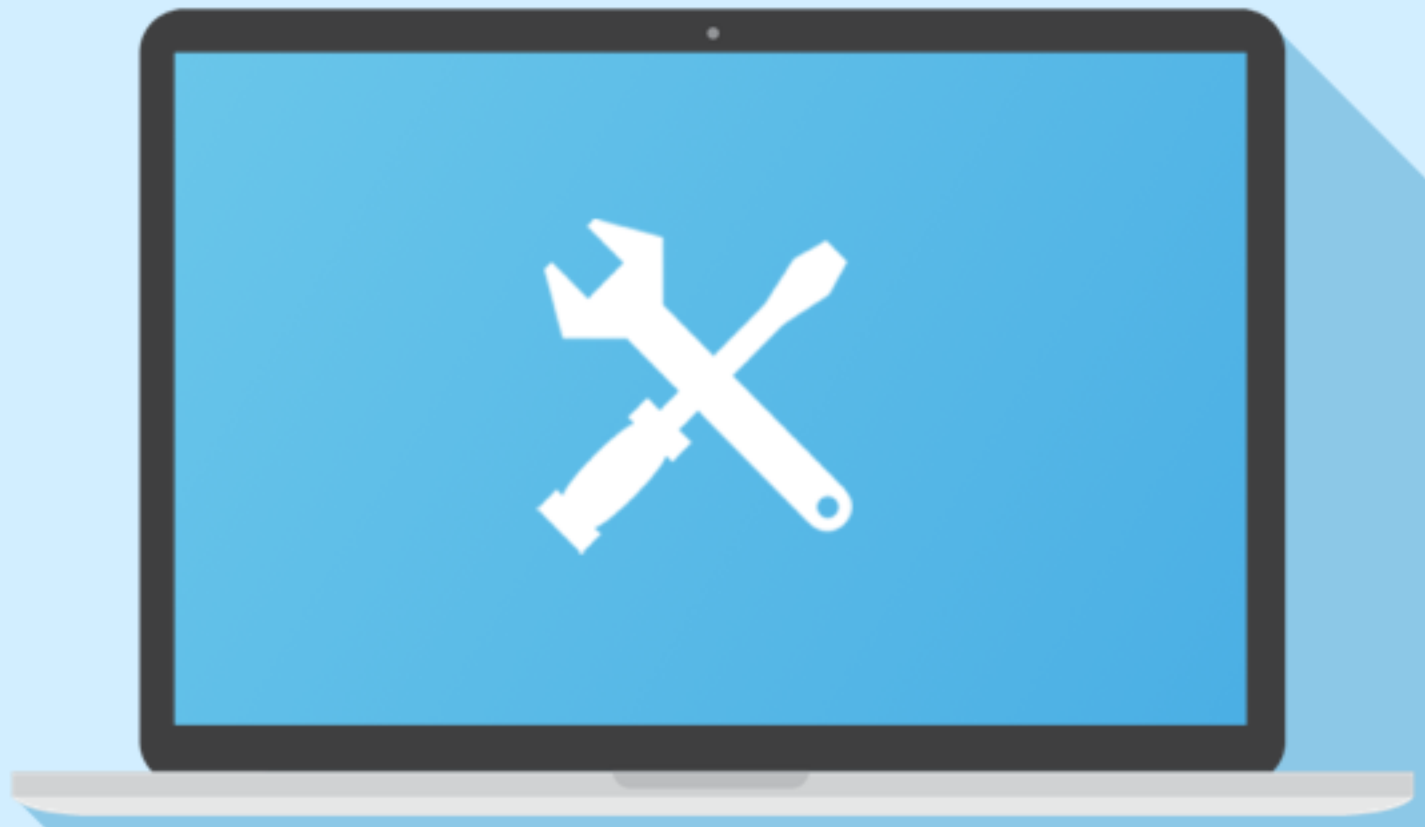
The Complete ServiceNow System Administrator Course

