Critical Capabilities for Software Asset Management Tools

Published: 28 July 2020  ID: G00401027

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Software asset management tools are essential for the management of cloud consumption and increasingly complex software-licensing metrics. This analysis helps sourcing, procurement and vendor management leaders evaluate and identify a tool that effectively supports their SAM requirements.

Key Findings

- Software asset management (SAM) tools help automate many of the tedious tasks required for reducing license compliance risk, optimizing costs and improving business process performance; however, they require advanced skills and expertise to achieve their full potential.

- Sourcing, procurement and vendor management (SPVM) leaders find that most SAM tools can effectively handle on-premises technology. However, cloud systems pose significant challenges with visibility into entitlements and consumption, which are capabilities that these tools are only beginning to adequately address.

- SAM tools often prove difficult for SPVM leaders to integrate with other tools that can benefit from software asset data, such as procure-to-pay suites, vulnerability assessment tools and enterprise architecture tools.

Recommendations

SPVM leaders responsible for software asset management should:

- Validate staff capabilities to ensure that sufficient organizational expertise exists to drive value from SAM tools, and have a plan to recruit expertise or develop those skills as their usage increases.

- Align SAM tool investments with future technology needs by identifying which SaaS, infrastructure-as-a-service and platform-as-a-service technologies are likely to be used during the next 18 to 24 months, and by requiring SAM tools under consideration to support these products.
Ensure that the SAM tool will deliver expected benefits by running a pilot of the tool against the most important independent software vendors to validate existing data sources and SAM tool functionality before purchasing.

What You Need to Know

Sourcing, procurement and vendor management leaders need to match their software asset management functionality needs to appropriate products in the SAM tool market. Gartner has established nine critical capabilities that differentiate the leading enterprise-focused products on the market, and four SAM functionality use cases to filter and prioritize the features that will have the most-beneficial impacts. This research complements the “Magic Quadrant for Software Asset Management Tools,” which highlights a broad set of factors, including the corporate viability, vision, marketing and geographic focus of the vendors that offer these SAM products. We strongly recommend that organizations use this research in conjunction with the Magic Quadrant, Peer Insights, inquiries with Gartner analysts and other Gartner research to define their requirements and select the solutions that match their needs.

Analysis

Critical Capabilities Use-Case Graphics

Figure 1. Vendors’ Product Scores for the PC and On-Premises Licensing Use Case

Product or Service Scores for PC and On-Premises Licensing

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<tr>
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As of 29 June 2020
Figure 2. Vendors’ Product Scores for the Complex Licensing in Hybrid Environments Use Case

Product or Service Scores for Complex Licensing in Hybrid Environments

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As of 29 June 2020

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Figure 3. Vendors’ Product Scores for the Complex Licensing in Cloud Primary Environments Use Case

Product or Service Scores for Complex Licensing in Cloud Primary Environments

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As of 29 June 2020

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Aspera (SmartTrack)

Aspera SmartTrack 4.5.0 includes Aspera’s license compliance/management capabilities, and a master catalog of product and stock-keeping unit (SKU) data. Additional products from Aspera include SmartCollect Inventory for asset discovery; three LicenseControl modules providing additional capabilities for Oracle, SAP and SaaS consumption management; and a third-party engineering plug-in.

Aspera simplifies the manual entry of entitlement records for applications by automatically populating license metrics and data products with standard use rights, utilizing their entitlement library of over 195,000 titles. Aspera also provides prebuilt integrations with SHI, common procurement tools and licensing portals to ingest contract and entitlement data. Integrations with other commonly used resellers may require custom integrations.

Through a partnership with Raynet, Aspera SmartCollect Inventory allows organizations to discover, inventory and meter software utilization through a variety of methods. These capabilities are also extended to software running with AWS, Microsoft Azure and GCP, yet it currently lacks support for other public cloud environments, such as Oracle Cloud and IBM Cloud. Using a browser-based agent, Aspera can discover SaaS apps, and it provides more than 40 out-of-the-box API integrations with SaaS providers, like Adobe, Salesforce and Office 365. Customer feedback indicates that these methodologies are not sufficient for capturing shadow SaaS and detailed consumption details. Natively, Aspera doesn’t support the management of specialty and
engineering applications that are managed by a license server. This requires the use of partnership with Novatec inCharge, which is not integrated into the SmartTrack platform, and which offers limited support for commonly utilized engineering applications.

Leveraging their large product library and inventory capabilities, Aspera effectively reconciles commonly used software titles for publishers such as Microsoft, IBM and Oracle, while also providing optimization recommendations. Aspera provides strong support for SAP, offering a comprehensive set of rules for user transactions in ECC and S/4HANA to help align users to the right roles, and provides insights into potential digital/indirect access. Users can also conduct “what if” simulations when evaluating infrastructure changes that may impact licensing. SmartTrack provides ready-to-use reports required by independent software vendors (ISVs), and for internal sharing with stakeholders such as procurement and finance. Aspera lacks a self-service portal to help facilitate requests for software deployments.

SmartTrack is a SAM tool suited for organizations that want a solution for managing software on-premises, and in public cloud environments with mature SAM practices needing to optimize a complex software portfolio.

**Certero (AssetStudio for Enterprise SAM)**

Certero AssetStudio for Enterprise SAM, v.6, is the core component of Certero’s SAM offering. It provides entitlement management and reconciliation capabilities for Microsoft, Adobe and commonly used metrics. Certero offers add-ons for a self-service portal (App-Centre), Certero for Cloud to provide visibility into cloud consumption, and three publisher-specific modules for Oracle, IBM and SAP. Customers can also procure AssetStudio for Enterprise ITAM to manage hardware and software assets on a single platform.

