USU

Smart Guide

Maximize Your SAM: Guide on Defining Feature Requirements

Empower your business with strategic Software Asset Management choices

Content

Introduction

Worldwide IT spending has increased from $3.5 trillion in 2017 to a projected $4.5 trillion in 2022, according to Statista.

This shows that managing your company's software usage and cloud subscriptions is a decisive success factor in handling short-term cost reduction and long-term financial savings. Starting a Software Asset Management (SAM) program is a big undertaking, especially for large enterprises or companies with a complex IT environment. While technical requirements vary, we have organized the most frequent and important in this white paper.

This SAM Buyers Guide will help you:

- Understand the value delivered by a professional SAM solution.
- Examine the needs of your IT landscape and organizational structure.
- Evaluate functional features such as system integration and data collection.
- Understand cost features such as SaaS management, reharvesting, and cloud BYOL.
- Assess the financial impact of contract tracking, KPI reports, and data security.

The goal of SAM is to ensure your software usage is always vendor compliant, quality assured, and finding its greatest saving potential. Applying feature requirements to tasks and tools will lead to your successful focus on results and benefits. Let's get started.

Defining Success & Use Cases

Before you purchase a Software Asset Management solution, it's important to know what your company needs. The requirements can vary widely so it is critical to concretely define yours before even beginning to look at SAM vendors. Let's look at who you should talk with internally to gather the use cases.

Who do you talk to?

The first step is identifying who will use the system. Questions to ask yourself include:

- What departments will use it?
- What job roles will be using it?
- Will it be used for internal and/or external purposes?
- Will it be used locally, regionally or globally across the company?

Here is a list of internal roles and teams you might speak with and why:

License Managers / Application Owners are hands-on owners of the usage, compliance and efficiency of your SAM program.

Support Engineers can assess the sharpness of SAM processes that support users for technical problems and needs.

Chief Infrastructure Officer (CIO) is responsible for strategic IT investments, which might include major software contracts, to align IT operations with business goals.

Chief Financial Officer (CFO) is also responsible for major IT purchases, generally from the view of ensuring the company meets its financial obligations.

Enterprise Architects are aware of large-scale IT deployments that help with reducing costs and lowering project risk.

Service Request Team sees the connection between managing software assets and deploying software from a self-service portal.

Security Team has security policies that identify potential risks and can help SAM legitimize and enforce their goals.

What stories do you hear?

Now it's time to talk with the departments and people you've identified. This is how you gather stakeholder stories to better understand their needs and current challenges. Use these internal stories as a starting point to build concrete feature requirements. Here are some real-life challenges that you may hear:

> **"I want to know what's actually out there… how many SaaS services we're using and who is using them.**

> **"I have an overview of the software that's installed but I want to look deeper.**

> **"I need to track our software and hardware together and see all assets in one place.**

> **"Right now, I don't have a way to identify when software is available or in use.**

> **"We have leftover budget and want to better manage our biggest vendor. How do we get started?**

> **"We want to integrate our ITSM tickets into a software visibility process, so we are solving many problems with a single source.**

> **"I want to proactively identify if there are security vulnerabilities on my devices and software.**

