

## **Project Design Phase-II Technology Stack (Architecture & Stack)**

Date	7 November 2025
Team ID	NM2025TMID09184
Project Name	Laptop Request Catalog Item
Maximum Marks	4 Marks

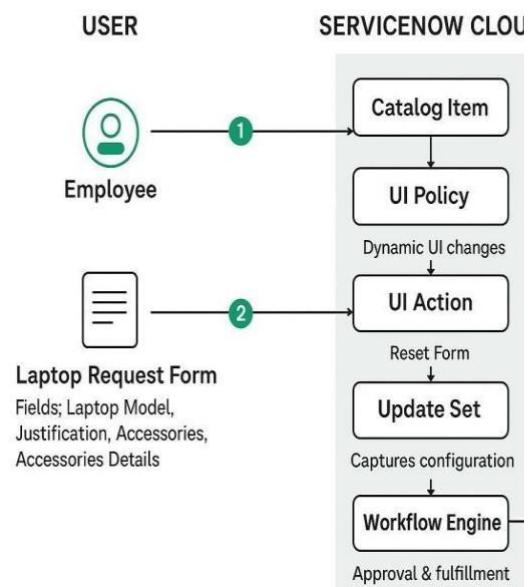
### **Technical Architecture:**

The deliverable includes the architectural diagram and supporting details in Table 1 and Table 2.

This architecture represents how the Laptop Request Catalog Item in ServiceNow enables employees to request laptops efficiently through an automated workflow.

**Example:** Laptop Request Catalog Item

## Technical Architecture - Laptop Request (ServiceNow)



### Guidelines:

- Include all ServiceNow processes (catalog item creation, UI policy, UI action, update set).
- Show infrastructure separation — Local Instance and Cloud Instance.
- Indicate external interfaces (email approvals, notifications).
- Highlight data storage in the ServiceNow database.
- Represent automation scripts for dynamic form behavior.
- Show deployment flow of update sets between instances.

**Table 1: Components & Technologies**

S.No	Component	Description	Technology
1	User Interface	Employees request laptops via Service Catalog form.	ServiceNow Service Catalog UI
2	Application Logic - 1	Catalog item creation with defined variables.	ServiceNow Catalog Item Form

3	Application Logic - 2	Dynamic behavior to show/hide fields based on user input.	Catalog UI Policy
4	Application Logic - 3	“Reset Form” functionality implemented using client script.	ServiceNow UI Action
5	Database	Stores catalog item configurations and variable values.	ServiceNow Tables
6	Cloud Database	Data stored and managed securely in ServiceNow cloud.	ServiceNow Cloud Database
7	File Storage	Update set and configuration stored in ServiceNow instance.	System Update Sets
8	External API (Optional)	Integration for hardware asset inventory (if required).	REST API Integration
9	Update Migration	Migrate update set across instances.	XML Export/Import
10	Infrastructure (Server/Cloud)	Entire system hosted and managed on ServiceNow SaaS.	ServiceNow Cloud (SaaS)

**Table-2: Application Characteristics:**

S.No	Characteristics	Description	Technology
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- 1 Open-Source Not applicable, as ServiceNow is a proprietary low-code platform. – Frameworks
- 2 Security Role-based access ensures only authorized users can create, Role-Based Access Control Implementations approve, or manage laptop requests. (RBAC), ACLs
- 3 Scalable Architecture Built on ServiceNow's SaaS model, allowing easy scalability ServiceNow Cloud Architecture across departments and instances.
- 4 Availability Always accessible via the ServiceNow cloud, ensuring 24/7 Load-balanced ServiceNow Instances  
uptime and redundancy.
- 5 Performance Efficient performance through optimized catalog forms, client GlideRecord, Service Catalog scripts, and indexed data tables. Optimization