

The z/VM Environment Basics

The z/VM environment has multiple components, however, this document will focus on two main components - the Control Program (CP) and the Conversational Monitor System (CMS). CP is the resource manager for z/VM. When logging onto z/VM with a CMS User ID, it starts with CP then the CMS operating system is typically started (if not starting a guest system such as Linux). Therefore important commands for both CP and CMS will be discussed. Running guest systems on z/VM will be discussed at a different time.

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Helpful references (current version links):

- CMS Primer - <https://www.vm.ibm.com/library/740pdfs/74626500.pdf>
- CMS User's Guide - <https://www.vm.ibm.com/library/740pdfs/74626600.pdf>
- CMS Commands and Utilities Reference - <https://www.vm.ibm.com/library/740pdfs/74626000.pdf>
- CP Commands and Utilities Reference - <https://www.vm.ibm.com/library/740pdfs/74626800.pdf>

Navigating z/VM in a 3270 Environment

Use the [Connecting to the zPRO Demo System](#) for the full information about using the 3270 environment.

The following is a review of the important information from the Connectivity document. It can be used as a reference/review or can skip to the next section.

Use the given CMS or z/VM 2nd level user ID and password to log onto the system:

- Start the emulator, when the z/VM screen appears, at the bottom left type:
 - Logon xxxxxxxx where xxxxxxxx is the user ID - hit enter
- Enter the password and hit enter again
- If VM READ shows at the bottom right, hit enter again to get to RUNNING
- If CP READ shows at the bottom right, type a 'B' and hit enter to get to RUNNING
- If MORE... or HOLDING show in the bottom right, the 'clear' key is used to clear the messages and move to the next screen

Basic Commands

There are many commands that can be used in z/VM. The following are the most common. The Query and Help commands are used in both CMS and CP.

HELP

There is a comprehensive HELP facility in z/VM. Enter HELP to get instructions on using the HELP facility. Enter HELP CMS to see information for CMS Commands. Enter HELP CP to see information for CP commands. Instructions for using the Help Menu are at the top of the menu screen.

Several things to note in the help screens.

- Many commands can be abbreviated. This will be noted by capitalization, such as Query is written with a capital Q but the rest lower case. Therefore it can be typed as QUERY or just Q. However, for a command such as QUERY LIMITS, the Query can be typed as QUERY or Q but LIMITS cannot be abbreviated as it is all in caps.
- There are options to most commands. In the example of Q LIMITS, there are several options that can be added. The defaults will be the top options on a line in the help file.
- If in a MENU screen, place the cursor on the desired command and hit enter to get help on that command.
- The function keys will navigate the screens. Use F3 to exit a screen and return to the previous screen (or to exit HELP). Use F8 to move forward in a screen and F7 to move backwards in a screen.

- Different commands have different privilege classes that restrict use. In the help for each command it will show “Authorization”. If it states “General User” (which is privilege class G and the default) then any user can enter the command. If it states “Privilege Class: x” then the user must have that privilege class assigned before the command can be executed or show the desired information.

QUERY

Query is a very useful command. When in doubt as to what to Query, do the following:

- Click on QUERY in the HELP CMS panel or in the HELP CP panel, then hit F11 for the list of parameters. Or type HELP CMS QUERY or HELP CP QUERY, then hit F11.
- Type HELP QUERY MENU - to get a panel that lists all query commands for XEDIT.
- HELP QUERY - shows the actual query command with F11 showing all of the related possible operands for CMS. HELP CPQUERY shows the menu of operands for CP.

Once the correct operand is known, the command can be issued from the bottom left corner of the screen. Some examples are:

- Q CPLEVEL (CP command) shows the current version level of the z/VM operating system, when the CP was created and when the system was started (IPL'd).
- Q CMSLEVEL (CMS command) shows the current version and service level of CMS.
- Q Names (CP command) shows the names of the users logged onto the that system (notice with the capital N, this could have been done with Q N).
- Q PRIVclass (CP command) shows the assigned privilege class(es) for this user (notice this could have been abbreviated as Q PRIV).
- Q DISK (CMS command) shows the disks to which this User ID has access.
- Q ACCESSED (CMS command) shows the status of those accessed disks (notice how both of these need to be spelled out, no abbreviations).

