

Lab Guide

CreatorCon17 Pune: Advanced Service Portal Widget techniques

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Lab instance: <http://clabs.link/advanced-widget-pnq>

Default Login / Password:

admin / pnq-cc17

itil / pnq-cc17

employee / pnq-cc17

This
Page
Intentionally
Left
Blank

Lab Goal

In this lab we will create a list widget and then we will modify it to load data client side.

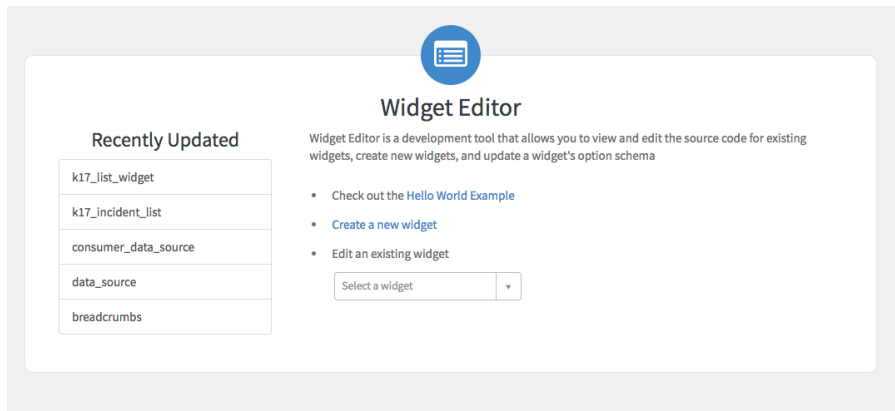
Lab 1.1 Create list widget

Log on to Your Training Instance.

1. Navigate to the unique instance URL provided to you.
2. Log on with provided credentials. Include periods at the end of your steps. Exclude the period if a step ends with text the student needs to copy and paste to prevent the period from being grabbed accidentally.

Create List Widget

1. Navigate to Service Portal > Service Portal Configuration.
2. Select **Widget Editor**
3. Select **Create a new widget**

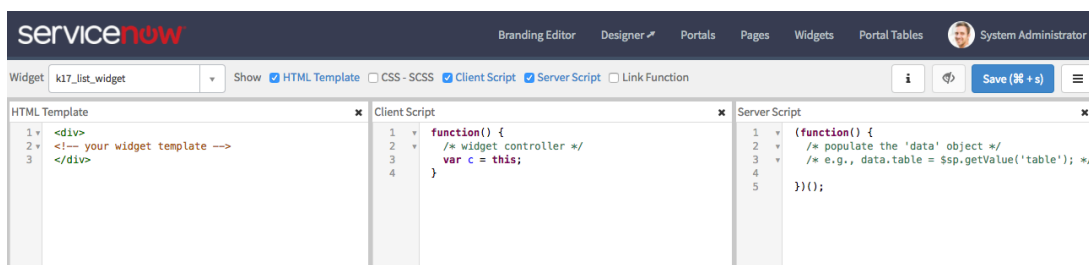


4. Enter the following information:

- Widget Name: k17_list_widget
- Widget ID: k17_list_widget
- Create Test Page: checked
- Page Id: k17_list_widget

5. Click the **Submit** button.

6. Your Screen should look like this



Enter Widget Information

1. Enter the following information in the Server Script Window:

```
(function () {  
    /* populate the 'data' object */  
    /* e.g., data.table = $sp.getValue('table'); */  
  
    //define the variable to hold our list  
    data.list = [];  
  
    //Query the table  
    var gr = new GlideRecord('incident');  
    gr.addQuery('active', true);  
    gr.query()  
    while (gr.next()) {  
        //load values into object  
        var record_obj = {};  
        record_obj.number = gr.number.getDisplayValue();  
        record_obj.short_description = gr.short_description.getDisplayValue();  
        record_obj.priority = gr.priority.getDisplayValue();  
        record_obj.category = gr.category.getDisplayValue();  
        //add object to the list  
        data.list.push(record_obj);  
    }  
})();
```

2. Enter the following information in the HTML template box

```
<div class="panel panel-default">  
<!-- your widget template -->  
    <div class="panel-heading">  
        K17 List Widget  
    </div>  
    <div class="panel-body">  
        <ul class="list-group">  
            <li class="list-group-item" ng-repeat="item in c.data.list">{{item.number}} -  
            {{item.short_description}} - {{item.priority}}</li>  
        </ul>  
    </div>  
</div>
```

