

Optimize software installations

Lab 5.2

20-25 minute

Lab objectives

You will achieve the following objectives:

- Restricted software identified
- Software usage data imported
- Software reclaimed and awaiting removal

Lab Dependency: Requires the completion of Labs 1.1, 2.1, and 2.2

Required Resources: 5.2-software_usage.xlsx

Scenario

The CloudD Information Security Office (ISO) has replaced Splunk software within CloudD, however the use of it by some employees is persisting. The ISO has requested that the Software Asset Management team add it to the list of software banned from use. Rick Lemm, Software Asset Manager at CloudD, needs to mark the software as Restricted in ServiceNow so installations can be identified as removal candidates.

Additionally, it is budget time at Cloud D. Rick needs to reclaim underutilized software to get an accurate picture of current utilized license costs and to reduce cost of licensing that needs to be budgeted for.

Requirements Summary

User Stories

- STRY050201 – Identify banned software

As a software asset manager, I need to identify Splunk as restricted software in ServiceNow, so that it can be removed.

- STRY050202 – Reclaim underutilized software

As a software asset manager, I need to reclaim underutilized software from the environment, so that I can optimize the use of software license rights.

STRY050201 – Identify banned software

Section 1 Identify software model as banned

Rick Lemm needs to mark the Splunk software model as restricted.



1. If not already, impersonate **Rick Lemm**.
2. Navigate to **Software Asset Workspace > License operations > Licensing > Software models**.
3. Open the software model for **Splunk 6 Enterprise**.
4. Select the **Restricted software** check box in the General section and click **Save**.

The screenshot shows the 'General' configuration page for the 'Splunk 6 Enterprise' software model. The page includes tabs for 'Details', 'Suite Components', 'Suite Parents', 'Software Product Lifecycle (2)', and 'Software Entitlements (1)'. The 'General' section contains the following fields and controls:

- Short description:** A text input field.
- Platform:** A dropdown menu set to '-- Anything --'.
- Language:** A dropdown menu set to '-- Anything --' with a search icon.
- Asset tracking strategy:** A dropdown menu set to 'Leave to category'.
- Next version:** A text input field with a search icon.
- Asset tracking unit:** A text input field with a search icon.
- Certified:** An unchecked checkbox.
- Cost:** A dropdown menu set to 'USD (\$) 0.00'.
- Restricted software:** A checked checkbox, highlighted with a red rectangular box.

Section 2 Identify restricted software

Now that Rick has identified the software model as banned, restricted software must be identified and added to the Restricted Installations removal candidates list. There is a scheduled job that runs daily to do this, but Rick wants the ServiceNow System Administrator, Jet Blake, to run it now for quicker resolution.



1. End Impersonation to return to **System Administrator**.
2. Navigate to **System Definition > Scheduled Jobs**.
3. Locate and open the **SAM - Identify Blacklisted Software** scheduled job.

The screenshot shows the configuration for a scheduled job named 'SAM - Identify Blacklisted Software'. The job is active and runs globally. The frequency is set to 'Daily' at 05:00. The script area contains the following code:

```
1 samIdentifyBlacklistedSoftware();
2
3 function samIdentifyBlacklistedSoftware(){
4     var jobLogGr = new GlideRecord('sam_job_log');
5     jobLogGr.initialize();
6     jobLogGr.setValue('name', 'SAM - Identify Blacklisted Software');
7     jobLogGr.setValue('status', 'in progress');
8     jobLogGr.insert();
9
10    try{
11        new SamIdentifyBlacklistedSoftware().process();
12        jobLogGr.setValue('status', 'completed');
13    }
14    catch(error){
15        jobLogGr.setValue('status', 'fail');
16    }
17    jobLogGr.update();
18 }
19
```

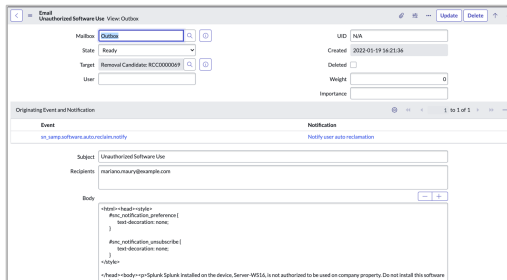
Note: Before the Quebec release Restricted Software was referred to as Blacklisted Software.

