XEDIT, EXECs & PIPES

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Disclaimer

- The information and opinions found herein are for informational sharing purposes only and not necessarily those of Wells Fargo Bank and should not be considered an endorsement.

Agenda

- Who I Am
- XEDIT
- EXECs
- PIPEs

Who is Bob?

- Systems programmer for z/VM and Linux on z Series at Wells Fargo

- AVP, Operating Systems Engineer

- Enterprise Hosting Services

- At WF since 2007

- 8 team members

- Install/support/engineer Linux on z and z/VM builds

- Level 2-3 for all Linux on z servers

- VM System Programmer since 1980 (VM/SP Release 1.0)

- VM user since 1977 (VM/370 Release 4)

New system – Create my userid

- Logon to MAINT630
- DISKMAP USER DIRECT
- XEDIT USER DIRECT

Vanilla XEDIT on MAINT630

```
 USER     DIRECT   C1  F 80  Trunc=72 Size=4733 Line=0 Col=1 Alt=0

00000 * * * Top of File * * *
00001 *****************************************************************
00002 *   z/VM 6.3.0  SYSTEM DIRECTORY                               *
00003 *****************************************************************
00004 *                                                             *
00005 *   THE ADDRESSES 123 THROUGH 133 ARE VIRTUAL ADDRESSES.      *
00006 *                                                             *
00007 *   NOTES:                                                    *
00008 *   REMEMBER THESE ARE ONLY VIRTUAL ADDRESSES NOT REAL        *
00009 *   ADDRESSES, SO THERE IS NO NEED TO CHANGE THEM TO MATCH    *
00010 *   YOUR HARDWARE ADDRESSES.                                  *
00011 *                                                             *
00012 *                                                             *
00013 *****************************************************************
00014 *                                                             *
00015 *   FOR A DESCRIPTION OF DIRECTORY STATEMENTS SEE:            *
00016 *     VM ENTERPRISE SYSTEM ARCHITECTURE                       *
00017 *     PLANNING AND ADMINISTRATION MANUAL.                     *
00018 *                                                             *
00019 *****************************************************************
00020 *
00021 *
00022 *
00023 DIRECTORY SSI 123 3390 VHFRES VHERES VH6RES
====> f USER CMS_
4B                     0:00.1                              27/017
```

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Copy the entry

```
 USER     DIRECT   C1  F 80  Trunc=72 Size=4733 Line=555 Col=1 Alt=0


cc555 USER CMS1     WD5JU8QP   32M    64M G
00556  INCLUDE IBMDFLT
00557  AUTOLOG AUTOLOG1 OP1 MAINT
00558  ACCOUNT ACT4 CMSTST
00559  MACH ESA
00560   IPL 190
00561 *
00562 *****************************
cc563 *
00564 IDENTITY CMSBATCH WD5JU8QP   32M    32M G
00565  BUILD ON VMHCF USING SUBCONFIG CMSBAT-1
00566  BUILD ON VMHCE USING SUBCONFIG CMSBAT-2
00567  BUILD ON VMHC6 USING SUBCONFIG CMSBAT-3
00568 * BUILD ON @@member4name USING SUBCONFIG CMSBAT-4
00569  ACCOUNT 3 SYSTEM
00570  MACH ESA
00571  OPTION ACCT
00572  IPL 190 PARM AUTOCR
00573  CONSOLE 009 3215
00574  SPOOL 00C 2540 READER *
00575  SPOOL 00D 2540 PUNCH  A
00576  SPOOL 00E 1403 A
00577
00578 SUBCONFIG CMSBAT-1
====> bot_



4B                    0:00.1                          27/010
```

SHARE in Orlando 2015

```
   USER     DIRECT   C1  F 80  Trunc=72 Size=4733 Line=4733 Col=1 Alt=0

 f4733    MDISK 191 3390 333   20  VHPP01 MR
 04734 * * * End of File * * *
```

```
====>
```

4B   0:00.1   03/002

```
 USER     DIRECT   C1  F 80  Trunc=72 Size=4742 Line=4733 Col=1 Alt=1


c4733     MDISK 191 3390 333   20  VHPP01 MR
04734 USER MYNEWID  MYNEWPWD    32M   64M G
04735  INCLUDE IBMDFLT
04736  AUTOLOG AUTOLOG1 OP1 MAINT
04737  ACCOUNT ACT4 CMSTST
04738  MACH ESA
04739   IPL 190
04740 *
04741 ******************************
f4742 *
04743 * * * End of File * * *
```

```
====>
```

```
4B                    0 :00.1                                    12/002
```

