

# ServiceNow Administration

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## Prevent User Deletion If Assigned To An Incident

**Team ID:** LTVIP2026TMIDS81090

**Team Size:** 4

### Team Members and Roles

Name	Role
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## 1. Introduction

### Project Title: Prevent User Deletion If Assigned To An Incident

This project focuses on implementing a validation mechanism in ServiceNow to prevent deletion of users who are assigned to active incidents. The solution ensures system reliability, maintains referential integrity, and prevents workflow disruption in IT Service Management (ITSM) environments.

## 2. Project Overview

### Purpose

In ServiceNow, users are assigned to incidents for issue resolution and service tracking. If a user assigned to an active incident is deleted, it may lead to broken references, loss of accountability, and data inconsistency.

The purpose of this project is to implement a Business Rule that validates incident assignments before allowing user deletion.

### Features

- User Deletion Validation: Prevents deletion of users who are assigned to active incidents.
- Real-Time Incident Check: Automatically verifies incident assignments before executing delete operation.
- Active Status Filtering: Ensures only active incidents are considered during validation.
- Server-Side Business Rule Execution: Uses a Before Delete Business Rule to enforce logic securely at the backend level.
- GlideRecord Integration: Implements GlideRecord API to query incident records dynamically.
- Role-Based Assignment Control: Requires ITIL role for users to be assigned to incidents.
- Data Integrity Protection: Maintains referential consistency between User and Incident tables.
- Error Message Notification: Displays system alert when deletion attempt is blocked.

## 3. Architecture

### Platform Architecture

The project is implemented entirely within the ServiceNow platform using server-side scripting and table relationships.

### Components Used

- User Table (sys\_user): Stores user records in the system.
- Incident Table (incident): Stores incident records and assignment details.
- Business Rule (Before Delete): Executes validation logic before a user record is deleted.
- GlideRecord API: Queries the incident table to check for active assignments.

## Architecture Flow

- Admin attempts to delete a user record.
- The “Before Delete” Business Rule is triggered.
- GlideRecord queries the Incident table.
- System checks for active incidents assigned to that user.
- If an active record exists → Deletion is blocked.
- If no active record exists → Deletion is allowed.

## System Architecture

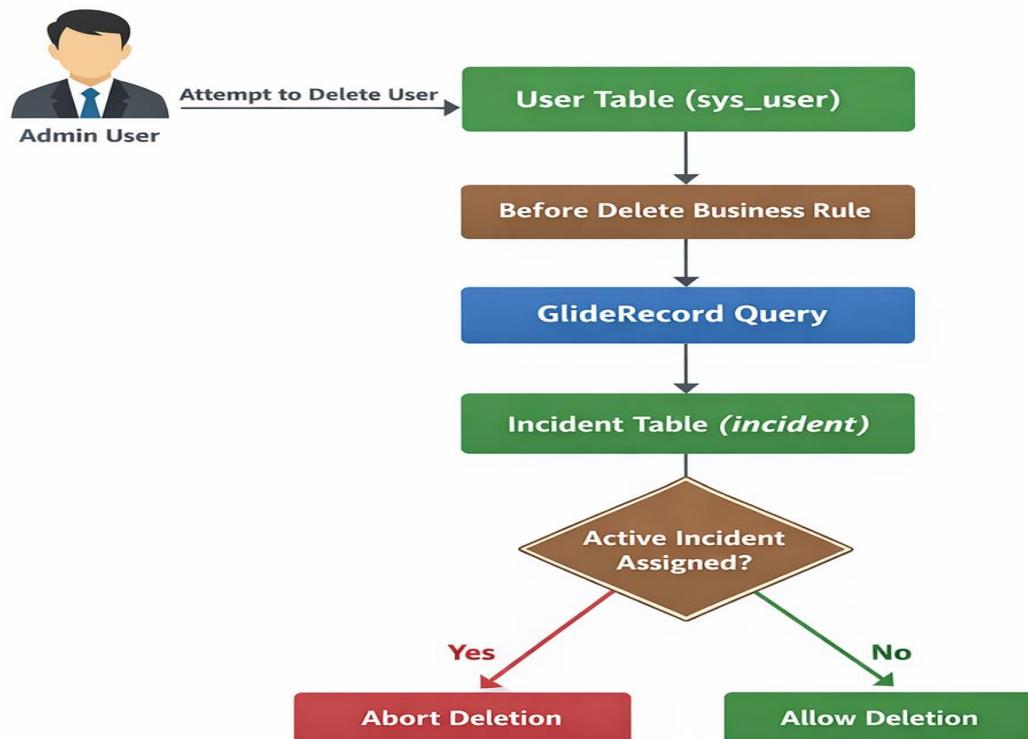


fig 1: User Deletion Validation Architecture in ServiceNow

## Figure Description

The diagram illustrates the workflow executed when an administrator attempts to delete a user record. The process begins from the Admin User, who initiates the deletion request in the User Table (sys\_user). A Before Delete Business Rule is triggered automatically.

This Business Rule uses a GlideRecord query to check the Incident Table (incident) for any active incidents assigned to the selected user.

A decision point evaluates whether an active incident exists:

If Yes, the system aborts the deletion to maintain data integrity.

If No, the system allows the user record to be deleted.  
This architecture ensures referential integrity and prevents accidental removal of users who are still associated with active incident records.

