EMA Research Report: Pragmatic Server Monitoring

Comparing SolarWinds Server & Application Monitor with Microsoft System Center Operations Manager

EMA ™

IT & DATA MANAGEMENT RESEARCH,
INDUSTRY ANALYSIS & CONSULTING

Table of Contents

Executive Summary

In order to assist enterprises in identifying optimal solutions for effective server monitoring, Enterprise Management Associates® (EMA™) analysts conducted primary research comparing server monitoring products from SolarWinds and Microsoft. Key findings include:

- The SolarWinds platform was indicated to be faster to deploy and easier to administer.
- The SolarWinds platform was also more frequently noted to provide an appropriate number of alerts.
- The Microsoft suite proved to require higher license, infrastructure, maintenance, and operational costs.
- Based on user responses, the SolarWinds solution was indicated to provide a higher overall value (comparing cost to functionality) than the Microsoft platform.

Evaluating Server Monitoring Solutions

Ensuring the reliability and optimal performance of IT investments requires continuous and proactive monitoring across the IT infrastructure. Without automated monitoring solutions, enterprises are reactionary in IT management – identifying and resolving problems only after they have become business impacting. Server monitoring platforms record, report, and alert in real time on the status, condition, and performance of applications, operating systems, and hardware components. In this way, problems and potential problems are rapidly identified and promptly remediated. Armed with this critical information (including historical trends, performance metrics, and resource availability), IT operations can make informed decisions on optimal configurations and management practices necessary to meet services requirements, including SLA achievements and ensuring the continuous availability of IT systems.

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Despite the clear value achieved from the adoption of an automated monitoring solution, selecting a platform that appropriately meets an organization's unique requirements can be challenging. In particular, enterprises must carefully balance the monitoring capabilities of a platform with its implementation and operational costs. Basic but inexpensive solutions may lack the necessary capabilities to meet current or future business requirements, while expensive but feature-rich platforms will be a wasteful investment if only a portion of the capabilities are actually used. An optimal solution successfully satisfies enterprise requirements while meeting budgetary restrictions.

To help organizations identify the characteristics that should be evaluated when selecting a server monitoring platform, Enterprise Management Associates has conducted primary research comparing two of the leading solutions side-by-side:

- SolarWinds Server & Application Monitor (SAM)
- Microsoft System Center Operations Manager (SCOM)

To perform the research, EMA fielded a survey to IT professionals indicated to be very knowledgeable about their organizations' systems management requirements and capabilities. In total, 135 IT professionals participated that actively used at least one of the two product sets and were employed by organizations with greater than 500 employees. Respondents represented a diverse range of industry verticals and horizontals.

Monitoring Efficiencies

While most monitoring solutions can collect data from a broad range of log files, performance metrics, and other resources, the ease of use, configurability, and level of analytics employed all contribute to how effective a solution will be to an organization.

Deployment Time to Value

Introducing a monitoring solution to a complex IT infrastructure can require substantial deployment efforts that can be impactful to business productivity. Common tasks involved in the deployment of a monitoring platform include the console server installation, monitoring configurations, agent deployments, testing, and administrator training. Each of these tasks must be performed without affecting the performance of the production environment. Also, the amount of time support personnel spend on these activities takes them away from other essential IT management activities.

On average, SAM users reported completing full deployments of their monitoring solution 14% faster than SCOM users (Figure1). 61% of SAM users and 60% of SCOM users indicated they completed platform deployments in less than a day. 82% of SAM users and 71% of SCOM users completed their deployments in less than a month. Overall, both platforms displayed reasonable deployment times commensurate with the size and complexity of the infrastructures they supported. However, the agentless SolarWinds solution was indicated to be installed more rapidly thanks to a less complicated hardware and software architecture.
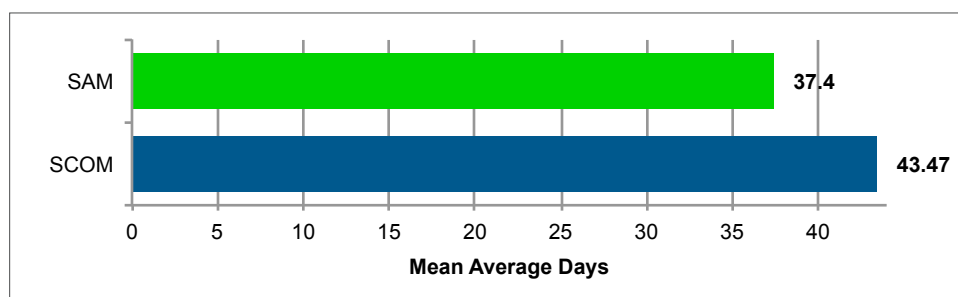

Figure 1. Approximately, how long did it take your organization to fully deploy your server monitoring platform?

