

IBM DB2 Sort for z/OS

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DB2 Sort for z/OS v1.1 – Announced August 10th, 2010

- **DB2 Sort is generally available in 09/2010**
- **What is it?**
 - DB2 Sort is a new DB2 OTC product that provides high speed utility sort processing for data stored in DB2 for z/OS.
 - It improves sort performance while optimizing overall system efficiency by exploiting the advanced facilities of the z/OS operating system and System z.
 - DB2 Sort leverages SyncSort sort technology for DB2 utility sort processing
 - Developed through relationship between IBM and Syncsort
 - Developed specifically to execute **today** with the DB2 Utilities
- **DB2 Sort v1.1 (5655-W42) requires:**
 - DB2 Version 8, DB2 9 or DB2 10 / DB2 Value Unit Edition with the following
 - z/OS 1.9 or higher
 - DB2 Utilities Suite Version 8,9 or 10 (depending on DB2 for z/OS level)

Features of DB2 Sort for z/OS V1.1

- zIIP support to lower billable CPU usage associated with sorting
 - Value: The higher the zIIP offload, the more reductions in CPU, the greater the savings
- Optimization on specific I/O devices to utilize the best I/O transfer technique
 - DB2 Sort monitors the I/O transfer rates
 - Value: Adjusts the use of devices to balance the I/O load to achieve the best elapsed time
- Memory Optimization
 - DB2 Sort determines the availability of system resources and selecting the appropriate amount of storage to allocate.
 - Value: Maximizing system resources while minimizing DASD requirements

Features of DB2 Sort for z/OS V1.1

- Dynamic allocation of intermediate work space
 - DB2 Sort minimizes the amount of DASD space used. It helps avoid sort capacity errors caused by insufficient amounts of work space and a better usage of intermediate work space to not over allocate space.
 - Value: Conserves resources as well as the CPU usage that would be spent in the allocation

- Synergy with the IBM Utilities to determine the optimal number of sorts to run in parallel, “intra-regional” parallelism.
 - DB2 Sort assesses the availability of system resources and communicates with the utility to optimize the allocation of resources for each sort based on the data characteristics.
 - Increases the number of sorts that can be run simultaneously
 - Value: Higher degree of parallelism results in lower elapsed utility processing time

- No utilities JCL changes needed!

Performance

- Customers using DB2 Sort V1.3 may see during certain utility sort processing:
 - **Up to 40% in reduction of sort elapsed time**
 - **Up to 70% reduction of sort CPU**
 - Total CPU utility time 30%-45% reductions
 - Up to 30% zIIP offload of remaining CPU

- IBM DB2 Utilities where you'll see performance benefits
 - **LOAD, REORG, RUNSTATS, REBUILD INDEX, CHECK INDEX and CHECK DATA**
 - **HPUNLOAD**

- Workloads where there is more likely to be a benefit from utility sort processing and DB2 Sort such as:
 - Highly-transactional workloads performing lots of insert, update, delete operations requiring RUNSTATS and REORG
 - Applications such as data warehousing applications that are performing frequent or large volumes of loading data requiring LOAD and REBUILD INDEX



**Customer results may vary. Results based on analysis done at SVL lab*

Utility Workload Analysis in a Spanish customer

DB2 Utilities Sort Analysis Reporter - Summary

| DB2 Utilities SMF Analysis | | Environment | |
|--|--------------|----------------------------------|----------|
| Earliest DB2 Utility Execution: | 17-Oct-11 | LPAR Name: | STLABD2 |
| Latest DB2 Utility Execution: | 23-Oct-11 | Machine Type: | 2084 322 |
| Number of Days: | 7 | Operating System Level: | 1,11 |
| Number of LPARs: | 4 | DB2 Level: | 9 |
| Number of Utility Executions: | | Number of Regular Processors: | 4 |
| LOAD: | 1.256 | Number of zIIP Processors: | - |
| REORG: | 1.443 | Amount of Memory: | 12G |
| REBUILD INDEX: | 0 | Default "Above the Line" Region: | 32M |
| Other Utilities & Tools: | 0 | | |
| Total: | 2.699 | | |
| Sort CPU time within Utilities (mins): | | | |
| LOAD: | 134 | | |
| REORG : | 392 | | |
| REBUILD INDEX: | 0 | | |
| Other Utilities & Tools: | 0 | | |
| Total: | 526 | | |

➤ **Estimated CPU savings in 1 week: 526min x 0.6 = 316min (5h16min)**

Informati धन्यवाद
Hindi

多謝

Traditional Chinese

ขอบคุณ 
Thai

Спасибо
Russian

Thank You

English

Gracias!

Spanish

شكراً

Arabic

Merci
French

Obrigado

Brazilian Portuguese

Bedankt

Nederlands

多谢

Simplified Chinese

Danke

German

நன்றி

Tamil

ありがとうございました

Japanese

감사합니다

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