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April 19–24, 2015 • Mandalay Bay • Las Vegas, NV

Lab Guide

Asset 102:

Track Licenses with Software Asset Management

Ben Sweetser & Bryan Boyle

Default Login / Password:

admin / Knowledge15

itil / Knowledge15

employee / Knowledge15

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Lab Goal

The most important foundational element to understand about software compliance is how the Software Counter captures the counts of Rights owned and Rights used.

This lab uses supporting files that you can download as a zip file from **https://servicenow.box.com/k15asset102**.

Lab 1.1
Count Software Rights Used

Log on to Your Training Instance

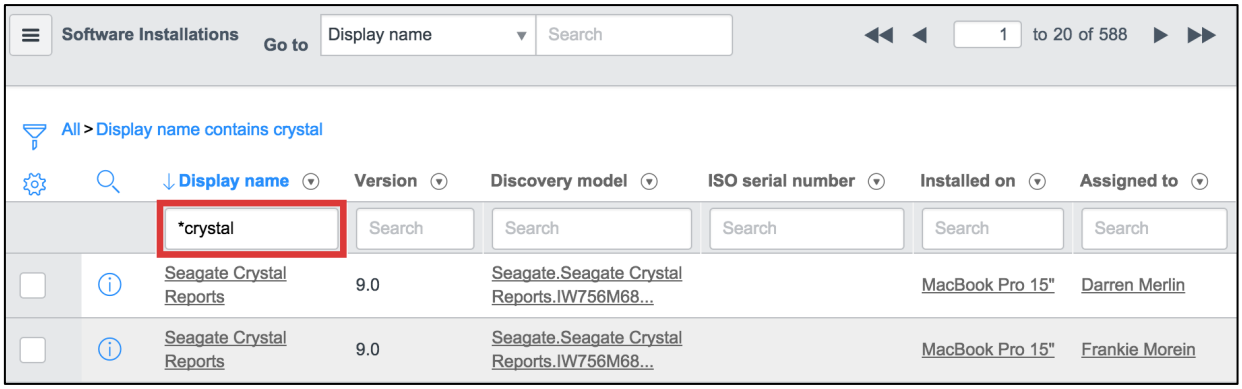
1. Navigate to the unique instance URL provided to you.
2. Log on with provided credentials.

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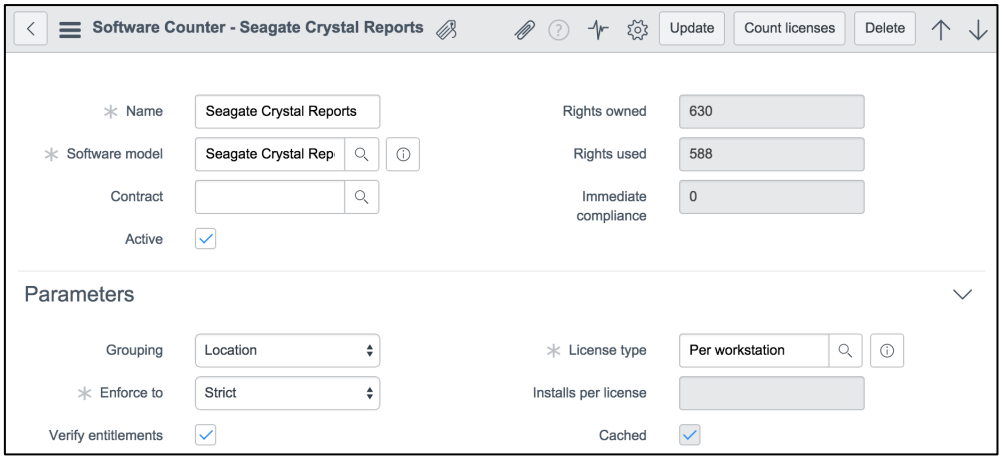
Rights Used – Per Workstation

In this section, you explore how the License Type identified on the Software Counter affects the count of software Rights used. To do this, you first view the number of installations. As long as each of these installations is on a different computer, this number should match the Rights used when the Software Counter uses a Per workstation License type.

1. Navigate to **Software Asset > Discovery > Software Installations**.
2. Filter to display records that contain **crystal**. How many installation records are there?



3. Navigate to **Software Asset > Reconciliation > Software Counters**.
4. Find and open the record for **Seagate Crystal Reports**. What is the **License type**?



5. Click **Count licenses**.

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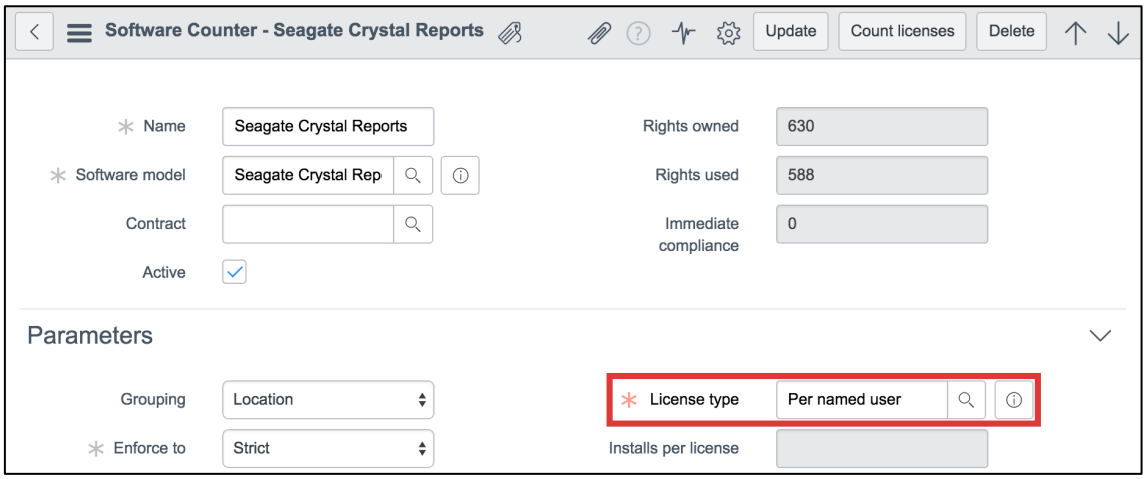
6. Click the form header menu and **Reload form** until the form no longer indicates “A license count is in progress.” This may take a couple minutes.

7. What is the total number of **Rights used**? How does this compare to the number of installations?

Rights Used – Per Named User

When software is licensed Per named user, a user can have any number of installations and these installations only count as a single Right used. In this section, you start at the Software Counter and change the License type, count licenses, and then check the count. ServiceNow uses the Assigned to field on the Configuration Item to identify the named user.

1. In the **Seagate Crystal Reports** record, change the License type to **Per named user**.



2. Click the form header menu and **Save**.

3. Click **Count licenses**.

4. Click the form header menu and **Reload form** until the form no longer indicates “A license count is in progress.” This may take a couple minutes.

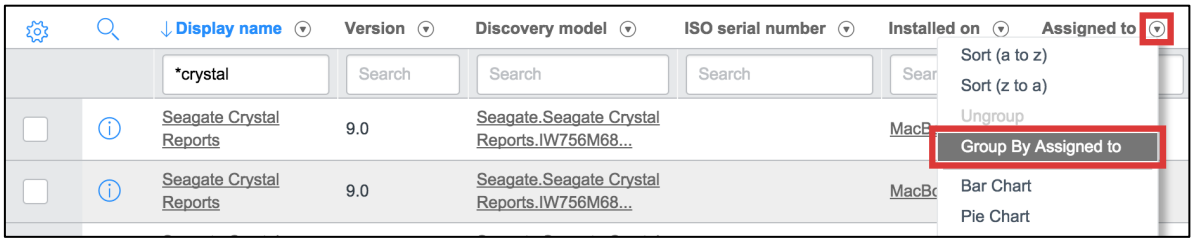
5. What is the total number of **Rights used**?

