White Paper

The Impact of Cisco ServiceGrid in a Hyperdistributed World

Managing multisupplier relationships with service integration and management.

Summary

Effective service integration is becoming more pivotal as organizations are outsourcing to an increasing number of service providers. There are many factors involved in successful multisourcing and establishing a service integration and management (SIAM) function. The tooling solution that enables ITIL processes is one success factor that is increasingly in the spotlight, as is the connecting of multiple toolsets belonging to the client and their many providers. This paper reviews the challenges and provides insights into how they can be addressed using an integration platform. Cisco® ServiceGrid® is an integration platform designed specifically for managing service cases across multiple suppliers, and their various environments, while consistently tracking performance levels. It bonds together multiple IT service management (ITSM) tools, and therefore complements the capabilities of existing ITSM toolsets.

Multisourcing is the New Normal

The rise of multisourced IT delivery models is well documented, and multi-sourcing is now accepted as the predominant trend.[1] ISG recently reported a 150 percent rise in the number of outsourcing contracts concluded in the United Kingdom (U.K.) during the second quarter of 2015, compared with the same quarter in 2014. And Pinsent Masons states that ISG's findings are in accordance with the sourcing trends they have seen in the U.K. and overseas.[2] These trends show no signs of abating, with cloud adoption on the rise.

To fulfil their various needs, IT organizations want to build ecosystems of suppliers through the selection of best-of-breed partners. These organizations want to reduce their risk by removing dependence on just one or two

[1]Number of New IT Outsourcing Deals Hits All-Time High, CIO.com, October 31, 2014
[2]UK Businesses continuing trend of multi-sourcing, market researchers say, Out-Law.com, August 3, 2015

suppliers. They want to adopt new cloud services while maintaining their legacy estate, and they want to increase the competitive tensions among providers to make sure they are getting the best value. They may want direct relationships with critical third-party suppliers in their ecosystems, allowing them greater visibility into, and control of, their supply chain. Lastly, they want shorter-term contracts, which results in lower total contract values and a greater number of contracts and supplier transitions.

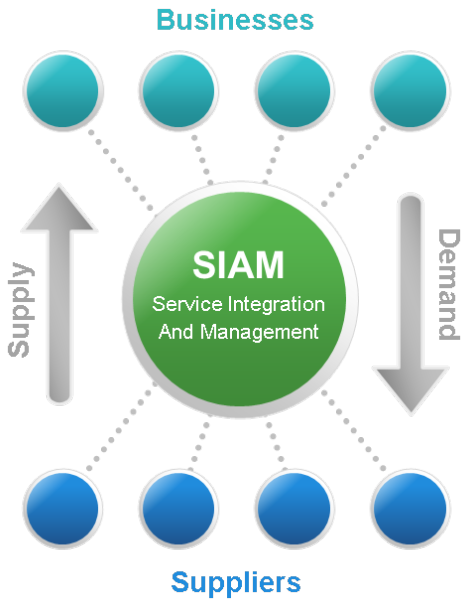
Introducing Service Integration and Management

Historically, outsourced contracts were placed with a prime contractor for the complete suite of IT services required by an organization. The prime contractor usually delivered some services themselves, supplemented by third parties for other services. Contracting for end-to-end services, and embedding the associated service levels into the contracts, meant that the prime contractor was incentivized to make sure that all parties under their management worked collectively to deliver a seamless service. The construct of the prime contract is such that it covers complete services and therefore the prime contractor is implicitly responsible for integrating the service delivery of all parties.

In multisourcing, these end-to-end services are divided into component services and sourced through individual contracts with multiple, separate providers. This style of contracting removes the incentive for an external supplier to ensure collaboration of the suppliers and integration of the services. Multisourcing as a strategy makes good sense to promote value for money, encourage competition, selection of the best providers of the component services, and flexibility in responding to business needs. However, mutisourcing presents many challenges. These challenges all relate to the integration of the services that have been disaggregated and sourced from separate providers. Difficulties range from separate processes and data, to contractual issues and getting providers to behave in a collaborative manner.

