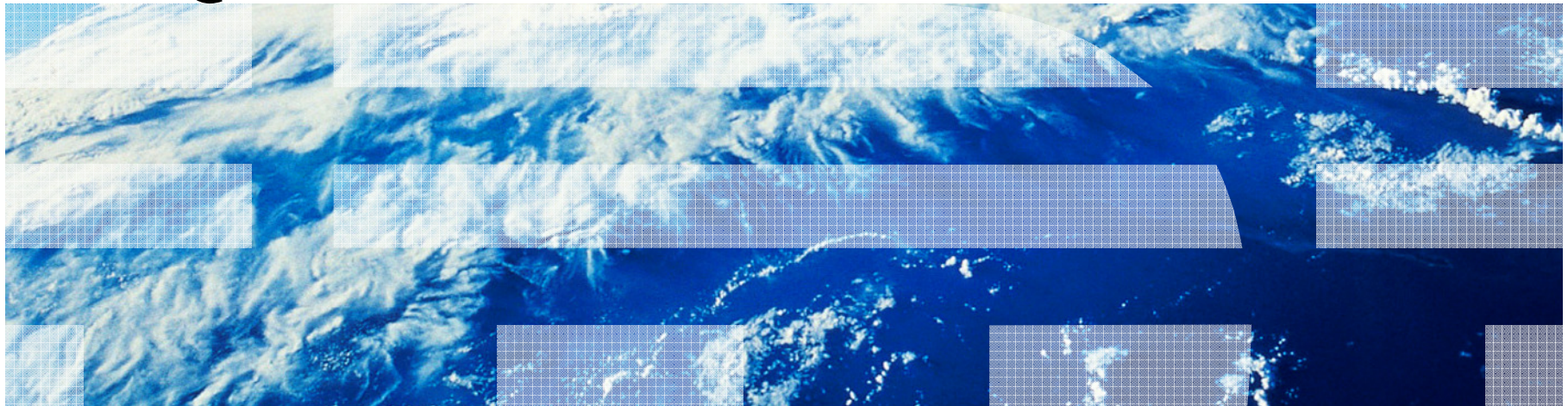IBM

Navigating z/VM Information Version 2.2

Session 13587

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z/VM Customer Focus and Care
bitnerb@us.ibm.com

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Notes:
Performance is in Internal Throughput Rate (ITR) ratio based on measurements and projections using standard IBM benchmarks in a controlled environment. The actual throughput that any user will experience will vary depending upon considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve throughput improvements equivalent to the performance ratios stated here.
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No other workload processing is authorized for execution on an SE.

IBM offers SEs at a lower price than General Processors/Central Processors because customers are authorized to use SEs only to process certain types and/or amounts of workloads as specified by IBM in the AUT.

Information

- Where to start?

- What to believe?

- Is it current?

- Too much information?

- Who can I ask?

The z/VM Library

- z/VM 6.3 "Bookshelf" contains 98 books!
    - ~65 Books for base z/VM Product
    - ~20 Books for priced features of z/VM
    - ~13 Books for related or z/OS topics (example LE – Language Environment)

- Key Books for new people to z/VM:
    - General Information manual, GC24-6193-05
    - Getting Started with Linux on System z, SC24-6194-03
    - z/VM V6R2 Installation Guide, GC24-6246-01
    - z/VM V6R2 CP Planning and Administration, SC24-6178-05
    - z/VM V6R2 Connectivity, SC24-6174-04
    - z/VM V6R1 CMS Primer, SC24-6172-00

z/VM General Information manual

- Often referred to as the "GIM"

- One of the first books updated and made available for a new release or enhancements in service stream
  - Example: SPE (Small Programming Enhancements) for High Performance FICON and HiperSockets Bridge in March 2012 resulted in an update version being created

- Key Content:
  - Overview of z/VM and Value (a little marketing)
  - What has changed in the most current release
  - Requirements
  - Appendices on Support Levels
    - IBM Servers supported by z/VM
    - IBM Operating systems supported as guests of z/VM

- z/VM 6.3 level: GC24-6193-05

Getting Started with Linux on System z

- Sometimes abbreviated "GSWL"

- More about z/VM than about Linux, but written with Linux as the primary workload for z/VM
  - Meant as a bridge between the simple installation process and the 100 books in the library with several pointers to other books in the library for more details
  - Significant updates for z/VM 6.2, SSI Clustering, and Live Guest Relocation

- Key Content:
  - Planning for Linux usage
  - Configuring DirMaint (Directory Maintenance Feature)
  - Configuring TCP/IP
  - Cloning of Linux guests

- z/VM 6.3 level: SC24-6194-03

z/VM V6R2 Installation Guide

- Often known simply as the "Install Guide"

- Key Content:
  - Step by Step details on installation of z/VM
  - Preinstalled licensed products and features
    - Performance Toolkit, DirMaint, etc.

- z/VM 6.3 level: GC24-6246-01

z/VM V6R2 CP Planning and Administration

- Also known as "CP P&A" or "Planning and Admin"
  - Note, there is also a CMS version of the book

- Key Content:
  - Details behind planning and configuring a z/VM system
  - Formulae for
    - Memory required
    - Disk page space
    - Dump space
  - Details behind User Directory (where virtual machines are defined)

- Not just a book for "first time install/configuration"
  - z/VM systems are dynamic and may grow – revisit for paging space and other considerations

- z/VM 6.3 Level: SC24-6178-05

z/VM V6R2 Connectivity

- Connectivity book is good book and often overlooked

- Key content:
  - All about z/VM virtual networks
    - Virtual Switches
    - Guest LANs
  - Other communication protocols or functions in z/VM
    - Advanced Program-to-Program Communications (APPC)
    - Inter-System Facility for Communications (ISFC) – backbone of SSI clustering

- z/VM 6.3 Level: SC24-6174-04

z/VM V6R1 CMS Primer

- Primer walks through getting started with CMS

- Key content:
  - Logging on and off of z/VM
  - CMS minidisk file system and SFS (Shared File System) background
  - Editing files using XEDIT
  - Managing files and several productivity aids included in CMS for this
    - Like other platforms, there is often more than one way to do things.