6. Navigate to **Software Asset > Discovery > Software Installations**.

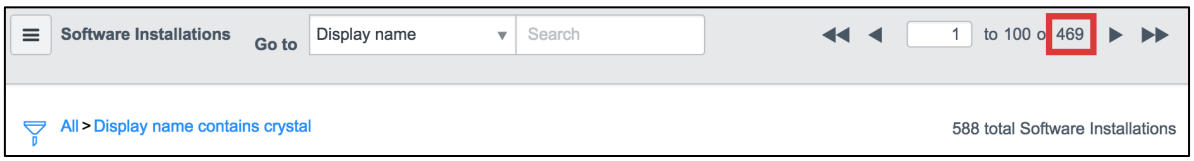
7. Filter to display records that contain **crystal**.

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8. Click the column header menu for **Assigned to** and select **Group by Assigned to**.

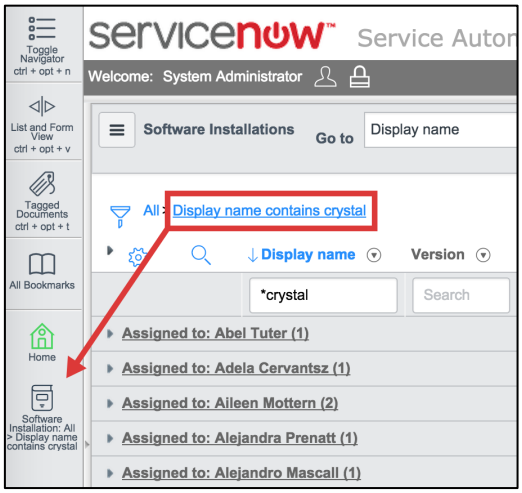


9. How many grouped records are there? How does this compare to the **Rights used** when the Software Counter uses the License type Per named user?



Note: The total number of Software Installations displays below the grouped record count for information purposes.

10. To return to this filtered list easily, drag **Display name contains crystal** from the breadcrumb to the Edge.

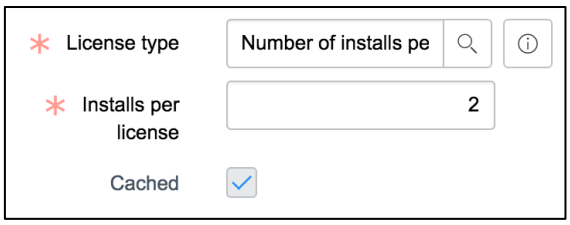


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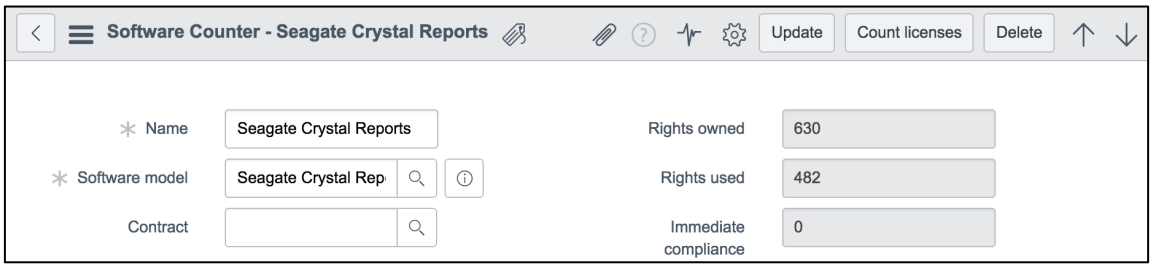
Rights Used–Number of Installs Per User

In some situations you are only permitted a certain number of installations per user for every Right owned. In this section, you explore how this works and how to validate it.

1. Navigate to **Software Asset > Reconciliation > Software Counters**.
2. Find and open the record for **Seagate Crystal Reports**.
3. Set the License type to **Number of installs per user** and Installs per license to **2**.



4. Click the form header menu and **Save**.
5. Click **Count licenses**.
6. Click the form header menu and **Reload form** until the form no longer indicates “A license count is in progress.” This may take a couple minutes.
7. What is the total number of **Rights used**?



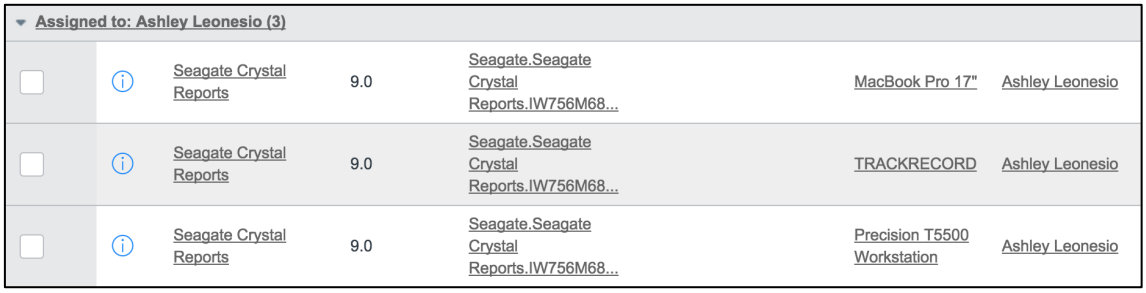
8. On the Edge, click the bookmark created previously.



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9. Click the column header menu for Assigned to and select **Group by Assigned to**.

10. Find the grouped record for **Ashley Leonesio**. How many installs does Ashley have? How many rights does this use?



Assigned to: Ashley Leonesio (3)						
☐	ⓘ	Seagate Crystal Reports	9.0	Seagate.Seagate Crystal Reports.IW756M68...	MacBook Pro 17"	Ashley Leonesio
☐	ⓘ	Seagate Crystal Reports	9.0	Seagate.Seagate Crystal Reports.IW756M68...	TRACKRECORD	Ashley Leonesio
☐	ⓘ	Seagate Crystal Reports	9.0	Seagate.Seagate Crystal Reports.IW756M68...	Precision T5500 Workstation	Ashley Leonesio

When a license allows each user a limited number of installations, start at the number of users, and then determine how many of those users use more than a single right.

Here there are 469 users, but when each user is only allowed two installations per right used, 482 rights are used. This leaves a difference of 13 to account for. Here is how to account for these Rights used for Seagate Crystal Reports.

Assigned to user	Number of installations	Additional right used
Ashley Leonesio	3	1
Beth Anglin	3	1
Chuck Farley	3	1
David Loo	7	3
Dennis Millar	3	1
Don Goodliffe	3	1
Howard Johnson	7	3
Luke Wilson	3	1
Olga Yarovenko	3	1
Total		**13**

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Lab Goal

Installation related information determines the Rights used for a software title. The Software License records identify the number of Rights owned. From a simple standpoint, you count the number of Rights in the Software Licenses to get this total. If you have upgrade or downgrade rights from a license purchase, though, this affects the count of Rights owned.

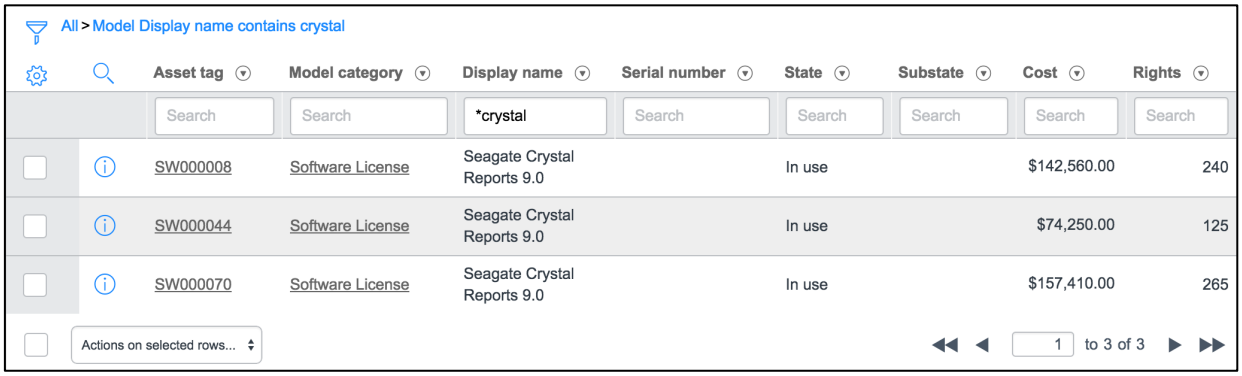
Lab 2.1 Count Software Rights Owned

Update Rights on a Software License

You discover a clerical error on one of your Software License records. In this section, you fix the error and rerun the Software Counter.