Service integration and management (SIAM) (Figure 1) emerged more than a decade ago to address the integration challenges introduced by multisourcing. SIAM can be compared to the integration activities originally performed by prime contractors. The key difference is that SIAM is a set of integration and management services, and is delivered separately from the organizations delivering services. There are various sourcing options for SIAM, which can be insourced or outsourced, or a hybrid solution.

Figure 1. SIAM: Integrating Supply and Demand



SIAM is an organizational function; a discrete team of resources. These SIAM resources are responsible for enacting and coordinating ITIL processes across multiple service providers (which can be a combination of both outsourced and in-house). Through SIAM, the end users perceive IT as being delivered by a single, integrated organization. The SIAM function does not remove the responsibility for delivering service from the service providers; it establishes and operates the integrated service management processes. To enable and automate these processes, the SIAM provides an effective workflow tool that enables all parties to securely share information in near real-time to effectively manage business outcomes. The scope of the service management processes and tooling is generally based on ITIL, with the occasional addition or omission from the standard offering.

Although SIAM is based on ITIL, a good SIAM is much more than the sum of the ITIL processes. A good SIAM function understands and enables the interrelationships between processes. It facilitates the interactions between the business relationship manager and the client business by providing relevant information from the demand, service level, and other service management processes. It enables effective supplier management through the provision of supplier performance reports across all processes including testing and change and configuration management. It also provides meaningful reports and helps to run an effective governance practice across the IT services. This provides for effective day-to-day delivery of services, commercial management of the suppliers, and relationship management with the business.

Awareness of SIAM has increased dramatically in the last few years. Many organizations have released publications on the subject, including IT advisory firms such as Gartner, Forrester, and KPMG, as well as service providers such as HP, Atos, and CapGemini. Endorsement of SIAM by Axelos, the U.K. government's joint venture with Capita (which owns ITIL), has also given the concept greater credibility.

Success Factors for Multisourcing

Multisourcing is not as straightforward as it might appear. There are challenges, even for organizations that have spent time developing their future operating model and included a SIAM function. The following success factors underpin successful multisourcing and SIAM:

- **Effective client organization:** In any sourcing arrangement, the client IT department is accountable for the IT services delivered to their business. Therefore, client IT departments should always retain responsibility for:
  - Business relationship management with their customers/ client businesses
  - Enterprise architecture, to ensure that the business strategy is realized through the IT roadmap
  - Security standards and policies
  - Financial Management for budget forecasting, cost control, and setting invoice standards

  When multisourcing, the client has multiple direct contracts with many suppliers, so a strong commercial management function is also required. All of these functions must be effective in order for SIAM to perform well. For example, SIAM cannot ensure that security standards are adhered to effectively if they are vague.
- **Clear boundaries of responsibility:** These are captured in the service descriptions of contracts and charters for organizational units. The boundaries of responsibility for each party must be firm and clear. At the root of this is the definition of sensible bundles for sourcing, sometimes referred to as service towers. Where ownership is not clear, the service management processes begin to falter and incident resolution slows to a halt. Service and incident managers must search for the responsible party, the CMDB is not updated, and so on.
- **Contracts that support integration:** SIAM is more effectively embedded into an organization if the supplier contracts reflect the requirement to engage with the SIAM. In-house SIAM teams can sometimes work around this because suppliers are more supportive of client teams. Where SIAM is outsourced, misaligned contracts can hinder operations. Suppliers may refuse to engage with the SIAM supplier since it is not in the contract.
- **Culture of collaboration:** Ensuring that contracts support integration can help enable collaboration, but often the key to effective collaboration is about culture. And culture is shaped by the way client teams behave. If they behave in an open, collaborative manner, suppliers are likely to do the same If the client team distrusts its suppliers and its SIAM, treating suppliers more like an opponent than a partner, the client is unlikely to achieve the integrated, collaborative multi-sourced ecosystem to which they aspire.
- **Integrated service management processes:** It is essential to have a common set of service management processes into which all providers and receivers of service are integrated. This includes a single service desk and other service management teams, together covering the full ITIL lifecycle, coordinating across multiple parties. These processes should not mandate how a supplier performs their incident, capacity, and other ITIL processes, but should describe the transitions between suppliers and the SIAM function.
- **Integrated tooling:** Process automation can be realized by embedding the processes into tooling solutions, and by integrating those tools with one another. This automation makes sure that processes are consistent; efficiencies are increased in terms of both time and cost. Without this automation it is not possible to achieve the provision of real-time information.
- **Meaningful reporting:** This means getting the right data, with the right level of analysis, (including data correlation) to the right people at the right time.
- **Integrated governance:** While individual suppliers require one-to-one management, there also must be governance forums that span all suppliers for estate-wide visibility and to encourage collaboration.