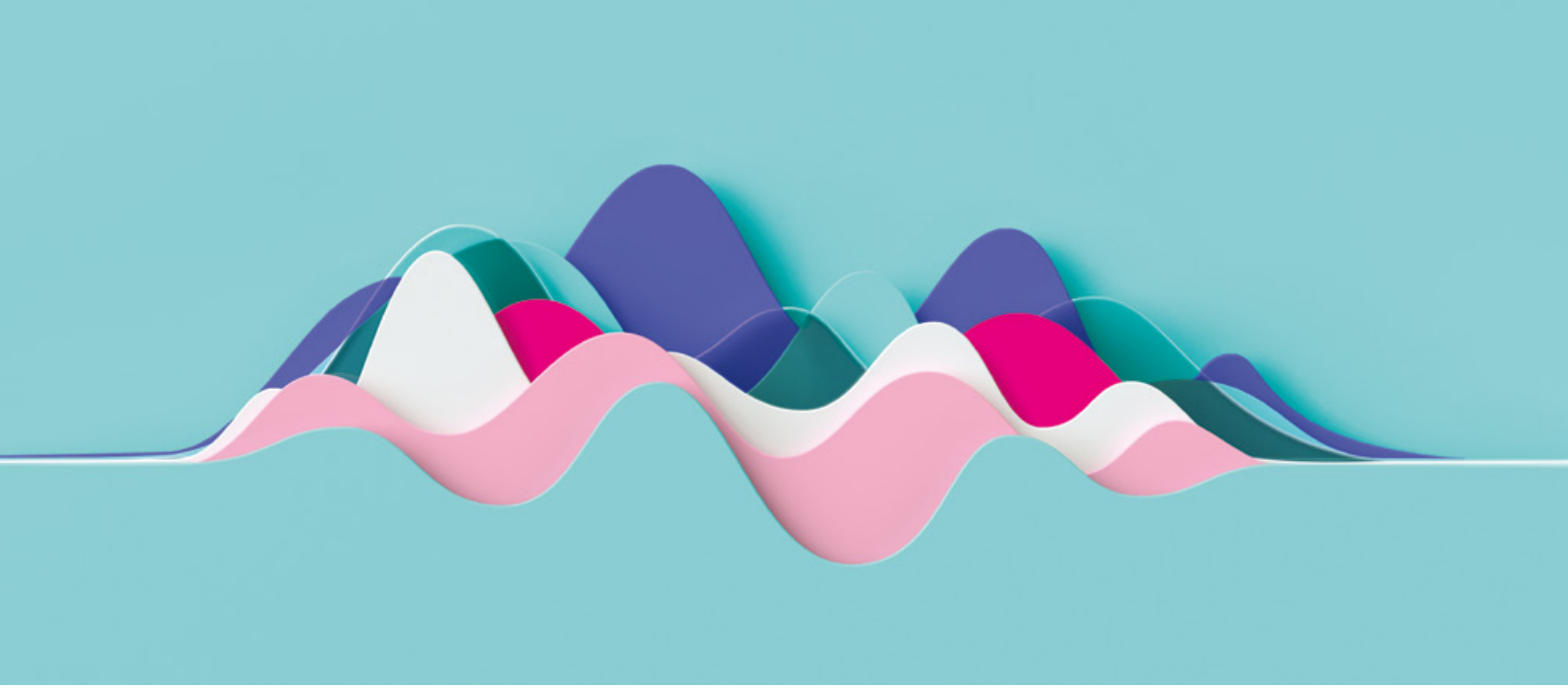
TL;DR: Requirements Checklist

To ensure success, create a list of required features that your internal research has determined your company needs in a SAM solution. This gives you a roadmap to start researching technology and talking with SAM vendors.

To get started, here is a TL;DR list of features that we feel are important. The rest of this document explains each technical topic and the details to inquire about. To get started, here is a TL;DR list of features that we feel are important. The rest of this document explains each technical topic and the details to inquire about. Want to customize this list for your company's specific needs'? Get the Word document.

Feature Requirement	Must Have Feature?	SAM Vendor 1	SAM Vendor 2	SAM Vendor 3
System Integration Requirements				
• Open system architecture • Open data import & exchange • ITSM integration • Procurement integration				
Data Collection Requirements				
• Agent-based collection • Agentless collection • Decentralized discovery • Non-standard discovery				
Data Management Requirements				
• Data normalization • Software reconciliation • Metering data analysis • Configurable metrics & rules				
SaaS & Cloud Requirements				
• Virtual & cloud discovery • SaaS discovery • SaaS cost management • BYOL for cloud (PaaS, IaaS) • Cloud migration simulation				

Compliance Requirements				
• Product library curation • Product use rights config • Shadow IT calculation • Compliance overview				
Optimization Requirements				
• Capacity management • Data center visualization • License & SaaS reharvesting • EOL & version management				
Budgeting Requirements				
• Financial optimization • Business unit chargeback • Contract lifecycle				
Workflow Requirements				
• Dashboard & KPIs • Reporting capabilities • Bulk uploads & group changes • UI configuration & usability				
Security Requirements				
• Permissions by role • Single sign-on (SSO) • GDPR & data protection				



System Integration Requirements

Open system architecture

Like a highway that vehicles run on, you need all roads to be connected. The most powerful SAM is done with open architecture.