1. Navigate to **Software Asset > Software Licenses**.

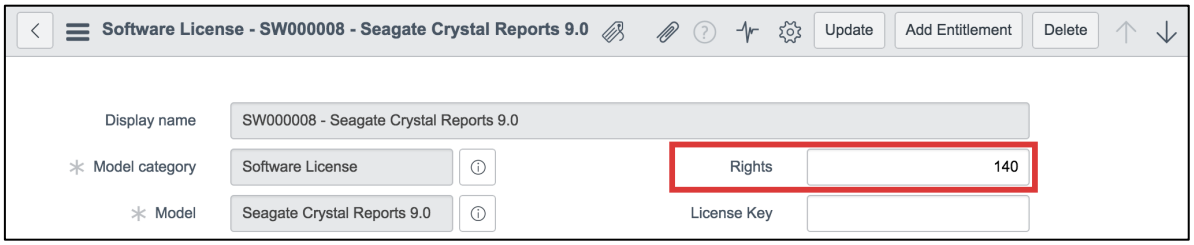
2. Find records with a Display name that contains **crystal**. How many records are there and how many total **Rights**?



3. Open the record with Asset tag **SW000008**.

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4. Change the number of Rights to **140**.



5. Click **Update**.

6. Navigate to Software Asset > Reconciliation > Software Counters.

7. Find and open the record for **Seagate Crystal Reports**.

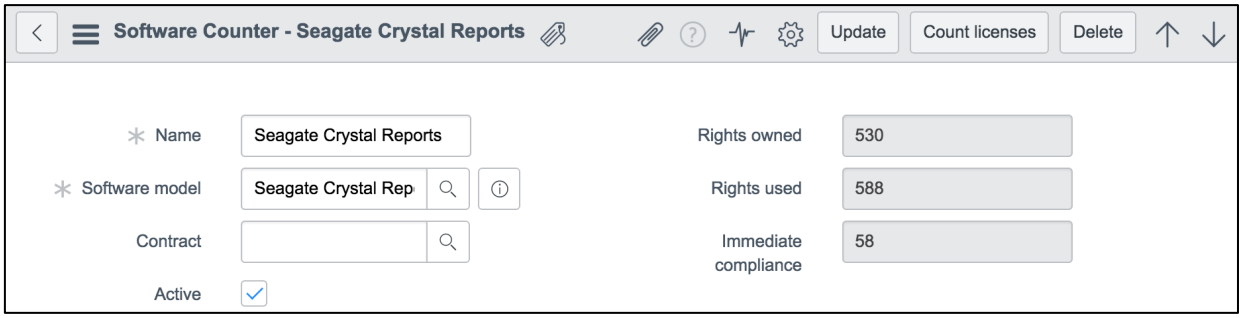
8. Set the License type to **Per workstation**.

9. Click the form header menu and **Save**.

10. Click Count licenses.

11. Click the form header menu and **Reload form** until the form no longer indicates “A license count is in progress.” This may take a couple minutes.

12. What is the total number of **Rights owned**? Are you compliant?



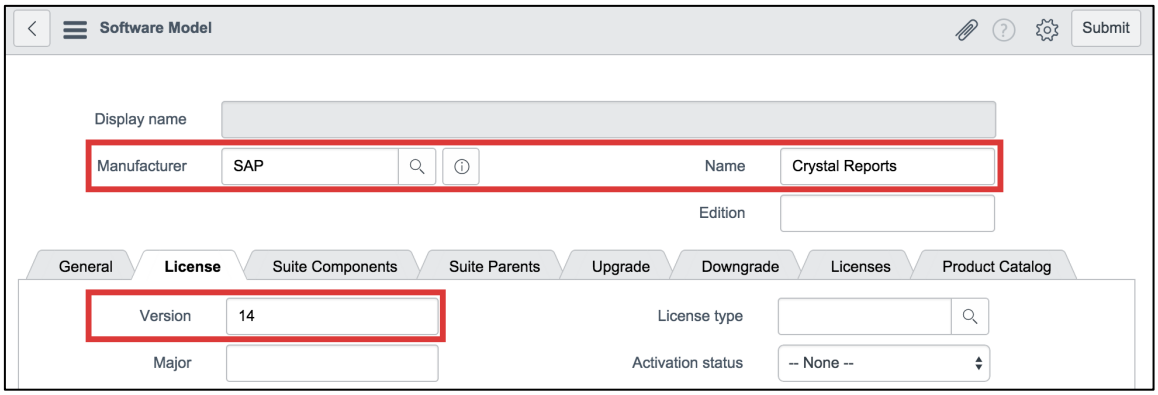
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Downgrade Rights

Because you are no longer compliant, you purchase some additional rights for Crystal Reports to become compliant. The version in this environment, Seagate Crystal Reports 9.0, is no longer available for purchase. You have negotiated with SAP to purchase rights for version 14.1 with downgrade rights to run version 9. Before you can create the Software License record, you first create a Software Model.

1. Navigate to **Software Asset > Software Models**.
2. Click **New**.
3. Complete the Software Model form as follows:

   Manufacturer: **SAP**
   Name: **Crystal Reports**
   Version: **14**

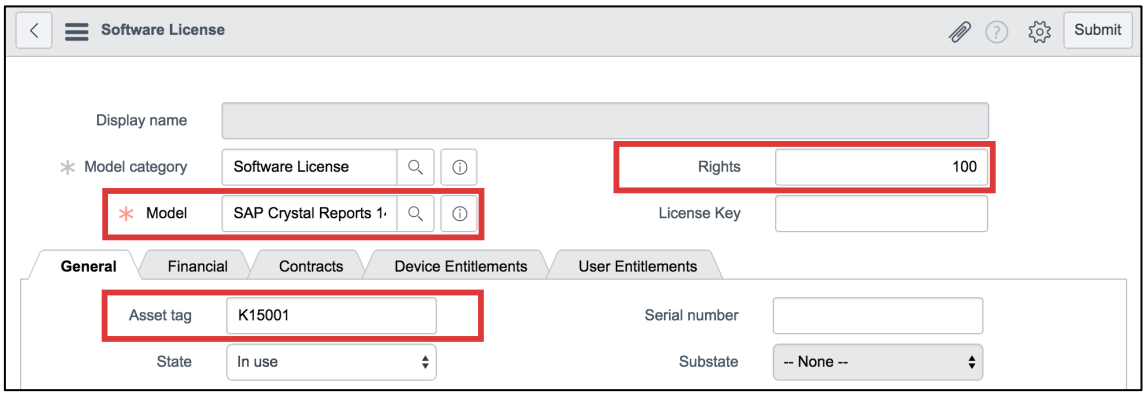


4. Click **Submit**.
5. Navigate to **Software Asset > Software Licenses**.
6. Click **New**.

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7. Complete the Software License form as follows:

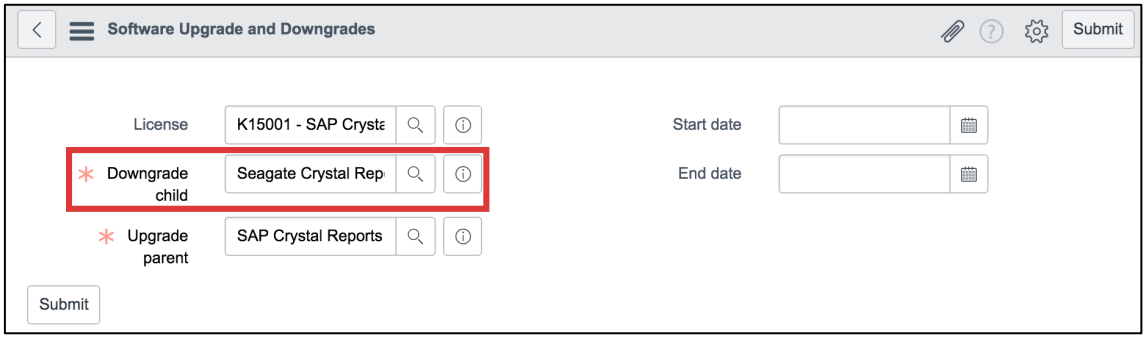
   Model: **SAP Crystal Reports 14**
   Rights: **100**
   Asset tag: **K15001**



8. Click the form header menu and **Save**.

9. Under the **Software Upgrade and Downgrades** related list, click **New**.

10. For Downgrade child, select **Seagate Crystal Reports 9.0**.



   Note: If SAP made the downgrade available for a limited time, you could use the date fields.

