Tradeoffs when choosing an Application Performance Management (APM) solutions

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Abstract:

- Having an APM solution is no longer an option for most enterprises given the growing SOA complexity, use of cloud services and hosting provides, and push for DevOps culture.

- Fortunately, the APM space has matured in depth and sophistication to monitor production environments.

- However like most IT efforts, APM solutions are also budget and time constrained so trade-offs must be made.

- This presentation will provide an overview of APM, trade-offs faced when deciding on which solution to pick, and examples of trade-offs made from several customer implementations.

Agenda

- What is APM?

- Some APM Vendors

- What comprise APM?

- Benefits

- APM tradeoffs area

- Summary

- Appendix: Reference URLs
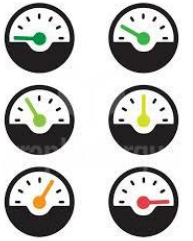
What is APM?

Application Performance Management (APM) is the monitoring and management of performance and availability of software applications.

APM strives to detect and diagnose application performance problems to maintain an expected level of service.

APM is "the translation of IT metrics into business meaning ([i.e.] value)."

http://en.wikipedia.org/wiki/Application_performance_management

Some APM Vendors

- AccelOps
- AppNeta
- Appnomic
- Apptio
- **App Dynamics**
- Aternity
- Bay Dynamics
- BlueStripe
- BMC Software
- Boundary
- CA Technologies
- Circonus
- Correlsense
- Corvil
- **Dynatrace (Compuware)**
- Evolven
- ExtraHop

- Hagrid
- HP
- IBM
- INETCO
- Interlink Software
- KeyNote
- Loggly
- ManageEngine
- Metafor Software
- Microsoft
- Moogsoft
- Nastel Technologies
- NetScout Systems
- Netuitive
- **New Relic**
- Nexthink
- Prelert
- RISC Networks

- Riverbed
- SAS
- Savision
- Sightline Systems
- SmartBear
- SolarWinds
- Splunk
- Sumerian
- Sumo
- TeamQuest
- Teleran
- Terma
- VMTurbo
- VMWare
- XpoLog
- Zenoss

What comprises APM?

End-user experience monitoring	• User Experience (UEM) • Passive (Span Network Port) • Active (Synthetic Script)
Business transaction	• Mapping • Grouping • SLAs
IT operations analytics/reporting	• SLA Management • capacity/trending/profiling • standard reports
Runtime application architecture discovery modeling and display	• Top down/bottom up from/to topology from/to transactions • ADDM
Component deep-dive monitoring in application context	• Agents on JVM/.NET • Middleware

https://www.gartner.com/doc/2889421/magic-quadrant-application-performance-monitoring?docdisp=share&srcId=1-4398736771

APM Observations

- APM implementation takes real effort and there are pit falls.
- No one-sized fits all
- APM Benefits are often not understood or quantified
- Often a tool is just added after production go-live without it trades off being thought through
- New requirements may challenge tool choice
- One APM tool can't do it all.   Finding hot spot is great help, but it may not tell you not how to fix it.
- APM should start with business/end user view
- You really don't have APM if you only have logs, system metrics, synthetic monitoring scripts

Benefits

- **Business Transaction and SLA Management**
  - Business can immediately relate and benefit from metrics
  - Way to hold a SaaS vendor, Content, or client-side provider accountable
- **End User Experience**
  - Real user profiling of browser side code execution. Deeper analytics, JavaScript error defection, Clicks stream
  - Cloud and In-Premise solutions
  - Generally very quick to setup
  - More value when integrated to component Deep Dive

Benefits , Continued

- **Analytics**
  - Pre-built real-time analytics engines for dash boarding
  - Allows Top down & bottom up analysis of transactions and infrastructure in one tool
  - Tops tools some with good out of box application & business process centric dashboards
- **Component Deep Dive & Run-Time Topology view**
  - Proven to run in production. Often Big Win
  - Export traces for off line analysis and comparison
  - Faster root sensors that instrument code and external calls
  - Quickly see cause analysis – Error, Volume, & Time spent by tier, SQL, Code, external calls
  - Auto and custom time spent, errors, volume by tier and component
 - Same too to see tier and component health

What is your priority?

Do you want to know that site is healthy and operating in normal limits?
Do you just care when volume is above 1000 TPS?
Do you care about click stream of user coming in from Philadelphia?

