Leveraging Service Level Management to Improve Service and ROI

A Guide for MSPs

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Executive Summary

Delivering effective service level management (SLM) is a vital requirement for today's managed services providers (MSPs). This paper looks at the importance of SLM and the key requirements for effectively and profitably delivering these services. Finally, the paper reveals how CA Unified Infrastructure Management (CA UIM, formerly CA Nimsoft Monitor) uniquely enables SLM, helping MSPs boost their service levels, market penetration and profits.

Service Level Management: An Introduction

SLM, or the practice of monitoring the performance of IT components and assets, has long been a service offered by many MSPs. Since the beginning, SLM has played a central role in making sure that service level agreements (SLAs) are honored.

The goal of SLM is to help employees remain productive and efficient as well as keep consumers happy while they conduct business. By producing data that conveys how employees and customers are interacting with technology, SLM can help executives make better decisions about their businesses. If organizations can prevent the outages and performance issues that lead to employee downtime and negative customer experiences, their IT teams and investments can start to further corporate objectives, rather than hinder them. If consumers are to understand if their technology investments are paying off, they must have the right data. Delivering the right data at the right time is precisely what SLM achieves.

Demand for MSPs to deliver SLM

Both for MSPs and other types of IT service providers, SLM should be an integral component of service offerings. Why? Because consumers demand it, and it is fast becoming a necessary component of any mature managed services operation. MSPs who already provide proactive managed IT services will find that offering SLM is a natural next step toward giving their clients essential data about their service performance in outsourcing the management of IT.

Today's business executives are growing increasingly impatient with IT investments that do not yield demonstrable dividends. MSPs must be able to provide SLM as an option for creating a functional IT infrastructure. Today's organizations are also increasingly reliant upon their IT for important business-related objectives. Simply knowing that an IT problem exists is no longer enough. MSPs must be able to provide their clients with the ability to monitor and fix problems before they affect users or customers. Then, and only then, can a consumer rest assured that their IT investments are working for them.

The requirements for delivering SLM

For companies already engaged in managed services, or for those who are in some related practice of delivering IT solutions, the decision to offer SLM can be a natural one. As MSPs become more proactive, the natural tendency should be to offer higher value, higher margin services that will resonate clearly with the client. SLM is one such service. Following are a few of the most vital capabilities for delivering SLM:

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- **Tools**. The ability to deliver effective SLM demands that sophisticated tools be used. While basic IT device monitoring and management tools are pre-requisites for delivering managed services, SLM requires tools that examine and measure atypical objects within the IT stack. Areas like custom applications, Web servers, portals, extranets and anything else that users interact with are monitoring subjects for SLM. In order to achieve this result, the appropriate tools and processes must be acquired.

- **Processes**. While tools are important, without the right processes in place, SLM can never take place. Once the data is collected, the MSP or IT provider must have a process that will take that information and turn it into action. The process of taking monitoring data and transforming it into a plan that can actually detect and prevent problems from occurring is the essence of managed services and SLM. Only by developing a functional process for extracting and analyzing data can an MSP take preventative action on behalf of their clients. For example, data indicating poor site performance must lead to tests of the implicated objects. Tests must yield more information about how those objects are working (or failing). Proactive steps must then be taken in order to remediate any issues before they affect users. In order to prevent user or customer dissatisfaction, proactive IT management must be employed. In order to accomplish this, every MSP must have a process to follow.

- **Business consulting**. Especially among smaller MSPs, the concept of providing business consulting (or at the very least relevant data) is integral to delivering SLM. The practice of reactive IT management is antithetical to SLM. The delivery of SLM cannot be accomplished without providing a minimal amount of proactive management in order to maintain end-user satisfaction. This notion is lost on many MSPs who view IT management as more of a technical undertaking. It goes without saying that technology is an important component, but without the business data and advice the client is at the mercy of an IT network that may or may not be functioning optimally.

- **SLAs**. SLAs play an important role in the relationship between MSP and client. If an MSP is tasked with providing SLM on a particular application or appliance, the SLA should dictate the level of expectation and performance that can be expected. Quite a few consumers are left on their own when it comes to monitoring SLA performance. Without an MSP or SLM, business executives may never know if their infrastructure is performing as it should.