- Content you can probably skip when you read for first time:
  - Printing from CMS
  - NAMES files

- z/VM Version 6 Level: SC24-6172-00

z/VM Internet Library

- http://www.ibm.com/vm/library

- Includes:
  - z/VM "Information Centers"
  - z/VM BookManager-format bookshelves
  - z/VM PDF libraries
  - z/VM Program Directories
  - z/VM data areas and control blocks
  - z/VM monitor records
  - Select IBM Redbooks®
  - White papers and other documents

z/VM Internet library

z/VM
News
About z/VM
Events calendar
Products and features
Downloads
Technical resources
Library
How to buy
Install
Service
Education
Site map
Site search
Printer-friendly
Notify me
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z/VM Internet Library

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Please read and accept our terms and conditions before using the z/VM
Internet Library.

z/VM product information

- z/VM information center | **V6.3** | **V6.2** | **V5.4** |
- z/VM bookshelf | **V6.2** | **V6.1** | **V5.4** | **V5.3** | **V5.2** | **V5.1** | **V4.4** |
  V3.1 |
- z/VM V6.3 Collection page coming soon!
  The z/VM V6.3 Collection (SK5T-7054-06) is available as a
  downloadable zip file from the IBM Publications Center
- Additional and updated z/VM publications (03-2013)
- Program directories
- Data areas, control blocks, and monitor records

Reader's comments
Send us your comments on the z/VM publications and the z/VM Internet
Library. When commenting on a publication, please specify the complete form
number (xxxx-xxxx-xx).

Linux on IBM System z documentation for 'Development stream'
Device Drivers, Features, and Commands and other documents

IBM Redbooks publications
Redbooks publications for z/VM
Redbooks publications home page

White papers, consultant reports, performance reports
z/VM Performance Report

Related links
- Resource Link
- Resources for IBM
  Business Partners
- Resources for developers

z/VM Information Center

- IBM Publications provides a series of "Information Centers"

- z/VM Information Center available on web or as a DVD for install on standalone PCs

- Content is identical to traditional BookManager and PDF formats

- Strategic IBM mechanism for delivering product documentation

- Advantages:
  - Up to date
  - Searching (Web based search engines often give too much)
  - Printing
  - More than just the publications (control blocks, monitor records, etc.)

IBM ®

Search: [   ] Go   Scope: All topics

Contents

- ⊞ z/VM V6R2.0 Information Center (April 2012)
- ⊞ System Overview
- ⊞ Installation, Migration, and Service
- ⊞ Planning and Administration
- ⊞ Customization and Tuning
- ⊞ Operation and Use
- ⊞ Application Programming
- ⊞ Diagnosis
- ⊞ Data Facility Storage Management System for VM
- ⊞ Directory Maintenance Facility for z/VM
- ⊞ Performance Toolkit for VM
- ⊞ RACF Security Server for z/VM
- ⊞ RSCS Networking for z/VM
- ⊞ Device Support Facilities
- ⊞ Environmental Record Editing and Printing
- ⊞ Network Job Entry
- ⊞ Open Systems Adapter
- ⊞ IBM XL C/C++ for z/VM
- ⊞ z/VM data areas, control blocks, and monitor records
- ⊞ PDF and Softcopy (BOOK) files available with the z/VM V6R2.1 Information Ce
- ⊞ Notices, Accessibility, and Programming Interfaces
- ⊞ View information in information center
- ⊞ Contact z/VM
- ⊞ ibm.com: About IBM - Privacy - Contact

z/VM V6R2.0 Information Center (April 2012)

Related resources

→ Resource Link

→ z/VM technical resources

→ Accessibility

- About this information center

  Here's what you can expect from this information center.

- Help for the Information Center

  Get help using the information center.

- What's in this information center

  Want to know more about the contents of this information center?

- Notices, accessibility, and programming interfaces

  Special notices about this information.

- PDF and Softcopy (BOOK) files available with the z/VM V6R2.0 information center

  Links to all the PDF and softcopy (BOOK) versions of the major topics available with this information center.

- How to read syntax diagrams

  A description of the syntax of external interfaces used throughout the information center.

- IBM softcopy

  Get the latest information about IBM technical documentation available on CD-ROM, DVD, and the Internet.

- Where to get z/VM publications

  You can get z/VM publications from several sources.

15

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Showing Books in a Topic

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Searching

Search: | STORBUF | Go | Scope: All topics

Search Results

Total 30 result(s) found for **STORBUF**:

📄 **STORBUF INITIAL Defaults Changed**

z/VM: CP Commands and Utilities Reference Previous topic | Next topic | Contents | Index | Contact z/VM | Library | PDF | BOOK STORBUF INITIAL Defaults Changed z/VM: CP Com...

📄 **[V6.2] STORBUF Default Change**

z/VM: Migration Guide Previous topic | Next topic | Contents | Index | Contact z/VM | Library | PDF | BOOK [V6.2] STORBUF Default Change z/VM: Migration Guide GC24-6201-03 ...

📄 **Poor Interactive Response Time (with a Large Number of Interactive Users)**

z/VM: Performance Previous topic | Next topic | Contents | Index | Contact z/VM | Library | PDF | BOOK Poor Interactive Response Time (with a Large Number of Interactive Us...

