10 Completely Obvious Tuning Tips

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In a tough economic cycle, everyone is getting back to basics and focusing on the fundamentals. And as our work lives get more complex, it can be easy to get buried in the details and bemused by technical wizardry and advances. But the basic rules in performance really haven’t changed and apply whether you are enjoying the mainframe renaissance, playing in Linux or managing any other server. Let’s get back to tuning basics in this session.
Agenda

- The 10 KPRs
- Summary
“The obscure we see eventually. The completely obvious, it seems, takes longer.”

Edward R. Murrow
“The greatest enemy of knowledge is not ignorance; it is the illusion of knowledge.”

Stephen Hawking
TRADITION

Just because you’ve always done it that way
doesn’t mean it’s not incredibly stupid.
The 10 KPRs

1. All the data, all the time
2. Expect the best and plan for the worst
3. Know your user and your business
4. Bottlenecks never go away – they just move
5. Know your loved ones, but don’t ignore the rest
6. Only change one thing at a time (and document it)
7. Use cheap resources
8. The best I/O is no I/O
9. Understand your metrics (and statistics)
10. Communicate
“You cannot manage what you don’t measure.”
Where’s the data?

SMF 110 Records
“The goal is to transform data into information, and information into insight.”

Carly Fiorina
Server Farm

Figure 11: CICS Application R/T Profile

Data Collectors

LAN

WAN link

LAN
2. Expect the best and plan for the worst
Temporary eBay failure effects our applications

It seems that eBay has accidentally changed our account on their system, which is effecting all our eBay applications.

Since about 10:00 GMT none of our applications is accepting requests to the eBay Server.
Instead you will see the following error message:

Your application has exceeded usage limit on this domain. Please make call to GetAPIAccess Rules to check your call limit.

We hope that the problem is fixed around 20:00 GMT at the latest.
We will provide any news on this issue.

Update: We were just informed by eBay’s developer support center that the issue should be resolved.

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Bank of America suffers site outage

By Troy Wolverton
Staff Writer, CNET News

Bank of America’s online banking site was dogged by problems in its third day of sporadic outages and slow service.

The company’s online banking site for California customers was down for about three hours Thursday, and went down again in the afternoon, company representatives said.

Meanwhile, the company’s online banking services suffered a nationwide outage from at least 11:45 a.m. PST to 12:45 p.m. PST, company representatives said. Executives blamed the outages both inside and outside California on a problem with the sites’ network connection.
Track, model and plan

- Track business accuracy
- Model to push the limits
- Track actuals vs. forecasts
- Understand business error
- Personal SLAs
3. Know your user and your business
Teaming for Success
4. Bottlenecks never go away – they just move
Bottleneck Analysis

Fix here

Not here
5. Know your loved ones, but don’t ignore the rest
Management assigning priorities

- PAYROLL
- EVERYTHING ELSE
The Balancing Act
6. Only change one thing at a time (and document it)
Managing resources

![Image of budget constraints and resource allocation]
What’s the impact?
## Change log

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<th>Time</th>
<th>Change</th>
<th>Benefit Expected</th>
<th>Actual Result</th>
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7 – Use cheap resources instead of expensive ones, and borrow, don’t buy
8 – The best I/O is no I/O

User tuning  Application tuning  Buffering

Data in memory  Database Tuning

8 – The best I/O is no I/O
Can you tune a user?

Hey, don’t get me wrong... He’s quick... and he’s cheap...

But I still think datasets will always require some human input!
What is CPU busy?

WHAT IS THE CONFIGURATION?

Where does work run?

Who talks to who?

What are your workload patterns?

What metrics matter?

What metrics can’t you get?
Workload characteristics

Which database?

CPU demand?

Homogeneous transactions?

How many I/Os?

Where does it run?

Pattern?

How many hops?

Volume?
What is an average?

How important is standard deviation?

What is the summarization level?

What is summarized?

Correlation? Cause & effect?

Change analysis?

Forecasting?
TELECOMING
Killing genuine human interaction two thumbs at a time.
(is) MotivatedPhotos.com
“If wisdom were offered me with this restriction, that I should keep it close and not communicate it, I would refuse that gift.”

- Seneca
Options
11 – Check your assumptions

ASSUMPTIONS
NEVER MAKE THEM. REALITY IS ALWAYS MUCH, MUCH WORSE.
ASSUMPTIONS

NEVER ASSUME WHAT YOU’RE TRYING TO PROVE,
UNLESS YOU’RE TRYING TO PROVE YOU’RE A BONEHEAD.
“Assumption is the mother of the screw-up.”
- Angelo Donghia
Questions?
The 10 KPRs
thank you

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