Figure 2 includes success factors for effectively operating in a multisourced environment. They could be supplemented with additional success factors for the transition from the current to a future operating model, such as a clear vision, good communication, and integrated planning.

Figure 2. Success Factors for Multisourcing

Why Integrated Tooling is Key for Multisourcing

Recently, the ITSM tooling solution has taken a central role in the success of managing multisupplier relationships. In the past, the CIO did not worry about service management tooling; it was one of many steps involved in delivering IT services, which were the supplier's responsibility. Multisourcing changes that. Today the CIO needs to be aware of the tooling solution because it underpins the organization's ability to achieve its goals of flexibility of supply, responsiveness to the business needs, and sourcing from multiple best-of-breed suppliers—all while delivering a seamless service to customers.

The ITSM toolset is one of the most contentious aspects of managing multiple suppliers for the early adopters of SIAM, and for those organizations trying to break away from their legacy prime contractor arrangements. The ITSM toolset is the cause of "supplier lock-in," where a client organization feels unable to sever ties with a supplier because all of the intelligence required to manage and govern the suppliers and services is embedded into their proprietary toolset. Because of this, the trend is for internal teams to perform most SIAM activities and for the IT department to own the toolset. This trend is raising the profile of the ITSM toolset.

An effective ITSM toolset underpins effective ITIL processes. By embedding the ITIL process workflows into a tool, the processes become consistent, transparent, traceable, and sharable. The data captured enables service reporting, knowledge management, risk assessments, and prioritization of service improvements.

When multi-sourcing, the client organization benefits from capturing all service data and ITIL processes in a single repository. There are two common solutions to achieve this:

- **Single toolset**: A single toolset is mandated across all suppliers. However, this toolset is unlikely to perform the way in which the suppliers want to manage all their services and resources internally. For example they

may need to escalate an issue for resolution by central teams who will not use the client's tool. The supplier is effectively forced to manage their work via two tools; their own and the client's. This creates a "swivel chair" solution whereby the supplier has resources performing data entry in both systems to keep them in sync. Due to the manual nature of this synchronization, it cannot be real-time and is subject to human error. In addition, this increases the cost of service because the supplier has to invest in client-specific training for these resources, dedicates these resources to that account, and the client often has increased licensing costs.

- **Tooling integration:** Getting the supplier and client's ITSM/ITIL toolsets to communicate is a better solution. For example, Charter Communications, one of the world's largest and most successful broadband communications companies, saw a 20-25 percent reduction in mean time to incident resolution as a result of their tooling integration.[3] To enable integration, many SIAM and ITSM toolset providers have created potential integration solutions including Enterprise Service Bus (ESB), Application Programming Interface (API), web service interfaces (SOAP/HTTP/XML connectivity through the Internet), batch file transfer (FTP/SFTP) and email-to-email (structured email exchange). All of these methods have been successful in integrating two ITSM toolsets, some in real-time. However, building and maintaining these connections present other challenges.

