Beyond Unified Monitoring: The Case for Application Service Management

Extract

This paper discusses the Best Practice approach for monitoring infrastructure and applications and the services that by working together, these components deliver to end-users.

It starts by exploring the term Unified Monitoring, which is quickly emerging as a suggested best practice by both analysts and market leading vendors in the Service Assurance Industry.

It then builds upon this theory to discuss the next logical step; "Application Service Management" and its benefits.

The paper is informed by industry research, in-house surveys and anecdotal evidence from real use cases.

Why is Everyone Talking About Unified Monitoring?

Historically, the various teams within a larger IT department have selected the tools and systems that they use for Fault and Performance management of their particular domains of IT (Server, Network, App, DB, Storage).

This has resulted in the need to consult many sources of "truth" when trying to establish root-cause when an issue affects an internal or external customer-facing service.

Technically, this is challenging, as there is no correlation between the management tools when reviewing an incident, and from a business perspective, it can be argued that both the capital and operational cost of running many systems doesn't stack up – especially if answers are not being found quickly enough.

What is Unified Monitoring?

Unified Monitoring is one strategy to address this challenge.

Unified Monitoring is the ability to monitor the multiple domains of IT that are involved in delivering total IT or Business Services within one system and one database (a CMDB for monitoring).

The benefits of this are that one source of truth is created, events are correlated between IT Domains, alerts are reduced and logical groups can be created according to service, roles or infrastructure.

Unified Monitoring can be achieved in 2 main ways:

1. A Single Vendor Solution that provides solution for the end-to-end IT Service.
2. Configure isolated domain tools to feed into a correlation engine and reporting platform – sometimes referred to as a Manager of Managers (MoM)

Going Beyond Unified Monitoring: Application Service Management

Once fault and performance data is all in one place, then it should be possible to organise the alerting and reporting of that data, in a way that the business sees the IT Department function – the Application Services that IT delivers to end-users and customers.

Several Unified Monitoring platforms go some way to deliver this, by understanding what is connected to what and then providing some level of dependency information.

Application Service Management (ASM) however, requires that there is a deeper knowledge of the dependencies, including visibility of end-user experience of the performance of the top-level application services, the key services by which end-users recognize IT (email, web, CRM etc).

When performance falls below SLA, ASM will provide an integrated understanding of interdependencies between the supporting application processes, OS's, VM's, hosts, network components, connectivity, databases and storage components.

"Application Service Management is more than acknowledging a relationship between objects and putting these into buckets or groups, (as in most Unified Monitoring Platforms) but instead defining

the relationship between the objects in the context of how the service is delivered to your end-users."

The Ingredients of Successful ASM

To achieve this goal, a sophisticated mix of technology and process is required.

This includes:

- Service Availability Definition – In order to define whether an Application Service is available or not, it is necessary to define a reliable logic that accurately represents whether users can access that service within the requirements of the SLA's defined by the business.

  Many vendors would suggest a single method for doing this, however the myriad of different application configurations mean that picking one technique is not always practical. For example, web-based applications would require an entirely different approach to a fat-client application.

- Configuration Discovery – Where knowledge of service configuration is not available within the business, then a combination of advanced discovery techniques and technologies will need to be applied to the target environment.

- Service Modeling – The ability to interpret dependencies, routes and continuity paths that are involved in delivering the services from technology to every type of user accessing them. In other words accurate and useable definition of the Service Configuration.

- Data Visualisation – Defining, modeling and discovering service configurations is sometimes complex, however in order for that work to have value, then it is essential that the visual representation of the data, through dashboards, reports and alerting is simple.

The entire motivation for viewing "Service" is to simplify the management of IT Operations. This is achieved by providing the ability to quickly establish whether or not a fault is service affecting, what the problem root cause is and who within the business is affected.

Challenges to Overcome

The concept described in this document will no doubt seem both logical and appealing to most IT Operational Professionals. So why is this approach not yet more adopted?

The below lists the most common reasons stated in our recent client surveys:

Process and Knowledge - Companies don't have access to a framework to develop their own in-house processes around, which would allow them to capture the required information about their services and record it in a useable way.

Intelligent Technology – With the mix of the physical and logical configuration items making up a service, the challenge is often finding a monitoring platform that can firstly take data from ALL the required components AND also then discover, model and visualise them in the right way.

Keeping the System up to Date – Application Service environments are dynamic, devices are added or changed, software versions are updated or patched and in some environments application servers move round dynamically according to resource demand. As changes are made, ASM systems and the processes that support them need to keep up.

SaaS Applications – Although the introduction of these applications can introduce a monitoring blind-spot that often can't be avoided, a strategy needs to be defined to bring visibility of their performance into the main monitoring system.

This may for example involve; integrating via service provider API's, synthetic transactions recording performance client side performance or monitoring the infrastructure and connectivity, providing access to the application to discount your own network causing the delays.

Resistance to Changing Legacy Tools – It can be difficult to convince the IT department heads that there is a need to change the tools that they trust and know for the greater good of the IT. These people have spent time and money developing their management systems so that they provide them with an effective platform to manage their own IT domain resource. Change should be gradual, or even better, provided as a complimentary add-on to what they are already doing.

Summary

Application Service Management is not another "buzz word" invented by a software vendor to create a new niche in the IT market. It is a term to describe functionality that offers real and tangible benefits for IT Operations working in large and complex network environments.

The term is required to provide a distinction between similar related fields such as APM, Network Management, Unified Monitoring, Business Service Management and IT Service Management.

In fact, ASM takes a little bit from each of these disciplines to provide something altogether more pragmatic for organisations that rely on their application services to run their business.

About ServiceVisual

ServiceVisual provides Enterprise, Government and Educational organisations a unique proposition in the Application Service Management / Unified Monitoring market space.

Key Features:

- Delivered as A Managed Service from our Secure Data Centre.

- Key Services discovered and modeled by our experts, using our unique technology and process.

- Visibility Provided via our easy to understand Stunning Dashboard technology – from your NOC or on your mobile device.

- Intelligent alerts and service centric reports managed and delivered to your inbox.

- No need to integrate with or replace your existing monitoring tools – we compliment them.

- Service perspective from your DC and from regional end-users.

- Keeps up with changes to service configuration – we managed the system for you!

- Designed for IT Operations.