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Now on Now:
How Software Asset Management Helps Control IT and Cloud Spending During COVID-19

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Introduction

Business models, operating models, and workforce paradigms are ever changing, and IT organizations need to adjust accordingly. Perhaps the most dramatic example is the COVID-19 pandemic. Almost overnight, employees began working remotely. From a software management perspective, this shift made it difficult to:

- Accurately track assets and usage to optimize software spend,
- Maintain compliance to avoid potential licensing penalties and reputational risk, and
- Deliver software efficiently and effectively to provide good experiences for both software users and the IT staff.

This case study will share how ServiceNow uses our Software Asset Management (SAM) product to create value on both the IT and cloud hosting sides of our business.

Section 1: Information Technology

Challenges

Prior to implementing SAM, we had multiple challenges:

- **Visibility** – We did not have good visibility into our total spend. For example, not all our Microsoft subscription or reserved license entitlements were in our database.
- **Control** – Software licensing was not centralized. Multiple groups were procuring their own software licenses.
- **Speed** – User software requests took a lot of time to fulfill, resulting in poor user experiences.

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- **SaaS software tracking** – SaaS software was not being tracked. For example, with everyone working from home during COVID-19, demand for the Miro whiteboarding solution exploded, and we added 4000+ users—an unexpected IT expense.
- **Cloud workload** – We were using manual effort to optimize our public cloud workload, for example, to right size and decommission unused machines.

Just like any other company, our goals were to maintain compliance, optimize software spend and streamline the processes by automating software request process to help provide better user experience and to save IT productivity hours. To do that, we turned to our own Now Platform®.

Solution Approach

To implement ServiceNow® SAM we used a four-step approach:

1. Define roles and responsibilities
2. Establish trustworthy data
3. Integrate operations
4. Implement Cloud Insights

Details on each of these steps are provided below. To optimize the return on our efforts, we initially focused on our top 10 software products, including Microsoft, Adobe, and Miro.

Defining Roles and Responsibilities

We created three roles with clear responsibilities:

- **SAM Process Owner** – A senior manager with the influence and authority to ensure that the SAM process is executed correctly and consistently across the organization
- **SAM Analyst** – Responsible for creating and maintaining software asset information, including software models, software entitlements, and allocations defined within the scope of the area
- **SAM Administrator** – Responsible for loading asset management data, integrations, and discovery tools

Establishing Trustworthy Data

First, we ensured that our foundation data was set up correctly. For example: Software products stored in the Software Product table are updated from the ServiceNow Content Library. This includes product name, publisher, product type, and product classification.

We then collected software installation data, using Discovery by integrating with SCCM for Windows, JAMF for MACs, Qualys and VMware. We activated and configured the publisher packs. For example, the Microsoft publisher pack brings in subscription data automatically from the Microsoft portal. We also integrated with Miro (SaaS) to automatically obtain usage data.

Next, we created software entitlements, which refer to the software asset itself and include the type, quantity, and cost of rights to use. Software license metrics were used for reconciliation to determine our compliance position. License metrics were defined for all the major publishers, as well as custom metrics.

We then updated software allocations. Typically, software entitlement rights are allocated through the software request process (service catalog), the software remediation process (based on reconciliation), or updated directly in the entitlement record. Note: Software allocations in ServiceNow SAM are records that grant one or many rights, are identified on the entitlement record, and are assigned to an individual or device using the software.

Lastly, we ran the reconciliation process, which shows the compliance status of software with respect to rights used vs. entitled rights. This can be run as a scheduled job (default is weekly), or on demand for one or all software publishers.

SnagIt 20
⊘ Compliant

Total Spend	True-up Cost	Over-licensed Amount
$(USD)80,000.00	$(USD)0.00	$(USD)55,276.19

License Metric Results (1)   Remediation Options (3)   Unlicensed Installs   Removal Candidates