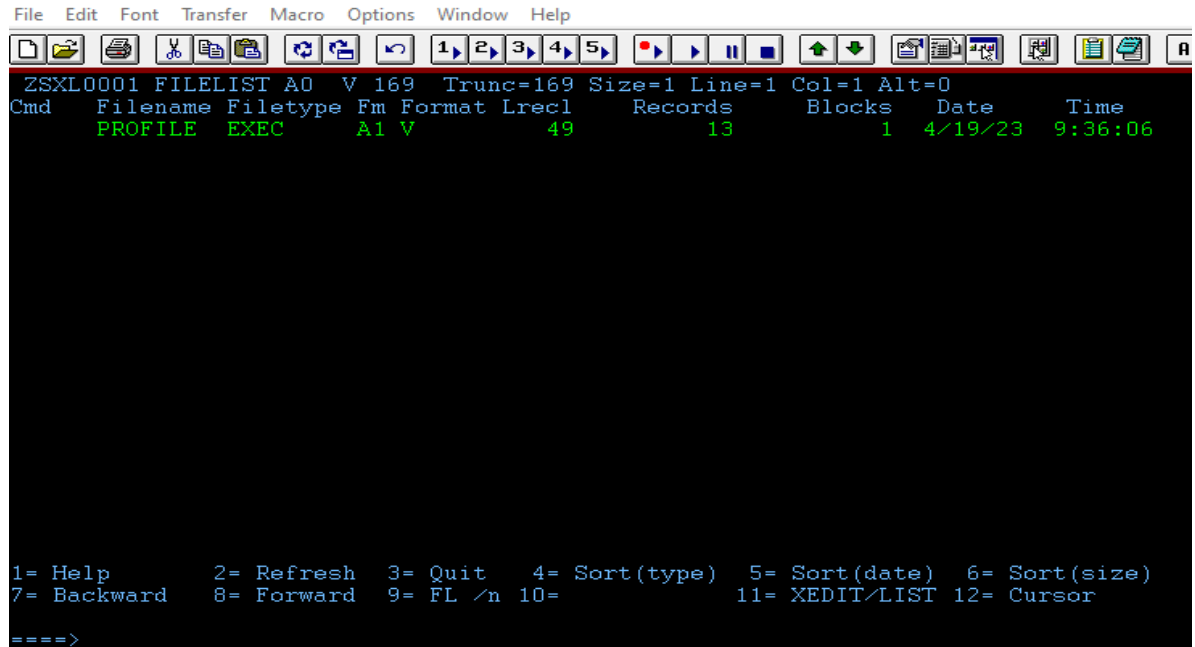
Basic CMS Commands

CMS File Introduction

All files have a File Name (FN), a File Type (FT) and a File Mode (FM). There are rules governing these parameters. Both file name and file type can only be up to **eight** characters. File mode is two characters signifying a mode letter (A-Z) and a number (1-9). Each number has a specific meaning. The File Mode can be a virtual disk or allocated space in a Shared File System (SFS) and is analogous to accessed drives on Linux.

FILELIST

To view the files owned by this User ID or to which the ID has access, use the FILELIST command. This can be abbreviated to FILEL. FILELIST allows the use of wildcards in any of the three parameters. (For examples on how to use, use HELP FILELIST and/or HELP PATTERN). To view the files this ID owns, use FILEL by itself and it will default to * * A. (The 'A' file mode is usually a disk or SFS space to which the User ID has write access). This will create a list similar to the one seen below:

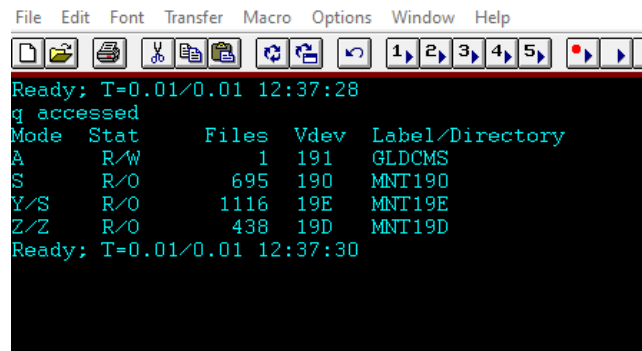


```
File Edit Font Transfer Macro Options Window Help
ZSXLO001 FILELIST A0 V 169 Trunc=169 Size=1 Line=1 Col=1 Alt=0
Cmd  Filename Filetype Fm Format Lrecl  Records  Blocks  Date    Time
  PROFILE  EXEC    A1 V      49      13      1  4/19/23 9:36:06

1= Help      2= Refresh  3= Quit     4= Sort(type)  5= Sort(date)  6= Sort(size)
7= Backward  8= Forward  9= FL /n   10=           11= XEDIT/LIST 12= Cursor
====>
```

This will display important information about the files, such as creation date/time, the formats of the files and the sizes of the files. These can be sorted in multiple ways. See HELP FILELIST for more information.

