



ARE ASSET MANAGEMENT

SAM Server Optimization

Engagement kit





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How to use this document

Getting started

The SAM Server Optimization engagement Kit walks you through the complete cycle of an engagement. The kit begins with a general introduction describing what a SAM Server Optimization engagement is and the stages involved to complete one. The rest of the kit focuses on how to proceed with each stage. This includes which deliverables represent billable milestones at the end of each stage.

Prerequisites

Partners that participate in a SAM engagement must be a registered SAM Gold Partner, or must have earned the SAM Solution Expertise criteria.

Server Optimization Introduction





The majority of companies today use Cloud services. Some only rely on the Cloud while others use a hybrid of Cloud and on-premises services. In any instance, customers want to get the most from their server environment and lay the groundwork to digitally transform their business in the future.



The SAM Server Optimization engagement

The SAM Server Optimization engagement provides the customer with an end-to-end analysis and mapping of their server environment (both physical and virtual), taking into consideration customer plans, current deployment, usage, and licensing data. The analysis serves as the basis for the evaluation of the customer's overall server state in relation to their server strategy, helping the customer optimize its current server workloads and applications. In addition, the analysis provides insights on the business, licensing, and technology benefits to moving additional workloads to virtualization or the Cloud. At the end of the engagement, you'll be able to offer recommendations to optimize SAM policies, procedures, and processes to facilitate their server strategy and implementation.

To establish these recommendations, you'll perform a server, Windows Server, and Virtual Machine discovery process, gathered through third-party tools, the customer, as well as other necessary sources. With this data, you'll provide an optimization analysis as well as provide recommendations on additional uses of the data captured to show customers how to get more value from the SAM engagement.

Customer benefits

- Optimizes customer's current server workloads and applications
- Offers insight on the business, licensing and technology benefits to moving additional workloads to virtualization or the Cloud
- Facilitates customer's server strategy and implementation
- Reduces costs through improved operational efficiencies
- Helps customer's manage your reporting requirements



90 percent of businesses have a digital transformation initiative to replace or optimize physical infrastructure or manual processes with a Cloud infrastructure.²



Server Optimization



What to expect from a SAM engagement

Every SAM engagement focuses on four phases



SAM Services Incentive Program

SAM Server Optimization engagements are funded under the SAM Services Incentive Program, a worldwide offering designed to help Microsoft partners, such as you, increase adoption of SAM best practices. By participating in the program, you can engage with a customer or deepen existing relationships that can lead to new sales and opportunities. For questions, please visit <u>The Sam Partner Incentive Program Guide</u>.

It's required that you use Intelligent Asset Manager (I-AM) in this SAM Server Optimization engagement to receive Channel Incentives. All work completed under this Statement of Work (SOW) will be provided in accordance with the I-AM Terms of Use ("TOU"), available <u>here</u>.

Please note that in this SAM Value engagement, the ELP is optional. Components for the ELP are broken out separately in each section. The choice of including the ELP in this engagement belongs to the SAM engagement manager in discussions with the customer and you. Principally, the SAM Value engagement isn't an exercise to determine a licensing gap, but rather a way to identify specific opportunities to improve the customer's assets, management value, and business objectives. The ELP, as a customer-facing document, has great value to clearly articulate to the customer their current standing on entitlements compared to deployment and is often requested by the customer as the outcome of the engagement.



For Proof of Execution (PoE), you must include the following deliverables, due to Microsoft, upon the completion of the SAM engagement. There materials serve as necessary PoE in order for you to collect Channel Incentives payment.

- Letter of Engagement
- Established Deployment Position (EDP) •
- Effective License Position (ELP) (optional)
- Server Optimization Assessment Report
- Letter of Confirmation (only required for certain countries)

How to file for a SAM Services Incentive Program

To learn how to file for a SAM Services Incentive Program, visit Software Asset Management.



Server Optimization

Step 1: Planning

reporting and promote growth.





A SAM Server Optimization engagement helps a customer identify all of its licenses and software installations, develop a strategic plan, and ensure the right policies and procedures are put in place to effectively manage

The first stage of such an engagement focuses on planning. Within this stage, you will achieve the following:

- Identify the customer's needs and goals
- Gather information about the customer's environment
- Discuss the project and arrange access and resources

Identify the customer's needs and goals

Planning begins by discussing with the customer its goals and objectives. What you discover will help inform you about how to define scope and configure your inventory tool to get the necessary information required to help identify technical readiness.

