



Automate Software License Approvals in ServiceNow – A Step-by-Step Guide

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Introduction:

Manual approval of software license requests can create unnecessary bottlenecks, especially when the same set of requests from trusted user groups repeat frequently. Automating this process through ServiceNow's native approval rules and gating approvals ensures faster delivery, maintains compliance, and reduces workload on approvers. This guide walks beginner to intermediate ServiceNow developers through setting up an auto-approval workflow for software license requests using workflow-based tools—no AI agents required.

Understanding ServiceNow Approval Mechanics:

Key Terms:

- **Approval Rule:** A logic-based rule that defines whether a task or request is approved automatically or goes through a manual approval process.
- **Approval State:** The status of a request, such as Not Yet Requested, Requested, Approved, or Rejected.
- **Gating Approval:** A type of approval that must be fulfilled before a request can proceed. Until it is approved, no notifications or fulfillment tasks are triggered.

How It Works:

When a catalog request is submitted:

- Approval Rules evaluate conditions like user group, requested item, or cost.
- If conditions match and the "Run Rule Before" flag is set, the system can auto-set the approval state.
- Gating approvals are used for high-sensitivity items to delay any action until manual validation is completed.

Creating a Software License Catalog Item:

Step-by-Step:

- 1 Navigate to Service Catalog > Maintain Items.
- 2 Click New to create a new item.
- 3 Configure the basic item details:
 - Name: "Request Visual Studio License"
 - Short Description: "Developer license request for Visual Studio."
 - Category: "Software"
- 4 Add variables to capture user input:
 - Type: Dropdown
 - Question: "Select Version"
 - Choices: 2019, 2022
 - Type: Checkbox
 - Question: "Include Add-ons?"
- 5 Under the Catalogs tab, assign it to the appropriate catalog (e.g., Technical Catalog).
- 6 Save and publish the item.

Tips:

- Add icons and images to improve catalog usability.
- Tag catalog items with "low risk" or "auto-approve" labels internally for reporting.

Creating an Auto-Approval Rule:

Purpose: Allow trusted user groups (e.g., Software Developers) to bypass manual approvals for common software.

- 1 Navigate to Process Automation > Approvals > Approval Rules
- 2 Click New
- 3 Fill in the fields:
 - Name: "Auto-Approve Visual Studio for Devs"
 - Table: `sc_request`
 - Condition:
 - Script or builder logic:
`gs.getUser().isMemberOf('software_developers')`
 - Set State: Approved
 - Run Rule Before: ☒ (must be enabled for auto-approval to trigger before record insert/update)
- 4 Save and activate the rule.

Tips:

- You can apply multiple conditions like department, request type, or cost threshold
- Test with non-production data first

Creating Gating Approvals for Exceptions:

Why Gating Approvals? For costly or sensitive tools (e.g., Adobe CC, SAP Clients), human validation is necessary

- 1 Go to Service Catalog > Maintain Items
- 2 Select a high-value item like "Request Adobe CC"
- 3 Scroll to the Approvers tab and add:
 - Approval Type: Gating Approval
 - Approver: User's Manager (via Reference Field)
- 4 Set approval condition if required (e.g., cost > \$500)
- 4 Save the item

Result: Until the manager approves the request, no fulfillment tasks are created and no notifications are triggered.

Tips:

- Use Dynamic Approvers to route to role-based or location-based approvers
- Use scripted conditions for highly customized logic

Workflow Configuration with Flow Designer

Purpose: Create a visual automation pipeline that reacts to approval state changes and triggers fulfillment.

- 1 Navigate to Flow Designer > New Flow
- 2 Set the trigger:
 - Trigger: When a new catalog request is submitted for "Visual Studio License"
- 4 Add flow actions:
 - Action 1: Get Catalog Request Variables
 - Action 2: If Approval State = Approved
 - Add task: Create Fulfillment Task
 - Send notification: Assigned to Software Admin
 - Action 3: If Approval State = Rejected
 - Log the outcome and send an email to the requester
- 4 Save and test the flow

Tips:

- Add logging actions to help debug flow execution
- Use Subflows to manage reusable approval logic

Testing Your Setup

Test Case 1 – Auto-Approval:

- User: Member of "Software Developers"
- Item: "Request Visual Studio License"
- Expected Result: Auto-approved, task created, fulfillment starts

Test Case 2 – Manual Gating Approval:

- User: Any general employee
- Item: "Request Adobe CC"
- Expected Result: Gating approval request sent to manager; no task until approved

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Tips:

- Use the Impersonate User feature to simulate different scenarios.
- Track approval audit logs under the Approvals tab of the request.

Troubleshooting Tips

Common Issues and Fixes:

- Approval rule doesn't trigger:
- Check if "Run Rule Before" is enabled
- Ensure the table and conditions match exactly
- Check rule order priority (lower order = higher priority)
- Gating approval stalls:
- Ensure the approver is properly resolved
- Use the flow log or workflow context to identify blockers
- Fulfillment task doesn't start:
- Ensure the approval state is changed to Approved
- Check for errors in the Flow Designer log

Best Practices for Scaling

- Use Data Lookups: Dynamically assign approvers based on department, location, or request cost.
- Log Everything: Maintain system logs for all auto-approved requests for auditing.
- Review Periodically: Revisit rules quarterly to adjust for org changes.
- Avoid Over-Automation: Not every item should be auto-approved—balance speed and security.
- Use Tags and Categories: Helps with filtering and analytics later

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