3. Click Save

4. Navigate to [your instance] .service-now.com/sp_config/?id=k17_list_widget and check your results

K17 List Widget	
INC0000002 - Unable to get to network file shares - 1 - Critical	
INC0000003 - Wireless access is down in my area - 1 - Critical	
INC0000007 - Need access to sales DB for the West - 1 - Critical	
INC0000015 - I can't launch my VPN client since the last software update - 1 - Critical	
INC0000016 - Rain is leaking on main DNS Server - 1 - Critical	
INC0000017 - How do I create a sub-folder - 1 - Critical	
INC0000018 - Sales forecast spreadsheet is READ ONLY - 1 - Critical	
INC0000019 - Can't launch 64-bit Windows 7 virtual machine - 2 - High	
INC0000020 - I need a replacement iPhone, please - 5 - Planning	
INC0000025 - I need more memory - 1 - Critical	
INC0000027 - Please remove the latest hotfix from my PC - 2 - High	
INC0000029 - I can't get my weather report - 5 - Planning	
INC0000031 - When can we get off Remedy? UI is killing us - 1 - Critical	
INC0000037 - Request for a new service - 3 - Moderate	
INC0000039 - Trouble getting to Oregon mail server - 5 - Planning	
INC0000040 - JavaScript error on hiring page of corporate website - 3 - Moderate	
INC0000041 - My desk phone does not work - 3 - Moderate	
INC0000044 - Can't log into SAP from my laptop today - 2 - High	
INC0000046 - Can't access SFA software - 3 - Moderate	
.....	

Load data client side

1. Navigate back to the widget editor
2. Modify the Server Script to look like this

```
(function() {  
    /* populate the 'data' object */  
    /* e.g., data.table = $sp.getValue('table'); */  
  
    if(input){  
        //define the variable to hold our list  
        data.list = [];  
  
        //Query the table  
        var gr = new GlideRecord('incident');  
        gr.addQuery('active', true);  
        gr.query()  
        while (gr.next()) {  
            //load values into object  
            var record_obj = {};  
            record_obj.number = gr.number.getDisplayValue();  
            record_obj.short_description =  
gr.short_description.getDisplayValue();  
            record_obj.priority = gr.priority.getDisplayValue();  
            record_obj.category = gr.category.getDisplayValue();  
            //add object to the list  
            data.list.push(record_obj);  
        }  
    }  
})();
```

3. Enter the following information in the Client Script

```
function($scope) {  
    /* widget controller */  
    var c = this;  
    c.data.loading = true;  
  
    $scope.server.update().then(function(){  
        c.data.loading = false;  
    })  
}
```

4. Modify the html template to look like this

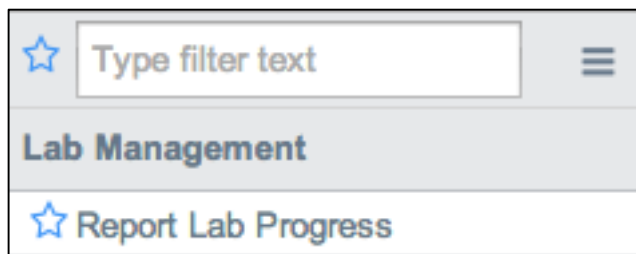
```
<div class="panel panel-default">
<!-- your widget template -->
  <div class="panel-heading">
    K17 List Widget
  </div>
  <div class="panel-body">
    <span ng-if="c.data.loading"><i class="fa fa-spinner fa-spin fa-3x fa-fw"></i>
      <span class="sr-only">Loading...</span></span>
    <ul class="list-group">
      <li class="list-group-item" ng-repeat="item in c.data.list">{{item.number}} -
        {{item.short_description}} - {{item.priority}}</li>
    </ul>
  </div>
</div>
```

