



IBM Information Management – DB2

# It's time to switch IBM DB2 – the Database optimized for SAP

**Wilfried Raunikar**

Sales Leader Database & BI  
Central Eastern Europe  
Austria & Switzerland

## Agenda

- **Why customers choose DB2**
- **Proven fast & reliable technology**
- **Simple install and administration**
- **Price Advantage**
- **Migration to IBM DB2**
- **SAP / IBM partnership**

# SAP DB2 Customers on Linux, Unix und Windows

JAB  
ANSTOETZ



## Migration Austrian Railways



- “We chose DB2 for our SAP implementation because it was a better value than Oracle. With administrative and other costs figured into the total cost of ownership, [DB2 is 25 percent less expensive than Oracle.](#)”

- In addition to price, chose DB2 over Oracle because the high availability and disaster recovery capability DB2 is supported for SAP solutions whereas the Oracle RAC high-availability functionality is not. One of the major advantages of DB2 that [we get a disaster recovery solution for SAP system with HADR at no extra cost.](#)”

### *Software*

- IBM DB2 Universal Database for AIX, Enterprise Server Edition, Version 8.2
- IBM AIX 5L, Version 5.3
- IBM HACMP™
- IBM DB2 HADR
- IBM Tivoli® Storage Manager

rku.it

## - SAP Oracle to SAP DB2 Migration on pSeries



### Scope of Project

- About 60 SAP Instances
- Database sizes from 50 GB to 1.1 TB
- Users from 5 to 1.000, total 4.500 user
- SAP-Modules: R/3, HR, IS-U, EDM, BKA, BW, PT, EBP, PS, WAS, Portal, CRM

### Issues with Oracle

- Cost transparency
- Scalability and performance

### Why rku.it chose DB2?

- Lower TCO, flexible contracts
- Improved database administration within SAP – DB6cockpit, backup/restore
- Broadest platform support
- Superior support structure
- Excellent performance. Measurements show up to 40% performance improvement thru DB2

## E.G.O.

### Profile

- **E.G.O.** is one of the leading suppliers to manufacturers of household appliances worldwide. The foundations for building the company were laid as far back as in 1931, in Oberderdingen, Germany, where the group still has its headquarters today.

### Challenge

- Replace the aging hardware and existing database with modern IBM Unix servers and IBM DB2.

### Benefits

- The result was major advance in performance for the SAP solutions with considerably shorter response times. Flexible, dynamic server, database and network environment that supports the E.G.O.-specific data back-up model and could be implemented at relatively low costs.

## E.G.O.

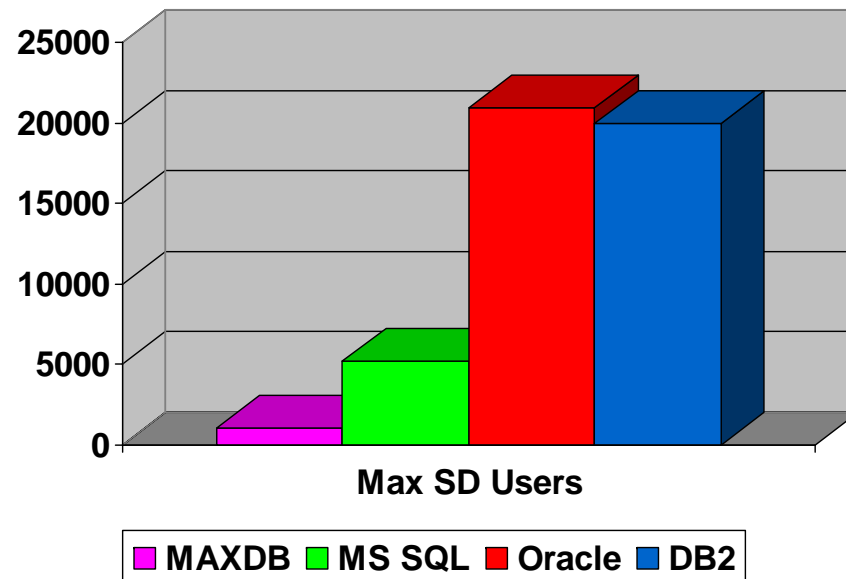
*IBM DB2 Universal Database Version 8 was chosen as the new database system, offering excellent integration into the SAP GUI, logical design and the easy installation – all features that won the IT experts over.*

*“We were surprised at how quickly we got a grasp of DB2,” says Manfred Leistner. “This was thanks to both the simple DB2 user interface and the excellent support we received from the DB2/SAP Support Team at IBM.”*

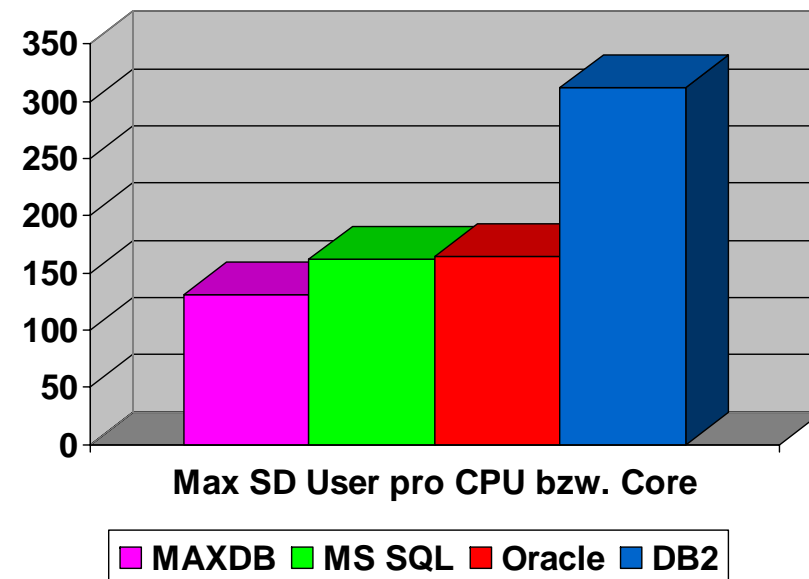
*Manfred Leistner,  
manager of the E.G.O. Group data*

# SAP SD 2-Tier Benchmark Ergebnisse

Maximum # of users achieved



# of Users per CPU resp. Core



Quelle: [www.sap.com/benchmark](http://www.sap.com/benchmark) - Status: 2. Juni 2006