Other files on other accessed disks (from Q ACCESSED) can be viewed. Below shows a Q ACCESSED display.



```
File Edit Font Transfer Macro Options Window Help
Ready; T=0.01/0.01 12:37:28
q accessed
Mode Stat    Files  Vdev  Label/Directory
A    R/W      1    191  GLDCMS
S    R/O     695  190  MNT190
Y/S  R/O    1116  19E  MNT19E
Z/Z  R/O     438  19D  MNT19D
Ready; T=0.01/0.01 12:37:30
```

Notice there are four accessed disks. The first disk (FM A - 191) is the disk that has write access and is owned by this particular User ID. The other three disks are system disks that are in read only status but hold information needed in CMS. To see the files on the 'Z' or 19D disk, use FILEL * * Z or FILEL * HELP* Z as shown below. This is the disk that holds help files on this system. It is only accessed if the HELP command has been entered.

```

File Edit Font Transfer Macro Options Window Help
[Icons]
ZSXL0001 FILELIST A0 V 169 Trunc=169 Size=438 Line=1 Col=1 Alt=0
Cmd  Filename  Filetype  Fm  Format  Lrecl  Records  Blocks  Date  Time
VMDUMPTL  HELPMENU  Z2 V    66      114      2  4/21/22  8:15:29
VMDUMPTL  HELPABBR  Z2 V    40      102      5  4/21/22  8:15:26
SMAPI     HELPTASK  Z2 V    74      195     10 12/09/21 11:53:33
CERTMGR  HELPTCPI  Z2 V    80      294     12 12/02/21 11:33:30
TCPIP     HELPMENU  Z2 V    66      97       2 12/02/21 11:33:30
TCPIPGEN HELPTASK  Z2 V    75      42       2 12/02/21 11:33:30
CERTMGR  HELPMENU  Z2 V    67      18       1 12/02/21 11:33:29
FILTER   HELPCERT  Z2 V    78      69       3 12/02/21 11:33:29
HELP     HELPCERT  Z2 V    77      22       1 12/02/21 11:33:29
OPTION   HELPCERT  Z2 V    78      96       4 12/02/21 11:33:29
TYPE     HELPCERT  Z2 V    77      57       2 12/02/21 11:33:29
CERTMGR  HELPABBR  Z2 V    40       4       1 12/02/21 11:33:28
FCXFLDS  HELPTASK  Z2 V   100     224     17  8/05/21  8:41:02
REDISPL  HELPMENU  Z2 V    67      27       1  8/05/21  8:41:02
BASIC    HELPMENU  Z2 V    67      34       1  8/05/21  8:41:01
FCONTROL HELPMENU  Z2 V    67      58       1  8/05/21  8:41:01
PERFORM  HELPMENU  Z2 V    75     232      3  8/05/21  8:41:01
FCX      HELPABBR  Z2 V    67     300     13  8/05/21  8:40:59
HELP     HELPTASK  Z2 V    78      40       3  7/30/21 12:23:22
MENUS    HELPMENU  Z2 V    69     141      2  7/30/21 12:23:22
1= Help      2= Refresh  3= Quit    4= Sort(type) 5= Sort(date) 6= Sort(size)
7= Backward  8= Forward  9= FL /n 10=      11= XEDIT/LIST 12= Cursor
====>

```

By using the function keys (PF keys) at the bottom of the screen, the file display can be sorted in different ways. Use F4 to sort by the file type instead of the date created (it does a secondary sort on file name as well). Use F8 or F7 to scroll down and back up the list.

```

File Edit Font Transfer Macro Options Window Help
[Icons]
ZSXLO001 FILELIST A0 V 169 Trunc=169 Size=438 Line=1 Col=1 Alt=438
Cmd  Filename  Filetype  Fm  Format  Lrecl  Records  Blocks  Date  Time
ADVH  HELPABBR  Z2  V  24  159  5  12/10/20  11:14:10
APPCVM  HELPABBR  Z2  V  44  1  1  10/23/19  16:15:47
AVS  HELPABBR  Z2  V  40  1  1  10/23/19  16:03:35
BORDER  HELPABBR  Z2  V  44  1  1  10/23/19  16:05:15
CERTMGR  HELPABBR  Z2  V  40  4  1  12/02/21  11:33:28
CMS  HELPABBR  Z2  V  40  75  4  10/23/19  16:05:15
CMSQUERY  HELPABBR  Z2  V  40  7  1  10/23/19  16:05:15
CMSSET  HELPABBR  Z2  V  40  8  1  10/23/19  16:05:15
CP  HELPABBR  Z2  V  40  90  4  7/30/21  11:45:20
CPQUERY  HELPABBR  Z2  V  40  157  7  2/18/20  14:15:21
CPSET  HELPABBR  Z2  V  40  76  4  3/03/20  14:53:53
CRR  HELPABBR  Z2  V  41  1  1  10/23/19  16:05:15
DEFINE  HELPABBR  Z2  V  31  23  1  10/23/19  16:15:47
DELETE  HELPABBR  Z2  V  30  11  1  10/23/19  16:15:47
DETACH  HELPABBR  Z2  V  27  3  1  10/23/19  16:15:47
DFSMS  HELPABBR  Z2  V  43  1  1  10/23/19  16:05:15
DIRECTOR  HELPABBR  Z2  V  40  2  1  7/30/21  11:45:20
DISABLE  HELPABBR  Z2  V  30  5  1  10/23/19  16:15:47
DISPLAY  HELPABBR  Z2  V  26  18  1  10/23/19  16:15:47
DUMP  HELPABBR  Z2  V  29  18  1  10/23/19  16:15:47
1= Help 2= Refresh 3= Quit 4= Sort(type) 5= Sort(date) 6= Sort(size)
7= Backward 8= Forward 9= FL /n 10= 11= XEDIT/LIST 12= Cursor
====>

```

If the desire is to list all EXEC files on any of the accessed disks, the command would be FILEL * EXEC *. Be careful using FILEL * * * as there may be more files accessed than anticipated. Use HELP FILELIST (and look at the Function keys at the bottom of the screen) to get more information.