5. Click **Save**

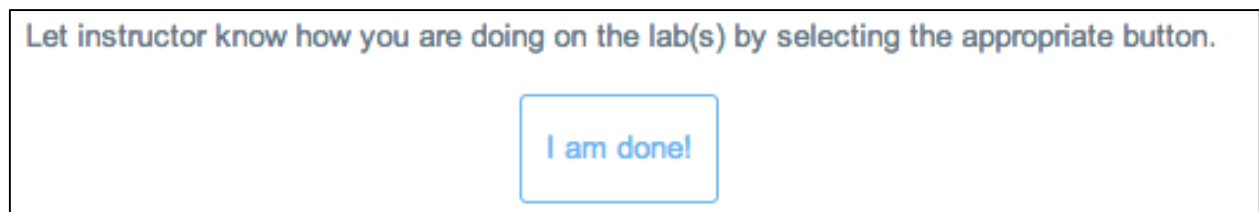
6. Navigate to [your instance] .service-now.com/sp_config/?id=k17_list_widget and check your results

Progress Report

1. Navigate to Lab Management> Report Lab Progress.



2. Click I am done!



Lab Goal

In this lab we will modify our list widget to make use of the REST API.

Lab 2.1 REST API

Modify List Widget.

1. Navigate to the widget editor and open the k17_list_widget.
2. Modify the Server Script to look like this

```
(function() {  
    /* populate the 'data' object */  
    /* e.g., data.table = $sp.getValue('table'); */  
  
})();
```

3. Modify the Client Script to look like this:

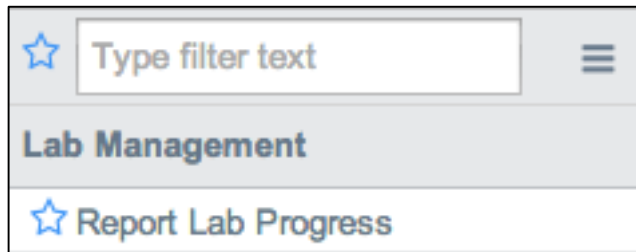
```
function($scope,$http) {  
    /* widget controller */  
    var c = this;  
    c.data.loading = true;  
  
    $http.get('/api/now/table/incident?sysparm_query=active%3Dtrue').success(function(response){  
        c.data.loading=false;  
        c.data.list = response.result;  
    })  
}
```

4. Click **Save**

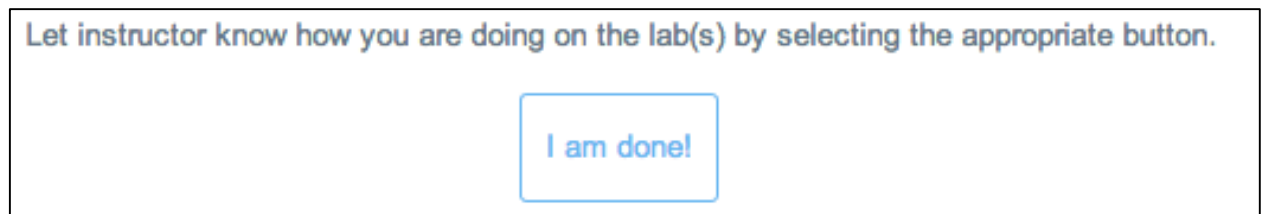
5. Navigate to [your instance].service-now.com/sp_config/?id=k17_list_widget and check your results

Progress Report

1. Navigate to **Lab Management> Report Lab Progress**.



2. Click I am done!



Lab Goal

In this lab we create 2 ng templates to be used by our widgets

Lab 3.1 NG Template

Create Templates.

1. Navigate to Service Portal > Widgets
2. Open the k17_list_widget.
3. Scroll to the bottom and select the Angular **ng-templates tab**
4. Click **New**
5. Enter the following information
 - ID: task-priority
 - Template:

```
<span>{{item.number}} - {{item.short_description}} - {{item.priority}}</span>
```

6. Click Submit
7. Scroll to the bottom and select the Angular **ng-templates tab**
8. Click **New**

9. Enter the following information

- ID: task-category
- Template:

```
<span>{{item.number}} - {{item.short_description}} - {{item.category}}</span>
```

10. Click **Submit**

Update List widget

1. Open the k17_list_widget using the widget editor
2. Modify the HTML template to look like this

```
<div class="panel panel-default">
<!-- your widget template -->
  <div class="panel-heading">
    K17 List Widget
  </div>
  <div class="panel-body">
    <span ng-if="c.data.loading"><i class="fa fa-spinner fa-spin fa-3x fa-fw"></i>
      <span class="sr-only">Loading...</span></span>
    <ul class="list-group">
      <li class="list-group-item" ng-repeat="item in c.data.list" ng-include="'task-
category'"></li>
    </ul>
  </div>
</div>
```