Ease of Administration

There is a direct correlation between how effectively administrators are able to utilize a monitoring platform and how easily they are able to execute tasks with the console interface. SAM users consistently reported they were able to perform critical configuration tasks in less time than SCOM users (Figure 2). In particular, customization features, such as creating a custom dashboard or generating a new report, were accomplished substantially faster with SAM than with SCOM. Also, adding a new server was indicated to be 25% faster with SAM, providing further evidence of a superior deployment process. Since administrators regularly perform these kinds of tasks each week, a 25% savings rapidly adds up – reclaiming months of support time every year for each administrator managing the support stack.
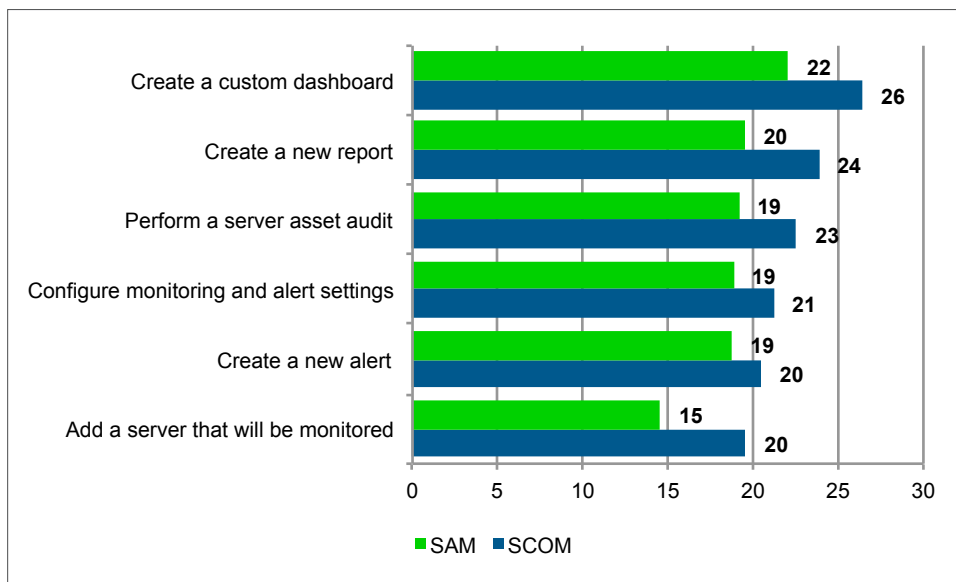
Figure 2. On average, how much time (in minutes) does it take to perform each of the following tasks?

Accuracy of Alarms

The ability of a monitoring platform to support system reliability is contingent on its ability to promptly and accurately alert administrators to issues. If the alerts are not comprehensive, critical information will be missed and errors may occur that will not be brought to the attention of IT administrators until after they have impacted business performance. Conversely, if too many alarms are issued, they will likely contain a large percentage of false positives and non-critical information. Faced with a blizzard of alarms, administrators typically treat it all as "white noise" and equally ignore both critical and non-critical alerts. To be effective, monitoring platforms must comprehensively record status and performance data and must also employ analytics to weed out unimportant messages so that *only* critical alerts are brought to the attention of the administrators. In the EMA survey results, a slightly higher percentage of SAM users reported they received the appropriate number of alert in comparison with SCOM users (Figure3).
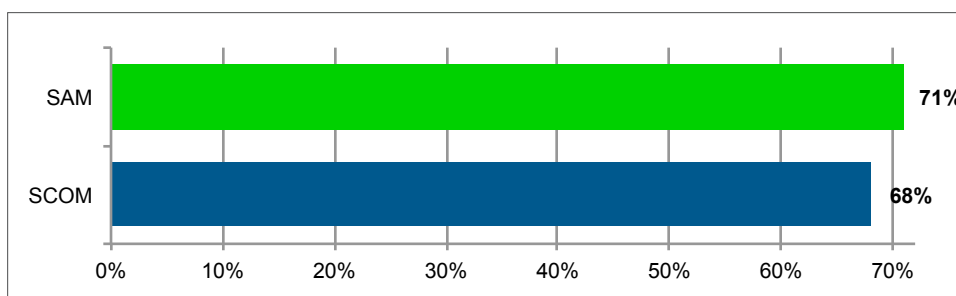

