

# New z/VM Systems and Storage Management Products from IBM: Archive Manager and Operations Manager

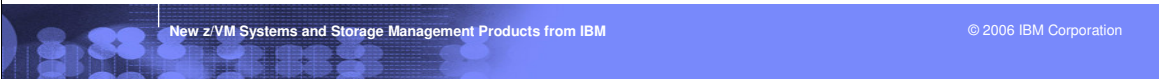
MVMUA  
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## Agenda

- Overview
- Archive Manager for z/VM
  - Key features
  - Product architecture
  - Configuration
- Operations Manager for z/VM
  - Key features
  - Product architecture
  - Configuration



## Overall z/VM Marketplace

- **Traditional z/VM customers**
  - Longtime z/VM (VM/ESA, VM/SP) customers
  - Running business applications on z/VM
  - Also installing and using Linux on zSeries
  - Require full set of systems management solutions for z/VM and the Linux guests
- **Customers using z/VM to host Linux only**
  - New to z/VM
  - Understand the benefits of using z/VM to host Linux guests
  - Prefer Linux-based tools for systems management of Linux guests
  - Also need basic systems management tools for z/VM host
- **Total cost of ownership being scrutinized**
  - Automation
  - Efficiency and productivity
  - Software costs

## Archive Manager for z/VM

- **Archive - designed for users and administrators**
  - Manage disk space by moving infrequently used or accessed files to tape or other disk
  - Source data on CMS minidisk, SFS, ECKD images
  - Select files by filename filetype filemode
    - Wildcard support for filename filetype, SFS directory (including all subdirectories, or not)
  - Target output (a parcel) to tape or disk
    - Always copied to staging disk first
- **Recall**
  - Source data on tape or disk
  - Target output to CMS minidisk, SFS, ECKD DASD, virtual reader
  - User or administrator requested
  - Search for file(s) to recall
    - Wildcard support for filename and filetype
    - Selection by date
    - Can include other files in that archive parcel
- **Catalog**
  - Contains all metadata for archive jobs and files
- **Product information**
  - Announced August 23, 2005
  - GA August 26, 2005

## Operations Manager for z/VM

- **Monitor service machines**
  - Take predefined actions based on message text matching
  - Suppress messages
  - Highlight messages with color, blinking, etc.
- **Schedule events/actions**
- **Automate tasks with Terminal Device Manager**
- **Supports multiple installations of Operations Manager on one z/VM system**
  - Performance (monitoring a large number of consoles)
  - Separation of access control
- **Product information**
  - Announced August 23, 2005
  - GA August 26, 2005

## Archive Manager for z/VM

Efficiency  
Productivity  
Control

## Key Features

- **Based on design of Backup and Restore Manager**
  - Modular data handlers and media drivers
  - Catalog housed as a hierarchical structure in SFS
  - Standard CMS interfaces
  - Recalls with original date
  - Expiration processing
- **Asynchronous user interface**
  - Immediate (synchronous) notification if no files found to archive
  - User warned not to modify files until archive complete
  - User notified when archive or recall is complete
- **Concurrent processing available when tapes are involved**
  - Multiple service machines available
  - 1 job assigned to 1 service machine
  - Assigned by master server
- **Automatic aging and pruning of the archive catalog and data**
  - Tape consolidation available to remove gaps created by expired archives

## Access Control

- **Administrators**
  - Submit archive and recall requests for any data
  - Archive and recall from anywhere to anywhere
  - Manipulate contents of archive catalog
  - Receive all service machine consoles
  - Full screen interface for navigating the catalog and requesting recalls
- **Users**
  - Archive and recall files they own
  - Archive to any authorized storage class
  - Full screen interface to find files available for recall
- **Groups**
  - Can recall files belonging to any storage group to which they are a member

## Storage Groups and Storage Classes

### AMVSRVR CONFIG

```

Begin_Groups
ALLUSERS
DSKUSERS
End_Groups
Begin_Classes
Define_Class DEFAULT TAPE SIMPLEX 1 365 365 SCRATCH ALLUSERS - NYYNNNN
Define_Class ADMINDSK EDF SIMPLEX 1 365 2555 E00 DSKUSERS - YYYYYNN
End_Classes
    
```

