📄 Phase – 2: Backend Development & Configurations

Business Rules

Description

Business Rules in ServiceNow are used to enforce backend automation and data consistency during the processing of software installation requests. In this project, a Business Rule is implemented to automatically handle license-related issues by triggering backend logic when a requested item enters a specific state.

The Business Rule ensures that when a software installation request cannot proceed due to license unavailability, the system automatically creates an Incident and assigns it to the appropriate support team. This eliminates manual intervention, improves response time, and ensures proper escalation and auditability.

Business Rule Overview

- **Business Rule Name:** Create Incident on License Issue
- **Table:** Requested Item (`sc_req_item`)
- **Execution Type:** After Update
- **Trigger Condition:** State changes to *Work in Progress*
- **Purpose:** Automatically create an Incident when a software request encounters a license issue

This rule operates entirely on the backend and does not impact the user interface, ensuring clean separation between UI actions and system automation.

Configuration Details

1. Business Rule Setup

The Business Rule is configured on the **Requested Item (RITM)** table to ensure it executes at the correct stage of the request lifecycle.

Key Settings:

- Active: ✔️
- Advanced: ✔️
- When to run: After
- Update: ✔️
- Insert / Delete / Query: ❌
- Order: 100

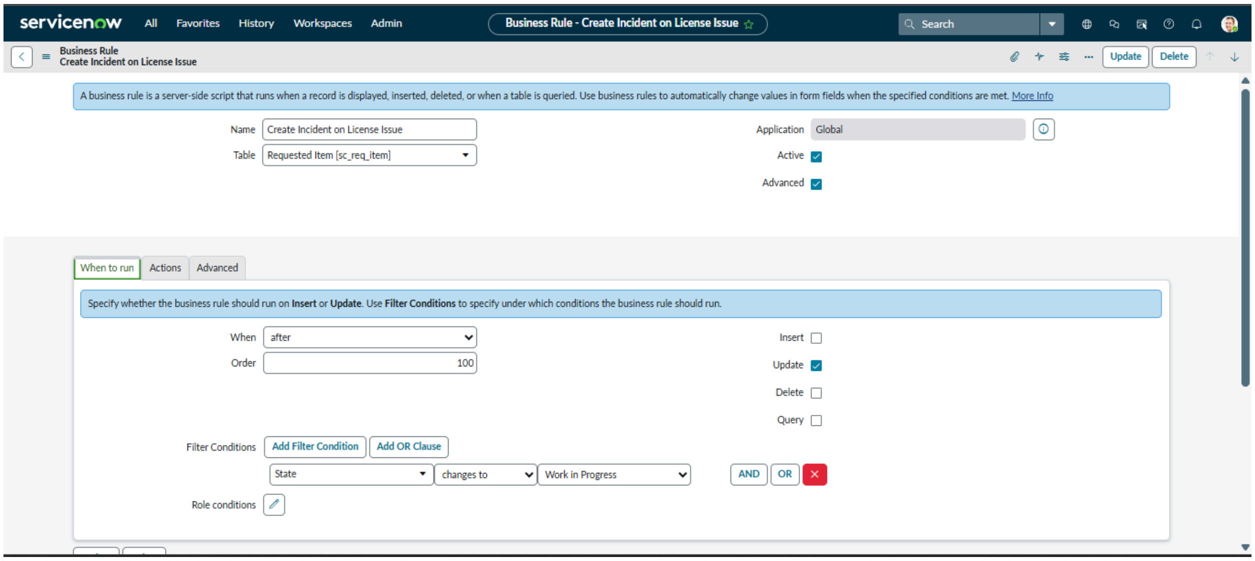
Filter Condition:

```
State changes to Work in Progress
```

This condition ensures the rule runs **only once**, when the request state transitions, preventing duplicate Incident creation.

📸 **Screenshot Evidence:**

Screenshot showing the Business Rule configuration with table selection, execution timing, and filter condition.


servicenow
All
Favorites
History
Workspaces
Admin
Business Rule - Create Incident on License Issue
Search
Business Rule
Create Incident on License Issue
Update
Delete
When to run
Actions
Advanced
Add Filter Condition
Add OR Clause
AND
OR
Role conditions

A business rule is a server-side script that runs when a record is displayed, inserted, deleted, or when a table is queried. Use business rules to automatically change values in form fields when the specified conditions are met. More Info

Name: Create Incident on License Issue

Table: Requested Item [sc_req_item]

Application: Global

Active: ☑

Advanced: ☑

Specify whether the business rule should run on **Insert** or **Update**. Use **Filter Conditions** to specify under which conditions the business rule should run.