Information Center Printing
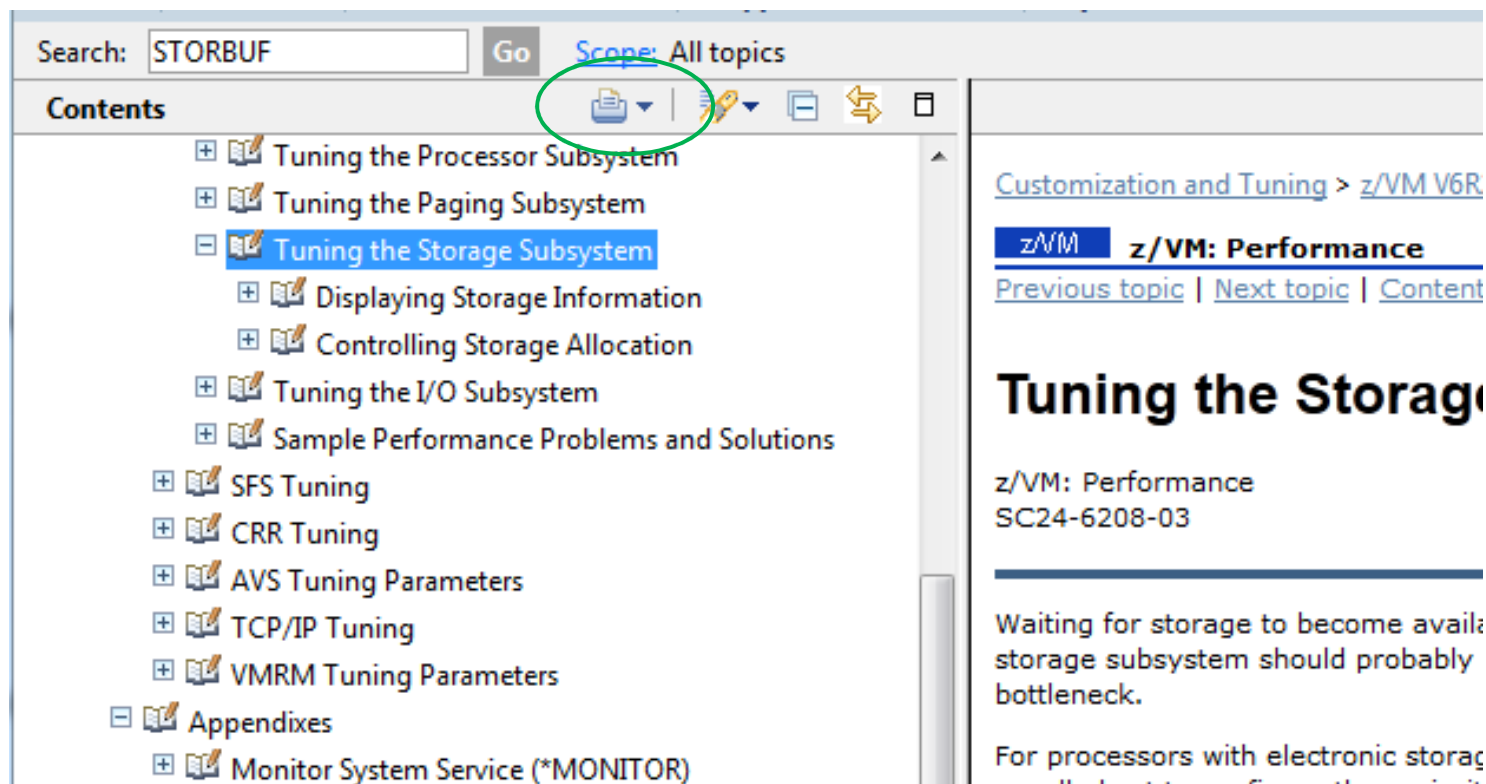
Print Icon provides two choices in pull down allows printing selected topic or selected topic and all subtopics.
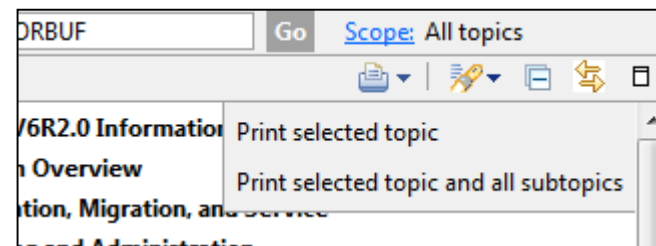
Redbooks

- Redbooks – result of collaborative residency work with IBMers and others

- Redpieces – smaller documents

- Great source of information
  - Practical
  - Hands on
  - Combines different products
  - Usage based instead of reference based

- Use some caution
  - Not all Redbooks are updated as often as needed
  - Can show a possible solution, but might not be best case in all scenarios

A Few Redbooks and Pointers

Redbooks.

- Redbooks home page: http://www.redbooks.ibm.com/

- List of z/VM related Redbooks: http://www.vm.ibm.com/pubs/redbooks/

- Bill's Favorites:
  - Linux on IBM System z: Performance Measurement and Tuning
    http://www.redbooks.ibm.com/abstracts/sg246926.html?Open
  - z/VM and Linux on IBM System z: The Virtualization Cookbook for SLES 11
    SP1 http://www.redbooks.ibm.com/abstracts/sg247931.html?Open
  - z/VM and Linux on IBM System z: The Virtualization Cookbook for Red Hat
    Enterprise Linux 6.0
    http://www.redbooks.ibm.com/abstracts/sg247932.html?Open
  - Practical Migration to Linux on System z
    http://www.redbooks.ibm.com/Redbooks.nsf/RedpieceAbstracts/sg247727.htm
    l?Open
  - An Introduction to z/VM Single System Image and Live Guest Relocation
    http://www.redbooks.ibm.com/abstracts/sg248006.html?Open
  - Using z/VM 6.2 Single System Image and Live Guest Relocation
    http://www.redbooks.ibm.com/abstracts/sg248039.html?Open

z/VM Home Page

- **www.vm.ibm.com** = **www.ibm.com/vm**

- Running on z/VM!