AssetStudio for Enterprise SAM allows organizations to import data from Microsoft License Statement (MLS) and IBM Passport Advantage, and offers SAP contract review services to enter SAP entitlements. Users can manually create entitlements and improve this process with Certero’s product library of entitlements for Microsoft, Oracle and IBM, which includes the license types, metrics and use rights.

Certero offers agent or agentless discovery and inventory of software running on Windows, Linux, UNIX and Mac platforms. Certero extracts data from third-party systems such as VMware and XenServer to inventory software running in virtualized environments. Certero utilizes integrations with Okta, and offers 10 API integrations with common SaaS applications such as Salesforce, Office 365 and Adobe to monitor SaaS consumption. Certero lacks the ability to discover unknown shadow SaaS. Certero currently offers support for public cloud providers AWS and Azure, but cannot discover and inventory software within other cloud providers, such as GCP, Alibaba Cloud and IBM Cloud. Certero lacks support for the management of specialty and engineering applications that are generally licensed concurrently and managed by a license server.

Certero allows users to adequately reconcile their entitlement and consumption data for commonly utilized applications; however, the interface is not intuitive and requires users to develop custom queries to produce effective license positions (ELPs). While Certero Discovery is not a replacement
for IBM’s License Metric Tool (ILMT), Certero identifies which instances require ILMT installed, to ensure compliance with IBM requirements to utilize ILMT where subcapacity licensing is utilized. The combination of App-Centre and AppsMonitor lets organizations identify candidates for software removal and reallocation. Certero utilizes its own native business intelligence (BI) tool Acquaintia, which sits on top of the AssetStudio platform and allows users to create custom reports for technology insights.

Certero AssetStudio for Enterprise SAM is suited for organizations that manage all IT assets (hardware, software and cloud) from a unified platform, and have a complex on-premises license portfolio.

Note: Certero declined to participate in the process for this Critical Capabilities research; it identified no reference customers and chose not to provide supplementary information. Gartner’s analysis of Certero in this Critical Capabilities is therefore based on other credible sources, including previous vendor briefings, customer inquiries, Gartner Peer Insights reviews and other publicly available information.

Eracent (IT Management Center Suite)

IT Management Center (ITMC) Suite, v.10.2.23, is made up of ITMC Discovery, ITMC Lifecycle and Eracent Data Extractor, which extracts data from third-party tools. ITMC provides license position reporting through an array of Continuous License Reconciliation modules. Eracent also offers add-on products for enhanced data normalization and a workflow-driven self-service portal.

ITMC uses wizards to aid in the manual entry of entitlements; however, this process is difficult to navigate, as the interface displays several fields and is not intuitive. ITMC also provides users with the ability to upload entitlement records via flat file feeds, web services calls, API calls and Open Database Connectivity (ODBC) connections. Customer feedback indicates that these integrations are not prebuilt and require additional services for configuration.

ITMC provides hardware and software consumption data across a variety of platforms, including Windows, Linux and virtual environments. This includes detailed consumption data for software running on-premises, which helps identify optimization opportunities. Eracent utilizes a partnership with Xpandion to offer the CLR for SAP Applications (Advanced) module, providing users with detailed insights into their SAP license position and consumption for user licensing, indirect access and engine licensing. ITMC largely relies on the use of network discovery to monitor web traffic to capture SaaS consumption, only offering one prebuilt API integration with Office 365. This is problematic for mobilized workforces who likely do not access SaaS from a single device where the agent is installed. ITMC can capture consumption data within AWS EC2 and Azure if an agent or agentless scanning process is deployed to the instance, but cannot identify which instances are BYOL or PAYG, which is required to produce an ELP. ITMC provides visibility to the installation of specialty engineering software consumption with the use of an agent-based or agentless discovery at the local machine level. However, as most of the engineering and specialty applications are managed at the license server level, this method is insufficient for monitoring license denials.

ITMC and the CLR modules provide functional capabilities for reconciling software consumption with entitlements. CLR for SAP Advanced acts as an independent product and requires users to
establish their own rules for transactions, while Oracle CLR is difficult to navigate and not intuitive. ITMC cannot suggest alternative licensing models or configurations to potentially optimize software. Eracent provides users with prebuilt dashboards and allows users to create interactive dashboards as needed. Using IT-Pedia, Eracent also provides enriched asset data, such as end of life, end of support and National Institute of Standards and Technology (NIST) vulnerabilities for most commonly used products.

Eracent ITMC Suite is a SAM tool suited for organizations looking for a solution that supports hardware and software assets on-premises, with a limited cloud footprint.

**Flexera (FlexNet Manager Suite)**

The product evaluated for this research was Flexera’s FlexNet Manager Suite 2019, which provides SAM, hardware asset management and desktop license optimization. Additional capabilities are provided by SaaS Manager, Optima (cloud cost management), Cloud Management Platform (CMP), AppBroker and App Portal (self-service asset request and reharvest), Data Platform (advanced asset data normalization and enrichment), Foundation (dependency mapping), FlexNet Manager for Engineering Applications, and FlexNet Manager for SAP Applications.

FlexNet Manager Suite provides clients with a large entitlement library with over 450,000 applications for the most common independent software vendors. This large library improves user’s ability to easily create entitlements by providing product use rights, metrics and license types. Flexera also provides prebuilt integrations for most common procurement suites and software resellers to ingest entitlements. Customer feedback indicates that, while FlexNet Manager allows them to ingest entitlements from other data sources, the ability to validate and error-check the data is difficult, which leads to increased manual effort.

