



IBM Software

Update on z/VM Systems and Storage Management Products from IBM

SHARE Session 9147

Tracy Dean, IBM

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Agenda

- **Overview**
- **What's new**
 - Backup and Restore Manager for z/VM
 - Operations Manager for z/VM
 - Tape Manager for z/VM

Backup and Restore Manager for z/VM

- **V1.1.0 PTFs**
 - “New day” exit
 - CMS RESERVED minidisks
 - Enhanced response to STATUS request
- **V1.2.0**
 - Announce: August 15, 2006
 - GA: August 25, 2006
 - Improved performance
 - Compression and encryption exits
 - FBA and VFB-512 support
 - Worker assignment
 - Miscellaneous enhancements

Operations Manager for z/VM

- **V1.2.0**
 - Announce: February 21, 2006
 - GA: February 24, 2006
- **Support for RACF or other External Security Manager**
- **Monitor logon status of specified user IDs**
- **Support for SET OBSERVER**
- **Flexible data space configuration**
- **Assign an action to a specific action processing server**
- **Enhanced viewing of monitored consoles**
- **New scheduling options**
- **New functions for HMF customers**

Tape Manager for z/VM

- **V1.2.0**
 - Announce: February 21, 2006
 - GA: February 24, 2006
- **NL and BLP support**
- **Generic scratch requests**
- **Data Security Erase utility**
- **Catalog verification utility**
- **ATL content verification utility**
- **Miscellaneous enhancements**



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IBM Backup and Restore Manager for z/VM

Backup and Restore Manager for z/VM

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New Functions in V1.1

■ **New Day processing exit**

- New exit called after first WAKEUP interrupt after midnight
 - WAKEUPs set every 15 minutes to keep server active
- Flexible behavior based on return codes:
 - 0 Normal completion, don't call again today
 - 4 Call again later
 - 8 Error occurred, call again later
 - 12 Error occurred, don't call again today
 - 16 Disable the exit, don't call again until server is restarted
 - 20 Fatal error, shut down Backup server

New Functions in V1.1

- **Support for minidisks processed by CMS RESERVE**
 - New job-level option to process RESERVED disks as image or file level
 - CONFIG BKR_JOB_BACKUP_RESERVED_AS_IMAGE = NO|YES
 - NO: process as file level backup
 - YES: process as image level backup
 - Backup and Restore Manager automatically detects RESERVE status
- **Enhanced response to STATUS command now includes information on each worker service machine**
 - Current job name and instance
 - Total count of backup or restore tasks in the current job
 - Current of total tasks (for example, "2 of 8")
 - If idle, name and instance number of last job



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IBM Backup and Restore Manager for z/VM

New Functions in V1.2

Improved Performance

- **INCLUDE/EXCLUDE processing**
 - Reduced processing time for both REVIEW and SUBMIT
- **Incremental backups of CMS files**
- **Backing up data to tape (and twin tapes)**
 - Reblocking performed by default to reduce the number of tape I/O's
 - Reduction in CPU overhead due to reduced number of calls to TAPEIO
 - Modest increase in virtual CPU time
 - Overall decrease in total CPU time
 - Reblocking also used for disk I/O if compression or encryption exits are specified
 - Minimal reduction in number of disk I/O's due to minidisk cache, etc.
 - Additional metadata written as part of the backup
 - Highly compressible

Compression and Encryption Exits

- **Two general purpose User Data Processing Exits (UDPE)**
- **Intended for compression and encryption**
- **Each called with a block of data**
 - Accepts more, less, or no data in return
 - Output of exit 1 (compression) is input to exit 2 (encryption)
 - Output of exit 2 is appended to current block of data ready to write to tape, twin tapes, or disk
 - Based on reblocking code added for performance improvement of backing up to tape.
- **Name of exit(s) specified at the job level**
 - TEXT deck loaded dynamically when initially required
- **Compression routines provided**
 - Sample routine using basic run-length encoding provided as source code
 - Supported routine using CMS compression services provided Object Code Only
 - Can replace supplied dictionaries with ones you create using VM-supplied routines and your data
 - Compression recommended for disk only
 - Use hardware features of tape devices for compression on tape
 - Be aware of increased CPU consumption
- **Requirement for supported encryption routine understood**

Configuring Compression and Encryption

In Backup job template:

```
CONFIG BKR_OUT_EDF_UDPE1 = BKREXT3A
CONFIG BKR_OUT_EDF_UDPE2 = MYCRYPT
CONFIG BKR_OUT_EDF_UDPE2_PARM = MONTHLY
CONFIG BKR_OUT_EDF_UDPE2_PLEN = 7
```

- Call the first exit to compress data when backing up to CMS minidisk. BKREXT3A is a shipped sample that uses CMS compression services and includes default dictionaries.
- Call the second exit to encrypt data when backing up to CMS minidisk. Compiled code is provided by the customer in MYCRYPT TEXT.