Software model result = TechSmith SnagIt 2020

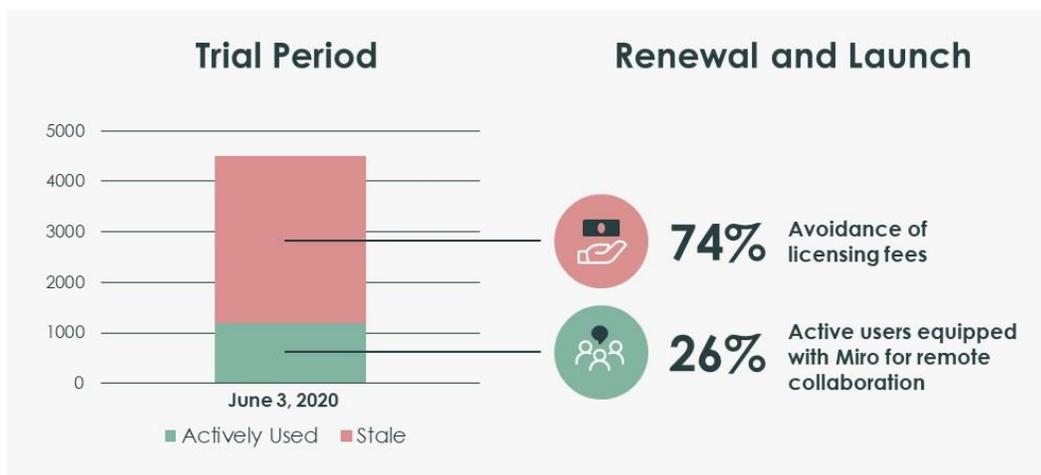| Display name	Rights owned ▲	Rights used	Rights available	Over-licensed amount	Average price
Per User	2,100	649	1,451	$(USD)55,276.19	$(USD)38.10

License Workbench shows the status of compliance items by publisher that need action—rights purchased vs. rights used. In this mock-up example, we had purchased 2,100 rights, however, only 649 rights are being used. We can then terminate those unused licenses and reduce our software spend.

Case Study: Miro

Miro is an excellent example of the power of trustworthy data. When COVID-19 hit, most ServiceNow employees began working from home. One of the tools they needed was a way to whiteboard with their colleagues. We went with Miro and signed up nearly 4,500 users on a three-month trial basis.

Because this was an unplanned expense, we wanted to make sure we were optimizing our spend. We integrated Miro to pull the usage data into SAM and used SaaS License Connections and Flow Designer to monitor usage.

Trial Period — **Renewal and Launch**

June 3, 2020 — Actively Used / Stale

74% Avoidance of licensing fees

26% Active users equipped with Miro for remote collaboration

We saw that of the roughly 4,500 employees licensed for Miro, only about 1,500 were actively using the app. As a result, we were able to save over $740K in renewal costs, while ensuring that active users had access to Miro for remote collaboration. We continue to analyze daily license usage to manage our spend.

Integrating Operations

Now that we had reliable data and pilot-tested our SAM solution, the next step was operational integration, including:

- **Software requests** – We integrated SAM with Service Catalog—a one-stop shop for requesting software products—giving us visibility over all software licenses and usage. We also automated the software request process. Now, when a user selects the software they want from the catalog, the system initiates a workflow and sends an approval request to the manager. Once the manager approves, the system checks license entitlements and, if spare licenses are available, it is allocated to the user automatically. If the user needs to be part of an active directory group, the system adds them and sends the user instructions on how to access the software. The previous process used to take hours or even days; now it takes less than five minutes.

> *Software requests that once took days now take only five minutes.*

- **Software sourcing** – If spare entitlements are not available and additional rights need to be purchased, we create a purchase order using our standard purchasing process. Once additional rights are available, we update the software entitlement count accordingly. We use the Microsoft true-up process for Microsoft subscriptions.
- **Software installation optimization** – Integrating SAM with SCCM and JAMF provides the data needed to assess software usage and reclaim unused licenses, including licenses when a user leaves the company. This is currently a manual process, but can be automated with SAM which we plan to do in 2021. SAM out-of-the-box, Office 365, and Adobe Cloud dashboard provide good visibility into our compliance position. Local install data impacts SaaS license usage for some publishers like Microsoft and Adobe, which ServiceNow SAM can measure for us.

Implementing Cloud Insights

Cloud Insights lets us pull recommendations from multiple cloud providers into a single platform. Because Azure is our primary cloud provider, we first implemented Cloud Insights for Azure workloads.

RECOMMENDATIONS AND SAVINGS PREDICTIONS						Last data download: 2020-09-26 18:10:10	
Top 5 Recommendations							See All
Configuration Item	Current Size	Recommended Size	Monthly Savings	Provider	Service Account	Owner	Confidence
uswqlsaphecr1	Standard_M64ls	Standard_M8-4ms	$(USD)2,234.00	Azure	IT Corp - SubProd Apps (SA)		Low
uswslsaphbhs1	Standard_M64ls	Standard_M32ls	$(USD)1,464.00	Azure	IT Corp - SubProd Apps (SA)		Low
uswplbidrb3	Standard_E32s_v3	Standard_E8-2s_v3	$(USD)805.00	Azure	IT Corp - Prod Apps (PA)		Low
uswplsplus01	Standard_F16s_v2	Standard_F4s_v2	$(USD)595.00	Azure	IT Corp - Prod Shared Svcs (PS)		Low
uswplsplcol01	Standard_F16s_v2	Standard_F4s_v2	$(USD)595.00	Azure	IT Corp - Prod Shared Svcs (PS)		Low

