



IBM Washington Systems Center

Non IMS Performance PARMs

Dave Viguers
dviguers@us.ibm.com

Edited By:
Riaz Ahmad
IBM Washington Systems Center



SMFPRMxx

- Check DDCONS
 - Yes (default) causes SMF to consolidate data set information at SMF INTVAL
 - Might cause delays at SMF interval
 - Affect most noticeable on address spaces with large numbers of data sets
 - DB2
 - IMS
 - Best to specify NO
 - But some monitors may require YES for some functions

Work Load Manager (WLM)

- Don't micro manage
 - WLM is adjusting region priority
 - IMS schedules into regions
 - Don't go below class level if possible
 - Especially if many trans in a class
 - WLM may be adjusting too frequently
 - For little or no benefit

WLM

■ Possible settings

- IMS & DB2 address spaces
 - Importance 1 (maybe CPU critical)
- MPP's
 - Importance 2 (maybe CPU critical)
- BMP's
 - Importance 3 - 5
- If DBCTL then AOR's similar to MPP's
- IRLM
 - SYSSTC

GRS / RECONS

▪ RESERVE / ENQ

- Exclude or Convert - but do at least one
 - Exclude if
 - possibility of 'other' systems outside this sysplex with access
 - Consider using SYNCRES option (GRSCNFxx)
 - eliminates DBRC OBTAIN to force I/O
 - Convert if
 - GRS star
 - Other data sets on same volume
 - Resource - DSPURI01 (SYSTEMS level)
 - DSPURI02 at SYSTEM level (not systems)

GRS / RECONS

- GRS uses system resources
 - CF structure(s)
 - Delays in access can affect entire sysplex
 - Monitor with RMF

- Don't forget basic RECON placement guidelines
 - Important for availability if not performance
 - Separate volumes for each RECON
 - Each one with own catalog on same volume
 - Different sizes with spare being largest

- DBRC priority - WLM Importance 1

SECURITY

- We all know that security just gets in our way
 - Unfortunately we can't usually control

- RACF (or whatever security manager)
 - Uses system resources
 - CF structures
 - DASD
 - Data spaces
 - Storage
 - GETMAINs/FREEMAINs

- Use caching to avoid I/O

- RACF enhancements
 - Selective refresh

SECURITY

- Different IMS implementations
 - Depends on source of request
 - Terminal
 - Sign on/off infrequently
 - Hopefully at least
 - ETO ASOT / ALOT ?
 - APPC / OTMA
 - APPCSE= or OTMASE=
 - N is best but C would be next choice
- Use DFSBSEX0 to reduce security calls
 - If users security already checked why do it again?

DB2

- Beside the obvious
 - Check IMMEDIATE WRITE option
 - PH1 can cause delays at syncpoint
 - YES means at actual update time
 - If significant delays problem may be group buffer pool size
 - Also note that CLASS 1 times being high is mostly normal with IMS
 - Time between trans but thread is kept
 - Use WFI/PWFI to keep threads active

MVS Logger

- Things to consider
 - New data set allocations for offload
 - Most likely cause of delays
 - Specify large size in logger policy
 - Amount of data kept
 - 2 CQS structure checkpoints +
 - Data sets are deleted only if 0 records in it are needed

MVS Logger Duplexing

- **Data Space is best**
 - Might not be an option depending on availability requirements

- **System managed duplexing**
 - Could add significantly to response time

- **Staging data sets**
 - Could also add to response time but provides DR with mirroring

Resource Recovery Services (RRS)

- RRS also uses MVS logger structures
- RRS uses XCF as well
- Delays in either can affect IMS response time and thruput

Sysplex Hardware

- CF configuration
 - CF CP speed \geq Host CP speed
 - Minimizes host overhead
 - Dedicated processor(s)
 - No dynamic dispatching
 - Avoid system managed duplexing
 - Weigh value versus cost
 - External CF's typically provide best resiliency
 - Also may remove need for duplexing
 - Staging or System managed

Summary

- **Many other factors of course**
 - Speed of processors
 - Memory
 - DASD
 - Coupling Facilities
 - To name just a few