

Cloud service is Great But you still have to think...

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The Simple Oracle DBA



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Favorite Quotes: "The Limitation shows the master" (Goethe), "Simplicity is not a luxury, it is a necessity. Unfortunately, "Complex' solutions sell better. (EW Dijkstra).

History

(servers...)

Unlimited Resources !

(Finally)

Cloud Risks.

- All you can Eat ?
- Errors !

(best pract..)

Positive note!

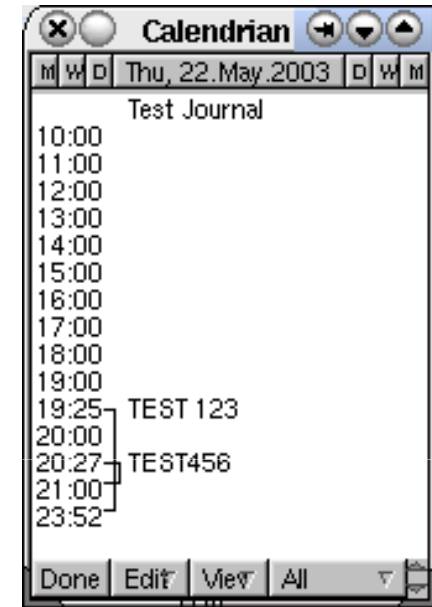
(it works)

Role of DevOps (the DBA)

(it depends)

10 min Discussion

(Do Challenge!)



What is (was) happening...

SOLUTIONS THAT MATTER

- History of IT: “need More...”
 - Moore’s law, and “capacity will be used...”
 - Storage + Usage grow exponentially
 - System will become slower...
- Never Enough, How to keep up ?
 - Buy more hardware ?
- Future:
 - Big data? (unstructured data, cleverly indexed)
 - Only in “Cloud...”



“Cloud” can give you...

(1/2)

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SOLUTIONS THAT MATTER

- **Very Quick start ... of any Idea / project / company**
 - Just need Visa / MC / AMEX.
- **Easy expansion (no fear of Success!)**
 - And they want you to buy more....
- **Resilience and Availability (bonus!)**
 - Cloud datacentre vs your “server room”
- **Reliable Network and Unlimited Bandwith**
 - At datacentre (not at your desk yet...)



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Cloud services are very convenient. (and if you don't give it to them, they will take it themselves !)
Nobody has to wait for Hardware, System-admin. All capacity you need can be there in minutes.

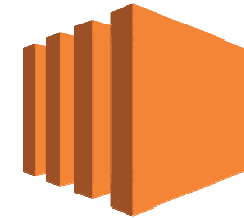
“Cloud” can give you...

(2/2)

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SOLUTIONS THAT MATTER

- **Unlimited CPU + memory**
 - PAYG, Per hr..
 - Just need more Visa / MC / AMEX.
- **Unlimited Bandwidth**
 - Including “elastic”-IP and Load-Balancers
 - But you will get billed
- **Unlimited Storage**
 - Per GB per month...
- “All you can eat”... but not at fixed price.



•Amazon EC2



•Router



•Bucket



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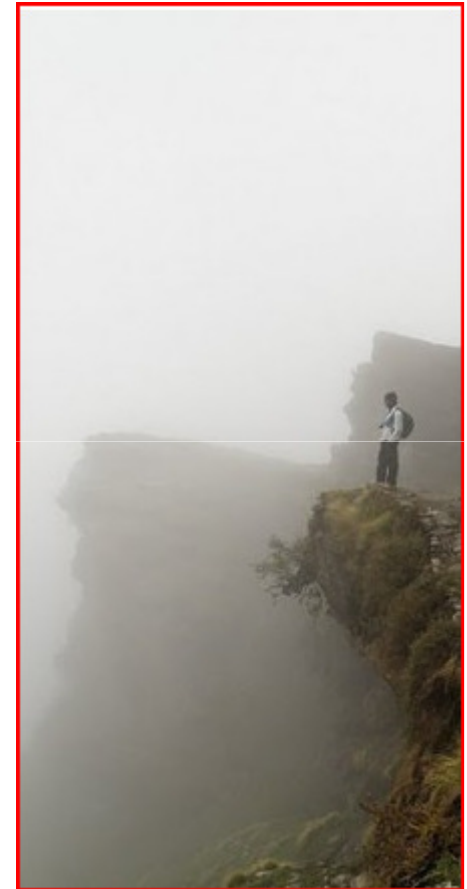
Cloud services are very convenient. All you can eat...
Cloud vendor is like Telco-contract: you get billed per usage. (roaming cost)