IBM Systems > System z > z/VM >

| z/VM |
| News |
| About z/VM |
| Events calendar |
| Products and features |
| Downloads |
| Technical resources |
| Library |
| How to buy |
| Install |
| Service |
| Education |
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| Site search |
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| Contact z/VM |

Build better customer experiences with zEnterprise

Announcing new system and solution offerings to build cloud, analytics, mobile and security advantage

z/VM®

Virtualization with Efficiency at Scale

Recent Highlights

July 23, 2013 - Announcement of z/VM 6.3

August 2, 2012 - z/VM celebrates its 40th anniversary.

Read the z/VM and VM Site News and Changes for a summary of VM-related news, announcements, pointers, new classes, and places to hear about z/VM virtualization technology.

Currently Supported Releases of z/VM

z/VM V6.3 (support begins July 28, 2013)
z/VM V6.2 Updated August 28, 2012 with required service for z/VM 6.2 to run on the IBM zEnterprise EC12

NEW Cloud Computing with xCAT on z/VM

Find out how xCAT on z/VM can help you manage, provision, and monitor physical and virtual machines.

CPU Measurement Facility

Customer Data Collection Program

Find out more on how you

Related links
· Resource Link

Left Navigation Bar Highlights

z/VM

News

About z/VM

Events calendar

Products and features

Downloads

Technical resources

Library

How to buy

Install

Service

Education

Site map

Site search

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Technical Resources

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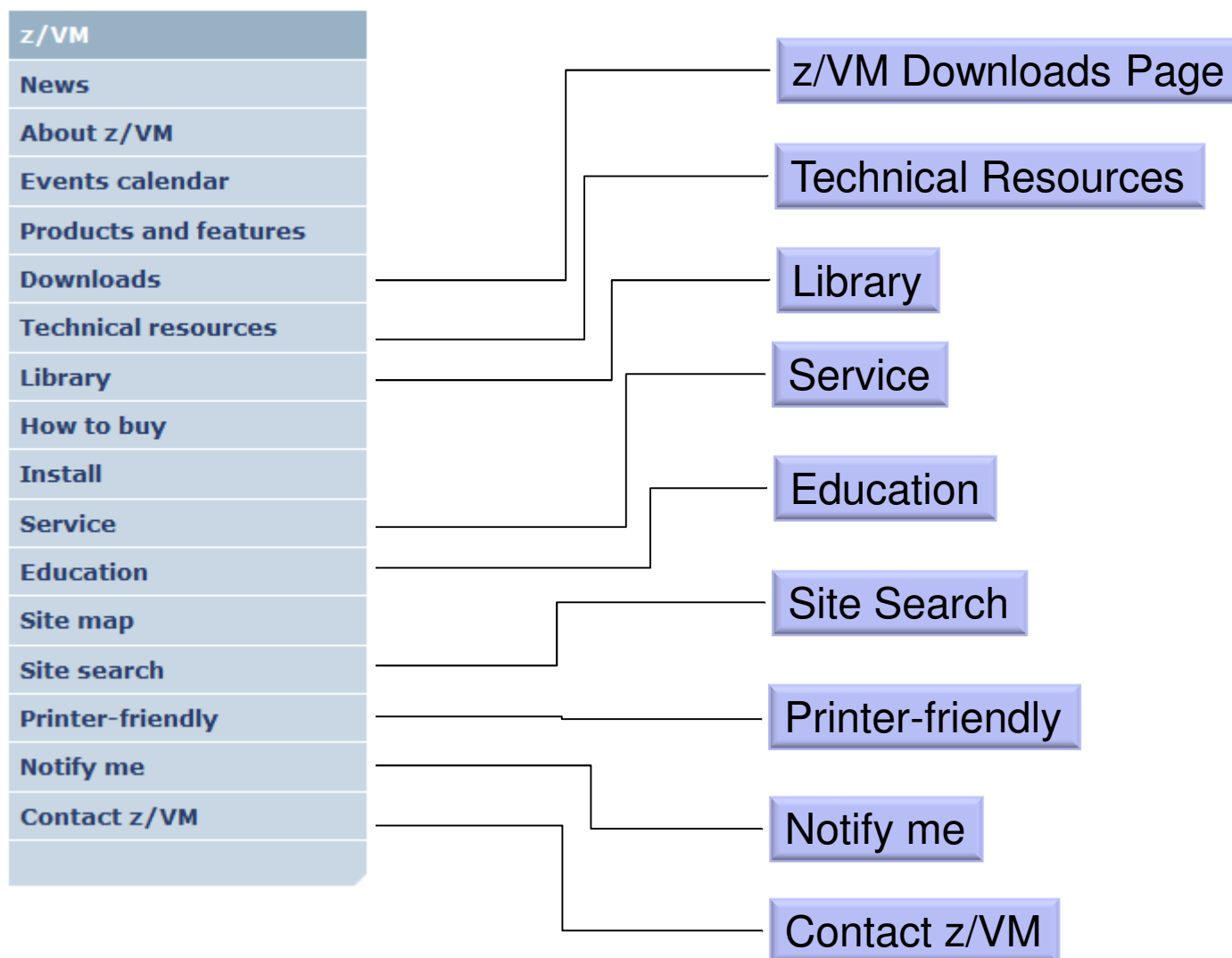
z/VM Technical Resources Page

- Collection of links:

  - Information on each release of z/VM

  - Information on the VM Community

  - Order and upgrade information

  - Networking, Security, Performance, Systems Management, etc. subsystem pages

  - Guest Operating Systems

  - Application Development

z/VM Service Page

- Important Service news

- Links to program directories and other important information
  - "Program Directories" are documents intended for the system programmer responsible for program installation, covering such topics as: Support, Installation, and Service.

