

Phase 4: Data Migration, Testing & Security

Data Integrity

Description

The Data Integrity phase focuses on ensuring that all information related to the Software Installation Request is accurate, complete, secure, and consistently maintained throughout the request lifecycle. This phase validates mandatory field enforcement, automated data population, approval controls, and end-to-end workflow behavior to prevent incomplete or unauthorized submissions.

Activity 1: Mandatory Field Enforcement

Objective

To ensure that critical software request details are mandatory and cannot be bypassed during submission.

Actions Taken

- Key fields such as:
 - **Software Name**
 - **Version (if required)**
 - **Business Justification**
 - **Urgency Level**
- were configured as **mandatory**.
- Client-side validation was implemented using **Catalog Variable settings and UI behavior**.

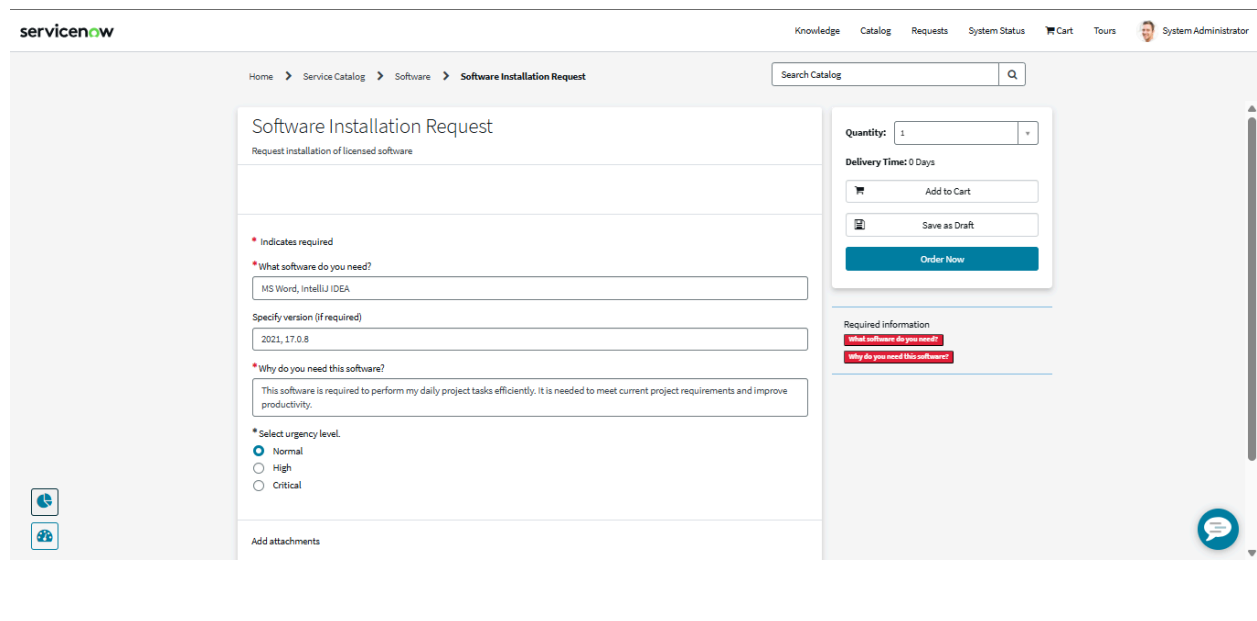
- Server-side enforcement was ensured through **workflow-driven approval checks**, preventing incomplete records from progressing.

Outcome

- Users were unable to submit requests with missing mandatory information.
- Incomplete or invalid requests were blocked at the submission stage, ensuring clean data entry.

Screenshot Evidence (Optional)

Insert screenshot showing mandatory fields marked with red asterisks () on the Service Catalog form.*



Activity 2: Automatic Population of Values

Objective

To reduce manual input errors by automatically populating user-related data.

Actions Taken

- The **Requested For** field was auto-populated with the logged-in user.

