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DASD Online Formatter Concepts

Design Concepts for Formatting DASD Modules on z/TPF

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Disclaimer / Comments

- These are design concepts on how DASD modules could be formatted on z/TPF and are subject to change
- Please provide comments and feedback at the TPF Users Group or through your customer service representative

Formatting Requirements

- Ability to format modules being brought online by Module Copy (ZMCPY)
- Ability to format unused areas of online DASD modules

Formatting modules for ZMCPY

- Currently, modules must be preformatted before being used by Module Copy (ZMCPY)
- Change Module Copy to always format the target module
  - ZMCPY would format the target track and copy data

Benefits of a formatting Module Copy

- No longer need to pre-format spare modules
  - Spare modules only need correct VSN
- Reduces operational complexity for customers with more than one device type or logical device support
  - No need to select a matching or compatible spare module before starting ZMCPY

Formatting Online DASD Modules

- Propose new z/TPF formatter command to format unused areas of online DASD modules
  - Select tracks and modules to format
  - Start, stop, pause, resume, resume across an IPL, and report status
- Unused areas to be formatted must be defined in the FACE Table (FCTB) as format eligible
  - To be format eligible, tracks can not be defined as fixed, pool, or spare in the SIP deck
  - To protect system integrity, format eligible areas will be kept separate from fixed, pool, and spare definitions in the FCTB

Online Formatter Controls

- For each TPF device type (DEVA, DEVB, etc.), only one format process is allowed at a time
- Format process can be controlled by
  - Number of DASD modules to format simultaneously
  - Number of DASD modules to format simultaneously on the same DASD logical subsystem (LSS)

Proposed Format Procedure

1. If formatting previously in-use areas, complete any pool deactivation. Remove deactivated pools and obsolete fixed records from the SIP deck
2. Build and load a new FCTB to all processors with the obsolete records removed
3. In the SIP deck, define unused areas as format eligible
4. Build and load a new FCTB to all processors with the format eligible areas defined

Proposed Format Procedure (cont.)

5. Using the formatter command, select format eligible areas from the FCTB to be formatted
6. Using the formatter command, select the modules to format to start the verification process
   a. Select all modules or subset for the TPF device type and choose just primes, just dupes, or all modules from the set
   b. Verifies modules are same TPF device type and online
   c. Verifies all tracks to be formatted are marked as format eligible on all active processors
7. Verification completes successfully - enter the formatter command to start the actual formatting
8. Allow the z/TPF formatter to complete

Proposed Format Procedure (cont.)

9. Change the format eligible areas in the SIP deck to fixed, pool, or spare records
10. Build and load a new FCTB with records that use the newly formatted areas
11. Use the ZSVTT command to verify the format of new fixed and pool records
12. Perform a norm state pool reallocation to start using any new pool records

ZMCPY and Format Eligible Tracks

- Module Copy (ZMCPY) will format all target tracks defined as format eligible in the FACE Table (FCTB)
- Preserves new formatting if a module goes offline after the new areas are formatted but before a new FCTB is loaded
- No need to track modules going offline or coming online while using the z/TPF online formatter

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