

Enhancing Customer Care at Sri Tel Ltd

Exploring Middleware Architectures for Improved Customer Experience and Service Management

Sri Tel Ltd - Sri-Care Solution



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Customer Care Enhancement

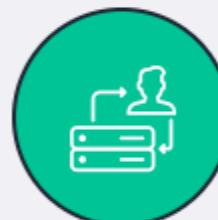
Introduction to Sri-Care

Enhancing Customer Care at Sri Tel Ltd with Middleware Solutions



01 Objective of Sri-Care

The initiative aims to enhance STL's customer care through middleware architectures, improving service accessibility.



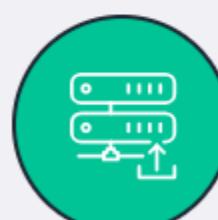
02 Addressing Service Challenges

STL faces significant challenges, including service disconnections and bill payment delays, hindering customer satisfaction.



03 Seamless Service Management

Sri-Care will enable customers to manage services online, minimizing manual processes and improving efficiency.



04 User Empowerment

The platform empowers users with self-care options for bill payments, service activation, and customer support.



Proposed Solution Architecture

A Comprehensive Overview of the Middleware Architecture for STL Services



Web Portal and Mobile Apps

Client interfaces for easy access to telecom services via web and mobile platforms.

Middleware Layer

Handles RESTful API requests, ensuring smooth communication between clients and backend systems.

Integration with Provisioning System

Facilitates service activation and deactivation through API calls for seamless user experience.

Payment Gateway Integration

Securely processes online payments, enhancing user convenience and trust in the system.

Notification Service

Alerts users via push notifications and SMS for important updates and service changes.

Planned Chat Service

Future functionality to provide real-time customer support, improving user satisfaction.



Technical Stack Overview

Technical Architecture Details

Overview of the technology stack and integration components for Sri-Care platform



Architecture Comparison

Exploring Alternative Architectures

Comparative Analysis of Microservices and SOA with RESTful Middleware

Microservices Architecture

Each core functionality (billing, service activation) is a separate microservice.

Offers scalability to handle increased loads efficiently.

Fault isolation allows issues in one service to not affect others.

Requires complex management and orchestration of multiple services.

Service-Oriented Architecture (SOA) with ESB

Centralized communication through an Enterprise Service Bus (ESB).

Easier integration with legacy systems and existing services.

More control over data flow and service orchestration.

Can become a bottleneck, potentially hindering scalability.



Architectural Patterns

Key Patterns in Middleware Architecture for Customer Care Solutions



01 Client-Server Architecture

Web and mobile apps function as clients, communicating with the backend services through REST APIs for efficient data handling.



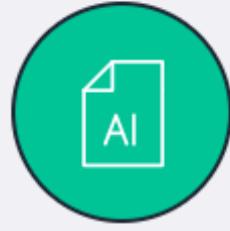
02 Service-Oriented Architecture (SOA)

Core functionalities like billing and payments are exposed as services, allowing for modular integration and reuse.



03 Layered Architecture

This structure separates the user interface, business logic, and data management, enhancing maintainability and scalability.



04 Publish-Subscribe Pattern

Utilizes RabbitMQ/Kafka for the notification service, enabling efficient message distribution based on user subscriptions.



05 API Gateway Pattern

A centralized gateway streamlines request handling and ensures secure communication between clients and backend services.

Customer Self-Service

Key Functionalities of Sri-Care

Empowering Customers with Self-Service Options for Telecom Management

- 01 Service Activation/Deactivation**
Easily manage services like international roaming and data top-ups via API.
- 02 Bill Viewing and Payment**
Securely view and pay bills online using credit/debit cards through a robust payment gateway.
- 03 Alerts and Notifications**
Receive real-time push alerts for bill due dates and service updates using a notification system.



Security Measures

Security Considerations

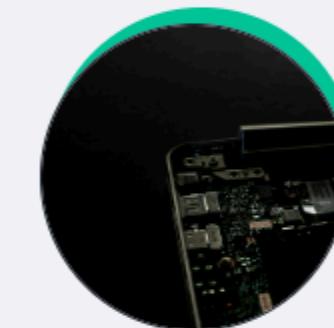
Key Security Measures for Protecting Customer Data and Transactions



01

Encryption: SSL/TLS

Ensures that all communication between clients and servers is encrypted, protecting data from breaches.



02

Authentication: OAuth 2.0

Facilitates secure login and token-based access for sensitive operations, enhancing user security.



03

Payment Security: PCI-DSS Compliance

Integrates a secure payment gateway that adheres to PCI-DSS standards, safeguarding user payment information.



04

Recovery: Token-based Password Recovery

Implements a secure, token-based password recovery system, ensuring customer privacy without manual intervention.



THANK YOU!