Section 4 - Customizations



Course Outline

1 Course Introduction

2 ServiceNow Overview

3 Lists, Forms, & the UI

4 Customizations

5 Tables & Fields

6 User Administration

7 Core Applications

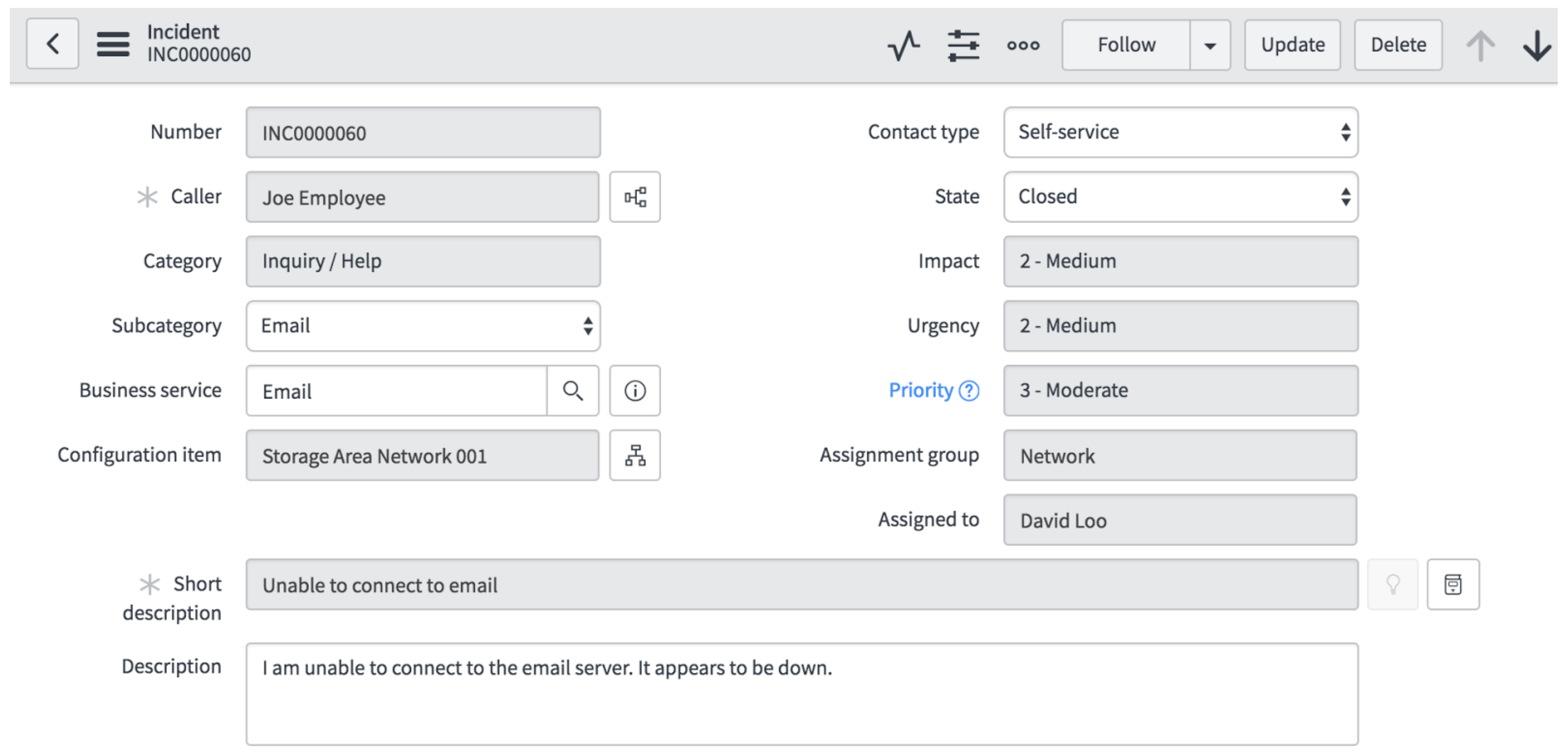
8 System Administration

9 Building A Custom App

Section Outline

1 Client-Side vs Server-Side
2 Customizing ServiceNow
3 UI Policies
4 UI Actions
5 Business Rules
6 Client Scripts
7 Data Policies
8 Script Includes
9 Update Sets
10 Plugins

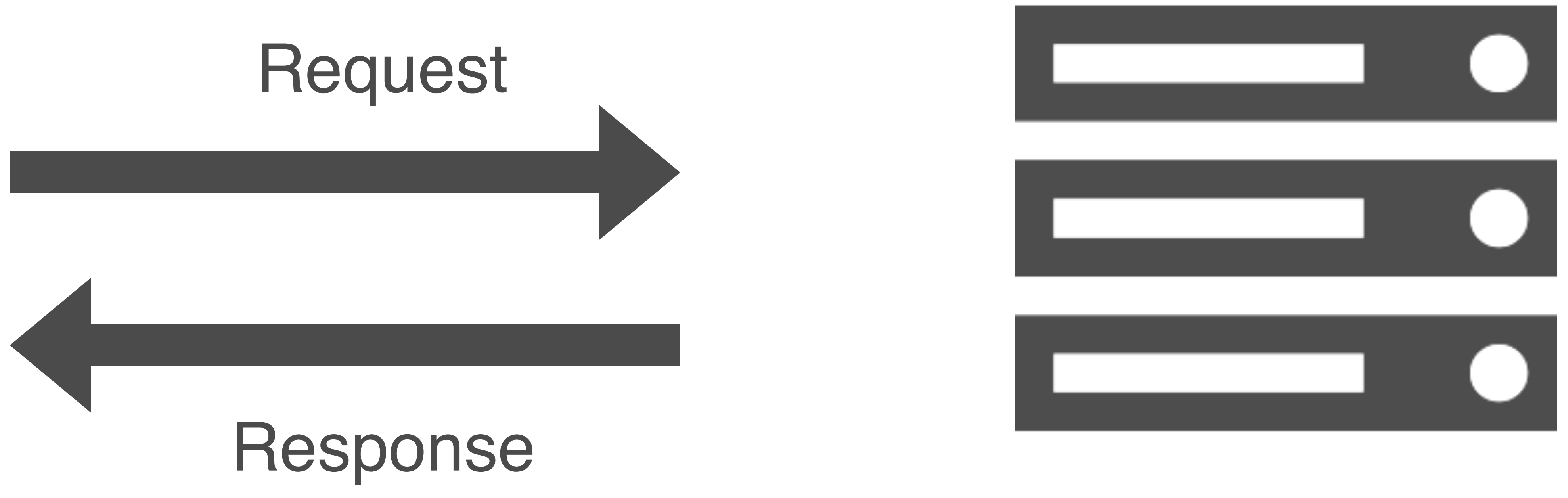
Client-Side vs Server-Side



Incident
INC0000060

Follow | Update | Delete

Number	INC0000060	Contact type	Self-service
✱ Caller	Joe Employee	State	Closed
Category	Inquiry / Help	Impact	2 - Medium
Subcategory	Email	Urgency	2 - Medium
Business service	Email	Priority	3 - Moderate
Configuration item	Storage Area Network 001	Assignment group	Network
		Assigned to	David Loo
✱ Short description	Unable to connect to email		
Description	I am unable to connect to the email server. It appears to be down.		