Using one of the aforementioned solutions means that each tooling connection needs to understand how to translate between the two specific tools being integrated. Creating each connection starts with the mapping of the supplier's processes to the client's processes. For example, one process may have five levels of incident prioritization, while the other has three levels. The connection must contain the knowledge of how to translate between these two categorizations. This mapping exercise is somewhat repetitive for the client team, and places considerable effort on a few resources. This limits the number of supplier connections that can be created at any one time. Because each process and tool is unique, every connection created is also unique. For a client creating connections with numerous suppliers there is very little reuse and each end solution lacks standardization. It takes considerable time and effort to create these connections. This results in the client managing a selection of custom connections, which are complex in nature and require skilled individuals to maintain.

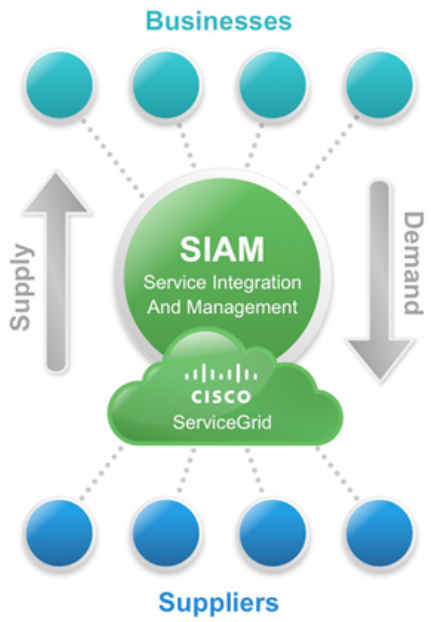
The scenario described in the above paragraph was all too familiar to a large British multinational bank. They had successfully built eight connections between their modern, cloud-based ITSM toolset and eight of their service provider's toolsets. Additionally, they expanded their internal team of technical support personnel to maintain these connections. When it came time to build their ninth connection with another supplier, the bank decided they could no longer support these connections to their suppliers. They began exploring other options, considering the manual "swivel chair" process as their best option. That is, until they discovered Cisco ServiceGrid™.

The Impact of Cisco ServiceGrid in a SIAM World

Cisco ServiceGrid is an integration platform in the cloud that offers enterprises and service providers a flexible way to integrate with everyone in their ecosystem. (See Figure 3.) It automates the sharing of processes, data, and workflows to eliminate manual practices and bottlenecks. It allows clients and suppliers to continue using their own processes and tools, providing the bond and translation between them for seamless process operation across all parties. It facilitates real-time, multisourced collaboration, resulting in significant operational efficiencies and greater economies of scale.[4]

[3]Want to Improve Business Outcomes in Outsourcing Deals?, The Outsourcing Institute at Outsourcing.com, May 1, 2015
[4]Cisco Has Acquired SolveDirect, Cisco.com, March 25, 2013

Figure 3. Cisco ServiceGrid and SIAM



ServiceGrid is a unique solution, created with the sole purpose of enabling the integration of ITSM systems. ServiceGrid is often mistaken for being in competition with ITSM toolsets, but it is actually complementary. It is the platform that allows multiple tools to talk to one another. ITSM toolsets are built primarily to be effective workflow engines and data repositories. Although some have an answer to the integration challenge, none were built with this at the core of what they do. ServiceGrid fulfils some client's ITIL process tooling needs; however, it was not created for this purpose.

ServiceGrid acts as a translation engine. It contains all of the intelligence required to perform the translation between toolsets in a single repository with a common structure. The connections into ServiceGrid are standardized, which makes support less complex, lowers risk, and requires fewer resources. With ServiceGrid, you connect an individual system once, which means you are able to connect to everyone in your ecosystem easily. ServiceGrid has established connections with the vast majority of ITSM toolsets on the market, along with other tools such as event monitoring systems and configuration management databases (CMDB).