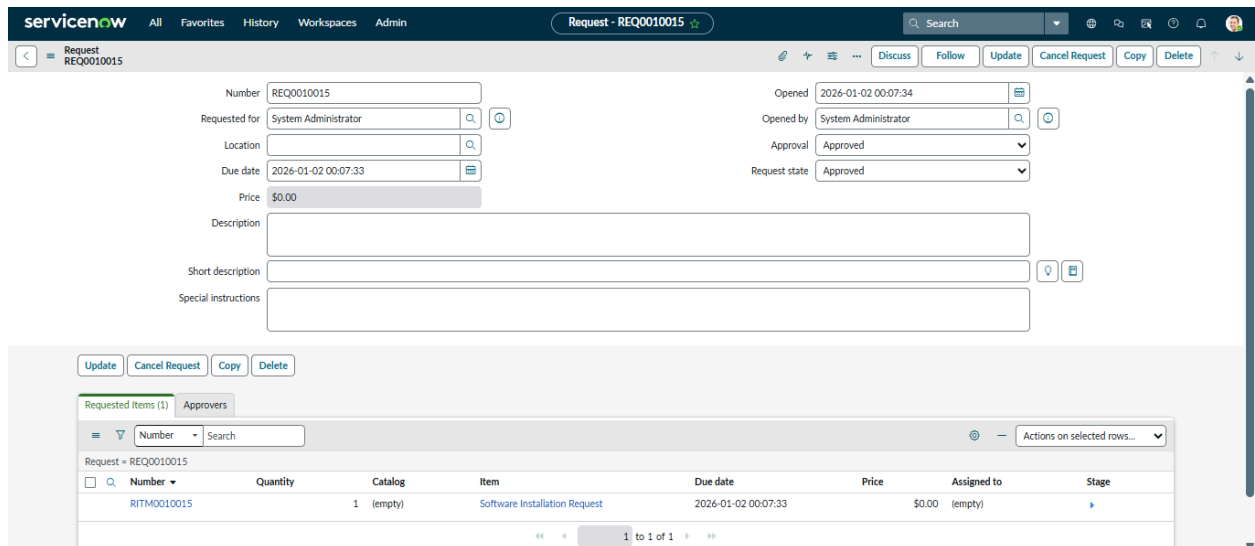
- User-related attributes such as **Department** and **Location** were dynamically pulled from the user profile.
- Default values were applied where applicable to maintain consistency.

Outcome

- Reduced manual effort for users.
- Ensured consistency and accuracy of user-related data across records.

Screenshot Evidence (Optional)

Insert screenshot showing auto-filled Requested For and related user fields in the Request or RITM record.



The screenshot displays the ServiceNow interface for a Request record (REQ0010015). The form includes several fields, some of which are auto-filled. The 'Requested for' field is populated with 'System Administrator', and the 'Opened by' field is also populated with 'System Administrator'. Other fields like 'Number', 'Due date', 'Price', 'Description', 'Short description', and 'Special instructions' are present but empty. The 'Approval' and 'Request state' dropdowns are set to 'Approved'. Below the form, there is a table titled 'Requested Items (1)' with one row containing details for a 'Software Installation Request'.

Number	Quantity	Catalog	Item	Due date	Price	Assigned to	Stage
RITM0010015	1	(empty)	Software Installation Request	2026-01-02 00:07:33	\$0.00	(empty)	

The screenshot shows a ServiceNow interface for a 'Requested Item' with ID RITM0010015. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Workspaces', and 'Admin'. The breadcrumb trail is 'Requested Item - RITM0010015'. The form is divided into several sections:

- Header:** Includes 'Requested Item - RITM0010015' and action buttons: 'Discuss', 'Follow', 'Update', 'Delete'.
- Form Fields:**
 - Number: RITM0010015
 - Item: Software Installation Request
 - Request: REQ0010015
 - Requested for: System Administrator
 - Due date: 2026-01-02 00:07:33
 - Configuration item: (empty)
 - Watch list: (empty)
 - Opened: 2026-01-02 00:07:33
 - Opened by: System Administrator
 - Stage: Request Approved
 - State: Open
 - Quantity: 1
 - Estimated delivery: (empty)
 - Backordered: ☐
 - Order Guide: (empty)
- Variables:**
 - * What software do you need?: intelliJ
 - Specify version (if required): 2021
 - * Why do you need this software?: Eclipse working space
 - * Select urgency level:
 - ☒ Normal
 - ☐ High
 - ☐ Critical

Activity 3: Testing & Validation

Objective

To validate the complete lifecycle of a Software Installation Request.

Steps Performed

- Submitted a Software Installation Request from the Service Catalog.
- Verified approval flow execution.
- Confirmed catalog task creation upon approval.
- Completed the catalog task and verified request closure.

Observations

- Requests followed the correct lifecycle:
Submission → Approval → Catalog Task Creation → Fulfillment → Closure

- Approval and task records were properly linked.