Figure3. Do you receive the appropriate number of alerts?

Total Cost of Ownership

While most organizations tend to focus on software license fees when calculating the budgetary impact of a server monitoring platform, these typically only account for a fraction of the total cost of ownership. Other financial considerations include: implementation costs, maintenance costs, and infrastructure costs. The SAM vs. SCOM pricing comparisons below provide an example of how to perform a true cost evaluation.

License Costs

The SolarWinds SAM entry license is offered at $2,995 USD and monitors up to 150 metrics. A metric is a single monitored component and customers typically monitor 10 metrics on average per server. Pricing for larger license tiers supporting larger numbers of metrics are offered at scaled discounts. Using the 10 metric to 1 server (physical or virtual) ratio, pricing at the lowest tier comes to about $200 per server and the largest tier comes in around $32 per server. All license tiers include the first year of maintenance free.

Microsoft licensing for SCOM is substantially more complex. Microsoft bundles licenses for 8 System Center platforms (including SCOM) into a single combined license. It is not possible to purchase a SCOM license independent of the System Center bundle. Microsoft offers two types of server Management Licenses (MLs): a "Standard ML" supports standalone servers with no more than two processors and up to two virtual machines, and a "Datacenter ML" supports servers with no more than two processors and hosting more than two virtual machines (up to 1024 VMs per server for Hyper-V environments). For servers with greater than two processors, multiple licenses will need to be purchased. The MSRP for *System Center 2012 R2 Standard* is $1,323 and for *System Center 2012 R2 Datacenter* is $3,607. Microsoft sells SCOM through a variety of channels, and each vendor maintains a separate discount chart for bulk purchases and bundling. In EMA's survey results, the majority of SCOM respondents (71%) noted purchasing Datacenter MLs either for all servers or in addition to Standard MLs, indicating a broad number of managed virtual environments and higher overall license costs (Figure 4).
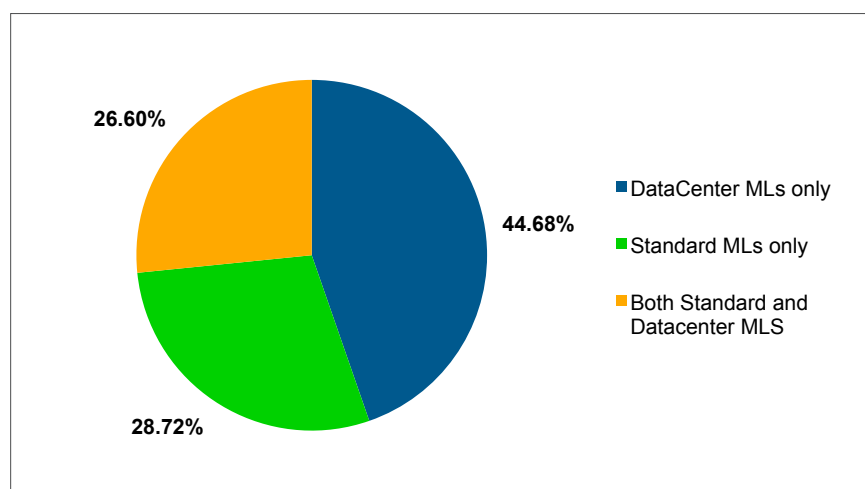

Figure 4. Percent of server MLs purchased by SCOM users

Assuming that organizations with both types of licenses are evenly split (50% Standard and 50% Datacenter) and assuming half the monitored servers have 4 processors and the remaining have 2 processors, the average cost of a Microsoft System Center R2 license can be estimated as $4,049 per server. While this sum does include support for substantial capabilities beyond server monitoring, it is a close estimate of what Microsoft would charge even if only the Microsoft SCOM server monitoring platform was actually used. Comparatively, SolarWinds also offers additional integrated management capabilities, including patch management for Microsoft and third-party applications as well as capacity planning for Hyper-V & VMware environments. These capabilities can be purchased separately if needed.

