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April 27–May 1, 2014 • Moscone Center • San Francisco, CA

Lab Guide

IT Cost Management

Dave Knight & Giora “GT” Tamir

Lab instance: https://**<<name>>**.lab.service-now.com

Login / Passwords:

admin / Knowledge14

itil / Knowledge14

employee / Knowledge14

Lab Goal

Create an automatic charge back to a user's department for mobile assets requested through the Service Catalog. In this lab, you will modify the workflow associated with mobile assets to create an expense line, create a new expense allocation rule to direct that expense to the user's department, and build a new report to see those charge backs.

Lab 1
Mobile Asset Charge Back

What is Graphical Workflow?

The Graphical Workflow engine automates multi-step processes. Each workflow generates a sequence of activities, such as generating records or running scripts, and transitions between them based on conditions.

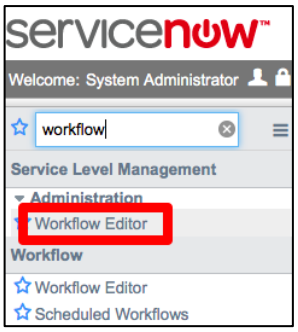
For each step in the workflow:
- An activity is processed; the behavior determined by the activity occurs.
- When the action completes, the workflow checks each of the activity's conditions.
- For each matching condition, the workflow follows the transition to the next activity.

When the workflow runs out of activities, the workflow is complete.

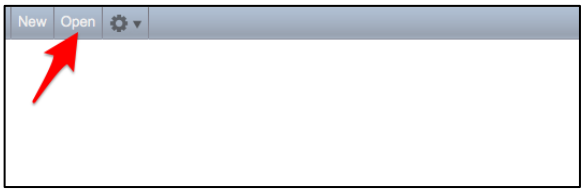
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Create the Expense Generation Workflow Activity

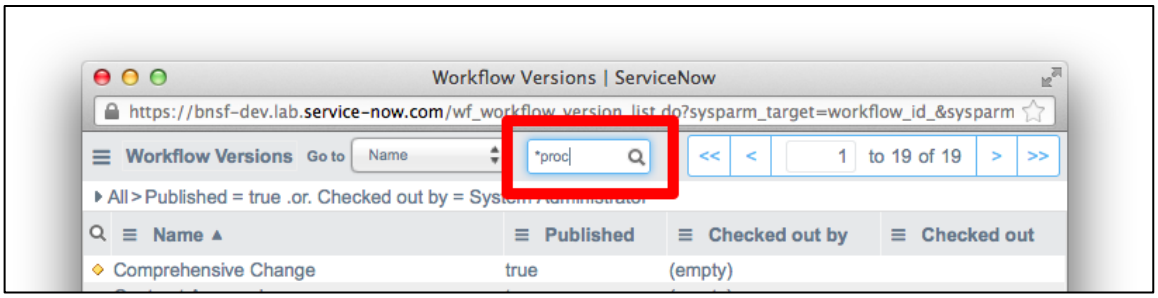
1. Navigate to **Service Level Management > Workflow Editor**.



2. Click **Open**.

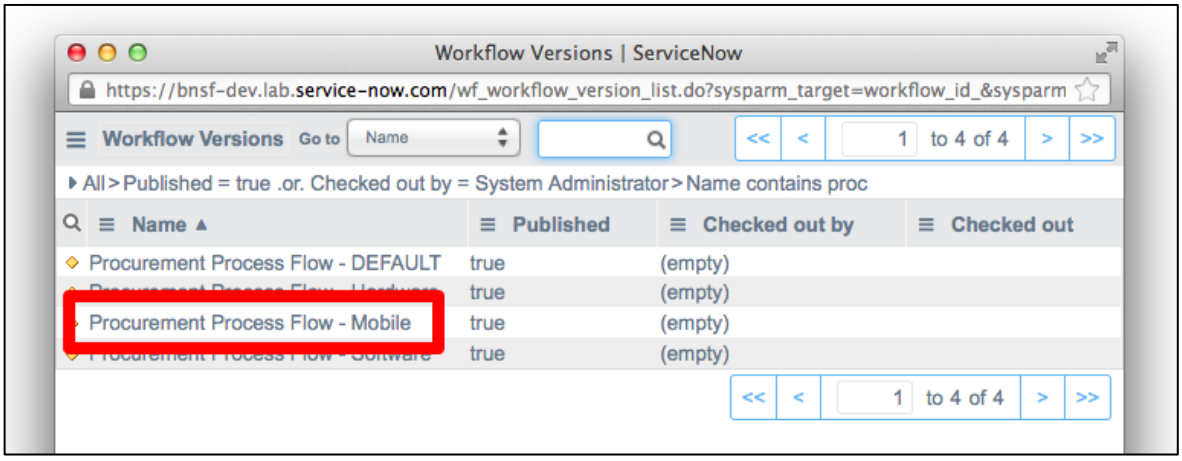


3. In the pop-up form, type ***proc** in the **Go to Name** search box.

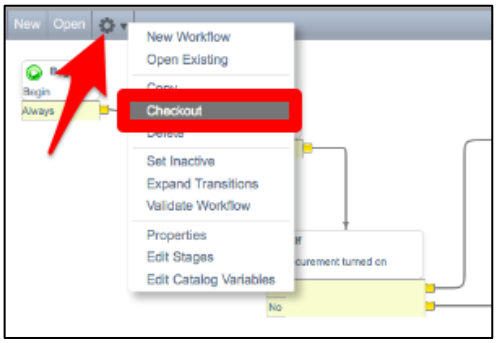


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4. Click **Procurement Process Flow – Mobile** workflow.



5. At the top-left corner of the browser, click the **Gear**, then click **Checkout**.



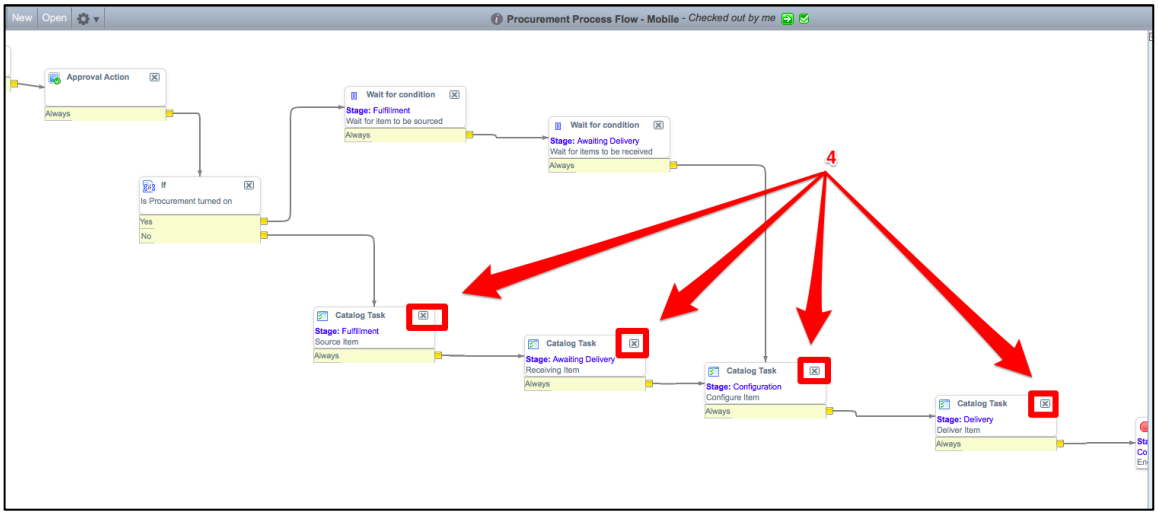
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The Workflow menu

Checkout: Creates a personal Workflow Version, which can be edited. Click Checkout to open an existing, published workflow for edit. This option only appears on the menu when the current workflow has been published.

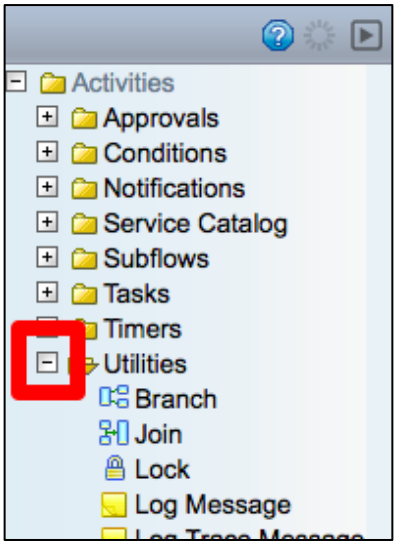
Publish: Makes the personal Workflow Version public, over-writing the current Published Workflow Version. Published workflows cannot be edited until checked out. This option only appears on the menu when the current workflow is checked out.

6. Click on the **X** for all Catalog Task activities in the workflow, deleting all four (**4**) of them. You may have to scroll the window to view the far right activity. Delete all four.

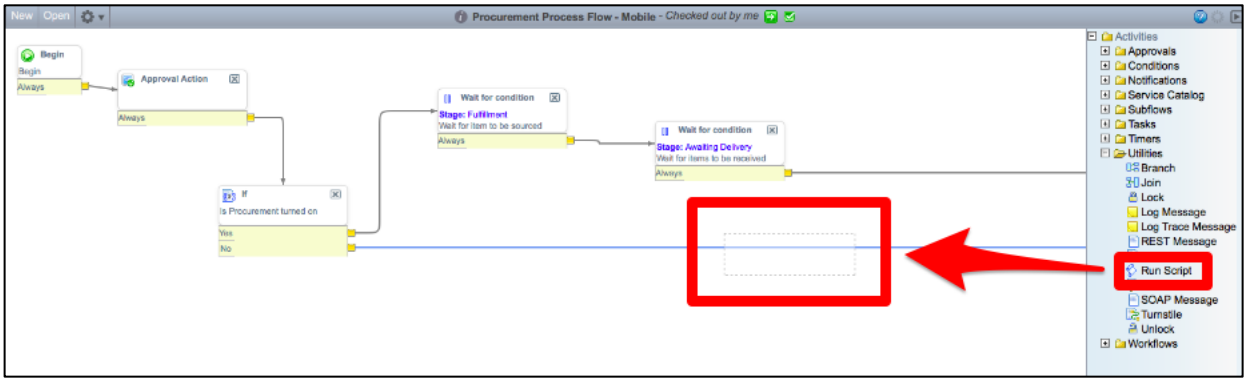


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7. On the right side of the browser, click the **Utilities** plus box to expand all of the contained activities. Do **NOT** click any activity under Utilities yet! (If you do, save that activity, and then delete it.)



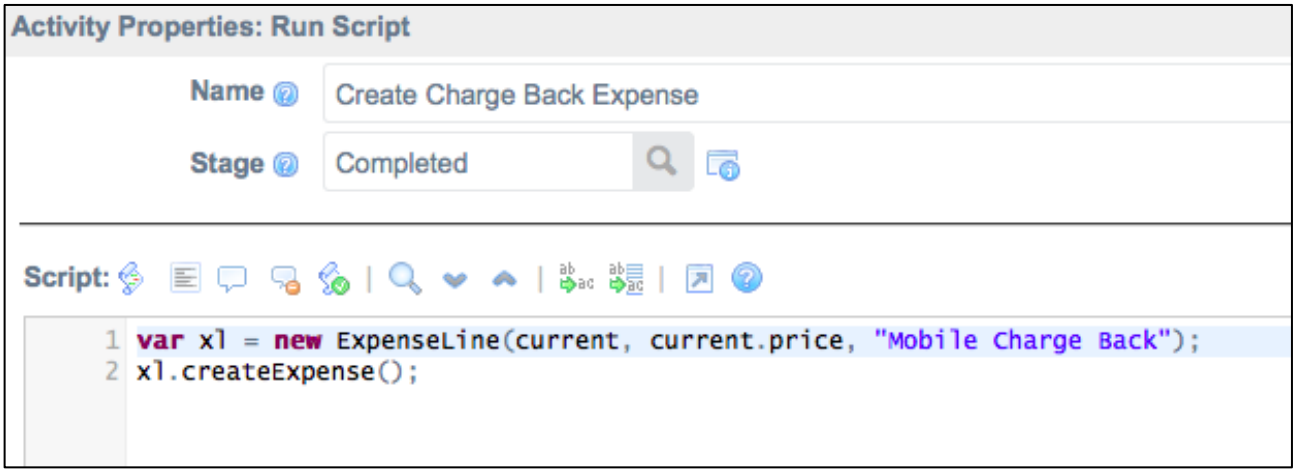
8. Click-and-drag the **Run Script** activity out onto the editor canvas, holding it over the line at the bottom of the workflow until the line turns **BLUE**, then release the mouse button.



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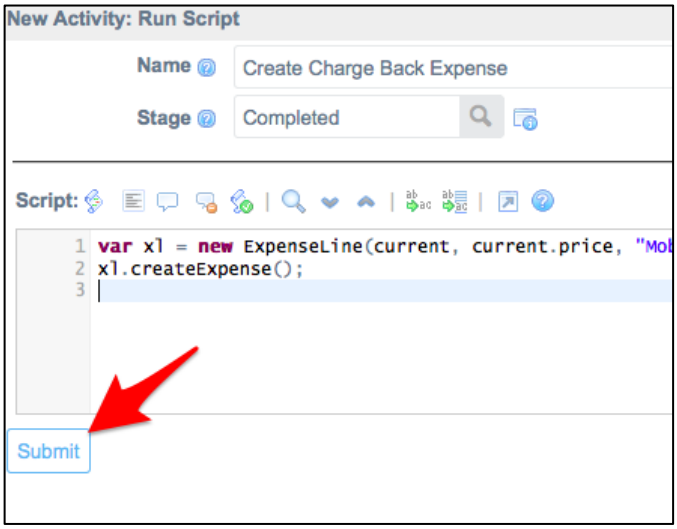
9. Type **Create Charge Back Expense** into the **Name** field, select **Completed** in the **Stage** field, and copy-and-paste the following two lines of JavaScript into the **Script** field –

```
var xl = new ExpenseLine(current, current.price, "Mobile Charge Back");
xl.createExpense();
```



See Knowledge article KB0010001 if unable to copy-and-paste.

10. Click **Submit**.

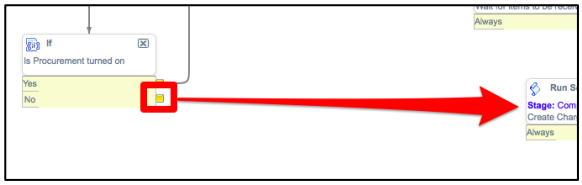


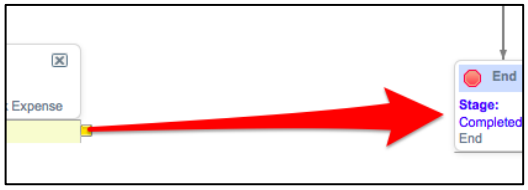
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11. Ensure the **Create Charge Back Expense** activity is connected to the workflow.

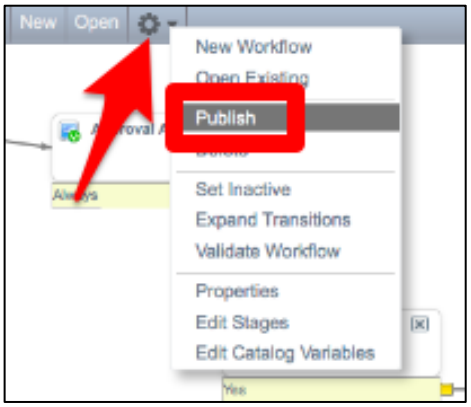


12. (Optional) Only if the activity is not connected (the line did not turn BLUE), click on the line passing under/by the activity, press the **Delete** key, click-and-drag from the **No** port of the **Is Procurement turned on** activity to the **Create Charge Back Expense** activity. Repeat the click-and-drag from **Create Charge Back Expense** activity to the **End** activity.