The contents of the files can be viewed (or edited if the disk is accessed as read/write). This is done by using the XEDIT command.

XEDIT

XEDIT is the CMS command for reading, editing or creating CMS files. When using XEDIT to edit a file, if it does not currently exist, it will create it.

Again, files in CMS have a file name (FN), a file type (FT) and a file mode (FM).

Useful commands while in a file, along with available help options:

- FILE - will file and exit out of XEDIT. If a file already exists with the same name, there will be an error message and the suggestion to use FFILE.
- SAVE - will save and stay in XEDIT. Once again, if a file already exists with the same name, there will be an error message and the suggestion to use SSAVE.
- QUIT - will exit out of XEDIT and NOT save the file. If the file has been changed and QUIT is entered, a message will appear that says to use QQUIT to leave without changing the file.

- HELP - Use HELP XEDIT MENU to see all of the commands that can be done while in an XEDIT session. Also, when in the XEDIT menu, click on :XEDIT for a step by step guide for creating and editing a file.

Once in an XEDIT session, the command line is =====> and the cursor will default to be just to the right. Commands such as 'Add' will add lines to the file or 'Input' will put the XEDIT session into input mode. Both of these commands can be used to add lines to a file. (If using 'Input', to get out of Input mode, hit enter). Many other commands are available. Use HELP XEDIT MENU to view other commands that can be done while in XEDIT.

SENDFILE

Files may be sent from one user to another or from one z/VM system to another. The SENDFile (or SFile or SF) command is used to send files. When files are sent in this way, they exist in a system area called the Spool. There is much more to spool files, but that will be covered later. More information about SENDFILE (SF) can be done by issuing HELP SENDFILE

To send a file to another user on the same system, the line command can be used or a file can be sent from a FILEList screen. In the example below, a file named SOME FILE has been created. This file will be sent to another user on the same system. The line command would be to type SF SOME FILE A to ZSXL0005. If the file name/type are not remembered or if multiple files are to be sent, it might be easier to use FILEL. The example below, uses FILEL. First, a FILEL command is done:

```
ZSXL0002 FILELIST A0 V 169 Trunc=169 S
Cmd  Filename Filetype Fm Format Lrecl
     ZSXL0002 NETLOG   A0 V           79
     SOME      FILE    A1 F           80
     PROFILE   XEDIT   A1 V           31
     PROFILE   EXEC    A1 V           49
```

To send SOME FILE from user ZSXL0002 to ZSXL0005, the SF command is done with a '/' (which says the following file) 'to' and then the user to which the file will be sent. This is typed on the same line as the file then hit 'enter'.

```
ZSXL0002 FILELIST A0 V 169 Trunc=169 Siz
Cmd  Filename Filetype Fm Format Lrecl
     ZSXL0002 NETLOG   A0 V           79
sf / to zsx10005ILE   A1 F           80
     PROFILE   XEDIT   A1 V           31
     PROFILE   EXEC    A1 V           49
```

```
File SOME FILE A1 sent to ZSXL0005 at VSIVC1 on 11/29/24 15:57:43
```

There will be a MORE... at the bottom of the screen. This can be cleared with the clear key or wait 10 seconds for it to clear. On the ZSXL0005 user, the following will appear:

```
RDR FILE 0097 SENT FROM ZSXL0002 PUN
```

The file SOME FILE is now in the spool as a file sent from user ZSXL0002 to ZSXL0005.

RDRLIST

The RDRList (or RList or RL) command is used to view/action files.