11. Click **Submit**.

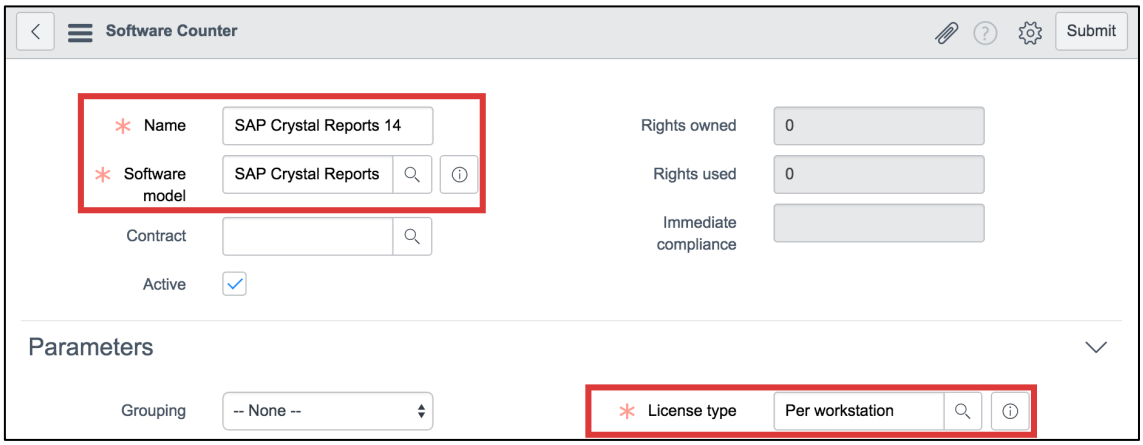
12. Navigate to **Software Asset > Reconciliation > Software Counters**.

13. Click **New**.

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14. Complete the Software Counter form as follows:

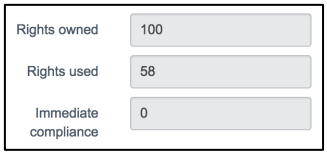
    Name: **SAP Crystal Reports 14**
    Software Model: **SAP Crystal Reports 14**
    License type: **Per workstation**



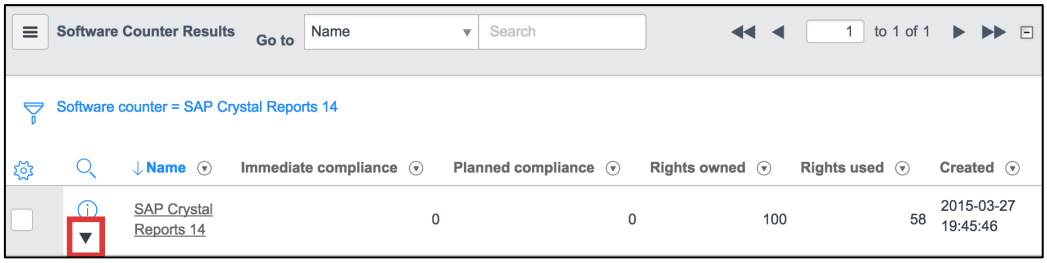
15. Click the form header menu and **Save**.

16. Click **Count licenses**.

17. Click the form header menu and **Reload form** until the form no longer indicates "A license count is in progress." This may take a couple minutes. What is the result?

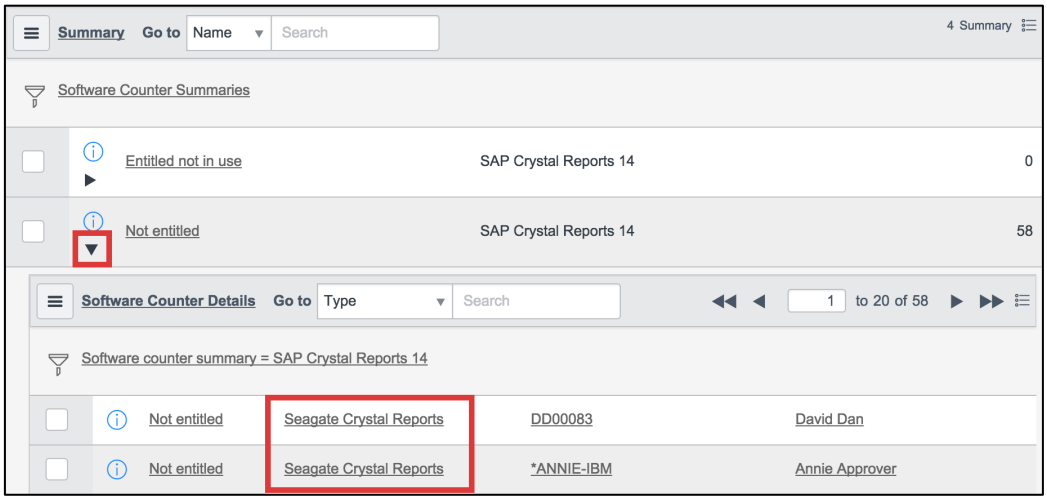


18. Under the **Software Counter Results** related list, expand **SAP Crystal Reports 14**.



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19. Under **Summary**, expand **Not entitled**. Notice the installs listed are Seagate Crystal Reports.



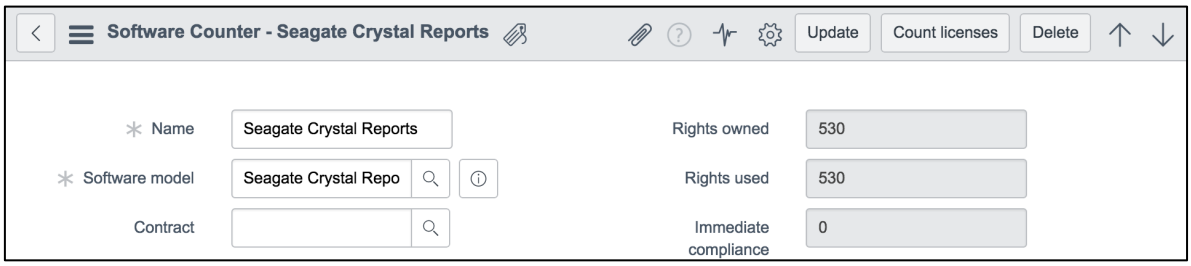
20. Return to the list of **Software Counters**.

21. Find and open **Seagate Crystal Reports**.

22. Click **Count licenses**.

23. Click the form header menu and **Reload form** until the form no longer indicates “A license count is in progress.” This may take a couple minutes.

24. What is the total number of **Rights owned**? Are you compliant?



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Lab Goal

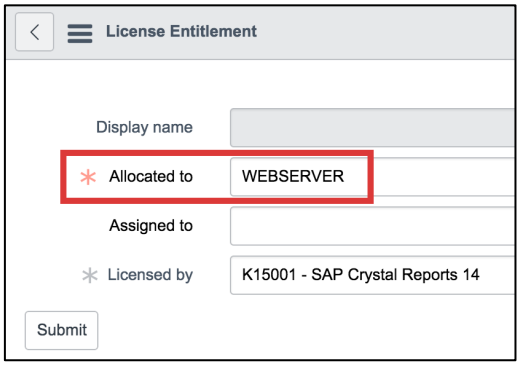
External compliance with the vendor is important to ensure you have paid for all the rights you use, but if you track who is allowed to use software or where the software should be installed in your environment, you can better optimize where those licenses are used and determine whether or not they are used in the right places. You can entitle software manually, through import, or as part of a workflow that automates the process based on requests.