- User’s browser
- Limited access to instance data
- Makes requests

- ServiceNow datacenters
- Unlimited access to instance data
- Returns response

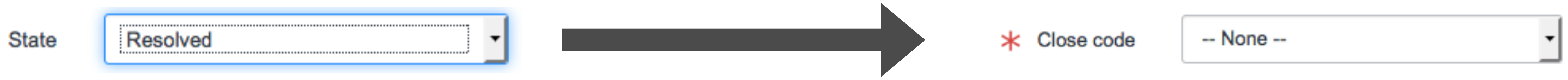
Customizing ServiceNow

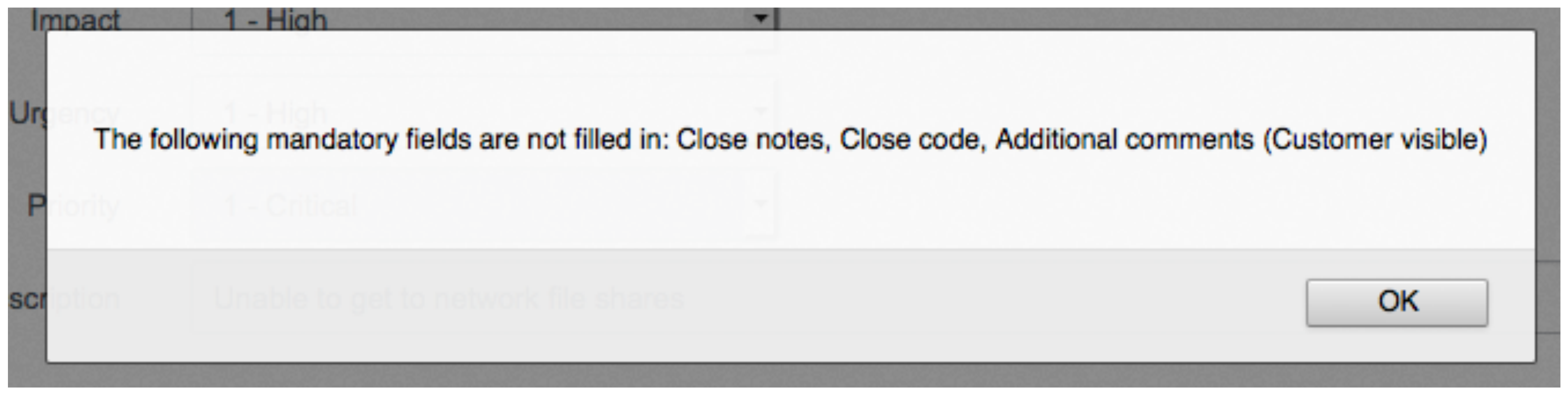
- Very flexible
- Little you cannot change
- Many places to apply customizations:
  - Client Scripts
  - Business Rules
  - Script Includes
  - UI Actions
  - UI Policies
  - Data Policies
  - Many more…

Covered in ServiceNow 201: Development

UI Policies

- Form control
- Run on client-side
- Easy to use (no scripting required)
- Used to set form fields to:
  - Mandatory
  - Read-only
  - Show/Hide




The following mandatory fields are not filled in: Close notes, Close code, Additional comments (Customer visible)

When to use:

UI Policies

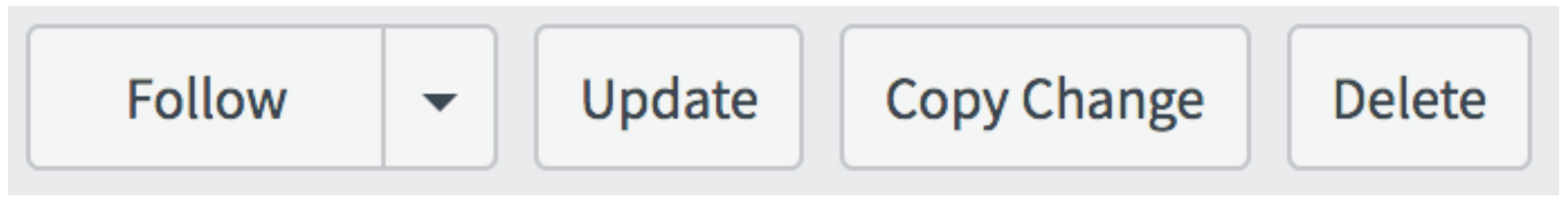
1. Set an incident's **Short description** field to *read-only* if the incident state is **Closed**
2. *Hide* an incident's **Resolution notes** field if the state is **Open**