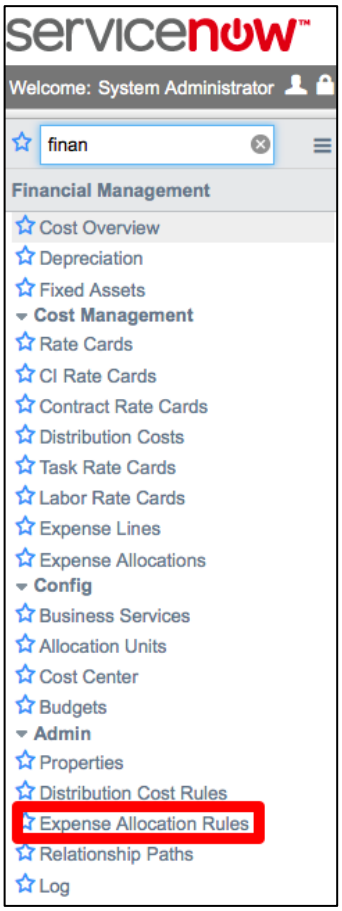
13. Click the **Gear**, then click **Publish**.



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Create the Expense Allocation Rule

1. Go back to the previous browser tab, and navigate to **Financial Management** > **Expense Allocation Rules**.

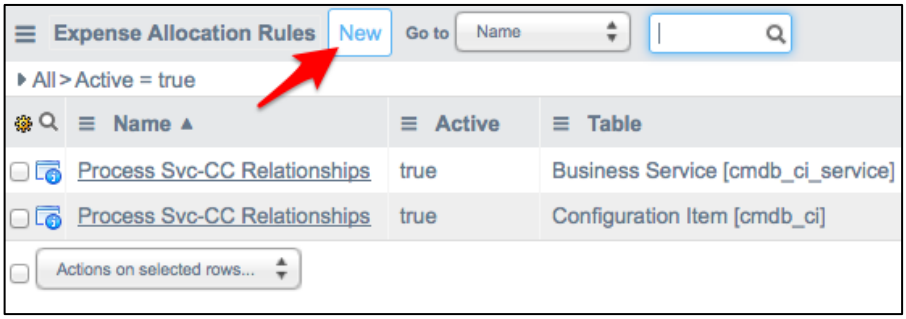


Expense Allocation Rules

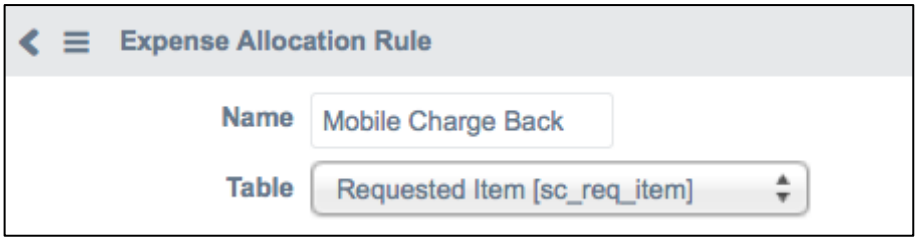
Expense allocation rules enable you to associate expenses with an item, such as a user, group, or department.

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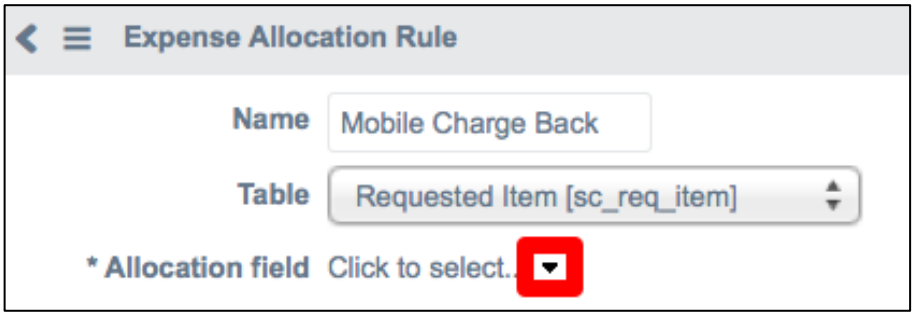
2. Click the **New** button.



3. Type **Mobile Charge Back** in the **Name** field, and select **Requested Item** in the **Table** field.

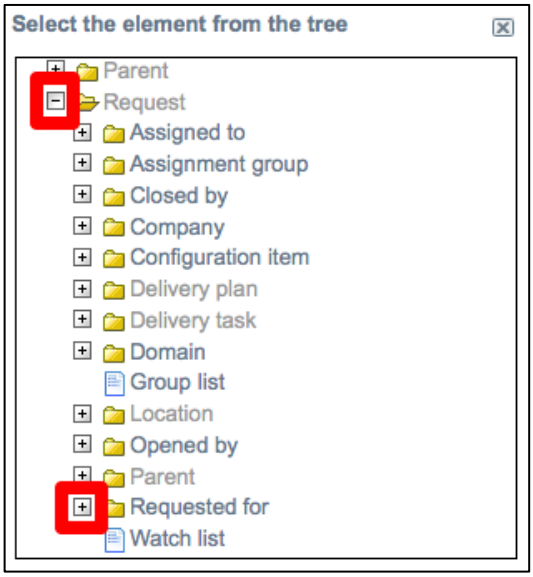


4. Click the triangle in the **Allocation field**.

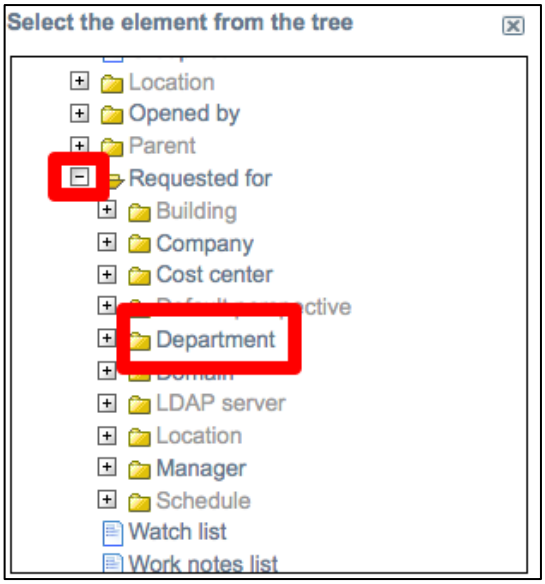


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5. Click the plus (**+**) to expand **Request**, then **Request > Requested for**.

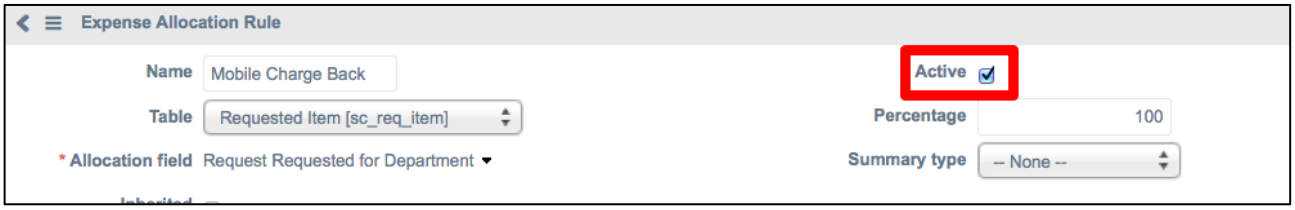


6. Click **Request > Requested for > Department**.

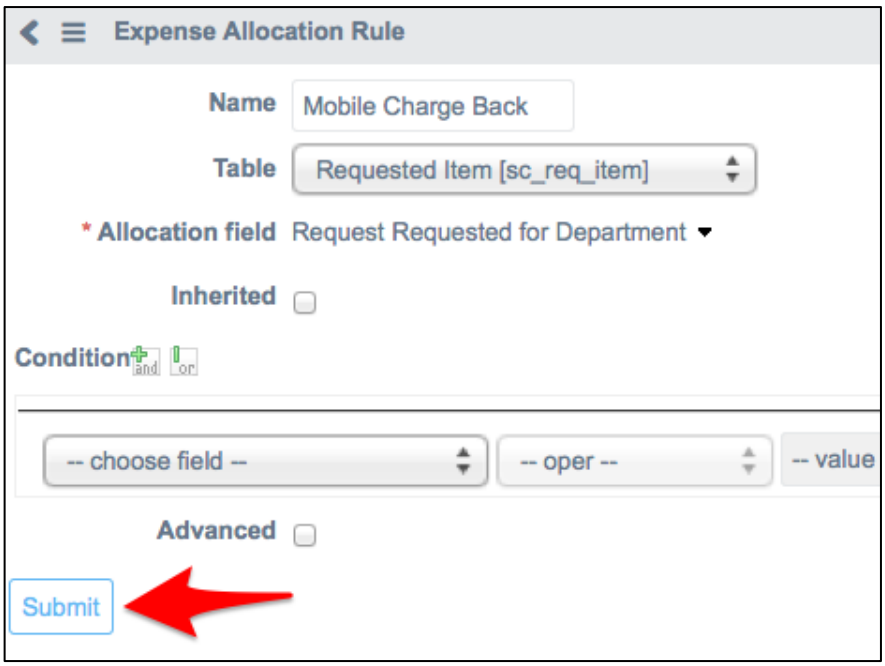


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7. Ensure the **Active** check box is selected.



8. Click **Submit**.



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Order Some Mobile Devices to Generate Charge Back Records

1. Click the **Head Silhouette** icon to impersonate Abel Tuter, a member of the Product Management department.

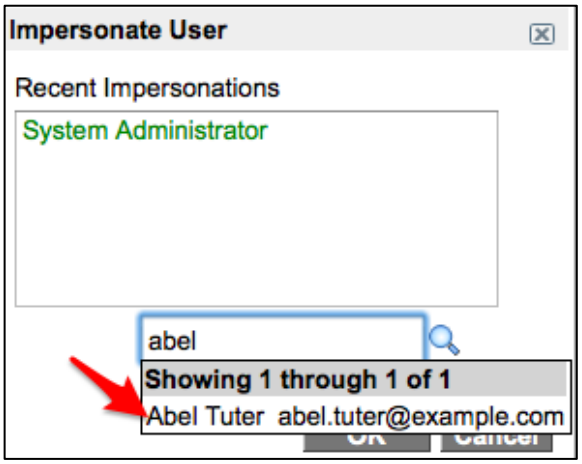


Impersonating a User

Administrators can impersonate other users for testing purposes. When impersonating another user, the administrator has access to exactly what that user would have access to in the system, including the same menus and modules. ServiceNow records anything the administrator does while impersonating another user as having been done by that user.

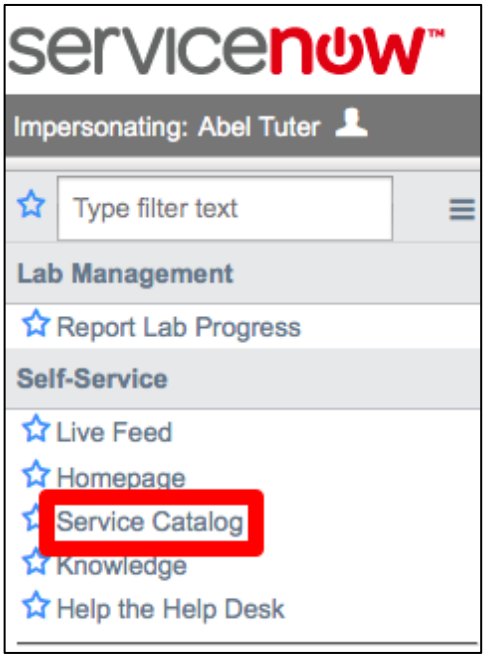
Use this feature to test what different users can do in the system and to perform actions for them in their stead.

2. Type **abel** in the **Lookup Box**, click **Abel Tuter**, then click **OK**.



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3. Navigate to **Self-Service > Service Catalog**.



Service Catalog

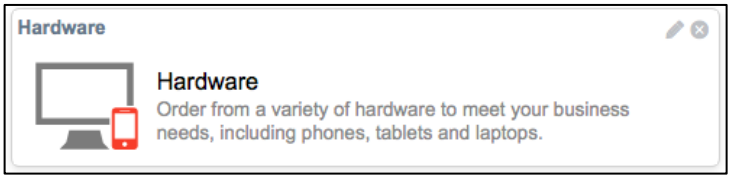
The Service Catalog application is a way for customers to order pre-defined, bundled goods and services from your IT organization or other departments. It offers a consistent and intuitive online ordering experience with as much flexibility as you need. The catalog is a structured commodity with its own description, fields, price, and execution schedule.

End users will see all the goods and services they can order (a new laptop, an office desk, business cards...), grouped into categories (IT, Facilities, Office and Printing...) and subcategories (Computer Hardware, Furniture and Decor, Document Services...).

Once an order is placed, the customer can track its progress against the execution plan. **Approvers** will authorize the order if necessary, and **Fulfillment Groups** perform any tasks related to item/service delivery, based on the tickets (work orders) generated by the order.

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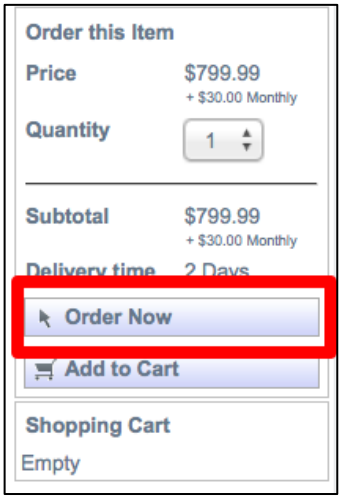
4. Click on **Hardware**.



5. Click the **Apple iPhone 5**.

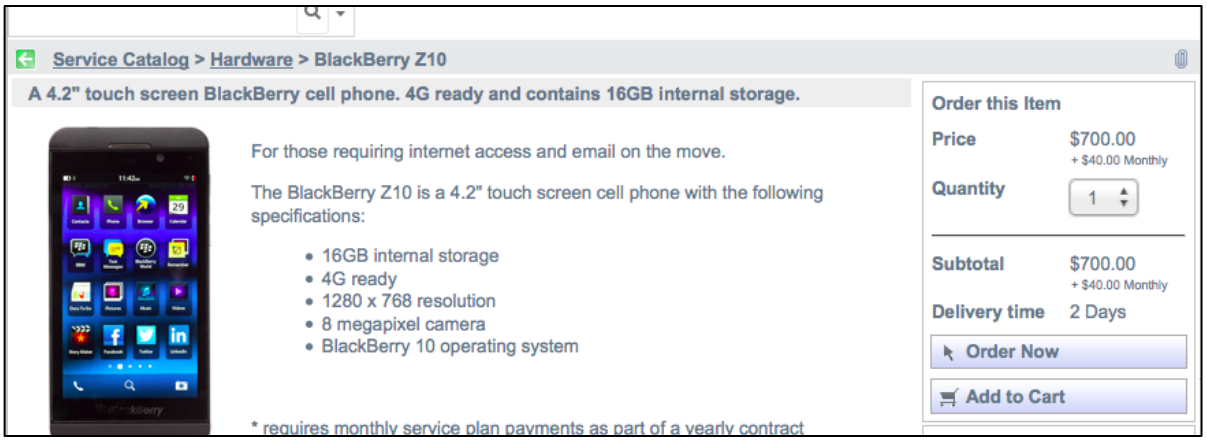


6. Click **Order Now**.



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7. Repeat steps 1 through 6 for **Adela Cervantsz**, a member of Customer Support. Order a BlackBerry Z10 this time (for a different price).