Flexera offers organizations a comprehensive portfolio of products that enables them to gain insights into on-premises software, SaaS, public cloud environments (AWS, Azure, GCP, Alibaba Cloud, IBM Cloud and Oracle Cloud), engineering applications and SAP. SaaS Manager utilizes integrations with expense management tools, can identify and normalize 30,000 SaaS applications, and provides enriched consumption data for 30 applications, including Salesforce, Workday and Office 365. With the use of agent discovery and APIs, FlexNet can discover software running in common cloud providers such as AWS EC2, Azure and GCP. Flexera uses cloud-provided APIs to discover and inventory software within AWS RDS. To identify whether an instance is utilizing BYOL or PAYG, Flexera relies on cloud APIs and custom policies through its policy engine. Flexera is the only SAM vendor to natively develop its engineering and specialty SAM capabilities.

With the use of quality entitlement and consumption data, Flexera demonstrated effective reconciliation of data to produce an effective license position and make optimization recommendations for common software titles. FlexNet Manager for SAP provides some out-of-the-box transaction rulesets; however, the customer must set specific thresholds in order to produce an ELP and identify optimization opportunities. With the use of Optima, users can also identify optimization recommendation workloads in public cloud environments.
Flexera FlexNet Manager Suite is a SAM tool that is suited to organizations looking for a solution for managing on-premises software and cloud systems with mature SAM requirements, and those with specialty engineering platforms in their software portfolio.

License Dashboard (License Manager)

The product evaluated for this research was License Manager 12.0. License Dashboard’s SAM offering has three primary components: License Dashboard License Manager for entitlement management and reconciliation, Dashboard Discovery for inventory and consumption data, and License Dashboard Portal for reporting and dashboarding. Additional products include License Dashboard API, which facilitates data sharing; SaaS Optimization Platform for visibility into cloud consumption; and Data Navigator, which helps aggregate data from other inventory sources.

License Manager utilizes an internal feature, License Cleanser, to upload and normalize license entitlement records to produce a trusted entitlement record. License Manager also provides organizations with an entitlement knowledge base of nearly 20,000 applications, with a focus on the larger publishers such as Microsoft, Oracle and IBM. This is problematic for organizations with larger portfolios, as it will require more manual effort to create entitlements within License Manager.

Dashboard Discovery excels at providing detailed inventory and utilization data for software running on PCs and on-premises. Dashboard Discovery uses an agent to discover software in public cloud environments, such as AWS EC2 and Azure. Customer feedback indicates that this methodology is insufficient for supporting inventory requirements required to manage licenses in hybrid environments. SaaS Optimization Platform provides integrations with Adobe and Office 365. However, it lacks the ability to discover shadow SaaS applications, or to provide integrations with other leading SaaS applications, such as Salesforce and Box. License Manager relies on the use of data from SAP’s USMM and License Administration Workbench (LAW) tools to provide insights into SAP consumption. Depending on the use case, License Dashboard will utilize VOQUZ Labs to provide additional detailed usage data and optimization recommendations as part of its service offerings. License Manager has developed capabilities to capture AutoCAD consumption, yet relies on an additional partnership with other third-party providers to manage engineering applications.

License Manager allows users to collect data from different sources and establish ELPs (for users that possess advanced licensing knowledge), or utilize its SAM services. As a discovery-agnostic vendor, License Dashboard has built intelligence into the tool that helps identify data quality issues to improve SAM governance. License Dashboard portal provides users with a business intelligence platform that allows users to easily access and create visualized reports to improve asset decision making, such as license analysis.

License Manager is a SAM tool that is suited for organizations that wish to utilize a SAM managed service provider in order to manage their on-premises software.

Matrix42 (Software Asset Management)

The product evaluated for this research, Matrix42 Software Asset Management (SAM) v.10, supports license management for basic licensing, such as per-install. Organizations that wish to extend the product to support complex licensing, cloud management and specialty engineering
software will require add-ons. These include Oracle Database Compliance, Datacenter Compliance, SaaS Compliance Data Provider, Cloud Expense Management, License Intelligence Service (LIS), SAP Compliance powered by VOQUZ Labs and a third-party engineering add-on.

As part of the platform, Matrix42 offers organizations a contract management feature that enables organizations to create contracts and associate them with entitlement records. This is enhanced by the Matrix42 software asset management entitlement library, which offers a catalog of more than 68,000 entitlements. When licensing SAM, organizations are enrolled in LIS, which provides updates to the library and allows organizations to request additional normalization and license entitlement creation.

Included with Software Asset Management, Matrix42 uses agentless technology to help identify software assets, and its Unified Endpoint Management (UEM) to provide additional inventory details, such as software utilization. For organizations that do not wish to utilize their unified endpoint solution, Matrix42 offers prebuilt integrations with other leading client management and unified management offerings, such as SCCM, BigFix and Ivanti Unified Endpoint Manager. Matrix42 does not natively offer support for SAP or for engineering and specialty software. Matrix42 offers certified integrations in its marketplace, with Open iT and VOQUZ Labs to support those needs. Customer feedback indicates that Matrix42 utilizes API data to capture consumption data from AWS, Azure and GCP, but lacks granular data required to manage software licenses running in hybrid environments. Using a browser agent, Matrix42 can discover roughly 50 SaaS applications, and offers API integrations to Salesforce and Adobe.

Matrix42 Software Asset Management effectively allows users to reconcile entitlement and consumption data and identify license shortfalls. SAM doesn’t have the ability to provide actionable optimization recommendations based on entitlement, inventory, configuration and contract data available within the platform. In addition to providing prebuilt reports in a format that both Oracle and SAP require, Matrix42 allows users to create and customize their own reports with the use of drag-and-drop functionality. Out of the box, Matrix42 offers integrations with ServiceNow, but it cannot natively share information with other leading IT service management (ITSM), enterprise architecture, vulnerability assessment, and portfolio, program and project management tools.