Here are some questions to consider asking a customer to find its goals and objectives:

- What are your objectives from the engagement?
- What do you hope to achieve with the engagement?
- What is your timeline?

Gather information about the customer's environment

Your first meeting with a customer concerns scoping the company, culture, licensing, and IT landscape to gain a better understanding of their environment and needs.

To start, you'll want to collect the following inputs from the customer's estate:

- Complete background on customer's server infrastructure:
 - View of the customer's Windows Server, SQL Server and virtual machine infrastructure and environment including on-premises, Cloud and outsourced installations for all locations and/or divisions
 - Information on how the customer is using or plans to use SQL Server, including what types of workloads or applications are currently implemented and what future implementation plans are under consideration
 - o Customer's server workload vision and/or roadmap
- Deployment inventory data coverage of no less than 90% from at least one (1) automated discovery tool for each customer location where Microsoft products are installed (see <u>Data collection</u> <u>requirements</u>)
- Current IT infrastructure and organization diagrams that include locations, IT group names, SAM tool(s), or supporting processes in place and stakeholder names



If an Effective License Position (ELP) is required (an ELP provides details related to license entitlements and deployments and is generated using I-AM):

You'll need to collect the following inputs from the customer's premises:

- Entitlement data and licensing agreements from procurement and any applicable sources or suppliers which may include:
 - o Original Equipment Manufacturer (OEM)
 - o Full Packaged Product (FPP) / Retail
 - o Outsourcer
 - o Service provider (Hosters, etc.)
 - Additional reseller(s)
 - o Changes to entitlements resulting from mergers, acquisitions or divestitures
 - Independent Software Vendors (ISV)
 - Any servers/environments managed by a licensing agreement
- A full and confirmed list of affiliates, if they exist, and any relevant amendments to their Microsoft Volume License Agreements, including any license transfer documents, either granting or receiving licensing rights.
- Location of software entitlement, deployment, and retirement records as well as the allowable level of access.

You'll need to also collect the following inputs from Microsoft:

Microsoft License Statement (MLS), including Microsoft Product and Services Agreement (MPSA) data where relevant.

Discuss the project and arrange access and resources

Based on the preliminary information you've gathered, you can create a full SOW. This plan will contain an outline for data collection and analysis, a detailed list of deliverables and a timeline with deadlines. This will help establish the customer's expectations and your accountability.

Deliverables

A Letter of Engagement is due to the customer and Microsoft at the beginning of the engagement. This letter provides the necessary Proof of Execution (PoE) in order for you to collect Channel Incentives payment.

This letter must include at a minimum:

- A SOW for the engagement being performed, including a list of all customer deliverables
- Scope of the engagement, including any scope limitations
- Dates and timelines
- Your project team members and their relevant Microsoft Certified Professional (MCP) credentials
- A list of key contacts that must include names, titles, phone numbers and email addresses
- Planned disclosure of engagement deliverables to Microsoft
- A statement explaining that data collected by you from the customer's information system environment is transferred to Microsoft, and how Microsoft will use that data collected to generate reports necessary for you to effectuate the SAM services

Server Optimization Step 1: Planning



- Consent from the customer to transfer data to Microsoft, any of its affiliates, and to the subprocessors Microsoft may employ to generate the reports necessary for the SAM services, including consent to transfer Personal Information to the United States and other countries where Microsoft's subprocessors are located. "Personal Information" in this instance means any information provided by Microsoft or collected by you in connection with this agreement that (a) identifies or can be used to identify, contact, or locate the person to whom such information pertains, or (b) from which identification or contact information of an individual person can be derived. Personal Information includes, but is not limited to: name, address, phone number, fax number, and email address. Additionally, to the extent any other information (such as, but not necessarily limited to, a personal profile, unique identifier and/or IP address) is associated or combined with Personal Information, then such information also will be considered Personal Information.
- The Microsoft <u>SAM Engagement data usage and privacy information</u> document (i.e. Data Usage Guide).
- Reference to the Data Usage Guide where appropriate.

