

REQUIREMENT ANALYSIS PHASE

Project Title: Optimizing User, Group, and Role Management with Access Control and Workflows

1 Introduction

This phase identifies and defines both **functional** and **non-functional** requirements necessary to build a secure, automated task management workflow in ServiceNow. The system involves two key users — **Alice (Project Manager)** and **Bob (Team Member)** — managed by the **Admin**, who configures all roles, ACLs, and workflows.

2 Functional Requirements

ID	Requirement	Description	Actor
FR1	Create User Roles	System must support two primary roles — Project Manager and Team Member.	Admin
FR2	Create Tasks	Alice should be able to create and assign tasks to Bob.	Alice
FR3	Update Tasks	Bob must be able to update only the <i>Status</i> and <i>Comments</i> fields of assigned tasks.	Bob
FR4	Apply ACLs	System should restrict Bob's access to only allowed fields.	Admin
FR5	Automate Workflow	The system should automatically trigger Flow Designer when a record is created/updated.	System
FR6	Request Approval	Once the task is marked “Completed,” an approval request should go to Alice.	System
FR7	Approve Tasks	Alice should be able to approve or reject task completion requests.	Alice
FR8	Display Approvals	Approved/rejected requests must appear in “My Approvals.”	System
FR9	Store Data	Task records, user data, and approval logs must be stored in ServiceNow tables.	System

3 Non-Functional Requirements

ID	Category	Description

NFR1	Platform	The solution will be built and tested on ServiceNow Personal Developer Instance (PDI).
NFR2	Security	All data access controlled by ACLs (Access Control Lists) ensuring least privilege.
NFR3	Reliability	Approval and update processes must execute consistently and record all status changes.
NFR4	Usability	Role-based interfaces to reduce user confusion and ensure easy task tracking.
NFR5	Maintainability	Configurations should be easily modifiable (roles, tables, and flows).
NFR6	Performance	Workflow execution and approvals should occur in under 3 seconds per event.
NFR7	Auditability	Each update or approval must be logged automatically by the platform.

4 System Actors

Actor	Description
Admin	Configures instance, creates users, roles, tables, ACLs, and workflows.
Alice (Project Manager)	Creates tasks, assigns to Bob, and approves completed work.
Bob (Team Member)	Updates assigned tasks (status/comments) and requests approvals.
ServiceNow System	Automates updates and approvals via Flow Designer.

5 Requirement Matrix (Insert Screenshot)

Suggested screenshot:

Workflow Studio | Task Table Automation | Flow

Task Table Automation

Trigger

Task Table 2 Created where (Status is In progress; Assigned To is Bob p; Comment is feedback)

Trigger - Record Created

Condition All of these conditions must be met

- Status is In progress
- Assigned To is Bob p
- Comment is feedback

New Criteria

Advanced Options

Data

- Flow Variables
- Trigger - Record Created
- Task Table 2 Record
- Task Table 2 Table
- Run Start Time UTC
- Run Start Date/Time
- 1 - Update Record
- Task Table 2 Record
- Task Table 2 Table
- Action Status
- 2 - Ask For Approval
- Approval State
- Action Status

Status: Published | Application: Global

1 Update Task Table 2 Record

Action Update Record

* Record Trigger -> Task Table 2 R...

* Table Task Table 2 [u_task_table_2]

* Fields Status Completed

+ Add field value

Trigger - Record Created

1 - Update Record

Task Table 2 Record

Task Table 2 Table

Run Start Time UTC

Run Start Date/Time

2 Ask For Approval

+ Add an Action, Flow Logic, or Subflow

Error Handling

javascript:void(0)

Data

- Flow Variables
- Trigger - Record Created
- Task Table 2 Record
- Task Table 2 Table
- Action Status
- 1 - Update Record
- Task Table 2 Record
- Task Table 2 Table
- Action Status
- 2 - Ask For Approval
- Approval State
- Action Status

Workflow Studio

Task Table Automation Flow

Task Table Automation

Active

2 Ask For Approval

Action: Ask For Approval

* Record: Trigger - R... > Task Table 2 R... X

Table: Task Table 2 [u_task_table_2]

Approval Field: Status

Journal Field: Comment

* Rules:

- Approve When: Anyone approves
- When: alice p X

Due Date: None

Data

Trigger - Record Created

- Task Table 2 Record
- Task Table 2 Table
- Run Start Time UTC
- Run Start Date/Time

1 - Update Record

- Task Table 2 Record
- Task Table 2 Table
- Action Status

2 - Ask For Approval

- Approval State
- Action Status

Add another OR rule set

Delete Cancel Done

Status: Published | Application: Global

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User access management | chatgpt - Yahoo Search Re... | Web app or ServiceNow | ServiceNow Developers | Task Table 2s | ServiceNow | Task Table Automation | W...

servicenow All Favorites History Process Mining Workspace Task Table 2s

All

Assigned To	Comment	Description	Due Date	Priority	Status	Task Name
(empty)	Due date passed auto Approved task				requested	
(empty)	alice p approved the task.		2025-10-31		approved	
Bob p	alice p approved the task.	FINAL TEST	2025-10-31		approved	FINAL
Bob p	alice p approved the task.	esting approval workflow"	2025-10-31		approved	Test Approval Flow
Bob p	alice p approved the task.	AGAIN FINAL TEST	2025-10-31		approved	AGAIN FINAL
Bob P	alice p approved the task.	hello	2025-10-31		approved	Frotend
Bob p	alice p approved the task.	NOTHING	2025-10-31		approved	NAAN MUTHALVAN
Bob p	alice p approved the task.	HELLO	2025-10-31		approved	HELLO
Bob p	Due date passed auto Approved task	Vanakkam	2025-10-31		requested	Name Find
Bob P	Initial draft assigned to Bob	Create homepage layout for project	2025-10-31		approved	Design UI Layout

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User access management | ServiceNow Developers | Approvals | ServiceNow | Task Table Automation | WI

servicenow All Favorites History Workspaces Approvals

Approvals Created Search Actions on selected rows...