### DEFAULT Storage Class

- Archives to single tape
- Default retention 365 days
- Min retention 1, max 365 days
- All users on system can archive here
- Users can remove and transfer archives
- Users can not extend expiration, move parcels to another storage class, create image parcels

### ALLUSERS GROUPLST

EVERYONE

### EVERYONE ROSTER

\*

### DSKUSERS GROUPLST

ADMINS  
DEPTABC

### ADMINS ROSTER

OPS\*

### DEPTABC ROSTER

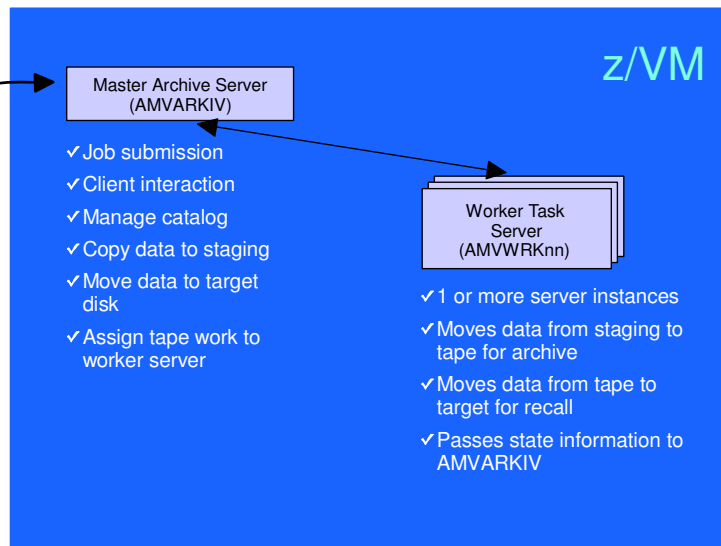
USERA  
USERB  
USERC

### ADMINDSK Storage Class

- Archive to AMVARKIV's E00 mdisk
- Default retention 365 days
- Min retention 1 day, max 7 years
- USERA, USERB, USERC, and OPS\* users can archive here
- Users can extend expiration, remove and transfer archives, move parcels to another storage class, create image parcels

## Archive Manager - Architecture

→ Communication via SMSG/IUCV



## System Configuration Information

```

* Identify administrative user and top-level service virtual machines
*
Local_Archive_Admin_ID = AMVADMIN
Local_Archive_Server_ID = AMVARKIV
Local_Archive_Catalog_ID = AMVCATLG
*
* Control archivist use of DEFINE MDISK versus LINK for minidisk access
*
* Valid settings are: "LINK" - use CP LINK (requires OPTION LINK)
* "DEFMDISK" - use CP DEFINE MDISK (requires OPTION DEVMAINT)
*
* Note: Use of "DEFMDISK" allows archive processing of T-Disk contents. This
* feature is unavailable if the "LINK" option is specified
*
* Archive_Minidisk_Via = LINK
Archive_Minidisk_Via = DEFMDISK
*
* "Drop Dead" idle timer for worker task virtual machines
*
Worker_Idle_Timeout = +00:01:00
*
* Temporary staging area info for worker virtual machines
* Worker_Stage_Type = Some valid argument for DEFINE Txxx - DEFMDISK
* command. Supported values are T3380, T3390, T3395, T3396, T3397, T3398,
*
* Worker_Stage_Type = T3380

```

Allow or  
disallow  
archiving of  
files on temp  
disks

Timer to  
shutdown and  
logoff idle  
worker  
machines

Temp disk  
space for  
recalls  
directed to a  
reader or  
dissimilar  
target