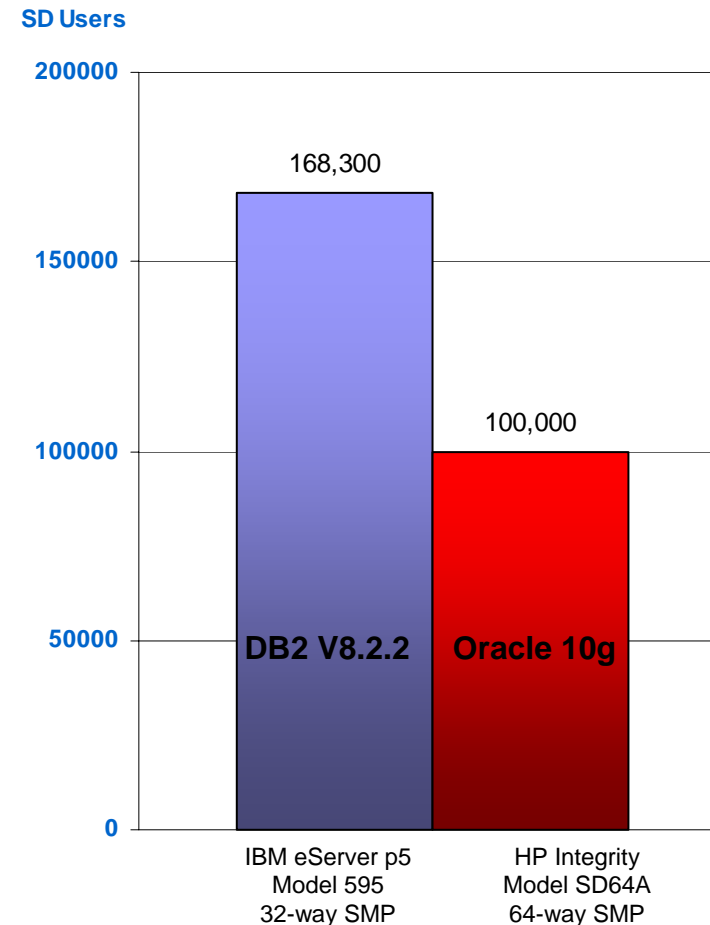
## Leading Performance 3-Tier SAP SD Benchmark\*

This benchmark represents a 3-Tier SAP R/3 environment in which the database resides on it's own server

- Shows DB2's ability to scale up to 168,300 SAP SD users – ready for large customer environments
- Used RDBMS Versions:
  - DB2 V8.2.2 – optimized for SAP solutions at DB2 availability
  - Oracle 10g – **certified 24 month after product availability**

Result: 68% better performance for DB2

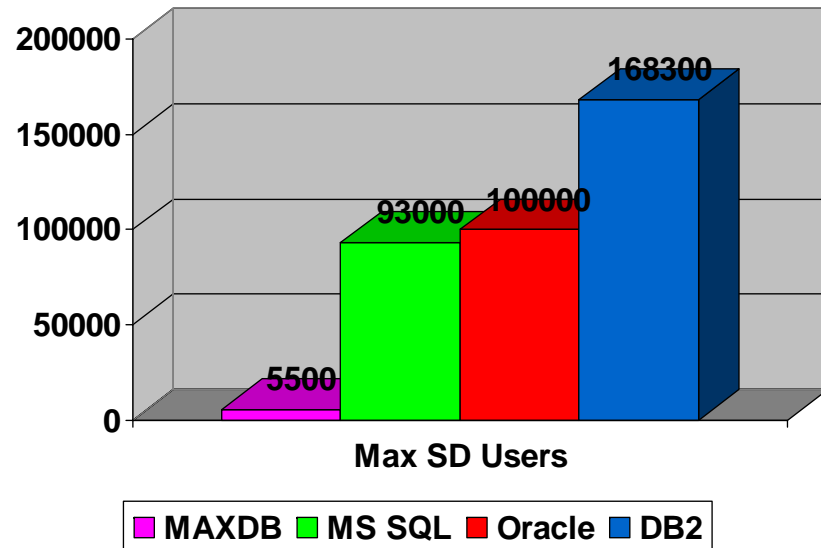
SAP Sales & Distribution,  
R/3 Release 4.7, 3-Tier Benchmark  
Best Result by Database Vendor



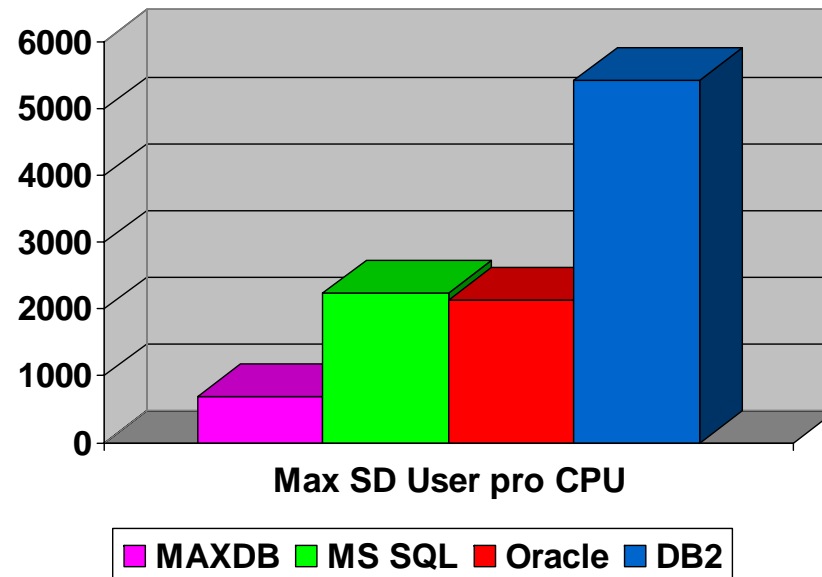
\*Results referenced are current as of May 13, 2005.  
For the latest SAP results, visit <http://www.sap.com/benchmark>.