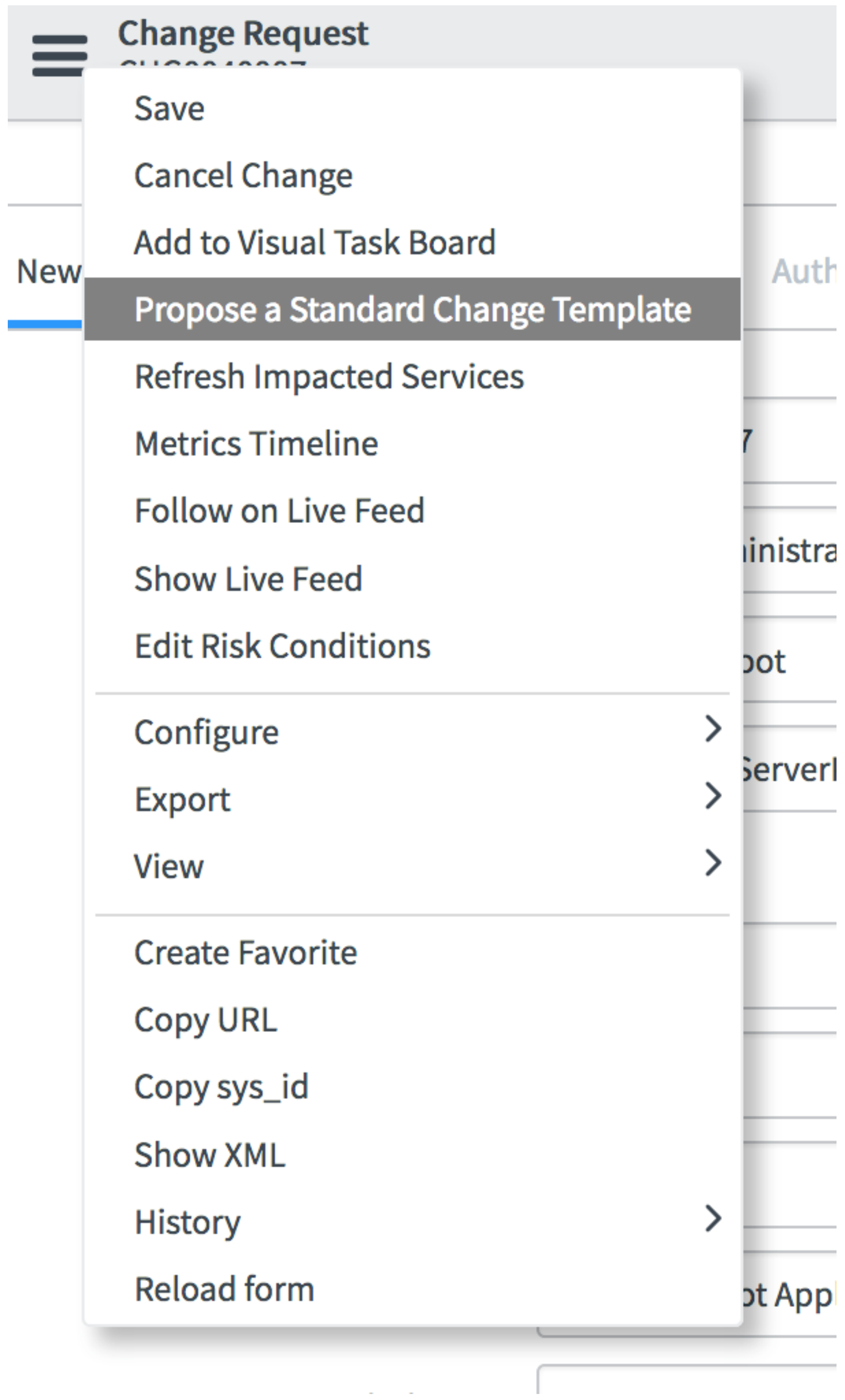
UI Policies

Demo

UI Actions

- Add buttons, links, and items to context menus
- Server-side and client-side
- Leverage JavaScript





When to use:

UI Actions

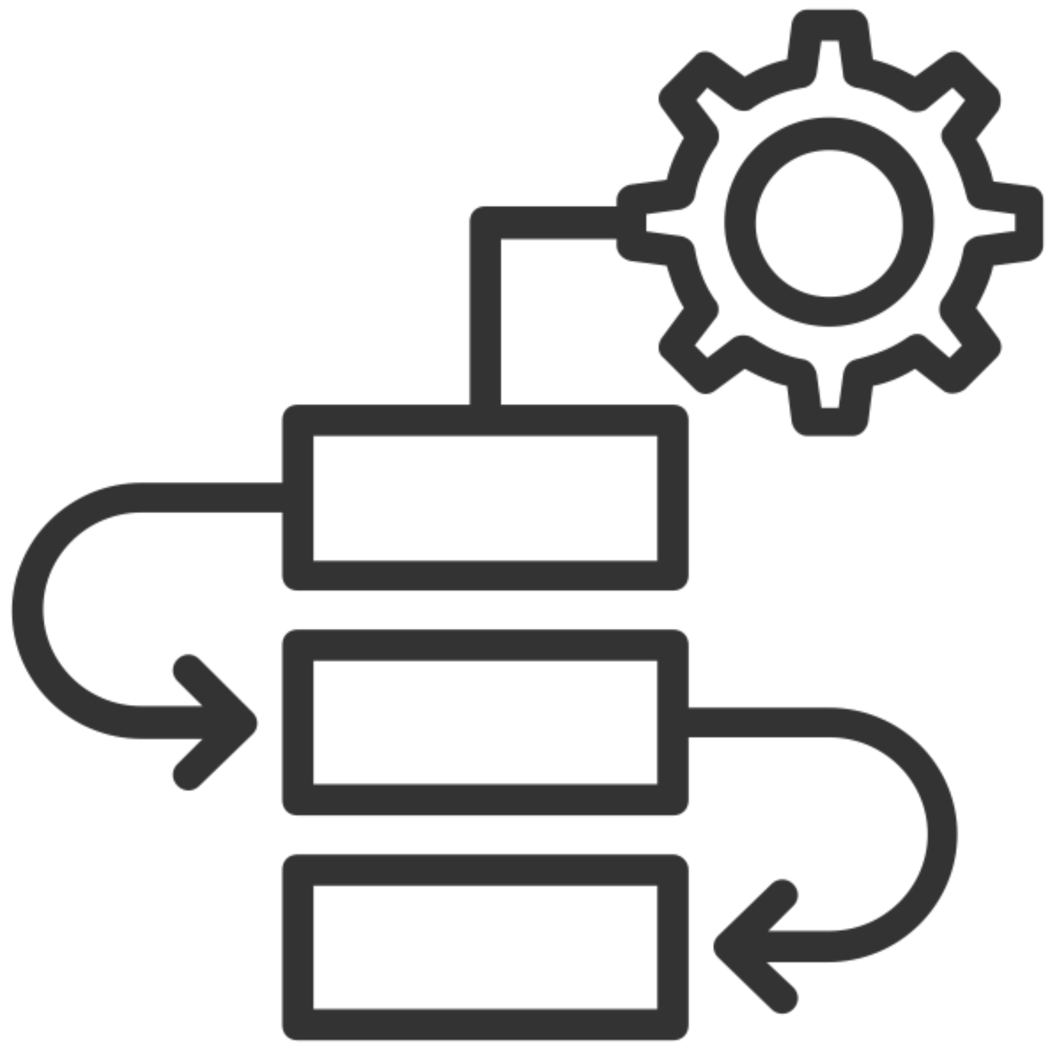
1. *Trigger* Salesforce **integration**, *creating* an associated Salesforce **ticket**
2. *Reject* an **approval** record

UI Actions

Demo

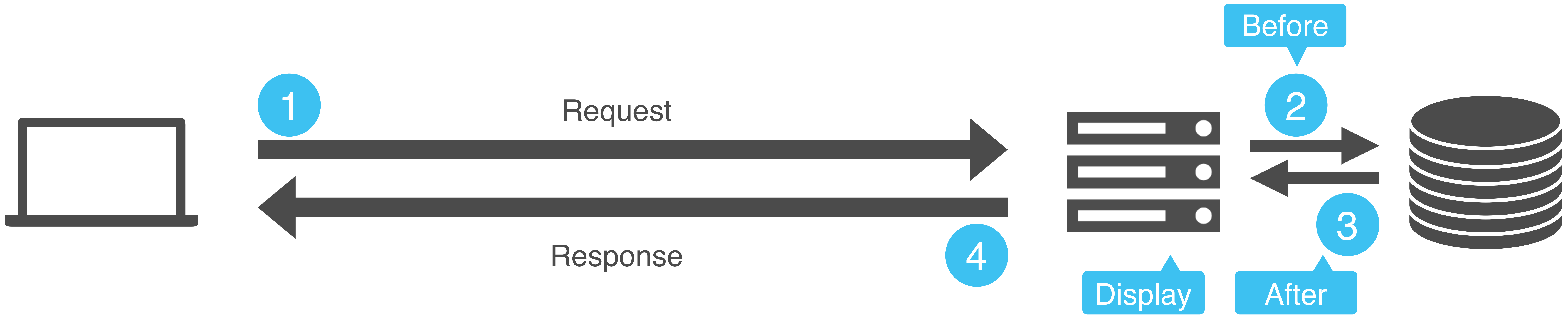
Business Rules

- Run off specific table & triggered by database operations
- JavaScript that runs on server-side
- Configure *when* to run
    - Before
    - After
    - Display
    - Async
- During *what* operation
    - Insert
    - Update
    - Delete
    - Query



Business Rules (cont.)