## System Configuration Information

```

* Configuration for tape handling exits (AMVMOUNT, AMVUMNT, AMVEOV):
Tape_Exit_Context = AMV
Tape_Operator = DMARTIN
Tape_Request_Method = EXEC TELL
Tape_Delay_Interval = +00:00:60
Tape_Times_To_Poll = 5
TAP1_Virtual_Address = 181
TAP2_Virtual_Address = 182
Tape_Retain_After_EOJ = 0
Tape_Handled_Via_EUM = 0
* EUM_Pool_Owner = AMVARKIV
* EUM_Pool_Name = ARCHIVE
*
* Master Archivist Catalog configuration:
*
CatalogPool = AMVCPool
CatalogSpace = AMVCATLG

```

Interaction  
with tape  
management  
process



## System Configuration Information

```

* Configuration for tape handling exits (AMVMOUNT, AMVUMNT, AMVEOV):
Tape_Exit_Context = AMV
Tape_Operator = DMARTIN
Tape_Request_Method = EXEC TELL
Tape_Delay_Interval = +00:00:60
Tape_Times_To_Poll = 5
TAP1_Virtual_Address = 181
TAP2_Virtual_Address = 182
Tape_Retain_After_EOJ = 0
Tape_Handled_Via_EUM = 0
* EUM_Pool_Owner = AMVARKIV
* EUM_Pool_Name = ARCHIVE
*
* Master Archivist Catalog configuration:
*
→ CatalogPool = AMVCPOOL
   CatalogSpace = AMVCATLG
    
```

SFS filepool  
and  
filesystem for  
archive  
catalog

## Server Configuration Information

```

→ Staging_Area = 292      * We access this as our parcel creation area...
*
BEGIN_GROUPS
ALLUSERS * Simple wild-card, one line '*' to fit any/all users...
BETA     * List of users in the "Beta" group
GAMMA    * List of users in group "Gamma"
END_GROUPS
*
*
BEGIN_CLASSES
*
Define_Class DEFAULT EDF SIMPLEX 1 365 365 E00 ALLUSERS SCRATCH Y Y Y Y N N
*
Define_Class CUSTOM EDF DUPLEX 1 365 99999999 E10 ALLUSERS SCRATCH Y Y Y Y N N
*
Define_Class TAPE1 TAPE SIMPLEX 1 365 365 SCRATCH ALLUSERS SCRATCH Y Y Y Y N N
*
Define_Class SFSIMPL SFS SIMPLEX 1 365 365 ROCKSFS1:AMVARKIV.SIMPLEX ALLUSERS - y y y y n n
*
Define_Class SFSDUPL SFS Duplex 1 365 99999999 ROCKSFS1:AMVARKIV.DUPLEX.PRIMARY ALLUSERS
ROCKSFS2:AMVARKIV.DUPLEX.SECONDARY Y Y Y Y N N
*
END_CLASSES
    
```

Archive server  
disk for staging  
parcels before  
moving to disk  
or tape

## Server Configuration Information

```

Staging_Area = 292      * We access this as our parcel creation area
*
* BEGIN_GROUPS
ALLUSERS * Simple wild-card, one-line '*' to fit any/all users...
BETA     * List of users in the "Beta" group
GAMMA    * List of users in group "Gamma"
END_GROUPS
*
* BEGIN_CLASSES
*
Define_Class DEFAULT EDF SIMPLEX 1 365 365      E00          ALLUSERS -      Y Y Y Y N N N
*
Define_Class CUSTOM EDF DUPLEX 1 365 999999999 E10          ALLUSERS E11   Y Y Y Y N N N
*
Define_Class TAPE1 TAPE SIMPLEX 1 365 365      SCRATCH     ALLUSERS SCRATCH Y Y Y Y N N
*
Define_Class SFSSIMPL SFS SIMPLEX 1 365 365    ROCKSFS1:AMVARKIV.SIMPLEX ALLUSERS -      y y y y n n
*
Define_Class SFSDUPL SFS Duplex 1 365 999999999 ROCKSFS1:AMVARKIV.DUPLEX.PRIMARY ALLUSERS
ROCKSFS2:AMVARKIV.DUPLEX.SECONDARY Y Y Y Y N N
*
END_CLASSES
    
```