# SAP SD 3-Tier Benchmark Results

Maximum # of users achieved

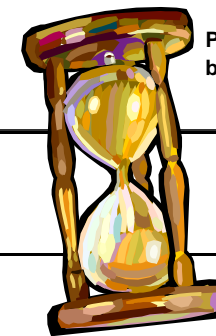


# of Users per CPU resp. Core

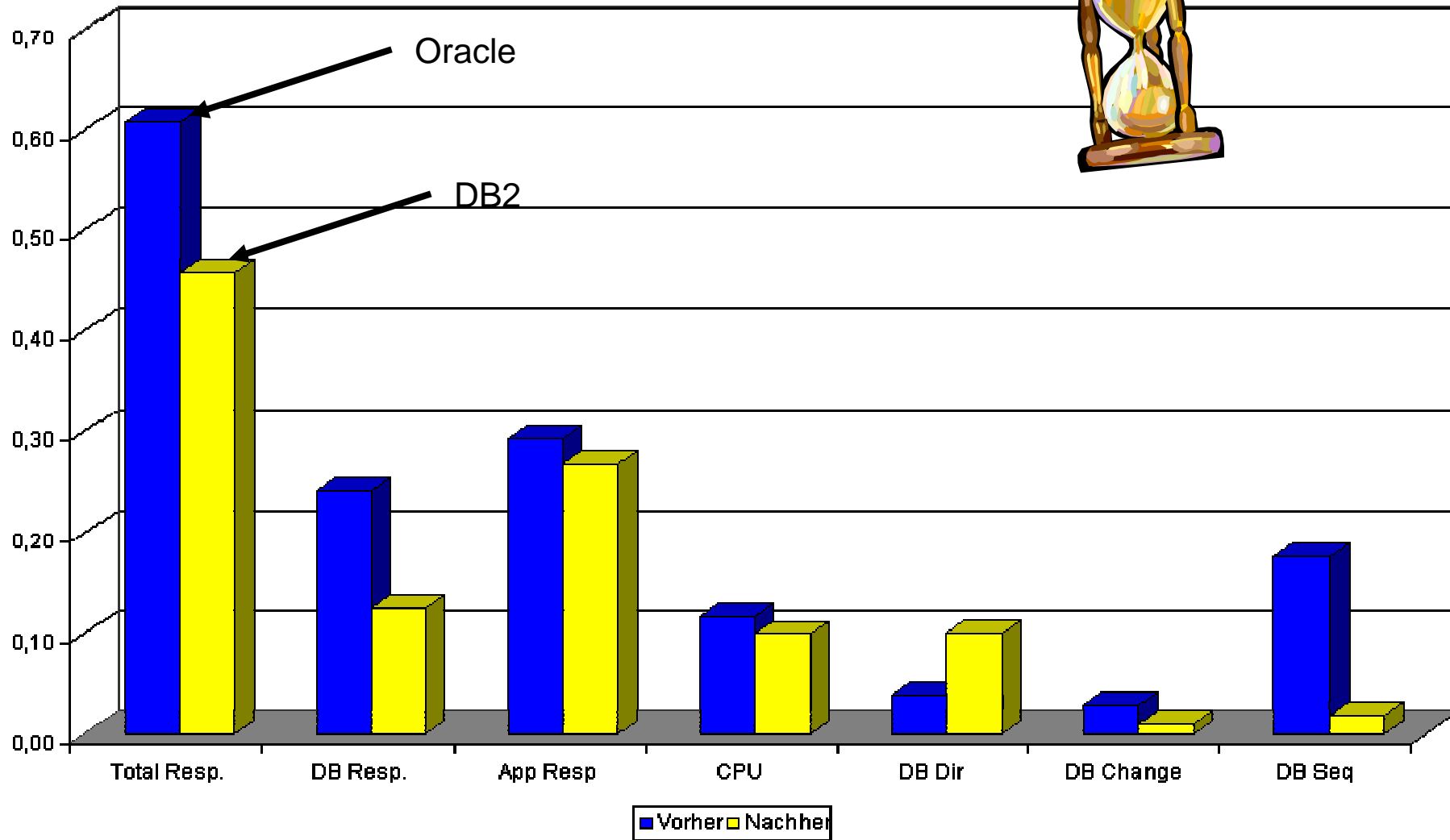


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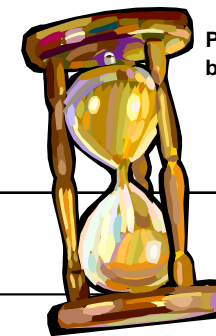
# Dialog: Responsetime



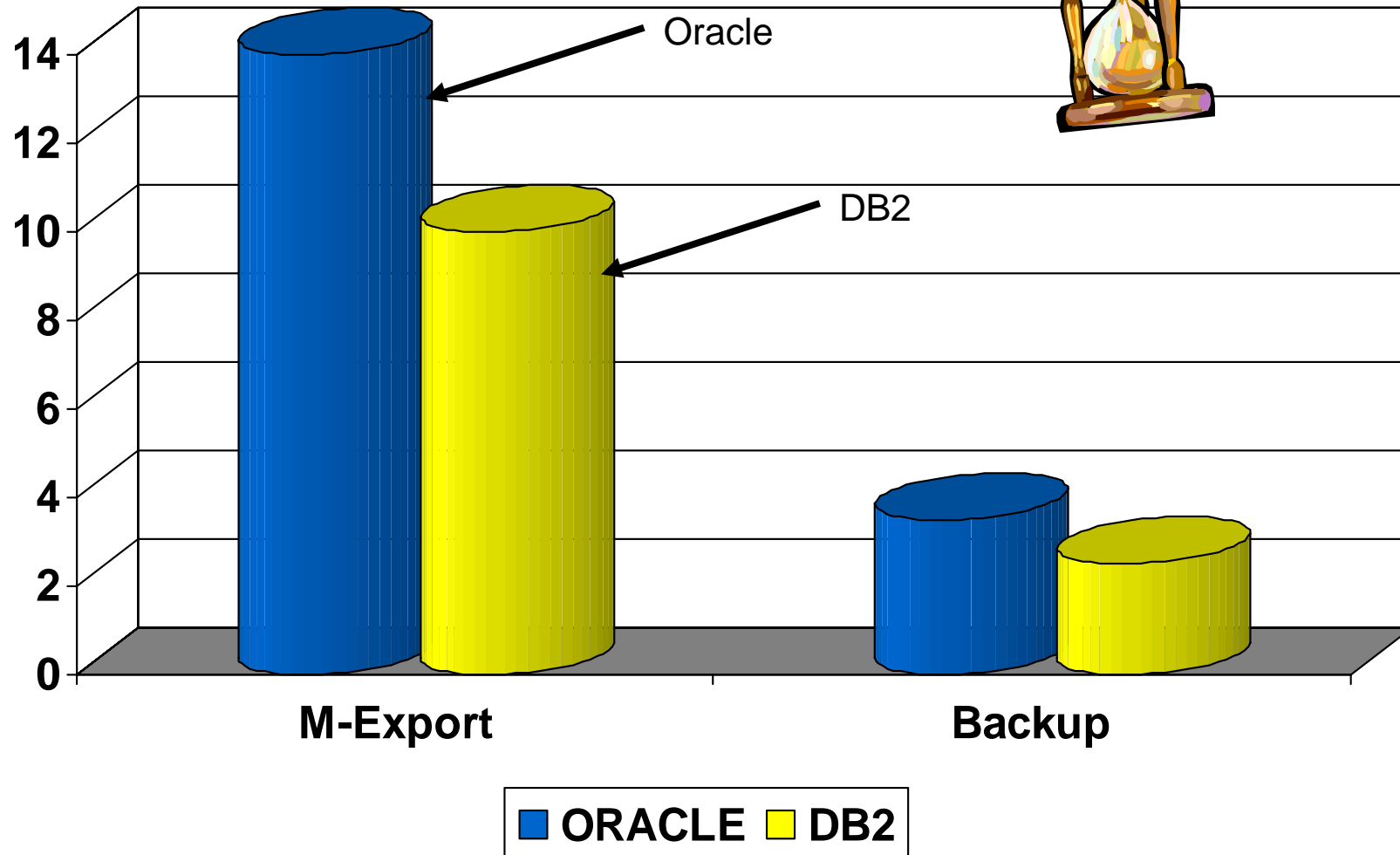
Performance comparison done by customer (rku)