Lab 3.1
Software Entitlement

Manually Entitle Software to a Device

You have identified a device in your environment that should run Seagate Crystal Reports. As you no longer have Rights available with your Seagate Crystal Reports licenses, create the entitlement on the SAP Crystal Reports 14 Software License that includes downgrade rights.

1. Navigate to **Software Asset > Software Licenses**.
2. Find and open the license with Asset tag **K15001**.
3. Click **Add Entitlement**.
4. Set Allocated to: **WEBSERVER**.



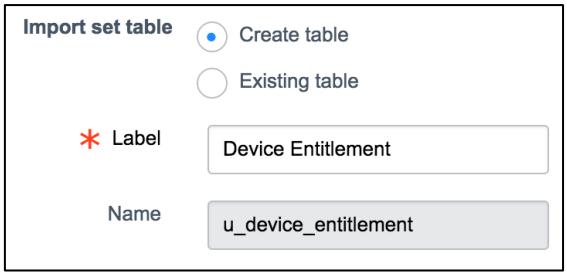
5. Click **Submit**.

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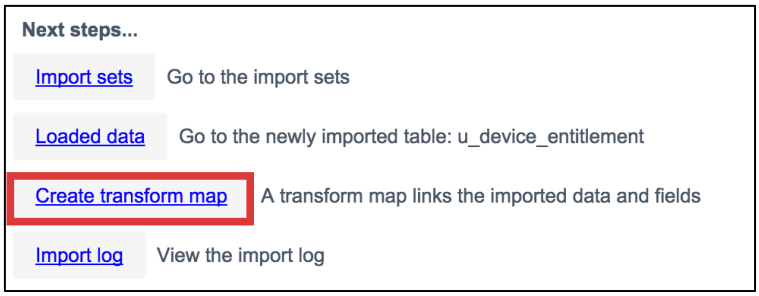
Import Software Entitlements

To facilitate the addition of a large number of entitlements, you have a spreadsheet with the list of computers you want to entitle. You can import this spreadsheet to quickly add entitlements. You would set up this import with your System Administrator. The values used in the Allocated to and Licensed by columns of the spreadsheet need to uniquely match existing CIs and Software Licenses.

1. Navigate to **System Import Sets > Load Data**.
2. For Import set table, select **Create table** and set the Label to **Device Entitlement**.



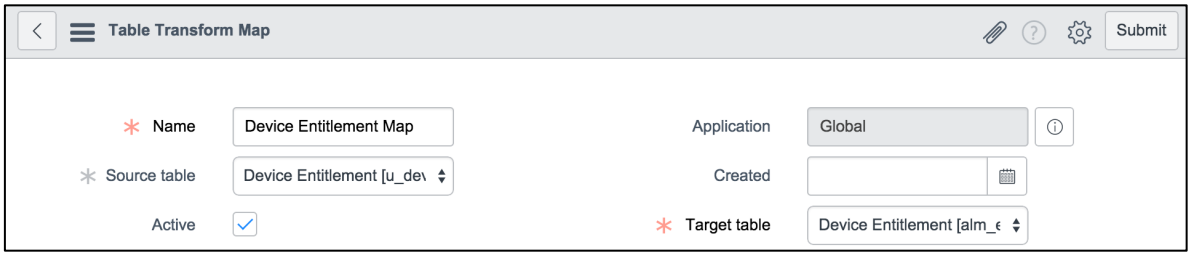
3. For the Source of the import, click **Choose file** and find the file **DeviceEntitlements.xls** downloaded with the supporting files for this lab.
4. Click **Submit**.
5. Under **Next steps…**, select **Create transform map**.



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6. Complete the Table Transform Map form as follows:

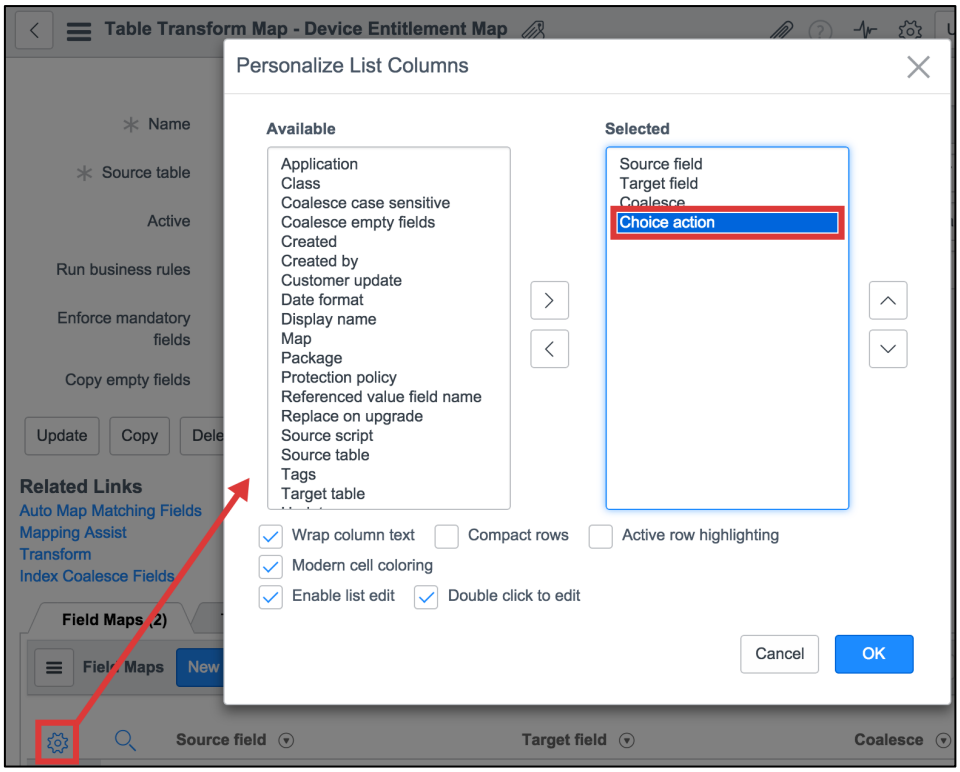
   Name: **Device Entitlement Map**
   Target table: **Device Entitlement [alm_entitlement_asset]**



7. Click the form header menu and **Save**.

8. Under **Related Links**, click **Auto Map Matching Fields**.

9. Click the **Personalize List** icon and add **Choice** action to **Selected**.

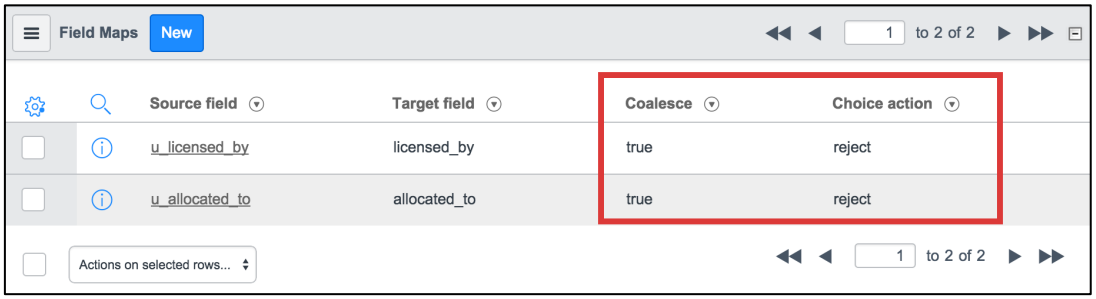


10. Click **OK**.

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11. In the **Field Maps** related list, update the values for both items as follows:

    Coalesce: **true**– This prevents the creation of duplicate entitlements.
    Choice action: **reject** –This prevents entries that do not match an existing CI or License.



