

Improving Application Performance: Motorola Case Study

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Performance Scenarios

- ❖ **Impact Analysis (case study)**
- ❖ **Production Issues**
- ❖ **On-going Performance Improvement**

Characteristics of Performance Scenarios

❖ Impact Analysis

- Planned Activity
- Precedes a Decision
- Objective
- Collaborative

❖ On-Going Performance Improvement

- Self-initiated or Vendor-initiated
- Opportunistic – What If?
- Precedes a Change and/or a Decision
- Objective
- Collaborative
- Under-rated & Under-appreciated!

❖ Production Issues

- Spontaneous with Urgency
- Business Criticality / Escalation
- Emotional
- Laden with CYA
- Sleep Deprivation

Impact Analysis (Case Study)

❖ Situation:

- Consolidation of a business critical B2B site hosted in EMEA servicing EMEA being moved to the US

❖ Application Characteristics:

- Transactional
- Private Content (encrypted & authenticated)
- Generally low page weight (not image rich)

❖ Challenge:

- Overcome the performance impact of geography

❖ Proposed Solution:

- Send less stuff

Proposed Solution Options

❖ How do we “send less stuff”?

- Content Delivery Network
- Delta-encoding
- Compression
- *Reduce Protocol Overhead*

Our Approach

Objective

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- Study the performance impact of moving the EMEA MOL instance to the US
- Apply backbone acceleration technology and measure the impact
- Determine if backbone acceleration can overcome the performance impact of the move

Frame the intention of the study and how it relates to the business objective.

State the change you intend to make

State the outcome of the study as being a determination on whether or not backbone acceleration can overcome geography.

Our Approach

Setup Details

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- Two US-based production servers were used as targets in the test
- Both were in the current Business Online farm but addressed individually
- Gomez and Keynote were used to measure performance impact
- Test scripts were co-authored by eBusiness and the MOL team
- Tests were conducted over a two-week time period

Document the test setup

Document how you will measure the results

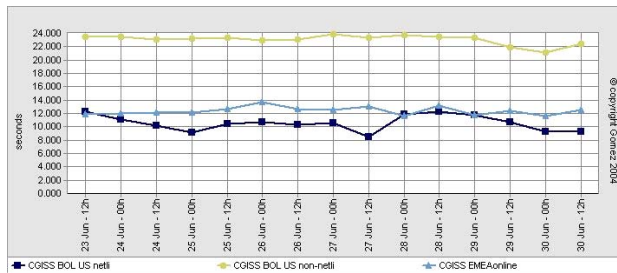
Collaborate with the application teams throughout

Measure results over time and avoid spot-check measurements

Our Approach

Gomez Results

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Data Summary

Test Name	Avg Response Time (sec)	Availability (%)
CGISS BOL US netli	10.638	99.83
CGISS BOL US non-netli	23.092	99.40
CGISS EMEAonline	12.364	99.15

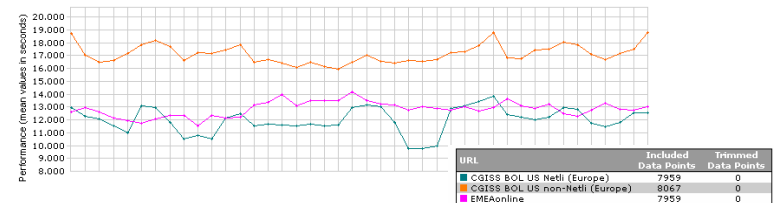
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Keynote Results

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Average	CGISS BOL US Netli (Europe)			CGISS BOL US non-Netli (Europe)			EMEAonline		
	Performance (secs)	Data Points	Avail %	Performance (secs)	Data Points	Avail %	Performance (secs)	Data Points	Avail %
	11.986	7959	99.59	17.122	8867	99.86	12.348	7959	99.36
Trimmed Data Points		0			0			0	

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- ❖ Present your findings graphically and in simple terms
- ❖ Be sure your presentation of results is in absolute alignment with the objectives of the study and your approach
- ❖ Doing a good job up front will make the results easy to comprehend

Our Approach

Conclusion

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- Moving the EMEA instance of MOL to the US will result in a material performance degradation
- Applying backbone acceleration can overcome this impact
- Combining the move with acceleration will restore performance to slightly better than today's level

Explicitly state your observations from the study

Explicitly state your observations regarding the change analyzed in the study

Tie back your conclusions back to the original business objective

Key Takeaways

- ❖ **Concisely but completely articulate the intent of the study and the determinations you expect to make**
- ❖ **Collaborate with the business on the setup of the test including: what you will measure; how you will measure it; and what these measurements will tell you**
- ❖ **Use measurement techniques and/or services that you all consider reliable and trustworthy**
- ❖ **Present your findings succinctly being sure they align with the stated objectives of the study**
- ❖ **Explicitly state your conclusions such that there is no doubt how you've interpreted the results of the study**