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The Essentials Series:
Infrastructure Management

Delivering Infrastructure Management

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by Chad Marshall

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Delivering Infrastructure Management

Infrastructure management is kind of like trying to balance a brick on a needle. If you're not careful, you'll drop the brick, smash your hand, and likely bend the needle in the process. It should be no surprise then that business' response to managing the infrastructure has been to use more needles to support the weight of the infrastructure. I'm talking, of course, about silos—the vertical alignments of technology groups.

Today, silos exist to support everything from application management to storage infrastructure management, and while their goal has been to align competent teams of like skill sets into a manageable organization, a silo approach brings with it many challenges. The first is the byproduct of team alignment. If I am a member of the storage team, I am therefore not a member of the server team, and an “us” versus “them” mentality is quick to develop and difficult to counter—especially when your storage team member “knows” that “those server guys” think they own the infrastructure and the server guys “know” that “those storage guys” are quick to blame others when problems arise. Herein lies a human problem interjected into a production environment; this problem has threatened corporations (and individuals) for centuries: the “ego” (and nowhere can egos flare more readily than in a group of competitively aligned subject matter experts—SMEs—whose brilliance make them as valuable to operations as they are susceptible to a slight degree of arrogance).

So how do you counter this and ensure that your infrastructure can be managed effectively? The solution is simple and elegant. Build a culture of teamwork within the organization that focuses the competitive impulse on a *constructive* outlet. The key word here is constructive, and to get a constructive outlet requires management to focus energy on gaining and keeping that constructive outlet. In infrastructure management, the constructive outlet is to focus on the common needs of the business. Once all teams are squarely focused on the needs of the business and can see how their contributions correlate to a business output, the real “competition” can be seen and a more organizational teamwork structure will begin to take place. With it comes all those things that depend upon team work, such as innovation and collaboration, both of which are byproducts of a highly functioning team.

As we examine the Unified Service Model (USM), you'll see how getting all your teams the information they need to do their job and making the same information available in a format that is understandable to business partners provides value for all involved.

 USM and CMDB are not the only ways to deliver sound infrastructure management. ITIL/ITSM and COBIT, when combined with a solid enterprise governance framework that focuses on IT Service Delivery, are common mainstays in this arena. The real benefit of USM from this perspective is that it generates a view that can be leveraged by all facets of infrastructure management. From the network engineer perspective and service delivery manager perspective through the end business partner and enterprise compliance officer, USM and CMDB come together to develop the only truly holistic picture available today.

USM Deep Dive

As we discussed in the first article in this series, USM provides a view into all the technology, assets, people, projects, and processes supporting any given service. Implementing USM within an organization requires an understanding of several crucial factors, including the “players” that are involved within the organization and the “goals” of implementing USM. In addition, an organization must consider which components need to be factored in and must determine the planned end-state relationship between each group and between each group and the line of business (LOB), so let’s begin.

The Goals

The primary goal of USM is to unify and simplify infrastructure management and generally make the process of infrastructure management easier. This goal includes making the presentation of infrastructure assets easier to understand from different points of view. For example, showing “performance” as it relates to a particular LOB application may be one view used to make business decisions, while showing “performance” as it relates to an infrastructure asset, such as a server or network device, will be useful for IT management. The end result is a model that allows for the presentation of infrastructure metrics in a way that enables management to prioritize and respond to the criteria that matters to them most.

USM also serves to foster the automation of the service life cycle. That is to say, through a common vision, USM can enable infrastructure and business managers to work together to automate IT processes based upon actual business needs. Once services are aligned to IT assets, infrastructure management based upon business needs becomes second nature as business managers, IT managers, information security, risk managers, and project managers all gain access to a wealth of infrastructure information in a way that will provide them with the most clarity for their position.

Consider, for example, the common concern of regulatory compliance. Your business partners need to know that their data is within industry compliance. Risk managers may have one view that allows them to see the systems in their business unit that need to be compliant to a particular control and their status in meeting that control. Information security may need to pull up a list of systems to view these controls at a more granular level, and your storage manager, who is less focused on the applications using the data, may need to see a view of all his or her storage devices that contain data flagged as a regulatory concern. In today’s infrastructure, these views, if they exist, are decentralized and the idea of working together—across business, risk, information security, and infrastructure teams—can be a challenging exercise that results in reports of questionable data quality.

Through USM, the organization can become unified. All information flows from the same data source, the configuration management database (CMDB), but the views of the information can be customized to meet the needs of all the parties involved. Let’s take a look at the components involved in the delivery of USM to see how this model works at a more granular level.

The Components

USM leverages a CMDB in which all the information about all the enterprise IT assets is stored. The idea behind CMDB is that, finally, the enterprise can have a single system of record for all assets that will be both authoritative and easy to interface with management tools. This database, combined with various capability solutions to meet your infrastructure management needs, creates a centralized dashboard of USM data.

Aligning infrastructure assets with a business need is as simply intuitive as defining a service definition within the CMDB. Doing so will provide a linkage between infrastructure components and business services. Thus, in addition to aligning infrastructure management needs vertically to storage management, database management, and so on, new views can be created to show how infrastructure management is measuring up to business needs.