ServiceGrid allows client organizations to achieve their multisourcing goals in a cost effective manner, not only with the initial investment of establishing connections, but also with ongoing maintenance costs.. For Service Providers, ServiceGrid can manage third parties in a similar model to that described for client organizations. It can reduce the time it takes to bring new clients into their support ecosystem. Kapsch, an international road telematics, information technology, and telecommunications company illustrates the differentiator that ServiceGrid presents by reporting that the integration of a local partner into their support model is completed in four weeks, while other systems take at least four months.[5] Kapsch has a distributed estate of fully automated road monitoring and toll equipment in over 40 countries. The support and management of their equipment is performed through a number of local parties

[5]Kapsch-ServiceGrid Case Study, Cisco.com, 2013

coordinated and integrated through ServiceGrid. Likewise, Cisco uses ServiceGrid in the Cisco Technical Assistance Center (TAC), its service support organization for clients. ServiceGrid clients consistently report improved resolution times and increased customer satisfaction. Dimension Data achieved a 27 percent reduction in mean time to resolve incidents and a 10 percent increase in customer satisfaction. [6]

Modern ITSM tooling solutions promise to deliver everything a SIAM organization might need. However, the experience of the British multinational bank described earlier brings this into question. These ITSM tooling solutions are expanding the breadth of ITIL and other processes they offer, and as a standalone ITSM toolset, they outperform ServiceGrid. But when it comes to integrating providers they appear to fall short of client's expectations. It is for this very reason that service providers like CapGemini and Dimension Data have included ServiceGrid within their standard support model. These companies cannot afford to have a saturation point on the number of clients they integrate into their support model. The ITSM toolsets offer the service management (ITIL process) part of SIAM, while ServiceGrid addresses the integration of the individual processes.

ServiceGrid differentiates itself through the transfer of data and mapping of workflows between multiple toolsets, but it does not replicate all the data found in the other tools. When a ticket is logged through one of the integrated systems, ServiceGrid automatically creates a shadow ticket within Service Grid in a fraction of a second. This shadow ticket contains the agreed upon minimum dataset required to transfer tickets between multiple parties. This includes metadata about the ticket, such as the time the ticket was logged, and every time an update is made to the ticket, whether that is an update in a field, or a change of status of a transfer between parties. This shadow ticket contains all the metadata relating to the customer ticket. In this way, ServiceGrid provides the single source of truth. It is the perfect repository in which to perform reporting and analytics. Gone are the days of bringing the ITSM toolset to its knees with complex reporting queries or needing to run reports overnight in order to avoid doing so. The power of this information, available in real-time, is transformative for businesses.

SIAM and ServiceGrid

If SIAM is defined as "an approach to managing multiple suppliers … and integrating them to provide a single business-facing IT organization," [7] it is clear how ServiceGrid has a role to play. Although ServiceGrid is not the answer to SIAM's entire tooling needs, it can play an essential role in the integrated tooling solution. Integrated tooling is the most obvious success factor that ServiceGrid supports, but it also supports a number of other success factors. In Figure 4, number 4–8 success factors are supported by ServiceGrid.

[6] Dimension Data Accelerates Customer Service and Satisfaction with Cisco ServiceGrid, youtube.com/user/CiscoServiceGrid, April 24, 2015
[7] Service Integration and Management, Wikipedia, September 20, 2015

Figure 4. Cisco ServiceGrid Supports Successful Multisourcing

The need for integrated service management processes seems like common sense. How else can you make sure that changes are assessed for impact across multiple parties; and that incidents are resolved by collaborating suppliers, and create a single complete release calendar spanning all services? Organizations want to reach the pinnacle of integrated service management processes throughout the ITIL lifecycle. This allows them to keep their business running, manage change effectively, achieve the target service quality, and offer value for money. This is achievable, but many clients face issues along the way. It is challenging for an IT organization to engage their businesses in discussions about value for money and demand reduction opportunities while they are struggling to deliver stable services. ServiceGrid can be part of an organization's strategy for establishing integrated processes, with a focus on the high volume processes of incident, change, and request management. With these effectively embedded, the IT organization is more likely to engage their customers and businesses in strategic discussions.