In Backup job template:

```
CONFIG TAPE_EXIT1_NAME = MYCRYPT
CONFIG TAPE_EXIT1_PARM = WEEKLY
CONFIG TAPE_EXIT1_PLEN = 6
```

Call the first exit to encrypt data when backing up to tape or twin tapes. The compression exit is not called, so encryption must be defined as the first exit.

Improved DASD Support

- **FBA and VFB-512**
 - Image backups now supported
 - In addition to previous support of CMS minidisks and SFS data on these DASD types
- **Restore to reader without temporary disk space**
 - Data restored directly from source (tape or disk) to virtual reader
 - No need for “staging” disk

Worker Assignment

- **Reserve worker service machines for**
 - Backup only
 - Restore only
 - Both
 - (Neither)
- **Master server still performs include/exclude processing and worker assignment**

In BKRUSERS NAMES:

```
:nick.WORKERS :list.BKRWRK01 BKRWRK02 BKRWRK03 BKRWRK04 BKRWRK05 BKRWRK06
:COMMENT.Worker virtual machines
```

In BKRSYSTEM CONFIG:

```
Workers_reserved_for_backup = 3
Workers_reserved_for_restore = 2
```

Backup only: BKRWRK01, 02, 03
Restore only: BKRWRK05, 06
Both: BKRWRK04

In BKRSYSTEM CONFIG:

```
Workers_reserved_for_backup = 4
Workers_reserved_for_restore = 3
```

Backup only: BKRWRK01, 02, 03
Restore only: BKRWRK05, 06
Neither: BKRWRK04

Miscellaneous Enhancements

- Specify DASD by real device address in a backup job

In a job template, after VDEV include/exclude statements:

FUNCTION	MEDIATYPE	RDEV	SPEC
INCLUDE	RDEVICE	0800-090F	
EXCLUDE	RDEVICE	081*	

- Specify DASD by volser in a backup job

In a job template, after VDEV include/exclude statements:

FUNCTION	MEDIATYPE	RDEV	SPEC
INCLUDE	RDEVVOL	510*	
EXCLUDE	RDEVVOL	510PAG	
EXCLUDE	RDEVVOL	510SPL	

- Include default or customer specified DSN in the tape label of backup tapes
 - Useful in RMM mode

In a job template:

```
CONFIG BKR_JOB_TAPE_DSN = BKR.VMSYS1.BACKUP
```


Miscellaneous Enhancements

- **Include tape pool name as part of backup job when using Tape Manager for z/VM**
 - Pull scratch tapes from a specific tape pool
 - Can be unique to each backup job
 - Default specified at system level

In a job template:

```
CONFIG BKR_JOB_POOL_OWNER = SYSPROG  
CONFIG BKR_JOB_POOL_NAME = POOL1
```

- **Verification of scratch tape mounts**
- **Shipped source for examples provided in the book**

Backup and Restore Manager Summary

- **Flexibility**
 - Backup only what is needed via include, exclude, and masking statements
 - Mix and match source and target types
- **Productivity**
 - Review of backup job before submission
 - User driven restores with no administrator interaction
- **Control**
 - Each user can only access restore data owned by him/her
 - Automatic aging and pruning of backup catalog
 - Consistent backups using the object directory (not source)
- **V1.2.0 available August 25, 2006**
 - Focus on
 - Performance
 - Compression and encryption exits
 - Enhancements based on requirements
- **Continuing to gather and prioritize requirements**



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IBM Operations Manager for z/VM

Operations Manager for z/VM

- **V1.2.0**
 - Announce: February 21, 2006
 - GA: February 24, 2006
- **Support for RACF or other External Security Manager**
- **Monitor logon status of specified user IDs**
- **Support for SET OBSERVER**
- **Flexible data space configuration**
- **Assign an action to a specific action processing server**
- **Enhanced viewing of monitored consoles**
- **New scheduling options**
- **New functions for HMF customers**