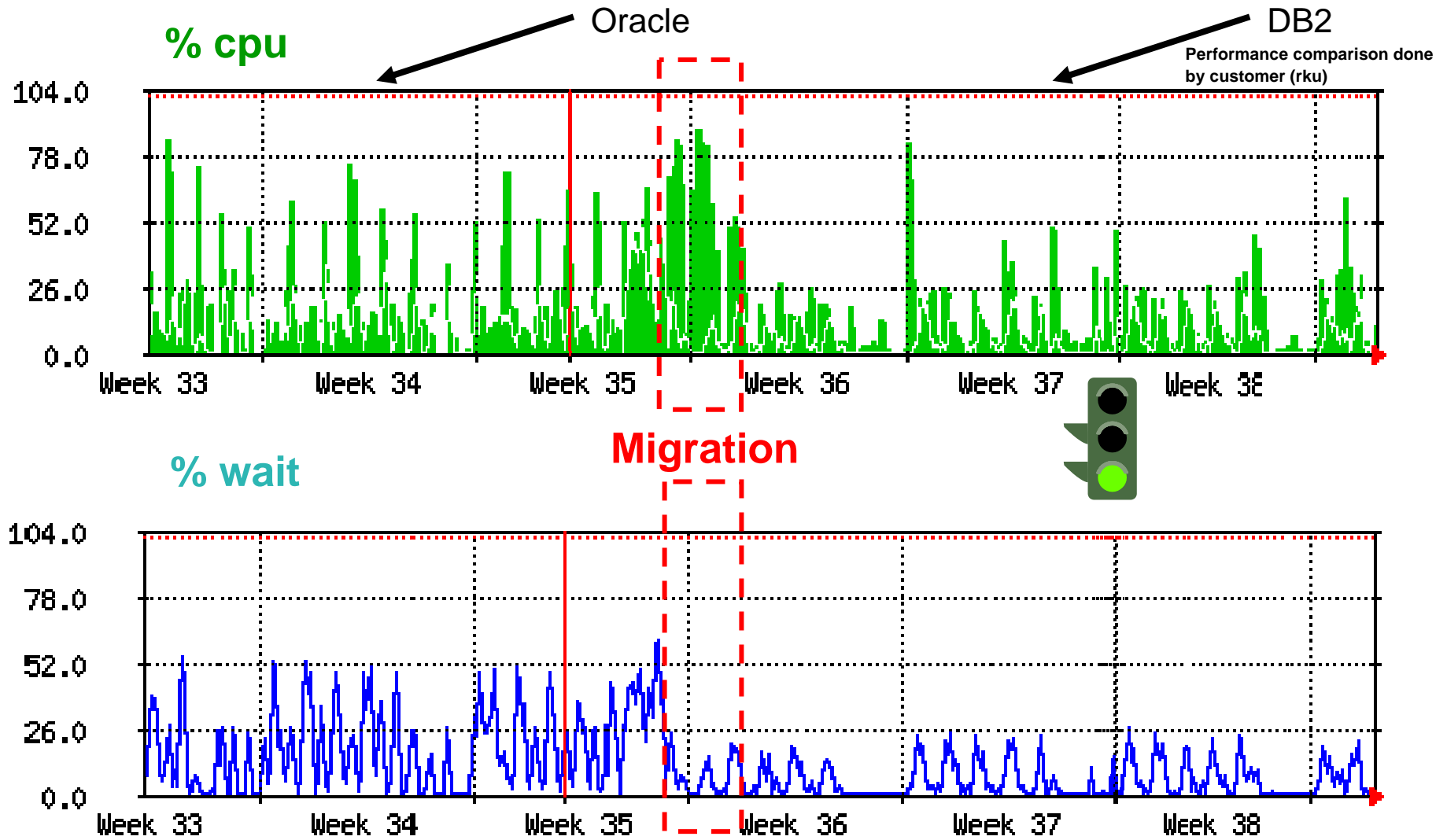
# Runtime Batchjobs



Performance comparison done by customer (rku)