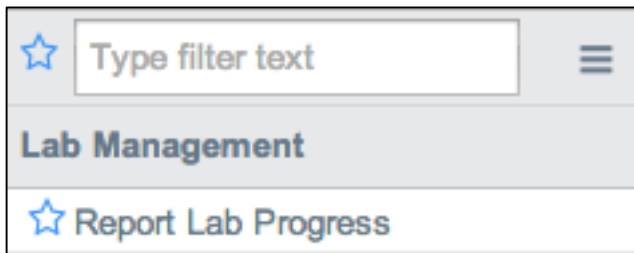
3. Click **Save**

4. Navigate to [your instance] .service-now.com/sp_config/?id=k17_list_widget and check your results

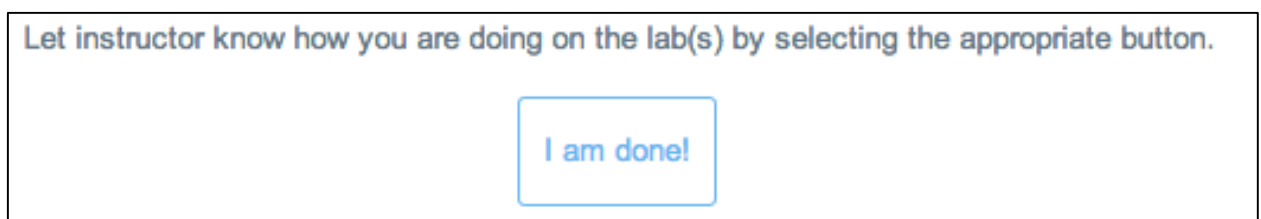
K17 List Widget	
INC0000002 - Unable to get to network file shares - network	
INC0000003 - Wireless access is down in my area - network	
INC0000007 - Need access to sales DB for the West - database	
INC0000015 - Can't connect to my VPN client since the last software update - software	
INC0000016 - Rain is leaking on main DNS Server - hardware	
INC0000017 - How do I create a sub-folder - inquiry	
INC0000018 - Sales forecast spreadsheet is READ ONLY -	
INC0000019 - Can't launch 64-bit Windows 7 virtual machine - software	
INC0000020 - I need a replacement iPhone, please - inquiry	
INC0000025 - I need more memory - hardware	
INC0000027 - Please remove the latest hotfix from my PC - software	
INC0000029 - I can't get my weather report - inquiry	

Progress Report

1. Navigate to **Lab Management> Report Lab Progress**.



2. Click I am done!



Lab Goal

In this lab we will define options for our widget

Lab 4.1 Widget Options


Add out of box options

1. Navigate to Service Portal > Widgets
2. Open the k17_list_widget.
3. Click on the lock icon next the **Fields** field
4. Add the following fields:
 - Title
 - Bootstrap Color
5. Click **Update**