Your spend and savings from Rightsizing recommendations	
$(USD)716,271 Last 30-day spend	**$(USD)32,252 (5%)** Next 30-day total potential savings

Using Cloud Insight's workflows, we were able to automate the rightsizing and decommissioning of virtual machines, which saved cost and reduced waste, while following ITIL best practices for change management and approvals.

We plan to extend Cloud Insights to AWS in 2021.

Software Spend Detection

ServiceNow headcount doubled in recent years, and with that growth came an increase in software purchases using corporate credit cards. So, we used Software Spend Detection to analyze 1.1 million credit card transactions over the last two years—totaling hundreds of millions of dollars—and identified over 750 additional software products used internally. Manually, this would have taken us weeks or even months to complete, but Software Spend Detection took just a few hours. We plan to do a deep dive into these software products in 2021 to identify overlapping spend, contract consolidation, and app rationalization opportunities.

> *Software Spend Detection identified hundreds of millions in unmanaged software spend in just a few hours.*

Value Outcomes

- **Software cost savings** – By improving and automating our software reclamation process we've saved $1.5M over the last two years—including the $740K on Miro license renewals mentioned above.
- **Productivity savings** – Automating software requests saved 3,260 hours, or $293,000, over the same period.
- **Cloud savings** – We unlocked over 250 right-sizing recommendations for our systems in 2020. We expect to realize six-figure savings on our yearly cloud spend in 2021.
- **Experience** – Self-service software requests and automated approvals speed software delivery, which is a big win for users. IT staff also benefits because they can focus on the high-value work they were trained to do, rather than on administrative tasks.
- **Visibility** – The SAM dashboard gives us total visibility into license allocation, cost, and compliance.
- **Quality** – Accurate, up-to-date software license data has dramatically improved the trustworthiness of our reporting to executives.

Next Steps

As with any journey, our SAM work is ongoing. Plans include:

- Automating software requests and our software reclaim process to generate considerable productivity savings
- Implementing out-of-the-box publisher packs for Zoom and SAP, among others, to gain better visibility into our license compliance and cost optimization opportunities
- Leveraging Cloud Insights with SAM, to provide visibility of bringing our on premise licenses to the cloud providers
- Continuing to work on spend detection to more effectively manage our software spend while still supporting the business

Section 2: Cloud Hosting

The Service Cloud Supply Chain Operations team provides end-to-end management of the cloud supply chain, from supply chain design through fulfillment and delivery. The team is also responsible for software and hardware asset management at the company's nearly 30 physical data centers worldwide, including separate instances for Federal, Commercial, and Lab.

Our cloud hosting environment is a separate instance from our IT environment. Over 70% of our software is purchased with hardware, and 90% of software usage is tied to a specific hardware device, such as server, storage, and networking devices.

Challenges

Managing software assets in our global environment presented multiple challenges:

- **Visibility** – We had no single source providing visibility into our software usage. Only the engineers who owned and managed the software could report usage status.
- **Efficiency** – Software inventory was tracked and managed manually, which was time-consuming and inefficient, and introduced the possibility for human error.
- **Cost** – We did not have a process for optimizing software usage and cost.
- **Compliance** – Our compliance team had to work with the engineering team to manually pull the data to understand and mitigate compliance status—a reactive and time-consuming process.

We had an established, automated process for hardware asset management and wanted a similar process for managing software assets. It needed to be automated to reduce manual work, and integrated with our software purchasing, contract, and financial information. To address these challenges, we implemented ServiceNow SAM running on the Now Platform.

Implementing SAM
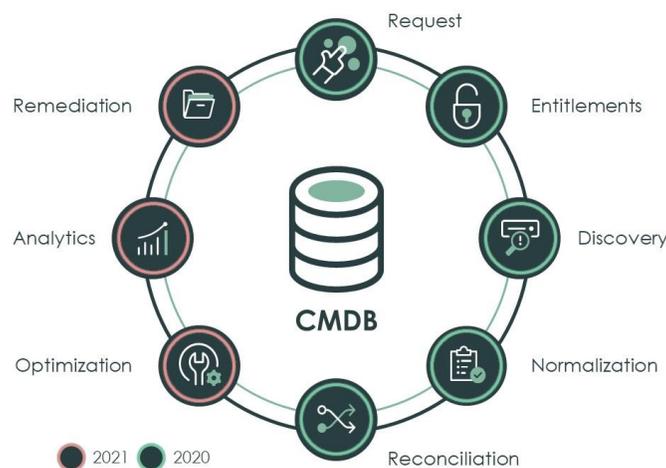
As with ServiceNow HAM, our SAM product leverages entitlements (software inventory) and CMDB discovery reports.