Access Control

- **Users defined with access to one or more:**
 - Control commands
 - Manage the Operations Manager infrastructure
 - Define additional service machines to execute actions
 - Authorize users
 - Display status
 - Issue CP and CMS commands on an Operations Manager service machine
 - Define data space sizes
 - Configuration commands
 - Define rules, schedules, actions
 - Define holidays
 - Define user IDs to monitor for logoff status
 - Define groups
 - Consoles
 - Define user access to monitored consoles
- **Security**
 - Internal to Operations Manager (as in V1.1.0)
 - RACF or other External Security Manager
 - Uses RACROUTE and new Facility classes for Control, Configuration, and Console access
 - Additional access based on access to modules
 - GOMCMD: issue commands on GOMMAIN and return output
 - Must be authorized to the commands issued
 - GOMTDM: terminal device management

Monitoring Service Machines

- **Monitor logon status of specified user IDs**
 - Take action if logged off to bring it to logged on status
 - Maximum number of retries can be specified

```
DEFMMON NAME (SFS) , USER (BKRSFS) , ACTION (LOGONUSR) , INTERVAL (5) , PARM (BKRSFS) , DAYS (*****)
```

Monitor BKRSFS every 5 minutes every day for LOGOFF status

If logged off, issue the LOGONUSR action with the parameter BKRSFS.

```
DEFMMON NAME (TAPEMGR) , USER (TMTMM) , ACTION (LOGONUSR) , INTERVAL (10) , PARM (TMTMM) , DAYS (*T*TF**H) , RETRY (1)
```

Monitor TMTMM every 10 minutes on Mon, Wed, Sat, Sun (except holidays) for LOGOFF status

If logged off, issue the LOGONUSR action with the parameter TMTMM.

Monitoring Service Machines

■ Capture console messages

- Must SECUSER or OBSERVER to Operations Manager GOMMAIN server
 - Functional differences based on CP support of SECUSER vs. OBSERVER
- Data spaces used to hold the log of captured messages/consoles
 - Console data passed from data space to the user when view is requested
 - One data space per monitored console
 - Customizable data space sizes: per monitored console and/or per system
- Daily log includes captured message and meta data
 - Text, length, IUCV class, source

In CP Directory entry:

```
CONSOLE 700 3215 T OPMGRM1
```

or

```
CONSOLE 700 3215 T OPMGRM1 OBSERVER
```

Or**In PROFILE EXEC:**

```
CP SET SECUSER OPMGRM1
```

or

```
CP SET SECUSER OPMGRM1 OBSERVER
```

In Operations Manager configuration file:

```
DEFDSPS USER(*SFS*), SIZE(2097152)
```

```
DEFDSPS USER(*), SIZE(1048576)
```

Monitoring Service Machines

- **Define rules to**
 - Scan console messages for text matching
 - Includes column, wildcard, and exclusion support
 - Take actions based on matches
- **Multiple rules can apply to one message**
 - FINAL option available to indicate no additional rules should be evaluated

In Operations Manager configuration file:

```
DEFRULE NAME (CPREAD) , MATCH (*HCP*150A*CP*) , MCOL (001:020) , ACTION (CPREAD)
```


Monitoring Service Machines

- **Predefined actions**
 - Suppress message from data space
 - Always sent to the log
 - Highlight message with color, blinking, etc.
 - Hold and change the display attributes of a specific messages when viewing a console
 - Message won't scroll off the top of the screen automatically if auto scroll is on
- **Customer defined actions**
 - CP or CMS command, or EXEC to be executed
 - Run on GOMMAIN, any available action processing server, or a specific action processing server

In Operations Manager configuration file:

```
DEFACTN NAME (CPREAD) , COMMAND (CP SEND &2 BEGIN) , OUTPUT (LOG, CRE) , ENV (GOMSVM02)
```

Define an action called CPREAD that will:

- Execute a CP SEND
- Pass second word of the matching message (the user ID)
- Pass "BEGIN"
- Add matching message to monitored console in data space
- Set message to red in console (data space)
- Place output of command in Operations Manager log
- Execute the command on GOMSVM02, an Operations Manager worker server

Monitoring Service Machines

▪ View consoles

- Authorize users to view individual consoles or a set of consoles
- View console with
 - Message text only
 - Message text with the time stamp
 - Message text with the date and time stamp
- "Full screen mode"
 - Scroll up and down
 - Auto scroll (on or off) as new output is displayed on the console
 - Access a console image before any output is available
 - Issue commands back to the monitored console via CP SEND
- One console view for a group of users

