

# Developing ServiceNow System API for Composite Operations



## Client Overview

The client is a major manufacturing company specializing in Consumer Goods, Marketing & Advertising, Retail, FMCG, Beauty & Wellbeing with a presence in over 190 countries. They have recently implemented ServiceNow as their enterprise service management platform to streamline IT services, HR, and other internal operations. The client's IT team is now tasked with enhancing their ServiceNow system to support composite operations through custom APIs.

## Requirements and Challenges

This project aims to develop custom APIs in ServiceNow to enable composite operations, where multiple service requests or data transactions can be orchestrated as a single atomic transaction. This will improve efficiency, reduce manual effort, and enhance automation within the client's ServiceNow instance.

### 1. Transactional Integrity:

Ensuring that all operations within a composite request succeed or fail together.

### 2. API Design and Integration:

Designing APIs that handle complex workflows involving multiple ServiceNow modules (e.g., Incident Management, Change Management, Asset Management).

### 3. Error Handling and Rollback:

Implementing error handling mechanisms and rollback procedures in case of failures during composite operations.

## At a Glance

### Industry

Manufacturing

### Challenge

The challenge involved developing custom ServiceNow APIs to orchestrate multiple service requests or data transactions into a single, atomic operation, ensuring transactional integrity, robust API design for complex workflows, and implementing error handling with rollback procedures.

### Key highlights

The client benefited from:

- Enhanced data integrity and consistency across ServiceNow modules.
- Faster project completion times and reduced costs.
- Improved brand loyalty.

## Prowess Provided Solutions and Services

Prowess delivered innovative solutions tailored to meet the client's integration needs:

### • Trigger Identification:

Automated systems that monitor various sources, such as customer emails and application logs, for specific events or conditions.

### • Event Recognition:

When a predefined trigger is detected (ex., a customer submits a support request, a system error occurs, or a certain threshold is met), the system identifies it as a potential case.

### • Case Creation:

Upon trigger detection, relevant information is collected automatically to populate a new case. This may include customer details, issue descriptions, timestamps, and associated data.

- **Confirmation and Notification:**

Once the case is created and assigned, automated notifications can be sent to stakeholders, informing them of the new case and necessary actions.

## Methodology & Process followed

### Project Scope:

- Develop a set of custom APIs within ServiceNow to support composite operations, allowing the execution of multiple service requests or data transactions as a single unit.
- Implement robust error handling and transactional integrity mechanisms to maintain data consistency and reliability.
- Integrate these APIs with existing ServiceNow modules and workflows to automate and streamline complex business processes.

### Implementation Phases:

#### 1. Requirement Gathering:

- Work closely with stakeholders (IT, HR, Operations) to identify key composite operation scenarios.
- Define the scope and sequence of operations for each composite request.

#### 2. API Design and Development:

- Design RESTful APIs using ServiceNow's scripting capabilities (e.g., Scripted REST APIs).
- Implement logic to orchestrate multiple operations within a single API request.
- Ensure atomicity and consistency by leveraging ServiceNow transactions.

#### 3. Error Handling and Rollback:

- Develop error handling routines to identify and handle failures gracefully.
- Implement rollback procedures to revert changes in case of partial failures.

#### 4. Integration and Testing:

- Integrate custom APIs with existing ServiceNow workflows and modules.
- Conduct comprehensive testing to validate the functionality of composite operations.
- Test scenarios include successful execution, partial failures, and edge cases.

## Value Proposition

### Results:

Our integration solutions seamlessly blended MuleSoft and ServiceNow functionalities, revolutionizing team collaboration and streamlining workflow processes. Here's how we delivered tangible business value:

#### 1. Enhanced Collaboration Efficiency:

By integrating MuleSoft and ServiceNow, we've unlocked a **38%** improvement in team collaboration efficiency. This allows for smooth data flow and communication across the entire business ecosystem.

#### 2. Real-Time Case Management Automation:

Our automated systems monitor, ensuring that all stakeholders are promptly informed about evolving customer needs. This automation resulted in **27%** reduction in response times, enhancing customer satisfaction.

#### 3. Enhanced Customer Experience:

By leveraging these integration capabilities, we've unlocked **43%** more services that can deliver a more seamless and personalized customer experience. Integrations enable real-time data access, improving responsiveness and service quality.

## Business Outcomes:

The client benefited from:

- Enhanced data integrity and consistency across ServiceNow modules.
- Faster project completion times and reduced costs.
- Improved brand loyalty.

Developing custom APIs for composite operations in ServiceNow enabled the client to leverage the full potential of their enterprise service management platform, driving efficiency, automation, and operational excellence across the organization.

This project underscores the importance of tailored solutions to meet specific business needs and optimize workflows within ServiceNow.

For further information, please contact:

**Prowess Software Services**

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