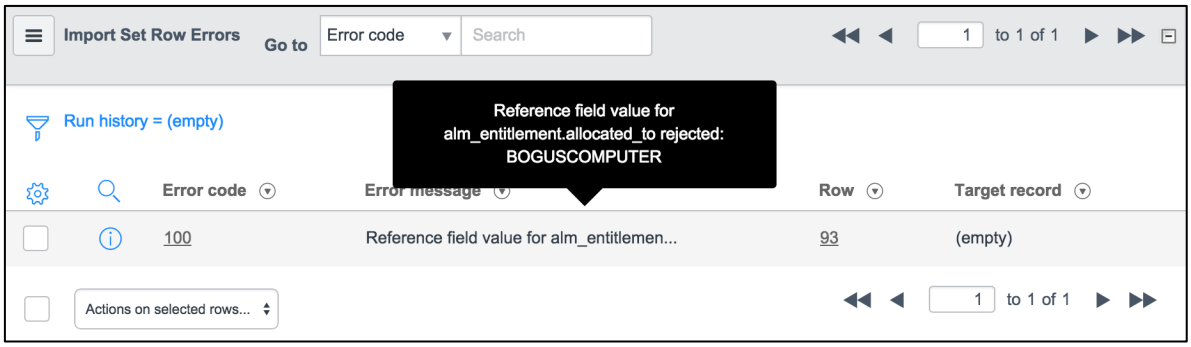
12. Under **Related Links**, click **Transform**.

13. Click **Transform**.

14. Under **Next steps…**, click **Transform History**.

15. Open the **History** record.

16. Under the **Import Set Row Errors** related list, view the error message. Why did this row fail to import?

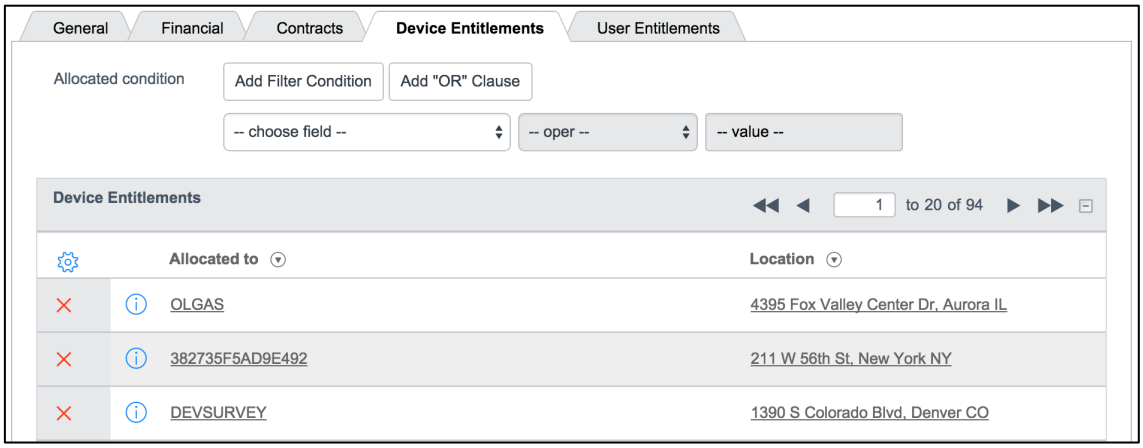


17. Navigate to **Software Asset > Software Licenses**.

18. Find and open the record with Asset tag **K15001**.

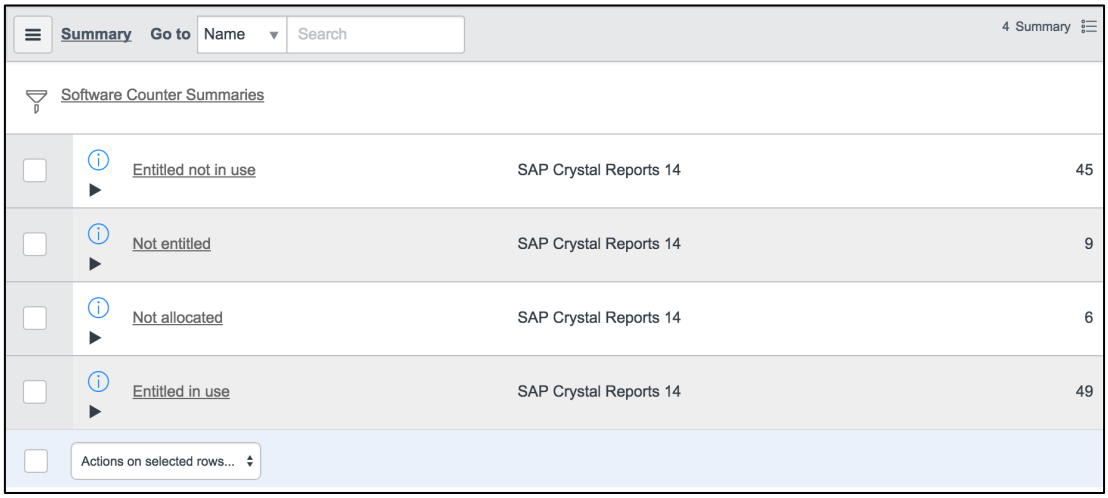
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19. View the **Device Entitlements** form section. How many entitlements are there?



Optional: Entitlement Extra

If you finish the other sections of this lab quickly and want a little more to do, you can open the Software Counters for **SAP Crystal Reports 14** and rerun the license count. View the Counter Summary to see what has changed.



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Lab Goal

Software Counters provide the flexibility to apply only specific installations toward the Rights used and specific Software Licenses to the Rights owned calculation.

Lab 4.1 Set Counter Conditions

Planned Compliance

When you factor in entitlements, you may find that you need to prepare for situations that may make you noncompliant with the vendor. In this lab, you look at Planned Compliance for Apple QuickTime Pro.

1. Navigate to **Software Asset > Reconciliation > Software Counters**.
2. Find and open the **Apple QuickTime Pro 7** counter.
3. If the Software Counter does not display Rights owned and Rights used, then click **Count licenses** and wait for the count to complete.
4. Scroll to the bottom of the page to view the **Software Counter Results** related list. What are the Immediate and Planned compliance numbers for this counter result?

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Software Install Conditions

Because you purchase a significant amount of Apple hardware, you have worked out an agreement with Apple to use QuickTime Pro on your Apple hardware for free. You still need to pay for it on non-Apple devices. In this lab, you use the device Manufacturer field to only count installations on devices not made by Apple.

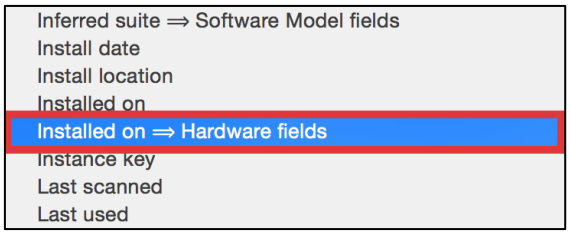
To leverage the **Manufacturer** field, you need to access the CI record from the software installation record.

1. If you are not already there, navigate to **Software Asset > Reconciliation > Software Counters** and open the **Apple QuickTime Pro 7** counter.

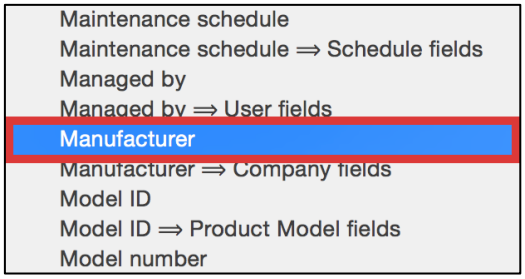
2. Under the Software install condition drop-down list, **choose field** and select **Show Related Fields** at the bottom of the list.



3. From the drop-down list, select **Installed on-->Hardware fields**.

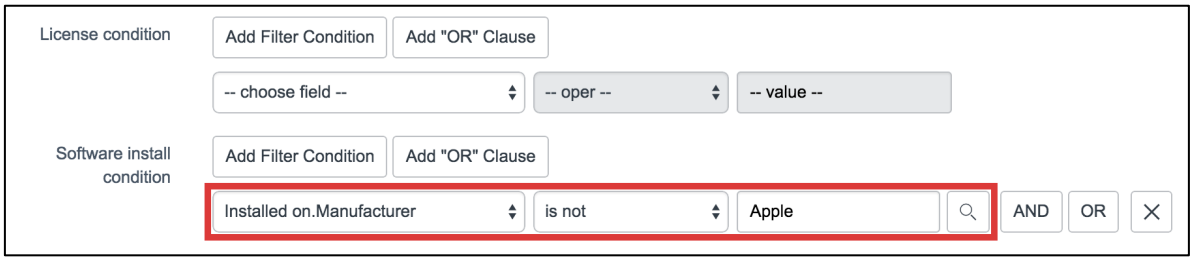


4. Select the drop-down list one more time and select **Manufacturer**.



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5. Set the remaining components of the condition so you end up with **Installed on.Manufacturer | is not | Apple**.