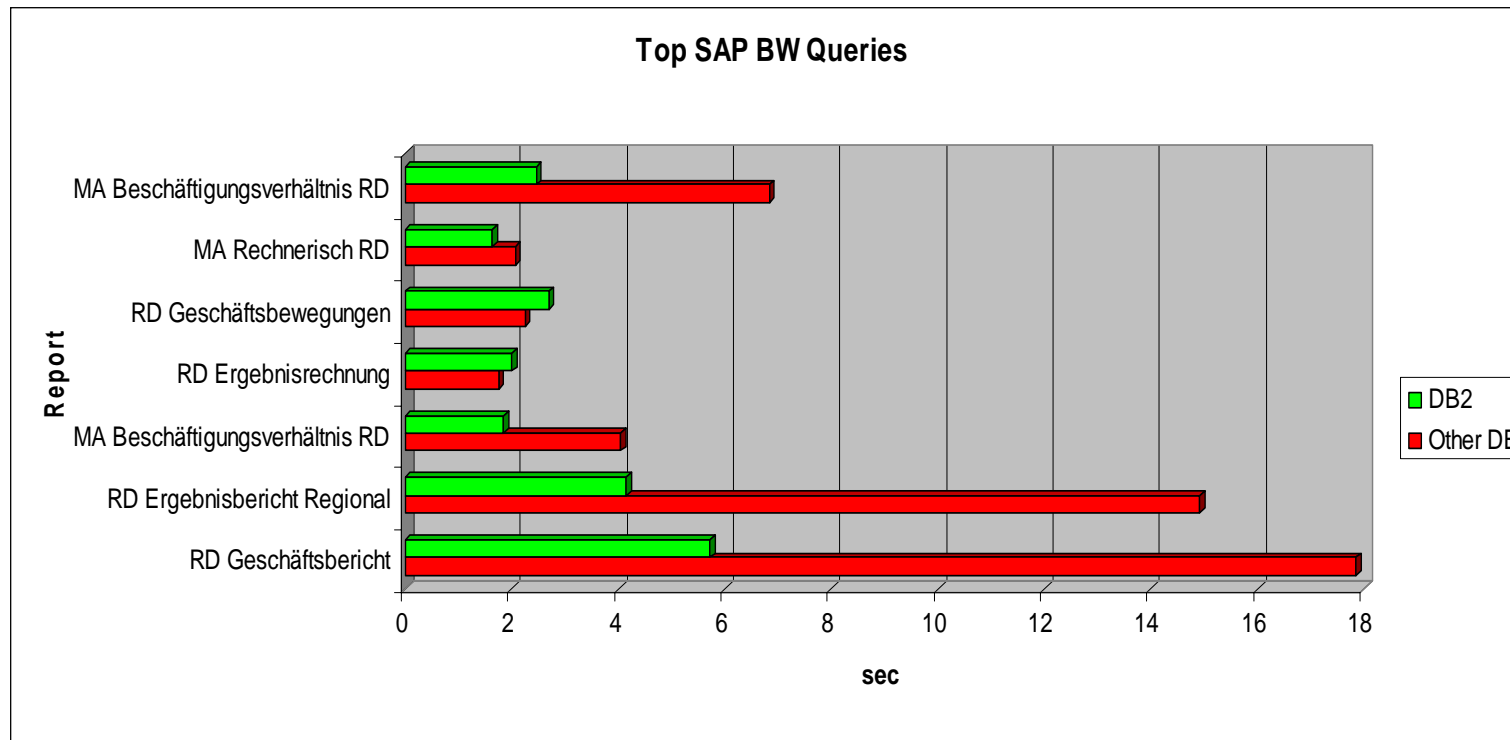


# Database Server load post Migration



## Top SAP BW Query performance test done by SIEMENS

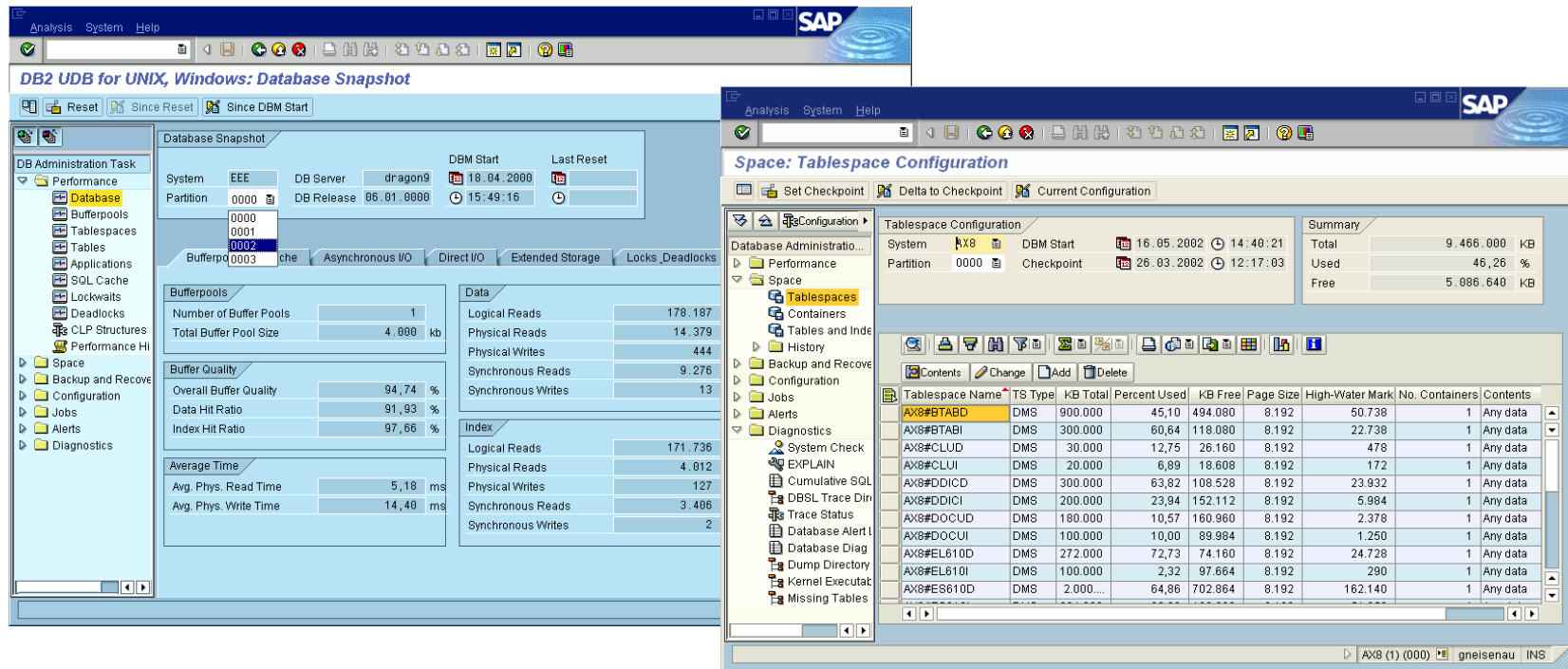
- **Test case: Measurement of runtime of several SAP Business Warehouse Queries with transaction RSRT**
  - DB2 on average 2.42 times faster
  - DB2 up to 3.6 times faster



# Unique SAP/DB2 Monitoring and Administration

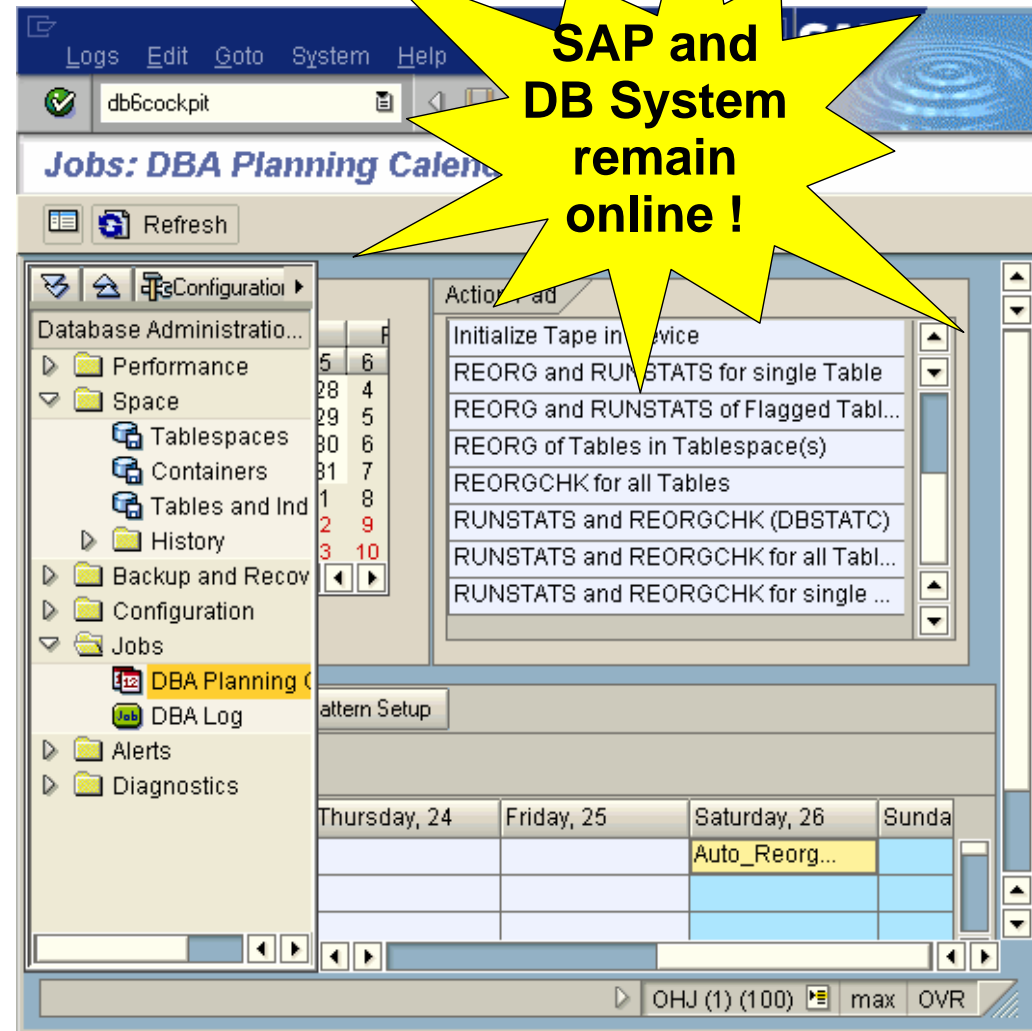
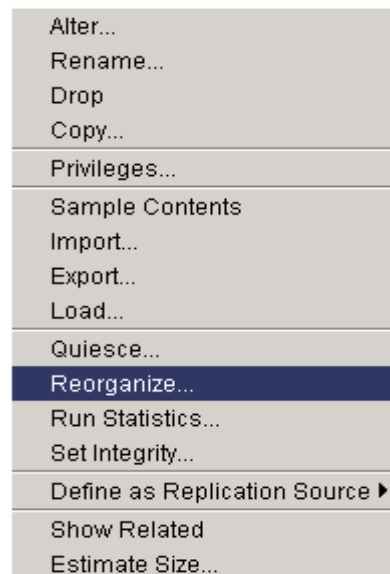
SAP WebAS comes with integrated administration and monitoring tools for DB2