The challenges of delivering SLM

Historically, MSPs who sought to offer SLM had several challenges. MSPs had to manually perform many essential tasks. For example, early MSPs had to manually analyze data in order to make any use of it. Event logs had to be meticulously examined to see if applications were running slowly or to see if devices were being overloaded. Once this determination had been made, the MSP had to take measures to fix the problem before it worsened.

To be effective, MSPs need tools that automate this data analysis, providing them with the information they need to offer proactive maintenance to those critical IT objects. Furthermore, MSPs need greater visibility into the objects they are managing. For instance, applications today need to be monitored at the user experience level. By seeing what the end user is actually experiencing, MSPs can fine tune their services to improve the way applications, Web sites and other devices perform.

As organizations of every size begin to realize how to improve use of their IT assets, the next phase of IT governance will be to measure the performance of those IT assets as they serve the goals of the organization. For many MSPs, offering SLM to clients has rewards far greater than merely ensuring that IT works. Because IT is becoming more critical to more consumers today, simply monitoring those IT assets and fixing them when they break is not enough. For increasing numbers of consumers, IT downtime is not an option. MSPs must be able to monitor and offer proactive maintenance of critical IT objects in order to make sure they never fail. In short, they must be able to offer SLM.

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Service Level Agreements: The Benefits for MSPs

SLAs are simply agreements between service providers and clients that outline the baseline levels of service to be delivered. The types of services that may be involved are too numerous to list here, but suffice it to say that the SLA is the mechanism by which a client indicates what levels of performance they expect from their service provider. If an SLA dictates the level of service a client is to receive, then SLM is the mechanism by which the service provider ensures that it meets its SLA targets and commitments to its clients. Whether monitoring a device, server farm, or a complete end-to-end application service, SLM is a key requirement for knowing how the various elements of an IT infrastructure are working to support the objectives of the MSP client.

Well-conceived SLAs can help MSPs:

- **Set boundaries and expectations and guard against "expectation creep."** The SLA defines a clear relationship between the MSP and the client by setting management boundaries and expectations, thus reducing the chances of clients being disappointed and keeping the MSP team focused on their client requirements.

- **Enhance the level of trust with clients**. SLAs help instill trust by adding conditions and penalties to the SLA when promises are not met.

- **Establish profitable pricing**. Because an SLA links client's requirements to infrastructure requirements, it enables MSPs to link service levels to service cost and, as a result, set profitable pricing.

- **Manage costs efficiently**. By spending wisely on well-defined requirements rather than rules of thumb or gut feeling, MSPs can achieve more efficient cost management.

- **Leverage well-defined KPIs to guide proper tool selection, process definitions and skills acquisition**. The SLA shapes the definition of key performance indicators (KPIs) at the service, application, system and network level. Defining these KPIs facilitates the proper tools selection, process definitions and skills acquisition, whether through hiring or training, for an organization.

- **Reduce monitoring overhead**. Knowing what to measure eliminates redundant data collection, which reduces the total overhead for the monitoring infrastructure. A good monitoring system collects data only once.

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SLA compliance risks and rewards

Are SLAs a worthwhile endeavor? The answer is an unequivocal "yes"—but only if the parameters defined in the SLA are achievable. The rewards for complying with SLAs can be extremely compelling (see table below) and will prompt the rapid adoption of SLAs. However, conversely, if the MSP fails to deliver full SLA compliance, there will be adverse business affects. It is also important to note that not adopting SLAs can have equally adverse business affects.

SLAs are a common part of the managed services relationship, but too often SLAs and their enforcement are left to chance. To mitigate the risk of non-compliance, as a precursor to adopting SLAs as a business practice, a fully automated and real-time SLA monitoring and reporting solution should be in place.

The table below highlights business risks and rewards for achieving SLA compliance.

"SLAs are a common part of the managed services relationship, but too often SLAs and their enforcement are left to chance."