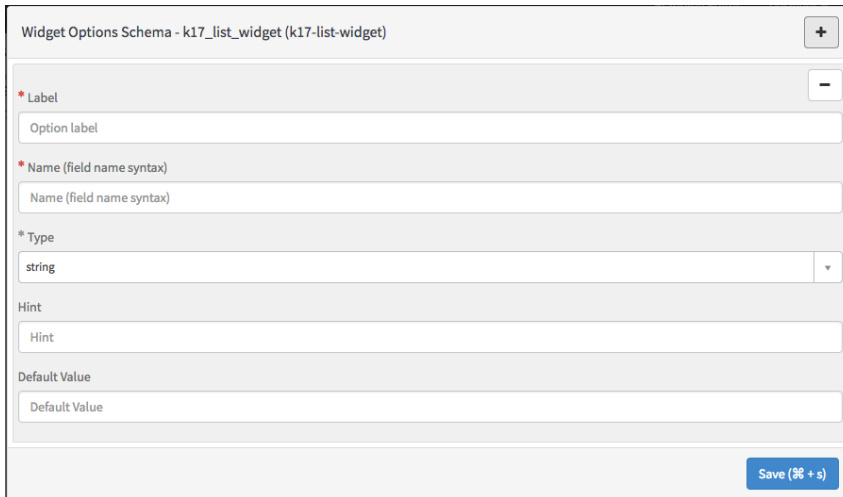
Modify list widget

1. Open the k17_list_widget using the widget editor.
NOTE: If you had the editor open, refresh it before continuing.




2. Click on the  icon in the top right corner
3. Select Edit Option Schema

4. Click on the  icon in the top right corner on of the modal window



5. Enter the following information

- Label: Table
- Name: table
- Type: String
- Default Value: incident

6. Click on the  icon in the top right corner on of the modal window

7. Enter the following information

- Label: Query
- Name: query
- Type:string
- Default Value: leave empty

8. Click on the  icon in the top right corner on of the modal window

9. Enter the following information

- Label: Template
- Name: template
- Type:string
- Default Value: leave empty

10. Click **Save**

11. Modify Client Script to look like this

```
function($scope,$http) {
  /* widget controller */
  var c = this;
  c.data.loading = true;
  c.data.table = c.options.table || "incident";
  c.data.query = c.options.query || "";
  c.data.template = c.options.template || "task-category";
  $http.get('/api/now/table/'+c.data.table+'?sysparm_query='+c.data.query).succ
ess(function(response){
    c.data.loading=false;
    c.data.list = response.result;
  })
}
```

12. Modify HTML Template to look like this

```
<div class="panel panel-{{c.options.color}}">
<!-- your widget template -->
  <div class="panel-heading">
    {{c.options.title}}
  </div>
  <div class="panel-body">
    <span ng-if="c.data.loading"><i class="fa fa-spinner fa-spin fa-3x fa-
fw"></i>
      <span class="sr-only">Loading...</span></span>
    <ul class="list-group">
      <li class="list-group-item" ng-repeat="item in c.data.list" ng-
include="c.data.template"></li>
    </ul>
  </div>
</div>
```

13. Click **Save**

14. Navigate to [your instance] .service-now.com/sp_config/?id=k17_list_widget

15. Press **“Control” right click** on top of your widget

16. Select Instance Options

'k17_list_widget' generated in : 0.003

Instance Options

Instance in Page Editor ✎

Page in Designer ✎

Edit Container Background

Widget Options Schema


Widget in Form Modal

Widget in Editor ✎

Log to console: \$scope.data

Log to console: \$scope

17. Enter the following information

☰ K17 List Widget 

Title

K17 List Widget

Bootstrap color

Primary ▼

Table

change_request

Query

priority=1

template

Save (⌘ + s)

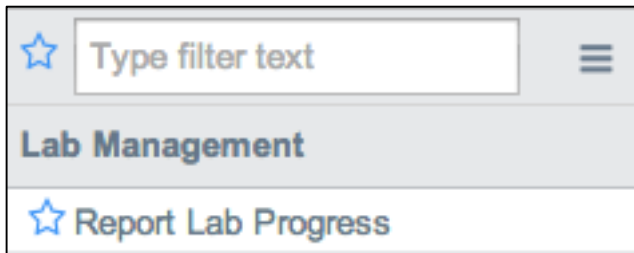
18. Click **Save**

19. Check your results

K17 List Widget	
CHG0000003 - Roll back Windows SP2 patch - Software	
CHG0000008 - Install new Cisco - Hardware	
CHG0000009 - Apply patches 10.2.0.1 to 10.2.0.3 - Software	
CHG0001007 - Physical breach of office - Other	
CHG0001012 - unauthorized data export - Other	
CHG0001023 - Possible "Deep Panda" IOC - Other	
CHG0001025 - Active attack on vulnerability - Other	

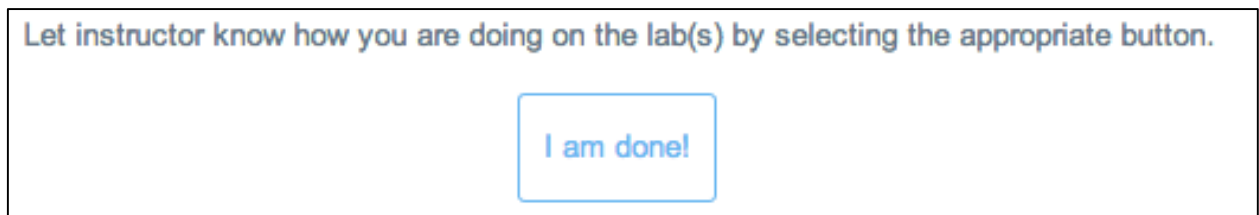
Progress Report

1. Navigate to **Lab Management> Report Lab Progress**.



A screenshot of a navigation menu. At the top is a search bar with a blue star icon on the left, the placeholder text "Type filter text" in the center, and a blue hamburger menu icon on the right. Below the search bar is a grey header bar with the text "Lab Management" in bold. Underneath the header bar is a white button with a blue star icon and the text "Report Lab Progress".