1. User sends request to server for specific incident (query)
2. Application server requests record from database server
3. Database server responds to application server with record
4. Application server checks for *display* business rules, then sends response back to client
5. User modifies incident record via form and sends update request
6. Application server receives update, checks for *before* business rules, then sends to database server
7. Database server updates record
8. Application server checks for *after* business rules



When to use:

Business Rules

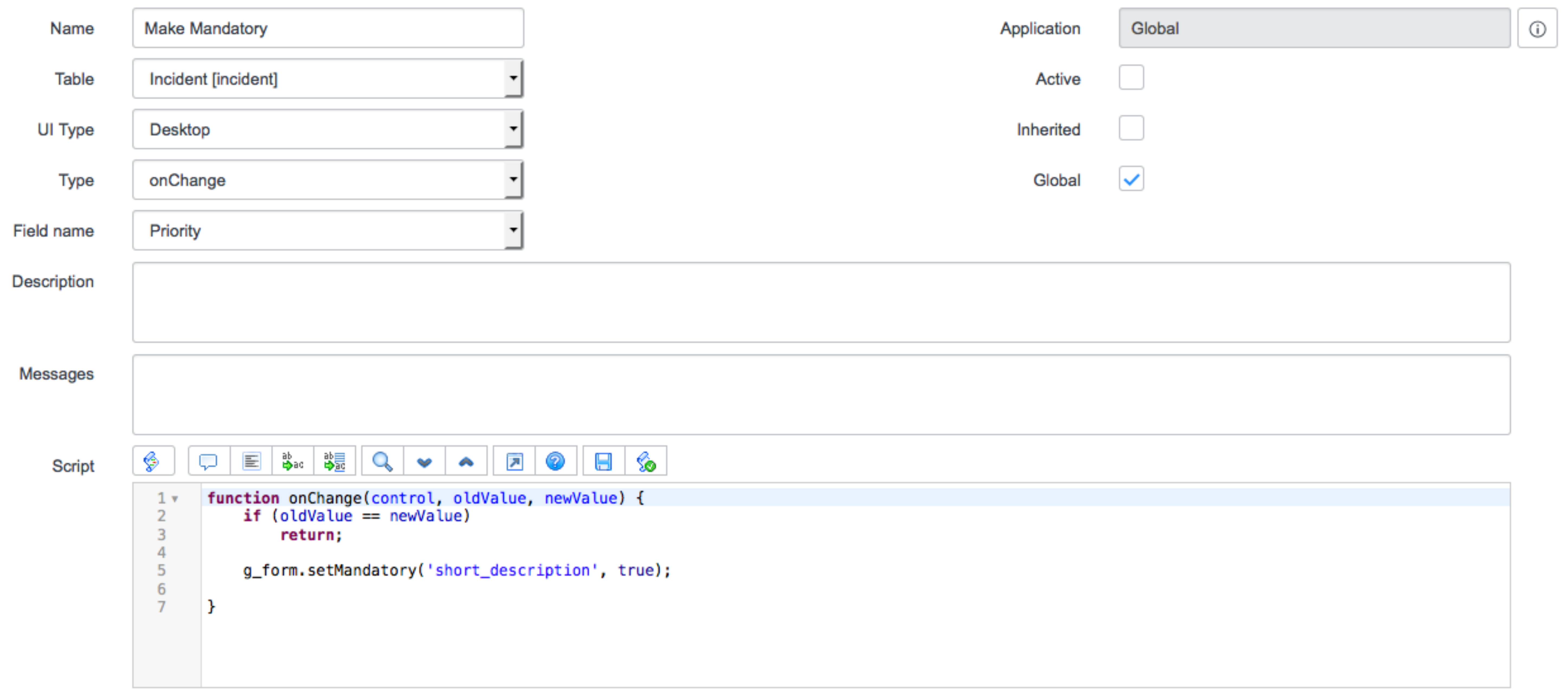
1. *Create* an associated **CI** when a new **asset** is *created*
2. When an **incident** is *reopened*, *increment* the **reopen count**

Business Rules

Demo

Client Scripts

- JavaScript on client-side; shipped to browser
- Form view
- Access to helper methods
- Triggers:
  - On load
  - On change
  - On submit
  - On cell edit



Name	Make Mandatory	Application	Global
Table	Incident [incident]	Active	☐
UI Type	Desktop	Inherited	☐
Type	onChange	Global	✓
Field name	Priority		
Description			
Messages			

Script

```
function onChange(control, oldValue, newValue) {
    if (oldValue == newValue)
        return;

    g_form.setMandatory('short_description', true);

}
```

When to use:

Client Scripts

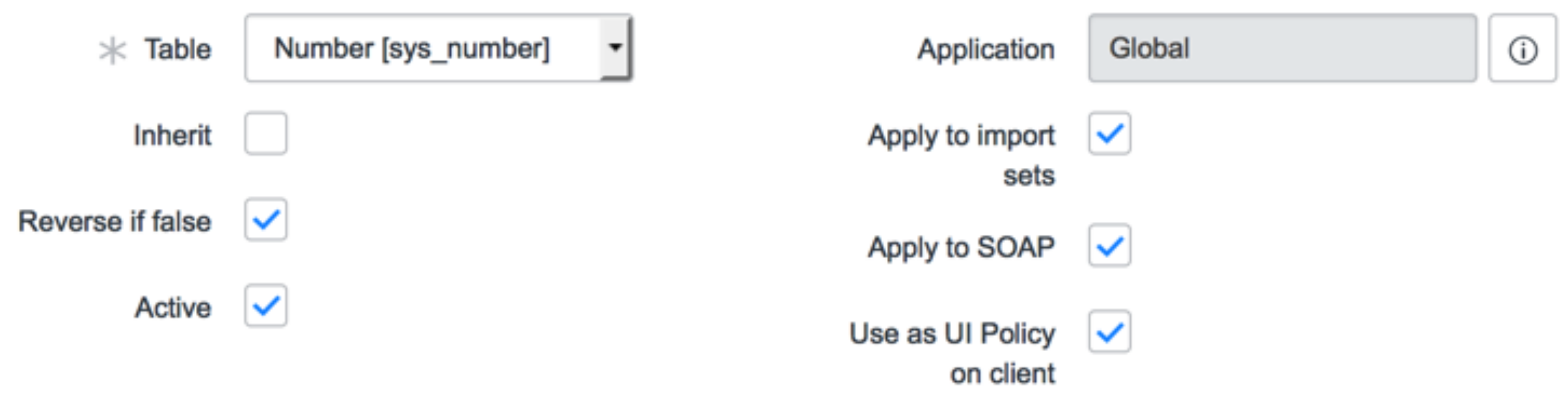
1. *Highlight* **Caller** field if user is a VIP
2. *Run* **Conflict checker** for Change Management