“Cloud” will happen (IaaS, DBaaS,)

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SOLUTIONS THAT MATTER

- “Distance” ? ... Is not an issue
- Network ? ... Fixable, to a point
- Confidentiality:
 - Vpn and encrypted storage will “pass the audit”
 - (The risk is elsewhere)
- Co\$ and Flexibility are ... Compelling.
 - Resistance is futile.



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many reasons why Cloud, or IaaS or any XaaS will just happen. Get prepared.

Beware: Application “Runaways”

SOLUTIONS THAT MATTER

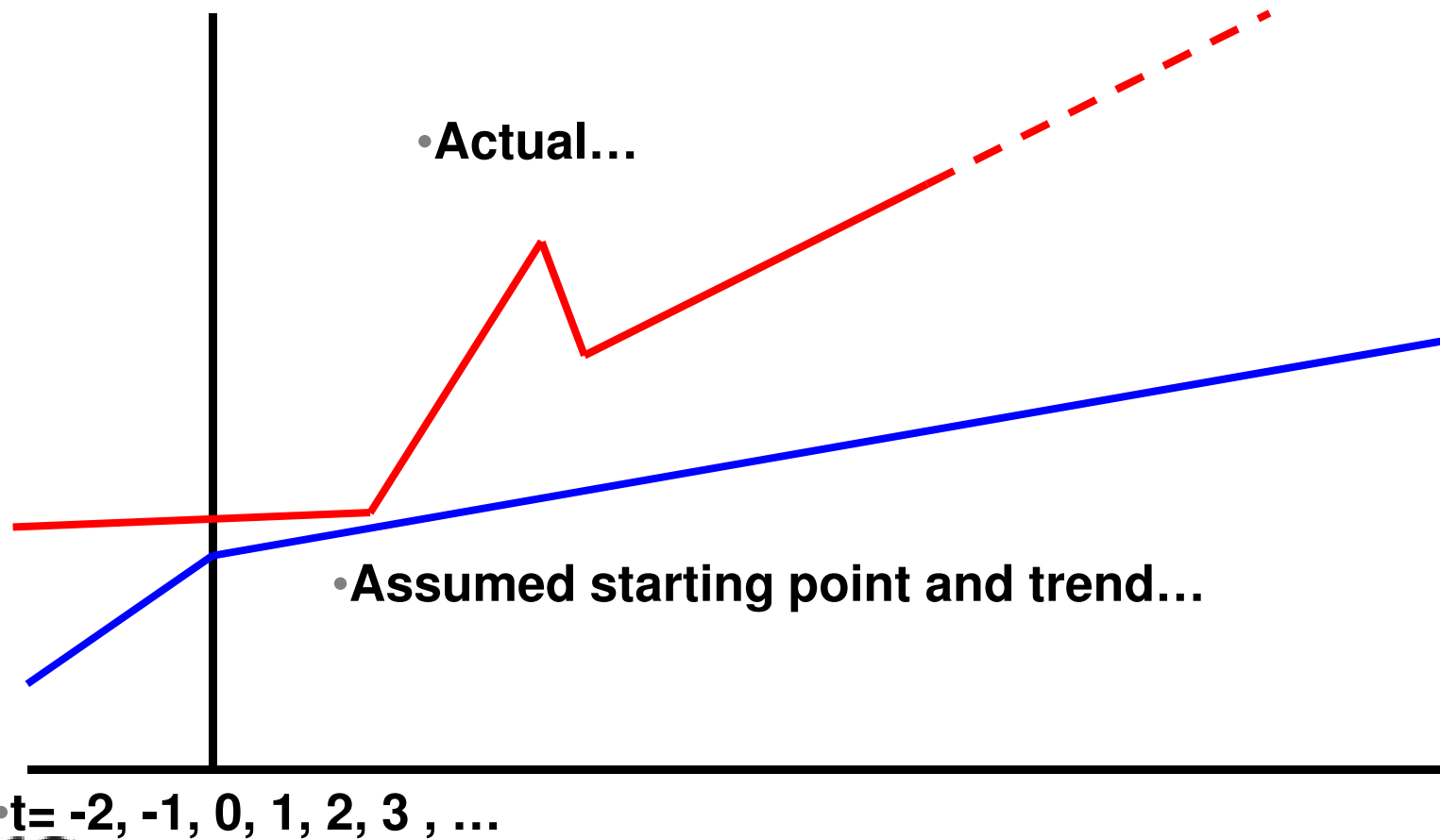
- Some Applications “leak”
 - CPU-runaways
 - Memory leaks
 - (log)files grow, are kept forever ..., ?
- Who checks these ?
 - If not: How many EC2 Servers do you need ?
- Testing (load-, Duration-testing) Important
- “Fix/Kill it With Iron” (KIWI) is too easy
 - Automatic provisioning... ? .