- Full multipartition support
- Ability to work with any DB2 database in the system landscape (also non-SAP)
- Comprehensive user interface



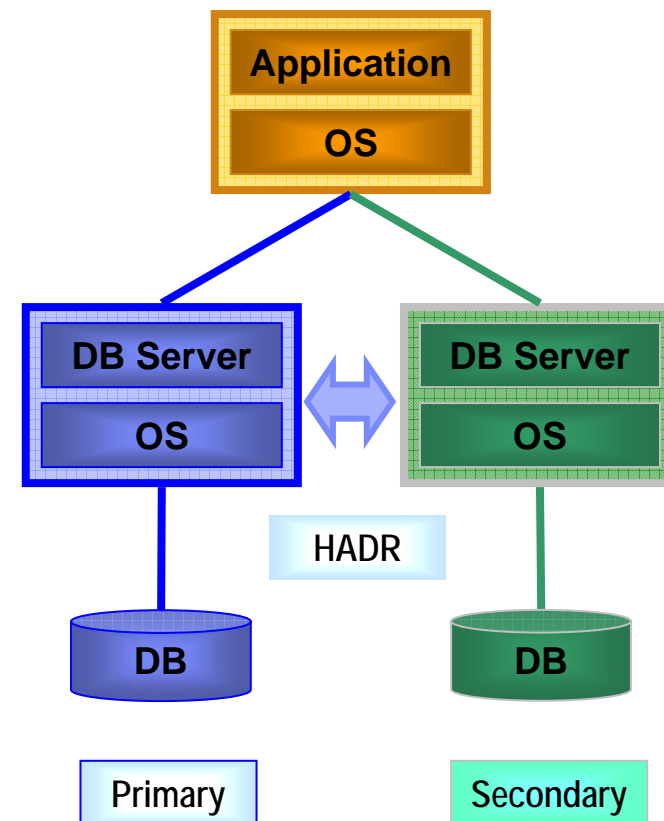
# DB2 Online Reorganization

- Online + Simple
- Under control of DB2 DBMS & SAP DB6COCKPIT



## HADR: High Availability Disaster Recovery

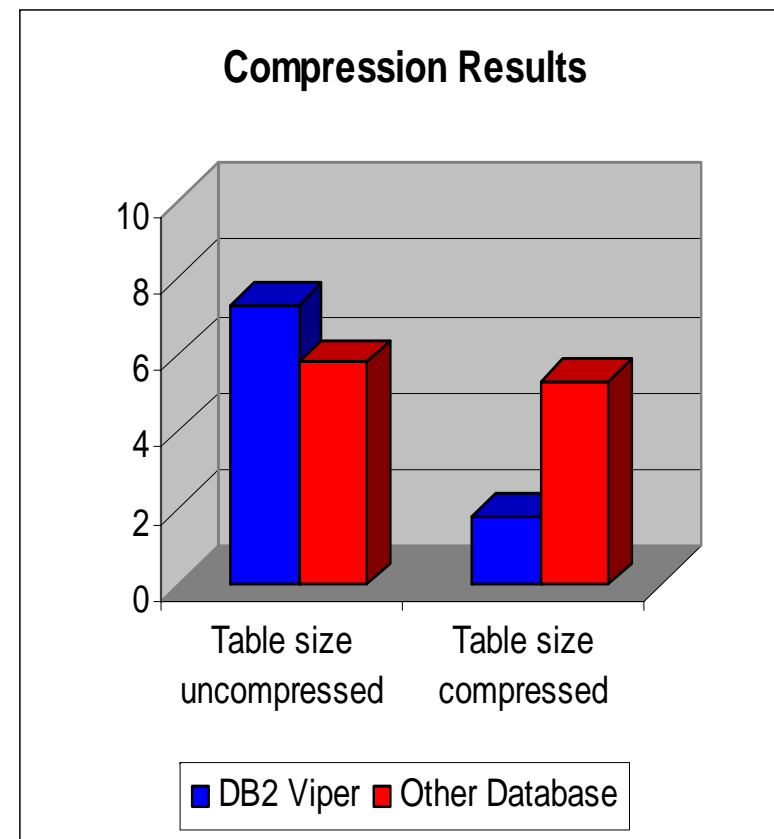
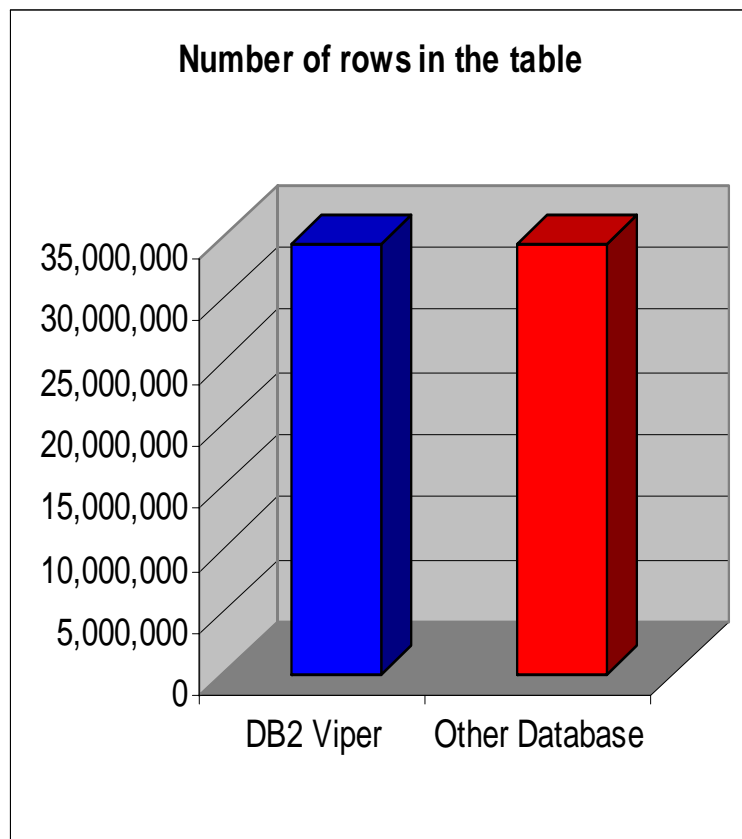
- **High Availability Disaster Recovery for**
  - Ultra-fast failovers (no instance restart)
  - Rolling upgrades
- **Two active machines**
  - Primary
    - Processes transactions
    - Ships log entries (not logfiles) to the other machine
  - Secondary
    - Cloned from the primary
    - Receives and stores log entries from the primary
    - Re-applies the transactions
- **If the primary fails, the secondary can take over the transactional workload**
- **If the failed machine becomes available again, it can be resynchronized**



*Failover in 11 seconds demonstrated in test of SAP environment with 600 users !*