The Letter of Engagement must be in writing and signed by an authorized representative of your organization and the customer.

You also must notify the Microsoft SAM Engagement Manager when the Letter of Engagement is uploaded into the required system as designated by Microsoft (currently, CHIP).

Letter of Engagement (required) Provides the customer with an overview of the SAM engagement.

View sample report <u>here</u>.



Server Optimization Step 2: Data collection





The main category of data collection is data related to the Server Optimization assessment and recommendations. You must ensure that the data collected is complete and accurate.

Within this section, you'll find steps you need to take to build the foundation for the required analysis and customer deliverables. All data collected needs to be stored securely and in accordance with the requirements set out in the I-AM TOUS.

Any deviation or change to data collection scope needs to be approved by Microsoft, the partner and the customer.

Take inventory of IT assets and licensing

You need to prepare for taking a full inventory of hardware and software deployments and licensing. This assessment includes how the technology is being used and by whom. You can accomplish this through inventory tools, questionnaires, and stakeholder interviews. Before you can move forward however, you must first work with the customer to establish the following parameters:

- Data collection requirements
- Choosing the right tool
- Defining the scope inventory
- Implementing the inventory tool
- Gathering data

Data collection requirements

Data coverage must reach at least 90% of all devices pertaining to this engagement. Data coverage is defined as the percentage of total devices for which all required installation data has been obtained. Where devices are not joined to the directory or network, manual collection of data is acceptable while maintaining the 90% data coverage requirement. Some specific guidance includes, but is not limited to:

- Complete extraction of SQL Server, Windows Server and virtualization topology and user accounts from:
 - Customer Active Directory (AD) domain(s)
 - Lightweight Directory Access Protocol (LDAP) and/or workgroups.
- Data extract must be cross-referenced against a minimum of one (1) additional data source, including but not limited to:
 - o Records from existing network performance/security monitoring and management tools
 - Network management frameworks
 - o Virtual machine performance monitoring
 - o Customer Human Resources (HR) records
 - Security sources (anti-virus)

- All trust accounts must be extracted to ensure no domains are missed.
- Extraction of user accounts by group (if applicable, e.g., for Citrix, event logs, last access date). Output includes a listing of user objects and the AD Groups they belong to.
- Identification of active users based upon the technique(s) employed by the customer, based on output from Step 1, or from parsing server logs.
- Complete extraction of data from the customer's current management and inventory tools and the calculation of current coverage levels of existing tool(s).
- Inventory of any missing devices, including but not limited to devices that:
 - Do not report inventory
 - o Are non-networked
 - o Are unmanaged devices
- Virtual environment mapping output for server virtualization. How many Windows Server virtual machines are deployed on the network, and on which host (typically to be determined using server reports)? The data points for each host server could include:
 - o Host server name
 - o Domain name
 - Physical or virtual
 - Clustering configuration
 - Operating system version and edition
 - Affinity rules (captured from virtualization management system)
 - o Processors, cores, and logical processors (vCPUs)
 - o Virtual guests and virtual guest movement across physical hosts within the past 90 days
 - o to accurately calculate licensing needs for products such as Windows Server, SQL Server, etc
 - Virtual migration logs to accurately calculate licensing needs for products such as Windows Server, SQL Server, etc.
 - o Additional software assets running on the host besides the virtual machines
- Identify System Center products managed endpoints and agent types to determine CAL requirements. The output of this step must include managed endpoint status detail (active/inactive) and the features used (Standard/Enterprise

If an ELP is required:

This section lists steps you must take to complete an ELP. Some specific guidance includes, but isn't limited to:

- Virtual environment mapping output including:
 - o Clusters
 - Physical host(s)
 - Virtual guests and virtual guest movement across physical hosts within the past 90 days to accurately calculate licensing needs for products such as Windows Server, SQL Server, etc.
- Identifying workstations and servers used by Microsoft Developer Network (MSDN®) subscriptions by employing various methods such as determining preferred user for devices, linking last logged-on user to devices, or soliciting feedback from customer personnel that have a MSDN® subscription (email template can be provided). This step should be completed as early as possible in the data collection phase.
- For server products that can be licensed in multiple ways (e.g., server/CAL or per processor), the licensing metric applicable to each implementation must be identified.