Matrix42 Software Asset Management (SAM) is well-suited for organizations with basic SAM needs that are utilizing other Matrix42 products where the integrated platform can be fully leveraged.

**ServiceNow (Software Asset Management)**

The Orlando release of ServiceNow Software Asset Management provides software compliance, optimization, SaaS license management, software spend detection, normalization services and a software entitlements library, plus publisher packs for Adobe, Citrix, IBM, Oracle, Microsoft, SAP and VMware.

Software Asset Management offers a straightforward, easy-to-use interface for creating entitlements for software included in its product library. The product library provides a catalog of product SKUs for a variety of products by commonly utilized publishers, such as IBM, Microsoft and Oracle, which automatically assigns license metrics and product use rights to entitlements on creation. Customers
not utilizing ServiceNow’s procurement or contract management solution are required to import entitlements from a Microsoft Excel sheet via the entitlement import feature, or to create integrations to procurement and contract management solutions with IntegrationHub, as ServiceNow doesn’t natively offer these.

To discover and meter software usage, ServiceNow uses its agentless Discovery solution (not included in Software Asset Management) and requires integrations with other client management tools, such as SCCM and JAMF. ServiceNow also offers API integrations and agentless discovery of AWS EC2, AWS RDS, Azure and GCP. In 2019, ServiceNow introduced SaaS License Management and software spend detection within Software Asset Management. Through integrations with financial systems, ServiceNow can normalize and categorize a wide range of SaaS products. The solution only utilizes API integrations with SaaS providers to monitor consumption. This includes prebuilt integrations with 10 leading SaaS applications. Integrations with other SaaS applications will require customer configuration using SaaS License Connections. ServiceNow established a partnership with OpenLM, which is available through the ServiceNow Store and requires an additional license with OpenLM. It allows organizations to monitor specialty engineering consumption, visualize the data within ServiceNow and take optimization actions within the platform.

ServiceNow offers effective reconciliation capabilities for software installed on-premises and optimization for SAP users. Software Asset Management currently cannot reconcile SAP engines, nor automatically identify which instances are BYOL or PAYG. Through prebuilt publisher specific dashboards, users can identify where entitlements exceed consumption, and vice versa. It also provides optimization of Oracle options, SAP users, commonly utilized SaaS apps, software rationalization and candidates for reclamation. It cannot suggest alternative licensing configurations, such as capacity to subcapacity, or process to core. Its single platform of products enables users to share data and build custom reports with their native BI solution.

ServiceNow Software Asset Management is suited for organizations with basic to advanced SAM needs wishing to extend the functionality of the ServiceNow platform.

**Snow (Snow License Manager)**

Snow License Manager v.9.4 is the base SAM product from Snow Software (Snow). In 2019, Snow announced a new product lineup, and Snow License Manager is no longer publicly available. The core of Snow’s SAM offering now comprises three products, which Snow License Manager underpins: Adoption Tracker (discovery, inventory and normalization), Spend Auditor (spend management and license reconciliation) and Spend Optimizer (reports and insights into software and cloud service optimization). Snow offers additional products for self-service and workflow automation, security and vulnerability insights, Snow Optimizer for SAP and a third-party offering for specialty engineering applications, among others.

Snow License Manager provides an easy-to-use interface and an entitlement library of over 620,000 SKUs to help reduce the time it takes to create entitlement entries. The product library is updated and enriched for customers that choose to enroll in Snow’s data intelligence service, which allows users to request additional software products be added to the library. Snow offers prebuilt
integrations with Oracle procurement tools, leading software resellers and vendor licensing portals to aid in the automation of loading contracts and entitlements.

Snow offers multiple methods, such as agent, agentless, zero-touch and API integrations, to discover and inventory across various platforms and hybrid environments. Snow also supports native integration with other commonly used data sources such as ILMT, ServiceNow Discovery, SCCM, BMC Discovery and Kace. Snow utilizes a browser plug-in, among other methods, to discover SaaS consumption. Snow also offers prebuilt API integrations to more than 30 common SaaS applications, such as Adobe, Salesforce, Workday, Box and Office 365, to provide consumption data from the software publisher. While Snow offers discovery for AWS EC2, Azure, GCP and Alibaba Cloud, client feedback indicates that Snow is unable to natively discover and identify which instances are running BYOL or PAYG without utilizing a custom script. Discovering and monitoring consumption for specialty engineering applications requires a third-party plug-in provided by Open iT.

Snow offers effective reconciliation capabilities for software installed across all environments. For SAP, Snow offers standard templates that can be adapted for each customer situation. Snow’s expanded portfolio of products allows users to optimize their entire software and cloud estate. It provides users with prebuilt dashboards and reports for various stakeholders to consume. Snow also offers prebuilt integrations with leading ITSM and BI tools, yet lacks prebuilt integrations with commonly utilized enterprise architecture, vulnerability, and portfolio, program and project management solutions.

Snow License Manager is a SAM tool suited to organizations seeking a solution for managing on-premises software and cloud systems with mature SAM and ease-of-use requirements.

