



Session PC11 -- N+I Performance Conference -- May 3, 2005

Choosing The Best User Measurement Solution

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The Questions

- Measuring user response time:
 - Should you use real or synthetic measurements?
 - What are the differences?
 - Which approach do you need?
 - Should you buy both?
 - If you buy both, which do you trust?

Why Real User Metrics Matter

An application can only be considered available through successful production-level usage. Web application availability must be managed from the perspective that matters most – that of the ultimate end user of that application. If a user cannot use an application – regardless of the reason – that application has failed.

Corey Ferengul, META Group

50 percent of service disruptions are reported by end users through the help desk and not by management products. Analyzing these products leads to finger-pointing, wasted resources and long resolution times – the exact opposite of service management.

Forrester Research

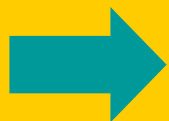
Measuring from a User's Perspective

- Active or Synthetic Measurement
 - Controlled, repeatable, predictable monitoring
 - From fixed set of locations
 - ISP hosting center
 - Major customer data center
 - Partner or branch offices
 - Identification, triage and validation of performance issues
- Passive or Real User Measurement
 - Captures actual end user experience
 - From wherever the user is located
 - Can report component, Web page, or transaction times
 - Can report on individual users or aggregates

Service Delivery Lifecycle



1. Baseline the user experience
2. Identify and prioritize problems in real time
3. Quantify the business impact of a problem
 - Who is being affected?
 - How long has the problem existed?
 - What is the business impact?
4. Triage, diagnose, and assign the problem
5. Validate that the problem has been fixed



PROACTIVE MANAGEMENT OF SERVICE LEVEL QUALITY

1. Baseline The User Experience

- What is “Normal”?
- Proactive measurement is required to establish a performance baseline for monitoring
 - By application
 - By time (day of week, hour of day, hour of week)
 - By geographic area
- Real user measurements can be useful to set baselines for special user classes
 - Platinum card holders
 - Institutional clients
 - Business partners

2. Identify and Prioritize Problems in Real Time

- Proactive measurements can reveal problems before they actually affect users
 - Increasing First Byte times may signal server contention
- Synthetic measurements reveal outages that are never shown by real user data
 - Especially useful for partial or intermittent failures (subset of infrastructure may be affected)
- Passive monitoring will tell you how the issue affects real users
 - If some page response times increase, is traffic affected?
 - Which subset of users is experiencing the problem?
 - Can high value clients continue doing business?

3. Quantify the Business Impact of a Problem

- Detecting a problem is only half the battle
- IT managers must also discover:
 - What is the extent of the problem?
 - Who is affected?
 - How long have they been affected?
 - What is the business impact of the problem?
- Real user measurements are best for this phase
 - Review aggregated real user measurement data
 - Compare with known patterns and baselines
 - Based on findings, prioritize and assign resources

4. Triage, Diagnose, and Assign the Problem

- Must start with an end user perspective
- Proactive measurements are most useful here
 - Synthetic measurements are controlled and predictable
- Monitor Web application infrastructure from multiple points
 - From various remote locations
 - From within the data center
 - Compare inside and outside, compare by ISP, etc.
- Normal state should be known
 - Examine data for exceptions, changes from baselines
 - May refer to system level monitoring (ESM) for confirmation

5. Validate that the Problem Has Been Fixed

- Both proactive and passive measurements are useful here
- Proactive measurements can quickly and consistently validate that a change has had its intended effect
- Passive measurements can help you determine whether:
 - the entire problem has been fixed
 - for all users
 - across all geographies
 - across all connection types
 - across all ISPs

Summing Up ...

- Q: Use real or synthetic measurements?
A: Ideally, both.
- Q: What are the differences?
A: Synthetic data is predictable, real is not.
- Q: Which approach do you need?
A: Ideally, both.
- Q: Should you buy both?
A: Ideally, yes. Each can reveal information and problems that the other misses.
- Q: If you buy both, which do you trust?
A: Both should be accurate, but they measure different things. If they differ, there is a reason.