SLA Compliance: Risks and Rewards	
Rewards for SLA compliance	**Risks for SLA non-compliance**
Increase service quality reputation	Lose money
Retain existing customers	Lose job
Gain new customers	Lose customers
Enables predictable business performance	Lose outsourcing contract
Bonus and/or wage increase opportunities	Lose contract extension
Heightened resource control	Lose key account
Overall loss avoidance	**Same risks apply for non-committal**
Many more	

SLA compliance monitoring and reporting challenges

As the table above details, non-compliance nullifies the many business benefits SLAs offer. Surprisingly, a poll of MSPs will reveal that those that have SLAs in place do not have the real-time visibility of SLA compliance to prevent violations. Current approaches to SLA monitoring and reporting are commonly manual in nature and as a result produce "after-the-fact" compliance statistics, hence precluding preemptive actions. This lack of automated data analysis, compliance calculation and automated report generation are prevalent causes for poor and inconsistent SLA compliance results.

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CA Unified Infrastructure Management for MSPs

For MSPs, CA Unified Infrastructure Management (CA UIM, formerly CA Nimsoft Monitor) delivers the capabilities required to effectively manage client service levels. CA UIM was designed from the ground up with SLM in mind.

CA UIM strikes a unique balance between ease of use, rapid client deployment and monitoring sophistication. Its lean, modular architecture, along with the flexibility to securely accommodate a variety of clients and network configurations, lends itself well to the MSP business model.

As inherent, fully integrated functionality, CA UIM includes availability, performance and SLA compliance management for client's critical business services—whether they are hosted internally, externally or a combination thereof. CA UIM offers monitoring coverage that spans the data center, encompassing virtualization, networks, servers, databases, applications and end user response. CA UIM can also monitor public and private clouds, such as Amazon Web Services, Rackspace, Google Apps, Salesforce.com, Vblock and FlexPod.

CA UIM offers MSPs breadth and depth of monitoring functionality to fully address the requirements of a range of organizations, from small businesses to large enterprises. CA UIM delivers a range of capabilities, from simple up/down testing for network devices and application servers to detailed performance trend analysis. As a result, CA UIM enables MSPs to deliver the monitoring functionality clients require to ensure maximum business availability and performance.

Proven SLM does not come without proven SLM methodologies and technologies. CA UIM delivers these essential capabilities for SLM:

▪ Deep data collection with broad technology support

▪ System-resident automation

▪ Secure data transport

▪ Scalable data consolidation

▪ Long and short term data archiving and trend analysis

▪ Data presentation in customizable alarm dashboards

▪ Comprehensive, web-based reporting

With CA UIM, all SLM capabilities are inherent functions, available through a single architecture and single code base. The result for MSPs is easy installation, deployment, configuration, administration, and most importantly, usability. With CA UIM, there is no requirement for laborious installation and ongoing administration efforts.

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Figure A.

CA UIM offers core functions that are tightly integrated to provide an unparalleled service level monitoring and reporting solution
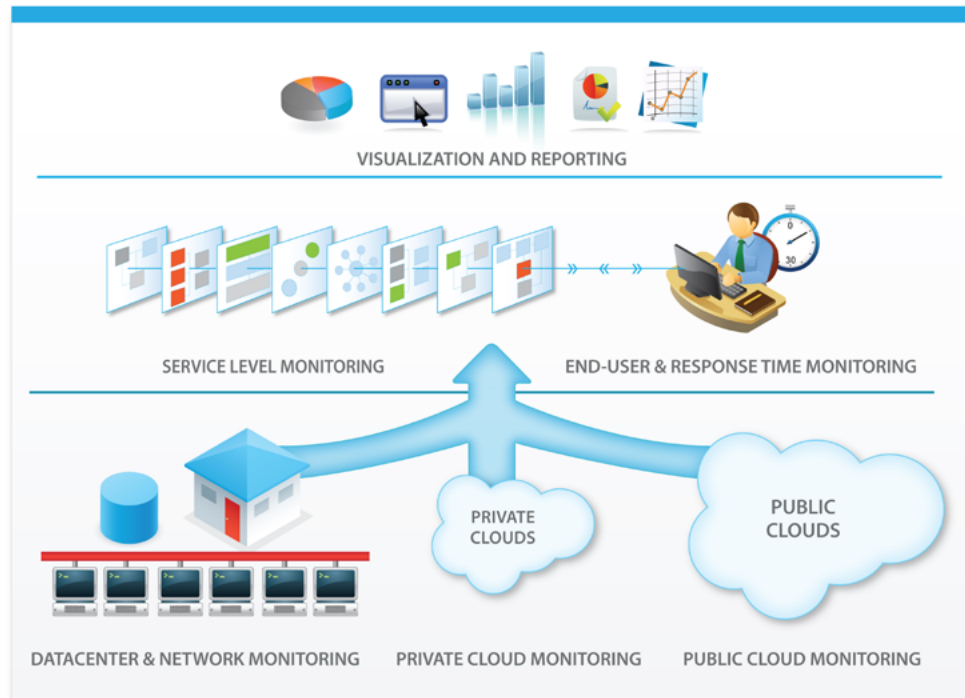
Harness Fully Integrated SLA, Alarm and Performance Monitoring Capabilities