Your SAM solution should connect natively or easily with all system and application data sources. It should scale with your changing IT for every system and database, from ILMT and SCCM to ServiceNow ITSM.

Benefits of open system architecture include:

- Flexible integration with IT systems already in place.
- Out-of-box API connectors that integrate into the IT backend.
- Generic connectors to enable direct connection to any database system.
- Automated data exchange between IT systems.
- No limits to ingesting data sources.

Open data import & exchange

If you look at the vehicles running on that highway, there are cars, motorcycles, trucks, big trucks... That's how you can view the data moving between systems as it is imported and exchanged.

Your SAM solution must be able to bring in, share and transform data from all formats including the ability to:

- Retrieve data using APIs such as ServiceNow CMDB, Office365 portal, and Adobe Admin Console.
- Connect directly to databases such as Oracle MySQL, Oracle DB, and Microsoft SQL DB that many tools run on.
- Execute certain types of scripts such as PowerShell
- Import data from well-known standard formats such as CSV/XLSX.

ITSM integration

Make sure the SAM solution has a direct connector to your IT Service Management (ITSM) solution. The exchange of activities across SAM and ITSM workflows is essential to determining if software is available for your employees.

- The ITSM solution manages your company's incidents, requests and changes, and scans for information about installations.
- The SAM solution analyzes whether those installations are used in a compliant way according to your vendor contracts.

An integration provides a deep view across ITAM and CMDB systems of software usage, user data, cost center data, and location data. You get better information to fulfill ticket requests and improve license governance. Together, the solutions can help manage the need and cost of software more efficiently.

Procurement integration

The exchange of activities across SAM and Procurement workflows is also important. The Procurement team oversees all software purchasing and needs information to ensure they buy new software only if really needed. Ideally, the SAM, ITSM, and Procurement solutions all connect together to determine if software is available.

The SAM solution should help procurement with capabilities such as:

- Showing if licenses are available for "reharvesting" so new purchase requests can be validated or denied.
- Making an educated decision about whether to renew the same quantity of licenses as the previous period.
- Combatting "shadow IT" purchases made outside normal procurement processes.

Data Collection Requirements

Agent-based collection

There are two methods for gathering data: agent and agentless. A flexible SAM solution gives you the option of both for optimal coverage and complementary results.

For agent-based discovery, the discovery software is installed on your target system. Benefits include:

- Agents run according to parameters and schedules that you define.
- The inventory data is collected and uploaded to the central server.
- Increased security because agents are a single secure point of connection to the central server.

Agentless collection

Also called "zero touch," the agentless method collects data with a least-privilege approach. For enterprise companies, it's most effective to use a mix of agent-based and agentless methods, so make sure the SAM solution can do both.

Agentless performs data discovery by connecting to and querying the target system. Benefits include:

- There's no need to install software on the devices.
- The inventory data is collected and stored directly on the central server.
- This method lets you restrict the access privileges and define exactly which data can be accessed for the inventory.

Decentralized discovery

Typically, software data is managed across different platforms and tools. The more powerful way of working is to put all data sources into a "single pane of glass." If you're a large company, you need an enterprise-level approach to gather data from decentralized locations. The SAM solution should support features such as:

- Raw data integrated from discovery and scanning tools which include: ARP, MSI, file scan, packaging, Active Directory, ISO 19770-2 tags.
- Alerts or notifications when data quality completeness or coverage falls below acceptable thresholds.
- Reconciliation against a library of known assets to normalize the view of the data against industry and vendor standards.