Context

SAM activities fall within the purview of IT asset management (ITAM) practices. However, ITAM professionals need deeper connections with core life cycle management processes and more data about physical, mobile, virtual and cloud platforms than broad ITAM tools typically provide. SAM tool vendors are developing their products to address the increasing risks and costs of the shift from fixed, physical assets to mobile and virtual assets. Finding mobile and virtual software assets is more challenging and requires greater automation, further driving tool adoption. The most relevant standard for ITAM, ISO/IEC 19770, has the potential to drive increased focus on this market, yet it is of limited current interest to Gartner clients.\(^1\) Although many SAM tool vendors — such as Flexera and Snow — support the ISO/IEC 19770-2 (focused on software consumption) and 19770-3 (focused on software entitlements) standards, limited ISV support restricts the value they can provide in automating SAM data analysis.

As ISVs adopt licensing models that account for infrastructure as a service (IaaS), SaaS, virtualization and mobility, complexity will increase. SAM tool vendors, such as Aspera, Flexera, ServiceNow and Snow, can now establish ELP for browser-based SaaS and web applications, such as Microsoft Office 365, Salesforce or Workday. These applications often require different approaches to monitor user activities and access to relevant cloud services, and to establish ELP. This is because there is often no installed software or “footprint” to discover, as there is with
traditional disk-based software. These challenges have driven acquisitions of startups that support SaaS capabilities, as seen by Flexera’s acquisition of Meta SaaS, ServiceNow’s acquisition of VendorHawk and License Dashboard’s third-party partnership with Binadox.

Additionally, SAM tool vendors have begun to add support for the management of IaaS environments. Many of the vendors have started to ingest cloud billing data via API to help visualize and identify cost-saving opportunities for cloud consumption. Also, acquisitions of leading cloud management platforms (CMPs) by vendors such as Flexera (RightScale) and Snow (Embotics) improve their ability to manage cloud billing and govern cloud instances to improve license compliance and optimize cloud costs. (For more information about CMPs, see “Magic Quadrant for Cloud Management Platforms.”) As organizations continue to shift workloads to cloud environments and utilize a mix of perpetual licensing and cloud provider managed licensing, organizations will need to look for CMPs and SAM tools to complement each other.

Support for specialty engineering and operational technology (OT) is also of increasing interest to many organizations. Specialty engineering systems, such as computer-aided design (CAD) software and computer numerical control (CNC) machines, often have expensive per-seat licensing costs and specialized license management systems. Some SAM tool vendors, such as Flexera, Open iT and OpenLM, can establish ELP for these systems to ensure compliance and optimize the use of software in these spaces.

As traditional IT software (including standard IT OSs such as Windows and Linux) has been introduced into OT environments, software vendors are increasingly extending license compliance audits into this space, demanding data on use of their software by OT systems. OT software vendors are following the lead of IT software vendors in auditing for compliance with software license terms and conditions, increasing the risk of significant unbudgeted costs. SAM tools that can support both IT and OT systems not only can address these risks, but also can support broader IT/OT alignment (see “Hype Cycle for Managing Operational Technology, 2020”).

SAM tool vendors continue to move their focus beyond just license compliance. Gartner clients indicate that the ability to optimize licenses and subscriptions to identify savings is a requirement for enterprise-class SAM tools. Gartner clients are increasingly expecting SAM tools to support their need to aggregate data for additional use cases, so a SAM tool must support software optimization. In the 2018 Gartner SAM tool survey, security concerns were the biggest driver of decisions to invest in SAM tools among respondents. Security leaders, including CISOs, increasingly look to SAM tools to provide a useful view of software inventory to improve vulnerability assessment and risk management. SAM tool vendors, such as Eracent and Snow, have introduced new products that help identify, classify and report on vulnerabilities and threats within an environment. SAM tool vendors have also offered data normalization and enrichment services that can be utilized to support application rationalization, project planning and digital transformation initiatives.

Enabling improved business process performance is increasingly important to organizations, and SAM tool offerings are evolving to meet this need. Many SAM tool vendors, such as Flexera, Eracent and Snow, provide enterprise app stores as part of their core SAM product offerings to make software acquisition and approval easier, while providing oversight. Others integrate with IT self-service portals from ITSM (see “Magic Quadrant for IT Service Management Tools”), client
management tools (CMTs; see “Market Guide for Client Management Tools”) and UEM (see “Magic Quadrant for Unified Endpoint Management Tools”).

In 2019, Gartner estimated the size of the SAM tool market at between $290 million and $310 million, with an estimated growth rate of approximately 12% over the previous year.³ The depth and scope of SAM tools will continue to grow. As SAM vendors move to support cloud, virtualized and mobile software, new approaches will evolve. Investment in a SAM tool comes with risks related to the swiftly changing nature of software licensing and the increasing diversity of platforms. ITSM, client management and other IT tool vendors that don’t offer robust SAM capabilities are starting to establish relationships with SAM tool vendors, create partnerships and add new product features to fill SAM automation and optimization gaps in their solutions. As a result of these trends, Gartner expects both partnership and merger and acquisition activities to continue as SAM-specific tool vendors look to expand opportunities and larger IT operations management (ITOM) suite vendors look to add this functionality.

SPVM leaders must ensure that their tool selection considers both their existing and future needs, as well as these trends in the market. It is common practice in the SAM tool market for a proof of concept (POC) test to be performed prior to finalizing the purchase of a tool. This enables the client to validate that software consumption can be measured effectively for key ISVs. It also provides staff with the ability to get direct experience with the tool and reduce the risk that the product cannot be effectively used for improving the value of software assets to the organization.

Product/Service Class Definition

SAM tools manage entitlements from enterprise license agreements, purchases and other records to automatically determine and optimize license position against discovered software. IT leaders use SAM tools for managing software entitlement, in lieu of using spreadsheets, due to the rising complexity of software-licensing metrics.