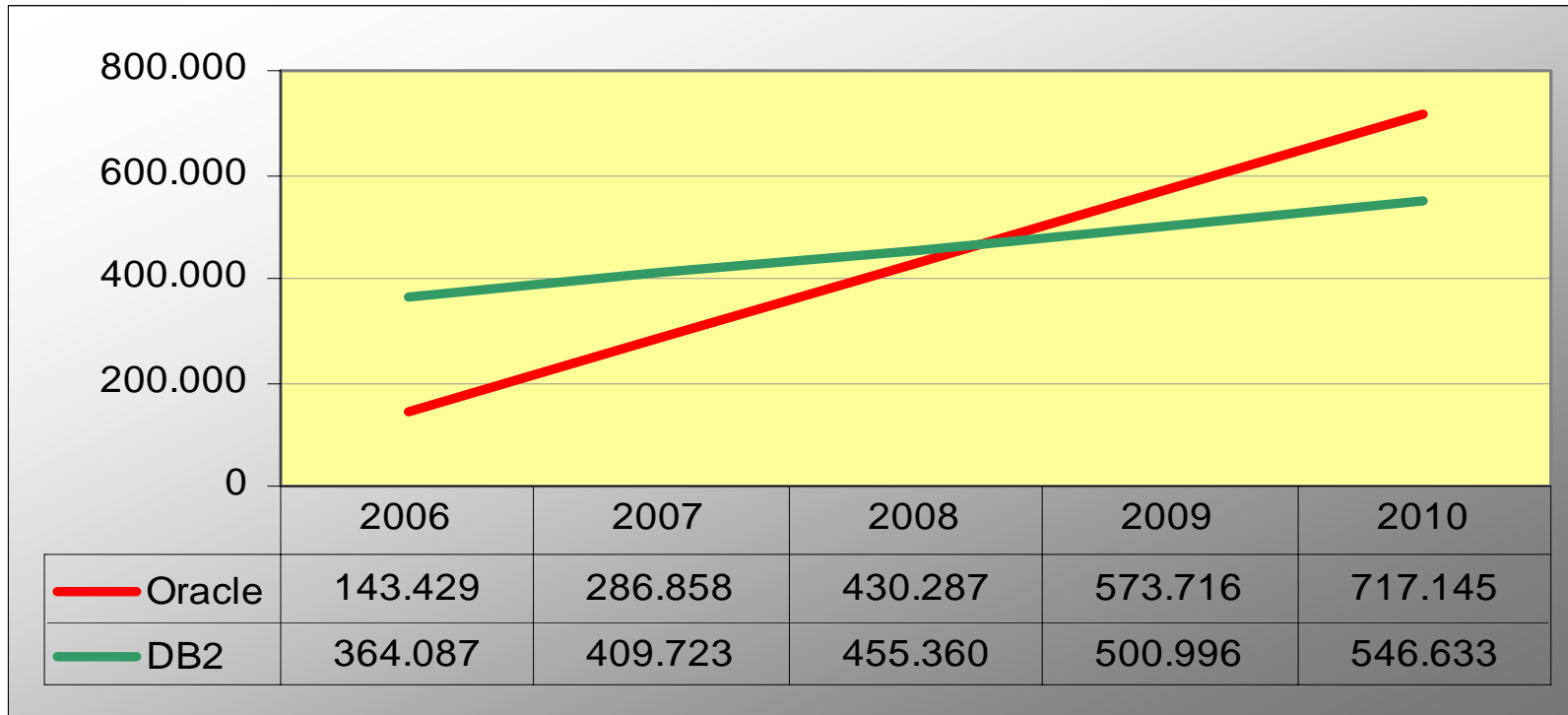
## Data Compression on SAP R3 Table with DB2 9 (Viper)

- Direct effects and savings from row compression on table SAP R3 STXH
  - DB2 compression: 75%
  - Other database compression: 10%



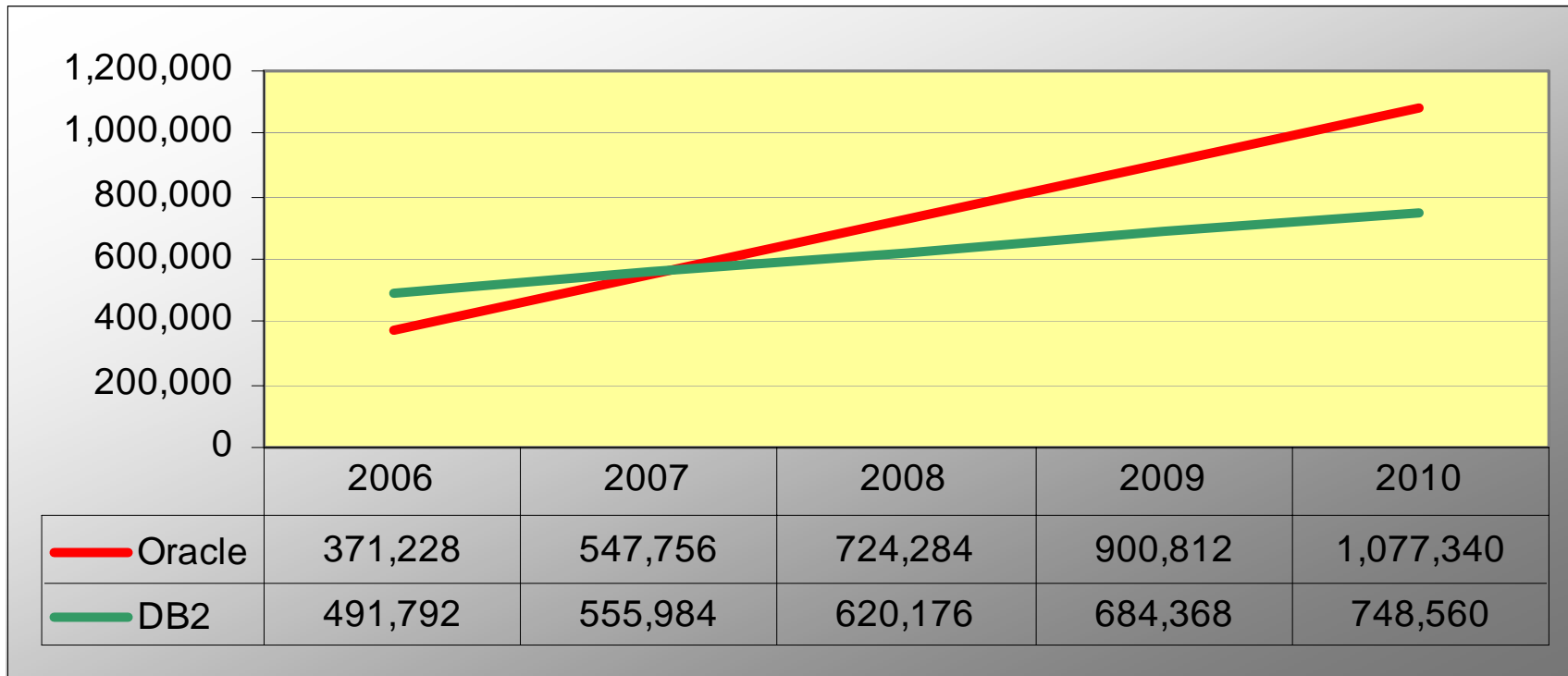
# ROI-Calculation (1) Migration to DB2

*assumption: Oracle-Supportpayments only*



# ROI-Calculation (2) Migration to DB2

Assumption: Buy additional SAP & Database Licenses in 2006



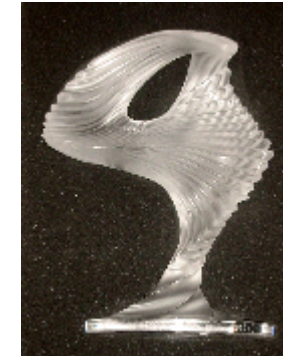
## DB2@SAP - SAP a Customer of IBM DB2

- **IBM DB2 one of the main development platforms within SAP**
- **Scope**
  - Development and test systems for future releases of
    - SAP CRM 5.0
    - mySAP ERP 2005
    - SAP SCM 5.0
    - SAP NetWeaver BI, SAP NetWeaver MDM
  - Widely used across various development and QA systems of
    - SAP ECC 5.0
    - SAP NetWeaver BI, Web Application Server (J2EE)
    - SAP Bank Analyzer
    - mySAP SCM
    - SAP R/3 Enterprise
- **Currently ~ 450 systems running on DB2**