2. Click I am done!



A screenshot of a message box. At the top, it says "Let instructor know how you are doing on the lab(s) by selecting the appropriate button." Below this text is a large, light blue rectangular button with a thin blue border and the text "I am done!" in blue.

Lab Goal

In this lab we will create a record watcher so our widget is automatically updated without having to refresh the page

Lab 5.1 Record Watchers

Set up record watcher

1. Open the k17_list_widget using the widget editor.
2. Modify the Client Script to look like this:

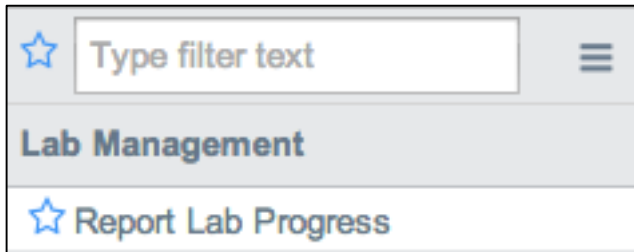
```
function($scope,$http,snRecordWatcher) {
  /* widget controller */
  var c = this;
  c.data.loading = true;
  c.data.table = c.options.table || "incident";
  c.data.query = c.options.query || "";
  c.data.template = c.options.template || "task-category";
  function getData(){
    $http.get('/api/now/table/'+c.data.table+'?sysparm_query='+c.data.query).succ
    ess(function(response){
      c.data.loading=false;
      c.data.list = response.result;
    })
  }
  getData();

  snRecordWatcher.initList(c.data.table, c.data.query);
  $scope.$on('record.updated', function(name, data) {
    getData();
  });
}
```

3. Click **Save**
4. Navigate to [your instance].service-now.com/sp_config/?id=k17_list_widget
5. How Many Changes are displayed?
6. Open a new window and open a new critical priority change request.
7. Go back to your widget window, is the new change request now showing?

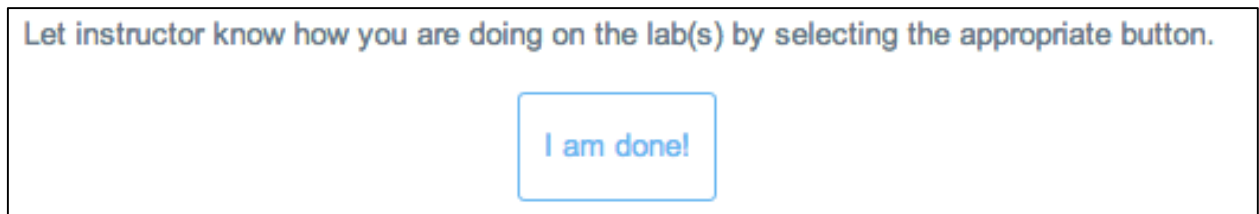
Progress Report

1. Navigate to **Lab Management> Report Lab Progress**.



A screenshot of a navigation menu. At the top is a search bar with a blue star icon on the left, the placeholder text "Type filter text" in the center, and a blue hamburger menu icon on the right. Below the search bar is a grey bar with the text "Lab Management" in bold. Below that is a white bar with a blue star icon and the text "Report Lab Progress".

2. Click I am done!



A screenshot of a message box. At the top, it says "Let instructor know how you are doing on the lab(s) by selecting the appropriate button." Below this text is a blue button with the text "I am done!" in white.

Lab Goal


In this lab we will modify our widget to broadcast an event and have another widget receive that event.

