Solution Architecture

Date	25 June 2025
Team ID	LTVIP2025TMID31361
Project Name	Lease Management

Solution Architecture is a high-level design that outlines how the different components of a system (like applications, databases, users, and external systems) work together to solve a specific business problem.

In your case, the problem is managing leases manually, and the solution is a Salesforce-based automated lease management system.

It's importance:

- Ensures all components work smoothly together.
- Helps stakeholders visualize the system.
- Supports planning, scalability, and risk management.
- Guides developers and admins during implementation.

Key Elements of a Solution Architecture

1. User Layer (Frontend):

- The interface that end users (like tenants or property managers) interact with.
- o In your project: Salesforce UI, Mobile app.

2. Application Layer (Logic):

- Core business logic that performs tasks like creating leases, sending notifications, approvals, etc.
- o In Salesforce: Apex, Flows, Process Builder, Triggers.

3. Data Layer:

- Where all data is stored and managed.
- In your case: Salesforce custom objects like Tenant, Property, Lease, Payment.

4. Integration Layer:

- Connects your system with other services or apps.
- Examples: Email alerts, Payment gateways, Calendar integration.

5. Security Layer:

- o Controls who can access what.
- Uses roles, profiles, permission sets in Salesforce.

6. Reporting Layer:

o Provides reports, dashboards, and analytics for decision-making.

7. Deployment & Maintenance:

 Tools and environments used to build, test, and deploy changes (like sandbox, production org, change sets).

Lease Management Solution Architecture

User Layer (Frentend)



Property Manager Tenant



Admin

Application Layer (Salesforce Core Components)

- Custom Objects
 (Tenant: Property, LeaseAgreement, Payment, Maintenance Request)
- Lightning Components (UI pages for creating/viewiewing proporties, tenants, leases, etc.)
- Apex Classes / Triggers (Custom losic for data validatorion, automation, and custom workflows)
- Process Builder / Flows
 (Automating actions like sending notifications, approvats or staruses)
- Approval Processes
 Lease approval flow (manager → admin ¬l confirmation)

Data Layer (Database / Storage)

- Salesforce Standard & Arusteo Custom Objects (stores structured data, tenant into lease detaits 'payment history, etc.)
- Attachments
 Flics related to lease agreements, ID proofs, etc.)

Integration Layer

- Email (Notification on lease status, teminders to tenants)
- External Payment Gateway (optional)

For rent collection (e.g. Razorpay. Stripe via REST API)

- Calendar Integration
 For setting reminders on lease
 renewsis:
- Reports & Dashboards
 For Admins to monito' lease statuses, revenue, etc.)

Security & Access Control

- Profiles & Permission Sets (for role-based access)
- Recorg-Level Sharing (for multi-tenant use)
- Audit Trails (to log key user actions

Deployment & Maintenance

- Sandbox Environments (for testing)
- Change Sets / Metadata API (for deployment)
- Scheduled Backups using Salesforce. Data Eport

Deployment &Access Control