Non-standard discovery

Every SAM solution runs discovery on vendor portals such as Office 365 or Adobe Admin Console, or via standard connectors such as SCCM and JAMF. But equally critical is running discovery for non-standard data that can't be discovered on devices. Make sure the SAM solution has the ability to:

- Gather and assemble discoverable data and non-discoverable data.
- Manually load data from systems that have no external connectivity capabilities.
- Send that data to the same centralized location that pulls in all other data sources.

Data Management Requirements

Data normalization

Normalization is the cleaning and organization of raw data so it is consistently identified across all database records and fields. This is a vital process to ensure your software and cloud data is accurate.

Your SAM solution needs a step-by-step normalization process that:

- Systematically cleans the data and filters out data that's not relevant.
- Identifies every piece of software and license data down to the smallest details.
- Produces software data that's high quality and fully reliable for your license calculations.

Important capabilities to look for include:

- Ability to filter out unneeded data.
- Assignment of software products to all raw data matched by signature.
- Rules that consider optional filters and metering information.
- Flexible signatures through wild cards.
- Complex rules for logical combination of signatures.

Software reconciliation

"Reconciliation" is the process of lifting the veil on your discovery data and creating a relationship between a software asset and the license it uses. This is a powerful part of cleaning data to know exactly what products you're moving into compliance.

For instance, you have 100 installations of Windows Server 2008. You need to match them to the exact edition you're paying for because each edition has specific license requirements. Is it Windows Server 2008 R2 Web, R2 Standard, R2 Enterprise, Standard, Enterprise, Web Server, Server Core... you get the picture.

It's a difficult dark art. The SAM solution should have functionality that is able to:

- Reconcile software data to physical installation data.
- Reconcile software data to physical usage data.
- Reconcile data received from inconsistent sources.

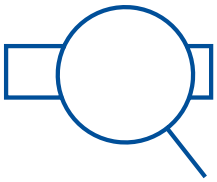
Metering data analysis

How do you know if software is unused or under-used? A powerful way is to ensure the SAM solution can analyze metering data from authentication and access tools such as SSO, SAML, IAM, and SCCM.

The metering data records and stores who accesses and runs software over long time periods. This data might include: last usage, usage frequency, data usage, host/agent usage, and bandwidth usage.

Use this data in the SAM solution determine if a license is used enough to keep it active, or whether to pull back the license for reharvesting or deactivation.

For example, Okta is well known as a Security & Identity Access Management (IAM) tool. Wherever Okta is running, SAM analysis can also use that metering data to see who has access and who ran it.



Configurable metrics & rules

The SAM solution needs the ability to recognize custom data attributes and configure them for license measurements. It should be built on a data model that is stable, flexible, and able to count any metric.

Standard metrics. All SAM solutions can handle the basic metrics from vendors such as: articles/SKUs, SWID tags, product use rights (PURs), upgrade rights, downgrade rights, software suite definitions, and lifecycle information (EOL, SOL).

Extended metrics. Some SAM solutions can recognize metrics at a deeper level. For instance, these metrics are important for the hardware lifecycle: support end date, data classification, status, location, and lease renewal notifications.

Non-standard metrics. Large or global enterprises often require metrics specific to a usage situation. For example, "Revenue in Millions" is used in specialized Oracle financial reporting. For an ERP system, an oil company might measure the barrel number of throughput oil, then convert that metric to gallons. Many SAM solutions can't handle these deep custom configurations so be sure to include this requirement.

SaaS & Cloud Requirements

Virtual & cloud discovery

To manage your cloud platform and infrastructure, you need all related data for licensing, consumption, and users. An effective approach is to collect this data using both the vendor portals – such as Azure, AWS, Google Cloud – and the SAM solution's discovery capabilities.

Your SAM solution must be able to pull in virtual and cloud data from these sources:

- **Cloud databases.** Provides consumption and historical data like when and how long a resource was spun up.
- **VM & container images.** Shows what virtual machines (VM) are used, where they reside, and consumption periods.
- **VM Scanners.** Delivers data such as vCPUs and Vcores from inside virtual systems.
- **CMDB/deployment.** Shows on-premises installations or clients being used in a hybrid cloud environment.
- **Billing information.** Correlates to VM or cloud usage with their costs to give a financial overview.