The ZSXL0005 user can now receive this file onto their write-able disk. The RL command is an easy way to manipulate their reader to action files. The example below shows how a file is received. First, the RL command is done, which shows a screen similar to FILEL. Now to receive the file, type 'rec' (short for receive) on the same line as the file or use F9 with the cursor on the same line as the file.

```

File Edit Font Transfer Macro Options Window Help
ZSXL0005 RDRLIST A0 V 164 Trunc=164 Size=1 Line=1
Cmd  Filename Filetype Class User  at Node  Hold
rec  SOME     FILE    PUN A  ZSXL0002 VSIVC1  NONE

```

```

File Edit Font Transfer Macro Options Window Help
ZSXL0005 RDRLIST A0 V 164 Trunc=164 Size=1 Line=1
Cmd  Filename Filetype Class User  at Node  Hold
*    SOME     FILE    received from ZSXL0002 at VSIVC

```

This now shows that SOME FILE has been received. This has saved the file to the 'A' disk, which is the default. The FILEList command will now show the file.

```

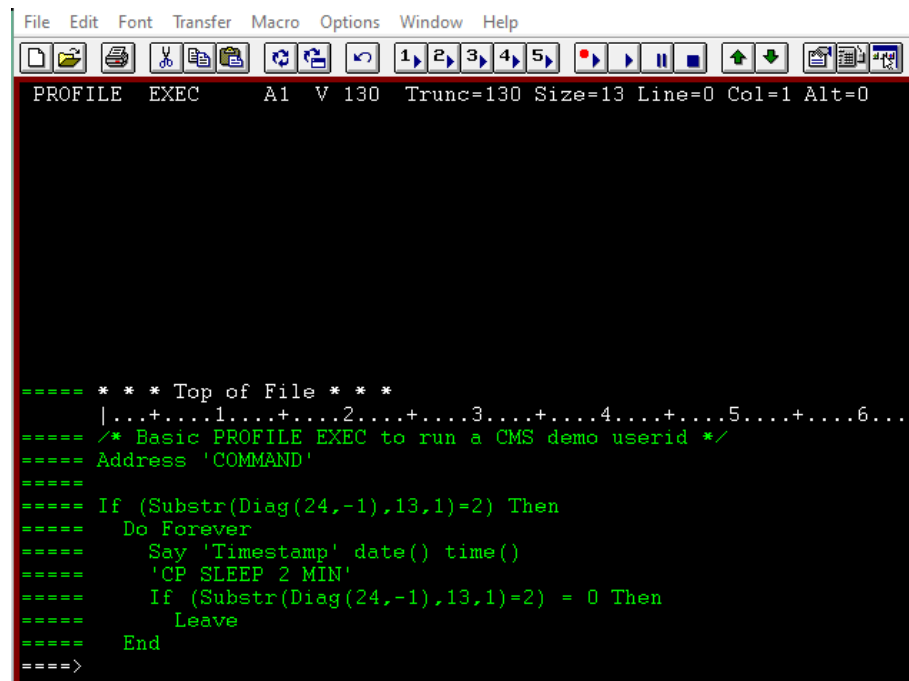
File Edit Font Transfer Macro Options Window Help
ZSXL0005 FILELIST A0 V 169 Trunc=169 Size=3 Line=1
Cmd  Filename Filetype Fm Format Lrecl  Records
ZSXL0005 NETLOG  A0 V      100    3
SOME  FILE     A1 F      80    3
PROFILE EXEC    A1 V      49    13

```

Many other things can be done with files. Use HELP RDRLIST for more information.

The PROFILE EXEC File

Use FILEL to display the files on the write enabled '191' disk. In this demonstration environment, the only file will be the PROFILE EXEC A file. This is a special file that is executed every time CMS is started (unless manually stopped) or the command PROFILE is entered. To edit this file, put the cursor on the same line as the PROFILE EXEC line and type an 'x'. (This could also be done by typing X PROFILE EXEC A).



The screenshot shows a terminal window with a menu bar (File, Edit, Font, Transfer, Macro, Options, Window, Help) and a toolbar. The main display area shows the following text:

```
PROFILE EXEC      A1 V 130 Trunc=130 Size=13 Line=0 Col=1 Alt=0

==== * * * Top of File * * *
|...+...1...+...2...+...3...+...4...+...5...+...6...
==== /* Basic PROFILE EXEC to run a CMS demo userid */
==== Address 'COMMAND'
====
==== If (Substr(Diag(24,-1),13,1)=2) Then
====   Do Forever
====     Say 'Timestamp' date() time()
====     'CP SLEEP 2 MIN'
====     If (Substr(Diag(24,-1),13,1)=2) = 0 Then
====       Leave
====     End
====>
```

Note: If the screen below doesn't appear, check for "HOLDING" in the bottom right corner of the 3270 screen, Use the "CLEAR" key to remove previous messages and the screen above should appear.