4. Click **Execute Now**.
5. Navigate to **Software Asset Workspace > License usage** then click the **Removal candidates** tab.

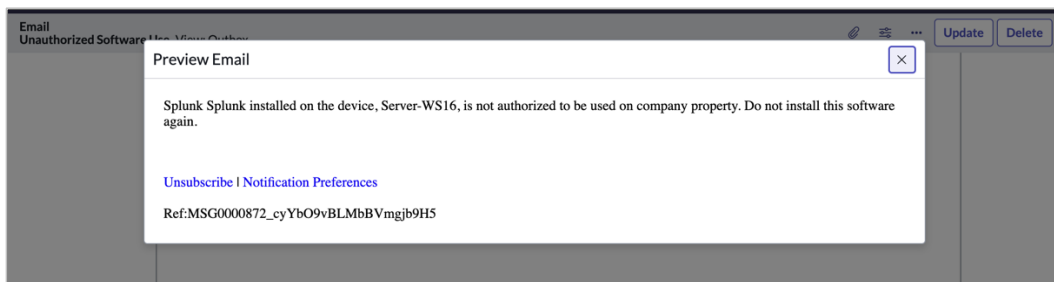
The screenshot shows the 'License usage' page with the 'Removal candidates' tab selected. The page displays a table of software licenses that are candidates for removal. The table has columns for Number, Name, Publisher, Product, Justification, and State. There are 634 removal candidates in total.

Number	Name	Publisher	Product	Justification	State
RCC0000001	Remove : Oracle DB Server Standard Edition 2	Oracle	DB Server	Invalid Configuration	Ready
RCC0000001	Remove rights: 3D Analyst	ESRI	ArcGIS 3D Analyst	Low Usage	Ready
RCC0000001	Remove Autodesk AutoCAD LT	Autodesk Inc.	AutoCAD	Low Usage	Closed Complete
RCC0000001	Remove : SAP Named Users SAP Application Developer	SAP	Named Users	Low Usage	Ready
RCC0000002	Remove : SAP Named Users SAP Application Professional	SAP	Named Users	Low Usage	Ready
RCC0000002	Remove : Oracle DB Server Standard Edition 2	Oracle	DB Server	Invalid Configuration	Ready

6. Validate there are records where the Product is **Splunk** in the **Removal candidates** list.
7. Navigate to **System Mailboxes > Outbound > Outbox**.
8. Open an item in the list with the Subject of **Unauthorized Software Use**.



9. Under Related Links, click **Preview Email**.



Note: This is the message users receive if Restricted software is found.

10. Close **Preview Email** window.

STRY050202 – Reclaim underutilized software

Section 3 Import software usage data

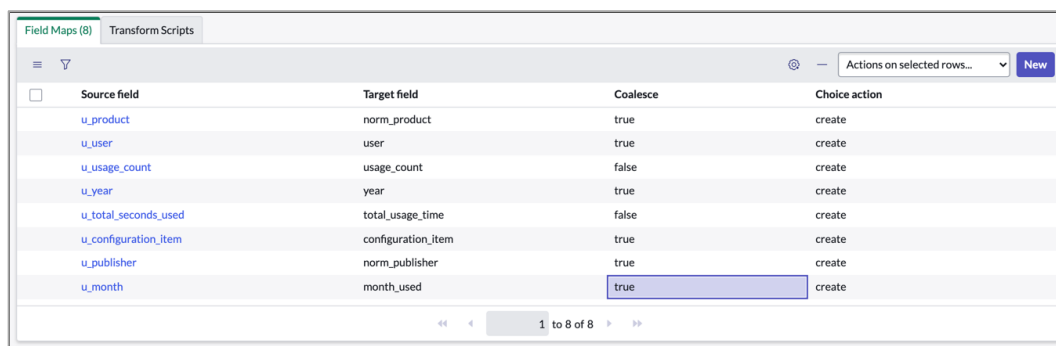
To optimize the use of software licenses in an environment, leverage usage information to determine where licensed software is used. When you can use entitlements with available rights rather than purchase new entitlements, you save money. Optimization begins with usage information, which needs to be imported from third-party sources. Alternately, if you have Microsoft SCCM, ServiceNow provides a plugin to support the import of its usage data.