SaaS discovery

Data discovery for SaaS is a huge challenge. Your data lives in the vendor's environment and you don't have direct access. There are a lot of security protocols between you and your data.

- In the corporate world, the most popular SaaS services are Microsoft 365 Suite, Adobe Creative Cloud, and Salesforce.
- It's important to connect with a wide variety of business SaaS including CRM like HubSpot, ERP like Microsoft Dynamics, HRM like Workday, and Accounting like QuickBooks.

Custom API. In general, each vendor admin portal requires a custom API for the system connection. Your SAM solution needs robust API functionality to individually connect and extract that SaaS data.

Workarounds. Even with a custom API, some SaaS vendors don't allow discovery of the complete range of license data. Which means the SAM solution also needs to handle discovery workarounds, such as using metering data or looking at Active Directory (AD) logs.

For example, the Creative Cloud API limits the data extraction to just users, accounts, publisher, and product version. A workaround to track user sessions might be using Single Sign-On data to calculate the access, length, and frequency.

SaaS cost management

Managing costs for SaaS is a challenge. There will be unplanned costs from unplanned consumption. Employee purchases of unapproved or untracked services. And other potential pitfalls such as inefficient vendor contracts, lack of join-move-leave processes, and poor governance.

The key to managing your costs is a complete centralized overview of your SaaS environment. Important features for the SAM solution include:

- One platform to view all SaaS software with a centralized dashboard and reporting.
- Automatic recognition of any SaaS regardless of the metric complexity.
- Usage monitoring to ensure subscriptions and services aren't going to waste.
- Rule definition for each SaaS vendor to test against the organization's usage data.
- Ability to monitor storage limits and over-limit fees.
- Ability to upload vendor contracts to review the license agreement details.

BYOL for cloud (PaaS, IaaS)

Cloud software can be licensed in two ways: Subscription service or Bring Your Own License (BYOL). The BYOL model is licensed separately from your cloud service package, therefore, you are bringing your own cloud license.

BYOL features in your SAM solution should include:

- Detects if a cloud machine already has prepaid subscription with the cloud vendor, or if it's unlicensed and open for BYOL.
- Analyzes if it's cheaper to "rent" software as a subscription and or to "buy" software as BYOL.
- Calculates how many BYOL licenses you need to buy across your environment.
- Let's you decide on the fly to use BYOL or a subscription as a flexible way to work.

Cloud migration simulation

As your company looks at moving on-premises software to cloud platforms and services, it's important to first evaluate the financial impact. The migration to cloud licensing is particularly complicated in heavily virtualized IT environments, which is the scenario typically found in large enterprises.

Look for a SAM solution that compares your current on-premises costs to the future SaaS, PaaS and IaaS costs. Such as:

- Shifts in license models, which are never an equivalent one-to-one.
- Decisions on which cloud model to choose, such as BYOL or subscription service.
- Splitting software in a "hybrid" situation for an optimal balance between on-premises and cloud.

Compliance Requirements

Product use right (PUR) config

The SAM solution must precisely calculate the compliance for each software product. To do this, it looks at the product's license metric and the vendor rules for usage, called "product use rights" or PURs.

These results are critical for business decisions such as the highest audit risks, biggest contracts, most expensive licenses, and most important vendors. Look for PUR measurement features that can handle:

- Clear-cut client metrics for desktops, laptops, cloud, and mobile.
- Complicated server metrics, such as virtualization type or hardware attributes.
- Non-standard license metrics that are not directly asset- or installation-based, often used by large vendors like IBM and Oracle.
- Data from integration with CMDB and other data sources.

Product library curation

A product library – also called a "software catalog" or "product database" – is the conjoined twin of a professional SAM solution. But not all libraries are built equal.

Some SAM solutions built their own library with the platform development. Other solutions bought libraries that are not closely curated over time.