Infrastructure Costs

The size and complexity of hardware and software infrastructure components have a direct effect on both implementation and on-going operational costs. Most notably, the number of physical servers required to support the platform exponentially increases the deployment costs. In addition to the cost of the server itself, a TCO evaluation should also consider the cost of operating systems, supporting applications (such as an SQL database), and maintenance. Minimum requirements for the evaluated product sets should be used as a basis for identifying the total cost of each management server. For example, EMA has identified the following server configuration as meeting the minimum requirements for both the SAM and SCOM platforms:

Monitoring server hardware cost: Cost estimate based on a Dell PowerEdge R520 server configured to meet common operating requirements for supporting a server monitoring platform	$1689 per server
Monitoring server operating system: MSRP pricing for Windows Server 2012 R2 Standard	$882 per server
SQL License: MSRP pricing for Microsoft SQL Server 2014 Standard	$3189 per server
Monitoring server maintenance Microsoft Software Assurance 25% p.a. for OS & SQL annualized over 7 years	$7124 per server
Total	**$12,884 per server**

Figure 5. Estimated cost of a monitoring server

EMA survey results identified a much higher mode average number of servers were monitored by each SAM server than by each SCOM server (Figure 5). This indicates a substantially higher number of SCOM servers are required to support larger-sized IT environments.

According to the EMA's survey results, SAM users supporting less than 500 servers indicated their monitoring servers were able to support a higher density of servers than reported by SCOM users (Figure 6). For environments with less than 50 servers, SAM users most commonly (i.e., mode average) indicated they employed only one server while SCOM users most commonly required 2 servers. Environments supporting between 50 and 500 servers displayed an even higher disparity as SCOM users most often indicated they needed 6 servers to monitor their infrastructure versus only one or two SAM servers for the same size range. Particularly large IT infrastructures (those supporting greater than 500 servers) slightly favored SCOM environments with a mode average of 6 servers compared to 7 servers in SAM environments.
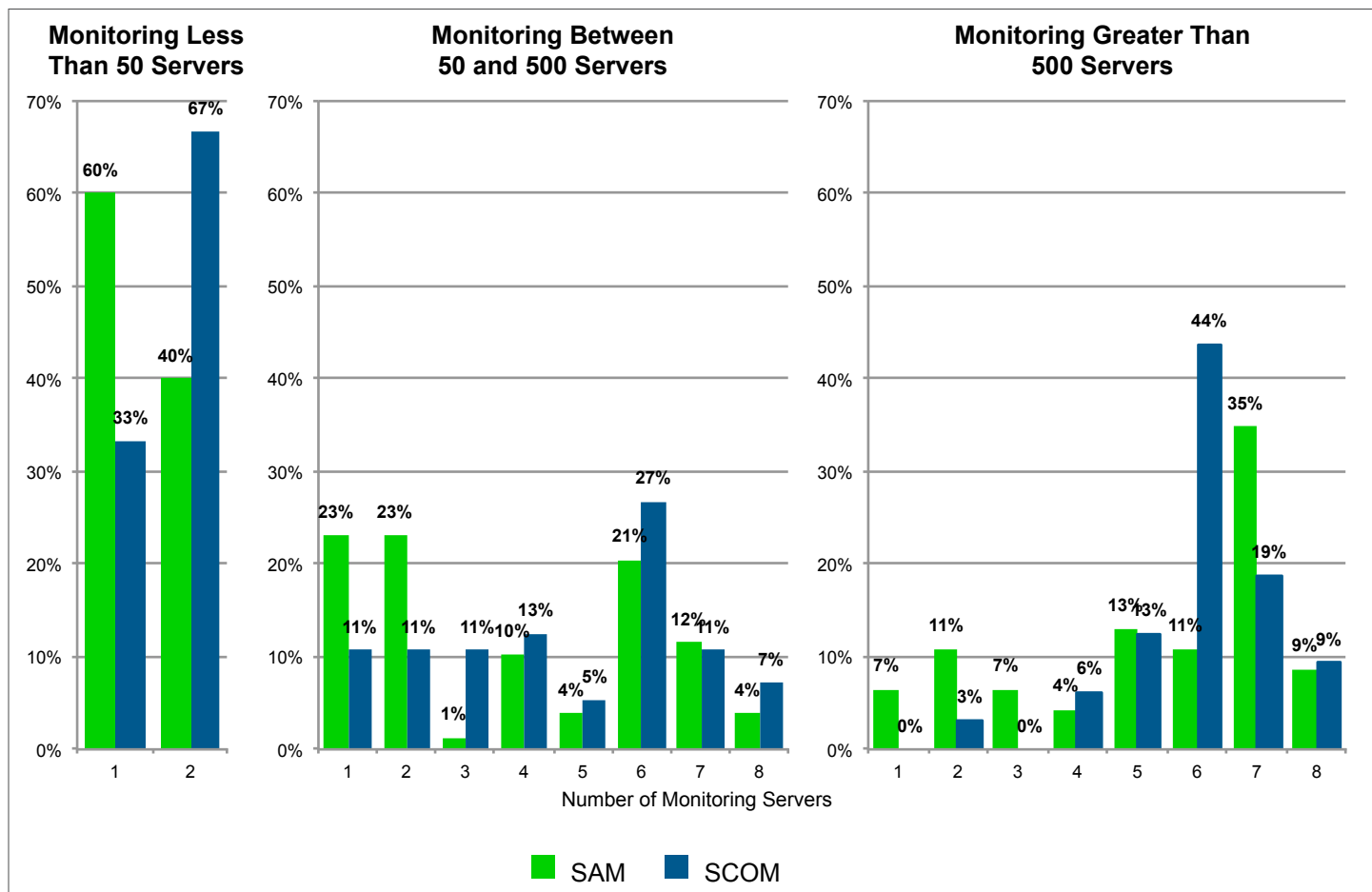
Figure 6. Percent of respondents indicating the number of monitoring servers they employ to support small, medium, and large server environments