Screenshot Evidence (Optional)

Insert screenshot showing Flow Execution Details with successful completion.

Workflow Studio

Software Request Workflow

Flow Designer Test

EXECUTION DETAILS

Software Request Workflow

Test Run - Completed

Open flow

Open context record

Hide Action Details

State

Start time

FLOW STATISTICS

Run as: System Administrator

Open flow logs

Completed

2026-01-02 00:07:57

356ms

TRIGGER

Catalog Item Requested

Session Information

VARIABLE NAME	VALUE
Calling Source	Flow Designer Test

Configuration Details

VARIABLE NAME	RUNTIME VALUE	CONFIGURATION	TYPE
Run Flow In			choice

Trigger Output

VARIABLE NAME	RUNTIME VALUE	TYPE
Request Item	RTTM0010015 g	reference
Run Start Date/Time	2026-01-02 00:07:56	glide_date_time
Run Start Time UTC	2026-01-02 08:07:56	glide_date_time
Table Name	sc_req_item	table_name

ACTIONS

1

Ask For Approval

Core Action

Completed

2026-01-02 00:07:57

240ms

Configuration Details

VARIABLE NAME	RUNTIME VALUE	CONFIGURATION	TYPE
Record	RTTM0010015 g	Trigger → Requested Item	Document ID
Table	sc_req_item	sc_req_item	Table Name
Approval Reason	Approval required for software installation request	Approval required for software installation request	String
Approval Field	approval	approval	Field Name
Journal Field	comments	comments	Field Name
Rules	ApprovesAnyUJ6816f79cc0a016401c5a33be04be441	ApprovesAnyUJ System Administrator	Approval Rules
Due Date	("action":"none","date_type":"actual","date":{"ID"},"duration":"1","duration_type":"days","schedule":{"...")	("action":"none","date_type":"actual","date":{"ID"},"duration":"1","duration_type":"days","schedule":{"...")	Schedule Date/Time

Output Data

VARIABLE NAME	RUNTIME VALUE	CONFIGURATION	TYPE
Action Status	("Action Status":{"code":"0","message":"Success"})		Object
Approval State	approved	state	Choice
Don't Treat as Error	true	true	True/False

No Logs

2

If Request Approved

Flow Logic

Evaluated - True

2026-01-02 00:09:05

112ms

Configuration Details

VARIABLE NAME	RUNTIME VALUE	CONFIGURATION	TYPE
Condition Label	Request Approved	Request Approved	String
Condition	approved=approved	1 - Ask For Ap... Approval St...=approved	String

No Logs

3

Create Catalog Task

Core Action

Completed

2026-01-02 00:09:05

112ms

Configuration Details

VARIABLE NAME	RUNTIME VALUE	CONFIGURATION	TYPE
Table Name	sc_task	sc_task	Table Name
Requested Item	RITM0010015	Trigger → Requested Item	Reference
Short Description	Software installation task	Software installation task	String
Fields	assignment_group=31f2f16f83c63210a67095d0deaa3c9 description=Install the requested software as per ...	assignment_group={"display":"Software Support","value":"31f2f16f83c63210a67095d0deaa3c9","sys_id":"..."} description=Install the requested software as per ...	Template Value
Wait	true	1	True/False
Template Catalog Item			Reference
Catalog Variables			Slush Bucket

Output Data

VARIABLE NAME	RUNTIME VALUE	CONFIGURATION	TYPE
Action Status	{ "Action Status": { "code": 0, "message": "Success" } }		Object
Catalog Task	SCTASK0010025	task	Document ID
Don't Treat as Error	true	true	True/False

No Logs

4

End

Flow Logic

Completed

2026-01-02 00:11:11

0ms

<div>Workflow Studio</div> <div>Software Request Workflow</div> <div>Software Request Workflow</div> <div>EXECUTION DETAILS</div> <div>Software Request Workflow</div> <div>Test Run - Completed</div> <div>Open flow</div> <div>Open context record</div>						
<div>Show Action Details</div> <div>Run as: System Administrator</div> <div>Open flow logs</div> <div>State</div> <div>Start time</div> <div>356ms</div>						
<div>FLOW STATISTICS</div> <div>TRIGGER</div> <div>Catalog Item Requested</div> <div>ACTIONS</div> <div>1 Ask For Approval</div> <div>2 If Request Approved</div> <div>3 Create Catalog Task</div> <div>4 End</div> <div>5 Else</div> <div>6 Update Record</div> <div>7 End</div> <div>ERROR HANDLER</div>						
			Core Action	Completed	2026-01-02 00:07:57	240ms
			Flow Logic	Evaluated - True	2026-01-02 00:09:05	112ms
			Core Action	Completed	2026-01-02 00:09:05	112ms
			Flow Logic	Completed	2026-01-02 00:11:11	0ms
			Flow Logic	Not Run		
			Core Action	Not Run		
			Flow Logic	Not Run		

Activity 4: Data Reliability Across Tables

Objective

To ensure data consistency across backend ServiceNow tables.