- Links to other IBM service related pages
  - PSP (Preventive Service Planning) Buckets: definitive source for what service you need to support devices, processors, z/VM
  - IBM Support Portal

- Link to Red Alert Page

z/VM Service Red Alert Page

- This page documents critical service information, examples:
  - APARs that are important though the abstract might not be obvious as to why you would need it.
  - Problems related to different factors (e.g. millicode change and unrelated z/VM feature)
  - Potential high-impact problems where APAR or PTF may not be available yet.

- Low number of red alerts, ~ 1 to 3 per year

- Highly recommend you subscribe for notification of changes to this page.

z/VM Home Page Site Search

- Located on left navigation bar is link for "Site Search"

- Special search for just the z/VM Home Page

z/VM Home Page Change Notification

- Allows you to get an email for an update to any page on the z/VM Home pages

- Privacy policy applies

- File: should be filled in if clicked on page you want, but you can over-ride it

The fields indicated with an asterisk (*) are required to complete this transaction; other fields are optional. If you do not want to provide us with the required information, please use the "Back" button on your browser to return to the previous page, or close the window or browser session that is displaying this page.

* Action: (choose one)	⦿ Enroll ○ Unenroll ○ Query
* Your e-mail address: (for example, you@yourcompany.com)	
* File: (for example, /service /rsu/rsu_eso.html) (required for enroll and unenroll) (ignored for query)	/service/redalert/index.html

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By clicking "Submit", you agree that IBM may process your data in the manner indicated above and as described in our Privacy policy.

Submit

Other Web Pages

- Linux on System z Portal
  - http://www.ibm.com/systems/z/os/linux/

- IBM System z You Tube Channel
  - http://www.youtube.com/user/IBMSystemZ

- ISV Products for Linux on z/VM
  - http://www.ibm.com/systems/z/solutions/isv/linuxproduct.html

- Melinda Varian's History of VM Community
  - http://www.leeandmelindavarian.com/Melinda/index.html

- Excellent White Paper on Virtualization by Solitaire International
  - http://public.dhe.ibm.com/common/ssi/ecm/en/zsl03192usen/ZSL03192USEN.PDF

- White Papers from IBM on Linux and z/VM
  - http://www-03.ibm.com/support/techdocs/atsmastr.nsf/Web/WP-ByProduct?OpenDocument&Start=1&Count=1000&Expand=11

World Wide Events and Local User Groups

★ z/VM Events: http://www.vm.ibm.com/events/

★ Local User Groups around the world: http://www.vm.ibm.com/events/usergrps.html

Mailing Lists

- There are two very helpful mailing lists:
  - IBMVM
  - LINUX-390

- Experts available 24 x 365

- Can subscribe to get each message as an email or daily digest form
  - Average about 25 messages a day

- Recommend subscribing even if you do not have a question!

- People all over world available to help answer questions

- For information and instructions to subscribe, see
  http://www.vm.ibm.com/techinfo/listserv.html

z/VM Help

- CMS HELP command is part of the z/VM system

- Provides information on:
  - Common tasks
  - Commands from various components and features
    - Is usually the same information as the Command Reference Book
  - Glossary (Terminology)
  - Messages
  - Macros and Routines

- Updated with service

- Menu driven

HELP


```
A - Small VM7 - [40 x 80]

File  Edit  View  Communication  Actions  Window  Help

HELP TASKS                    Task Help Information              line 1 of 40
(c) Copyright IBM Corporation 1990, 2013

z/VM HELP, main panel

The help panels listed below provide information about various
z/VM functions, topics, and tasks.
To view a help panel, move the cursor to any character of the name
or description and press the ENTER key or the PF1 key.


HELP       - z/VM HELP Facility topics
MENUS      - z/VM help menus
TASKS      - Basic z/VM tasks
AVS        - AVS commands
CMS        - CMS commands
CP         - CP commands
DIRMAINT   - DirMaint commands
DIRMAINT   - DirMaint topics
DUMPS      - Dump commands, subcommands, and utilities
DYNIO      - Dynamic I/O tasks
GLOSSARY   - Definitions of terms
LE         - Language Environment commands
LIBRARY    - z/VM bibliography
MACROS     - CMS assembler macros (menu)
MACROS     - Assembler macros and functions (types)
MESSAGES   - Messages and codes
OPEN       - OpenExtensions services and APIs
PERFKIT    - Performance Toolkit topics
PIPE       - CMS Pipelines stages and subcommands
PIPE       - CMS Pipelines tasks
QUERYSET   - QUERY and SET commands and subcommands
ROUTINES   - CMS callable services (menu)
ROUTINES   - CMS routines (types)
RSCS       - RSCS Networking commands and link parameters
PF1= Help      2= Top       3= Quit      4= Return     5= Clocate    6= ?
PF7= Backward 8= Forward  9= PFkeys  10=            11=          12= Cursor

====>  _
                                                           Macro-read 1 File
MA      A                                                            39/007
```