SAM tools automate many of the tasks required to maintain compliance with software licenses, thereby controlling software spending. They facilitate the in-depth analysis of software assets by decoding software license entitlements, automating the collection of software consumption data, establishing ISV ELP, and optimizing software value delivery and information sharing.

IT leaders and their teams need SAM tools because ISVs have developed increasingly complex software license use and distribution models. This complexity makes it easy to overspend and to become out of compliance. The risk that organizations using such software will be out of compliance with complex license models is so great that it’s virtually impossible to establish a defensible audit position, or to optimize license usage and costs, without a specialized tool.
Critical Capabilities Definition

Entitlement Management
Enable the efficient and effective entry of software purchase records. Then, decode and normalize those records to reflect entitlements and key metadata required to accurately establish a trusted entitlement record and measure software consumption.

PC and On-Premises Consumption
Minimize the time and effort needed to discover, identify and normalize software consumption data for PCs, servers, databases, and other data center systems that are managed in an on-premises data center.

IaaS and PaaS Consumption
Minimize the time and effort required to discover, identify and normalize software consumption data for infrastructure as a service (IaaS) and platform as a service (PaaS) environments to maintain license compliance with bring your own license (BYOL) policies.

SaaS Consumption
Minimize the time and effort required to discover, identify, and normalize software consumption data for SaaS applications. This is used to produce an ELP and optimize SaaS consumption.

Other Data Collection
Minimize the time and effort required to discover, identify and normalize the collection of “other” data. This includes users, transactions, access, location, revenue, or API calls that may be required to produce an ELP based on the license metrics, or to present an opportunity to optimize software.

Specialty Software Consumption
Minimize the time and effort required to discover, identify, and normalize software consumption data for specialty engineering, operational technology (OT) systems and edge computing use cases.

Reconcile Data to Establish ELP
Harmonize contract, purchase, and entitlement information with normalized consumption inventory data and further enrichment with other internal and external datasets to create an effective license position (ELP).

Software Value Optimization
Track changes to software license structures, improve vendor management, and balance software spending with usage to enable tuning the number, type, and expense of licenses needed and in use.
Software Asset Information Sharing

Consume and produce information for use in other domains. A central system of record for IT assets enables the enterprise to manage vendors and software assets throughout their life cycle.

Use Cases

PC and On-Premises Licensing

This use case focuses on the SAM functionality required to manage software assets being utilized on PCs, servers, databases and other on-premises data center systems.

Organizations have yet to adopt the usage of cloud technologies widely, and a vast majority of computing is done “on-premises.” Such organizations emphasize the need for a SAM tool to decode software entitlements, capture software consumption on PCs and data center systems, and integrate with other data sources such as identity and access management tools. They must reconcile that data to produce an ELP to minimize the risks of noncompliance and identify opportunities to optimize their software.

Complex Licensing in Hybrid Environments

This use case focuses on the SAM tool functionality required to manage software assets in complex hybrid environments (such as on-premises, IaaS, PaaS and SaaS).

Organizations with hybrid environments are very complex to manage, and thus justify significant investments in SAM expertise and tools to address the magnitude and risks due to compliance issues. SAM tools also help such organizations achieve considerable software savings. Given that complexity, these organizations look for a balanced mix of capabilities that provides visibility into all environments, the ability to decode complex software contracts, and insights into their ELP and software consumption to optimize their software spend.

Complex Licensing in Cloud Primary Environments

This use case focuses on SAM functionality tailored to the needs of organizations investing in cloud technologies.

Enterprises that have a significant investment in SaaS applications or run a vast majority of their software within IaaS or PaaS environments, with little support required for on-premises software, face several new challenges. These include discovering highly ephemeral assets and complex Bring Your Own License (BYOL) policies, managing consumption, and unique licensing metrics such as API calls. They require SAM products that can decode and interpret BYOL license entitlements, discover and inventory software running in public cloud environments and SaaS environments, and tie into other sources, including general ledgers and single sign-on tools, to obtain critical information. Finally, while license compliance is essential for these organizations, there is an increased emphasis on optimizing software consumption.
Specialty Software

This use case focuses on SAM functionality for technology that extends beyond the traditional scope of IT systems.

This use case is aimed at enterprises that require support not only for IT systems, but also to assist with specialty platforms often associated with engineering or operational technology (OT) teams outside the scope of IT. These organizations require support for specialized platforms such as CAD software that play a critical role in the manufacturing and other industries, as well as IT systems to support the overall enterprise. Therefore, they need products that can help limit costs from expensive per-seat licenses, as well as deliver value from traditional IT software.

Vendors Added and Dropped

Three vendors were added to this year’s Critical Capabilities due to their ability to meet this year’s functionality and revenue requirements. Three vendors were dropped as a result of their lack of support for prebuilt API integrations with Adobe, Microsoft or Salesforce.

Added

- Certero
- License Dashboard
- Matrix42

Dropped

- 1E
- Belarc
- Ivanti

Inclusion Criteria

To be included in the 2020 Critical Capabilities for Software Asset Management Tools, vendors must:

- Sell and market a SAM tool that, at a minimum, contains the following functionality:
  - Discovers, normalizes and reconciles software license entitlement data with software consumption data to establish an ELP for ISVs. This includes vendors that license based on sophisticated measures, such as CPU cores used, physical-virtual mappings and other activity-based metrics. Included vendors must provide full ELP support for 80% or more of the software applications from each of the following vendors:
    - Adobe (PC and SaaS)
- IBM
- Microsoft (on-premises and SaaS)
- Oracle Database
- Salesforce (SaaS)
- SAP (ECC 6.0 and S/4HANA)

- Has a prebuilt connector to support native API integration for at least one of the following SaaS vendors:
  - Adobe
  - Microsoft
  - Salesforce

- Optimizes software value delivery and information sharing by:
  - Identifying unintentional license shortfalls and enabling their mitigation
  - Highlighting potential reductions in the number, type, and expense of licenses required for current and future enterprise needs

- Has at least $4 million in 2019 annual SAM tool licensing and SAM tool license (perpetual or subscription) and maintenance revenue (excluding professional services associated with SAM).