CA UIM is an SLM platform that provides scalable, resilient and reliable monitoring capabilities for MSPs that wish to proactively manage their clients' IT infrastructures and critical business services. CA UIM is a fully integrated solution that offers these proven capabilities:

- Real-time alerting

- Historical performance reporting

- Predictive SLA compliance monitoring and reporting

SLA monitoring and reporting

SLAs are the yardstick clients use to assess their service providers. By gaining more sophistication in how they monitor, forecast and report on SLA compliance, MSPs can gain a tremendous competitive advantage.

CA UIM offers rich SLA reporting capabilities that feature trending analysis, SLA breach forecasts and intuitive pinpointing of SLA-endangering issues—enabling MSPs to more consistently comply with SLAs and minimize the financial risk of SLA breaches. Further, with its rich reporting capabilities, CA UIM helps MSPs more clearly demonstrate their value through SLA reporting.

CA UIM solves the SLA monitoring and reporting challenge with automated and real-time data analysis, compliance calculation and report generation. Verbal or written SLAs can be easily transposed into CA UIM SLA templates for automated compliance calculation, and then in real-time CA UIM generates web-based compliance reports with breach forecast indicators.

To ensure continued compliance for client's SLAs, CA UIM answers the following questions for MSPs:

▪ Am I still in SLA compliance?

▪ Am I trending towards a SLA breach?

▪ When will my client SLA breach if degrading conditions are allowed to persist?

▪ If I am trending towards a SLA breach, what do I need to fix to preempt a breach?

▪ If I did breach my client SLA, when (what time/day) did it breach?

▪ If I did breach my client SLA, what caused the breach?

▪ What is my compliance/breach history for past SLA periods?

CA UIM provides a graphical and text-based representation of IT infrastructure performance contrasted against service level commitments. They are both historical—describing compliance during prior periods—and forward looking, revealing the likelihood of achieving service level compliance during the current measurement period. SLA periods may be defined in day, week or month increments.

Alarm dashboards and client portals

The CA UIM Unified Monitoring Portal provides MSPs and their clients with tailored views that show the real-time status of IT and critical business services. CA UIM dashboards, an integral component of the Unified Monitoring Portal, are customizable to enable users to see practically any type of data—including help desk call statistics, application performance metrics, IT resource utilization and much more—in a unified view. The Unified Monitoring Portal is web-enabled for MSP and client accessibility and has access control features that help ensure CA UIM dashboards are only accessed by authorized users.

With CA UIM, it is possible to access practically any type of IT and business data. Once the data has been collected and consolidated into CA UIM, it becomes available for display in the Unified Monitoring Portal.

The CA UIM Unified Monitoring Portal does not force MSPs to operate from a standard, fixed interface. CA UIM gives MSPs the flexibility to build custom portal and dashboard views that suit personal preferences and achieve the desired management objectives. This flexibility is made possible with a Dashboard Design Toolkit. Using the toolkit is much like using Microsoft PowerPoint. The toolkit contains an assortment of alert objects, meters and graph objects, text objects (active and inactive), picture objects and much more.

Performance reporting

CA UIM provides web-based historical reporting for thousands of data metrics collected by more than 120 probes, gateways and adapters with the CA UIM suite of solutions. Performance data is automatically consolidated and archived into the CA UIM database. Once there, the CA UIM report generation wizard can be used to produce client-accessible Web reports in a matter of minutes. Short and long term performance reports are ideal for capacity planning, load balancing and preempting degrading conditions. CA UIM offers the following reporting periods: last 24 hours, last week, last month, prior weeks, prior months and prior quarters.