For server products that can be licensed in multiple ways (e.g., server/CAL or per processor), the licensing metric applicable to each implementation must be identified.

- SQL Server output including:
 - Version and edition
 - License type required for each SQL Server instance for customers with mixed licensing metric (server/CAL, per processor or per core)
 - o Confirmation of passive SQL Servers assigned Failover Rights
- Windows Server output including:
 - o Server name
 - o Physical or virtual operating system environment
 - o Operating system version and edition
 - o Processor and core information
- System Center Server output including:
 - o Server name
 - o Physical or virtual data
 - Component (e.g. System Center Virtual Machine Manager (SCVMM) version and edition, System Center Configuration Manager (SCCM))
 - o Processor and core information

Choosing the right tool

When choosing the right inventory tool, keep in mind that each tool supplier has its own process framework, so be sure to understand the way each tool works (don't assume they all function the same way). Using multiple tools helps you discover and analyze the data and provide a more complete view of a customer's environment. In some cases, the customer may already have an inventory tracking system or other tools may be able to augment the types of data that the customer's tools collect.

Some considerations when choosing or recommending an inventory tool include:

- What inventory tools are already deployed within the organization? What scope of the environment do they cover? What data points are they capable of capturing and reporting?
- Will deploying an agent-less or agent-based tool be more effective?
- What are the strengths and weaknesses of the tools being considered? Will one or more of them collect all required data points (i.e. hardware, software, virtualization details across a variety of hypervisors—Hyper-V, VMware® and XenServer®—and more)?
- Is it optimal to deploy and monitor a tool remotely or on-premises?
- How will the tool(s) gather data from PCs, servers, and mobile devices that connect to the network.
- If using an inventory tool that the customer already has in place, make sure it's configured correctly and can scan the full IT environment.
- Consider how the tool is licensed. The optimal tool will collect the right data and align with the customer's budget, whether the tool requires a license or subscription or is free.

Scope of inventory

For any SAM engagement, a standard best practice is to collect all relevant inventory and licensing data across all Windows-based computers in the environment. For SAM Server Optimization engagements, it's important to consider the minimum requirements based on customer goals. For customers looking to move some or all of their applications to a web-client delivery solution such as Office 365, the inventory tool's scope should cover all clients and a subset of servers to assess if systems are ready for the various Office 365 offerings.

You should also determine the scope of devices that contain data to be collected. For customers running Active Directory Domain Services (or Directories in the case of multiple, separate domains/forests), include in scope all machines with Active Directory activity reported in the last 30 days (time frame can be adjusted according to customer circumstances).

Implementing the inventory tool

The standard approach for deploying an inventory tool for a SAM Server Optimization engagement includes preparing the environment for scanning and data collection. Use either a combination of available tools or iterative scans to continually increase coverage rates.

Agent-less tools

- Understand domain, network, firewall and other considerations that will affect a tool's ability to access various portions of a customer's environment.
- Open firewalls, make firewall exceptions, deploy Group Policy Objects, open specific ports and take other steps to ensure that the tool can access all targeted machines.

Keep in mind that agent-less tools typically need to be run multiple times, especially at different times of the day and different days of the week, to catch the variety of users, shifts, time zones and such.

Agent-based tools

- Ensure agents are communicating regularly so that data is fresh.
- Ensure agents are deployed to the scope of target machines.
- Get the right refresh schedule and agent coverage to collect data with a single snapshot extraction that doesn't require iterations.
- Ensure data cleanliness. The quality of the scan coverage is top priority, beginning with Active Directory Domain Services.
- Run third-party tools when needed, in addition to customer-provided tools, to achieve proper cleansing.
- Work with the customer to ensure there is a repeatable cleansing process in place going forward.