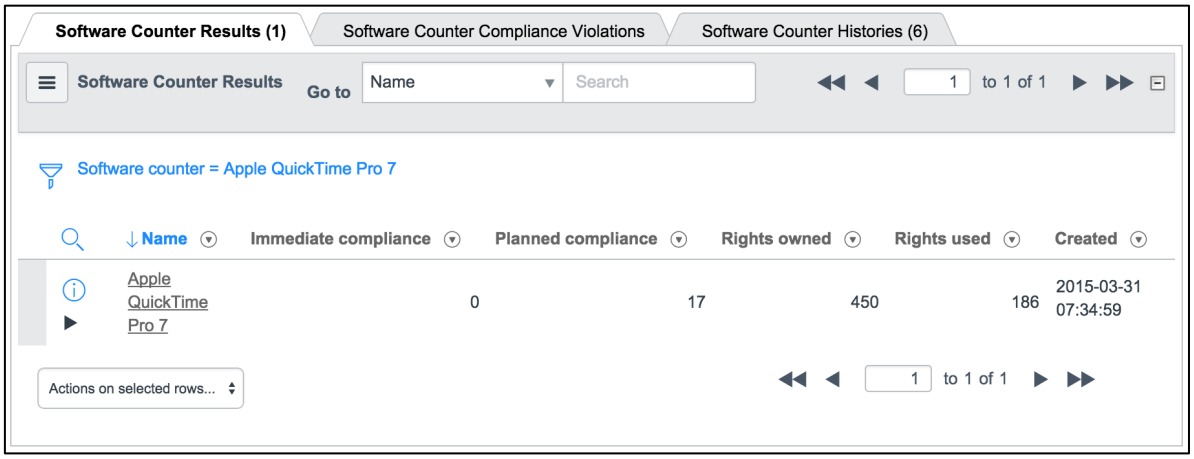


6. Click the form header menu and **Save**.

7. Click **Count licenses**.

8. Click the form header menu and **Reload form** until it no longer indicates that the software count is in progress. The count may take several minutes.

9. When the count is complete, view the **Software Counter Results**. What is the Planned Compliance?



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Lab Goal

Through contract management, you can track the details of your license agreements with software vendors, such as terms and conditions and use rights. Contracts also allow you to manage enterprise and subscription license configurations. In this lab, you familiarize yourself with these options.

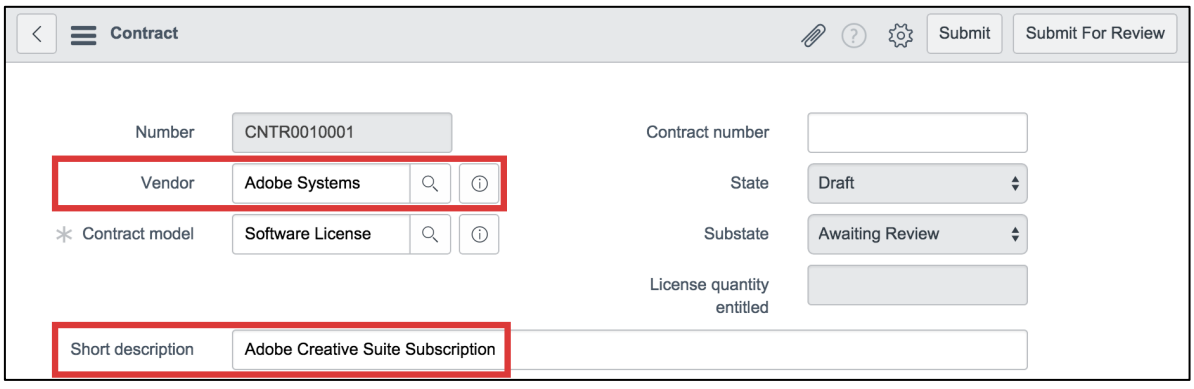
Lab 5.1
Contracts

Create a Subscription Software License

You have licensed Adobe Creative Suite as a subscription through the end of next year for some users and wish to track the subscription license.

1. Navigate to **Contract > Contracts > Software Licenses**.
2. Click **New**.
3. Complete the top of the Contract form as follows:

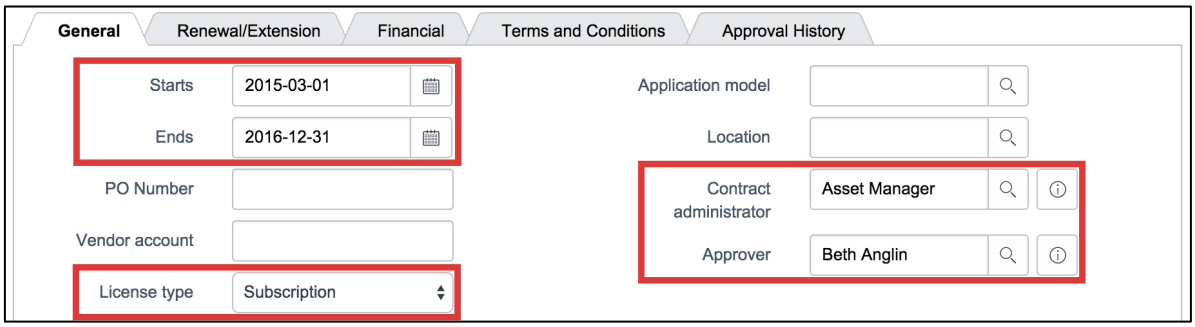
   Vendor: **Adobe Systems**
   Short description: **Adobe Creative Suite Subscription**



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4. Complete the General form section as follows:

   Starts: **2015-03-01**
   Ends: **2016-12-31**
   License type: **Subscription**
   Contract administrator: **Asset Manager**
   Approver: **Beth Anglin**

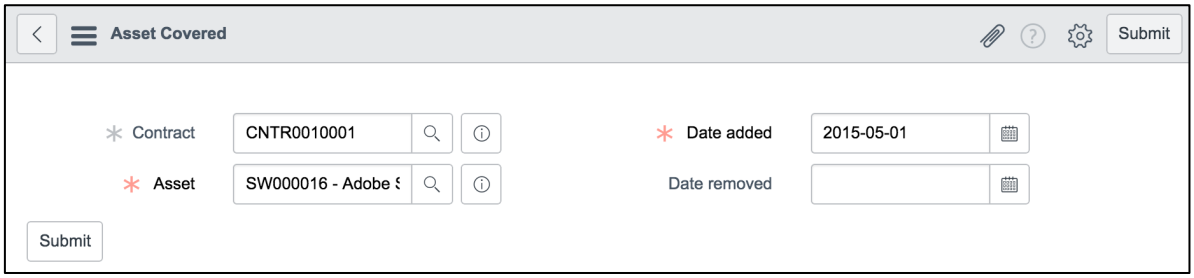


5. Click the form header menu and **Save**. Take note of the contract **Number**.

6. Under the **Assets Covered** related list, click **New**.

7. Complete the form as follows:

   Asset: **SW000016 – Adobe Systems Creative Suite Design & Web Premium 6.00**
   Date added: **2015-05-01**



8. Click **Submit**.

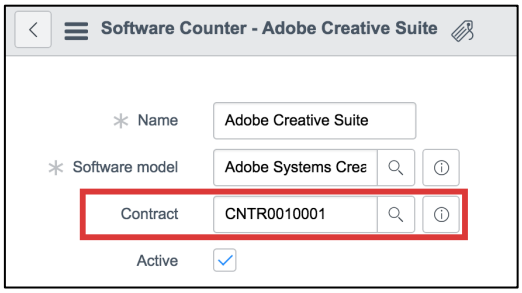
9. Click **Update**.