When: after

Order: 100

Insert: ☐

Update: ☑

Delete: ☐

Query: ☐

Filter Conditions: State | changes to | Work in Progress

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2. Business Rule Script Logic

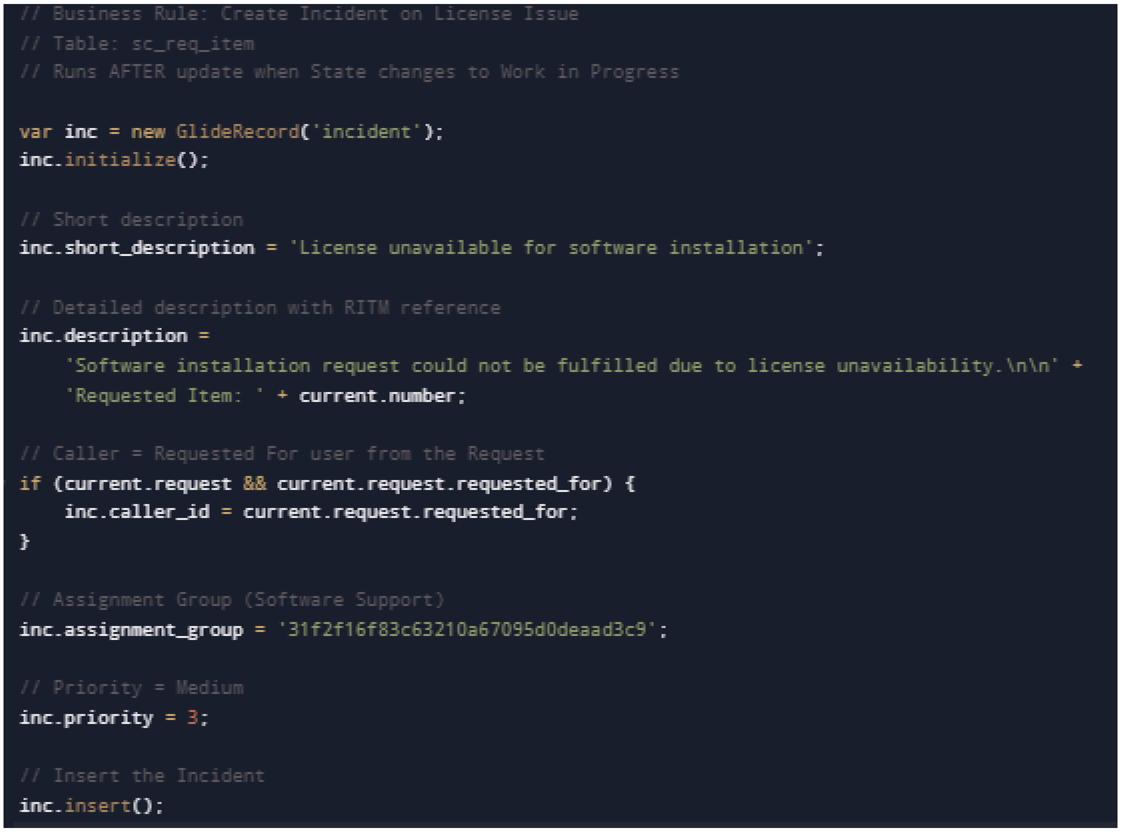
The Business Rule uses server-side scripting to create an Incident record automatically when triggered. The script performs the following actions:

- Initializes a new Incident record
- Sets a meaningful short description and detailed description referencing the RITM
- Assigns the Incident caller as the “Requested For” user from the request
- Assigns the Incident to the **Software Support** group
- Sets the priority to Medium
- Inserts the Incident into the system

Implemented Script Logic (Summary):

- Uses `GlideRecord` on the Incident table
- References the parent Request and Requested Item
- Avoids hardcoding display values
- Uses proper reference fields for assignment group