All product libraries can handle standard product attributes. Only the most robust SAM libraries can handle non-standard products, complex metrics and custom data typically found in large IT environments. Important features to look for include:

- Whether the library is maintained internally or brought in from a third party.
- How often the library is updated or published.
- If a company can add their own signatures based on custom requirements.
- Handles discontinued, duplicated, antiquated, and incorrectly named products.

Shadow IT calculation

Also called “dark purchasing,” shadow IT is any software initiative that happens outside the view of central IT.

It happens with both on-premises and cloud software. However, on-prem installations are easier to control with requirements such as admin permissions and passwords. The ease of accessing software hosted outside your own servers has enabled shadow IT to spread far and fast.

A SAM solution must be able to detect unapproved software and help simplify sharing information between teams. Capabilities should include:

- Access expense reports and credit card bills that show recent software purchases.
- Provide security tools that help locate software apps purchased under the radar.
- Keep accurate records of the licenses, entitlements, and permissions of each employee.
- Share contract details between the SAM team, central IT, and roles such as I&O and Procurement.

Compliance overview

Your compliance results should always be accessible per vendor. You should be able to access to exact PURs of each article.

A professional SAM dashboard can display the results, personalize them, and make them sharable with stakeholders for business decisions. The compliance overview should include capabilities such as:

- Comparison of license and usage data.
- Selection of analysis results by freely configurable criteria such as organizational unit or geography.
- Direct comparison of scenarios, such as inclusion/exclusion of planned procurement.
- Interactive analysis of the compliance situation and potential risks.
- Analysis history of past license and usage situations at any organizational level.
- Analysis profiles stored for individual users, group of users, or system wide.

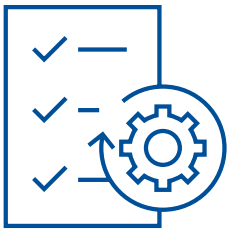
Optimization Requirements

Capacity management

Also called “right-sizing,” this process makes sure you are licensing or subscribing to meet your true needs. This may matter less for your on-premises servers, but it has a big impact in cloud costs.

For instance, if you expect to use 70% of a CPU over a period of 180 days, but then only use 30%, you’re wasting money. The SAM solution should have features that help you:

- Understand your capacity needs so all cloud servers are correctly sized in advance.
- Reduce spare capacity in a server to the absolute minimum so you eliminate under-utilization.
- Plan cloud migration by knowing how your on-prem is used.
- Choose between the two cloud licensing models: Bring Your Own License (BYOL) and subscription services.

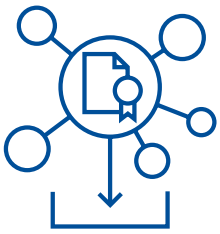


Data center visualization

Between 85-90% of IT software spend goes to data center vendors such as Microsoft, Oracle and IBM. It's essential that your SAM solution can analyze infrastructure and architecture issues, before you make technical decisions and software investments.

Look for features that let you visualize the complexity and costs of licensing for servers, clusters and virtualization. Such as:

- Simulate different topologies of IT infrastructure.
- Simulate unlimited "what if?" license scenarios to find the most cost-effective ones.
- Compare changes in licenses and contracts of all device types to your current arrangement.
- Calculate server consolidations and the effect of new rollouts.
- Calculate the risk of compliance for any data center design.
- Work in a sandbox environment with no impact on the live production systems.



License & SaaS reharvesting

Also called "reclaiming," reharvesting is a powerful way to monitor license and subscription usage and then optimize those costs.

The process identifies whether software is under-used or unused, based on inactivity detection over a specified period of time. Then it decides whether to deactivate and pull back – or "reharvest" – the software license or SaaS subscription from the assigned user.

The SAM solution should provide fully automated reharvesting with steps that include:

- Bring in activity data from sources such as Active Directory (AD), Single-Sign-On (SSO), and metering.
- Define the inactivity criteria and threshold within a rule set.
- Apply this data to track last usage dates and differentiate between low usage or no usage.
- Analyze the best response, such as triggering deactivation or assigning a different license that covers actual usage.
- Start a workflow to reharvest the license, talking to a connected ITSM system.
- Compare the subscription allocation quantity before and after reharvesting.