Define groups of users for access control

Define storage classes for access to archive locations

## Operations Manager for z/VM

- Monitoring
- Scheduling
- Task automation



## Monitor Service Machines

- **Capture console messages**
  - Must SECUSER to Operations Manager GOMMAIN server
  - Dataspaces used to hold the log of captured messages/console
  - Daily log includes captured message
    - Text, length, IUCV class, source
- **Define rules to**
  - Scan console messages for text matching
    - Includes wildcard support
  - Take actions based on matches
- **Multiple rules can apply to one message**
  - FINAL option available to indicate no additional rules should be evaluated
- **Predefined actions**
  - Suppress messages from the GOMMAIN console
    - Always sent to the log
  - Highlight messages with color, blinking, etc.
- **Customer defined actions**
  - CP or CMS command, or EXEC to be executed

## Schedule Events and Actions

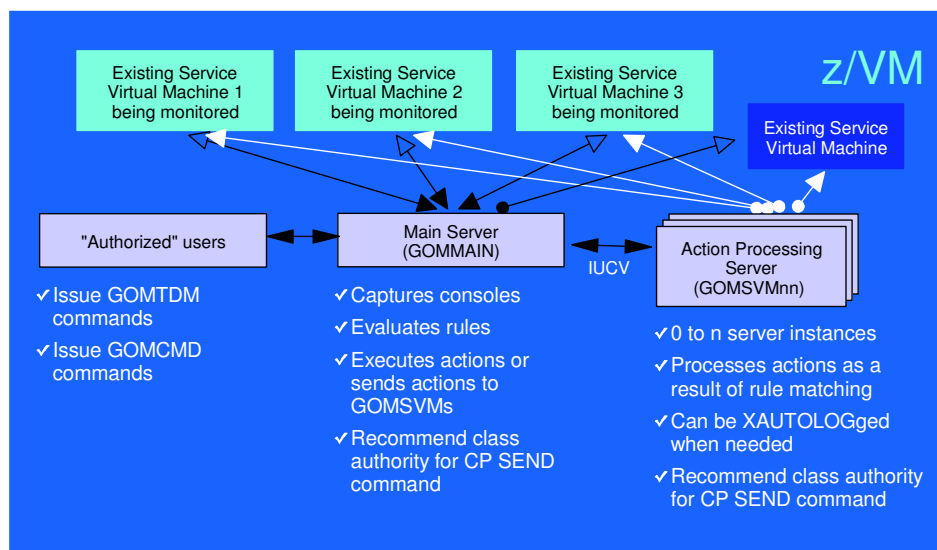
- **Define timers to occur**
  - Hourly at a specified number of minutes past the hour
  - Daily at a specified time
  - Weekly on a specified day of the week and at a specified time
  - Monthly on a specified day of the month and at a specified time
  - Yearly on a specified month and day and at a specified time
  - Once on specified month, day, year, and time
- **Time based on local time of system**
  - Same as Query TIME
  - Picks up dynamic time zone changes
- **Specify the action associated with the timer**
  - Actions specified the same as those for console rules
- **Only future timers are activated on startup**
  - Won't execute a timer scheduled for earlier today
  - Will execute it at its next occurrence

## Automate Multi-step Tasks

### ■ Using Terminal Device Management (TDM)

- Create scripts (REXX EXECs) to logon to a user and perform specific actions
- EXEC contains special calls to Operations Manager GOMTDM functions
  - **OPTION:** set up the environment for this session
    - Suppressing or displaying messages
    - Imbedded delays after input or output displayed on console
    - Maximum wait for console response to a GOMTDM query
    - Stacking returned values LIFO vs. FIFO
    - Coded character set to use
    - Put all console output to a file or not
    - Wait for keyboard input lock to clear or not
  - **INIT:** start a new session at this z/VM system's logon screen and return session id (handle)
  - **INPUT:** enter data from session command line by specifying:
    - Handle
    - Data to enter
    - Cursor position
    - Key to simulate (Enter, Clear, PA1-PA3, PF1-PF24, Forward tab, Backward tab, Up, Down, Left, Right, Newline, Home, EraseEOF)
  - **QUERY:** get information about the session
    - Cursor position
    - Position of next occurrence of a specified string on the screen, based on cursor position
    - Put copy of the screen in a specified file
    - Version of Operations Manager code running
  - **TERM:** end a session specified by a handle
- Using DIAG '7C' for logical device support

