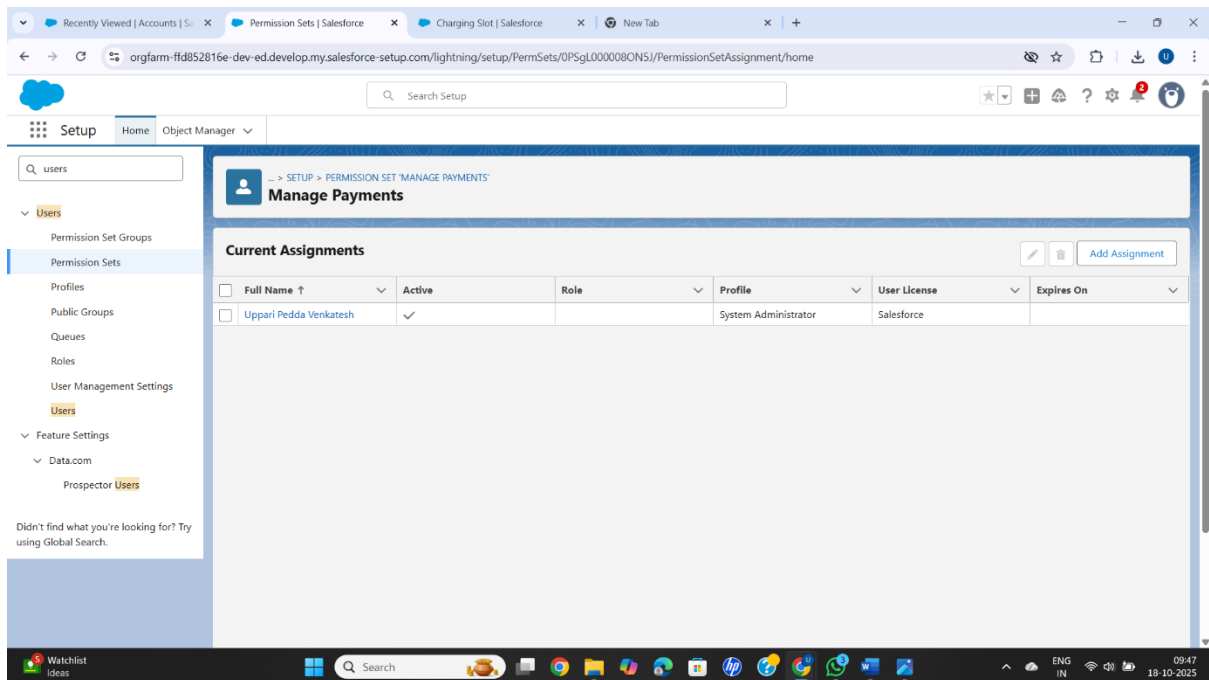
- **Customer Support :** Represents a standard user profile focused on Case management and potentially basic Booking assistance

The screenshot shows the Salesforce Setup interface with the 'Customer Support' user profile displayed. The user details are as follows:

User Detail		Role
Name	Customer Support	Customer Support - International
Alias	csupp	User License
Email	customfor@gmail.com [Verify]	Einstein Agent
Username	customfor@gmail.com	Einstein Agent User
Nickname	User17607578147322585598	Active
Title		<input checked="" type="checkbox"/>
Company		Marketing User
Department		<input type="checkbox"/>
Division		Offline User
Address		<input type="checkbox"/>
Time Zone	(GMT+05:30) India Standard Time (Asia/Kolkata)	Knowledge User
Locale	English (United States)	<input type="checkbox"/>
Language	English	Flow User
Delegated Approver		<input type="checkbox"/>
Manager		Service Cloud User
Receive Approval Request Emails	Only if I am an approver	<input type="checkbox"/>
Federation ID		Site.com Contributor User
		<input type="checkbox"/>
		Site.com Publisher User
		<input type="checkbox"/>
		WDC User
		<input type="checkbox"/>
		Mobile Push Registrations
		<input type="checkbox"/>
		Data.com User Type
		<input type="checkbox"/>
		Accessibility Mode (Classic Only)
		<input type="checkbox"/>
		Debug Mode
		<input type="checkbox"/>
		High Contrast Palette on Charts
		<input type="checkbox"/>