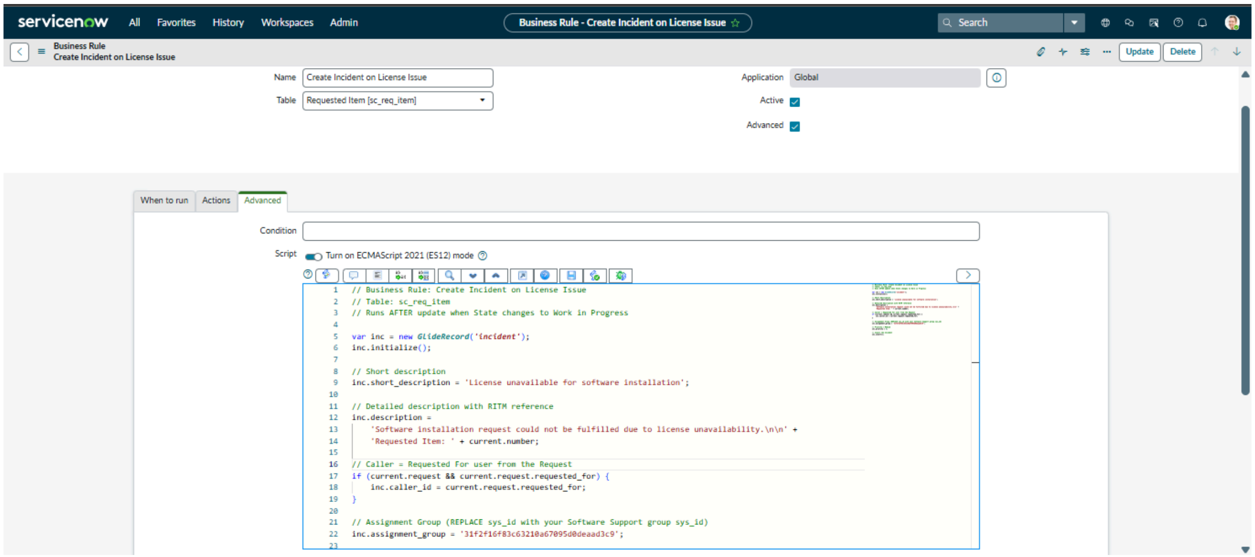
Final Script:



```
// Business Rule: Create Incident on License Issue
// Table: sc_req_item
// Runs AFTER update when State changes to Work in Progress

var inc = new GlideRecord('incident');
inc.initialize();

// Short description
inc.short_description = 'License unavailable for software installation';

// Detailed description with RITM reference
inc.description =
    'Software installation request could not be fulfilled due to license unavailability.\n\n' +
    'Requested Item: ' + current.number;

// Caller = Requested For user from the Request
if (current.request && current.request.requested_for) {
    inc.caller_id = current.request.requested_for;
}

// Assignment Group (Software Support)
inc.assignment_group = '31f2f16f83c63210a67095d0deaad3c9';

// Priority = Medium
inc.priority = 3;

// Insert the Incident
inc.insert();
```

📸 Screenshot Evidence:

Screenshot showing the Business Rule Advanced tab with the implemented script.



servicenow
All
Favorites
History
Workspaces
Admin
Business Rule - Create Incident on License Issue ☆
Search
Business Rule
Create Incident on License Issue
Update
Delete
When to run
Actions
Advanced

Name: Create Incident on License Issue

Table: Requested Item [sc_req_item]

Application: Global

Active ☑

Advanced ☑

Condition:

Script: Turn on ECMAScript 2021 (ES12) mode

```
// Business Rule: Create Incident on License Issue
// Table: sc_req_item
// Runs AFTER update when State changes to Work in Progress

var inc = new GlideRecord('incident');
inc.initialize();

// Short description
inc.short_description = 'License unavailable for software installation';

// Detailed description with RITM reference
inc.description =
    'Software installation request could not be fulfilled due to license unavailability.\n\n' +
    'Requested Item: ' + current.number;

// Caller = Requested For user from the Request
if (current.request && current.request.requested_for) {
    inc.caller_id = current.request.requested_for;
}

// Assignment Group (REPLACE sys_id with your Software Support group sys_id)
inc.assignment_group = '31f2f16f83c63210a67095d0deaad3c9';
```