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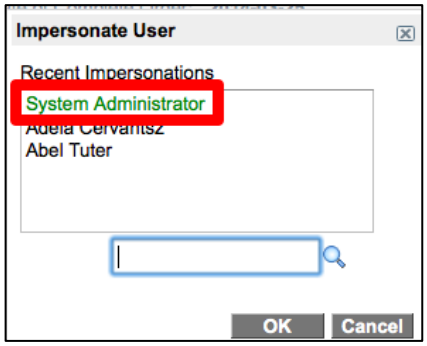
Create the Charge Back Report

Reports

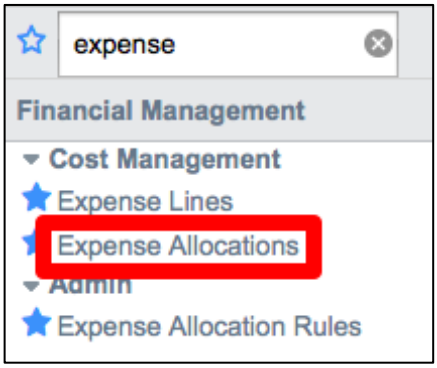
In ServiceNow, a report can be a list, chart, or calendar-based view of data in a particular table. ServiceNow also offers a range of predefined reports that pertain to applications and features like incident management and service catalog requests. If none of these meet your needs, you can create your own reports at any time. Use reports on homepages to display key information to different users. You can also publish reports to a URL that can be sent out through email.

1. Return to **System Administrator** persona (e.g., steps 1 and 2 in previous section), only double-click the green **System Administrator** under Recent Impersonations.



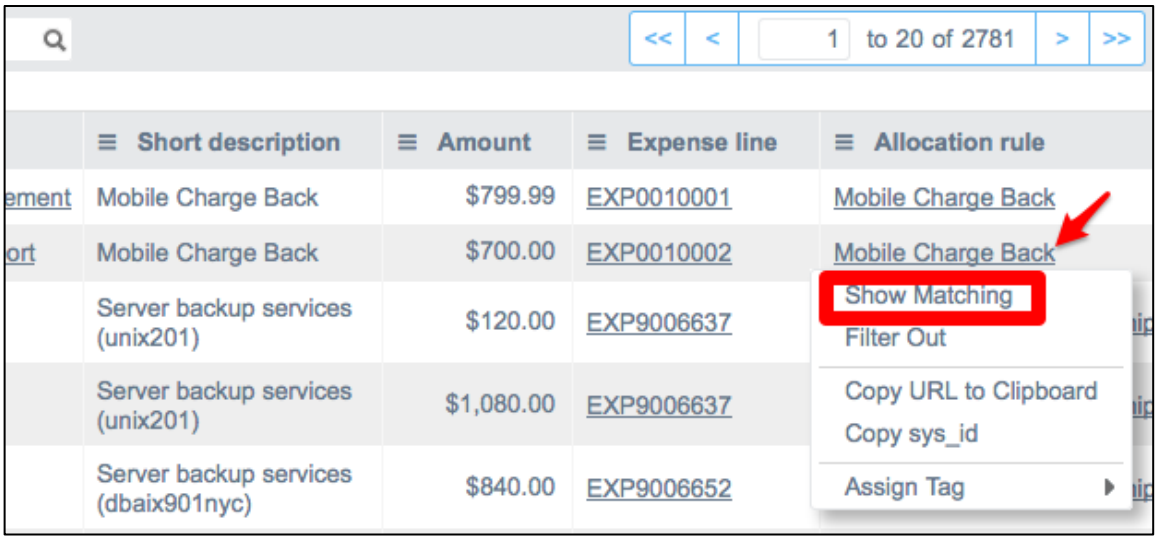


2. Navigate to **Financial Management > Expense Allocations**.

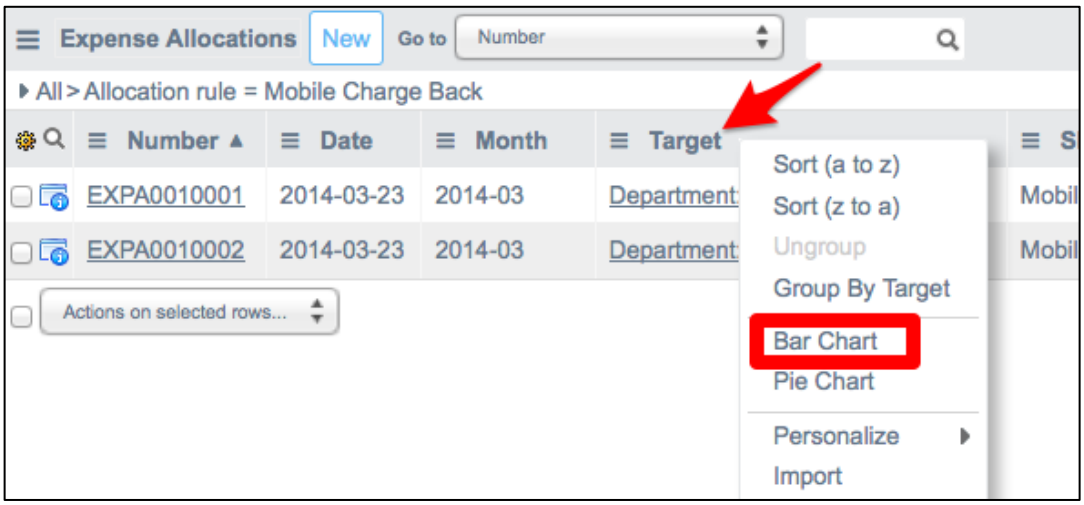


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3. In the right-most column, right-click on one of the **Allocation rule** fields that contain **Mobile Charge Back** (should be at the top of the list), and click **Show Matching**.

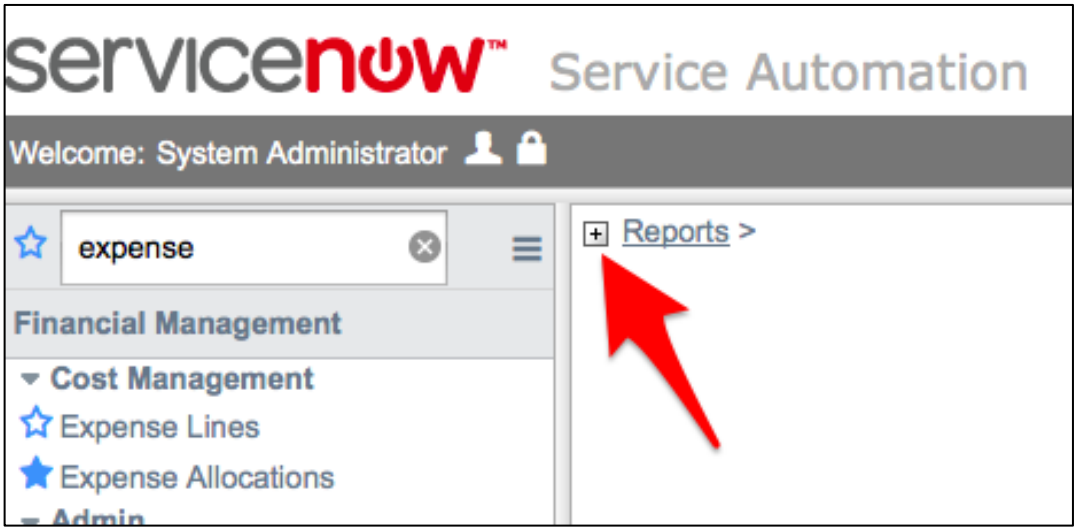


4. In the list header, right-click on the **Target** column header, and click **Bar Chart**.

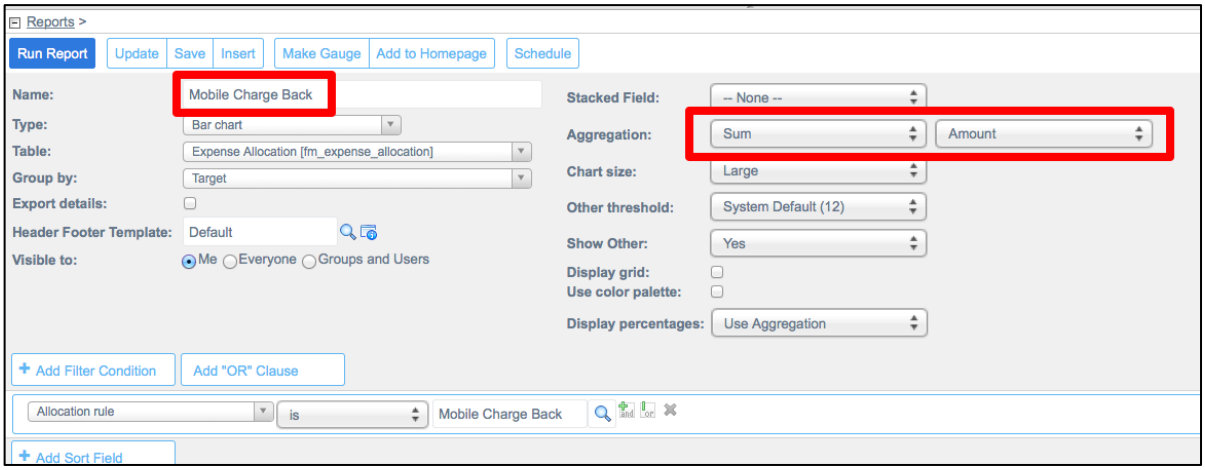


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5. At the top-left corner, click the **(+)** to expand the chart builder.

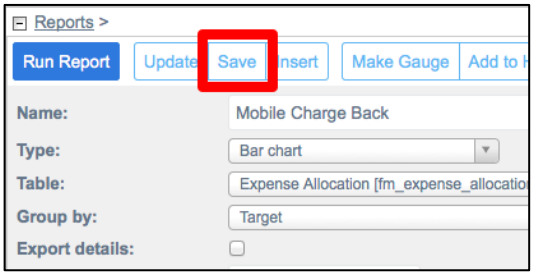


6. Enter **Mobile Charge Back** in the **Name** field, and select **Sum > Amount** in the **Aggregation** field.



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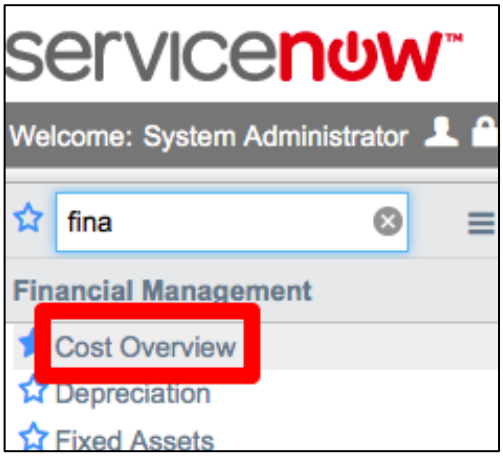
7. Click **Save**.



8. Click **Make Gauge**.

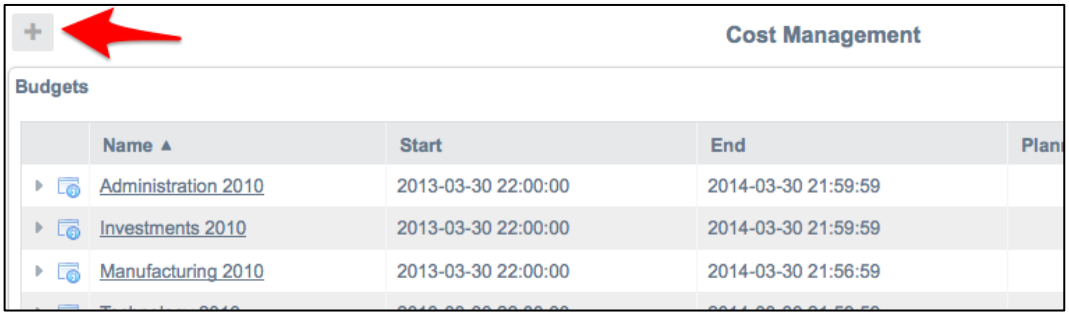


9. Navigate to **Financial Management > Cost Overview**.

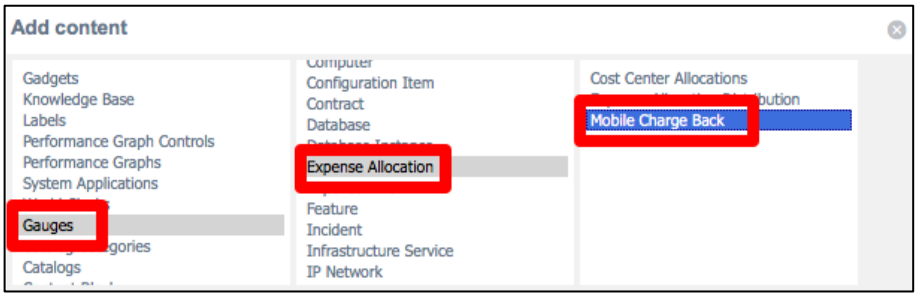


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10. In the top-left corner of the dashboard, click the (**+**) button.