Section 3.1 Load and transform data

1. Navigate to **System Import Sets > Load Data**.
2. Under Import set table, select **Create table** and label the import set table **Software Usage Import**.
3. For the source of the import, select **5.2-software_usage.xlsx** downloaded previously in Lab 1.1.
4. Click **Submit**.
5. Once data load shows as Complete, under Next steps..., click **Create transform map**.
6. Complete the form as follows:
 - Name: **Software Usage Map**
 - Target table: **Software Usage [samp_sw_usage]**
7. Under Related Links, click **Auto Map Matching Fields**.

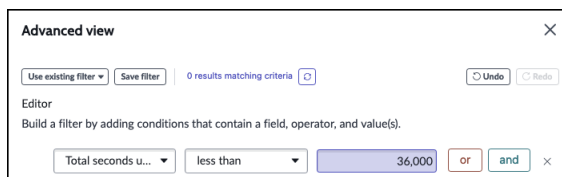
8. Under the Field Maps related list, set **Coalesce** to **true** for these fields (all but u_usage_count and u_total_seconds_used) by double clicking the field:

- **u_publisher**
- **u_year**
- **u_product**
- **u_month**
- **u_user**
- **u_configuration_item**



Source field	Target field	Coalesce	Choice action
u_product	norm_product	true	create
u_user	user	true	create
u_usage_count	usage_count	false	create
u_year	year	true	create
u_total_seconds_used	total_usage_time	false	create
u_configuration_item	configuration_item	true	create
u_publisher	norm_publisher	true	create
u_month	month_used	true	create

9. Under Related Links, click **Transform**.
10. Click **Transform** when the **Specify Import set and Transform map** form is displayed.
11. Navigate to **Software Asset Workspace > License operations > Discovery > Software usage**.
12. Click the **Show/hide** filter (i.e., the funnel icon) and then **Advanced view**.
13. To see all software usage under 10 hours, create a filter where **Total seconds used** | **less than** | **36000**.



Advanced view

Use existing filter | Save filter | 0 results matching criteria | Undo | Redo

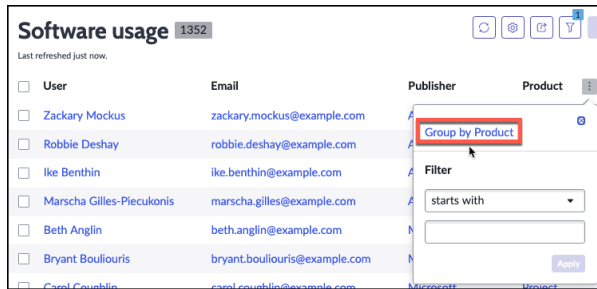
Editor

Build a filter by adding conditions that contain a field, operator, and value(s).

Total seconds u... | less than | 36,000 | or | and | ×

14. Click **Update**.

15. Click the **Product** column header (three dots) and select **Group by Product**.



Software usage 1352

Last refreshed just now.