Leverage Comprehensive IT Infrastructure Support

For data collection and automation, CA UIM offers comprehensive infrastructure coverage. CA UIM features over 120 data collectors that provide full coverage of clients' heterogeneous IT infrastructures, both across the data center as well as for the private and public clouds. CA UIM offers capabilities for monitoring networks, databases, virtual and physical servers, on-premise and cloud-based applications, data center power, unified communications, Web and much more. CA UIM offers open APIs, a flexible architecture and out-of-the-box third-party integrations and gateways—making it easy for MSPs to adapt the solution to their other management tools, monitoring processes and operational preferences.

Through its comprehensive infrastructure support and capabilities, CA UIM enables MSPs to expand their services portfolio—and increase revenue. CA UIM offers extensive monitoring coverage of the systems, services and infrastructures below.

Network monitoring

With CA UIM, MSPs gain the insights they need to ensure optimal availability and performance of their clients' networks. CA UIM can monitor all key facets of the network, including routers and switches, network traffic, SNMP, DNS, DHCP, LDAP, and Cisco NBAR and IPSLA.

The solution automatically discovers network interfaces, verifies connectivity, monitors interface traffic, collects and diagnoses accessibility and calculates bandwidth utilization. CA UIM displays this comprehensive data in intuitive, graphical alarm consoles, performance reports and SLA reports.

Server monitoring

With CA UIM, MSPs gain the broadest and deepest server monitoring solution on the market. CA UIM can monitor all servers—including VMware ESX, Sun Solaris, IBM AIX, IBM iSeries, HP HP/UX, Red Hat, SUSE Linux, Novell Netware, Microsoft Windows and more.

Through a single, easy-to-use console, MSPs can centrally monitor all their core server resources—and do remote management of all clients' processes and services. MSPs can also leverage real-time alarm dashboards, performance trend reports and SLA compliance reports—and so provide clients with higher service levels and more sophisticated insights into service levels.

Database monitoring

With CA UIM, MSPs can harness a comprehensive monitoring picture of all their clients' databases, including Oracle, Sybase, DB2, Microsoft SQL Server and IBM Informix. Additionally, to provide visibility of service quality as experienced by end users and associated applications, the solution monitors remote SQL query response times and transaction rates.

MSPs can rely on CA UIM to get the real-time alerts they need to both preempt and respond to potential issues, to leverage intuitive reports and dashboards to analyze performance metrics, and do sophisticated forecasting of database performance and usage.

Application monitoring

With CA UIM, MSPs can get a complete, multi-layered view of their clients' applications, and more effectively manage application performance. CA UIM offers monitoring capabilities for all the major applications in use today, including Exchange, Active Directory, VoIP, Apache, Tomcat, JBoss, WebSphere, WebLogic, Citrix and many others—as well as .NET, J2EE and custom applications.

In addition to providing a complete picture of the host server's performance metrics, CA UIM provides metrics on the actual performance end users experience. Armed with these insights, MSPs can more quickly identify and troubleshoot issues—before they impact end user performance.

End user response time monitoring

CA UIM helps MSPs ensure they understand the most critical aspect of their clients' IT infrastructure performance: what kind of responsiveness and reliability end users are actually experiencing.

CA UIM offers two approaches to monitoring and measuring end user experience:

- **Active monitoring**. With the solution's active monitoring capabilities, administrators can routinely and consistently generate synthetic transactions that mirror actual end-user behavior, and measure that experience from any number of locations.

- **Passive monitoring**. CA UIM offers passive monitoring solutions that can measure the performance that real end users are actually experiencing at any given point in time.

MSPs can leverage these two approaches, both individually and in tandem, to ensure they get the end user response time monitoring insights they need for their clients' specific business and operational objectives. With these solutions, MSPs can better ensure that clients' end users are receiving optimal performance— and always be the first to know if an issue arises.

Cisco VoIP monitoring

VoIP (Voice over IP) is increasingly relied upon to deliver vital communications services for organizations around the world—and as such represents a huge market opportunity for MSPs.

With CA UIM, MSPs can monitor and manage every service and system within their clients' Cisco VoIP ecosystem, including networks, call activity and messaging. By offering a comprehensive, centralized view into all vital areas that comprise the VoIP infrastructure, CA UIM enables MSPs to better optimize resource utilization, improve reliability and better ensure SLA compliance.