## 4. Setup Instructions

### Prerequisites

- Active ServiceNow Developer Instance
- Admin Access
- ITIL Role for assigned users

### Configuration Steps

#### 1. Create Test User:

    Navigate to:

        User Administration → Users → New

    Create a test user record.

#### 2. Assign ITIL Role:

    Open the created user → Add ITIL role under Roles related list.

    This allows the user to appear in the Assigned to field.

#### 3. Create Incident:

    Navigate to:

        Incident → Create New

    Fill:

        Short Description

        State = In Progress

        Active = True

        Assigned To = Test User

#### 4. Create Business Rule:

    Navigate to:

        System Definition → Business Rules → New

    Configuration:

- Table: User [sys\_user]
- When: Before
- Delete: Checked
- Advanced: Checked
- Active: Checked

## 5. Business Rule Script

```
(function executeRule(current, previous) {  
    var inc = new GlideRecord('incident');  
    inc.addQuery('assigned_to', current.sys_id);  
    inc.addQuery('active', true);  
    inc.query();  
  
    if (inc.hasNext()) {  
        gs.addErrorMessage("User cannot be deleted because they are assigned to active  
incidents.");  
        current.setAbortAction(true);  
    }  
})(current, previous);
```

This script checks whether any active incident is assigned to the user and blocks deletion accordingly.

## 6. Running the Application

To test the functionality:

- Assign an incident to a user
- Attempt to delete the user
- System displays error message
- User record remains in database

### Execution Validation Process

- Ensure the Business Rule is active on the User (sys\_user) table.
- The rule must be configured as Before Delete.
- Verify that the incident assigned to the user is Active = True.
- Attempting deletion triggers server-side validation.
- If validation fails, an error message is displayed.
- The user record remains unchanged in the database.

## 7. Functional Validation

Functional testing was conducted to verify:

- Business Rule triggers before deletion
- Incident query executes correctly
- Active condition filtering works properly
- System error message displays accurately
- Deletion is aborted when condition is met

## 8. User Interface

The user interface includes:

User Form – Displays user details and roles

Incident Form – Shows assignment information

Error Message Banner – Displays validation error

### User Record Form

The screenshot shows the ServiceNow User - New Record interface. The top navigation bar includes links for Media, Playback, Audio, Video, Subtitle, Tools, View, and Help. The main title is "User - New Record". Below the title, there is a note: "To set up the user's password, save the record and then click Set Password." The form contains the following fields:

User ID	pravina
First name	pravina
Last name	singh
Title	IT Technician
Department	IT
Password needs reset	<input type="checkbox"/>
Locked out	<input type="checkbox"/>
Active	<input checked="" type="checkbox"/>
Identity type	Human
Internal Integration User	<input type="checkbox"/>
Email	pravina@gmail.com
Language	-- None --
Calendar integration	Outlook
Time zone	System (America/Los_Angeles)
Date format	System (yyyy-MM-dd)
Business phone	(empty)
Mobile phone	(empty)
Photo	Click to add...

At the bottom left is a "Submit" button, and at the bottom right is a progress bar indicating "95%".

## Incident Assignment Form:

The screenshot shows the 'Create INC0010014 | Incident' form in ServiceNow. The form fields include:

- \* Caller: pravina singh
- Category: Inquiry / Help
- Subcategory: -- None --
- Service: (selected)
- Service offering: (selected)
- Configuration item: (selected)
- \* Short description: (empty)
- Description: (empty)
- State: New
- Impact: 3 - Low
- Urgency: 3 - Low
- Priority: 5 - Planning
- Assignment group: (empty)
- Assigned to: pravina singh

Below the form, there is a 'Related Search Results' section and a search bar.

## Business Rule Configuration:

The screenshot shows the 'Business Rule - New Record' configuration page in ServiceNow. The configuration includes:

- When to run: before
- Order: 100
- Actions:
  - Insert:
  - Update:
  - Delete:
  - Query:
- Filter Conditions: Add Filter Condition, Add OR Clause
- Role conditions: (empty)

At the bottom, there is a 'Submit' button.

## Error Message Display:

The screenshot shows a ServiceNow web application interface. At the top, there is a navigation bar with links for Media, Playback, Audio, Video, Subtitle, Tools, View, and Help. Below the navigation bar, the address bar shows the URL: dev294707.service-now.com/nav/ui/classic/params/target/sys\_user.do%3Fsys\_id%3D317da69747833210ccfea3c9316d4337%26syspar... The main content area has a title bar "servicenow" and a sub-title "Users". A search bar at the top right contains the text "Search". Below the search bar, a message box displays the error: "This user cannot be deleted because they are assigned to one or more incidents." The main table view shows a single user record for "pravina".

User ID	Name	Email	Active	Created	Updated
pravina	pravina singh	pravina@gmail.com	true	2026-02-19 03:08:13	2026-02-19 03:08:13

## 9. Testing

Manual testing was performed for the following scenarios:

- Assigned user deletion attempt
- Unassigned user deletion attempt
- Role visibility validation
- Self Service vs Default view behavior

All scenarios were validated successfully.

## 10. Known Issues

- Assigned To field not visible in Self Service view
- ITIL role required for user to appear in assignment field
- Business Rule will not execute if Delete checkbox is not enabled

## **11. Future Enhancements**

- Extend validation to Change and Problem tables
- Implement logging mechanism for deletion attempts
- Send email notification when deletion is blocked
- Create UI policy to guide administrator