Soluções de gerenciamento de desempenho para o DB2 for z/OS
Agenda

- Abertura
- Introdução / Fabrício
- Omegamon / Caurim
- SQLPA / Caurim
- Coffe Break
- Query monitor / Toshio
- Workload tuner / Pure query / Toshio
- Final - Q&A
Information Management on System z

- Information Agenda
- Information On Demand
- Data Warehousing
- Information-Led Transformation
- Business Intelligence
- Analytics

2008
- Information Server for System z
- Information On Demand

2009
- Information Server for System z
- Optim Data Governance for System z
- InfoSphere Discovery for System z
- InfoSphere Warehouse for System z
- Cognos 8 BI for System z

2010
- Information-Led Transformation
- InfoSphere MDM Server for System z
- Cognos 8 BI for System z

2011
- IMS 11 for z/OS
- DB2 10 for z/OS
- Active Active for z/OS
- Netezza for System z
- ISAS 9600 for System z
- IMS Tools Solution Packs for z/OS
- OMEGAMON DB2 end-to-end monitoring
- DB2 Sort for z/OS
- Guardium for System z
- SPSS for System z
- Netezza for System z
- IMS 12 for System z
- Industry Models for System z
- Cognos 8 BI for z/OS
- Smart Analytics Optimizer for z/OS
Managing your business environment

Business Challenges
DB2 for z/OS Tools

Reducing TCO is our first focus

- Provide autonomic features to add capability and simplify operations
- Avoid tedious tasks and reduce errors
- Ensuring that business and regulatory needs are met
- Maximizing IT staff productivity and resource consumption

2000: Reduce TCO

2000-2004: Initial portfolio
- DB2 V8 support

2005-2008: Portfolio Expansion
- DB2 9 support

2008-2011: Portfolio Expansion & ROI Focus
- Day1 Support of DB2 10

Today: Reduce TCO & Increased Value on z
Why IBM Information Management Solutions for DB2 for z/OS?

- **Data Access & Availability**
  - Fast retrieval of information
  - Reducing the amount of down time or minimizing batch window for maintenance

- **Performance & TCO**
  - Meeting or exceeding SLA’s and/or chargeback
  - Reducing CPU and ET to achieve lowest TCO

- **Automation & Standardization**
  - Reducing repeated tasks, manual effort and error
  - Ensuring consistency at company level

- **Continuity & Resiliency**
  - Ensuring data integrity
  - Ensuring Day-1 support of new versions of database engines (DB2 and IMS)
Trends in Database/Performance Management

- Data Volume growth puts pressure on IT infrastructure, SLAs and performance
  - Average data growth per year is approximately 30%
  - Large critical application data growth rate is > 50%

- In the last 10 years the number of objects needing performance management has increased:
  - The number of objects that need management has increased 3X
  - the number of objects per DBA has increased 4X

- Dynamic workloads create unpredictable performance, increasing the complexity of performance tuning

- Bad SQL can impact performance creating major challenges if tuning is not done for applications

- Running multiple databases on a server has become the norm

- 90% of customers have more than one DBMS ➔ Resource/skill issues, consistent administration efforts, increased cost in administration, greater time to resolve issues impact SLAs
For DB2 … Someone has just reported a performance problem. Where do you start?

- Could the problem be in DB2 itself?
  - Did you run out of system resources?

- Is the problem related to poorly coded SQL?
  - Is the SQL static or dynamic?
  - What is the access path?

- How about the network?

- When did this occur? Is this a one time occurrence, or has it happened before?

- Is the information stored in a history file somewhere?

- Do you have the knowledge, time, and expertise to do the analysis and determine the problem?
Identify, diagnose, solve and prevent performance problems

The Need: To provide tools to monitor and tune DB2 systems and applications to obtain optimal performance and lowest cost

1. Identify
   - Receive alerts of potential problems
   - Visual quick scan of complex environment

2. Diagnose
   - Drill-down into problem detail and related context
   - Analyze captured data

3. Solve
   - Monitor and analyze historical data trends for planning
   - Auto-manage workloads

4. Prevent
   - Receive expert advice for problem resolution
   - Correct the problem (SQL, database)
IBM DB2 Performance Management Tools Solution

Identify, diagnose, solve and prevent performance problems

1. Identify
2. Diagnose
3. Solve
4. Prevent

- DB2 Query Monitor
- DB2 SQL Performance Analyzer
- Tivoli OMEGAMON XE for DB2 Performance Expert
- Optim pureQuery Runtime
- Optim Query Workload Tuner

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