Virtualization monitoring

While virtualization capabilities ushered in a world of potential benefits, they also brought an entirely new world of challenges from a monitoring perspective—challenges that legacy management tools and platform-centric solutions are ill-equipped to address.

With CA UIM, MSPs can easily and profitably add virtualization monitoring capabilities to their portfolio of services. CA UIM enables MSPs to monitor the entire virtualized ecosystem—including the virtualization components, the resident business applications and end user response times—so they can effectively understand and manage service levels in virtualized environments.

Cloud monitoring

CA UIM enables service providers and enterprises to fully leverage the opportunities presented by public cloud computing approaches. Only CA UIM offers the ease of use, zero-touch setup, robust infrastructure coverage and sophisticated end-user response monitoring capabilities required by private and public cloud computing environments, including IaaS, PaaS and SaaS.

Power monitoring

CA UIM for power monitoring will garner data from the MSP's and the client's electrical units and uninterruptible power supplies, and produce "green grid" metrics. CA UIM describes data center power efficiency using power usage effectiveness (PUE) and data center efficiency (DCE) metrics. This enables MSPs to quickly estimate the energy efficiency of data centers, compare the results against other data centers and determine if any energy efficiency improvements can be made. Currently, the CA UIM power monitoring solution supports APC, and over time will include support for other manufacturers.

Assessing Existing Monitoring Platforms

Many MSPs are displacing their existing legacy solutions in favor of more cost effective modern-day solutions such as CA UIM. With competitive cost pressures, today's MSPs are looking for every opportunity to reduce their costs and their client's cost—without compromising service quality and their managed services portfolio.

CA UIM presents the MSP with unprecedented opportunities. CA UIM offers management functionality equal to, and in most cases, exceeding that offered by the large legacy vendors, and it does so without placing margin-deteriorating administrative, operations and infrastructure overhead on the MSP.

Review the questions below. If your answer is "yes" to any, it may be an indication that it's time to move to a more cost-effective, revenue-enhancing solution like CA UIM.

- **Limited monitoring?** Does your existing solution lack the monitoring sophistication mid- and large-sized businesses require?

- **Complex configuration?** Does your existing solution demand excessive cost and human resources?

- **Slow customer rollout?** Does your existing solution inhibit rapid customer rollout?

- **Slow server and network device deployment?** Does your existing solution inhibit rapid server and network device installation and configuration?

- **Limited multi-site management?** Does your existing solution limit the number of clients and client locations that can be centrally managed?

- **Limited technology support?** Does your existing solution offer limited technology support (i.e. Windows and Linux only)?

- **Complex pricing models?** Does your solution require you and your client to determine the number of CPUs per managed server?

- **Difficult entry, extensibility?** Does your existing solution prohibit new clients from "test driving" your service due to complexities?

- **Limited SLM focus?** Does your existing solution have limited SLM capabilities?

- **Limited real-time and historical reporting?** Does your existing solution have limited, inflexible business dashboards and poor status reporting?

- **Limited scalability and reliability?** Does your existing solution fail to scale to manage hundreds or thousands of servers and network devices?

About CA Technologies for Service Providers

In the application economy, successful service providers will have one thing in common: speed. Delivering services that help customers innovate their applications faster—and getting those services to market quickly—now represent critical competitive mandates. Today, service providers around the world are turning to CA Technologies because we help them get faster. CA equips service providers with a scalable service delivery platform that fuels operational optimization, complete solutions that power services at every stage of the application lifecycle and extensive enablement services that can accelerate all phases of your business' execution.

About This Document: Developed by the CA Service Provider Center of Excellence

This document has been written by the CA Service Provider Center of Excellence team and is intended to provide our service provider partners with the guidance they need to address some of their most pressing challenges. Our team has rich expertise in service provider businesses, strategic consulting, technical deployments, sales and marketing. Our documents are informed by the Center of Excellence team's extensive experience over the past ten years in helping build successful service provider businesses and by interviews with some of our most successful service provider partners. This document is provided for informational purposes only and on an as-is basis. The guidance and results described herein are based on the unique experiences of our staff and partners, and may not be applicable to all organizations.

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