11. Select **Gauges > Expense Allocation > Mobile Charge Back**.

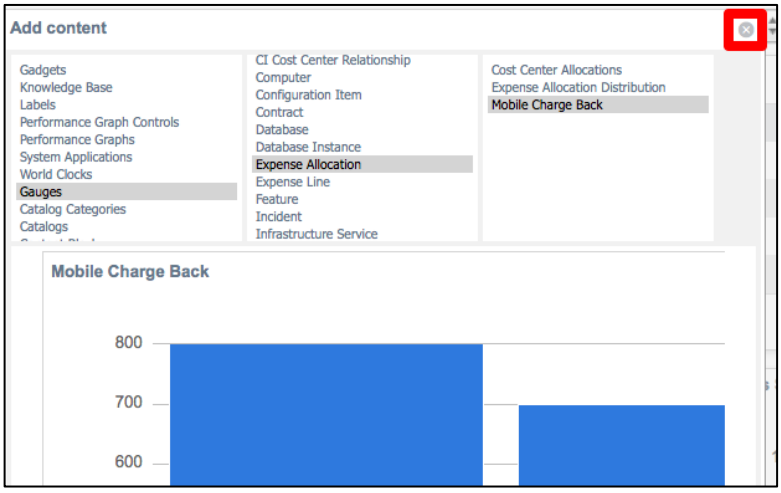


12. Click on the left **Add here** button.



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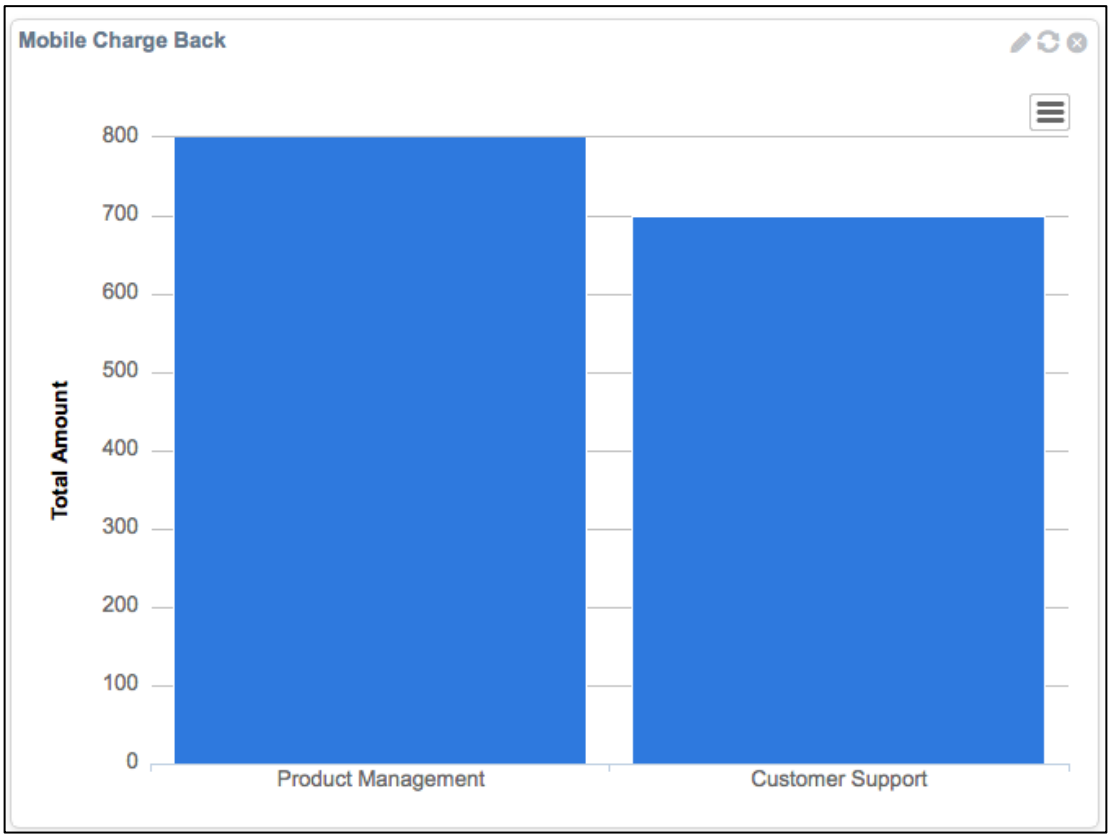
13. At the top-right corner of the **Add content** dialog, click the **X**.



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Lab Success Verification

1. The charge backs for the mobile phone orders you made as Abel and Adela should be in the new **Mobile Charge Back** gauge.



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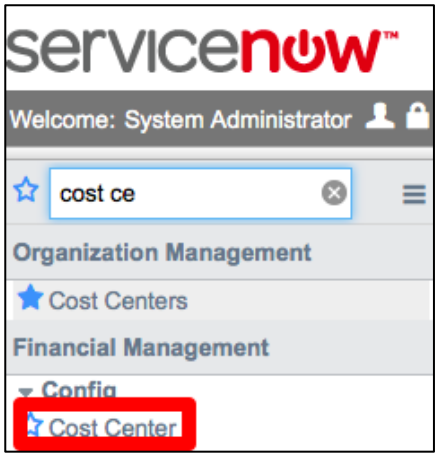
Lab Goal

Lab 2
Asset Cost Allocation to Cost Centers

Automatically allocate recurring fixed asset costs to the Cost Centers that use the associated business service. In this lab, you will create a new Cost Center for the Knowledge event management team, and allocate to them 500 email accounts. After setting up the email business service's "allocation units" for this new Cost Center (the 500 email accounts), you will simulate a monthly expense created by a CI rate card on a server that supports the email business service. This expense line will propagate from the email server, up to the email business service. After arriving at the business service, a portion of that expense, as defined by the assigned allocation units, will be allocated out to the Knowledge event management Cost Center. The Cost Center cost allocation reports will be updated automatically.

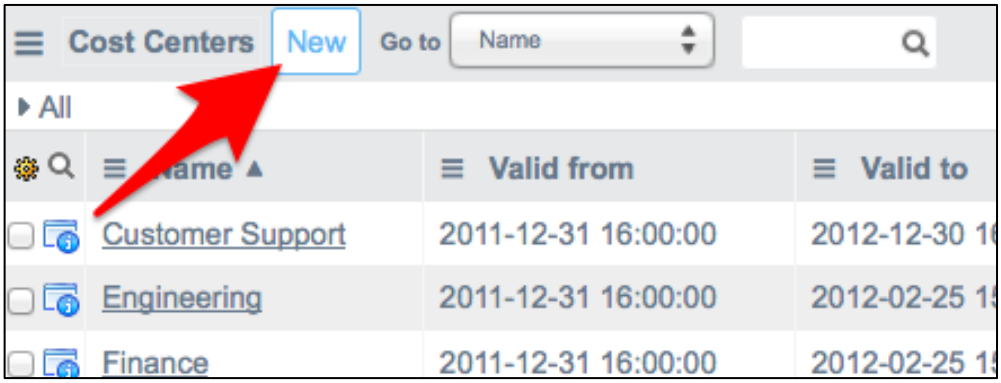
Create the Knowledge Events Cost Center

1. Navigate to **Financial Management > Cost Center**.

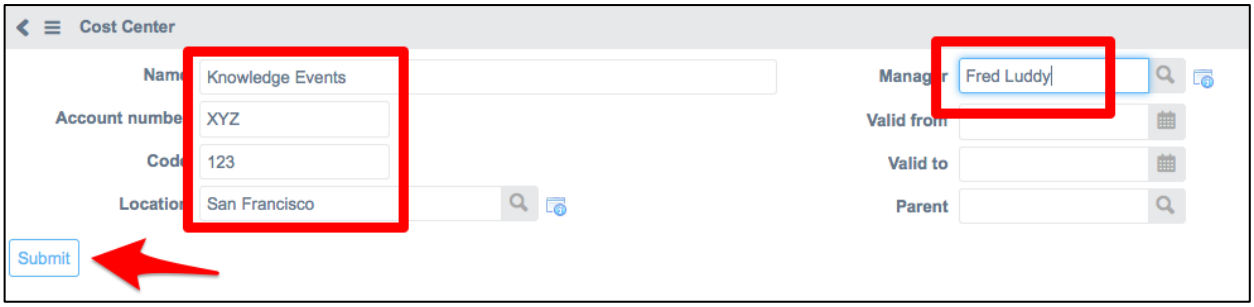


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2. From the list header, click the **New** button.



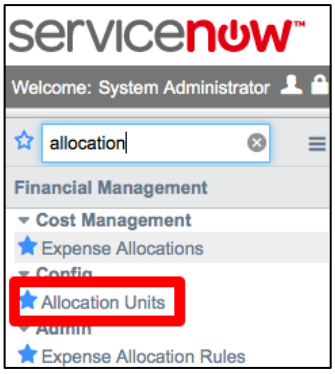
3. Fill in the fields highlighted in the form example, and click the **Submit** button.



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Define the E-mail Business Service 'Unit Allocation' for the new Cost Center

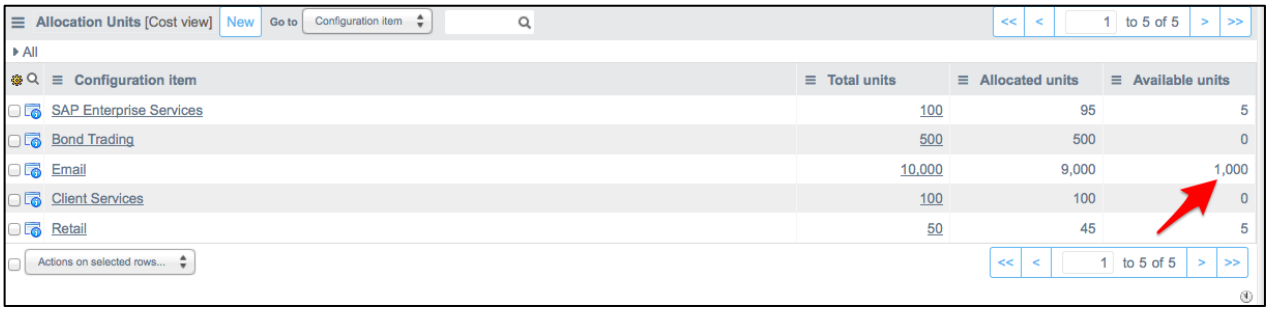
1. Navigate to **Financial Management > Allocation Units**.



Allocation Units

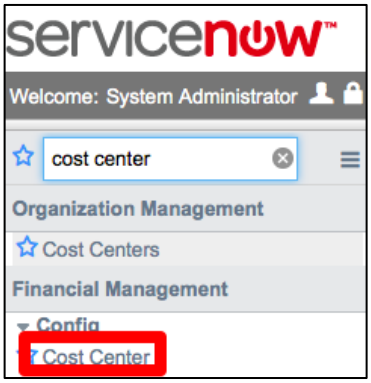
Allocation unit records define the capacity and usage of a business service. To define them, navigate to Financial Management > Allocation Units and select a record to edit or select **New**.

2. In the Email record, note that there are **1000** available 'units', out of a total of **10,000**. For the E-mail business service, a unit is defined to be an email account. The unit definition can be anything, and will typically be unique for each type of business service. You will be allocating 500 units (accounts) to the new Cost Center. The proportion of costs allocated to a particular cost center is the ratio of the allocated units to the total units (this can be changed in the **Financial Management > Properties**).

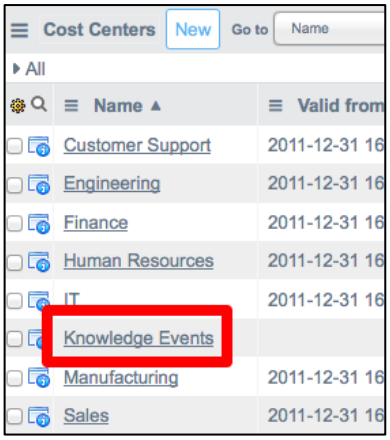


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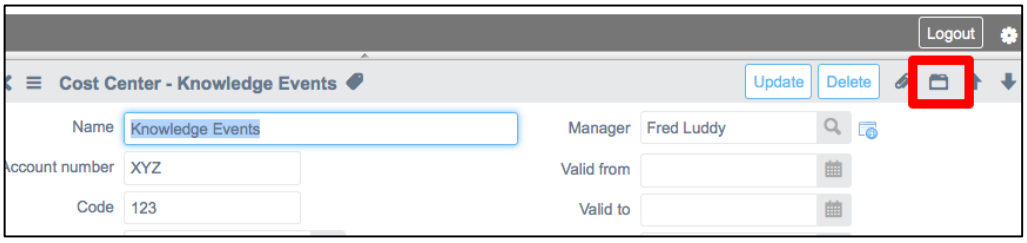
3. Navigate to **Financial Management > Cost Center**.



4. Click on the **Knowledge Events** record.

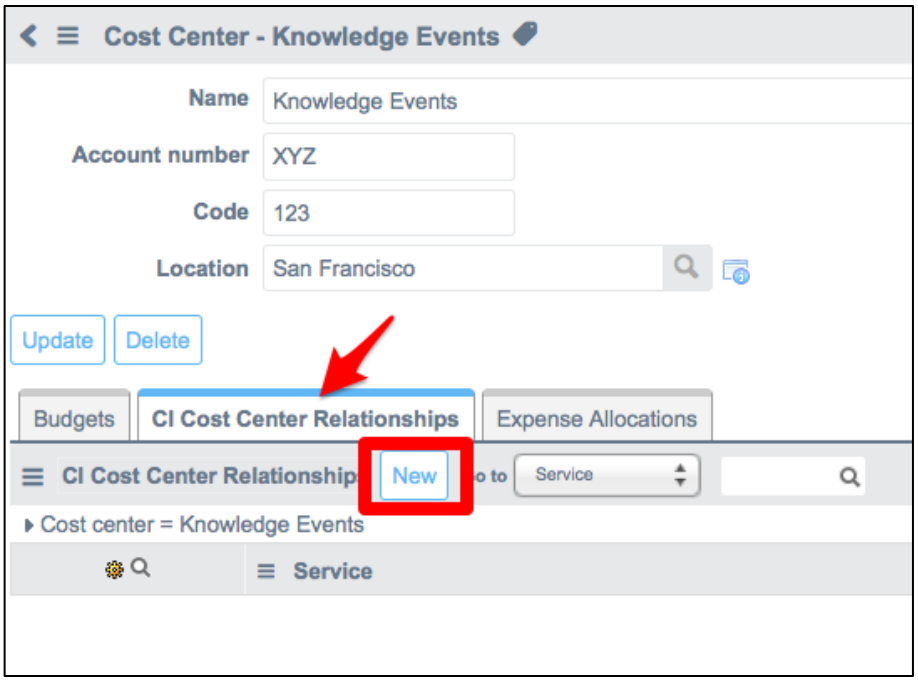


5. At the top-right corner of the form, click the **Toggle tabs on/off** icon.

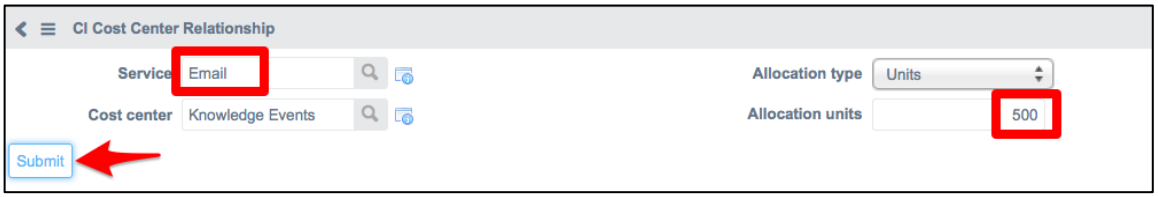


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6. At the bottom of the **Cost Center – Knowledge Events** form, click on the **CI Cost Center Relationships** tab, and click on the **New** button.

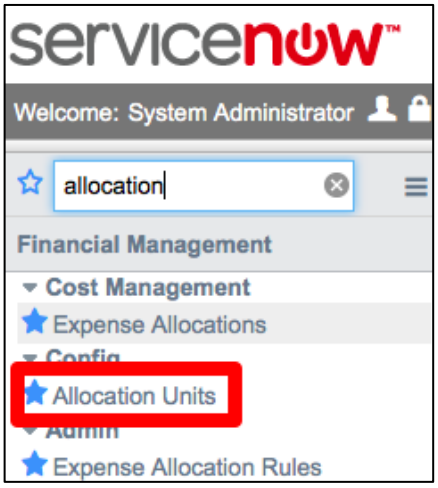


7. In the **Service** field, select **Email**. In the **Allocation units** field type **500.** After filling in the two fields, click **Submit**.