## Operations Manager - Architecture



## Monitoring GOMMAIN using the GOMCMD command

- Issued by users with access to the command
- Executes an Operations Manager command on GOMMAIN
  - User must have authorization to issue the command on GOMMAIN
  - Includes any valid Operations Manager control or configuration command
- Passes output back to user console
  - "Fullscreen mode" for log and console viewing
    - Scrolling up and down
    - Autoscrolling (on or off) as new output is displayed on the console
    - Can issue valid Operations Manager commands from fullscreen command line
  - "Linemode" for other commands
- Typically used to view a log or query status
  - Can be used to troubleshoot a service machine or user problem
  - Multiple administrators can view a console simultaneously

## Access Control

- Users defined with access to one or more:
  - Control commands
    - Manage the Operations Manager infrastructure
    - Define additional service machines to do monitoring
    - Authorize users
    - Display status
    - Send commands to a monitored console
  - Configuration commands
    - Define rules
    - Define timers
    - Define actions
  - Consoles
    - Define user access to monitored consoles
- Additional access based on access to modules
  - GOMCMD: issue commands on GOMMAIN and return output
  - GOMTDM: terminal device management

## Sample Configuration File

```

* Define users with control authority to Operations
*
AUTH USER(USER1),CONTROL(Y)
AUTH USER(USER2),CONTROL(Y)
*
* Define users with config authority to Operations
*
AUTH USER(USER1),CONFIG(Y)
AUTH USER(USER3),CONFIG(Y)
*
* Define users and the consoles they can access to Operations
* Must have control authority
*
AUTH USER(USER1),CONSOLE(SFS)
AUTH USER(USER1),CONSOLE(RSCS)
AUTH USER(USER2),CONSOLE(*)
*
* Define service machines to Operations Manager
*
DEFSRVM USER(GOMSV01)
DEFSRVM USER(GOMSV02)
DEFSRVM USER(GOMSV03)
DEFSRVM USER(GOMSV04)
*
CONFIG FN(MYLOCAL),FT(TIMERS),FM(A)

```

**Give USER1 and USER2 access to "control" commands**

- Add and delete Ops Mgr SVMs
- Add and revoke access
- View and add comments to logs
- Submit CP/CMS commands to Ops Mgr SVMs
- View monitored console
- Query status of Ops Mgr server

## Sample Configuration File

```

* Define users with control authority to Operations
*
AUTH USER(USER1),CONTROL(Y)
AUTH USER(USER2),CONTROL(Y)
*
* Define users with config authority to Operations
*
AUTH USER(USER1),CONFIG(Y)
AUTH USER(USER3),CONFIG(Y)
*
* Define users and the consoles they can access to Operations
* Must have control authority
*
AUTH USER(USER1),CONSOLE(SFS)
AUTH USER(USER1),CONSOLE(RSCS)
AUTH USER(USER2),CONSOLE(*)
*
* Define service machines to Operations Manager
*
DEFSRVM USER(GOMSV01)
DEFSRVM USER(GOMSV02)
DEFSRVM USER(GOMSV03)
DEFSRVM USER(GOMSV04)
*
CONFIG FN(MYLOCAL),FT(TIMERS),FM(A)

```

**Give USER1 and USER3 access to "configuration" commands**

- Define and delete rules
- Define and delete actions
- Define and delete timers
- Query status of Ops Mgr server

## Sample Configuration File

```

* Define users with control authority to Operations Manager
*
AUTH USER(USER1),CONTROL(Y)
AUTH USER(USER2),CONTROL(Y)
*
* Define users with config authority to Operations Manager
*
AUTH USER(USER1),CONFIG(Y)
AUTH USER(USER3),CONFIG(Y)
*
* Define users and the consoles they can access to Operations Manager
* Must have control authority
*
AUTH USER(USER1),CONSOLE(SFS)
AUTH USER(USER1),CONSOLE(RSCS)
AUTH USER(USER2),CONSOLE(*)
*
* Define service machines to Operations Manager
*
DEFSRVM USER(GOMSV01)
DEFSRVM USER(GOMSV02)
DEFSRVM USER(GOMSV03)
DEFSRVM USER(GOMSV04)
*
CONFIG FN(MYLOCAL),FT(TIMERS),FM(A)