- The provider’s SAM tool must be generally available for purchase as a separate product, with core SAM functionality developed by the provider, and it must have had an initial general availability release date on or before 1 November 2019.

- If the provider is white-labeling a partner’s solution, then there must be significant differentiation in the white-labeled product to be considered in parallel with the original white-labeled solution as it relates explicitly to licensing compliance and optimization.

- The provider must be actively participating in this market, marketing and selling a product that has fit Gartner’s definition of a SAM tool, since 1 January 2019.
Table 1. Weighting for Critical Capabilities in Use Cases

<table>
<thead>
<tr>
<th>Critical Capabilities</th>
<th>PC and On-Premises Licensing</th>
<th>Complex Licensing in Hybrid Environments</th>
<th>Complex Licensing in Cloud Primary Environments</th>
<th>Specialty Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entitlement Management</td>
<td>13%</td>
<td>10%</td>
<td>6%</td>
<td>10%</td>
</tr>
<tr>
<td>PC and On-Premises Consumption</td>
<td>25%</td>
<td>15%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>IaaS and PaaS Consumption</td>
<td>0%</td>
<td>15%</td>
<td>22%</td>
<td>0%</td>
</tr>
<tr>
<td>SaaS Consumption</td>
<td>5%</td>
<td>15%</td>
<td>22%</td>
<td>0%</td>
</tr>
<tr>
<td>Other Data Collection</td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
<td>5%</td>
</tr>
<tr>
<td>Specialty Software Consumption</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
<td>50%</td>
</tr>
<tr>
<td>Reconcile External Information</td>
<td>20%</td>
<td>13%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Software Value Optimization</td>
<td>10%</td>
<td>12%</td>
<td>15%</td>
<td>10%</td>
</tr>
<tr>
<td>Software Asset Information Sharing</td>
<td>10%</td>
<td>5%</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

As of June 2020

Source: Gartner (July 2020)

This methodology requires analysts to identify the critical capabilities for a class of products/services. Each capability is then weighed in terms of its relative importance for specific product/service use cases.
### Critical Capabilities Rating

**Table 2. Product/Service Rating on Critical Capabilities**

<table>
<thead>
<tr>
<th>Critical Capabilities</th>
<th>Aspera (SmartTrack)</th>
<th>Certero (AssetStudio for Enterprise SAM)</th>
<th>Eracent (IT Management Center Suite)</th>
<th>Flexera (FlexNet Manager Suite)</th>
<th>License Dashboard (License Manager)</th>
<th>Matrix42 (Software Asset Management)</th>
<th>ServiceNow (Software Asset Management)</th>
<th>Snow (License Manager)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entitlement Management</td>
<td>3.3</td>
<td>3.3</td>
<td>2.9</td>
<td>4.0</td>
<td>3.1</td>
<td>3.5</td>
<td>3.6</td>
<td>4.3</td>
</tr>
<tr>
<td>PC and On-Premises Consumption</td>
<td>4.3</td>
<td>3.7</td>
<td>3.7</td>
<td>4.1</td>
<td>3.9</td>
<td>3.1</td>
<td>2.7</td>
<td>4.3</td>
</tr>
<tr>
<td>IaaS and PaaS Consumption</td>
<td>2.7</td>
<td>2.0</td>
<td>1.7</td>
<td>3.5</td>
<td>1.9</td>
<td>1.8</td>
<td>2.7</td>
<td>3.6</td>
</tr>
<tr>
<td>SaaS Consumption</td>
<td>2.6</td>
<td>2.4</td>
<td>1.6</td>
<td>3.0</td>
<td>2.2</td>
<td>2.4</td>
<td>2.5</td>
<td>3.3</td>
</tr>
<tr>
<td>Other Data Collection</td>
<td>3.4</td>
<td>3.2</td>
<td>3.2</td>
<td>3.6</td>
<td>1.9</td>
<td>3.1</td>
<td>2.5</td>
<td>4.0</td>
</tr>
<tr>
<td>Specialty Software Consumption</td>
<td>2.1</td>
<td>1.5</td>
<td>1.7</td>
<td>4.1</td>
<td>1.4</td>
<td>3.9</td>
<td>3.9</td>
<td>3.9</td>
</tr>
<tr>
<td>Reconcile External Information</td>
<td>3.6</td>
<td>3.3</td>
<td>3.4</td>
<td>3.9</td>
<td>2.8</td>
<td>3.0</td>
<td>2.5</td>
<td>3.8</td>
</tr>
<tr>
<td>Software Value Optimization</td>
<td>3.9</td>
<td>3.1</td>
<td>2.9</td>
<td>4.5</td>
<td>2.6</td>
<td>3.0</td>
<td>3.0</td>
<td>4.3</td>
</tr>
<tr>
<td>Software Asset Information Sharing</td>
<td>3.2</td>
<td>2.8</td>
<td>3.1</td>
<td>4.6</td>
<td>2.7</td>
<td>2.8</td>
<td>4.3</td>
<td>4.4</td>
</tr>
</tbody>
</table>

As of June 2020

Source: Gartner (July 2020)