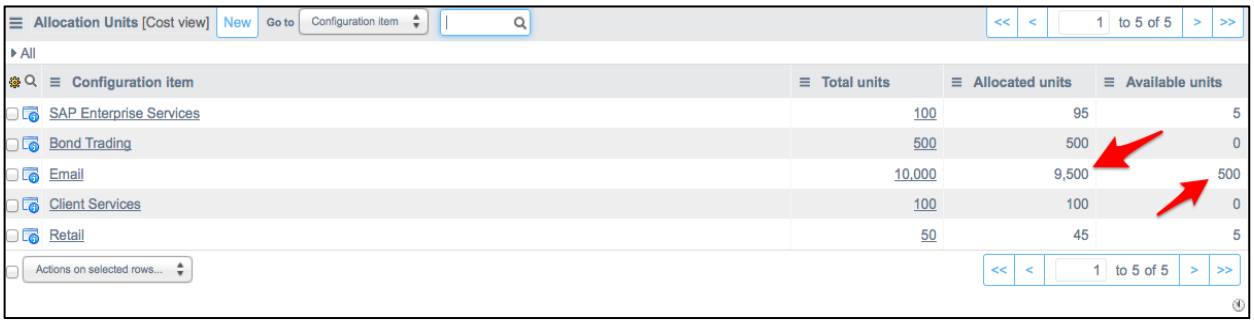


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8. Navigate back to **Financial Management > Allocation Units**.



9. In the Email record, note that only **500** units are available. 500 of the original 1000 have been allocated to the Knowledge Events Cost Center.



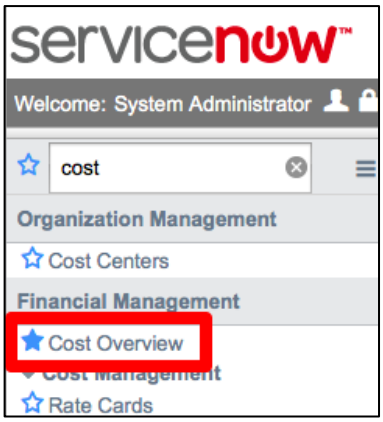
CI Rate Cards

A configuration item (CI) rate card is a group of recurring configuration item costs associated with multiple configuration items. Rate cards make it easier to enter and track costs that are the same across multiple configuration items.

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Simulate a Rate Card Expense to an E-mail Server

1. Before creating the simulated expense, navigate to the **Financial Management > Cost Overview** page.



2. Scroll down a bit, and note that the new **Knowledge Events** Cost Center is not yet in the **Target** field of the **Cost Center Allocations** pivot table. This is because no rate cards have been processed yet. (Rate Cards typically run in the early morning.)

Cost Center Allocations

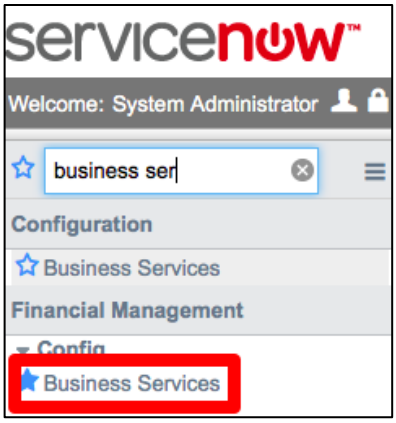
	Month							
Target	2010-06	2010-07	2010-08	2010-09	2010-10	2010-11	2010-12	Total
Sales	5,227.13	9,575.59	11,154.31	11,951.79	12,167.81	17,876.35	5,422.84	73,375.82
Finance	1,001.4	4,464.01	4,498.95	3,043.22	6,768.24	7,332.11	1,429.72	28,537.65
Human Resources	295.56	1,486.44	1,437.76	1,251.63	1,931.9	2,157.87	362.48	8,923.64
Engineering	563.46	1,846.29	1,585.38	1,809.67	1,800.05	2,038.84	204.75	9,848.44
IT	1,168.42	5,382.36	5,105.9	4,659.65	6,695.68	7,492.92	1,189.82	31,694.75
Manufacturing	944.13	6,734.28	6,873.58	4,943.5	10,584.96	11,492.37	2,490.32	44,063.14
Trading	8,145.01	11,572.83	9,412.17	9,442.38	11,838.46	12,955.62	1,934.75	65,301.22
Total	17,345.11	41,061.8	40,068.05	37,101.84	51,787.1	61,346.08	13,034.68	261,744.66

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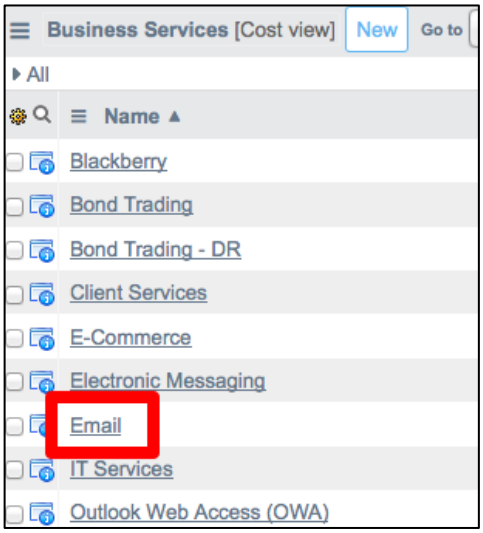
BSM Map

A business service is a service, such as the delivery of email to employees of an organization that is supported by an IT infrastructure. The delivery of email, for example, requires IT services such as exchange servers and Web servers. A Business Service Management (BSM) map graphically displays the configuration items (CI) that support a business service and indicates the status of those configuration items.

3. Navigate to **Financial Management > Business Services**.

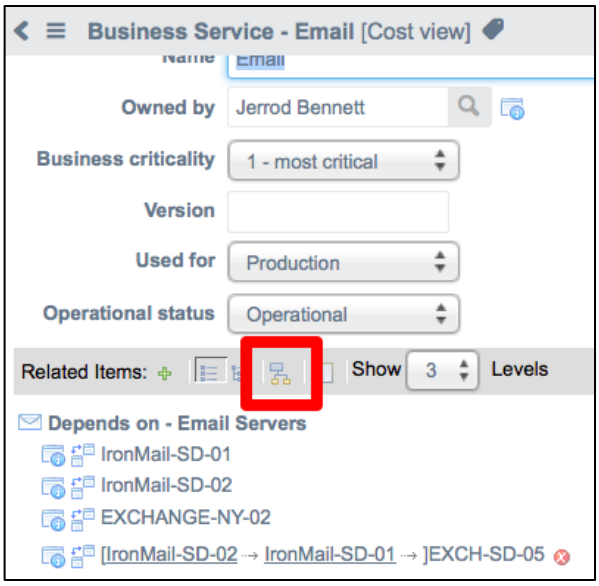


4. Click on the **Email** business service.

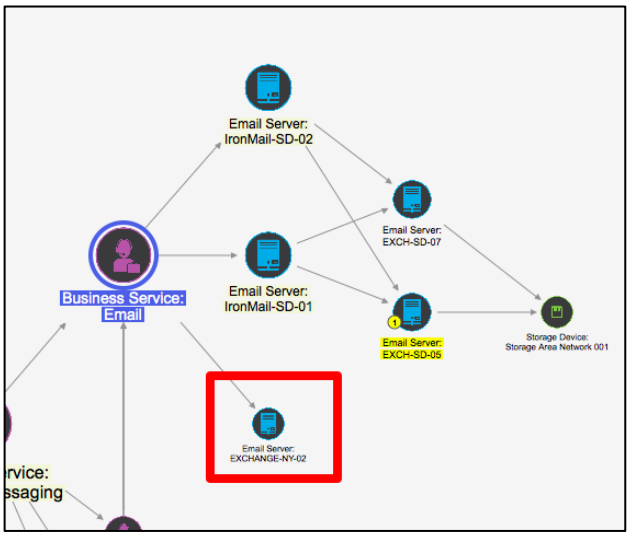


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5. In the **Related Items** section of the Business Service – Email form, click on the **Business Service Map (BSM)** icon.

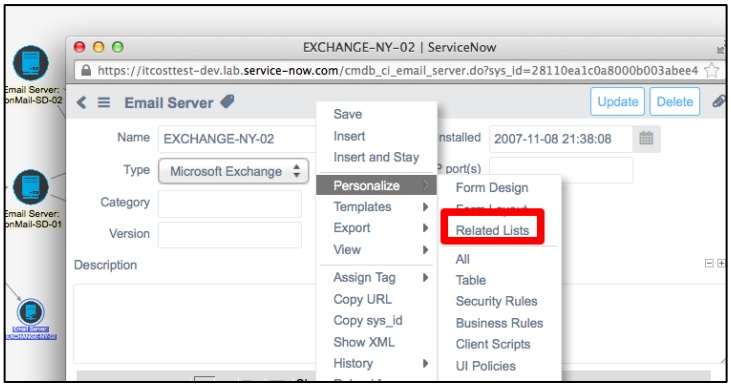


6. In the **BSM** that pops up in a new browser tab, notice that the **EXCHANGE-NY-02** service supports the Email business service, then double-click on that **EXCHANGE-NY-02** icon.

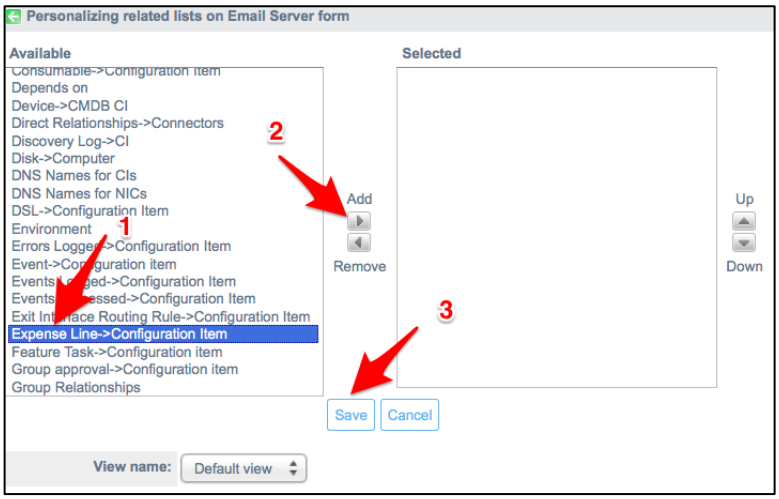


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7. A new browser window has popped up with the **Email Server – EXCHANGE-NY-02** form in it. In that **Email Server – EXCHANGE-NY-02** form header, right-click and select **Personalize > Related Lists**.



8. In the **Available** list, scroll down and click the **Expense Line->Configuration Item** entry, click the **Add** button, then click **Save.**

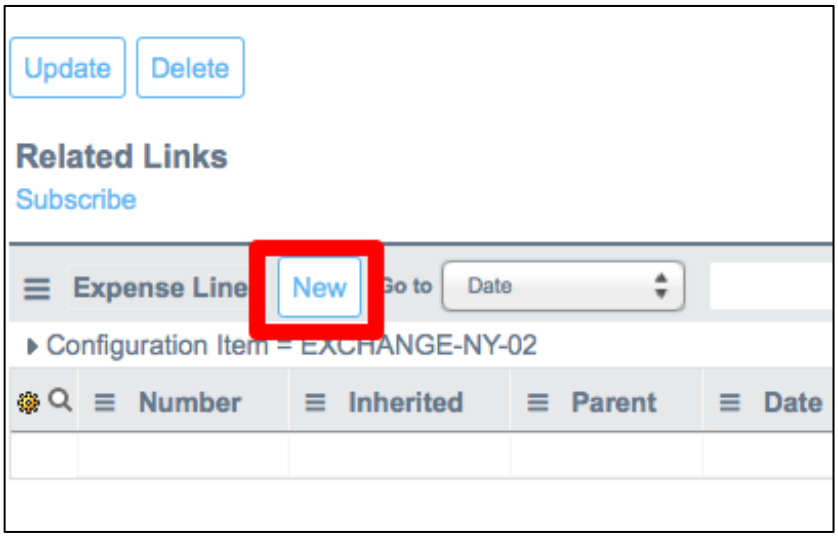


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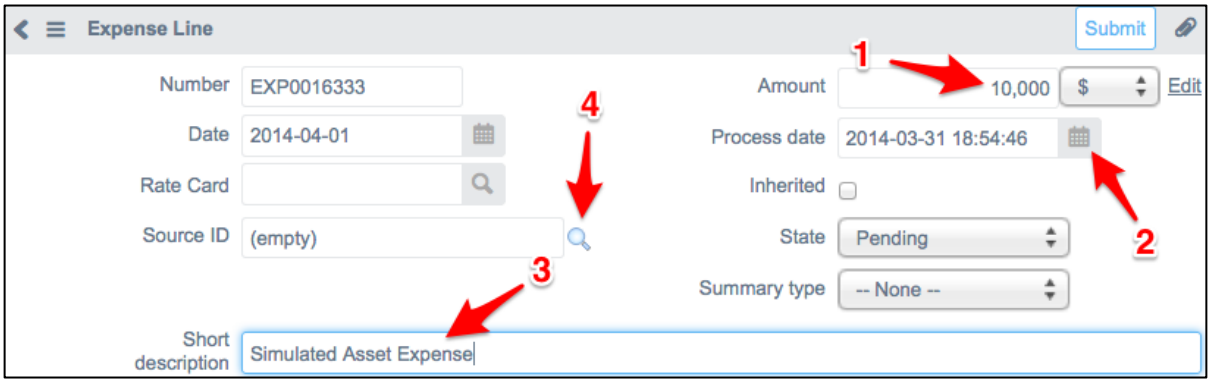
Expense lines

Expense lines track costs and record expenses incurred. Create expense lines manually or view expense lines generated automatically when costs are created by scheduled processing. Use expense allocation rules to associate expenses with items such as users, groups, or departments.

9. In the **Expense Line** related list, now at the bottom of the form, click the **New** button. This will be the simulated rate card expense.

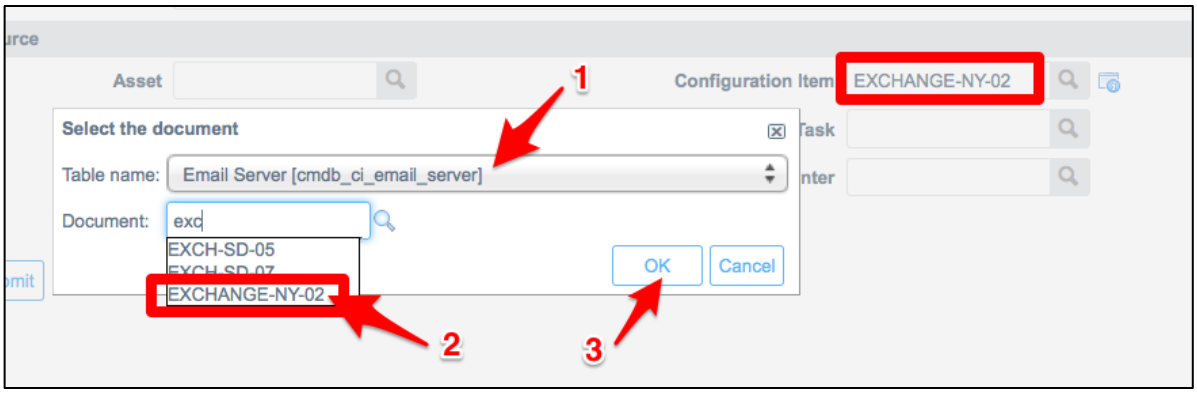


10. In the following order, fill in the **Amount** field with 10,000, click on the **Process date** calendar icon and select today's date, enter a **Short description** of 'Simulated Asset Expense', then click the **Magnifying glass** on the right side of the **Source ID** field. Follow the order in the example.