Edit a 2nd file

```
  USER     DIRECT   C1  F 80  Trunc=72 Size=4743 Line=4733 Col=1 Alt=2

04733     MDISK 191 3390 333   20  VHPP01 MR
04734 USER CMS1    WD5JU8QP   32M   64M G
04735  INCLUDE IBMDFLT
04736  AUTOLOG AUTOLOG1 OP1 MAINT
04737  ACCOUNT ACT4 CMSTST
04738  MACH ESA
04739   IPL 190
04740 *
04741 *****************************
04742 *
04743     MDISK 191 3390 333   20  VHPP01 MR
04744 * * * End of File * * *
```

```
  ===> x user diskmap
  4B             :00.1                          27/021
```

Did F VHPP01

00508	VHPP01	VMANAGER	0191	3390	00001	00005	00005	*
00509		VMANAGER	051D	3390	00006	00010	00005	*
00510		VMANAGER	0193	3390	00011	00025	00015	*
00511		VMANAGER	0195	3390	00026	00040	00015	*
00512		VMANAGER	01FF	3390	00041	00045	00005	*
00513		ZVMN012A	02C4	3390	00046	00046	00001	*
00514		ZVMN012A	02A6	3390	00047	00047	00001	*
00515		ZVMN012A	02A2	3390	00048	00048	00001	*
00516					49	49	1	GAP
00517		ZVMN012A	0210	3390	00050	00064	00015	*
00518		ZVMN012A	0214	3390	00065	00065	00001	*
00519		ZVMN012A	0216	3390	00066	00066	00001	*
00520		ZVMN012A	02C2	3390	00067	00067	00001	*
00521		ZVMN012A	02B2	3390	00068	00097	00030	*
00522		ZVMN012A	02D2	3390	00098	00102	00005	*
00523		ZVMX031A	02C4	3390	00103	00107	00005	*
00524		ZVMX031A	02A6	3390	00108	00112	00005	*
00525		ZVMX031A	02A2	3390	00113	00117	00005	*
00526		ZVMX031A	02D2	3390	00118	00122	00005	*
00527		ZVMX031A	0210	3390	00123	00137	00015	*
00528		ZVMX031A	0212	3390	00138	00139	00002	*
00529		ZVMX031A	0214	3390	00140	00140	00001	*
00530		ZVMX031A	02C2	3390	00141	00142	00002	*
00531		ZVMX031A	0218	3390	00143	00152	00010	*

```
====> xe
```

4B   @:00.1   27/009

SHARE
in Orlando 2015

```
04733    MDISK 191 3390 333   20  VHPP01 MR
04734 USER CMS1    WD5JU8QP   32M   64M G
04735  INCLUDE IBMDFLT
04736  AUTOLOG AUTOLOG1 OP1 MAINT
04737  ACCOUNT ACT4 CMSTST
04738  MACH ESA
04739   IPL 190
04740 *
04741 *****************************
04742 *
04743    MDISK 191 3390  49    1  VHPP01 MR
04744 * * * End of File * * *
```

```
===> file_
```

4B   :00.1   27/011

XEDIT

- XEDIT fn ft fm (Width size PROFile <u>PROFILE</u>|fname *other options*
  - If fm omitted, locates first file in access order, or creates new file on A.
  - Width defines the lrecl on RECFM V overriding default
- XEDIT is a full screen editor
- Flexible, customizable
- XEDIT Macros can be written using EXEC languages (filetype XEDIT)
- XEDIT invokes PROFILE XEDIT, set preferences in there:
  - /* XEDIT PROFILE */
  - 'SET SCALE OFF'
  - 'SET NUM ON'
  - 'SET SHADOW OFF'

Filetypes

- The filetype sets some features such as RECFM, LRECL, VERIFY, TRUNC, SERIAL, TABS and others.
    - LISTING   V 121
    - ASSEMBLE   F 80 SERIAL ON 10 10
    - EXEC   V 130
    - XEDIT   V 255
    - Many are   F 80

    Look in XEDIT Commands and Macros for a table of all defaults

Create: XEDIT PROFILE XEDIT

```
 PROFILE  XEDIT    A1  V 255  Trunc=255 Size=0 Line=0 Col=1 Alt=0
DMSXIN571I Creating new file:




 ===== * * * Top of File * * *
      |...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8....+....9....+...10....+...11....+...12....+
 ===== * * * End of File * * *




 ====> i /* This is my PROFILE XEDIT */_
                                                                                              X E D I T  1 File
 4B                      0:00.1                                            26/039
```