For now, ignore the commands currently shown in the file. Use the F8 key to scroll down to the next screen, then using the newline (Enter key) move the cursor to the empty line before the End of File line and type an 'i' as shown below:

```

File Edit Font Transfer Macro Options Window Help
PROFILE EXEC A1 V 130 Trunc=130 Size=13 Lin
=====
Do Forever
Say 'Timestamp' date() time()
'CP SLEEP 2 MIN'
If (Substr(Diag(24,-1),13,1)=2) = 0 Then
Leave
End
=====
Say 'Welcome to your CMS userid!'
i=====
=====
* * * End of File * * *
|...+...1...+...2...+...3...+...4...+
=====
===== >

```

Now hit 'enter' (Ctrl key) to add a new line and type 'CP SET PF12 RETRIEVE BACKWARD'. Move the cursor to the command line (=====>) and type FILE.

```

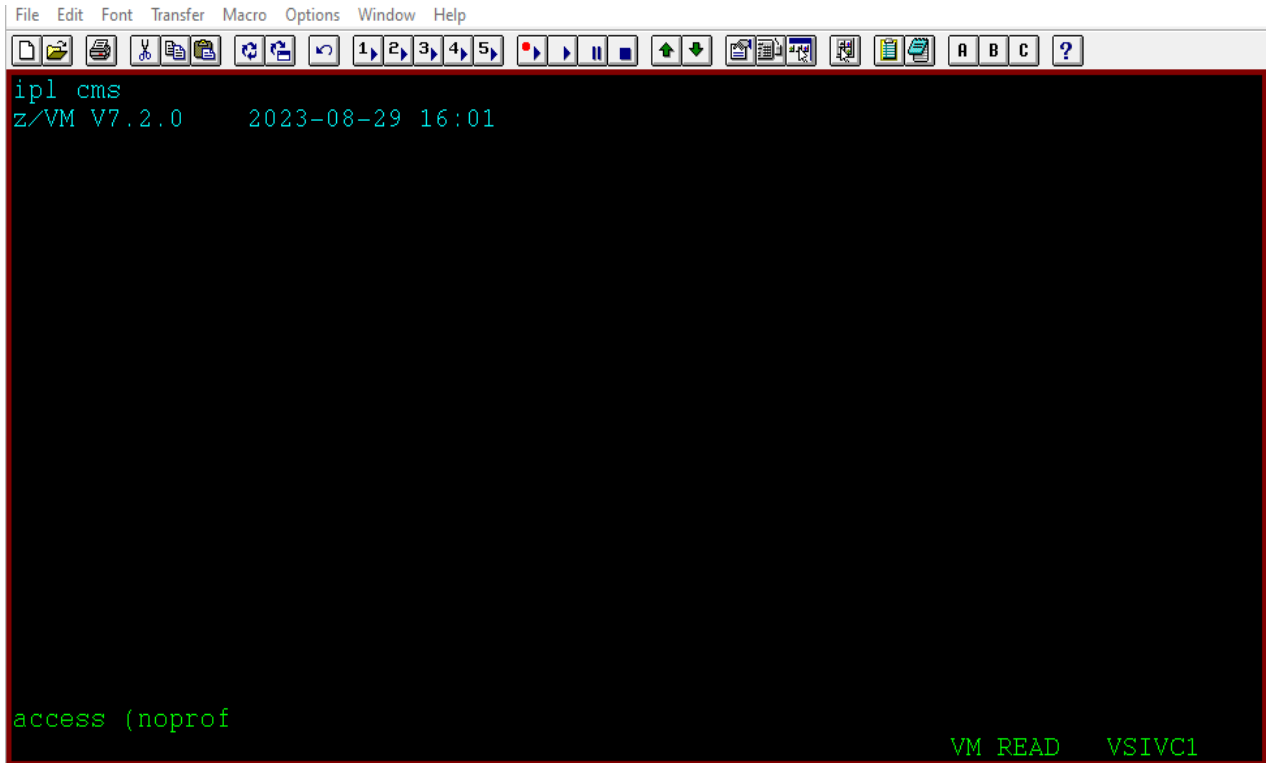
File Edit Font Transfer Macro Options Window Help
PROFILE EXEC A1 V 130 Trunc=130 Size=14 Line=15 Col=1 Alt=1
=====
If (Substr(Diag(24,-1),13,1)=2) Then
Do Forever
Say 'Timestamp' date() time()
'CP SLEEP 2 MIN'
If (Substr(Diag(24,-1),13,1)=2) = 0 Then
Leave
End
=====
Say 'Welcome to your CMS userid!'
=====
'CP SET PF12 RETRIEVE BACKWARD'
=====
* * * End of File * * *
|...+...1...+...2...+...3...+...4...+...5...+...6..
=====
===== > file

```

The PROFILE EXEC has now been updated. To see the change, type PROFILE and hit enter. Now type any command (FILEL, HELP, QUERY, etc), use F3 to return to the Ready; prompt. The F12 key can now be used to put the last command(s) entered back on the command line.

For new users, the command SET PF12 RETREIVE BACKWARD is particularly useful because this removes the need to retype commands. Setting these options enables functionality, similar to the bash shell on Linux systems. This function key can now be used to scroll through previous command history. (Function keys can be stated as PFx or Fx).

If a mistake is made and the PROFILE EXEC doesn't execute properly, it can be stopped from executing. The IPL command can be executed, with a follow up command of access (noprof - as shown below (notice the VM READ message at the bottom right):



```
File Edit Font Transfer Macro Options Window Help
ipl cms
z/VM V7.2.0      2023-08-29 16:01

access (noprof
VM READ  VSIVC1
```

This will now start CMS without executing the PROFILE EXEC. Use XEDIT to correct the mistake and try again.