Focus Area	Key Stakeholders			
	Application Support	Application Development	IT Operations	Application Owner or Line of Business
Business transaction and SLA Management	■		■	■
End-user experience monitoring	■	■	■	■
Problem Isolation and Remediation	■	■		
Performance improvement		■	■	■
Production readiness & Test		■		■
IT operations analytics/reporting			■	■
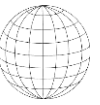
APM in the Broader IT EcoSystem
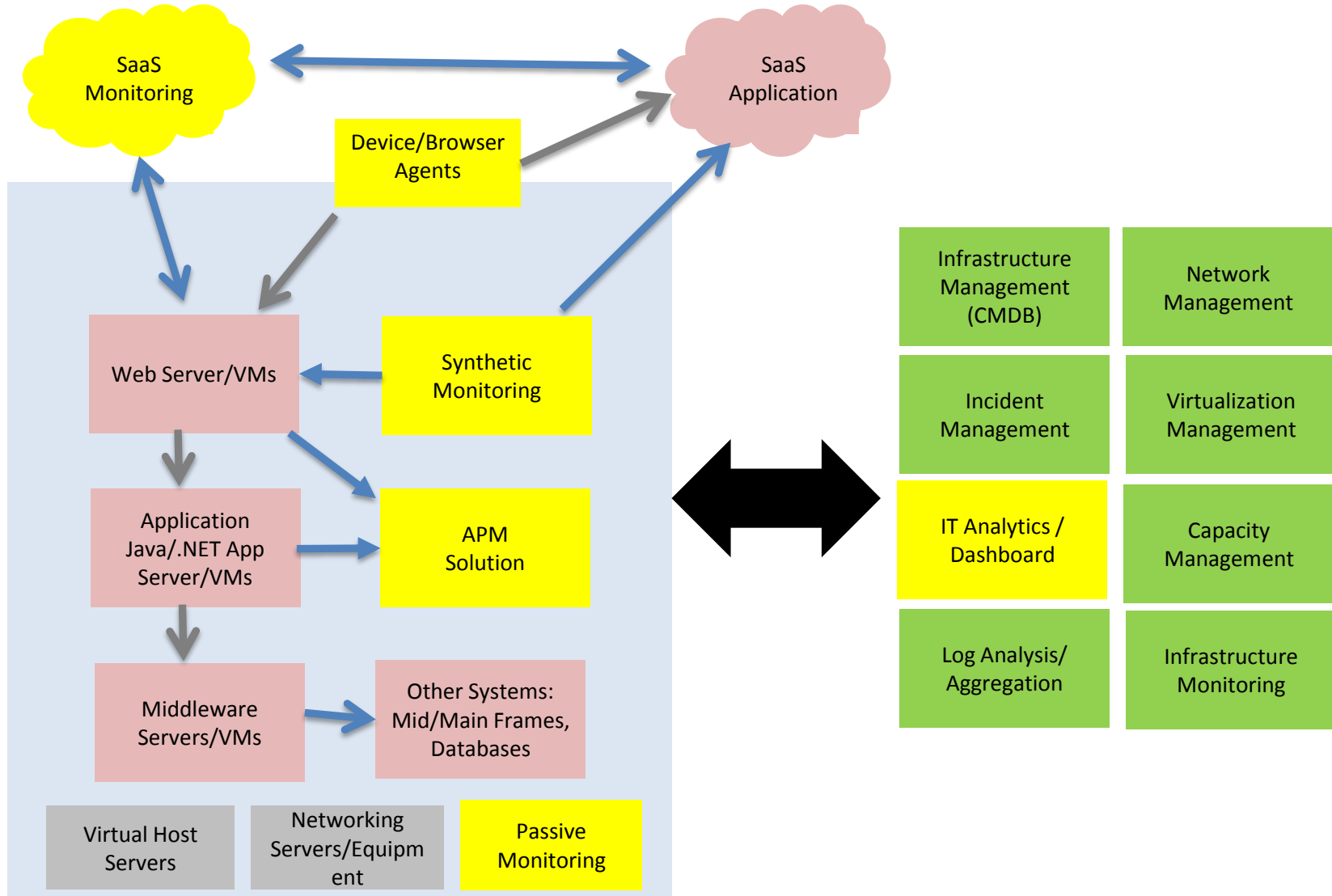
Areas for consideration

Within each of these areas there are tradeoffs to be made. There is no one size fits all with APM, so tradeoffs depend on your situation.

Application Constraints	SDLC Phase	Organization APM Maturity	APM Vendor Capabilities
Monitoring Scope	APM Topology	Integration Requirements	Application Architecture & Topology

Recommendations

- Remember, the business view, end user experience, and analytics is the primary focus for APM
- Understand and prioritize your specific requirements
- Understand the trade-offs of APM tool/vendor selection
- Try out tools & foster DevOps culture as to engage developers
- Be realistic about what can achieve based on APM maturity
- Understand your skillsets to use & maintain APM
- Define a capabilities roadmap aligned to release plan
- Understand roadmap of your vendors
- Learn More, it is a big domain that is not going away