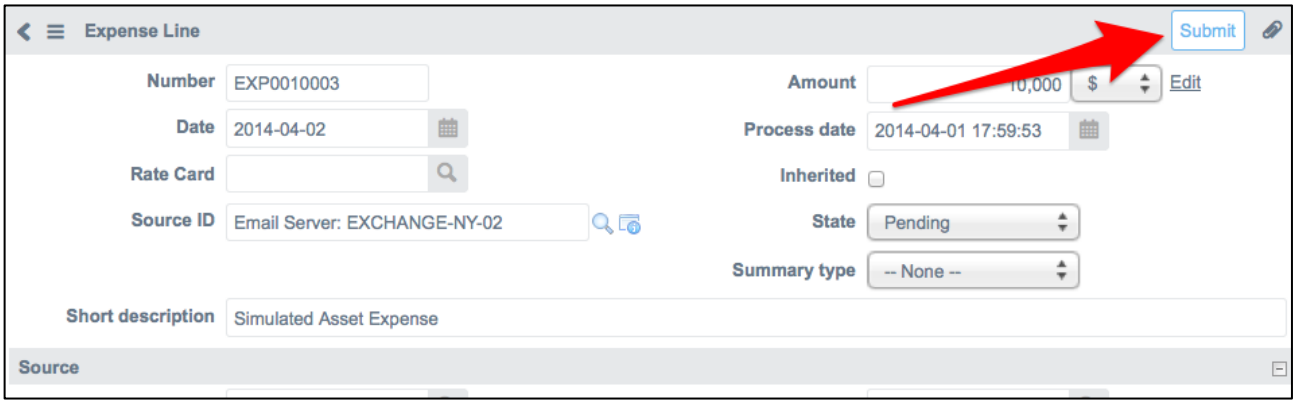


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11. First, in the popup dialog, **Table name** field, select **Email Server [cmdb_ci_email_server]**. Second, in the **Document** field select **EXCHANGE-NY-02**. Third, click **OK**.



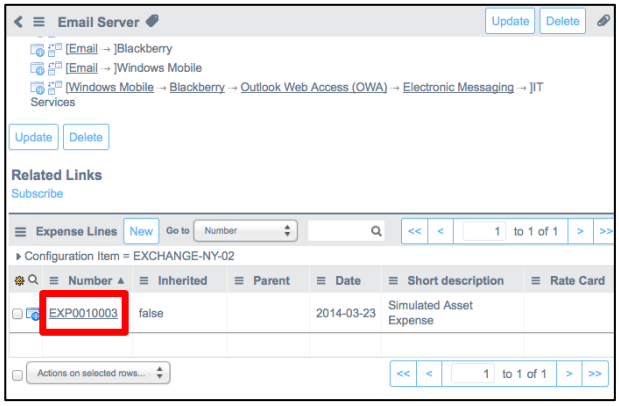
12. In the **Expense Line** form, click the **Submit** button. This will create the simulated expense line.



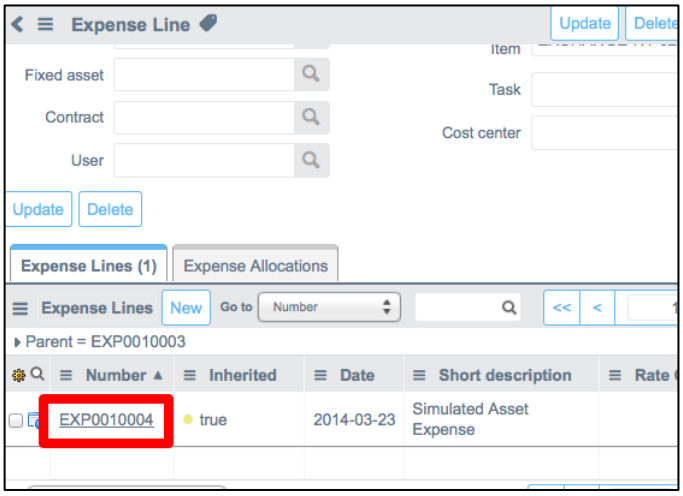
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Lab Success Verification

1. In the **Expense Lines** related list at the bottom of the **Email Server – EXCHANGE-NY-02** form, which is still in the popup window, click on expense record **Number**.

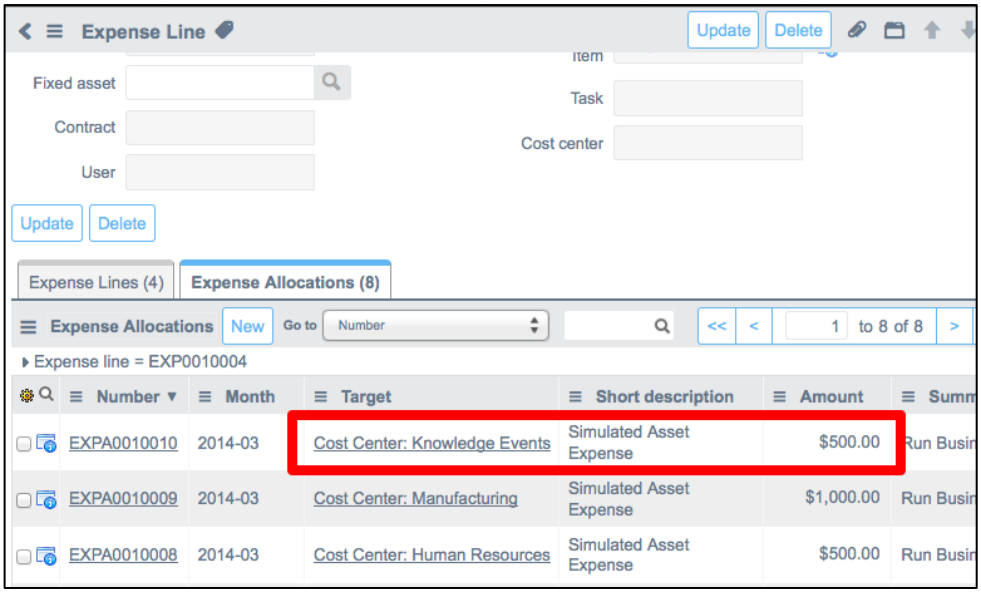


2. In the **Expense Lines** related list at the bottom of the Expense Line form are Expense Lines propagated up the BSM to dependent CIs and Business Services. Note that the **Inherited** field is true for the expense line in the related list. In that **Expense Lines** related list, click on the **Number** field of the Expense Line record for the **Simulated Asset Expense**.

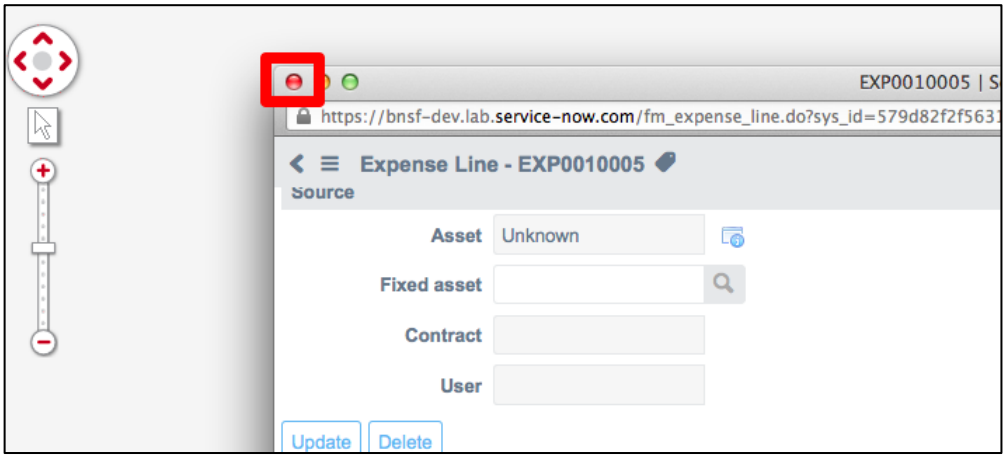


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3. At the bottom of this second, inherited Expense Line form, click on the **Expense Allocations** tab. Notice that $500 in the **Amount** field has been allocated to the **Cost Center: Knowledge Events Target**.



4. Close the popup window that the Expense Line form is in (MAC example).

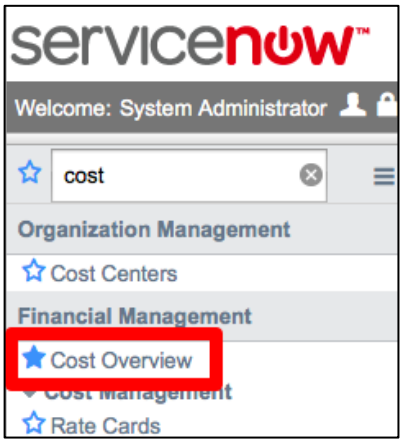


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Cost Overview

The Cost Overview module displays various cost management gauges. It gives financial administrators and other users a summary view of key cost management information.

5. Return to the previous browser tab, and navigate to **Financial Management > Cost Overview**.



6. Note in the **Target** field of the **Cost Center Allocations** pivot table the **$500** allocation for the **Knowledge Events** Cost Center appears.

Cost Center Allocations

Target	Month								
	2010-06	2010-07	2010-08	2010-09	2010-10	2010-11	2010-12	2014-03	Total
Knowledge Events	0	0	0	0	0	0	0	500	500
Sales	5,227.13	9,575.59	11,154.31	11,951.79	12,167.81	17,876.35	5,422.84	2,000	75,375.82
Finance	1,001.4	4,464.01	4,498.95	3,043.22	6,768.24	7,332.11	1,429.72	500	29,037.65
Human Resources	295.56	1,486.44	1,437.76	1,251.63	1,931.9	2,157.87	362.48	500	9,423.64
Engineering	563.46	1,846.29	1,585.38	1,809.67	1,800.05	2,038.84	204.75	1,000	10,848.44
IT	1,168.42	5,382.36	5,105.9	4,659.65	6,695.68	7,492.92	1,189.82	2,000	33,694.75
Manufacturing	944.13	6,734.28	6,873.58	4,943.5	10,584.96	11,492.37	2,490.32	1,000	45,063.14
Trading	8,145.01	11,572.83	9,412.17	9,442.38	11,838.46	12,955.62	1,934.75	2,000	67,301.22
Total	17,345.11	41,061.8	40,068.05	37,101.84	51,787.1	61,346.08	13,034.68	9,500	271,244.66

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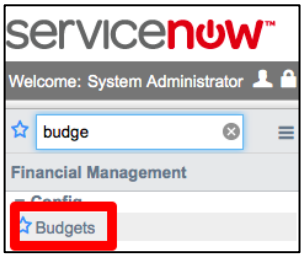
Lab Goal

Create a budget for the new Knowledge Events Cost Center, and track actual expenses against that budget. As a **bonus**, add a field to the budget called 'Target' which assumes a straight line spend accumulation over time. Add a style to the Actual field that will indicate when the current actuals are over the budget target for the current point in time.

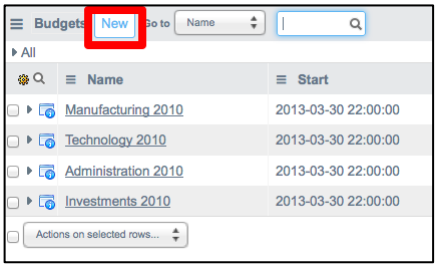
Lab 3
Managing Budgets

Create a New 'K14' Budget for the Knowledge Event Cost Center

1. Navigate to **Financial Management > Budgets**.



2. At the top of the list, click the **New** button.

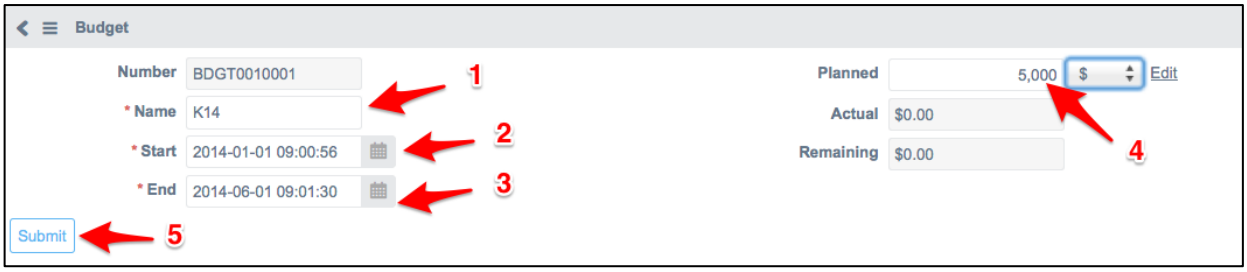


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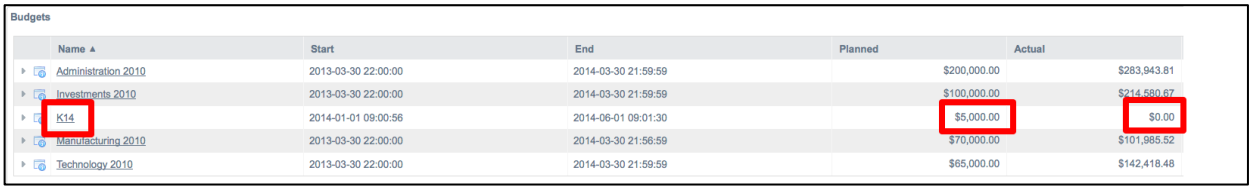
Budgets

Budgets allow tracking of planned and actual IT spending. Budgets are defined for a given time period for one or more cost centers. Cost Centers are used to represent a business entity. All expense allocations assigned to the budget's cost center during the budget period will be used to calculate the budget's actual expense allocations.

3. Fill in the four pieces of information on the form in the order specified in the example, being sure to make the **Start January 1 2014**, and the **End June 1 2014**, then click on **Submit**.