Phase 1 was completed in Q4 2020. We built a process to integrate software purchase requests with entitlements creation. We also implemented Discovery and Normalization simultaneously. Finally, we validated the publishers' reconciliation results, for which we confirmed data completeness and accuracy.

Phase 2 is scheduled for 2021. For the first group of publishers with validated results, we will look to optimize usage and reduce cost based on the recommendations provided by SAM. Using Performance Analytics, we will workflow our results with the compliance, tech licensing, engineering, and sourcing teams to make sure these partners can benefit from SAM's reporting capabilities. Lastly, we will continue to work on software usage remediation to gain greater cost benefit.

Software Entitlement Creation Processes

- **Order** – All licensing information is captured in the quote and purchasing process. The purchasing agent selects the software model or creates a new one and submits the purchase requisition. Our SAP system issues the purchase order and sends it along with the software model details to our data center production instance, where a receiving slip is created.
- **Receiving** – If the software was purchased with hardware, a data center engineer receives both the hardware and software. For software-only purchases or renewals, a SAM analyst handles receiving.
- **Entitlement** – The system draws all necessary software information and creates an entitlement record after receiving activities. This gives us a similar information flow for both software and hardware assets.
- **Discovery** – Discovery detects the publisher and normalizes the software model.
- **Reconciliation** – The system reconciles the entitlement records and CMDB records automatically, aligning the model name, and performing any additional discovery that's needed.

Value Outcomes

- **Visibility** – SAM gives us a single source for complete and accurate software asset data in our cloud environment, enabling us to identify trends and optimize spend.
- **Efficiency** – Automation has eliminated much of the manual work, saving time, improving productivity, and reducing the possibility of error.
- **Cost** – Based on the changes we've made thus far, we forecast savings of $285,000 per year in software licensing costs. Through automation, we expect to realize $200,000 in productivity savings. Additional cost and productivity savings should come as we further automate and improve our processes.
- **Compliance** – SAM not only shows us our compliance status in real time, but also helps us identify blind spots for unknown publishers, thereby reducing the risk of compliance infractions and penalties.

Lessons Learned

We've learned a great deal in our SAM journey. Two areas stand out:

- **Discovery and normalization** – We found it easy to deploy SAM. SAM updates software publisher details using Discovery and identifies inactive software. Our engineering team performed additional analysis on nine out of the nearly 60 publishers in the initial round. For these nine, we created business rules to copy software license information from the hardware table to the software table. For a few, we added Discovery patterns and probes to ensure that Discovery would find additional software details to report usage.

  The business rules and custom patterns we built will be incorporated into a future product release for customers. We also will make our custom probes available to customers through our developer site.

- **Reconciliation** – Before acting on a reconciliation readout for a publisher, it's important to verify data completeness and accuracy.

   Model normalization/standardization is a key to success. To establish a clean final report, it is worth double-checking this area first.

   For custom or bespoke titles, SAM also permits manual normalization of the software model if needed.

   For unknown publishers, our Content Service team is available to investigate and can typically complete the request, which is published to all instances, in two weeks. This will become even quicker with Machine Learning Normalization available in the Quebec release.

Next Steps

We plan to mature our cloud environment reporting via the Cloud Spend Dashboard. This will give us a consolidated view of all entitlements and consumption to help us further optimize cloud service costs. We also will enable pattern-based and machine learning-based discovery to gain visibility into open-source software. Today, SAM is enabled for our commercial and lab instances. We plan to enable it for our regulated market instance as well. ServiceNow has FedRAMP High Authorization for these markets.

Closing Thoughts

Our Software Asset Management journey didn't end with the implementation of SAM—it began. Now that we've laid a strong foundation, we will continue build upon it through process improvements, automation, and the growing capabilities of our SAM product.

To learn more

- Explore the ServiceNow Software Asset Management web page.
- Browse the Community forum for IT Asset Management.

About ServiceNow

ServiceNow is making the world of work, work better for people. Our cloud-based platform and solutions deliver digital workflows that create great experiences and unlock productivity for employees and the enterprise. For more information, visit www.servicenow.com.

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