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3. Assignment Group Configuration

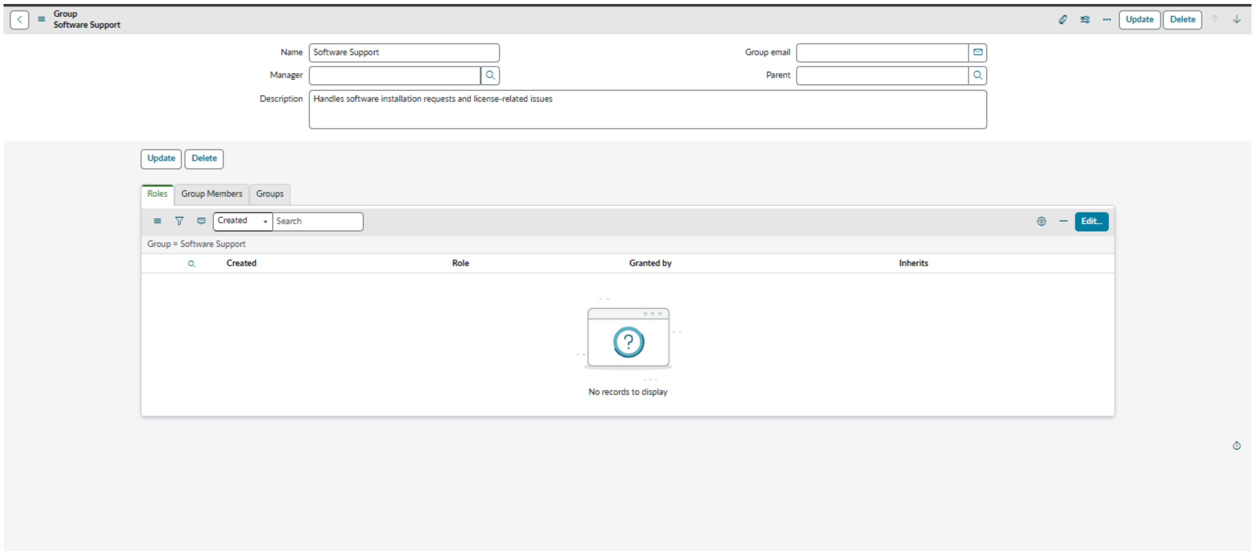
A dedicated **Software Support** group is created in the system to handle software installation and license-related issues. The Business Rule assigns the Incident to this group using its `sys_id`, ensuring safe and reliable assignment.

This approach aligns with ServiceNow best practices and avoids dependency on display values, improving maintainability and portability across environments.

- `My Software Support Group SysID :31f2f16f83c63210a67095d0deaad3c9`

📸 **Screenshot Evidence:**

Screenshot showing the Software Support group record with sys_id.



Group
Software Support

Name: Software Support
Manager:
Group email:
Parent:
Description: Handles software installation requests and license-related issues

Created | Search

Group = Software Support

Created	Role	Granted by	Inherits

No records to display

Testing and Validation

To validate the Business Rule functionality, the following steps were performed:

1. An existing Software Installation Requested Item (RITM) was opened.
2. The **State** field was changed from *Open* to *Work in Progress*.
3. The record was updated.