Connected to remote server/host gdlvm7.endicott.ibm.com using port 23

HELP

```
B - GDLVM7 - [43 x 80]                                                    _ □ X

HELP TASKS                     Task Help Information              line 1 of 40
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QUERYSET   - QUERY and SET commands and subcommands
ROUTINES   - CMS callable services (menu)
ROUTINES   - CMS routines (types)
RSCS       - RSCS Networking commands and link parameters
STATEMTS   - REXX, EXEC 2, and EXEC statements
SUBCMDS    - Subcommand groups, such as XEDIT
TCPIP      - TCP/IP commands
PF1= Help      2= Top       3= Quit      4= Return     5= Clocate    6= ?
PF7= Backward 8= Forward   9= PFkeys   10=            11=           12= Cursor

====>  _
                                                      Macro-read 1 File

MA    B                                                            42/007
```

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HELP for a Command

- Following may be included:
  - Command syntax diagram (aka Railroad Tracks)
  - Authorization – e.g. privilege command required
  - Purpose – brief description
  - Operands – description of each operand on the command
  - Options – description of each option
  - Usage Notes
  - Examples
  - Responses
  - Messages

- Some commands may have so many operands or options that they are presented as part of a menu or with "related" information
  - Example: HELP CPSET
  - Example: HELP MONITOR MENU

HELP VMRELOCATE

```
A - Small VM7 - [40 x 80]                                                    ☐ ☐ ✕

File   Edit   View   Communication   Actions   Window   Help

CP VMRELOCAT                    All Help Information              line 1 of 812
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VMRELOCATE

>>--VMRELOcate----------------------------------------------------------->

>--.-MOVE--.------.--userid--.----.--destination--| MOVE (continued) |-.---->< 
   |       '-USER-'          '-TO-'
   |-MODIFY--.------.--userid--| B |-------------------------------------|
   |         '-USER-'
   |-TEST--.------.--userid--.----.--destination----------------------|
   |       '-USER-'          '-TO-'
   |                .-ALL---------------------------------.
   |-STATUS--+----------------------------------------+----------------------|
   |         |  .-.------.--userid--.-------.      '-DETails-' |
   |         |  '-USER-'            '-DETails-'       |
   |         |-INcoming-----------------------------|
   |         '-OUTgoing-----------------------------'
   '-CANCEL--.------.--userid-----------------------------------------'
            '-USER-'

MOVE (continued):
                                      .-SYNChronous--.
|--.------------------------------.--+--------------+--.-| A |--------------------|
   |  <-------------------<  |  '-ASYNChronous-'   '-IMMEDiate--| B |-'
   '-FORCE---.-ARCHITECTURE-.--'
            |-DOMAIN-------|
            '-STORAGE------'

A:
   .-MAXTotal--NOLIMIT------.        .-MAXQuiesce--10--SEC--------.
|--+------------------------+--+------------------------------------+--|
   '-MAXTotal--nnn--.------.-'      '-MAXQuiesce--.-nnn--.------.-.-'
                    '-SEC-'                       |       '-SEC-' |
PF1=           2= Top       3= Quit      4= Return      5= Clocate    6= ?
PF7= Backward 8= Forward  9= PFkeys   10=            11=           12= Cursor

====>  _
                                                      Macro-read 2 Files

MA       A                                                              39/007

  Connected to remote server/host gdlvm7.endicott.ibm.com using port 23
```
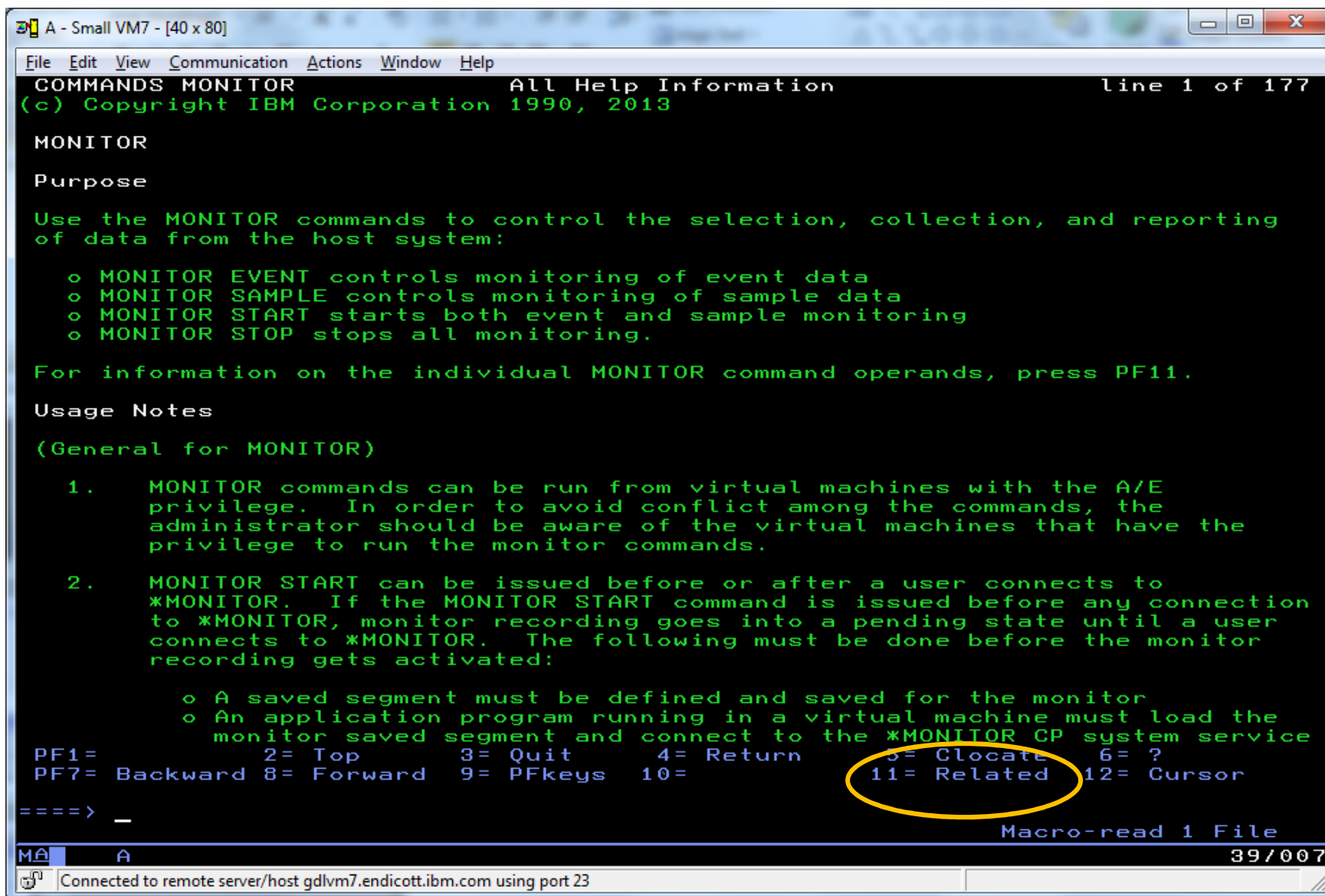
HELP VMRELOCATE