10. Navigate to **Software Asset > Reconciliation > Software Counters**.

11. Find and open the **Adobe Creative Suite** record.

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12. Select the Contract you just created.



13. Click the form header menu and **Save**.

14. Click **Count licenses**.

15. Click the form header menu and **Reload form** until the form no longer indicates "A license count is in progress." This may take a couple minutes.

16. What is the current status of Rights owned, Rights used, and Immediate compliance? Why?

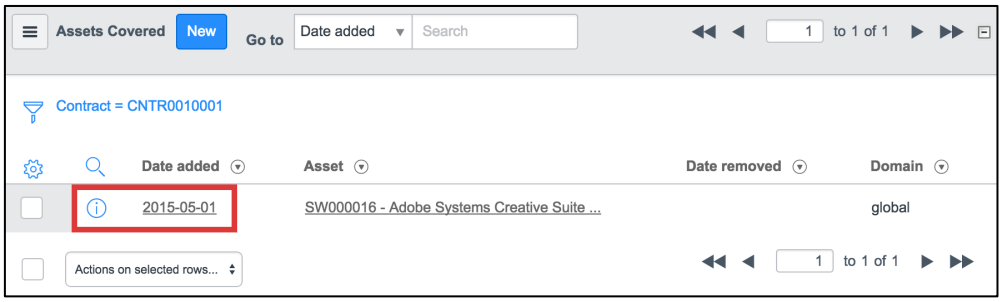


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Alter Subscription Coverage Date

Adjust the covered asset to begin yesterday rather than the first day of next month.

1. Navigate to **Contract > Contracts > Software Licenses**.
2. Select the contract created earlier.
3. Under the **Assets Covered** related list, click the **Date added**.



4. Change the Date added value to **2015-04-15**.
5. Click **Update**.
6. Navigate to **Software Asset > Reconciliation > Software Counters**.
7. Select the **Adobe Creative Suite** record.
8. Click **Count licenses**.
9. Click the form header menu and **Reload form** until the count completes. What is the result? Why?

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Lab Goal

Software vendors develop many creative ways to license their software. ServiceNow allows you to create custom License Calculations to meet the requirements of these calculations. In this lab, you create a complex License Calculation.

Lab 6.1 Custom License Calculation

Create a Complex License Calculation

Microsoft's licensing for SQL Server is now based on CPU cores rather than Client Access Licenses (CALs). The details are as follows:

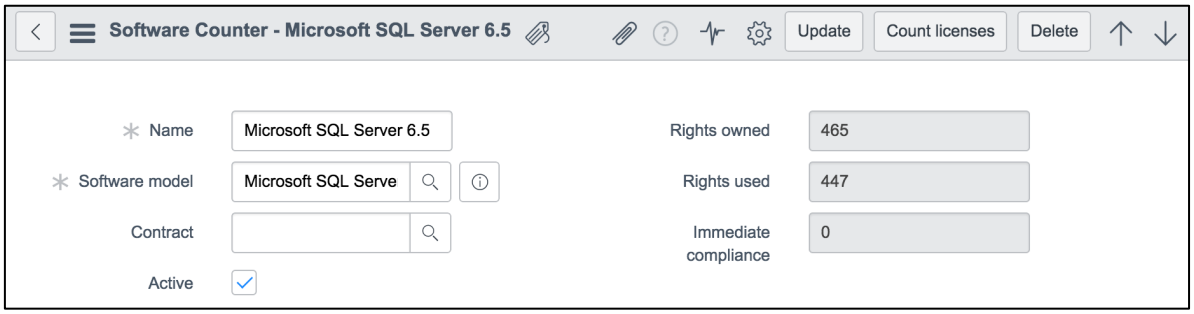
- Up to four cores uses four rights (one core uses four rights, two cores use four rights)
- More than four cores uses a number of rights equal to the number of cores (six cores use six rights)

This method does not match any of the available license types so you need to create a custom license calculation. Before you create and test the new counter, view your current compliance with the old license model.

1. Navigate to **Software Asset > Reconciliation > Software Counters**.
2. Find and open the record for **Microsoft SQL Server 6.5**.
3. Click **Count licenses**.

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4. Click the form header menu and **Reload form** until it no longer indicates that the software count is in progress. The count may take a couple minutes.



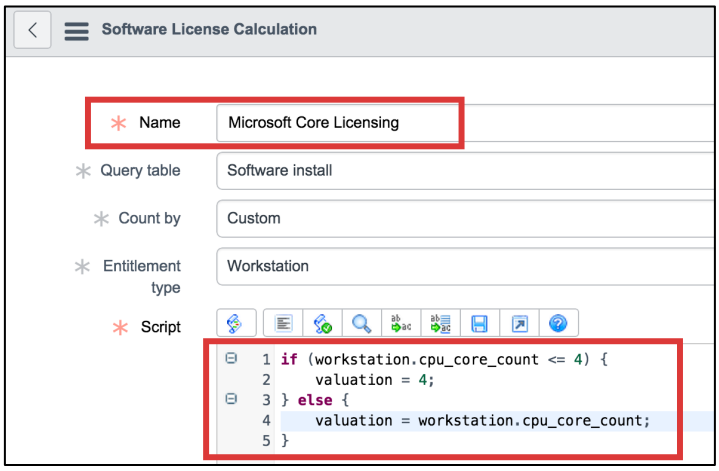
5. Navigate to **Software Asset > Reconciliation > License Calculations**.

6. Click **New**.

7. Complete the form as follows:

   Name: **Microsoft Core Licensing**
   Script:

```
if (workstation.cpu_core_count <= 4) {
   valuation = 4;
} else {
   valuation = workstation.cpu_core_count;
}
```



   Note: JavaScript is case sensitive.

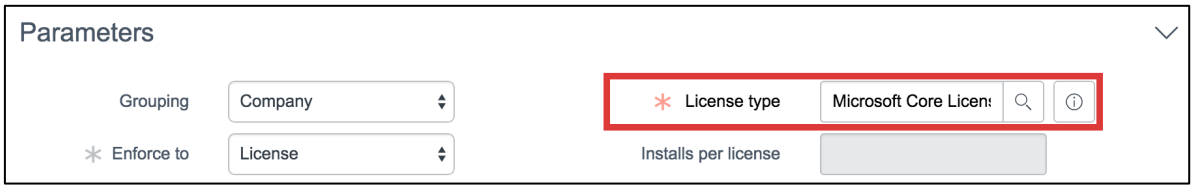
8. Click **Submit**.

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9. Navigate to **Software Asset > Reconciliation > Software Counters**.

10. Find and open the record for **Microsoft SQL Server 6.5**.

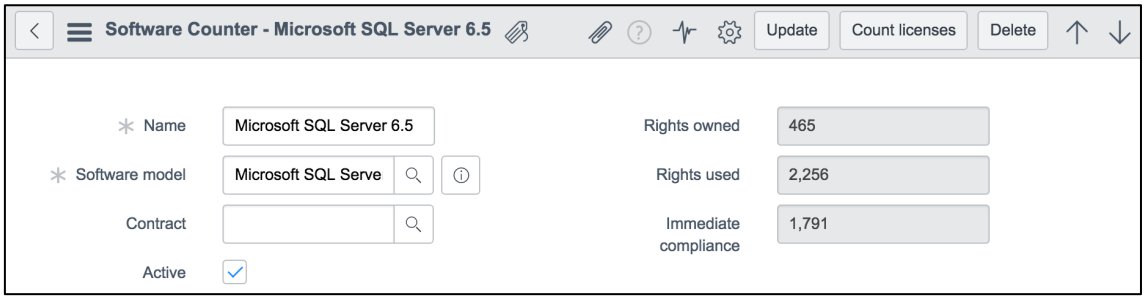
11. Change the License type to **Microsoft Core Licensing**.



12. Click the form header menu and **Save**.

13. Click **Count licenses.**

14. Click the form header menu and **Reload form** until it no longer indicates that the software count is in progress. The count may take a couple minutes.



15. What is the current compliance level?

    Note: With the change to core licensing, Microsoft adjusted the cost. To get a completely accurate count here, you would also need to update the rights owned to match the new model.

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