```

Give USER1  
access to the  
console of SFS  
and RSCS

Give USER2  
access to any  
console that  
Ops Mgr is  
monitoring

## Sample Configuration File

```

* Define users with control authority to Operations Manager
*
AUTH USER(user1),CONTROL(Y)
AUTH USER(user2),CONTROL(Y)
*
* Define users with config authority to Operations Manager
*
AUTH USER(user1),CONFIG(Y)
AUTH USER(user3),CONFIG(Y)
*
* Define users and the consoles they can access to Operations Manager
* Must have control authority
*
AUTH USER(user1),CONSOLE(SFS)
AUTH USER(user1),CONSOLE(RSCS)
AUTH USER(user2),CONSOLE(*)
*
* Define service machines to Operations Manager
*
DEFSRVM USER(GOMSV01)
DEFSRVM USER(GOMSV02)
DEFSRVM USER(GOMSV03)
DEFSRVM USER(GOMSV04)
*
CONFIG FN(MYLOCAL),FT(TIMERS),FM(A)

```

Define four  
action  
processing  
servers

## Sample Configuration File

```

* Define users with control authority to Operations Manager
*
AUTH USER(user1),CONTROL(Y)
AUTH USER(user2),CONTROL(Y)
*
* Define users with config authority to Operations Manager
*
AUTH USER(user1),CONFIG(Y)
AUTH USER(user3),CONFIG(Y)
*
* Define users and the consoles they can access to Operations Manager
* Must have control authority
*
AUTH USER(user1),CONSOLE(SFS)
AUTH USER(user1),CONSOLE(RSCS)
AUTH USER(user2),CONSOLE(*)
*
* Define service machines to Operations Manager
*
DEFSRVM USER(GOMSVMO1)
DEFSRVM USER(GOMSVMO2)
DEFSRVM USER(GOMSVMO3)
DEFSRVM USER(GOMSVMO4)
*
CONFIG FN(MYLOCAL),FT(TIMERS),FM(A)
    
```

**Nested configuration files**



## Sample Configuration File

```

* Define rules to Operations Manager
*
DEFRULE NAME(CPREAD),MATCH(*HCP*150A*CP*),ACTION(CPREAD)
DEFRULE NAME(VMREAD),MATCH(*HCP*150A*VM*),ACTION(VMREAD)
DEFRULE NAME(PSWAIT),MATCH(*HCP*450W*),ACTION(PSWAIT)
* Define timers to Operations Manager
*
DEFTIMR NAME(STATS),WHEN(00),ACTION(STATUS)
DEFTIMR NAME(H00),WHEN(00),ACTION(STORMAP)
DEFTIMR NAME(WMON),WHEN(00),ACTION(WMON)
DEFTIMR NAME(FIRSTM),WHEN(00),ACTION(FIRSTM)
*
* Define actions to Operations Manager
*
DEFACTN NAME(CPREAD),INPUT(LOG,CRE),OUTPUT(STATUS),ENV(GOM)
DEFACTN NAME(VMREAD),INPUT(LOG,CRE),OUTPUT(STATUS),ENV(GOM)
DEFACTN NAME(PSWAIT),INPUT(LOG,CBL),OUTPUT(STATUS),ENV(GOM)
DEFACTN NAME(STATUS),INPUT(LOG,CBL),OUTPUT(STATUS),ENV(GOM)
DEFACTN NAME(STORMAP),INPUT(LOG,CBL),OUTPUT(STATUS),ENV(GOM)
DEFACTN NAME(WMON),INPUT(LOG,CBL),OUTPUT(STATUS),ENV(GOM)
DEFACTN NAME(FIRSTM),INPUT(LOG,CBL),OUTPUT(STATUS),ENV(GOM)
DEFACTN NAME(ACCOUNTS),COMMAND(EXEC DOACCTS &P),OUTPUT(LOG),ENV(SVM)
DEFACTN NAME(NEWMONTH),COMMAND(EXEC DOACCTS &P),OUTPUT(LOG),ENV(SVM)
    
```