Note: If using access (noprof, access to other system disks may be lost. Correct the PROFILE EXEC and enter PROFILE again before continuing.

The XEDIT PROFILE File

To customize the way an XEDIT session functions, a PROFILE XEDIT file can be created. This file will be executed each time an XEDIT session is entered. Often there is a generic PROFILE XEDIT file on a shared disk that can be used by all. However, many people prefer to set up their own and this demonstration system does not have one. It will be created on the 'A' disk.

To create this file, enter XEDIT PROFILE XEDIT. The screen below should appear:

```

File Edit Font Transfer Macro Options Window Help
[Icons]
PROFILE XEDIT A1 V 255 Trunc=255 Size=0
DMSXIN571I Creating new file:

===== * * * Top of File * * *
|...+...1...+...2...+...3...+...4
===== * * * End of File * * *

===== >

```

Notice the message that states this is a new file. If there had been another PROFILE XEDIT file already created or on an accessed disk, it would have shown that one instead. Verify by observing the top line that this is a file on the A1 (or A) disk.

Use the 'i5' command on the left prefix area (=====) on the Top of File line to add 5 lines. Then enter the commands below and enter a FILE command to save and exit. A sample PROFILE XEDIT file might contain these lines:

```

/* SAMPLE PROFILE XEDIT FILE */
'SET CASE MIXED'
'SET AUTOSAVE 20'
'SET NUM ON'
'SET PF12 TOP'

```

The first line in this file must be a comment. A comment starts with /* and end with*/. The other SET commands customize the XEDIT session for specific preferences, such as how entered data is manipulated. The SET CASE MIXED statement will keep letters in the case in which they were typed. The default is SET CASE UPPER which upon hitting enter, will change all lower case typed letters to upper case. The SET NUM ON will show each line number on the left column instead of just =====. To see more about what options are available to be SET, see HELP XEDIT SET.

Basic CP Commands

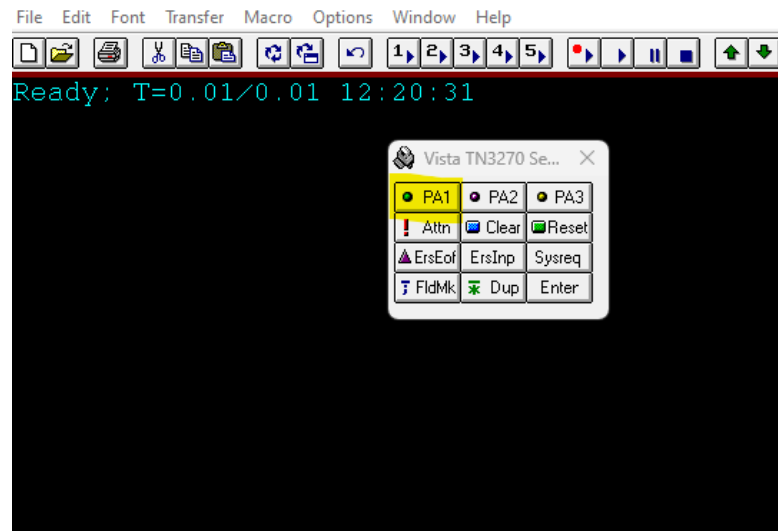
z/VM is comprised of two primary components: CP and CMS. The Control Program (CP) is the operating system that underlies all of z/VM. CP is responsible for virtualizing real hardware on a z/Series machine and allowing many virtual machines to simultaneously share the hardware resources.

CP also handles the creation and management of virtual machines, also known as 'guests'. It can be considered the operating system component of z/VM and is analogous to the Linux kernel in a GNU/Linux operating system. It allows multiple virtual machines, or guests, to be running an instance of an operating system. Different systems such as Linux, z/VM, z/OS, VSE and z/TPF systems can all be guests under z/VM.

This section introduces some basic CP commands.

About CP commands

In order to communicate with CP, it is necessary to go into CP mode or use a special character. To get into CP mode using the keyboard, use the special keyboard and click on the PA1 key, as highlighted below. CP READ should now show in the right bottom corner.



LOGON

The Logon command is used to access the virtual console of the specified virtual machine (User ID). This can be abbreviated to 'L' and is used the same way most logon commands are used to specify which User ID is being accessed. It also has a parameter to allow one user to logon to a different user by specifying Logon By.

LOGOFF

The Logoff command is used to end a virtual machine session.

IPL

An Initial Program Load, or IPL, is the process of loading an operating system into the memory of a computer. On z/VM, to IPL is to simulate this process. Usually, IPL CMS is done (or I CMS) to load CMS into the virtual machine session. However, different hardware like DASD or Tape devices can also be IPL'd if containing a boot-able operating system.