## Permission Sets:

Created Permission Sets for additional access:

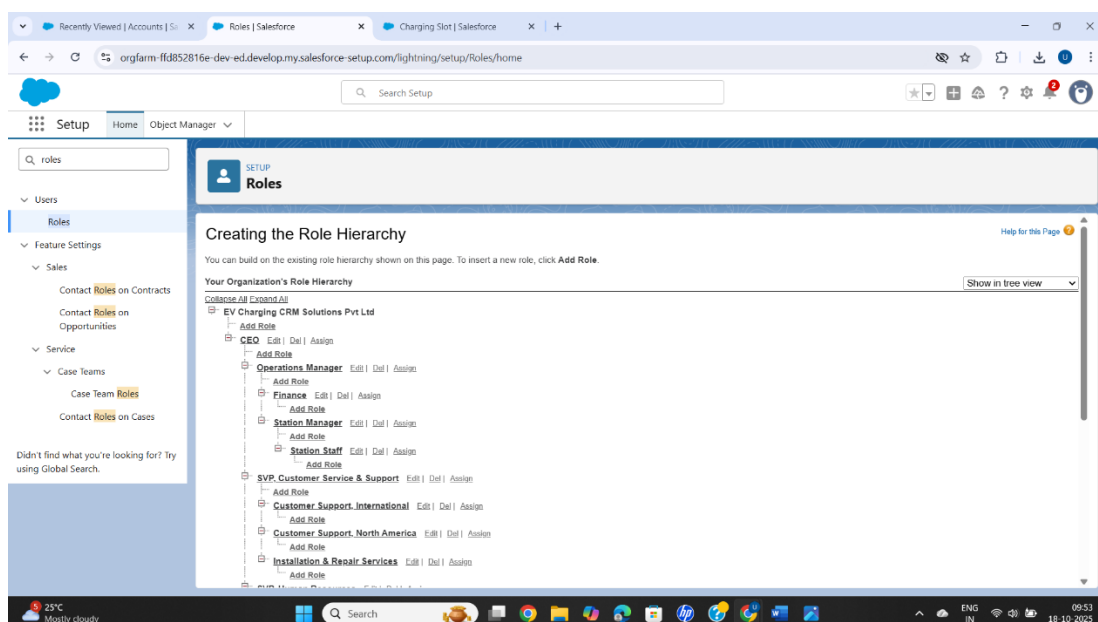


The screenshot shows the Salesforce Setup interface for the 'Manage Payments' permission set. The left sidebar contains a search bar with 'users' and a list of navigation items including Users, Permission Set Groups, Permission Sets, Profiles, Public Groups, Queues, Roles, User Management Settings, Feature Settings, and Data.com. The main content area is titled 'Manage Payments' and displays a table of 'Current Assignments'. The table has columns for checkboxes, Full Name, Active status, Role, Profile, User License, and Expires On. One user, 'Uppari Pedda Venkatesh', is listed as active with the role of 'System Administrator' and a 'Salesforce' user license. An 'Add Assignment' button is located in the top right corner of the table.

	Full Name ↑	Active	Role	Profile	User License	Expires On
<input type="checkbox"/>	Uppari Pedda Venkatesh	✓		System Administrator	Salesforce	

## Roles:

- Defined Role Hierarchy:
  - CEO
  - Operation Manager
  - Station Manager
  - Station Staff



The screenshot shows the Salesforce Setup interface for the 'Roles' page. The left sidebar contains a search bar with 'roles' and a list of navigation items including Users, Roles, Feature Settings, Sales, and Service. The main content area is titled 'Roles' and displays a tree view of the role hierarchy. The hierarchy starts with 'EV Charging CRM Solutions Pvt Ltd' at the top, followed by 'CEO', 'Operations Manager', 'Finance', 'Station Manager', 'Station Staff', 'SVP, Customer Service & Support', 'Customer Support, International', 'Customer Support, North America', and 'Installation & Repair Services'. Each role in the hierarchy has an 'Add Role' button next to it. The page also includes a 'Show in tree view' dropdown and a 'Help for this Page' link.