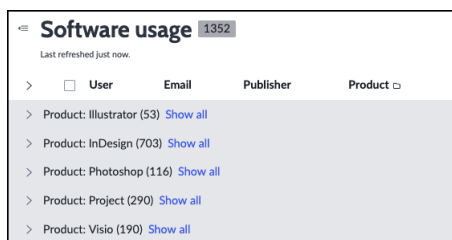
<input type="checkbox"/> User	Email	Publisher	Product
<input type="checkbox"/> Zackary Mockus	zackary.mockus@example.com		
<input type="checkbox"/> Robbie Deshay	robbie.deshay@example.com		
<input type="checkbox"/> Ike Benthin	ike.benthin@example.com		
<input type="checkbox"/> Marscha Gilles-Piecukonis	marscha.gilles@example.com		
<input type="checkbox"/> Beth Anglin	beth.anglin@example.com		
<input type="checkbox"/> Bryant Boullouris	bryant.boullouris@example.com		
<input type="checkbox"/> Carol Caublin	carol.caublin@example.com	Microsoft	Project

Group by Product

Filter

starts with

Apply



Software usage 1352

Last refreshed just now.

> <input type="checkbox"/> User	Email	Publisher	Product
> Product: Illustrator (53) Show all			
> Product: InDesign (703) Show all			
> Product: Photoshop (116) Show all			
> Product: Project (290) Show all			
> Product: Visio (190) Show all			

Note: The results may vary in your instance.

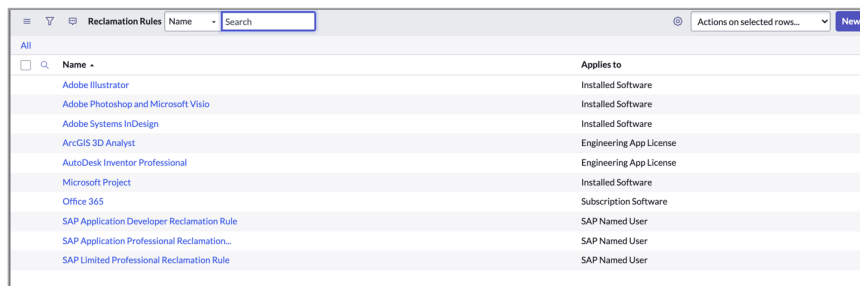
Knowledge Check: Refer to the Answer Guide at the lab's end.

1. What are your top three low-usage products?

Section 4 Review reclamation rules

Reclamation rules identify how much usage over some period of months constitutes low usage. Some sample reclamation rules exist in the system. Rick Lemm wants to view what is available.

1. Impersonate **Rick Lemm**.
2. Navigate to **Software Asset > Administration > Reclamation Rules**.



Name	Search	Applies to
<input type="checkbox"/> Adobe Illustrator		Installed Software
<input type="checkbox"/> Adobe Photoshop and Microsoft Visio		Installed Software
<input type="checkbox"/> Adobe Systems InDesign		Installed Software
<input type="checkbox"/> ArcGIS 3D Analyst		Engineering App License
<input type="checkbox"/> AutoDesk Inventor Professional		Engineering App License
<input type="checkbox"/> Microsoft Project		Installed Software
<input type="checkbox"/> Office 365		Subscription Software
<input type="checkbox"/> SAP Application Developer Reclamation Rule		SAP Named User
<input type="checkbox"/> SAP Application Professional Reclamation...		SAP Named User
<input type="checkbox"/> SAP Limited Professional Reclamation Rule		SAP Named User

Knowledge Check: Refer to the Answer Guide at lab's end.

2. Are there reclamation rules defined for the three products you identified as low usage in the last section?

- Open the reclamation rule **Adobe Photoshop and Microsoft Visio**

Reclamation Rule: Adobe Photoshop and Microsoft Visio

* Name: Adobe Photoshop and Microsoft Visio

Applies to: Installed Software

Reclamation type: Total Usage Time

Software install condition: Add Filter Condition Add "OR" Clause

Usage Metering Data: Subscribed Products Threshold

Aggregate usage by: Last Three Months

* Total hours used: 5

Software Product

Software product	Parent	Filter condition
No records to display		

Knowledge Check: Refer to the Answer Guide at lab's end.