The Relationship

Leveraging USM in your organization enables you to establish new relationships both in the way you view the information presented in the tools that you use to manage your infrastructure as well as in your relationships within your technology teams and with your business partners. The CMDB is the database part, and USM explains how you can use this data to the benefit of infrastructure management. Establishing relationships between infrastructure management tools and the CMDB is the beginning of realizing USM. If your current infrastructure management tools, such as those that you use for incident management or change management, don't leverage a CMDB, you might already be a step or two behind the curve. Centralization of asset information is very important in USM as well as in realizing ITIL goals and consolidating the sprawl of IT asset information that is likely to exist in a decentralized environment. Even if you can't physically consolidate the databases, solid USM infrastructure management tools can use multiple CMDBs to deliver a centralized view for your infrastructure. As you "get back to business" in infrastructure management and focus more and more of your technology decisions on the pure business need, USM delivers value to your organization by allowing you to expand the conversation with your key business partners in terms in which they can understand.

The Value

In addition to being a valuable asset to your infrastructure teams and allowing them to proactively identify problems across the infrastructure that may impact business, USM tools enable infrastructure management teams to optimize the utilization of your infrastructure by understanding, at a granular level, the needs of each business partner receiving infrastructure services. Infrastructure managers will no longer struggle to articulate the finer points of database management with a business partner as they leverage reports and views from the USM dashboard that actually "speaks the language of the customer" and will present information in a manner that is aligned to their business applications. This enables business partners to make better, more informed decisions that are based upon actual infrastructure metrics. In addition, it enables your infrastructure managers to make infrastructure investment decisions based upon actual client needs.

Tips on Gaining Momentum

We've established so far that implementing tools in your organization, such as a CMDB that enables infrastructure management, is simply the right thing to do from both an infrastructure management perspective and a business perspective. Infrastructure management tools help infrastructure managers visualize their IT environment in new ways, and provide technology, information security partners, and business partners with valuable information derived from asset data. But how do you manage the conversation with senior leaders and business partners to gain the momentum you need to bring infrastructure management to the enterprise?

The first area of focus is on gaining senior management buy-in, as this will be critical for success. To do so, you have a very valuable ally in the drive for infrastructure management: the business partner. LOB partners and executives thrive on information to perform their jobs. USM delivers relevant infrastructure management information in new, business-focused ways. Let's start by first examining what you will need to discuss to get senior managers to buy-in, and then we'll go through a few tips to bring your business partners to the table.

Senior Management Buy-In

Implementing infrastructure management tools designed to realize USM in your organization makes sense both from an IT perspective and a business perspective. However, in order to make that clear to management, you're going to need to begin by fostering support and changing the conversation. Until now, conversations regarding infrastructure management were likely focused on the siloed approach, as the infrastructure itself and senior management has become accustomed to hearing concerns on storage and servers from a silo perspective. There may even be contracts in place that address support for these siloed areas. Whatever your situation, the key to driving through and gaining buy-in with senior management is to keep the conversation centered on the business. Infrastructure management delivers business value. That, in turn, delivers shareholder value, and at the end of the day, that is what will matter most.

USM creates a business-focused infrastructure management environment that can help you:

- Talk with your business partners about their infrastructure management needs from their business perspective
- Increase the transparency of infrastructure management and demonstrate the value each infrastructure management team delivers to business goals
- Align infrastructure management offerings to business needs
- Optimize infrastructure management asset utilization
- Speed collaboration and innovation efforts by delivering a customizable view of the infrastructure that can be leveraged by project teams
- Speed root cause determination and problem management
- Reduce operational risk and help to ensure regulatory compliance by being able to quickly see which assets align to compliance-sensitive applications
- Realize ITIL goals
- Reduce IT costs

When discussing these points with senior management, it will help if you can provide real relationship drivers in addition to bolstering the infrastructure management need. It's important to drive the point that infrastructure management tools aren't just infrastructure management tools. Infrastructure management tools that realize USM deliver real, substantial value to focus infrastructure management efforts on business needs. If your organization has suffered a recent service interruption or problem that stemmed from a misunderstanding of business requirements, gather facts and figures from that impact, along with LOB statements, to provide a real "voice of the customer" view. Finally, don't take no for an answer. Remember that these are the same senior managers that expect delivery of a fully compliant infrastructure and solid return for their IT investment. Infrastructure management enables the delivery of both, and although it might seem odd that anyone would say "no" at a senior level for any tool that makes technology more closely align to the business, failure to proclaim support may have the same effect.

Six Sigma: Relating Infrastructure Management to Business Needs in Business Language

The value in USM is clear in that it makes management of the infrastructure easier, from a business perspective, by aligning assets to business needs. Making this single point clear on paper will be a critical step in gaining adoption with your business partners. To do so, you're going to want to use their language and understand their change management culture. Consider how your business partners examine new initiatives, and then use USM examples to show them how their initiative planning efforts—as well as their capacity, performance, incident, and problem management routines—can all be made easier.

If your organization has adopted a Six Sigma management culture, USM is a natural fit. Six Sigma, which was derived from a manufacturing process improvement effort, is a great way to improve business (and IT) processes. It centers on the concept that every process has a measurable number of defects, and business managers that use Six Sigma thrive on metrics that can help them clearly understand how they can improve their processes. Through USM, an entirely new world of relevant business metrics is made available to the business managers. Essentially, all such metrics have been used to manage infrastructure—such as performance, capacity, availability, and security—but are now visualized from the business perspective and aligned to their application or business service.

Summary

Infrastructure management enables the delivery of a meaningful, service-oriented approach to IT management. It simplifies relationships between key internal IT stake holders, such as storage and information security, and it delivers valuable metrics to business partners so that they can make informed decisions about their IT investments.