

# Create a New Class

## Lab 8.2

20-25 minutes

### Lab objective

You will perform the following in this lab:

- Create a new Class to implement Asset Management.

### Background Information

The concept for this lab comes from a requirement many customers request when implementing Asset Management. Every organization has their specific Asset Management strategy, but for the purpose of this lab, this is the scenario you will practice using existing demo data:

The Asset Location picker only shows relevant locations based on Asset Manager roles:

- Local-level Asset Managers can assign Configuration Items to locations in their assigned Regions.
- Company-level Asset Managers can assign Configuration Items to their own corporate locations.
- System Administrators can assign Configuration Items to all locations.

This lab presumes the following regarding the demo data in the **Locations**

**[cmn\_location]** table:

- Corporately owned locations are identified using an ACME organization in the **Company [company]** field. Non-corporate locations listed in the *Locations* table are never identified as an ACME company.
- Corporate locations are grouped by Regions. The **Parent [parent]** field in the *Location* table is used to identify a location's Region. Non-corporate locations listed in the *Locations* table are never assigned to a Region.
- Only users with the proper permissions have 'edit' access to the Location field in Configuration Item records.

These new Groups and Roles have already been created in the platform for this lab. Users have also been added to each group for testing purposes.

Group: **Asset Managers – New York**  
Role: **asset\_mgr\_local**  
User: **Luke Wilson**

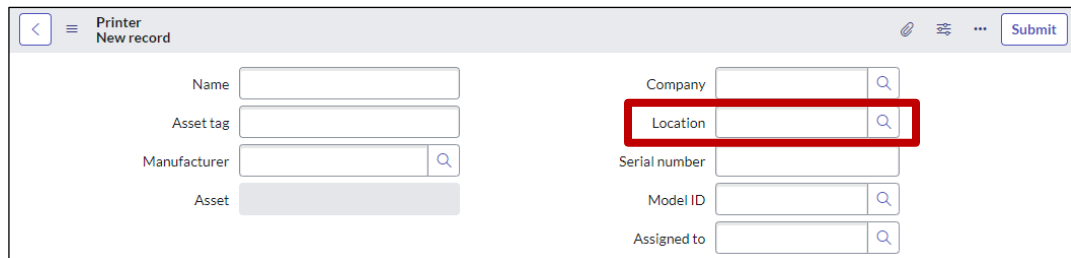
Group: **Asset Managers – Corporate**  
Role: **asset\_mgr\_corporate**  
User: **Howard Johnson**

## A. Preparation

1. Navigate to **Configuration > Base Items > Printers**.

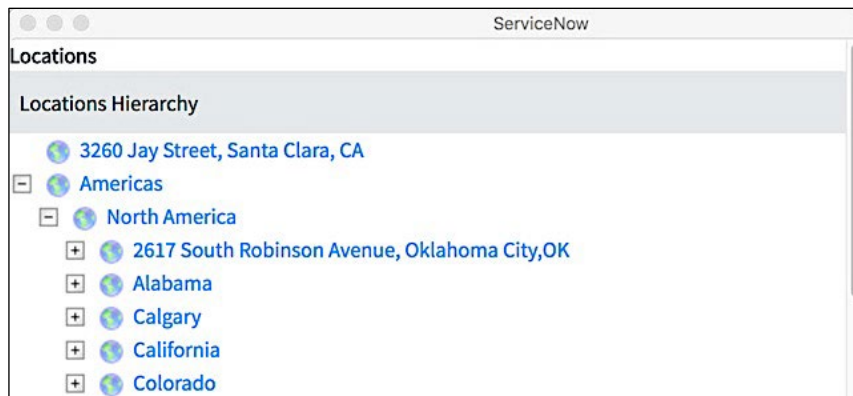
**Hint:** Consider saving this module as a **Favorite** since you will be navigating here often during this lab.

2. Select **New**.
3. Add the **Location** field to the form.

A screenshot of the ServiceNow 'Printer New record' form. The form has a header bar with a back arrow, a menu icon, the text 'Printer New record', and a 'Submit' button. Below the header, there are several input fields arranged in two columns. The left column contains 'Name', 'Asset tag', 'Manufacturer', and 'Asset'. The right column contains 'Company', 'Location', 'Serial number', 'Model ID', and 'Assigned to'. Each field has a magnifying glass icon to its right. The 'Location' field is highlighted with a red rectangular border.

4. Select the magnifying glass to the right of the **Location** field.

**Note:** Notice every location is available for selection. Close this pop-up window when you are ready to proceed.



## B. Write the Script Include to Restrict Location Selections

1. Create a new Script Include.

Name: **LocationsByRole**

Accessible from: **All application scopes**

Description: **Lab 8.2 Restrict Location Options**

2. Write the script.

```
1  var LocationsByRole = Class.create();
2  LocationsByRole.prototype = {
3    initialize: function() {
4      //retrieve the logged-in user's 'User [sys_user]' record
5      this.loggedInUser = new GlideRecord('sys_user');
6      this.loggedInUser.get(gs.getUserID());
7    },
8
9    forCMDB: function() {
10     var refQual = "";
11     if (gs.hasRole('admin')) {
12       //Admins may assign CIs to All locations
13       refQual += "^EQ";
14     }
15     if (gs.hasRole('asset_mgr_local')) {
16       //Users with this role may assign CIs to local locations
17       refQual += "parent=" + this.loggedInUser.location.parent + "^EQ";
18     }
19     if (gs.hasRole('asset_mgr_corporate')) {
20       //Users with this role may assign CIs to corporate locations
21       refQual += "company=" + this.loggedInUser.location.company + "^EQ";
22     }
23     return refQual;
24   },
25   type: 'LocationsByRole'
26 };;
```

