

Project Design Phase

Solution Architecture

Date	1 November 2025
Team ID	NM2025TMID04148
Project Name	Laptop Request Catalog Item
Maximum Marks	4 Marks

Solution Architecture:

Goals of the Architecture:

- Automate the laptop request process through a self-service catalog.
- Reduce manual effort and eliminate dependency on emails or forms.
- Improve approval tracking, transparency, and request fulfillment speed.
- Enhance user satisfaction and IT efficiency.

Key Components:

- **Catalog Item:** “Laptop Request” created under the Hardware category in ServiceNow.
- **Variables:** Laptop Model, Justification, Accessories Details.
- **UI Policy:** Controls visibility of “Accessories Details” based on user input.
- **UI Action:** Custom “Reset Form” button using script (g_form.clearForm() logic).
- **Workflow:** Automates approval and fulfillment steps.
- **Update Set:** Captures all configurations for migration to other instances.

Development Phases:

- **Requirement Gathering:** Identify pain points in the manual laptop request process.
- **Catalog Item Creation:** Create the “Laptop Request” item and add variables.
- **UI Policy Configuration:** Add rules for dynamic field behavior.
- **UI Action Implementation:** Add reset button with scripting logic.
- **Workflow Setup:** Automate approvals and notifications.
- **Testing & Validation:** Verify form visibility, field logic, and submission flow.
- **Migration:** Export update set to move solution to other instances.

Solution Architecture Description:

The Laptop Request Catalog Item architecture is designed to simplify and automate the process of laptop procurement in an organization using the ServiceNow platform.

It integrates catalog items, variables, UI policies, UI actions, and workflows to create a seamless self-service experience for employees. When a user requests a laptop, dynamic form logic ensures that only relevant fields appear based on selections, reducing confusion and errors.

The workflow engine manages approvals automatically, ensuring transparency and timely action. The Update Set functionality tracks all customizations, enabling smooth deployment across ServiceNow environments.

This architecture enhances productivity, accuracy, and visibility within IT service management operations.

Solution Architecture Diagram:

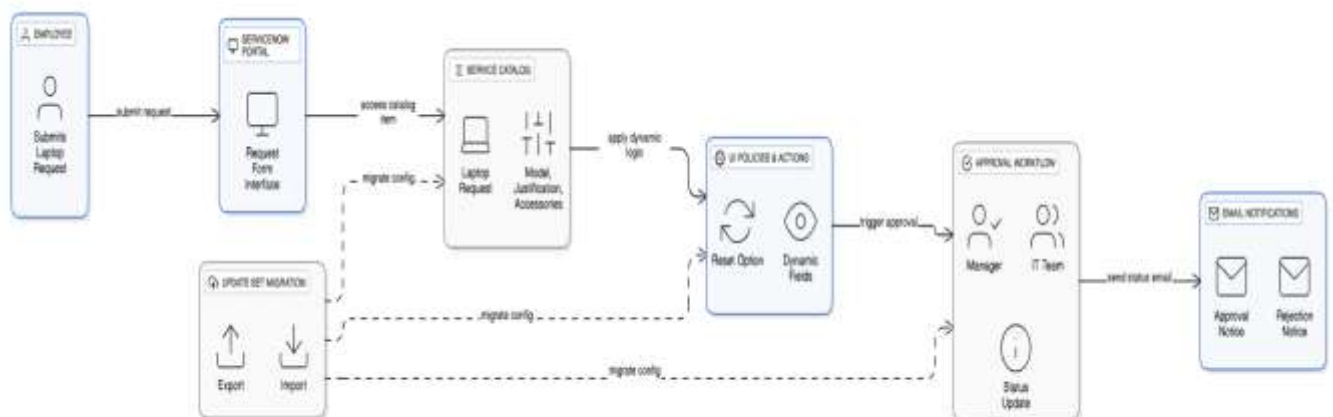


Figure 1: Architecture and data flow of the Laptop Request Catalog Item automation system

Reference: <https://aws.amazon.com/blogs/industries/voice-applications-in-clinical-research-powered-by-ai-on-aws-part-1-architecture-and-design-considerations/>