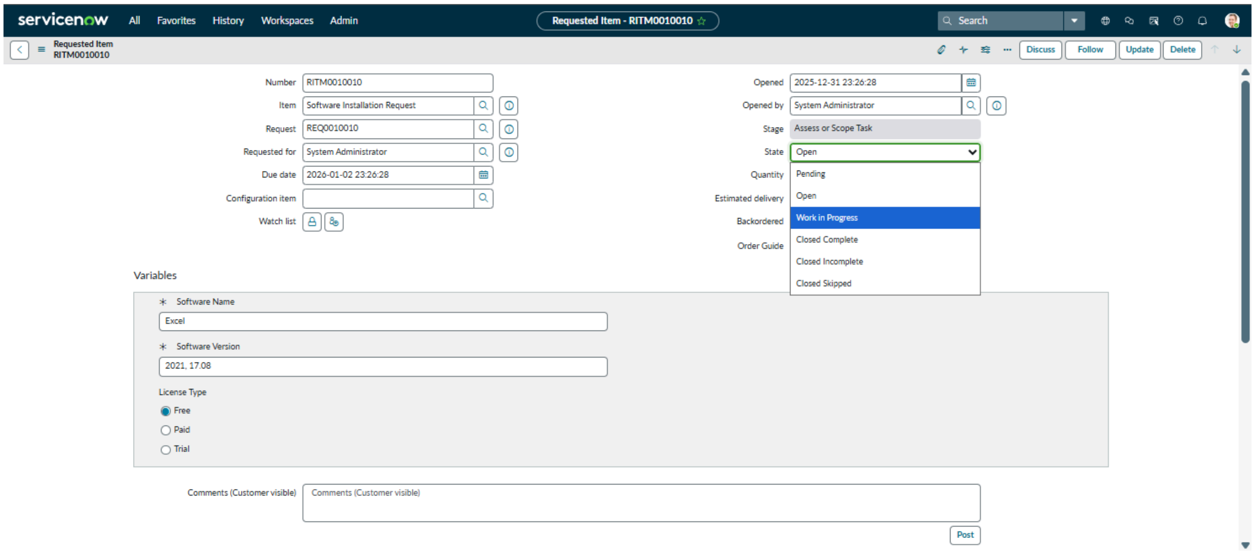
Observed Results:

- A new Incident was automatically created.
- The Incident was assigned to the Software Support group.
- The caller was set to the “Requested For” user.
- The description referenced the originating RITM.
- Priority was set to Medium.

This confirms that the Business Rule executed successfully and met the intended automation objectives.

📸 Screenshot Evidence:

Screenshot showing the automatically created Incident linked to the software installation request.


servicenow
All
Favorites
History
Workspaces
Admin
Requested Item - RITM0010010
Search
Requested Item
RITM0010010
Discuss
Follow
Update
Delete
Pending
Open
Work in Progress
Closed Complete
Closed Incomplete
Closed Skipped
Post

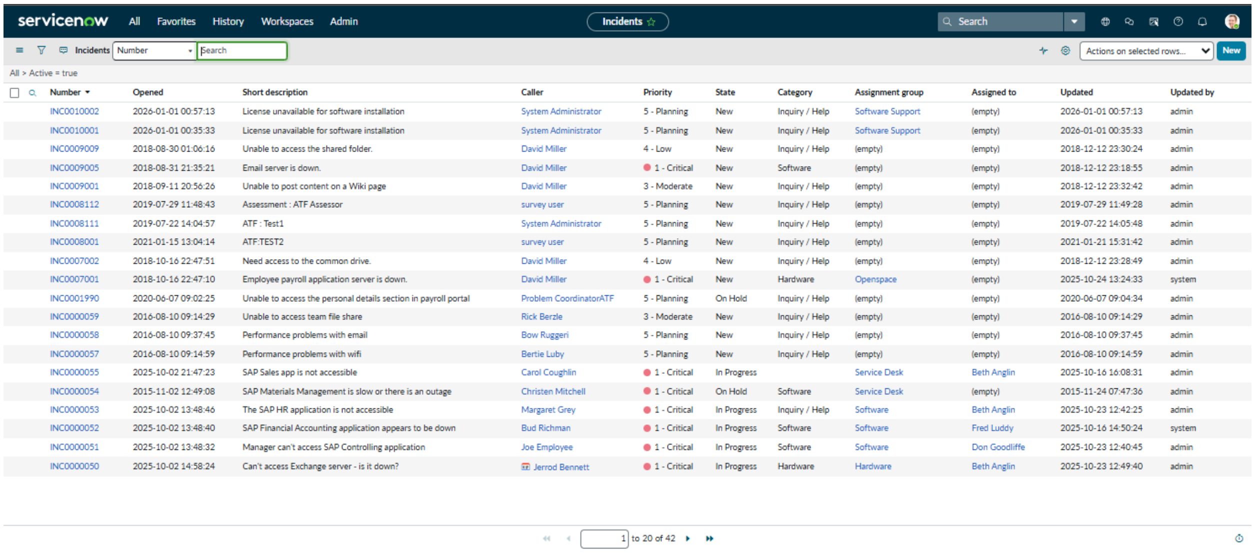
Number: RITM0010010
Item: Software Installation Request
Request: REQ0010010
Requested for: System Administrator
Due date: 2026-01-02 23:26:28
Configuration item:
Watch list