Table 3 shows the product/service scores for each use case. The scores, which are generated by multiplying the use-case weightings by the product/service ratings, summarize how well the critical capabilities are met for each use case.
### Table 3. Product Score in Use Cases

<table>
<thead>
<tr>
<th>Use Cases</th>
<th>Aspera (SmartTrack)</th>
<th>Cerbero (AssetStudio for Enterprise SAM)</th>
<th>Eracent (IT Management Center Suite)</th>
<th>Flexera (FlexNet Manager Suite)</th>
<th>License Dashboard (License Manager)</th>
<th>Matrix42 (Software Asset Management)</th>
<th>ServiceNow (Software Asset Management)</th>
<th>Snow (Snow License Manager)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC and On-Premises Licensing</td>
<td>3.62</td>
<td>3.23</td>
<td>3.18</td>
<td>4.01</td>
<td>2.89</td>
<td>3.07</td>
<td>2.95</td>
<td>4.11</td>
</tr>
<tr>
<td>Complex Licensing in Hybrid Environments</td>
<td>3.38</td>
<td>2.97</td>
<td>2.77</td>
<td>3.81</td>
<td>2.61</td>
<td>2.80</td>
<td>2.82</td>
<td>3.94</td>
</tr>
<tr>
<td>Complex Licensing in Cloud Primary Environments</td>
<td>3.19</td>
<td>2.77</td>
<td>2.50</td>
<td>3.71</td>
<td>2.37</td>
<td>2.64</td>
<td>2.79</td>
<td>3.84</td>
</tr>
<tr>
<td>Specialty Software</td>
<td>2.84</td>
<td>2.35</td>
<td>2.43</td>
<td>4.14</td>
<td>2.11</td>
<td>3.49</td>
<td>3.55</td>
<td>4.05</td>
</tr>
</tbody>
</table>

As of June 2020

Source: Gartner (July 2020)

To determine an overall score for each product/service in the use cases, multiply the ratings in Table 2 by the weightings shown in Table 1.

### Acronym Key and Glossary Terms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWS</td>
<td>Amazon Web Services</td>
</tr>
<tr>
<td>BYOL</td>
<td>bring your own license</td>
</tr>
<tr>
<td>GCP</td>
<td>Google Cloud Platform</td>
</tr>
<tr>
<td>PAYG</td>
<td>pay as you go</td>
</tr>
<tr>
<td>SCCM</td>
<td>System Center Configuration Manager (Microsoft)</td>
</tr>
</tbody>
</table>

### Gartner Recommended Reading

_Some documents may not be available as part of your current Gartner subscription._
Evidence

Unless otherwise stated, “customer feedback” refers to Gartner Peer Insights, and customer reference feedback collected as part of the analysis process. This information is based on 280 reviewers of SAM tools submitted between April 2019 and April 2020.

1 Based on an analysis of 2019 inquiries in which the ISO standard was brought up as a decision criterion for selection.

2 The 2018 Gartner SAM Tool Survey referenced here was conducted online in June 2018 among 200 respondents. Half were in the U.S., and half were in the U.K. Respondents were screened for active employment in organizations with 100 or more employees worldwide that had deployed or planned to deploy SAM tools internally. Soft quotas were established to guarantee a good distribution in terms of company size.

Respondents were required to work in the IT department, and to have knowledge of SAM. They were also required to have one or more of the following roles when related to SAM:

- Determine the business needs
- Set the strategy
- Define technology requirements
- Investigate or evaluate service providers or tools
- Make final decisions
- Manage operations

The results of this study are representative of the respondent base and not necessarily the market as a whole. The survey was developed collaboratively by a team of Gartner analysts and was reviewed, tested and administered by Gartner’s Research Data and Analytics team.

3 Gartner’s “Market Share Analysis: ITOM, Experience Management, Worldwide, 2019” analyzes market share for ITOM experience management, which includes SAM, ITAM and ITFM.
Critical Capabilities Methodology

This methodology requires analysts to identify the critical capabilities for a class of products or services. Each capability is then weighted in terms of its relative importance for specific product or service use cases. Next, products/services are rated in terms of how well they achieve each of the critical capabilities. A score that summarizes how well they meet the critical capabilities for each use case is then calculated for each product/service.

"Critical capabilities" are attributes that differentiate products/services in a class in terms of their quality and performance. Gartner recommends that users consider the set of critical capabilities as some of the most important criteria for acquisition decisions.

In defining the product/service category for evaluation, the analyst first identifies the leading uses for the products/services in this market. What needs are end-users looking to fulfill, when considering products/services in this market? Use cases should match common client deployment scenarios. These distinct client scenarios define the Use Cases.

The analyst then identifies the critical capabilities. These capabilities are generalized groups of features commonly required by this class of products/services. Each capability is assigned a level of importance in fulfilling that particular need; some sets of features are more important than others, depending on the use case being evaluated.

Each vendor’s product or service is evaluated in terms of how well it delivers each capability, on a five-point scale. These ratings are displayed side-by-side for all vendors, allowing easy comparisons between the different sets of features.

Ratings and summary scores range from 1.0 to 5.0:

1 = Poor or Absent: most or all defined requirements for a capability are not achieved
2 = Fair: some requirements are not achieved
3 = Good: meets requirements
4 = Excellent: meets or exceeds some requirements
5 = Outstanding: significantly exceeds requirements

To determine an overall score for each product in the use cases, the product ratings are multiplied by the weightings to come up with the product score in use cases.

The critical capabilities Gartner has selected do not represent all capabilities for any product; therefore, may not represent those most important for a specific use situation
or business objective. Clients should use a critical capabilities analysis as one of several sources of input about a product before making a product/service decision.
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