SHARE
in Orlando 2015

```
APL OFF                  IMAGE ON              SCOPE DISPLAY
ARBCHAR OFF $            IMPCMSCP ON           SERIAL OFF 10 10
AUTOSAVE OFF            LINEND ON #           SHADOW ON
BFSLINE NL              LRECL 255             SPAN OFF BLANK 2
CASE UPPER RESPECT  ←   MACRO OFF             SPILL OFF
CMDLINE ON             MSGLINE ON 2 2        STAY OFF  ←
COLPTR OFF             MSGMODE ON LONG       STREAM ON
CURLINE ON M           NAMETYPE CMS          SYNONYM ON
DISPLAY 0 0            NONDISP "             TABLINE OFF -3
ESCAPE OFF /           NULLS OFF   ←         TERMINAL DISPLAY
ETMODE OFF             NUMBER OFF  ←         TEXT OFF
FILLER                PACK OFF              TOFEOF ON
FMODE A1              PREFIX ON LEFT  ←     TRUNC 255
FNAME PROFILE         RANGE :1 :1           VARBLANK OFF
FTYPE XEDIT           RECFM V               WRAP OFF  ←
FULLREAD OFF          REMOTE OFF            ZONE 1 255
HEX OFF               SCALE ON M+1  ←


SCREEN SIZE 27
MASK
TABS 1 4 7 10 13 16 19 22 25 31 37 43 49 55 79 80
VERIFY OFF 1 255
CTLCHAR OFF
COLOR ARROW    DEFAULT NONE HIGH PS0
COLOR CMDLINE  DEFAULT NONE NOHIGH PS0

_
                                              MORE...    VMHCF
4B        ◌:00.1                      26/001
```

Did CASE M I then PF6 to retrieve I command change I to R

```
 PROFILE  XEDIT    A1  V 255  Trunc=255 Size=1 Line=1 Col=1 Alt=1




 
 
 
 
 
 
 
 
 
 
 ===== * * * Top of File * * *
 ===== /* THIS IS MY PROFILE XEDIT */
       |...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8....+....9....+...10....+...11....+...12....+
 ===== * * * End of File * * *





 
 
 ====> r_/* This is my PROFILE XEDIT */
                                                                                          X E D I T  1 File
 4B                      :00.1                                          26/008
```

SHARE in Orlando 2015

Replaced line and going into Input mode

```
PROFILE  XEDIT    A1  V 255  Trunc=255 Size=1 Line=1 Col=1 Alt=2




=====  * * * Top of File * * *
=====  /* This is my PROFILE XEDIT */
       |...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8....+....9....+...10....+...11....+...12....+
=====  * * * End of File * * *




====> i_
                                                                                                    X E D I T  1 File

4B                          0:00.1                                              26/008
```

SHARE
in Orlando 2015

Leave input by hitting ENTER on null line

```
 PROFILE  XEDIT    A1  V 255  Trunc=255 Size=11 Line=1 Col=1 Alt=0
DMSXMD573I Input mode:




* * * Top of File * * *
/* This is my PROFILE XEDIT */
|...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8....+....9....+...10....+...11....+...12....+...13.
   'SET CASE MIXED IGNORE'      /* Allow upper/lower case */
   'SET STAY ON'                /* Don't move if I don't find something */
   'SET WRAP ON'                /* If I reach EOF, start again at the top */
   'SET SCALE OFF'              /* I don't like the scale */
   'SET PREFIX ON'              /* Prefix area on the Left */
   'SET CMDLINE ON'             /* Large input area on the bottom */_



====> * * * Input Zone * * *
                                                                        Input-mode 1 File
4B                   @:00.1                                  21/070
```

CASE

- CASE <u>UPPER</u>|MIXED <u>RESPECT</u>|IGNORE
  - Entry:
    - UPPER translates everything typed to uppercase
    - MIXED means just the way you type it
  - Search
    - RESPECT for searches, has to match exactly
    - IGNORE matches regardless of case
  - CASE MIXED IGNORE
    - /Airplane will locate:
      - » AIRPLANE ← UPPER RESPECT locates this one
      - » Airplane ← MIXED RESPECT locates this one
      - » airplane
      - » airPlane