Gathering data

When collecting information, consider taking the following actions:

 Ask the customer to confirm the full set of Microsoft products offered to end customers. Compare the results to the customer's current product reporting (invoicing)



Server Optimization Step 2: Data collection

- Ask relevant questions regarding the customer's environment that enable you to effectively plan data collection from a server and stakeholder perspective. By the end of this stage, you should have a clear picture of:
 - o Environments
 - o Datacenters
 - o Number of servers (physical and virtual per environment/customer)
 - o Deployment types
 - o Type of virtualization software in use
 - Software inventory tools in use
 - o Operations management software in use
 - o Identification of other affiliates providing hosting services
 - o Microsoft products and versions in use and features enabled
 - o How servers and software are provisioned, decommissioned and tracked
 - o Dates when each server was put into production
 - o How the company manages user access
- Obtain additional support documents from the customer. This may include but not be restricted to:
 - Licensing entitlement documentation
 - Reporting
 - Invoices
 - License transfers
 - License mobility agreements
 - Written communications from Microsoft in regards to special agreements
 - Any non-standard agreement or amendment that the customer believes is agreed to with Microsoft
 - Accepted evidence, including, but not limited to:
 - End customer contracts
 - Itemized invoices
 - End customer license verification forms

(In the event that sufficient evidence can't be provided by the customer, you must work with the customer to get formal declaration from End customers to confirm license responsibility matches described by the customer).

In the event that full coverage isn't feasible, a sample percentage coverage can be agreed with the responsible Microsoft SAM Engagement Manager.

- Deployment documents
 - Fixed asset register
- Third-party tools
 - Proof of concept for internal tools that the customer may suggest be used as part of data gathering
 - The output data that will be supplied from any proposed third-party tool
 - Verification of tools for completeness, accuracy and integrity

If you're collecting the information from the customer through a questionnaire, you must review the information provided by the customer and request clarification as needed. You must then verify completeness.

Server Optimization Step 2: Data collection



Deliverables

At the conclusion of this stage, you'll create a set of reports that summarize your findings including the following:

EDP (required) Provides details related to all hardware and software currently deployed within the customer's IT infrastructure.

The customer will have time to review and validate the preliminary reports and make final adjustments.



Server Optimization





Step 2: Data analysis

The Server Optimization engagement data must be analyzed, reviewed, and agreed upon with the customer as an accurate point-in-time reflection of the customer's current deployment and license position. This data, along with the additional customer inputs, will also provide a basis for the development of a solid Server Optimization Assessment unique to the customer. Based on the inputs and data collection, the partner will complete the following required analysis:

- Reconciliation analysis between license entitlements and deployment data, including the application of license benefit and optimization rules (e.g. upgrades, downgrades, promotions, etc.).
- Aggregation and review of data from stakeholder interviews and questionnaires, noting any information that was either unavailable or challenging for the customer to gather.
- Review of existing SQL Workloads (OLTP, OLAP, etc.) to better determine which license type or server edition to assign to that particular workload.
- Review of usage and license optimization scenarios to determine final SQL Workloads/ virtualization optimization recommendations for the customer.
- Assessment of all business, licensing and technology requirements necessary to meet the recommendations presented to the customer.

Deliverables

ELP (optional)	Offers details related to license entitlements and deployments.
License Optimization Report (optional)	Presents recommendations on how to optimize your infrastructure and improve licensing efficiencies.



<u>Optimization</u>





Step 4: Final recommendations

At the conclusion of the SAM engagement, sit down with the customer and go over the reports. Ask the customer to submit any comments to the reports within 10 calendar days from receipt as well as provide approval of the report. You should consider valid comments from the customer and update the report if necessary. At the end of the 10 days, submit the final report to Microsoft.

Deliverables

Server

The following deliverables are **due to the customer** at the **end** of the engagement:

- Server Optimization Assessment Report. According to the scope of the engagement, this report will contain:
 - o Assessment of the customer's overall server environment
 - Full set of recommendations on optimizing Server workload and virtualization usage, licensing models and technology implementation along with the business, licensing and technology requirements needed to fulfill the recommended solutions. Examples can include:
 - Optimal access to mission critical systems and data through redundancy and Disaster Recovery solutions, which require additional network and storage capacity
 - Proper management of purchasing and deployment practices for Server environment, identifying who has authority to purchase and deploy, how they're deploying and how they're tracking deployments in order to gain better control (ie., unapproved purchasing by local IT administrators)
 - Assessment of the customer's SAM policies and procedures strengths, weaknesses and areas of opportunity, as well as recommendations for improvement
 - Determining percentage of server utilization for CPU, memory, and storage capacity in order to recommend strategies for ideal utilization
 - Determining existing virtualization deployment practices, limiting non-approved virtualized deployments
 - Return on investment (ROI) discussion and analysis, including a review of the impacts of hardware expenses, software installations, energy consumption, IT resourcing, disaster recovery, etc.
 - Cost of Cloud migration analysis, including integration with other IT systems, additional storage requirements, data extraction costs, etc.
- **Established Deployment Position (EDP).** A document with details related to all hardware and software currently deployed within the customer's IT server environment.