BEGIN

The Begin command is used to resume command execution in a virtual machine session. It is normally to return to the previous environment (such as CMS) after being in the control program environment. It is most commonly used when CP READ shows at the bottom right of the screen and the desire is to return to CMS.

DISCONNECT

DISConnect causes the session to exit but the guest keeps running. When reconnecting with the Logon command, the Begin command is used to return to CMS.

Note: If just hitting the enter key in a CMS session, the bottom right will say VM READ. Hit the enter key again to get back to RUNNING. If CP mode is entered, a 'B' must be entered to return to CMS.

More information about each of the CP commands and more, use HELP CP MENU or see the IBM CP Commands and Utility Reference manual noted above.

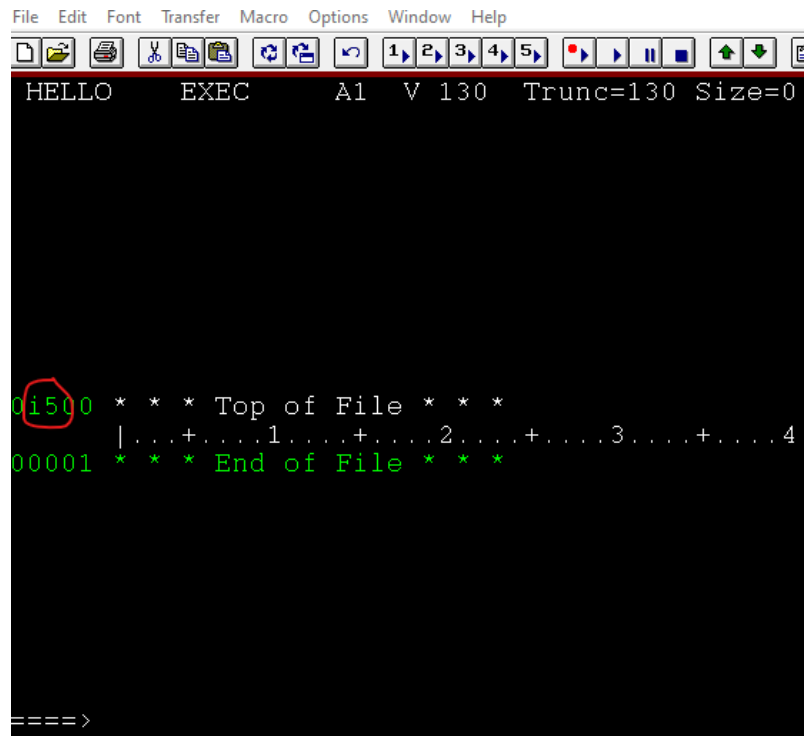
Exercise

This exercise will take some of the commands from above to put into practice and create a short executable program using the REXX (Restructured Extended Executor) language. Use Xedit to create/edit a file.

Type in X HELLO EXEC A

Note: If the screen below doesn't appear, check for "HOLDING" in the bottom right corner of the 3270 screen, Use the "CLEAR" key to remove the messages that are being maintained on the screen and the screen below should appear.

Use the prefix area to add 5 lines to the file (the examples are taken from a user that created a PROFILE XEDIT in the XEDIT section above).



```
File Edit Font Transfer Macro Options Window Help
HELLO EXEC A1 V 130 Trunc=130 Size=0
01500 * * * Top of File * * *
|...+...1...+...2...+...3...+...4...
00001 * * * End of File * * *
====>
```

Type the following into those lines (use the keyboard 'enter' key to go to the next line):

```
/* HELLO SCRIPT */
Say 'Please type your name:'
Pull name
If name <> "" then say 'Hello' name 'Welcome to your CMS guest'
Else say 'No input given for name'
```

It should look like the example below. Type file on the command line and hit enter.

```

File Edit Font Transfer Macro Options Window Help
HELLO EXEC A1 V 130 Trunc=130 Size=5 Line=0 Col=1 Alt=6

00000 * * * Top of File * * *
|...+...1...+...2...+...3...+...4...+...5...+...6...
00001 /* HELLO SCRIPT */
00002 Say 'Please type your name:'
00003 Pull name
00004 If name <> "" then say 'Hello' name 'Welcome to your CMS guest'
00005 Else say 'No input given for name'
00006 * * * End of File * * *

====> file

```

The file that was just created is an example of an EXEC file. These files can be executed. Once back at Ready; - this file can be tested as show below.

```

File Edit Font Transfer Macro Options Window Help
Ready; T=0.01/0.01 16:45:43
hello
Please type your name:
Susie
Hello SUSIE Welcome to your CMS guest
Ready; T=0.01/0.01 16:45:51
hello
Please type your name:
No input given for name
Ready; T=0.01/0.01 16:45:56

```

If this type of output was received, excellent. If not, xedit the file again and verify it was typed in as written above.