*"Since 1999, SAP has worked closely with IBM around DB2 to give our customers a competitive edge," said Karl-Heinz Hess, senior vice president, Active Global Support, SAP. "IBM's latest release of DB2 is a substantial step in our joint integration efforts. This tighter integration will allow our customers to enjoy more enhanced performance of SAP solutions at an even lower cost." Source: SAP IBM Press Release, April 26th, 2005*

## DB2 Optimized for SAP – The Building Blocks

- **Partnership: Joint development and QA**
  - *All teams that work on SAP on DB2 are joint teams from SAP and IBM. We jointly work in development, QA, testing and service.*
- **Integration: One product, one service, one maintenance strategy**
  - *SAP on DB2 comes as one integrated product: From integrated install and one-stop service to a synchronized maintenance schedule*
  - **DB2 aligned with SAP maintenance strategy “5 + 1 + 2”**
- **Product innovation: The SAP on DB2 Roadmap**
  - *The DB2 roadmap covers 4 releases and will provide extraordinary innovation and value to our joint customers.*

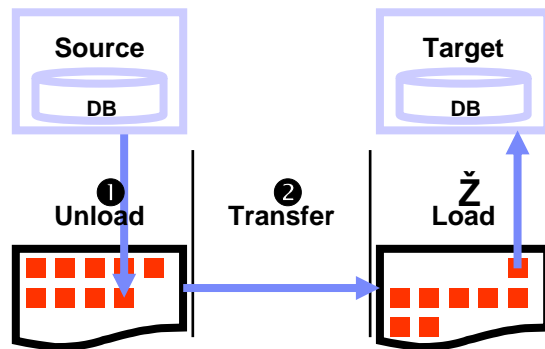


**SAP® Pinnacle Awards 2006 WINNER**

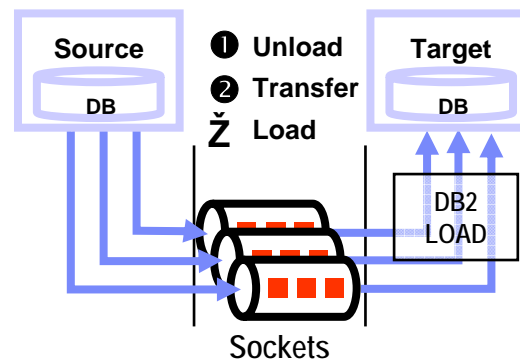
**“2005 Best Technology Solution”**

**The partnership between SAP and IBM is unique!**

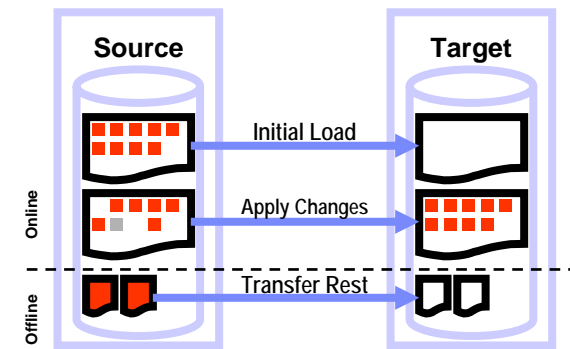
## SAP Database Migration-Methodologies



**Capacity:** ~ 250 GB/weekend  
 However: 800 GB achieved within  
 60 hours incl. admin. tasks



**Capacity:** 650 GB in 22 hrs  
 Max. Capacity dependent on HW



**Capacity:** No Limit re. DB-size;  
 Process limited through size of  
 largest tables and update rate

### Standard Project with minimal risk based on SAP tools and processes

- Duration of complete migration project typically between 2 – 6 months (dependent on number of systems to be migrated and preparation and test times)
- Various migration methodologies dependent on database size and “Downtime”-requirements
- Experienced SAP consultants with SAP migration know-how within IBM Service Organization

## Let us talk about a migration to DB2....

- ...if you plan a change in Hardware and / or OS**
- ...if you plan to consolidate your database servers**
- ...if you plan to introduce new modules of SAP or Unicode**
- ...if SAP BI does not perform on your existing database platform**
- ...if you simply want to reduce cost**
- ...if you are not satisfied with your current database provider**

## Additional information

- **IBM SAP Alliance**

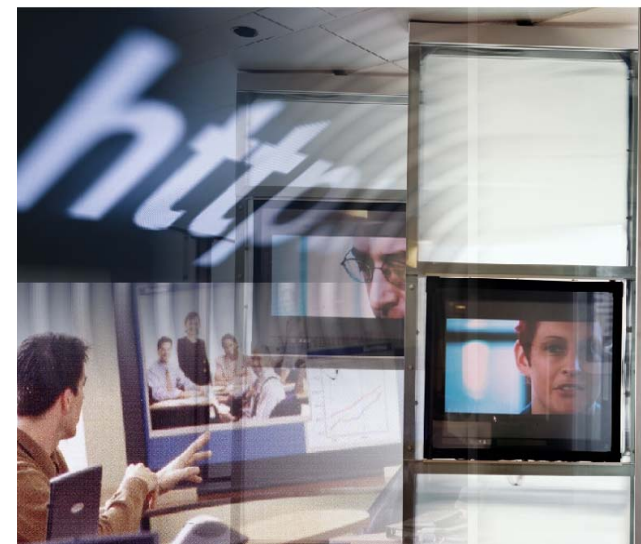
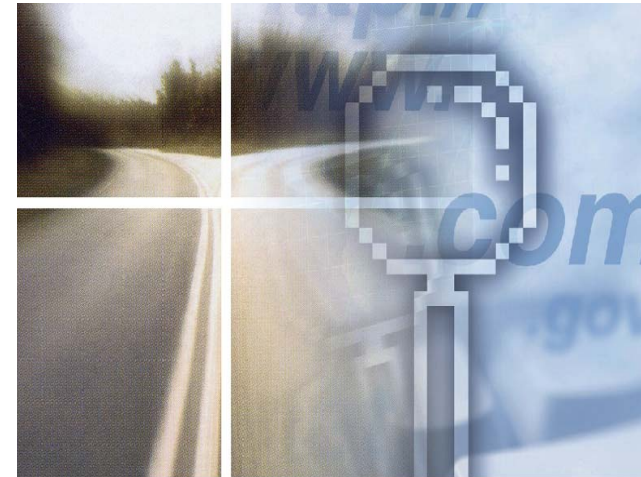
[www.ibm.com/solutions/sap](http://www.ibm.com/solutions/sap)

- **IBM DB2 IM and SAP**

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Thank  
YOU