Newsletter 10 2024. (DS8A00 IBM)

IBM announced the general availability of the Storage DS8A00, designed for enterprise-class storage and specifically tailored for IBM Z mainframe architectures. The DS8A00 series storage is designed to leverage the full capabilities of the IBM Z (7370 TERA for the set of two frames). It offers access to critical workloads with consistent data performance (80 µsec response time) and a modular architecture (NVMe).

This is a significant leap in hardware capacity and performance that is in line with your new needs for the near future and fits well with new AI projects.

But 7.37 PETA is huge, the new high-tech hardware components of the z series will manage this space well, but your z OS disk manager will probably have to be more vigilant on the I/O performance aspect because each client is different and especially in the Back-End of the z OS disk arrays. This is why we added a new feature in EADM (ESSM release 2).

Between 1970 and 2024 something has not changed is the composition of a z OS disk response time (Response Time = Connect Time + Disc Time + Pending Time + IOSQ) and this despite the recent virtualization of the Back-End, the information of the ''Response Time Disc'' therefore always remains important.

The creation of this ''Response Time Disc'' value comes from the RMF CMF reports following the analysis of the SMF Binary files. It is the SENSE TEST I/O CCW which feeds the SMF74 records.

The CCW (Channel Command Word) is a key element in the IBM mainframe architecture, particularly in the management of input/output. A CCW is a command that tells the control channel how to interact with storage or input/output devices.

The **SENSE TEST I/O command** is a type of CCW command used to test and retrieve the status of an IBM, HITACHI, or DELL EMC z OS disk subsystem. Here are some key points about this command:

1. **Functionality** : It allows the system to query the status of an I/O device, which can be useful for diagnostics or error handling.
2. **Usage** : When a system sends a SENSE command to a device, it receives detailed information about the device's operational status, which may include data about errors, capabilities, or alerts.
3. **Importance for management** : This allows administrators to better understand potential issues with devices and take corrective actions if necessary.

In summary and whatever the Hardware add-ons you always have the necessary information to understand the internals of the z OS disk subsystems with the RMF or CMF .txt files. Our EADM application is compatible with all RMFs from V1R11 to V3R1 and moreover with each feature add-on in RMF the EADM application will show you in the form of a graph over 24 hours or more the new I/O behaviors.

Below is the simplified architecture of a new disk array in 2024 and on the right the visualization of an I/O activity of the LPAR UKL541 which uses this disk array shared by other LPARs (we can see a non-stable DISC TIME for this LPAR UKL541).
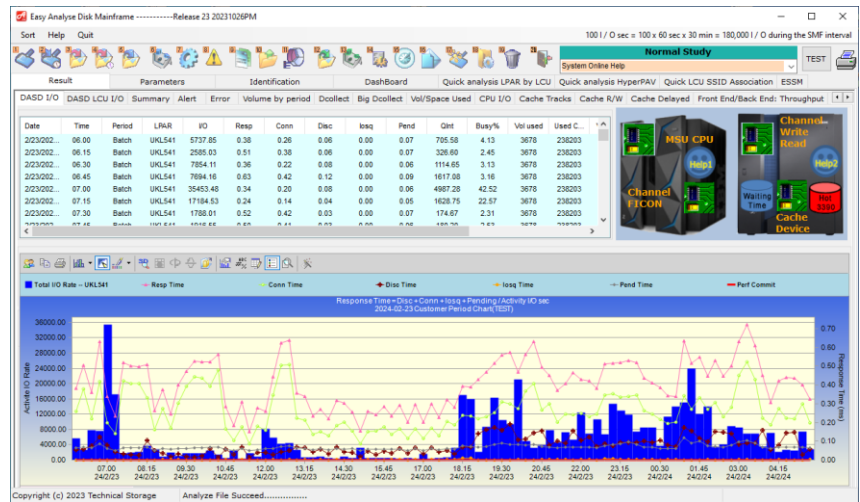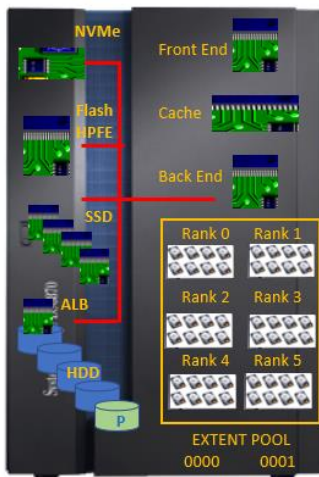
ESSM Release 2 allows you to see the global Back-End activity in Read and Write (of all LPARs because the 'Back-End' is virtualized) in a few seconds. In this example, EADM shows high response times in Write on EXTENT 0 (probably the cause of a large DISC).In terms of economy, if you have 100 LPARs, there is no need to create 100 RMF or CMF files. A single file allows you to discover the Back-End activity.

Conclusion: Whatever new hardware technologies are present or coming, the RMF CMF I/O indicators will be there to help you and if you have EADM it will be simpler and faster.

TECHNICAL STORAGE Part-Dieu Tower 129 rue Servient 69326 LYON Cedex 3

www.technical-storage.com   tel: 04 72 53 59 53 Port: 06 20 28 36 44