ServiceGrid can be part of the answer to achieving integrated processes. Since ServiceGrid holds data for all tickets in a common language, it can support the creation of meaningful reporting and integrated governance. As mentioned earlier, ServiceGrid is an ideal repository for performing analytics and creating meaningful reports from a multitude of data sources. Without tooling integration, customers can struggle with supplier governance as they spend their supplier performance review meetings debating whose data is accurate. ServiceGrid provides a single source of truth for reporting, allowing any inconsistencies in data or opinion to be worked out. With ServiceGrid, all parties can view and access all the data and proactively pinpoint errors for correction. By mapping all providers' processes and activities into a common tool and terminology, ServiceGrid enables the direct comparison or benchmarking of providers' performance. Having information on service delivery activities available in real-time allows organizations to proactively manage their services and is transformative in delivering value to the customers of service.

ServiceGrid also plays a role in that most elusive of success factors: creating a culture of collaboration. Using ServiceGrid, all parties have access to the same data in real-time. ServiceGrid provides service level agreement (SLA) reporting against both the performance of individual suppliers and the end-to-end service as provided to the customer. This consistency and ability to see the entire perspective can drive better, more informed collaboration. For example, a supplier may place more effort on a ticket that is about to breach its end-to-end SLA, even if the supplier's own SLA for the ticket has time remaining. Suppliers can also gain awareness of current events outside their purview. For example, they can see when a severity 1 incident is raised for the datacenter network link, which could explain issues they have relating to performing maintenance activities on an application hosted in that datacenter.

Implementing a new SIAM is often within the context of wider sourcing changes. Embedding SIAM early makes good sense because the SIAM function and their processes can be applied to managing the supplier and service transitions across the service providers. The BBC articulated this approach when they said of their move to disaggregate their existing Atos contract, "The most responsible way to handle this complex organizational change and associated procurements is to establish the in-house SIAM team first before we transition to new services." [8]

This same rationale applies to the implementation of ServiceGrid. For some organizations, establishing their own ITSM toolset and integrating it with their legacy providers may be the first step towards transitioning away from those providers, especially where the current model is with a prime contractor. They are then able to onboard new providers into the integrated operational service management processes and seamlessly and effectively transition services. This approach mitigates the risk associated with service transition. Since ServiceGrid has lower implementation timescales and costs, and a software as a service pricing model, this becomes a commercially viable approach.

ServiceGrid Beyond SIAM

ServiceGrid capabilities and potential use go beyond the needs and capabilities of current SIAMs in a couple of ways. The focus of a SIAM is in integrating the providers that have a direct relationship with the client. The model generally assumes that the management of any third party subcontractors is the role of the supplier with whom the client has a direct contractual relationship. For some organizations this is not enough; due to wanting visibility or control over the complete end-to-end supply chain, or perhaps due to regulatory issues and a need to see into the supply chain. ServiceGrid is deployed to achieve just this. ServiceGrid can allow third party providers to be integrated into the single tooling architecture, giving the client organization the visibility they require.

The other area where ServiceGrid capabilities today outperform most SIAMs is in the integration of technology beyond IT — sometimes referred to as operational technology (OT). Kapsch, the ServiceGrid client previously mentioned, provides an example of an organization using ServiceGrid as part of their support model across both their IT and OT components of service [9]. The domestic food retailer, Spar Austria, also uses ServiceGrid at the center of their support model for IT and OT. ServiceGrid interfaces between the Spar service desk and the service providers for IT services alongside those supporting in-store devices, such as their point of sale cash registers, credit card readers, printers, and electronic scales.[10] Spar uses ServiceGrid to manage their centralized device inventory, which enables them to monitor approximately 40,000 devices in real-time, allowing them to proactively manage device repairs and replacements. This automation leads to impressive efficiency improvements; Spar

[8] SBBC: Hey, Atos, old buddy. Here's a cheque for £285m, fill your boots, theregister.co.uk, February 18, 2014
[9] Kapsch-ServiceGrid Case Study, Cisco.com, 2013
[10] Spar-ServiceGrid Case Study, Cisco.com, 2013

store managers save two-and-a-half hours per day as a result of no longer having to manually intervene in the support and incident resolution processes.