**Pattern matching**

- Standard CMS wildcard processing
- Starting and ending columns
- Exclusion matching with wildcard and column support

**Define a rule called CPREAD that will execute the CPREAD action when matched**



## Sample Configuration File

```
* Define rules to Operations Manager
*
DEFRULE NAME (CPREAD),MATCH (*HCP*150A*CP*),ACTION (CPREAD)
DEFRULE NAME (VMREAD),MATCH (*HCP*150A*VM*),ACTION (VMREAD)
DEFRULE NAME (PSWAIT),MATCH (*HCP*450W*),ACTION (PSWAIT)
* Define timers to Operations Manager
*
DEFTIMR NAME (STATS),WHEN (00),ACTION (STATUS)
DEFTIMR NAME (H00),WHEN (00),ACTION (STORMAP)
DEFTIMR NAME (WMON),WHEN (MON-00:00),ACTION (ACCOUNTS),PARM (WEEKLY)
DEFTIMR NAME (FIRSTM),WHEN (01-00:00),ACTION (NEWMONTH),PARM (MONTHLY)
*
```

Define a timer called **STATS** that will execute the **STATUS** action every hour on the hour

Define a timer called **WMON** that will execute the **ACCOUNTS** action every Monday at midnight, passing the parameter **"WEEKLY"**

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

```
* Define actions to Operations Manager
*
DEFACTN NAME (CPREAD),COMMAND (CP SEND &2 BEGIN),
INPUT (LOG, CRE),OUTPUT (LOG),ENV (LVM)
DEFACTN NAME (VMREAD),COMMAND (CP SEND &2 BEGIN),
INPUT (LOG, CRE),OUTPUT (LOG),ENV (LVM)
DEFACTN NAME (PSWAIT),COMMAND (CP SEND &U IPL CMS),
INPUT (LOG, CBL),OUTPUT (LOG),ENV (LVM)
DEFACTN NAME (STATUS),COMMAND (STATUS),OUTPUT (LOG),ENV (GOM)
DEFACTN NAME (STORMAP),COMMAND (STORMAP),OUTPUT (LOG),ENV (LVM)
DEFACTN NAME (ACCOUNTS),COMMAND (EXEC DOACCTS &P),OUTPUT (LOG),ENV (SVM)
DEFACTN NAME (NEWMONTH),COMMAND (EXEC DOACCTS &P),OUTPUT (LOG),ENV (SVM)
```

## Sample Configuration File

```
* Define rules to Operations Manager
*
DEFRULE NAME (CPREAD),MATCH (*HCP*150A*CP*),ACTION (CPREAD)
DEFRULE NAME (VMREAD),MATCH (*HCP*150A*VM*),ACTION (VMREAD)
DEFRULE NAME (PSWAIT),MATCH (*HCP*450W*),ACTION (PSWAIT)
* Define timers to Operations Manager
*
DEFTIMR NAME (STATS),WHEN (00),ACTION (STATUS)
DEFTIMR NAME (H00),WHEN (00),ACTION (STORMAP)
DEFTIMR NAME (WMON),WHEN (MON-00:00),ACTION (ACCOUNTS),PARM (WEEKLY)
DEFTIMR NAME (FIRSTM),WHEN (01-00:00),ACTION (NEWMONTH),PARM (MONTHLY)
*
```

Define an action called **CPREAD** that will:

- Execute a CP SEND
- Pass 2nd word of the matching message
- Pass "BEGIN"
- Add matching message to Ops Mgr console in dataspace
- Set message to red in console (dataspace)
- Place output of command in Ops Mgr log
- Execute the command on main Ops Mgr server

```
* Define actions to Operations Manager
*
DEFACTN NAME (CPREAD),COMMAND (CP SEND &2 BEGIN),
INPUT (LOG, CRE),OUTPUT (LOG),ENV (LVM)
DEFACTN NAME (VMREAD),COMMAND (CP SEND &2 BEGIN),
INPUT (LOG, CRE),OUTPUT (LOG),ENV (LVM)
DEFACTN NAME (PSWAIT),COMMAND (CP SEND &U IPL CMS),
INPUT (LOG, CBL),OUTPUT (LOG),ENV (LVM)
DEFACTN NAME (STATUS),COMMAND (STATUS),OUTPUT (LOG),ENV (GOM)
DEFACTN NAME (STORMAP),COMMAND (STORMAP),OUTPUT (LOG),ENV (LVM)
DEFACTN NAME (ACCOUNTS),COMMAND (EXEC DOACCTS &P),OUTPUT (LOG),ENV (SVM)
DEFACTN NAME (NEWMONTH),COMMAND (EXEC DOACCTS &P),OUTPUT (LOG),ENV (SVM)
```

## Sample Configuration File

```

* Define rules to Operations Manager
*
DEFRULE NAME (CPREAD) ,MATCH (*HCP*150A*CP*) ,ACTION (CPREAD)
DEFRULE NAME (VMREAD) ,MATCH (*HCP*150A*VM*) ,ACTION (VMREAD)
DEFRULE NAME (PSWAIT) ,MATCH (*HCP*450W*) ,ACTION (PSWAIT)
* Define timers to Operations Manager
*
DEFTIMR NAME (STATS) ,WHEN (00) ,ACTION (STATUS)
DEFTIMR NAME (H00) ,WHEN (00) ,ACTION (STORMAP)
DEFTIMR NAME (WMON) ,WHEN (MON-00:00) ,ACTION (ACCOUNTS) ,ENV (GOMSVM02)
DEFTIMR NAME (FIRSTM) ,WHEN (01-00:00) ,ACTION (NEWMONTH) ,ENV (SVM)
*
* Define actions to Operations Manager
*
DEFACTN NAME (CPREAD) ,COMMAND (CP SEND &2 BEGIN) ,
INPUT (LOG, CRE) ,OUTPUT (LOG) ,ENV (LVM)
DEFACTN NAME (VMREAD) ,COMMAND (CP SEND &2 BEGIN) ,
INPUT (LOG, CRE) ,OUTPUT (LOG) ,ENV (LVM)
DEFACTN NAME (PSWAIT) ,COMMAND (CP SEND &U IPL CMS) ,
INPUT (LOG, CBL) ,OUTPUT (LOG) ,ENV (LVM)
DEFACTN NAME (STATUS) ,COMMAND (STATUS) ,OUTPUT (LOG) ,ENV (GOM)
DEFACTN NAME (STORMAP) ,COMMAND (STORMAP) ,OUTPUT (LOG) ,ENV (LVM)
DEFACTN NAME (ACCOUNTS) ,COMMAND (EXEC DOACCTS &P) ,OUTPUT (LOG) ,ENV (GOMSVM02)
DEFACTN NAME (NEWMONTH) ,COMMAND (EXEC DOACCTS &P) ,OUTPUT (LOG) ,ENV (SVM)

```

### Define an action called ACCOUNTS that will:

- Execute DOACCTS EXEC
- Pass the parameter from the rule or timer calling this action
- Place output of DOACCTS EXEC in console in dataspace
- Execute this action on action processing server GOMSVM02

## Summary

- New z/VM tools for systems and storage management
  - Improved flexibility, productivity, and control of backup and restore operations
  - Automated, efficient, and productive tape management and operations
  - Improved user management of disk space with archive functions
  - Automated operations
- April 29, 2005
  - GAed Tape Manager for z/VM V1.1
  - GAed Backup and Restore Manager for z/VM V1.1
- August 26, 2005
  - GA Archive Manager for z/VM V1.1
  - GA Operations Manager for z/VM V1.1
- Gathering and prioritizing additional customer requirements
- Web site:
  - <http://www.ibm.com/software/stormgmt/zvm/>