Look for Trends!

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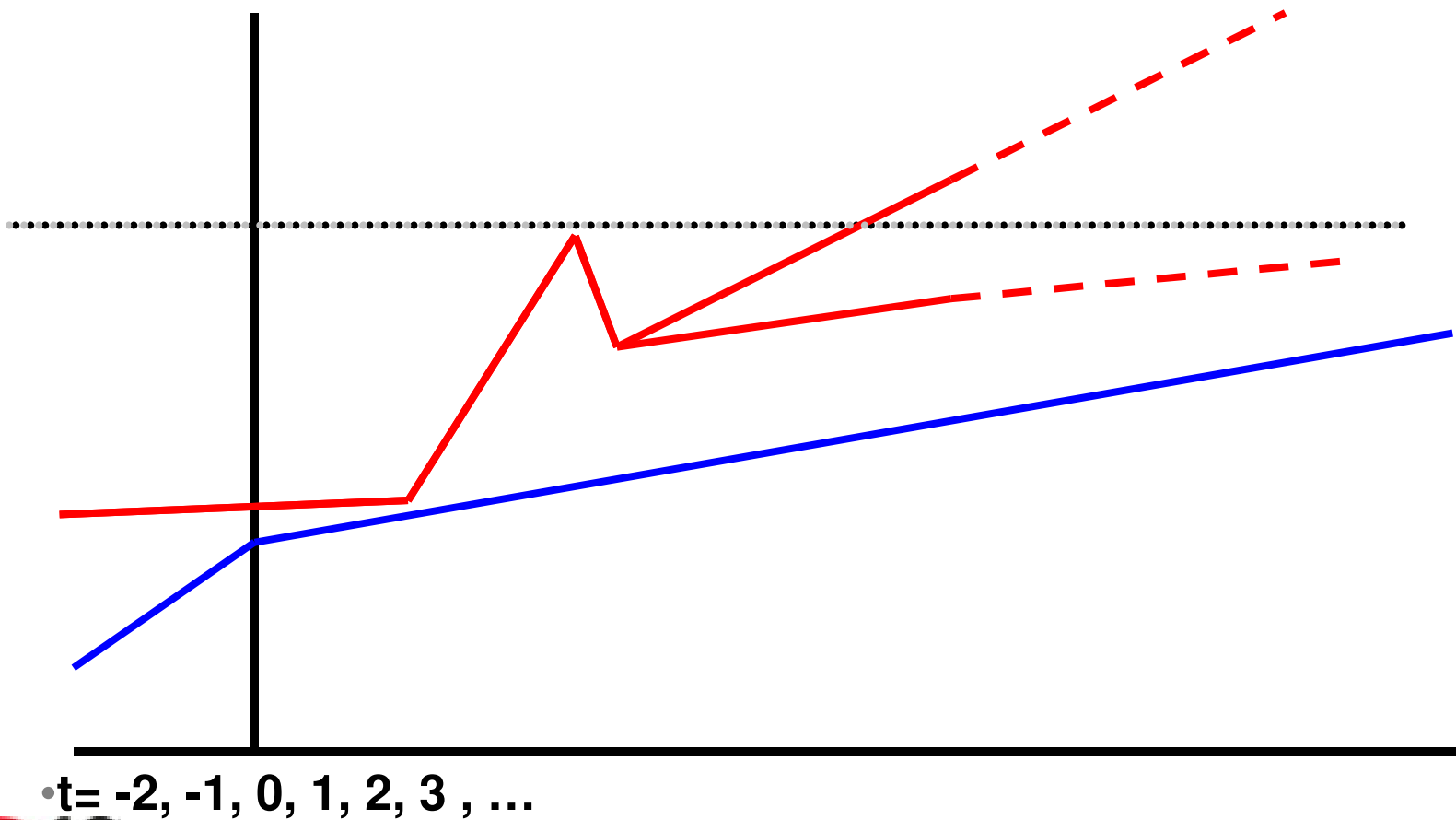
SOLUTIONS THAT MATTER