In Operations Manager configuration file:

```
DEFVIEW NAME (SFS) , USER (*SFS)
DEFVIEW NAME (TAPEMGR) , USER (TM%%)
AUTH USER (USER1) , CONSOLE (TAPEMGR)
AUTH USER (USER1) , CONSOLE (TCPIP)
AUTH USER (USER2) , CONSOLE (SFS)
```

From USER1:

```
GOMCMD OPMGRM1 VIEWCON USER (TCPIP)
Or
GOMCMD OPMGRM1 VIEWCON USER (TAPEMGR)
```

Scheduling Events and Actions

- **Define schedules to execute**
 - At a specific time
 - Hourly at a specified number of minutes past the hour
 - Daily at a specified time
 - Weekly on a specified day of the week and at a specified time
 - Monthly on a specified day of the month and at a specified time
 - Yearly on a specified month and day and at a specified time
 - Once on specified month, day, year, and time
 - At regular intervals
 - Every x hours and y minutes
 - Within a specified window of time
 - Specify start time
 - Specify conflicting schedules
 - Specify maximum time to defer this schedule, waiting for conflicts/dependencies to complete
 - No execution for this occurrence of the schedule if maximum time is reached
 - Within limits
 - Restrict to specific days of the week: Monday through Sunday plus holidays
 - Restrict to certain hours of the day
- **Only future schedules are activated on startup**
 - Won't execute a schedule defined for earlier today that has reached its maximum deferral
 - Will execute it at its next occurrence

Scheduling Events and Actions

In Operations Manager configuration file:

```
DEFSCHD NAME (FIRSTM) , ACTION (NEWMONTH) , WHEN (01-00:00) , PARM (MONTHLY)
```

Define a schedule called FIRSTM that will execute the NEWMONTH action every 1st day of the month at midnight, passing the parameter "MONTHLY".

In Operations Manager configuration file:

```
DEFACTN NAME (NEWMONTH) , COMMAND (EXEC DOACCTS &P) , OUTPUT (LOG) , ENV (SVM)
```

Define an action called NEWMONTH that will:

- Execute DOACCTS EXEC
- Pass the parameter (MONTHLY) from the rule or schedule calling this action
- Put the output of the command execution in a special data space called SCHEDULE
- Place the console output of DOACCTS EXEC in the log
- Execute this action on any action processing server

Scheduling Events and Actions

In Operations Manager configuration file:

```
DEFSCHD NAME (HEALTH) , ACTION (CHECKSYS) , EVERY (03:00) , DAYS (MTWTF**H)
```

Define a schedule called HEALTH that will execute the CHECKSYS action every 3 hours, starting at server startup, on Saturdays and Sundays, except holidays.

In Operations Manager configuration file:

```
DEFACTN NAME (CHECKSYS) , COMMAND (EXEC SYSTATUS) , OUTPUT (LOG) , ENV (GOMSVM02)
```

Define an action called CHECKSYS that will:

- Execute SYSTATUS EXEC
- Put the output of the command execution in a special data space called SCHEDULE
- Place the console output of SYSTATUS EXEC in the log
- Execute this action on a specific action processing server: GOMSVM02

Scheduling Events and Actions

In Operations Manager configuration file:

```
DEFSCHD NAME (BACKUP) , ACTION (INCRBACK) , WHEN (01:30) , CONFLICT (HEALTH) , MAXDEFER (30)
```

Define a schedule called BACKUP that will execute the INCRBACK action every day at 1:30AM, unless HEALTH is running. Retry every one minute, and wait a maximum of 30 minutes for HEALTH to finish.

In Operations Manager configuration file:

```
DEFACTN NAME (INCRBACK) , COMMAND (CP SMSG BKR00 SUBMIT INCRJOB1) , OUTPUT (LOG) , ENV (GOMSVM04)
```

Define an action called INCRBACK that will:

- Submit backup job INCRJOB1 to the master backup server BKR00
- Place the console output of CP SMSG in the SCHEDULE data space
- Place the console output of CP SMSG in the Operations Manager log
- Execute this action on a specific action processing server: GOMSVM04

Operations Manager Summary

- **Assist with automated operations**
 - Monitoring user IDs for logoff status
 - Monitoring service machine consoles
 - Taking actions based on console text matching
 - Scheduling actions
- **Follow-on to Host Management Facility (HMF)**
- **V1.2.0 available February 24, 2006**
 - RACF or ESM support
 - Flexible data space configuration
 - Define actions for specific action processing server
 - Enhanced viewing of monitored consoles
 - Support for SET OBSERVER
 - New scheduling options
 - New functions for HMF customers
 - Monitor logon status of specified user IDs
- **Upcoming focus on integration with Tivoli system management portfolio**