STAY and WRAP

- SET STAY ON|<u>OFF</u>
  - On = keep CURLINE if not found

- SET WRAP ON|<u>OFF</u>
  - On = search to EOF, then go to top and search to CURLINE

CURLINE, CMDLINE, SCALE, TABLINE and PREFIX

- CURLINE ON M+/-|n+/-
  - Current line pointer.
  - M is middle, Mn or M+n is middle plus n lines, - is above middle
  - +n, or just n, is lines from top, -n is lines from bottom
- CMDLINE ON|TOP|BOTTOM
  - ON two lines at bottom of screen for commands
  - TOP one line on line 2
  - BOTTOM one line at bottom of screen
- SCALE OFF|ON M+/1|n+/-
- TABLINE OFF|ON M+/-|n+/-
- PREFIX OFF|ON LEFT|RIGHT
  - NUMS OFF|ON

This is what we look like so far


```
PROFILE  XEDIT    A1  V 255  Trunc=255 Size=8 Line=0 Col=1 Alt=9




















=====  * * * Top of File * * *
===== /* This is my PROFILE XEDIT */
=====    'SET CASE MIXED IGNORE'
=====    'SET STAY ON'
=====    'SET WRAP ON'
=====    'SET SCALE OFF'
=====    'SET PREFIX ON'
=====    'SET CMDLINE ON'
=====    'SET CURLINE ON 10'
===== * * * End of File * * *



====> q pf_
                                                                X E D I T  1 File
 4B                    @ :00.1                        26/011
```
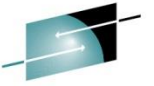
```
PF1    BEFORE  HELP MENU
PF2    BEFORE  SOS LINEADD
PF3    BEFORE  QUIT
PF4    BEFORE  TABKEY
PF5    BEFORE  SCHANGE 6
PF6    ONLY    ?
PF7    BEFORE  BACKWARD
PF8    BEFORE  FORWARD
PF9    ONLY    =
PF10   BEFORE  RGTLEFT
PF11   BEFORE  SPLTJOIN
PF12   BEFORE  CURSOR HOME
PF13   BEFORE  HELP MENU
PF14   BEFORE  SOS LINEADD
PF15   BEFORE  QUIT
PF16   BEFORE  TABKEY
PF17   BEFORE  SCHANGE 18
PF18   ONLY    ?
PF19   BEFORE  BACKWARD
PF20   BEFORE  FORWARD
PF21   ONLY    =
PF22   BEFORE  RGTLEFT
PF23   BEFORE  SPLTJOIN
PF24   BEFORE  CURSOR HOME

_
                                                     MORE...    DVFVM
```

SHARE in Orlando 2015

PF3 is QUIT! What if??

```
 PROFILE  XEDIT    A1  V 255  Trunc=255 Size=8 Line=0 Col=1 Alt=9
DMSXSU577E File has been changed; type QQUIT to quit anyway




=====  * * * Top of File * * *
===== /* This is my PROFILE XEDIT */
=====     'SET CASE MIXED IGNORE'
=====     'SET STAY ON'
=====     'SET WRAP ON'
=====     'SET SCALE OFF'
=====     'SET PREFIX ON'
=====     'SET CMDLINE ON'
=====     'SET CURLINE ON 10'
=====  * * * End of File * * *


====> _

                                                        X E D I T  1 File

4B              @:00.1                          26/007
```

Adding some color
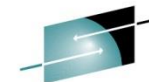
```
                                                (2)              (2)
                                          ----------        ----------
                              (1)
>>--,-------,--COLOR--,--*---------,-------+-+-----------+-+-+-----------+-+---><
    '-SET-'            | |-Arrow----|       | |-Blue------|   | |-BLInk-----| |
                       | |-Cmdline--|       | |-Red-------|   | |-REVvideo--| |
                       | |-CUrline--|       | |-Pink------|   | |-Underline-| |
                       | |-Filearea-|       | |-Green-----|   '-NONe------'
                       | |-Idline---|       | |-Turquoise-|
                       | |-Msgline--|       | |-Yellow----|
                       | |-Pending--|       | |-white-----|
                       | |-PRefix---|       '-Default---'
                       | |-Scale----|
                       | |-SHadow---|
                       | |-STatarea-|
                       | |-Tabline--|
                       '-TOfeof---'
```