3. Select **Submit**.

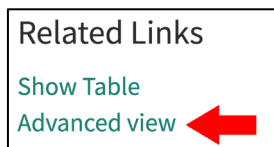
## C. Configure the Location's Reference Qualifier to Call the Script Include

1. Navigate to **Configuration > Base Items > Printers**.
2. Select **New**.
3. Right-click the Location field's label and select **Configure Dictionary**.
4. The record is read-only as the *Location [location]* field does not exist in the Printer [cmdb\_ci\_printer] table. The hierarchy for this table in the platform is **Base Configuration Items [cmdb] > Configuration Items [cmdb\_ci] > Printer [cmdb\_ci\_printer]**.

Select the **Click here** link in the InfoMessage at the top of the form to open the *Dictionary Entry* record for the *Location [location]* field in the *Base Configuration Items [cmdb]* table. The record opens in a new browser window.

① This cloned descendant element is read-only [Click here](#) to open editable first element (cmdb.location) in a new window. ✕

5. Select the Advanced **view** Related Link.



6. Configure the fields on the Reference **Specification** tab.

User reference qualifier: **Advanced**

Reference qual: **javascript:new LocationsByRole().forCmdb()**

Reference Specification

The Reference field specifies what table this field displays values from.

\* Reference Location

Use reference qualifier Advanced

Reference qual javascript:new LocationsByRole().forCmdb()

**Note:** The Scope name is not required if the Script Include is in the same scope as the Dictionary Entry record. **javascript:new global.LocationsByRole().forCmdb()** works as well.

7. While you are in the Location's Dictionary Entry record, take a minute to also disable the legacy Tree picker. (The List view is a better strategy for locating Locations quickly as it offers the use of the Condition builder to query the list.)

On the **Attributes** Related List, update the Tree picker's Value field to **false**.

Access Controls Choices Attributes (3) Labels (711) Dictionary Overrides

Attribute Search

Dictionary entry = Location

Attribute	Value
Tree picker	false
Edge Encryption Enabled	true
Encode UTF8	true

8. Select **Update**.
9. Close the browser tab you are currently on and return to the original browser tab displaying the full view of the platform.

## D. Test Your Work

1. Navigate to **Configuration > Base Items > Printers**.

2. Select **New**.

3. Select the magnifying glass to the right of the **Location** field.

Notice a *List* view replaces the *Tree picker* view.

Scroll to the bottom of the window. Record the total number of records: \_\_\_\_\_. If you did not add any Locations to the baseline demo data, there should be ~426 records in the list.

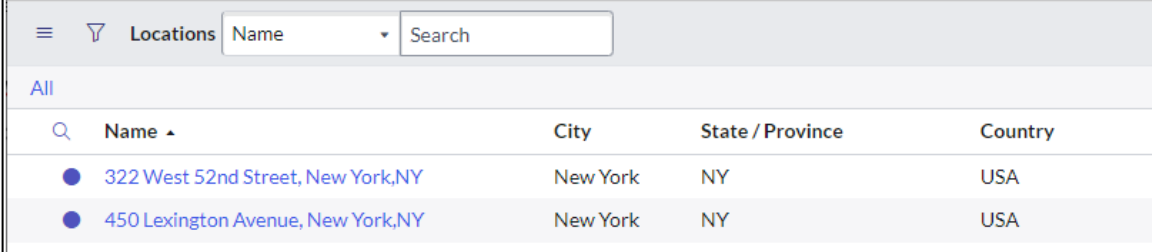
4. Impersonate **Luke Wilson**, a member of the *Asset Managers – New York Group* with the *asset\_mgr\_local* Role and his Parent Location (Region) is *New York*.

5. Navigate to **Configuration > Base Items > Printers**.

6. Select **New**.

7. Select the magnifying glass to the right of the **Location** field.

Notice only the two New York locations are available for selection. If not, debug and re-test.



Name	City	State / Province	Country
322 West 52nd Street, New York,NY	New York	NY	USA
450 Lexington Avenue, New York,NY	New York	NY	USA

8. Impersonate **Howard Johnson**, a member of the *Asset Managers – Corporate Group* with the *asset\_mgr\_corporate* Role and his Company is *ACME North America*.

9. Navigate to **Configuration > Base Items > Printers**.

10. Select **New**.

11. Select the magnifying glass to the right of the **Location** field.

Notice only North America corporate locations are available for selection. To be sure, quickly scan through a few pages to confirm.

Also record the total number of records in the list now: \_\_\_\_\_. If you did not add any Locations to the baseline demo data, there should now be 372 records in the list. If not, debug and re-test.

12. End the impersonation. You should be logged in as the System Administrator when this step is complete.

## Lab Completion

Great job! You have successfully created and used a server-side Script Include. This strategy for restricting Locations was selected because it pushes the data to the client before the user even opens a form, thus eliminating a round-trip visit to the server that an onLoad() Client Script would require.