IBM Software

IBM Tape Manager for z/VM

Tape Manager for z/VM

- **V1.2.0**
 - Announce: February 21, 2006
 - GA: February 24, 2006
- **NL and BLP support**
- **Generic scratch requests**
- **Data Security Erase utility**
- **Catalog verification utility**
- **ATL content verification utility**
- **Miscellaneous enhancements**

Non-Label and Bypass Label Processing

- **Allow authorized users to**
 - Mount NL tapes
 - Request a mount with the BLP option, or
 - Both
- **NL mounts**
 - NL must be specified on the mount request
 - Default is SL
 - Tape must be NL
 - Can't mount a Standard Label tape as NL
 - User must be authorized by system default or individually
- **BLP support**
 - BLP must be specified on the mount request
 - Default is SL
 - Tape can be NL or SL since no checking is done
 - User must be authorized by system default or individually
- **Requires PTF UK16098 for APAR PK27715**

Non-Label and Bypass Label Processing

- **Allow authorized users to**
 - Mount NL tapes
 - Request a mount with the BLP option, or
 - Both
- **NL mounts**
 - NL must be specified on the mount request
 - Default is SL

Set system defaults in configuration file

```
TAPELBL NL NONE YES
TAPELBL BLP NONE NO
```

Commands to define users who are exceptions to the system defaults:

```
TAPELBL ADD USER USERA LABEL NL
TAPELBL ADD FILE AUTHNL USERS LABEL NL
```

- Tape can be NL or SL since no checking is done
- User must be authorized by system default or individual

- **Requires PTF UK16098 for APAR PK27715**

No users can mount NL tapes or request BLP. Exceptions are allowed for NL.

USERA allowed to mount NL tapes

All users listed in AUTHNL USERS file allowed to mount NL tapes

Generic Scratch Requests

- **System option effecting manual scratch mount requests only**
- **Mount message to operator and device specifies SCRATCH instead of a volser**
- **Operator mounts a tape from “scratch bin”**
- **Tape Manager verifies tape is scratch**
 - In the catalog as an available scratch tape
 - In requesting mount pool or free pool
- **Requires PTF UK16098 for APAR PK27715**

Data Security Erase

- **Option to enable DSE at pool or tape level**
- **Tape marked as DSE-ready when it is freed**
- **Runs on separate user IDs/service machines**
- **Issues query against catalog to find all tapes with DSE flag on**
 - Requires Tape Manager ADMIN authority
- **Mounts each tape**
 - Verifies volume label if possible
 - Erases tape
 - Turns off DSE flag in catalog
- **Time specified for missing interrupt handler (MITIME) must be high enough for DSE to complete on each tape**
- **Configuration options**

```
Max_Runtime = 20
Max_Tapes = 20
Errors_to = ADMIN1
Error_action = CONTINUE
NL_Tapes = NO
TMM_Userid = TMTMM
```

Data Security Erase

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- **Mounts each tape**
 - Verifies volume label if possible
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 - Turns off DSE flag in catalog
- **Time specified for missing interrupt handler (MITIME) must be** for DSE to complete on each tape
- **Configuration options**

Do not start a new tape after this amount of time

Maximum number of tapes to process

```
Max_Runtime = 20
Max_Tapes = 20
Errors_to = ADMIN1
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User IDs to receive error messages

Data Security Erase

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 - Requires Tape Manager ADMIN authority
- **Mounts each tape**
 - Verifies volume label if possible
 - Erases tape
 - Turns off DSE flag in catalog
- **Time specified for missing interrupt handler (MITIME) must be high enough for DSE to complete on each tape**
- **Configuration options**

If error, STOP
all DSE
processing or
CONTINUE
with next tape

Process NL
tapes found?

```
Max_Runtime = 20
Max_Tapes = 20
Errors_to = ADMIN1
Error_action = CONTINUE
NL_Tapes = NO
TMM_Userid = TMTMM
```

User ID of
Tape Manager
machine

ATL Verification

- **Runs on separate user IDs/service machines**
- **Issues query against catalog to find all tapes in specified ATL(s)**
- **Requires Tape Manager Admin authority and RMS Admin authority**
- **For each tape**
 - Queries DFSMSRms for tape status
 - Takes action based on status and configuration options
- **Configuration options**