EOL & version management

A critical element in SAM is product lifecycle management. End-of-life (EOL) – also called end-of-support (EOS) – is the date that a vendor stops selling, distributing and updating a software product.

The SAM solution should support EOL tracking in various ways, such as:

- The product library should always have release date and end-of-life information. This will be based on the product or publisher values that you specify.
- Determine the phasing out process for a product that is no longer needed.
- Have the ability to create EOL/EOS lifecycles so you can assess and manage risks for critical software.

Financial Requirements

Budget optimization

The SAM solution should be full featured to budget your software licenses and expenditures. It should provide a complete, company-wide view of the finances required for license usage and compliance, including software cost allocation and reliable budget planning. Look for functionality that includes:

- Cost breakout views by vendor, product, and time formats.
- Cost breakout options by organizational unit, project, and cost/profit models.
- Global view of currency exchange rates, accounting tax and depreciation rules, and local product reference prices.
- Flexible IT reports like costs per fiscal year, savings from reusing licenses, and estimated costs for new licenses.
- Defining service charge formulas that map software usage to software costs.
- Clear formulas for procurement history that build a pricing assistant.

Business unit chargeback

Chargebacks let you track licenses and software usage assigned to business units. It's a significant way to manage the pool of applications and services across the company and organizational structure.

It is also called "organization data modeling" and the models can go quite deep. For example, you might analyze the assignment of licenses to one cost center, but assignment of the usage rights to several cost centers.

The SAM solution should have chargeback features that include:

- Looks at all organizational levels such as group, company, business unit, and cost center.
- Manages geographical parameters such as locations, countries, and regions.
- Able to cross-reference the organizational structure with the geographical structure.
- Looks at allocation levels of information such as licenses, devices, installations, and usage.
- Flexible display and control of associated licenses and contracts.

Contract lifecycle

The SAM solution should be able to track all aspects of your vendor contracts, from basic terms and conditions to the entire contract lifecycle. Generic contract management can't handle complex agreements so check for capabilities that include:

- Specific contract types such as purchase, rental, and enterprise.
- Individual licenses purchased under master procurement agreements.
- Volume agreement details such as internal and external number ranges, outsourcing and transfer rules, and integrated organizational scope.
- Contract model mapping, including the relationship of multi-dimensional contractual arrangements.
- Document management for original contracts that link between contract data and assigned licenses.
- IT contracts outside of software such as leasing or hardware maintenance.

Workflow Requirements

UI configuration & usability

In the SAM solution, how easy is it to tailor the user experience? Both the end-user interface and the administrative interface should be intuitive and offer streamlined workflow.

From the end-user view: Look for user-friendly navigation, unified menu structure, and a harmonized interface. Your employees should have a pleasant experience, or they won't want to use the tool!

From the administrative view: Look for features like:

- System admins can set up, manage, and maintain the application.
- System admins can add custom fields to collect extra data and use these fields to drive search and routing.
- Are these workflows easy to follow, or do they require programming knowledge.
- What is the impact from upgrades and patches.

Bulk uploads & group changes

Automation is an efficient part of your SAM solution. The SAM solution should be able to push global or mass changes across data, users, contracts, and licenses.

Bulk uploads. An efficient way to pull in many records at once, rather than in small batches of records or one record at a time.

Group changes. You can edit multiple records and update with the same value. For instance, you have a user attribute for North America, but now you want to separate those users into business units in the US and Canada. It's efficient to separate and change the user attribute in a group-wide action.

Reporting capabilities

Reports are how you share KPIs and performance analysis with other SAM users, IT stakeholders, and business decision makers. For example, a standard report might update compliance levels on a daily basis so it's easy to know at a glance. Another report might notify you about key quarterly dates such as end-of-license agreements or maintenance.

How flexible and automated is the SAM solution for reporting types, generation, and distribution? Some aspects to consider are:

- Extensiveness of the solution's predefined reporting.
- Ease of customizing these reports.
- Ability to create ad hoc queries and save them for later reuse.
- Flexible time options such as daily, weekly, X times per month, monthly, and yearly.
- Support for vendor-provided standard reports that can be customized.
- Support for event-driven reports such as upcoming renewals.