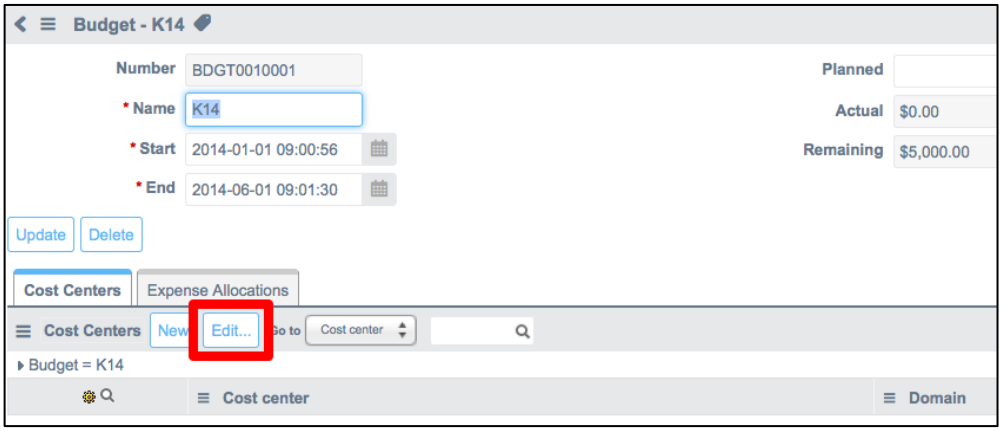


4. Notice that the budget **Actual** for the new **K14** budget is zero, then click in the **K14 Name** field.

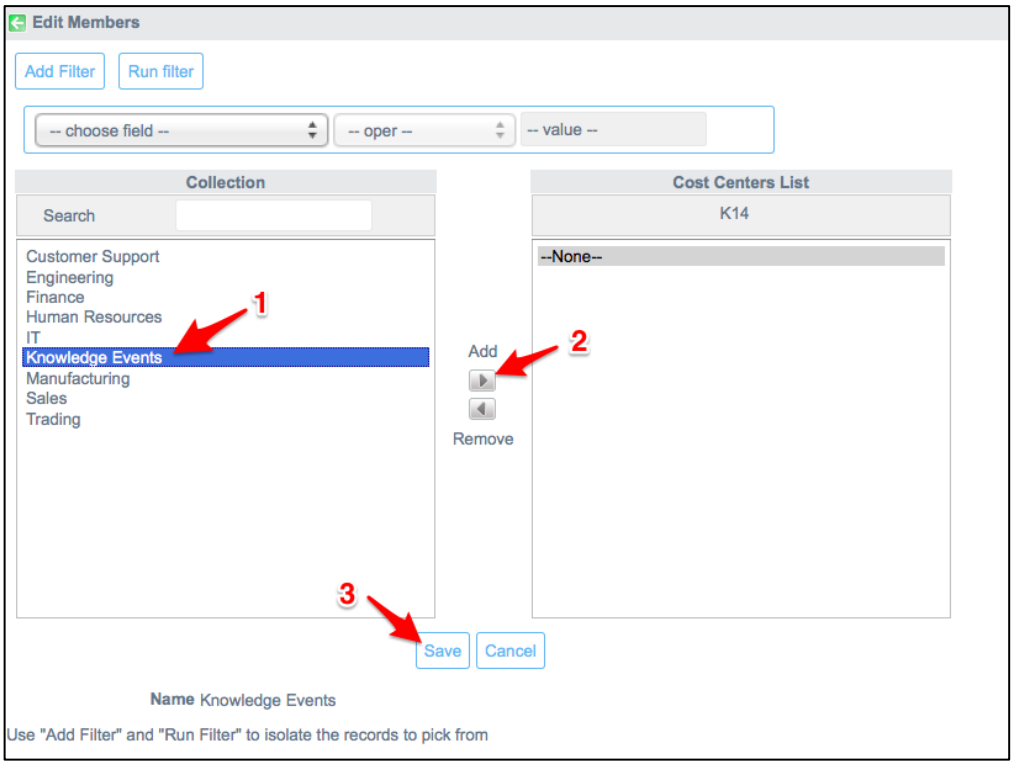


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5. At the bottom of the form, in the **Cost Centers** related list, click the **Edit** button.



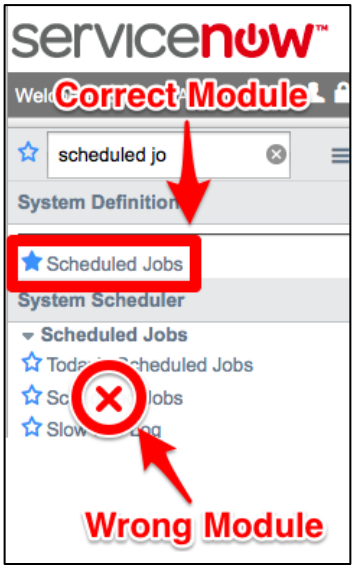
6. In the **Collection** box, select **Knowledge Events**, click the **Add** button, then click **Save**. This will associate the Knowledge Events cost center to the K14 budget.



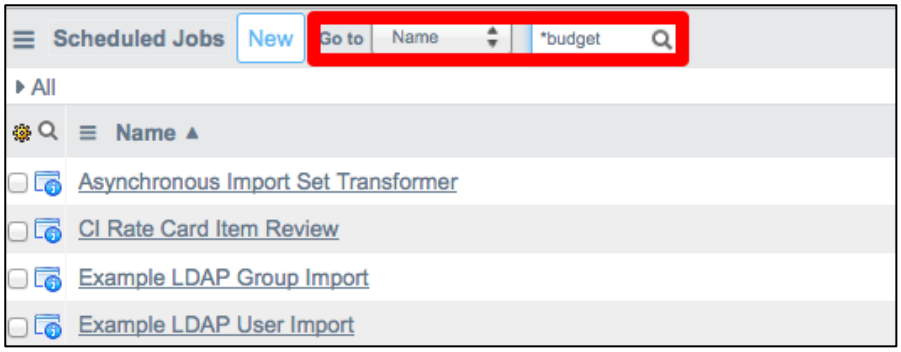
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Lab Success Verification

1. Navigate to **System Definition > Scheduled Jobs**.

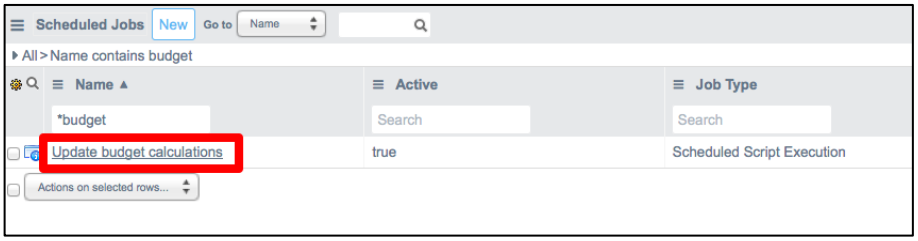


2. At the top of the list, enter ***budget** in the **Go to Name** box, and press **Return**.

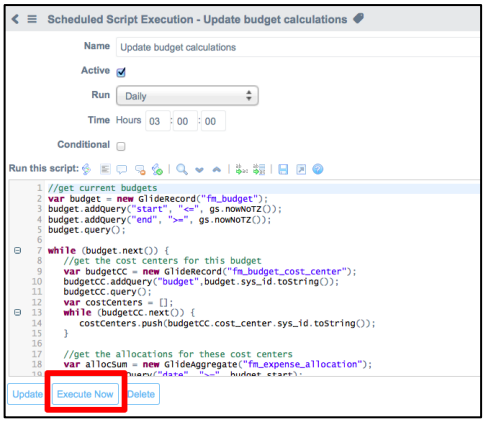


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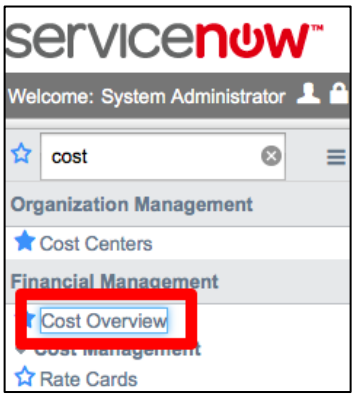
3. Click on the **Update budget calculations** record.



4. Click the **Execute Now** button.

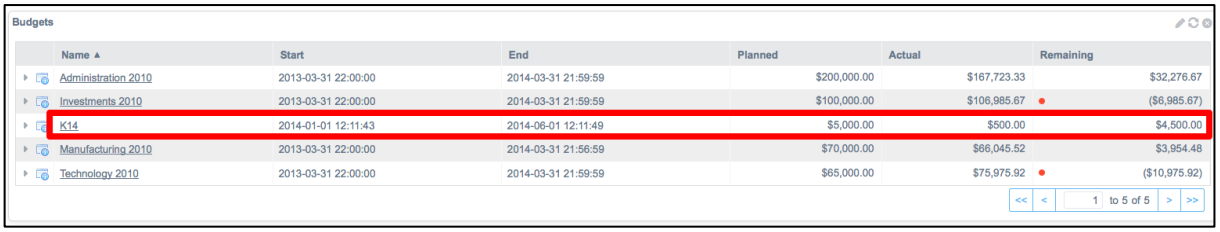


5. Navigate to **Financial Management > Cost Overview**.



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6. Notice that the **K14 Actual** value is $**500**, the expense allocation made in Lab 2 (you may have to wait and refresh before the $500 to show up, by clicking the circular arrows in the top-right corner of the chart, since the budget scheduled job runs asynchronously).

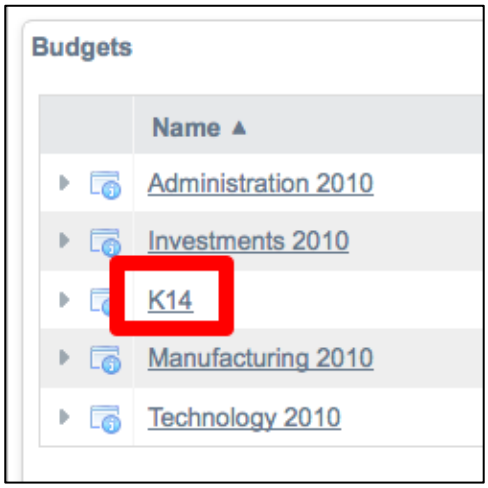


Bonus – Create a budget Target value given the current date, assuming straight line spending. Color code the Actual field based on how spending compares to this straight line Target. Bonus section starts on next page

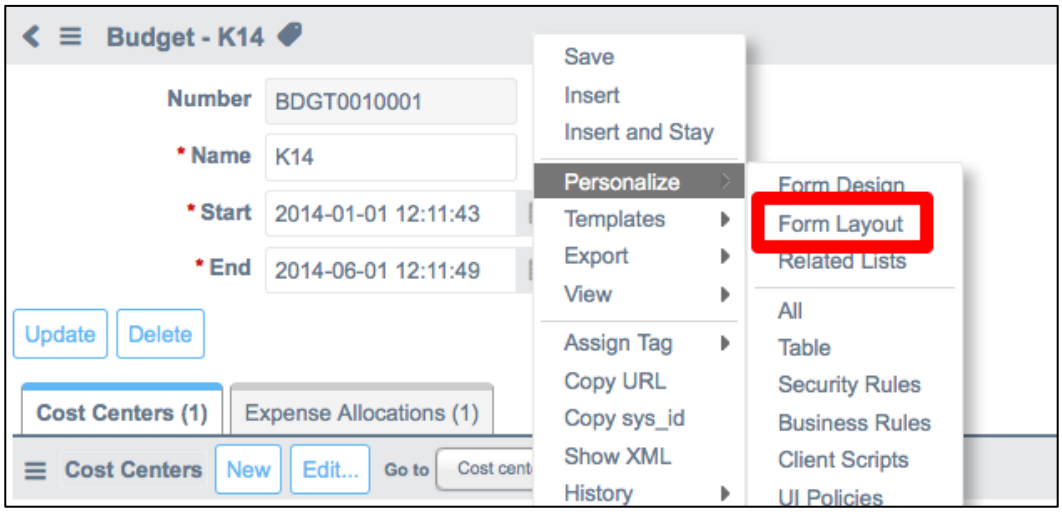
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Add Target and Color Code Actuals

1. In the **Budget** report, click on the **K14** budget record.



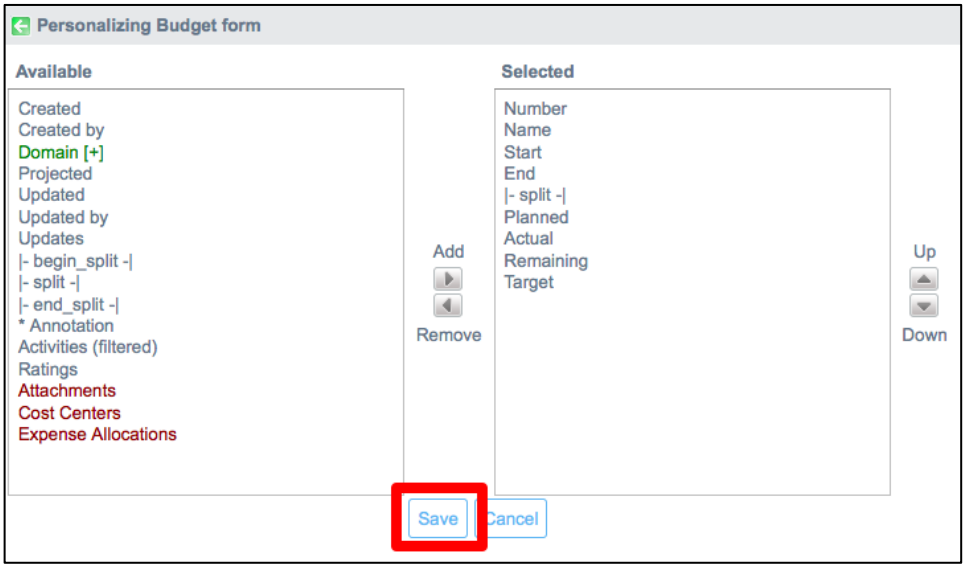
2. On the form header, right-click **Personalize > Form Layout**.



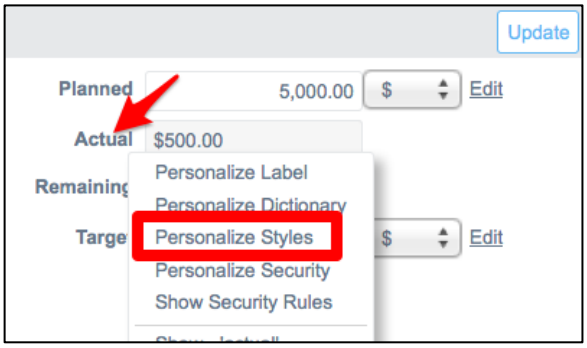
3. In the bottom-right corner of the popup, create a new field. Type **Target** in the **Name** field, select **Currency** in the **Type** field, and click **Add**.

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4. Click **Save**,

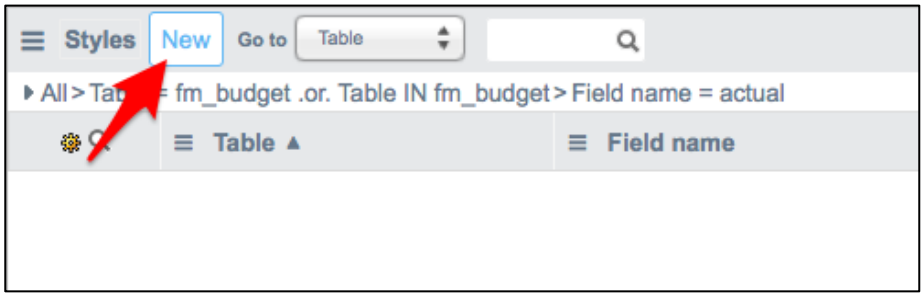


5. Right-click on the **Actual** label and select **Personalize Styles**.



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6. At the top of the list, click **New**.



Field Styles

Field styles allow administrators to declare individual CSS styles for a field in a list or form. The CSS can change the color, change the font attributes (bold, italics, underline), and change the padding and alignment of text.

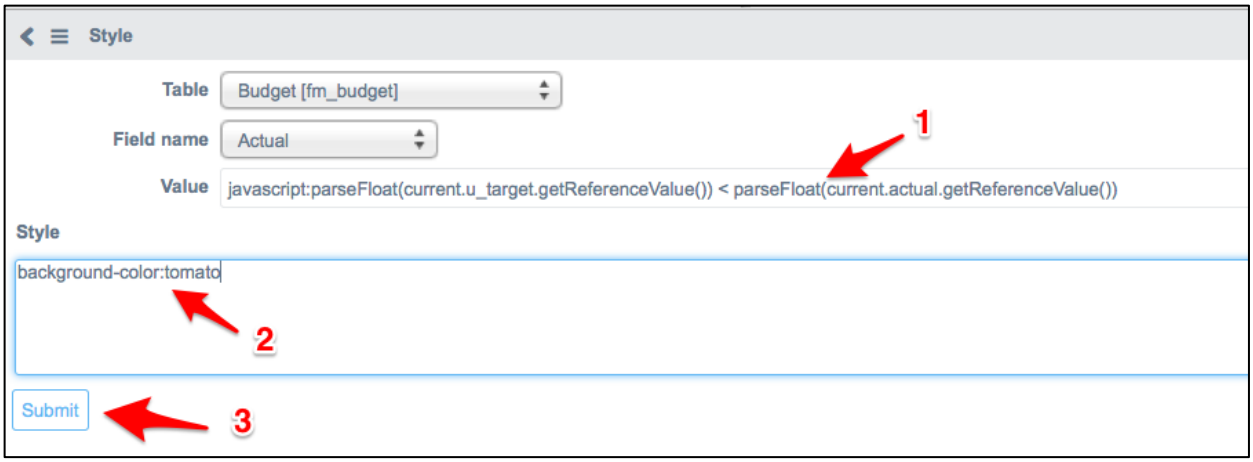
7. Cut-and-paste the following two code snippets into the **Value** field and **Style** field, then click **Save**.