• If an ELP is required:

- **The ELP spreadsheet.** A spreadsheet produced using I-AM (Note: Defined in **Deliverables to Microsoft** section below.)
- **License Optimization Report.** This report must contain the risks, liabilities, and issues associated with current licensing practices and prioritized recommendations on how to better manage their licenses to minimize risks in the future. The report could also contain, but is not limited to:
 - Identification of all the customer's Volume License Agreements (VLAs) with Microsoft and a recommendation on any beneficial consolidation
 - Consumption information, detailing installed products that are unused or under-utilized (e.g., no use in last six months)
 - Recommendations on repeatable, simplified inventory collection process for future True-ups (for Enterprise Agreement customers only)
 - Additional customer-specific recommendations based on captured data and insights

The ELP must be finalized in I-AM. ELPs produced outside of I-AM will not be accepted. An encrypted ELP must be uploaded into the designated tool (currently CHIP) as proof of execution.

The following deliverables are **due to Microsoft** at the **end** of the engagement:

- Established Deployment Position (EDP). The EDP, a I-AM generated Excel report, provides details related to the customers' Microsoft software deployments and usage data. The software deployments are identified using discovery tools and manual inputs as outlined in the Data collection section. The partner must first input all relevant data into the customer Inventory Data Contract (CIDC) template, which will be uploaded into I-AM. The EDP will then be created by the partner using I-AM which is to be given to the customer and Microsoft. EDPs produced outside of I-AM will not be accepted as proof of execution. The EDP data must meet or exceed the minimum quality standards published in the current <u>SAM Minimum EDP Quality Standards</u>.
- Server Optimization Assessment Report. This must be the same Server Optimization Report provided to the customer, as outlined above.
- Letter of Confirmation (only applicable for customer countries listed below)
 - o Required: China
 - o Advised: India, Malaysia, Indonesia, Philippines and Vietnam

The Letter of Confirmation should be drafted after completion of the SAM engagement and requires the customer's chop (stamp) or email from the customer's corporate domain confirming provision of SAM engagement.

The Letter of Confirmation must include the following statement:

"This is to confirm Microsoft SAM Partner <insert Partner Name> has implemented SAM service <insert SAM Engagement Type> to customer <insert customer name>



Due to customer

Required:

Letter of Engagement	Provides the customer with an overview of the SAM engagement.
Server Optimization Assessment Report	Contains an Executive Summary, a summary of project background and scope, engagement results, recommendations and next steps.
EDP	Provides details related to all hardware and software currently deployed within the customer's IT infrastructure.

Optional:

ELP	Provides details related to license entitlements and deployments.
License Optimization Report (required with an ELP)	Presents recommendations on how to optimize your infrastructure and improve licensing efficiencies.

Due to Microsoft

Required:

Letter of Engagement	Provides the customer with an overview of the SAM engagement.
Server Optimization Assessment Report	Contains an Executive Summary, a summary of project background and scope, engagement results, recommendations and next steps (same report as given to customer).
EDP	Provides details related to all hardware and software currently deployed within the customer's IT infrastructure.
Letter of Confirmation (required for certain countries)	Requires customer's chop (stamp) or email from the customer's corporate domain confirming provision of the SAM engagement (see the previous page for a list of countries required this letter).

Required if an ELP is included the scope of the engagement:

ELP

Provides details related to license entitlements and deployments.

View sample report here.



Server Optimization Step 4: final recommendations

SAM resources

SAM Partner eligibility, program overview and Partner incentive guides are located at: http://aka.ms/SAMIncentiveGuide