Dashboards & KPIs

A dashboard is the centralized place for your SAM solution to display daily or trending information. It should come with preconfigured Key Performance Indicators (KPIs) that show different aspects of licensing data and SAM processes. Typically, the KPIs default to 90 consecutive days of data.

For instance, the KPIs might display successful data import, license clearing, product recognition rates, pricing coverage, degree of under-licensing, or top 10 over-licensed products. Dashboard features to look for include:

- Flexibility to build your own custom KPIs.
- Ease of modifying KPI calculations.
- Visual display such as graphs, charts, and drag-and-drop configuration.
- Dynamic drilldown into the KPI data.
- Ability to integrate data from multiple sources.
- Configuration per user role or profile permissions.

Security Requirements

Permissions by role

Large companies and global data centers have many employees to manage. It's essential for the SAM solution to support strong user permissions.

Your SAM admin needs the ability to decide what information each user sees. The user logs in with a profile that has a specific set of permissions for the dashboard display, menu access, and data access.

For instance, an employee can view software contracts but not software installations, or only Microsoft data instead of all vendor data. The SAM solution should have role features such as:

- Restrict permissions by entity, product level, or application level.
- Provide security at the user-group level and at the individual level.
- Assign predefined SAM-related roles such as product owner, end user, business unit manager, cost center manager, compliance manager, contract manager, and procurement manager.

Single sign-on (SSO)

This authentication method lets users log into many software systems with a single set of credentials. An employee puts in one username and password to access all SSO-related services. This simplifies password management while improving security, since each user has only one login credential to protect and bypasses password fatigue.

SSO logs are also a great way to monitor account activity for managing licenses. The SAM solution should be able to connect to your SSO system and access the records for insights such as:

- See what logins have been captured as a record of employee usage.
- Use SSO data to calculate the frequency and length of user sessions.
- Analyzing the SSO audit logs will help determine how active the accounts are, and which accounts can be deactivated, redistributed, or reassigned.

GDPR & data protection

The privacy needs for global license management continue to grow. Your SAM solution must be fully GDPR compliant and follow requirements such as pseudonymizing, anonymizing, and built-in encryption.

Important GDPR requirements to support include:

- "Privacy by design and default" requires features to work with the least amount of personal data required.
- "Right of access by the data subject" lets data be clearly attributed to a data subject by database foreign key relations.
- "Restrict access with permissions" allows restricting data and menu options for each user role.
- "Mask sensitive data" such as name, email, login and import ID.
- "Right to be forgotten" requires removing data and its history when they're no longer needed.

Conclusion

Software Asset Management is a powerful solution for managing large volumes of data, quickly delivering actionable, on-demand solutions, and eliminating unneeded costs in your organization.

Key requirements you may have gathered from this SAM Buyers Guide include:

- **Integrating systems** with API connectors, databases, shell scripts, and data formats.
- **Collecting data** for installations, SaaS, cloud platforms, and virtual machines.
- **Managing data** by accurately identifying software products and specific attributes.
- **Controlling cloud costs** with BYOL licensing, subscription models, and migration.
- **Managing compliance risks** such as an uncurated product library or Shadow IT usage.
- **Optimizing licenses** by visualizing the data center and right-sizing cloud capacity.
- **Managing financials** by tracking vendor contracts and unit chargebacks.
- **Implementing workflows** such as dashboard KPIs and automated reporting.
- **Handling security options** such as role permissions and GDPR compliance.

With the wide variety of features and approaches, it can be difficult to orient yourself in the solution market. Take the time to define and refine your technical requirements, carefully listen to stakeholders, and work with SAM providers to estimate ROI.

Once you have a clear picture of key features to consider, you're ready to build your own requirements list. This important document will lead you to seeing technology demos, writing a Request for Proposal (RFP), and eventually setting up a Proof of Concept (POC). Focus on your actual needs over flashy features, and you'll choose a solution which meets your current needs and is capable of growing with your organization in the future.