   Value:

```
javascript:parseFloat(current.u_target.getReferenceValue()) <
parseFloat(current.actual.getReferenceValue())
```

   Style:

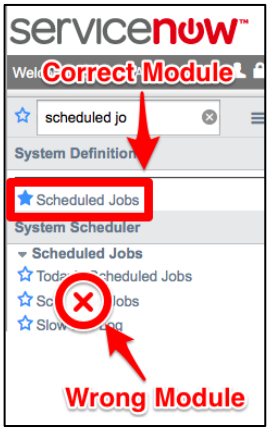
```
background-color:tomato
```



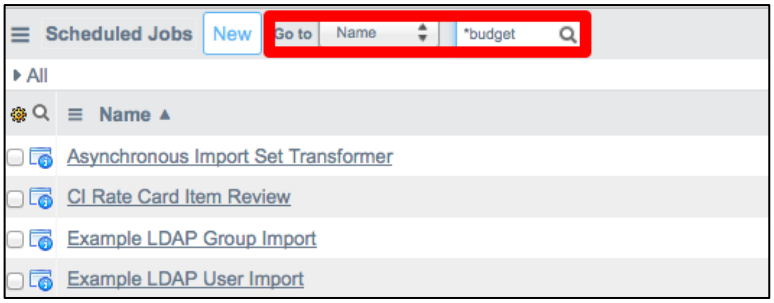
   See Knowledge article KB0010002 if unable to copy-and-paste.

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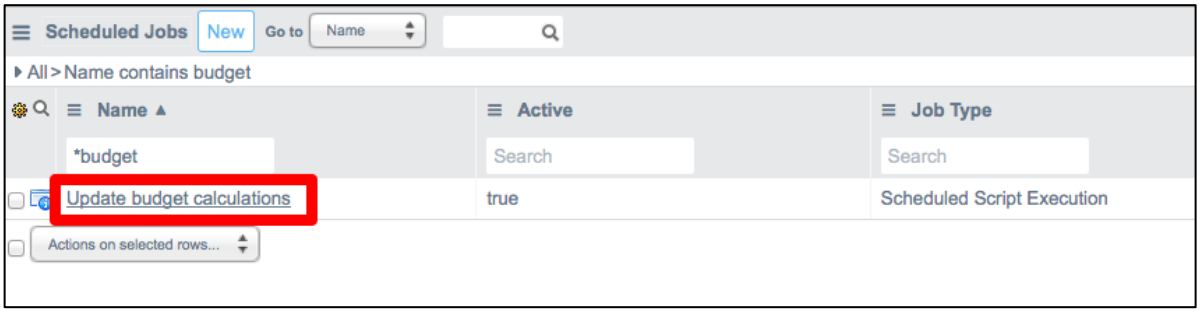
8. Navigate to **System Definition > Scheduled Jobs**.



9. At the top of the list, enter ***budget** in the **Go to Name** box, and press **Return**.



10. Click **Update budget calculations**.



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11. Cut-and-paste the ALL of following into the **Script** field, replacing the entire block of JavaScript currently in the field:

    See Knowledge article KB0010003 if unable to copy-and-paste.

```
//get current budgets
var budget = new GlideRecord("fm_budget");
budget.addQuery("start", "<=", gs.nowNoTZ());
budget.addQuery("end", ">=", gs.nowNoTZ());
budget.query();

while (budget.next()) {
   //get the cost centers for this budget
   var budgetCC = new GlideRecord("fm_budget_cost_center");
   budgetCC.addQuery("budget",budget.sys_id.toString());
   budgetCC.query();
   var costCenters = [];
   while (budgetCC.next()) {
          costCenters.push(budgetCC.cost_center.sys_id.toString());
   }

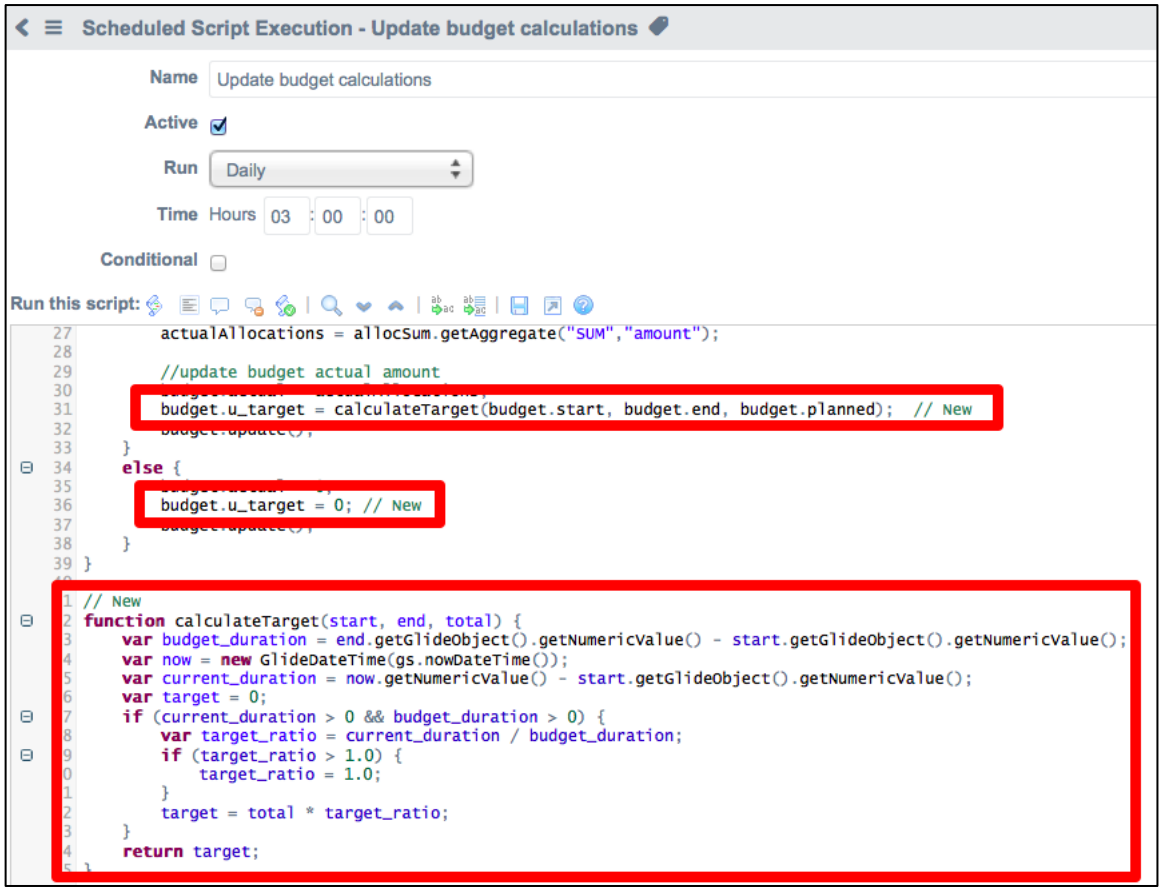
   //get the allocations for these cost centers
   var allocSum = new GlideAggregate("fm_expense_allocation");
   allocSum.addQuery("date", ">=", budget.start);
   allocSum.addQuery("date", "<=", budget.end);
   allocSum.addQuery("target_table","cmn_cost_center");
   allocSum.addQuery("target", "IN", costCenters);
   allocSum.groupBy("target_table");
   allocSum.addAggregate("SUM", "amount");
   allocSum.query();
   if (allocSum.next()) {
          actualAllocations = allocSum.getAggregate("SUM","amount");

          //update budget actual amount
          budget.actual = actualAllocations;
          budget.u_target = calculateTarget(budget.start, budget.end, budget.planned);  // New
          budget.update();
   }
   else {
          budget.actual = 0;
          budget.u_target = 0; // New
          budget.update();
   }
}

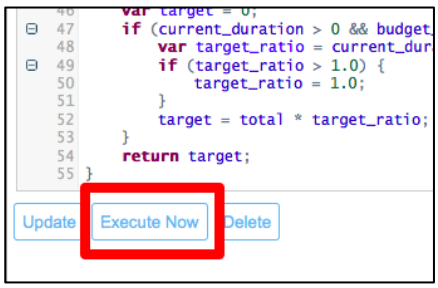
// New
function calculateTarget(start, end, total) {
   var budget_duration = end.getGlideObject().getNumericValue() -
start.getGlideObject().getNumericValue();
   var now = new GlideDateTime(gs.nowDateTime());
   var current_duration = now.getNumericValue() - start.getGlideObject().getNumericValue();
   var target = 0;
   if (current_duration > 0 && budget_duration > 0) {
          var target_ratio = current_duration / budget_duration;
          if (target_ratio > 1.0) {
                 target_ratio = 1.0;
          }
          target = total * target_ratio;
   }
   return target;
}
```

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Notice that the only thing new in the script is the “target”calculation (**calculateTarget**). It is a simple straight line formula based on the start of the budget, the end of the budget, and the current date.

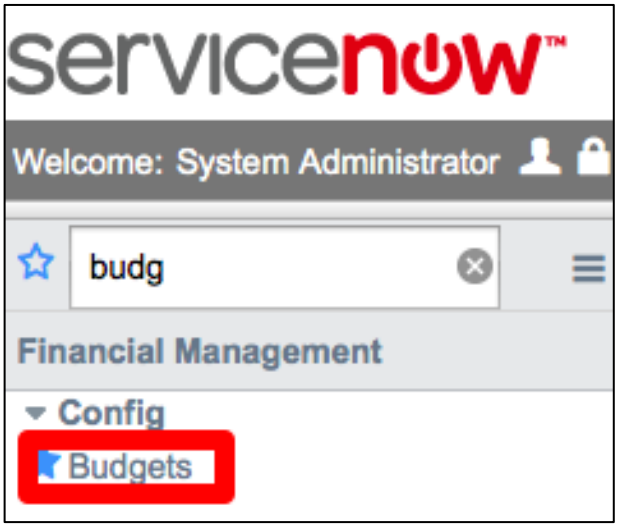


12. Click the **Execute Now** button, which will also save the new version of the script.

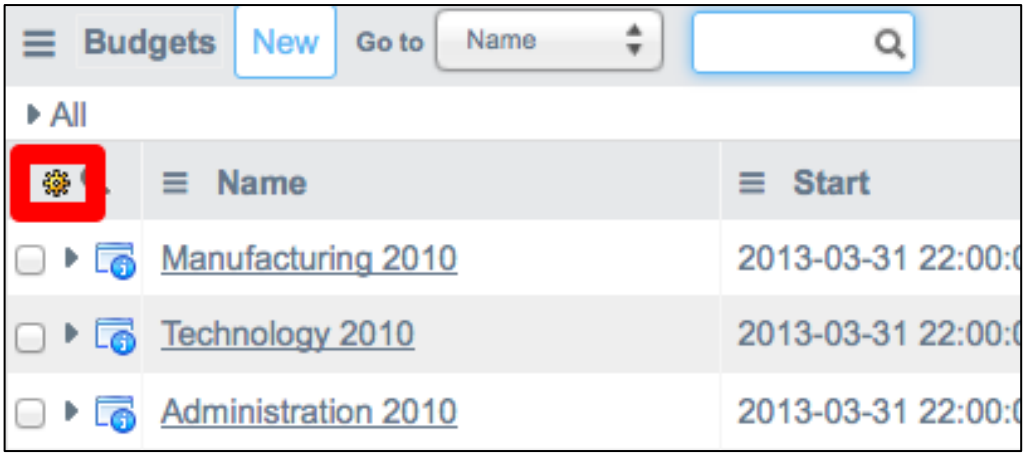


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13. Navigate to **Financial Management > Budgets**.

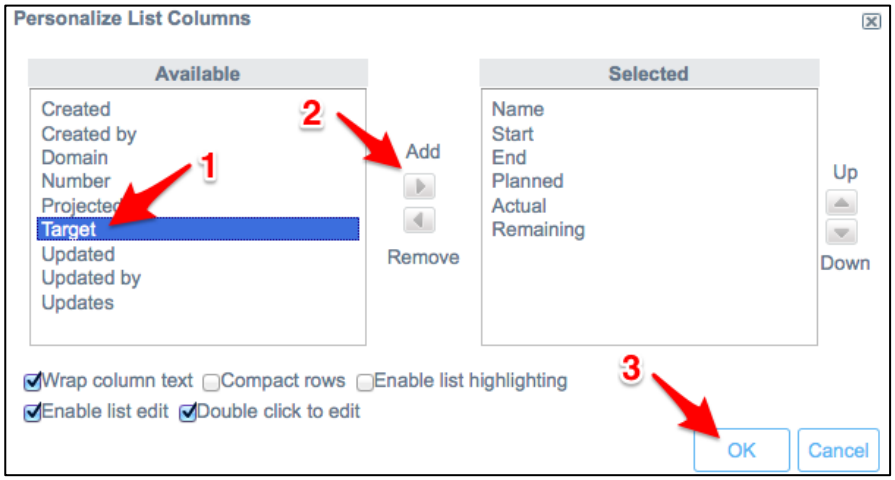


14. Click the **Gear** on the left side of the list column headers.

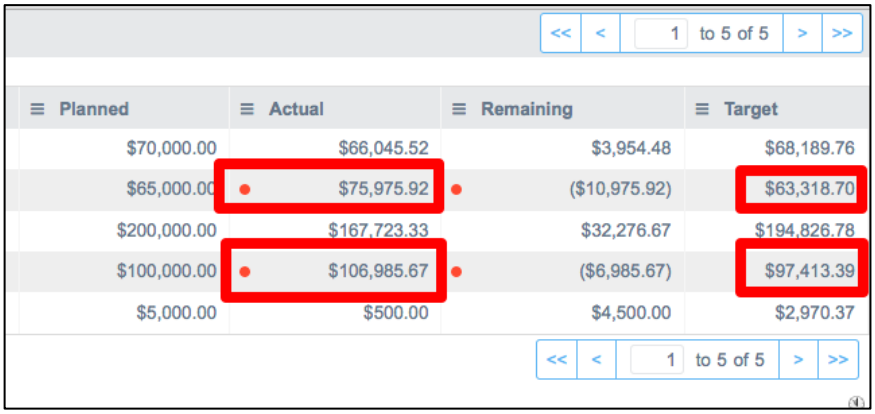


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15. Select the **Target** field in the **Available** list, click **Add,** then click **OK**.



16. Observe that the **Target** values have been loaded, and the budgets where **Actual** is greater than **Target** is highlighted in red (spending ahead of schedule).



17. You are done! Thank you for your time and attention. We hope this was informative, and you can put it to good use. Enjoy the conference!

--Dave and GT

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