IBM

```
B - GDLVM7 - [43 x 80]

COMMANDS VMRELOCATE                    All Help Information            line 1 of 812
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VMRELOCATE

>>--VMRELOcate------------------------------------------------------>

>--.-MOVE--.------.--userid--.----.--destination--| MOVE (continued) |-.----><
   |       '-USER-'          '-TO-'                                     |
   |-MODIFY--.------.--userid--| B |-------------------------------|
   |         '-USER-'
   |-TEST--.------.--userid--.----.--destination--------------------|
   |       '-USER-'          '-TO-'
   |          .-ALL---------------------------.
   |-STATUS--+----------------------------------+-----------------|
   |         | -.------.--userid--.---------.-|
   |         |  '-USER-'          '-DETails-'|
   |         |-INcoming--------------------|
   |         '-OUTgoing--------------------'
   '-CANCEL--.------.--userid----------------------------------------'
            '-USER-'


MOVE (continued):
                                          .-SYNChronous--.
|--.---------------------------.--+----------------+--.-| A |------------.----|
   |            <------------<  |  '-ASYNChronous-'   '-IMMEDiate--| B |-'
   '-FORCE---.-ARCHITECTURE-.--'
            |-DOMAIN-------|
            '-STORAGE------'


A:
  .-MAXTotal--NOLIMIT------.   .-MAXQuiesce--10--SEC---------.
|--+------------------------+--+-------------------------------+---------------|
  '-MAXTotal--nnn--.-----.-'   '-MAXQuiesce--.-nnn--.-----.-.-'
                   '-SEC-'                   |       '-SEC-' |
                                             '-NOLIMIT------'

B:
PF1=          2= Top      3= Quit      4= Return      5= Clocate    6= ?
PF7= Backward 8= Forward  9= PFkeys   10=            11=           12= Cursor

====>  _
                                                       Macro-read 1 File
MA    B                                                            42/007
```

Example of related information: HELP MONITOR


```
A - Small VM7 - [40 x 80]

File  Edit  View  Communication  Actions  Window  Help

COMMANDS MONITOR                  All Help Information              line 1 of 177
(c) Copyright IBM Corporation 1990, 2013

MONITOR

Purpose

Use the MONITOR commands to control the selection, collection, and reporting
of data from the host system:

   o MONITOR EVENT controls monitoring of event data
   o MONITOR SAMPLE controls monitoring of sample data
   o MONITOR START starts both event and sample monitoring
   o MONITOR STOP stops all monitoring.

For information on the individual MONITOR command operands, press PF11.

Usage Notes

(General for MONITOR)

   1.    MONITOR commands can be run from virtual machines with the A/E
         privilege.  In order to avoid conflict among the commands, the
         administrator should be aware of the virtual machines that have the
         privilege to run the monitor commands.

   2.    MONITOR START can be issued before or after a user connects to
         *MONITOR.  If the MONITOR START command is issued before any connection
         to *MONITOR, monitor recording goes into a pending state until a user
         connects to *MONITOR.  The following must be done before the monitor
         recording gets activated:

            o A saved segment must be defined and saved for the monitor
            o An application program running in a virtual machine must load the
              monitor saved segment and connect to the *MONITOR CP system service
PF1=            2= Top       3= Quit      4= Return      5= Clocate     6= ?
PF7= Backward 8= Forward   9= PFkeys   10=            11= Related    12= Cursor

====>  _
                                                          Macro-read 1 File
MA    A                                                                39/007
```

Connected to remote server/host gdlvm7.endicott.ibm.com using port 23

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Example of related information: HELP MONITOR

COMMANDS MONITOR   All Help Information   line 1 of 177
(c) Copyright IBM Corporation 1990, 2013

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Purpose

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           recording gets activated:

               o A saved segment must be defined and saved for the monitor
               o An application program running in a virtual machine must load the
                 monitor saved segment and connect to the *MONITOR CP system service
               o A MONITOR START command must be issued.

