KEY CONSIDERATIONS FOR IT PROFESSIONALS WHEN

SELECTING AN APPLICATION PERFORMANCE MANAGEMENT SOLUTION

A VENDOR-INDEPENDENT VIEW

KedronUK
Enterprise Management Solutions

SUMMARY

This paper has been written to assist IT Professionals who have been tasked with researching the Application Performance Management market space.

It will help the researcher to broadly categorise vendor offerings and understand what those categories deliver, and what they don't.

The paper aims to help the reader choose the correct type of solution for their specific business requirements, and avoid making incorrect decisions based on common incorrect assumptions.

THE CHALLENGE YOU FACE

APM IS A MINEFIELD. FINDING THE RIGHT APM SOLUTION CAN POTENTIALLY BE A LONG, DRAWN-OUT AND TIME CONSUMING PROCESS WHICH, BY THE END, THE RESEARCHER MAY NOT ACTUALLY FEEL CONVINCED THAT THEY HAVE SELECTED THE CORRECT SOLUTION.

With most IT environments having grown organically over the past 10-15 years the need to know what your network and hardware is actually doing and how it is performing is only a fraction of what IT Professionals need to know about the services they deliver.

The performance of key IT service delivery to customers is now paramount and IT need to know about every single component of a service to get a true view of its performance and availability.

During the years of growth many enterprises have purchased a plethora of monitoring solutions and are now at a stage where there is a very silo'd coverage of service monitoring.

The main question a researcher needs to answer when searching for an APM solution, is what does the business actually want to achieve with their investment into APM?

For example do they:

Simply want application availability. i.e. 'Is the Application up or down'?

Need visibility of every business transaction between multiple application tiers?

Want to reduce mean time to resolution (MTTR) as well as monitor performance?

Stop the "blame game" between IT departments? (Also known as the 'war room' scenario)

Need to monitor time-critical applications down to the nano second?

DIVIDING THE MARKET INTO CATEGORIES

Many of the market leading software vendors profess to have 'the best APM solution' on the market, but which one suits an individual business requirement best? There are several different approaches to APM and they all have their strengths and weaknesses.

The author accepts that within these broad categories different vendors offer varying functionality, however it is a decision at this higher "category" level that must be made by the researcher before analysing vendor feature and benefits.

DEVICE BASED APM

Monitoring server hardware, OS and application processes running on individual servers to establish application health from a device perspective

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Provides Detailed information about your enterprises network and server environment.

High level RAG displays of your estate can give a good 50,000ft view of what's happening.

Comparatively easy to deploy.

Low risk as only SNMP and WMI tend to be monitored.

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Poor visibility of how applications perform across the tiers.

Limited visibility of end-user performance.

Enterprises with 10's of thousands of devices can result in large complex monitoring deployments.

Suitable Scenarios

Enterprises that require a relatively high-level of Application performance metrics.

Enterprises which are new to APM and simply need know how their Application servers and network devices are connected.

Notes
RAG stands for Red Amber Green as in traffic light warning system.
Device based APM is often used as part of a wider infrastructure monitoring platform.

NETWORK BASED APM (PACKET CAPTURE)

Monitoring of ap-plications via capturing network traffic traversing links either via network TAP or SPAN/mirror session on a network devices.

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Good level of application level response time and availability monitoring.

Many tools have a built in Experts that can highlight Application issues

Ability to report on End-User-Experience

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Positioning of "Probes" is paramount to successful monitoring and some environments will be limited on available SPAN /Port mirrors.

Packet capture solutions for high speed networks can prove expensive.

Limited ability to trace transactions across the tiers unless some form of packet tagging is used, which can result in an unnecessary overhead on the application.

Suitable Scenarios

Enterprises who require more information on network level Application metrics.

Enterprises that required an overview of Application distribution across their network.

Enterprises which need to know the impact that non business critical ap-plications are having.

Notes
Visibility of application performance only viewed at point of capture and will always be from that perspective.

For more information on SPAN and Port Mirroring please see: http://www.networkinstruments. com/support/html_doc/current/index.html#page/nTAPs/when_to_use_a_span_mirror_port.html

SYNTHETIC SCRIPT BASED APM

The process of simu-lating either user or application processes by creating or copying transactions to "play" across the network and then measure the perfor-mance of.

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Good level of application performance, availability and End-User-Experience.

Excellent for high-lighting if application performance issues are related to Desktop, Network (LAN & WAN) or DataCentre.

Good for monitor-ing SaaS services

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Synthetic transac-tion scripts can end up being very complex and tend to need a great deal of internal knowledge of scripting technologies.

Lack of flexibility for application architecture changes. When an application changes a synthetic scripts will need to be re-written.

Only give visibility into the Desktop to Web server tier so there is no ability to follow transaction across the tiers.

Can have high risk due to the scripts running actual 'real-world' transactions and can result in dummy accounts and credit cards being required.

Suitable Scenarios

Enterprises which need to know how an application is performing even when 'real users' are not using it.

Enterprises that have applications which have few configuration and architecture changes.

Enterprises which want a high level overview of whether performance issues are because of 'Client Side Delay, WAN/LAN or Data Centre'.

Notes
This technique is often used to test network readiness for new technologies such as VoIP being deployed on networks

TRANSACTION LEVEL BASED APM

APM via visibility of actual (real-user) transactions across the multiple tiers of IT.

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Excellent level of End-User monitoring

Some solutions are only .NET or Java specific limiting their coverage.

Ability to follow a transaction across ALL the tiers

Some solutions require a very detailed understanding of the applications being monitored, which is not always readily available.

Breakdown appli-cation performance issue to Desktop, Network, Data Centre and ALL the tiers within the DC.

Depending on the vendor selected these solutions can require a large amount of Professional Service to configure.

Effective method to reduce MTTR

Quick deployment with NO network changes required

Suitable Scenarios

Enterprises which have a requirement to know Real User Experience.

Enterprises that need to follow a user's 'journey' across all the tiers from Desktop/Browser -> Network -> and all tiers within the DC.

Enterprises that have applications used by the public where remote monitoring/scripts are not possible.

Notes
Often Enterprises deploy this method only on the most critical revenue generating applications, and use an alternative method for less mission critical applications.

CONCLUSION

APM IS VARIED TOPIC AND SELECTING THE RIGHT SOLUTION CAN BE A DIFFICULT TASK.

In some instances a single APM solution can work and in others it may be that a mix of two or three of the above described categories will be required within an enterprise.

Researchers should always first examine what outcome they are looking to achieve and then consider what type or types of APM solution best suits those requirements. This will make creating a short list of vendors a much more efficient task.

Often The best way to move things forward for your enterprise is to engage with an experienced consultancy company who can guide you in the right direction for the correct APM solution that meets not only your technical but also your businesses needs.

KedronUK is a leading Network and Application Performance Management Consultancy.
We provide our customers with increased visibility and control across their network and application infrastructure by combining leading technology, knowledge and service.

KedronUK appreciate that although our clients have similar challenges and objectives, the obstacles they face can differ vastly from company to company and culture to culture.

We approach each client engagement as an individual project, creating unique plans for each customer, from initial discovery and scoping right through to installation, configuration, deployment and solution development.

Our services provide greater operational and security intelligence, increased productivity by reducing problem resolution times, and cost saving via automation and optimisation of IT infrastructure.