Lab 6.1 Broadcast events

Set up event

1. Open the k17_list_widget using the widget editor.
2. Modify the Client Script to look like this:

```
function($scope,$http,snRecordWatcher,$rootScope) {  
  /* widget controller */  
  var c = this;  
  c.data.loading = true;  
  c.data.table = c.options.table || "incident";  
  c.data.query = c.options.query || "";  
  c.data.template = c.options.template || "task-category";  
  function getData(){  
    $http.get('/api/now/table/'+c.data.table+'?sysparm_query='+c.data.query).succ  
    ess(function(response){  
      c.data.loading=false;  
      c.data.list = response.result;  
      $rootScope.$broadcast("K17ListWidgetUpdated",c.data.list);  
    })  
  }  
  getData();  
  
  snRecordWatcher.initList(c.data.table, c.data.query);  
  $scope.$on('record.updated', function(name, data) {  
    getData();  
  });  
}
```

3. Click **Save**
4. Click 
5. Select Create New Widget
6. Enter the following information:

- Widget Name: k17_count_display_widget
- Widget ID: k17_count_display_widget

7. Click Submit

8. Enter the following code in the HTML Template Field:

```
<div>
<!-- your widget template -->
  <h2 class="jumbotron">
    Total Records:{{c.data.count}}
  </h2>
</div>
```

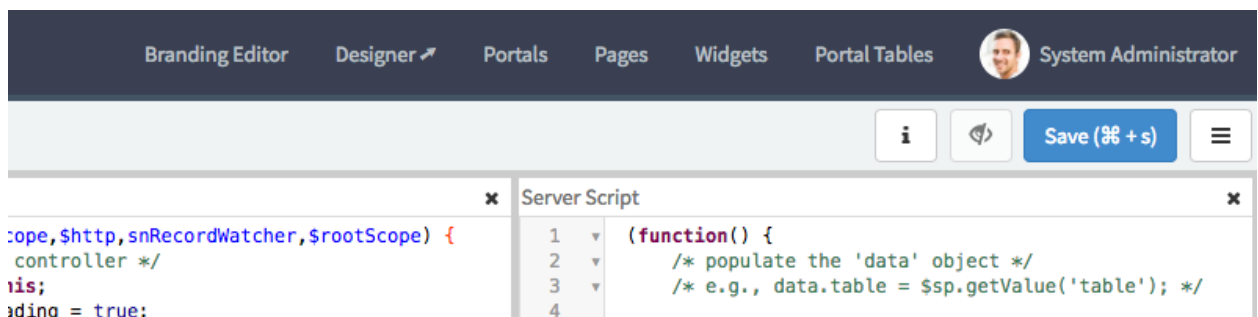
9. Enter the following code in the Client Script field:

```
function($scope) {
  /* widget controller */
  var c = this;
  c.data.count = 0;

  $scope.$on("K17ListWidgetUpdated",function(evt,results){
    console.log(results)
    c.data.count = results.length;
  })
}
```

10. Click **Save**

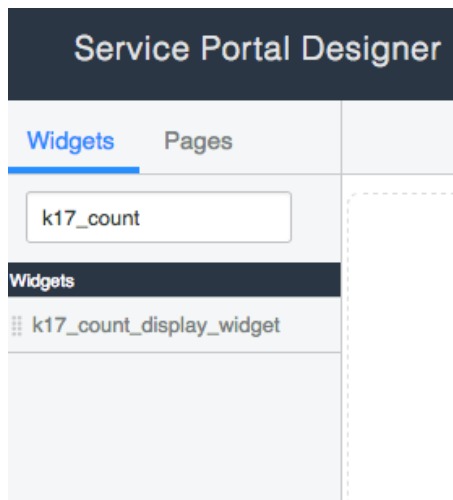
11. Click on the **Designer** Option in widget header menu



12. Use the filter to look for k17_list_widget Test Page

13. Select the Page

14. Use the filter to search for k17_count_display_widget



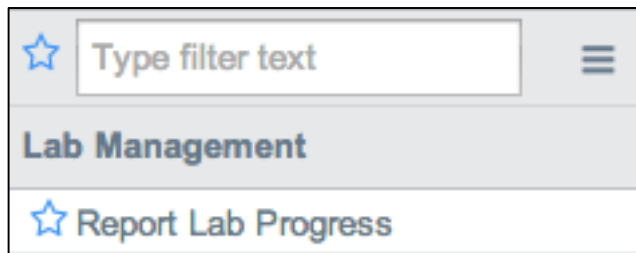
15. Drag and drop k17_count_display_widget above the k17 List Widget

16. Navigate to [your instance] .service-now.com/sp_config/?id=k17_list_widget

17. Is the count of records populating?

Progress Report

1. Navigate to **Lab Management**> **Report Lab Progress**.



2. Click I am done!