    3.   Both the event and sample profiles can be changed after monitoring has
PF1=   2= Top   3= Quit   4= Return   5= Clocate   6= ?
PF7= Backward 8= Forward   9= PFkeys   10=   11= Related   12= Cursor

====> _

                                                              Macro-read 1 File
MA   B   42/007

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Results from F11 on HELP MONITOR

Results from F11 on HELP MONITOR


```
B - GDLVM7 - [43 x 80]

 COMMANDS MONITOR                     Related Help Information          line 1 of 20
 (c) Copyright IBM Corporation 1990, 2013
  Related Information

  For information on each MONITOR operand,
  place the cursor under the topic of your choice
  and press ENTER or the PF1 key.


  MONITOR      - Control monitoring of event data
  EVENT

  MONITOR      - Control monitoring of sample data
  SAMPLE

  MONITOR      - Start both event and sample monitoring
  START

  MONITOR      - Stop all monitoring
  STOP

* * * End of File * * *













  PF1= Help       2= Top        3= Quit       4= Return      5= Clocate     6= ?
  PF7= Backward  8= Forward    9= PFkeys    10= Morehelp    11=            12= Cursor

====>  _

                                                          Macro-read 1 File
MA   B                                                                       42/007
```

Other Uses of HELP

- HELP SYNTAX
  - Explains how to read syntax diagrams

- HELP GLOSSARY or HELP GLOSSARY *term*
  - Brings up glossary list and goes to term if available

- HELP *message*
  - Looks up message and provides information on it
  - Example: HELP HCP1810I

- HELP HCPnnnnW
  - Provides Help on CP wait state number nnnn

HELP HCP1810I

```
 MSG HCP1810I                    All Help Information          line 1 of 27
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 HCP1810I   The variations of this message are explained below.

           -userid: Current storage use guest_footprint exceeds available
           capacity on destination destination_resource by difference

           -userid: Current storage use exceeds capacity on destination

Explanation:  The current storage footprint of this virtual machine exceeds
the current available storage resources (central storage, expanded storage,
and auxiliary storage) on the destination system. Allowing such a virtual
machine to relocate could result in a system abend. The current storage
footprint includes the pageable and non-pageable CP storage required to
virtualize the guest, in addition to all storage currently used in its base
address space and for all of its virtual disks. If values are specified for
the current storage footprint of the virtual machine and the current available
resource of the destination system, please be aware that these values are
transient and should be considered subject to change.

System Action:  The relocation is terminated with no further action. The
virtual machine continues to run on the source system.

User Response:  Take steps on the destination system to reduce the system load
or increase paging capacity. Alternatively, you could relocate this virtual
machine to a different system with adequate capacity in the SSI cluster.

* * * End of File * * *




PF1=             2= Top      3= Quit     4= Return     5= Clocate    6= ?
PF7= Backward 8= Forward   9= PFkeys   10=           11=           12= Cursor

====>  _
                                                    Macro-read 1 File
MA     A                                                        39/007
```
Connected to remote server/host gdlvm7.endicott.ibm.com using port 23

HELP HCP1810I

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HCP1810I   The variations of this message are explained below.

            -userid: Current storage use guest_footprint exceeds available
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and auxiliary storage) on the destination system. Allowing such a virtual
machine to relocate could result in a system abend. The current storage
footprint includes the pageable and non-pageable CP storage required to
virtualize the guest, in addition to all storage currently used in its base
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resource of the destination system, please be aware that these values are
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* * * End of File * * *

PF1=   2= Top   3= Quit   4= Return   5= Clocate   6= ?
PF7= Backward 8= Forward 9= PFkeys   10=   11=   12= Cursor

====> _

                                                          Macro-read 1 File

MA   B   42/007

Summary

- Lots of information is available

- Never be afraid to ask for help
  - IBMVM Mailing List
  - Your local IBM team
  - bitnerb@us.ibm.com

- Your assignment for after session:
  - ❑ Subscribe to Red Alert Page
  - ❑ Subscribe to IBMVM and Linux-390 Mailing Lists
  - ❑ Introduce yourself on the Mailing Lists
  - ❑ Bookmark www.vm.ibm.com
  - ❑ Bookmark the z/VM Information Center
  - ❑ Read first few chapters of the CMS Primer
  - ❑ Send Bill Bitner an email to tell him what topic you have trouble understanding and would like IBM to work on a small tutorial or video or other aid to learning

Please remember to do an evaluation: www.share.org/BostonEval

Bill's Cheat Sheet Version 1.1

IBM

Processor	Model
z900	2064
z800	2066
z990	2084
z890	2086
z9 EC	2094
z9 BC	2096
z10 EC	2097
z10 BC	2098
z196	2817
z114	2818
zEC12	2827
zBC12	2828
zPDT	1090

z/VM Release	Supported LCPUs	Supported Cstore	Supported Xstore
z/VM V6R3	32	1024GB	128GB
z/VM V6R2	32	256GB	128GB
z/VM V6R1	32	256GB	128GB
z/VM V5R4	32	256GB	128GB

Psuedo Name	Name	Cylinders	Space	Dev Type Value
3390-3	3390-3	3339	2.3GB	0A
3390-9	3390-9	10017	6.9GB	0C
3390-A	3390-A	>64K		0E

z/VM Release	CMS Level
z/VM V6R3	27
z/VM V6R2	26
z/VM V6R1	25
z/VM V5R4	24

Bill's Cheat Sheet Version 1.1

Conversions
1 Page = 4KB = 4096 Bytes
1 MB = 256 pages
1 GB = 262144 pages
180 4 KB blocks per 3390 Cylinder
1 FullWord = 4 Bytes
1 KB Kilobyte = 1024 Bytes
1 GB Gigabyte = 1024 Megabyte
1 TB Terabyte = 1024 Gigabyte
1 EB Exabyte = 1024 Terabyte

Time
1 millisecond = 0.001 seconds $(10^{**}-3)$
1 microsecond = 0.000001 seconds $(10^{**}-6)$
1 nanosecond = 0.000000001 seconds $(10^{**}-9)$
1 microsecond = 4096 TOD clock units

64 Bit TOD clock --> bit 51 = 1 microsecond

To convert a TOD value in pipes (example TOD of 7FFFFFFFFFFFFFFF):
pipe strliteral 7FFFFFFFFFFFFFFF| dateconv todabs isodate timeout | cons