The Future for SIAM

Integrated service management, or effective SIAM, will be the lynchpin in the success of future service delivery models. There are two main trends to which the SIAMs of the near future need to respond: the increasing disaggregation of services, and the increasing need to integrate IT with OT and other services.

The first of these trends has been written about by Gartner, Forrester, and others, and will most likely continue. At the February 2015 International Association of Outsourcing Professionals summit, a joint study with ISG was presented, which states that, "Multisourcing as an outsourcing approach increased by 75 percent from last year's percentage." [11] It also indicated continued growth ahead: "51 percent of respondents in the survey said they expect to pursue more outsourcing opportunities during the year." [12] SIAM must support the future sourcing needs of organizations by enabling operational service management of high numbers of providers and having effective supplier transition processes, with short implementation timescales, to support the continuous on- and off-boarding of suppliers.

The SIAM processes and practices in the future will be applied to an increasing number of technologies, including ATMs, cash registers, manufacturing equipment, and monitoring systems, whether they are monitoring traffic, weather, or oil production. As organizations increasingly depend on the Internet of Things to do business, there will be a growing need for seamless support processes across all facets of technology. SIAM processes will extend into services beyond technology, like facilities, finance, and human resources so that support services are seamless. For example, a new user request will encompass IT requirements, physical access, payroll, tax registration, and more.

The Future for ServiceGrid

ServiceGrid is not an ITSM toolset, nor does it aspire to be one. The future for ServiceGrid is as an integration solution, its key function since its conception. ServiceGrid is strategically aligned to address today's multi-sourcing trends, and has focused its product development on expanding its service integration capabilities. As organizations' multi-sourced ecosystems grow in size, complexity, and supplier churn, ServiceGrid will continue to be a strategic asset for the SIAM-based organization.

In the future, ServiceGrid will integrate a broader array of systems, bringing together greater numbers of data sources and data types and thereby playing an even bigger role in data and analytics. As described earlier, the fact that ServiceGrid stores the metadata for all service integration tickets means it lends itself to analytics far more than the individual ITSM toolsets. Organizations will be able to see how IT performance directly impacts business performance. This will be possible not just through theoretical correlations, but also through holistic analysis of integrated data sources.

The next generation capabilities offered by ServiceGrid will also enable organizations to achieve their digital transformation strategy by working with their ServiceGrid connected partners to create new innovative and unique software and services designed to meet the needs of the hyperconnected world of the Internet of Things.

[11] Annual State of the Industry, IAOP, July 23, 2015
[12] Outsourcing 2015: Changing in a Good Way, ISG, February 2015

Conclusion

SIAM is still a fairly new concept and not easy to implement correctly. It has become an important topic in the U.K., with interest spreading globally and a range of organizations publishing papers on the subject. Axelos, who now own ITIL, recently published two papers on SIAM. One of the papers included, “Toolset integration between suppliers and SIAM toolsets” as a component of an effective SIAM model.[13] Meanwhile, Cisco has invested in a tool that specifically addresses the need to integrate service management toolsets, a tool which some of their clients have been using for over 10 years, one which is being actively adopted by service providers to support their integration needs, and one which is set to change the way we think about the tooling integration needs for SIAM.

For More Information

Read more about Cisco ServiceGrid, or contact us at servicegrid-info@external.cisco.com.

About the Author

Hannah Patterson, BSc, is a leading expert in multisourcing and service integration. She has built a breadth of SIAM-related experience since she worked on the first U.K. SIAM implementation 10 years ago. Hannah has experience in the assessment of existing services and practices, the design of operating models, sourcing models, and organizational structures. This includes the implementation of improvement activities such as process change and sourcing restructures. Based on this experience, she has published thought leadership on multisourcing and service integration and has conducted educational workshops on these subjects.

[13]An Introduction to Service Integration and Management and ITIL, Axelos, January 2015

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