Client Scripts

Demo

Data Policies

- UI policies for the backend
- Restrict data through imports
- Web services



* Table	Number [sys_number]	Application	Global
Inherit	☐	Apply to import sets	✓
Reverse if false	✓	Apply to SOAP	✓
Active	✓	Use as UI Policy on client	✓

When to use:

Data Policies

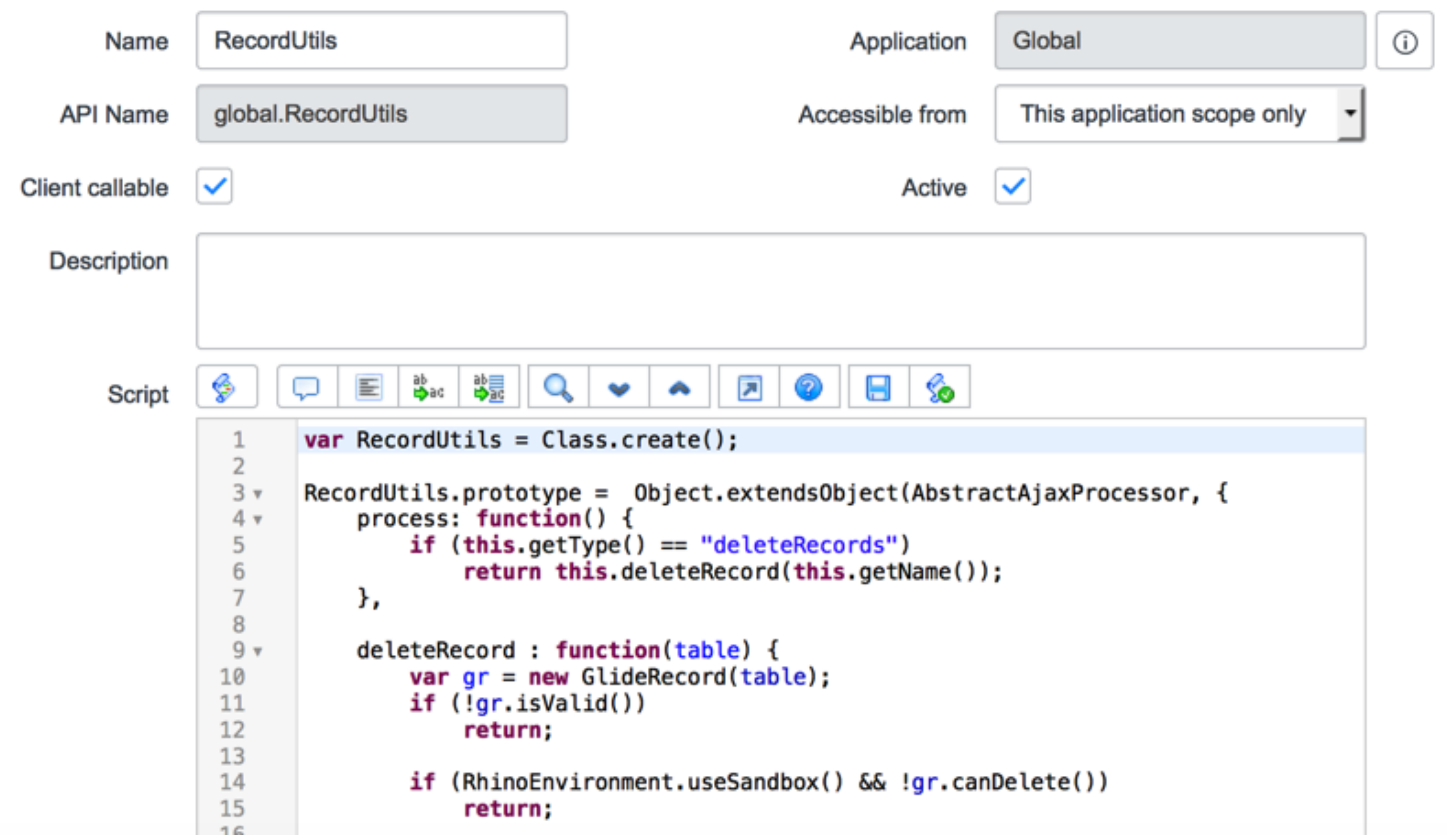
1. *Require* the **Type** field on the Change form, for web services
2. *Require* the **Close notes** on an Incident before changing the status to **Closed/ Resolved**