```
Max_Runtime = 20
Max_Tapes = 20
Errors_to = ADMIN1 ADMIN2
Error_action = CONTINUE
TMM_Userid = TMTMM
ATL_Names = IBMATL1 IBMATL2
Action_not_in_library = RESET
Action_inaccessible = IGNORE
Action_ejected = RESET
Action_misplaced = WARN
Action_label_damage = HOLD
```


ATL Verification

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ATL Verification

- Runs on separate user IDs/service machines
- Issues query against catalog to find all tapes in specified ATL(s)
- Requires Tape Manager ADMIN authority and RMS Admin authority
- For each tape
 - Queries DFSMSRms for tape status
 - Takes action based on status and configuration
- **Configuration options**

Names of
ATLs to
process

Action to take if
ATL indicates
an error

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Max_Runtime = 20
Max_Tapes = 20
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ATL_Names = IBMATL1 IBMATL2
Action_not_in_library = RESET
Action_inaccessible = IGNORE
Action_ejected = RESET
Action_misplaced = WARN
Action_label_damage = HOLD
  
```

```

IGNORE: do nothing
WARN: issue warning message
HOLD: WARN and set HOLD flag for tape
RESET: WARN and set MANUAL flag for tape
  
```

Catalog Verification

- **Runs on separate user IDs/service machines**
 - Tape Manager must be shut down
- **Reads the catalog directly (not via Tape Manager commands)**
 - Requires RR or MR access to TMTMM's 191, 200, and 210 disks
- **For each entry**
 - Verifies data format is correct (dates, numbers, etc.)
 - Verifies data is consistent across files (volser's in pool inventories vs. tape inventories)
 - Optionally corrects invalid data
- **Strongly caution analysis before using the option to correct "errors"**
- **Configuration options**

```
Errors_to = ADMIN1 ADMIN2
Error_action = CONTINUE
TMM_Userid = TMTMM
Database_disk_1 = 200
Database_disk_2 = 210
Config_disk = 191
Verbosity = MEDIUM
Invalid_tape_inventory_records = WARN
Invalid_pool_volume_records = WARN
```

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File locations (tape and pool inventories, media types, and device pools)

```
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Database_disk_2 = 210
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- **Configuration options**

Level of informational output (does not affect warnings)

Action to take if errors found in files

```

Errors_to = ADMIN1 ADMIN2
Error_action = CONTINUE
TMM_Userid = TMTMM
Database_disk_1 = 200
Database_disk_2 = 210
Config_disk = 191
Verbosity = MEDIUM
Invalid_tape_inventory_records = WARN
Invalid_pool_volume_records = WARN
    
```

IGNORE: do nothing
 WARN: issue warning message
 CORRECT: WARN and correct the error

Miscellaneous Enhancements

■ **Effective maintenance of catalog data**

- Not erased when tape is freed or scratched
- Only erased or rewritten when tape is reused (including DSE)
- Improves recovery of metadata if tape is accidentally freed

■ **Additional retry processing**

- Automatically retries a mount request when
 - Internal label does not match volser requested
 - Used tapes - applies to manual mounts only
 - Scratch tapes - applies to ATLs and manual mounts, a new scratch volser is requested
 - Mounted tape is NL, but mount request specified SL (manual mounts only)
 - Mounted tape is SL, but mount request specified NL (manual mounts only)
 - RMM returns errors, 'not a scratch volume' and 'volume not found' (ATL only)
- Operator can request a retry on manual mounts when
 - Specific volser for a scratch request is not available
 - Tape Manager finds another scratch and reissues mount request

Tape Manager Summary

- **Automate daily tape operations**
 - Manage mount requests
 - Control tape access
 - Perform label verification
 - Expire tapes
- **Efficiently manage tapes and tape drives**
 - Share devices
 - Control access to individual tapes in an ATL
- **Improve productivity**
 - Notify and interact with operator on behalf of user
 - Support manual and ATL mount requests
 - Perform label verification before and after tape use
 - Verify read/write attribute on manual mounts
- **V1.2.0 available February 24, 2006**
 - SL and BLP support
 - Data Security Erase
 - Verify tapes are in ATLs
 - Retain catalog data until tape is rewritten
 - Support generic scratch mount requests

z/VM Tools Wrap-up

- **More information**

- <http://www.ibm.com/software/stormgmt/zvm/>
- tld1@us.ibm.com

- **Other sessions**

- 9199/1645 OMEGAMON XE on z/VM Linux
 - Thursday, 1:30pm
- 9198/1644 System and Performance Management Scenarios
 - Thursday, 3:00pm

- **Demo**

- Operations Manager
- Backup and Restore Manager