Opened: 2025-12-31 23:26:28
Opened by: System Administrator
Stage: Assess or Scope Task
State: Open
Quantity
Estimated delivery
Backordered
Order Guide

Variables

* Software Name: Excel
* Software Version: 2021, 17.08
License Type:
● Free
○ Paid
○ Trial

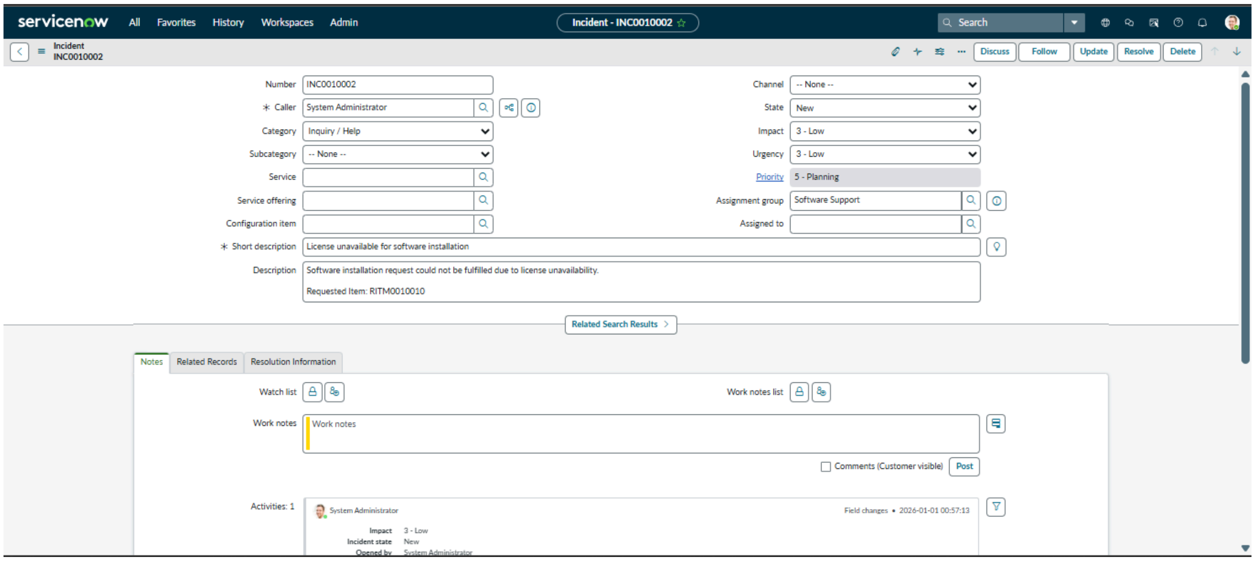
Comments (Customer visible): Comments (Customer visible)