All

State Approver Comments Approval for Created

Requested	alice p	(empty)	2025-10-30 23:29:19
Requested	alice p	(empty)	2025-10-30 23:20:19
Requested	alice p	(empty)	2025-10-30 23:20:19
Approved	alice p	(empty)	2025-10-30 03:18:23
Approved	alice p	(empty)	2025-10-30 03:18:21
Approved	alice p	(empty)	2025-10-30 02:46:26
Approved	alice p	(empty)	2025-10-30 02:46:23
Approved	alice p	(empty)	2025-10-30 02:43:12
Approved	alice p	(empty)	2025-10-30 02:43:03
Approved	alice p	(empty)	2025-10-30 02:42:32
Approved	alice p	(empty)	2025-10-30 02:42:25
Approved	alice p	(empty)	2025-10-30 02:29:24
Approved	alice p	(empty)	2025-10-30 02:29:21
Approved	alice p	(empty)	2025-10-30 02:26:23
Approved	alice p	(empty)	2025-10-30 02:13:10
Approved	alice p	(empty)	2025-10-30 01:59:21
Approved	alice p	(empty)	2025-10-30 00:17:23

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Workflow Studio Task Table Automation Flow

Task Table Automation

Test flow

Run your flow to make sure it has no errors before you activate it. When the test finishes running, check the execution details to see each action's configuration, runtime values, and the log messages for any errors that occurred.

Trigger: Task Table 2 Created where (Status is I)

Actions: Select multiple

- 1 Update Task Table 2 Record
- 2 Ask For Approval

Error Handler: If an error occurs in your flow, the actions you add here will run.

Test flow details:

- * Task Table 2 Record: Select Task Table 2 Rec...
- Run test in background

Flow Variables:

- Trigger - Record Created
- Task Table 2 Record
- Task Table 2 Table
- Run Start Time UTC
- Run Start Date/Time
- 1 - Update Record
- Task Table 2 Record
- Task Table 2 Table
- Action Status
- 2 - Ask For Approval
- Approval State
- Action Status

Status: Published | Application: Global

Workflow Studio | Task Table Automation Flow | Task Table Automation | WI

Task Table Automation

Test flow

Run your flow to make sure it has no errors before you activate it. When the test finishes running, check the execution details to see each action's configuration, runtime values, and the log messages for any errors that occurred.

* Task Table 2 Record

Run test in background (i)

Trigger

- Task Table 2 Created where (Status is I)

ACTIONS Select multiple

- Update Task Table 2 Record (i)
- Ask For Approval (i)

ERROR HANDLER

If an error occurs in your flow, the actions you add here will run.

Status: Published | Application: Global

Trigger - Record Created

- Task Table 2 Record Record
- Task Table 2 Table Table
- Run Start Time UTC Date/Time
- Run Start Date/Time Date/Time

1 - Update Record

- Task Table 2 Record Record
- Task Table 2 Table Table
- Action Status Object

2 - Ask For Approval

- Approval State Choice
- Action Status Object

Workflow Studio | Task Table Automation Flow | Task Table Automation | Flow execution | Task Table Automation | WI

Task Table Automation

EXECUTION DETAILS

Test Run - Waiting (i)

	State	Start time	Duration
Show Action Details			
FLOW STATISTICS	Run as: System Administrator <input type="button" value="Open flow logs"/>	Waiting	2025-10-31 23:31:31
TRIGGER			91ms
Task Table 2 Created	<input type="button" value="Open current record"/>		
ACTIONS			
1 Update Record	Core Action Completed	2025-10-31 23:31:31	17ms
2 Ask For Approval	Core Action Waiting	2025-10-31 23:31:31	74ms
ERROR HANDLER			

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EXECUTION DETAILS **Task Table Automation**

Show Action Details

	State	Start time	Duration	
Run as: System Administrator	Open flow logs	Completed	2025-10-31 23:34:27	69ms

FLOW STATISTICS

TRIGGER

- Task Table 2 Created [Open current record](#)

ACTIONS

Index	Action	Type	Status	Start time	Duration
1	Update Record	Core Action	Completed	2025-10-31 23:34:27	6ms
2	Ask For Approval	Core Action	Completed	2025-10-31 23:34:27	63ms

ERROR HANDLER

- A table showing FR1–FR9 and NFR1–NFR7 mapped to "Test ID" or "Flow Step".
- Example:
 - FR5 → “Flow Trigger: Record Created/Updated”
 - FR6 → “Ask for Approval (Alice)”
 - FR7 → “My Approvals → Approved → Flow Complete”

6 Traceability

Requirement	Implementation Component	Verification
FR1–FR3	User & Role Module	Check users/roles under System Security
FR4	ACL Configuration	Impersonate Bob and validate restricted fields
FR5–FR6	Flow Designer	View execution logs
FR7–FR8	My Approvals Module	Alice's approval visible
FR9	Table Data	u_task_table_2 records persist correctly
NFR2–NFR7	ServiceNow System Logs	Verify via audit and response times

7 Conclusion

The requirement analysis confirms that the system must focus on *role-based task management, secure access, and automated workflows.*

ServiceNow's native ACLs, Flow Designer, and Approval engine fully meet these needs. This foundation ensures accurate task tracking, efficient approvals, and minimal administrative overhead.