- What products are checked by this reclamation rule?
 - Is the user notified?
- Set the **Assignment group** to **Software Asset Managers**.
 - Select the **Notify user** check box.
 - Populate the **Days before auto-reclamation** field with **15**.

Reclamation Rule: Adobe Photoshop and Microsoft Visio

* Name: Adobe Photoshop and Microsoft Visio

Applies to: Installed Software

Reclamation type: Total Usage Time

Usage Metering Data: Subscribed Products Threshold

Aggregate usage by: Last Three Months

* Total hours used: 5

Software Product

Software product	Parent	Filter condition
No records to display		

* Assignment group: Software Asset Managers

Notify user: ☒

* Days before auto-reclamation: 15

- Click **Update**.

Section 5 Reclaim software license rights

Removal candidates are tasks that track the process of software removal. Over the course of the task, the task goes through various states. Those in the Awaiting User and Awaiting Approval states automatically progress to the Awaiting Revocation state once approved. Those in the Ready state need to be reviewed and reclaimed.

Rick needs to review removal candidates with a state of Ready and reclaim them.

1. As Rick Lemm, navigate to **Software Asset Workspace > License usage** then click the **Removal Candidates** tab.
2. Filter the list to only display records with a State of **Ready**.

License usage

Publishers

Reconciliation

Removal candidates

Reports

Removal candidates

135

Reclaim All

Edit

Export

New

Last refreshed just now.

<div><div></div></div> Number ▲	Name	Publisher	Product	Justification	State ▾	Potential savings
RCC0000001	Remove rights: 3D Analyst	ESRI	ArcGIS 3D Analyst	Low Usage	Ready	\$0.00
RCC0000001	Remove : SAP Named Users SAP Application Developer	SAP	Named Users	Low Usage	Ready	\$8,787.00
RCC0000001	Remove : Oracle DB Server Standard Edition 2	Oracle	DB Server	Invalid Configuration	Ready	\$0.00
RCC0000002	Remove : SAP Named Users SAP Application Professional	SAP	Named Users	Low Usage	Ready	\$1,047.00
RCC0000002	Remove : Oracle DB Server Standard Edition 2	Oracle	DB Server	Invalid Configuration	Ready	\$0.00
RCC0000003	Remove rights: 70400INVBUN_2010_OF	Autodesk Inc.	Inventor Professional	Low Usage	Ready	\$0.00
RCC0000003	Remove : SAP Named Users SAP Application Developer	SAP	Named Users	Low Usage	Ready	\$1,287.00
RCC0000004	Remove : SAP Named Users SAP Application Professional	SAP	Named Users	Low Usage	Ready	\$1,047.00
RCC0000004	Remove rights: 70400INVBUN_2010_OF	Autodesk Inc.	Inventor Professional	Low Usage	Ready	\$0.00
RCC0000005	Remove : SAP Named Users SAP Application Developer	SAP	Named Users	Low Usage	Ready	\$1,287.00
RCC0000006	Remove : SAP Named Users SAP	SAP	Named Users	Low Usage	Ready	\$8,787.00

Important: In a real-world situation, your next step is to click **Reclaim All** and a message is displayed that the job is running in the background. However, there are too many candidates to perform this operation in a timely manner during class.

In a typical environment, remove the software from the target system, possibly through the deployment tool. The next time the discovery source runs, it removes the software installation record. SAM Professional supports the use of Client Software Distribution to automate this removal.

Congratulations! You have completed this lab!

You are now ready to begin learning about retiring software.

Knowledge Check Answer Guide

1. **What are your top three low-usage products?**
 - InDesign
 - Project
 - Visio
2. **Are there reclamation rules defined for the three products you identified as low usage in the last section?**
 - Yes
3. **What products are checked by this reclamation rule?**
 - Photoshop
 - Visio
4. **Is the user notified?**
 - No

Lab takeaways



- Identify restricted software
- Import software usage data
- Reclaim software