Tables Verified

- sc_request (Request – REQ)
- sc_req_item (Requested Item – RITM)

- **sc_task (Catalog Task – SCTASK)**

Observations

- All records were created automatically and linked correctly.
- Catalog variables were preserved and visible at the backend.
- Approval states were accurately reflected in RITM and REQ records.
- Task states transitioned correctly during fulfillment.

Outcome

These validations ensured strong data reliability, preventing unauthorized access, incomplete submissions, or inconsistent record states.

 **Screenshot Evidence (Optional)**

Insert screenshot showing linked REQ → RITM → SCTASK records.

servicenow

All Favorites History Workspaces Admin

Request - REQ0010015

Search

Discuss Follow Update Cancel Request Copy Delete

Request REQ0010015

Number REQ0010015

Requested for System Administrator

Location

Due date 2026-01-02 00:07:33

Price \$0.00

Description

Short description

Special instructions

Opened 2026-01-02 00:07:34

Opened by System Administrator

Approval Approved

Request state Approved

Update Cancel Request Copy Delete

Requested Items (1) Approvers

Number Search

Actions on selected rows...

Request = REQ0010015

Number	Quantity	Catalog	Item	Due date	Price	Assigned to	Stage
RITM0010015	1	(empty)	Software Installation Request	2026-01-02 00:07:33	\$0.00	(empty)	

1 to 1 of 1

servicenow

AllFavoritesHistoryWorkspacesAdmin

Request - REQ0010015

Search

Requested Item
RITM0010015

NumberRITM0010015

ItemSoftware Installation Request

RequestREQ0010015

Requested forSystem Administrator

Due date2026-01-02 00:07:33

Configuration item

Watch list

Opened2026-01-02 00:07:33

Opened bySystem Administrator

StageRequest Approved

StateOpen

Quantity1

Estimated delivery

Backordered

Order Guide

Variables

* What software do you need?

intelliJ

Specify version (if required)

2021

* Why do you need this software?

Eclipse working space

* Select urgency level.

☒ Normal

☐ High

☐ Critical

UpdateDelete

Related Links

Flow Context

Catalog Tasks (2)Approvers (2)Group approvals

Request item = RITM0010015

Number	Assignment group	Assigned to	Short description	Actual start	Actual end	Order
SCTASK0010026	Software Support	(empty)	Software installation task	2026-01-02 00:09:06	(empty)	
SCTASK0010025	Software Support	(empty)	Software installation task	2026-01-02 00:09:05	2026-01-02 00:11:11	

1 to 2 of 2

Catalog Task
SCTASK0010025

FollowUpdateDelete

NumberSCTASK0010025

Assigned to

Assignment groupSoftware Support

Configuration item

Active

Short descriptionSoftware installation task

DescriptionInstall the requested software as per approved request.

Work notes

Post

ApprovalNot Yet Requested

Priority4 - Low

StateClosed Complete

Request itemRITM0010015

Requested forSystem Administrator

Activities: 2

System Administrator

StateClosed Complete was Open

Field changes • 2026-01-02 00:11:11

System Administrator

Impact3 - Low

Opened bySystem Administrator

Priority4 - Low

StateOpen

Field changes • 2026-01-02 00:09:05

UpdateDelete

Affected CIsApproversGroup approvals

Configuration item

Summary Table

Area	Actions Taken
Data Handling	Catalog variables mapped and validated across core ServiceNow tables
Access Control	Role-based approvals and conditional logic using Flow Designer
QA Testing	End-to-end testing including request, approval, task creation, and logs
Data Integrity	Mandatory validations, auto-fill logic, and approval state enforcement

Outcome

The Data Integrity phase successfully ensured that all Software Installation Requests maintained high data quality, security, and reliability. Mandatory validations, automated field population, and workflow-driven controls worked together to ensure accurate tracking and seamless fulfillment across all related ServiceNow records.