All > Active = true

Number	Opened	Short description	Caller	Priority	State	Category	Assignment group	Assigned to	Updated	Updated by
INC0010002	2026-01-01 00:57:13	License unavailable for software installation	System Administrator	5 - Planning	New	Inquiry / Help	Software Support	(empty)	2026-01-01 00:57:13	admin
INC0010001	2026-01-01 00:35:33	License unavailable for software installation	System Administrator	5 - Planning	New	Inquiry / Help	Software Support	(empty)	2026-01-01 00:35:33	admin
INC0009009	2018-08-30 01:06:16	Unable to access the shared folder.	David Miller	4 - Low	New	Inquiry / Help	(empty)	(empty)	2018-12-12 23:30:24	admin
INC0009005	2018-08-31 21:35:21	Email server is down.	David Miller	● 1 - Critical	New	Software	(empty)	(empty)	2018-12-12 23:18:55	admin
INC0009001	2018-09-11 20:56:26	Unable to post content on a Wiki page	David Miller	3 - Moderate	New	Inquiry / Help	(empty)	(empty)	2018-12-12 23:32:42	admin
INC0008112	2019-07-29 11:48:43	Assessment : ATF Assessor	survey user	5 - Planning	New	Inquiry / Help	(empty)	(empty)	2019-07-29 11:49:28	admin
INC0008111	2019-07-22 14:04:57	ATF : Test1	System Administrator	5 - Planning	New	Inquiry / Help	(empty)	(empty)	2019-07-22 14:05:48	admin
INC0008001	2021-01-15 13:04:14	ATF:TEST2	survey user	5 - Planning	New	Inquiry / Help	(empty)	(empty)	2021-01-21 15:31:42	admin
INC0007002	2018-10-16 22:47:51	Need access to the common drive.	David Miller	4 - Low	New	Inquiry / Help	(empty)	(empty)	2018-12-12 23:28:49	admin
INC0007001	2018-10-16 22:47:10	Employee payroll application server is down.	David Miller	● 1 - Critical	New	Hardware	Openspace	(empty)	2025-10-24 13:24:33	system
INC0001990	2020-06-07 09:02:25	Unable to access the personal details section in payroll portal	Problem CoordinatorATF	5 - Planning	On Hold	Inquiry / Help	(empty)	(empty)	2020-06-07 09:04:34	admin
INC0000059	2016-08-10 09:14:29	Unable to access team file share	Rick Berzle	3 - Moderate	New	Inquiry / Help	(empty)	(empty)	2016-08-10 09:14:29	admin
INC0000058	2016-08-10 09:37:45	Performance problems with email	Bow Ruggeri	5 - Planning	New	Inquiry / Help	(empty)	(empty)	2016-08-10 09:37:45	admin
INC0000057	2016-08-10 09:14:59	Performance problems with wifi	Bertie Luby	5 - Planning	New	Inquiry / Help	(empty)	(empty)	2016-08-10 09:14:59	admin
INC0000055	2025-10-02 21:47:23	SAP Sales app is not accessible	Carol Coughlin	● 1 - Critical	In Progress		Service Desk	Beth Anglin	2025-10-16 16:08:31	admin
INC0000054	2015-11-02 12:49:08	SAP Materials Management is slow or there is an outage	Christen Mitchell	● 1 - Critical	On Hold	Software	Service Desk	(empty)	2015-11-24 07:47:36	admin
INC0000053	2025-10-02 13:48:46	The SAP HR application is not accessible	Margaret Grey	● 1 - Critical	In Progress	Inquiry / Help	Software	Beth Anglin	2025-10-23 12:42:25	admin
INC0000052	2025-10-02 13:48:40	SAP Financial Accounting application appears to be down	Bud Richman	● 1 - Critical	In Progress	Software	Software	Fred Luddy	2025-10-16 14:50:24	system
INC0000051	2025-10-02 13:48:32	Manager can't access SAP Controlling application	Joe Employee	● 1 - Critical	In Progress	Software	Software	Don Goodliffe	2025-10-23 12:40:45	admin
INC0000050	2025-10-02 14:58:24	Can't access Exchange server - is it down?	Jerrod Bennett	● 1 - Critical	In Progress	Hardware	Hardware	Beth Anglin	2025-10-23 12:49:40	admin

1 to 20 of 42



Number: INC0010002
Caller: System Administrator
Category: Inquiry / Help
Subcategory: -- None --
Service:
Service offering:
Configuration item:
Short description: License unavailable for software installation
Description: Software installation request could not be fulfilled due to license unavailability.
Requested Item: RITM0010010

Channel: -- None --
State: New
Impact: 3 - Low
Urgency: 3 - Low
Priority: 5 - Planning
Assignment group: Software Support
Assigned to:

Work notes: Work notes
☐ Comments (Customer visible)

Activities: 1
System Administrator — Field changes • 2026-01-01 00:57:13
Impact: 3 - Low
Incident state: New
Opened by: System Administrator

Outcome

The implementation of Business Rules enhances backend automation by proactively handling license-related issues without manual intervention. By automatically creating and assigning Incidents based on request state changes, the solution ensures faster issue resolution, improved accountability, and better compliance with IT service management processes.

This Business Rule complements the overall automation strategy and provides a strong foundation for integrating approval workflows and fulfillment tasks in subsequent phases.