The Ceiling – Iron or Brains ?

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SOLUTIONS THAT MATTER



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• Just let this speak for itself....

• 26 October
2012

Beware: Database Bottleneck

(stateless) Application; can scale

– Just add capacity (KIWI)

Database is your SPOT (ACID) ...

– Only 1 record with Balance!

– All “transactions” come there.

• Most IaaS include resilience (...)

– But nobody tests for Scalability.

– Inefficient code/SQL still hurts!



data: SPOT

Beware: DevOps (sysadmin) : Busy !

SOLUTIONS THAT MATTER

- From “hardware”, to VMs, to ... Dashboard.
- Having unlimited “Machines” means...
 - More work for Sysadmin.
- Deployment !
 - Keep relevant components up to date !
- Monitoring, Verifying, Testing.
 - Make sure all works as intended. All the Time.
- Be ready for “Permanent Deployment”



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essentially, more machines mean much more work.
One business has 18 scrum teams and 100+ copies of data + application... how to keep control ??? .

Gartner : IaaS

(or any HaaS)

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SOLUTIONS THAT MATTER

- Amazon...
- IBM, HP,
- Oracle ??

- Note: much more.
2 large customers ..
@ “unknown” provider.

Cloud... It does work.

Get Prepared...



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IaaS is almost inevitable, and Amazon is the main pioneer. But others try to follow.
Anecdote about two customer using same vendor, very expensive

What You can Do... (let them eat it)

SOLUTIONS THAT MATTER

- Prepare for “Cloud”
 - Re-Define role for your DevOPs (Sysadmin, DBA)
 - Get used to “external systems”
- Let it happen... (hand out a few cloud-machines)
- Focus on “deployment” and “testing”
 - Define + Verify: How you want your systems to run.
- Control: Growth of “Machines” in the cloud.
- Control: Monitor usage, Monitor Co\$t



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Remember the “let them eat it” comparison? Let them eat...
Puppet? Chef? anyone?

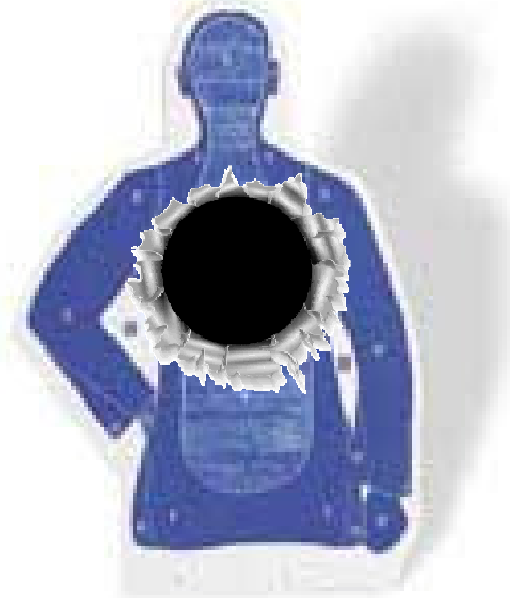
Quick Q & A (3 min ;-)

3 .. 2 .. 1 .. Zero

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SOLUTIONS THAT MATTER

- Questions ?
- Reactions ?
- Experiences from the audience ?



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Question and Answer time. Discussion welcome
Teach me something: Tell me where you do NOT AGREE.

(what about that Razor?)