Applying the per server cost estimate to the mode average managed server densities identified in the survey results, the following calculations can be made that exemplify how infrastructure costs can dramatically increase with the number of required servers.

	Number of Monitored Servers		
	<50	50 to 500	>500
Number of required SAM servers	1	2	7
Number of required SCOM servers	2	6	6
Total SAM Infrastructure costs	$12,884	$25,768	$90,188
Total SCOM Infrastructure costs	$25,768	$77,304	$77,304

Figure 7. Calculating total infrastructure costs

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Software Maintenance Costs

Software maintenance contracts – which include essential operational support for on-going patches, updates, and help-desk support – are also available from solution providers and contribute to the total cost of the platform's ownership. Typically, maintenance contracts are offered as an annual subscription prices as a percentage of the total license cost. Microsoft Software Assurance is offered at 25% purchase price while SolarWinds offers maintenance contracts that scale from 16% to 20% of the license list price. Additionally, SolarWinds offers free maintenance for the first year.

It should also be noted that the effectiveness of vendor support teams are not created equal. For example, according to the EMA survey results, 67% of SolarWinds customers reported connecting with a help desk support specialist in less than 30 minutes while only 50% of Microsoft customers indicated that level of response (Figure 8). The more time administrators waste connecting to the appropriate support representative, the less time they have available to resolve business-impacting issues.
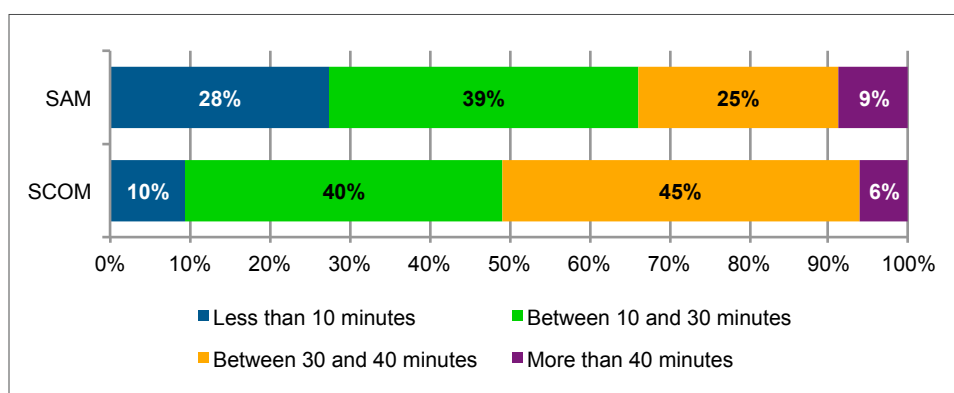