Data Policies

Demo

Script Includes

- Store JavaScript functions and classes
- Reusable code
- Server-side
- Only ran when called



Name	RecordUtils	Application	Global
API Name	global.RecordUtils	Accessible from	This application scope only
Client callable	✓	Active	✓
Description			

Script

```
var RecordUtils = Class.create();

RecordUtils.prototype =  Object.extendsObject(AbstractAjaxProcessor, {
    process: function() {
        if (this.getType() == "deleteRecords")
            return this.deleteRecord(this.getName());
    },

    deleteRecord : function(table) {
        var gr = new GlideRecord(table);
        if (!gr.isValid())
            return;

        if (RhinoEnvironment.useSandbox() && !gr.canDelete())
            return;
```

When to use:

Script Includes

1. *Create* commonly used helper **functions**
2. *Call* a custom **function** via GlideAjax

Script Includes

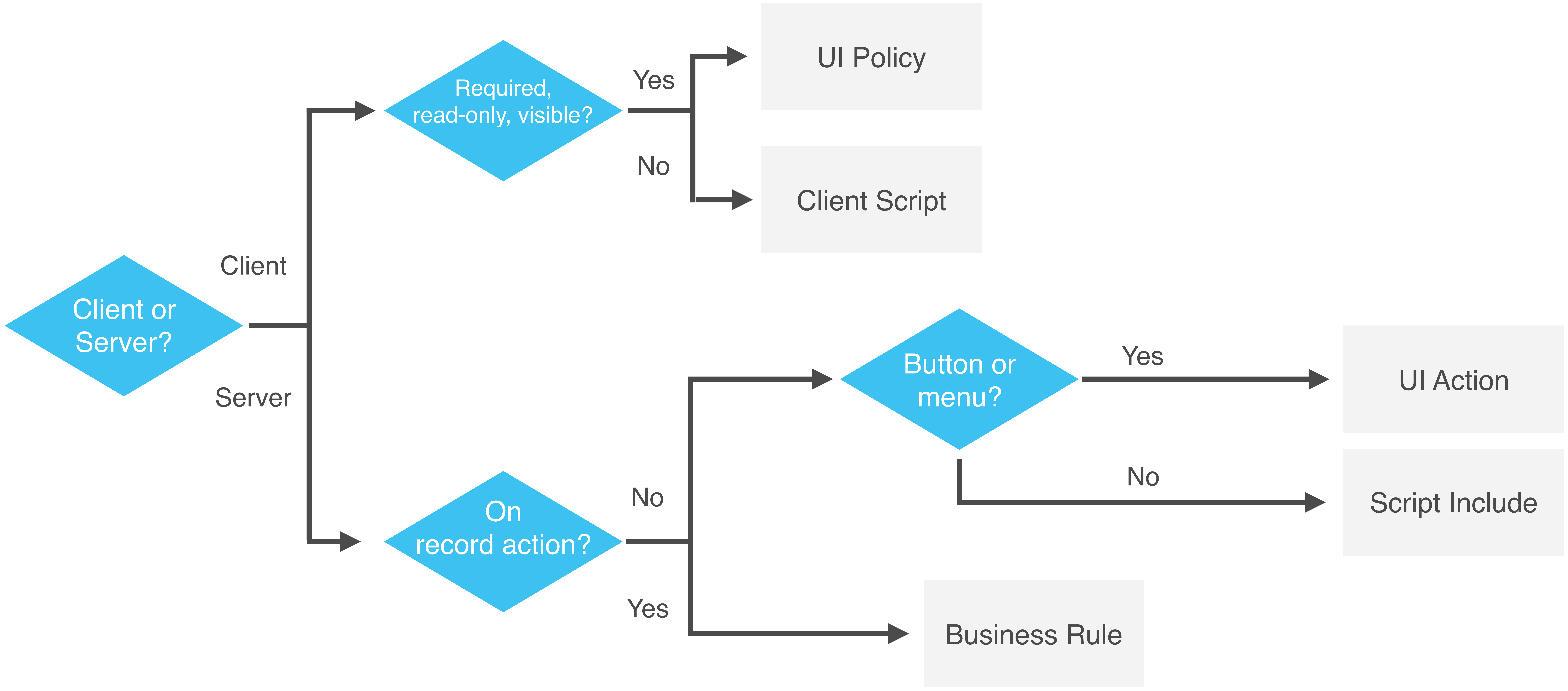
Demo

Client-Side vs Server-Side Revisited

- Client Scripts
- UI Policies
- UI Actions

- Business Rules
- Script Includes
- UI Actions
- Data Policies

Where to Customize



Update Sets

- Record most customizations & configurations
- Used for moving changes from instance to instance
- XML *snapshot* of record
- Versions & merging
- Previewing & committing

Update Sets (cont.)

What's Captured

✓

- Customizations previously discussed
- Tables & fields
- Reports
- Workflows
- Forms

What's Not Captured

✗

- Data, new records
- Configuration Items
- Schedules
- Users
- Groups

Plugins

- Activate plugins at any time
- May require subscriptions
- Hundreds of plugins
- Demo data

Update Sets & Plugins

Demo

Demo