Figure 8: When contacting the help desk for your server monitoring platform, how long does it take to connect with a support specialist?

A primary value to software maintenance that should also be acknowledged is the substantial savings that is achieved from not having to pay additional costs for solution set updates. Even if a solution provider only releases a major update once every four years or so, the maintenance contract pays for itself. More dynamic vendors, however, add significant functional improvements much more frequently than that. For example, since 2013, SolarWinds his introduced 3 major and 2 minor product releases. Considering the costs that are saved over acquiring these updates individually, investing in a software maintenance contract is a clear bargain.

Total Cost of Ownership

Bringing all the financial elements together completes the picture of the cost-effectiveness of evaluated platforms. The chart below (Figure 10) leverages the price figures and research findings identified above. Three different sized support stacks have been calculated and each assumes 7 years of maintenance costs. The results present a clear pattern identifying SolarWinds SAM as significantly more cost-effective than the comparable solution from Microsoft.

	Number of Monitored Servers					
	25		250		900	
	SAM	SCOM	SAM	SCOM	SAM	SCOM
Solution License Costs	$5,295	$101,232	$31,495	$1,012,320	$31,495	$3,644,354
Software Maintenance Costs	$6,354	$177,156	$37,794	$1,771,561	$37,794	$6,377,619
Infrastructure Costs	$12,884	$25,768	$25,768	$77,304	$90,188	$77,304
Total	$24,533	$304,156	$95,057	$2,861,185	$159,477	$10,099,276

Figure 9. Total cost of ownership evaluation comparison

EMA Perspective

Every organization is different – different goals, different IT configurations, different budget sizes, different end user needs – and monitoring platform evaluations should always incorporate these unique business requirements when determining the true value they can expect to receive from the adopted solution. What is consistent, however, is that the true value of the solutions can be gauged by weighing the total cost of a solution with the level of functionality it brings to the business. For server monitoring solutions, key capabilities to evaluate include ease of use, holistic visibility into the hardware and software IT ecosystem, and the availability of analytics to limit alarms to only critical and actionable alerts while also helping to pin-point the root cause of failure events.

EMA's independent survey-based evaluation results determined that the SolarWinds SAM product outshines Microsoft SCOM in performance, ease of use, and cost effectiveness in the majority of cases. When directly asked about the value their monitoring platform offers to their organization, 86% of SAM respondents identified their solution as providing above average value – indicating a 16% greater appreciation than SCOM users. Based on this evidence, EMA must objectively conclude that, overall, SolarWinds offers a superior server monitoring value proposition with its SAM solution than Microsoft is able to deliver with SCOM. EMA urges enterprises seeking to adopt a server monitoring platform to improve IT performance and reliability perform their own independent analysis of solutions in the market based on their unique organizational requirements.

About SolarWinds

SolarWinds (NYSE: SWI) provides powerful and affordable IT management software to customers worldwide from Fortune 500 enterprises to small businesses. SolarWinds focuses exclusively on IT Pros and strives to eliminate the complexity that they have been forced to accept from traditional enterprise software vendors. SolarWinds delivers on this commitment with simplicity through products that are easy to find, buy, use and maintain while providing the power to address IT management problems on any scale. SolarWind's solutions are rooted in a deep connection to its user base, which interacts in the thwack® online community to solve problems, share technologies and best practices, and directly participate in the product development process. Learn more today at http://www.solarwinds.com/SAM.

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