Better, but more to do

```
PROFILE  XEDIT    A1  V 255  Trunc=255 Size=15 Line=6 Col=1 Alt=0


==== * * * Top of File * * *
==== /* This is my PROFILE XEDIT */
====    'SET CASE MIXED IGNORE'        /* Allow upper/lower case */
====    'SET STAY ON'                  /* Don't move if I don't find something */
====    'SET WRAP ON'                  /* If I reach EOF, start again at the top */
====    'SET SCALE OFF'                /* I don't like the scale */
====    'SET PREFIX ON'                /* Prefix area on the left */
====    'SET CMDLINE ON'               /* Large input area on the bottom */
====    'SET CURLINE ON 10'            /* Place current line on screen line 10 */
====    'SET COLOR TOFEOF PINK'
====    'SET COLOR CURLINE YELLOW HIGH'
====    'SET COLOR SCAL TURQ NOHIGH'
====    'SET COLOR PREFIX TURQ NOHIGH'
====    'SET COLOR IDLINE WHITE NOHIGH'
====    'SET COLOR CMDLINE WHITE'
====    'SET COLOR MSGLINE RED HIGH'
==== * * * End of File * * *




===> _

                                                            X E D I T  1 File
4B                   ⏱:00.1                          26/007
```

A look at the screen

```
 PROFILE  XEDIT    A1  V 255  Trunc=255 Size=15 Line=6 Col=1 Alt=0          ← Idline
DMSXDC546E Target not found                                          ← Msgline

=====  * * * Top of File * * *                                       ← TOfeof
===== /* This is my PROFILE XEDIT */
=====     'SET CASE MIXED IGNORE'          /* Allow upper/lower case */
C         'SET STAY ON'        ← Pending   /* Don't move if I don't find something */
=====     'SET WRAP ON'                    /* If I reach EOF, start again at the top */
=====     'SET SCALE OFF'                  /* I don't like the scale */
=====     'SET PREFIX ON'                  /* Prefix area on the left */  ← Curline
=====  -------------------  2  line(s) not displayed -------------------  ← SHadow
=====     'SET COLOR TOFEOF PINK'
=====     'SET COLOR CURLINE YELLOW HIGH'                                 ← Scale
=====     'SET COLOR SCAL TURQ NOHIGH'
      |...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8....+....9....+...10....+...11....+...12....+
=====     'SET COLOR PREFIX TURQ NOHIGH'
=====     'SET COLOR IDLINE WHITE NOHIGH'
=====     'SET COLOR CMDLINE WHITE'           ← Filearea
=====     'SET COLOR MSGLINE RED HIGH'
=====  * * * End of File * * *
```

Arrow   PRefix   STatarea

          T T T T T T T T T   T   T   T   T   T   TT
===> /FRED   ← Cmdline
                                                                C pending...
```
4B                    ☼:00 1                              26/007
```

Tabline

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

Prefix

- . name   Set a symbolic name
- < or >   Shift left or right
- /   Move to Curline
- "   Duplicate
- C   Copy
- D   Delete
- E   Extend (works where line > screen width)
- F   Following
- I   Insert
- M   Move
- P   Preceding
- S   Show
- X   eXclude
- SCALE   Put scale on here
- SI   Structured Input mode (lines up with previous line)
- TABL   Put Tabline on here

More on Prefix

- Numbers may be included with command
  - C15   Copies next 15 lines
- Commands can be blocked: >>, <<,CC, DD, MM, XX
  - CC on two lines copies everything between

```
=====     'SET CASE MIXED IGNORE'      /* Allow upper/lower case */
CC===     'SET STAY ON'                /* Don't move if I don't find something */
=====     'SET WRAP ON'                /* If I reach EOF, start again at the top */
=====     'SET SCALE OFF'              /* I don't like the scale */
CC===     'SET PREFIX ON'             /* Prefix area on the left */
=====     'SET CMDLINE ON'             /* Large input area on the bottom */
=====     'SET CURLINE ON 10'          /* Place current line on screen line 10 */
```

  - >>4 indents all the lines between >> 4 columns

```
=====     'SET CURLINE ON 10'          /* Place current line on screen line 10 */
=>>4=     'SET COLOR TOFEOF PINK'
=====     'SET COLOR CURLINE YELLOW HIGH'
=====     'SET COLOR SCAL TURQ NOHIGH'
=====     'SET COLOR PREFIX TURQ NOHIGH'
>>===     'SET COLOR IDLINE WHITE NOHIGH'
=====     'SET COLOR CMDLINE WHITE'
```

  - On CMDLINE: RESET. Clears any pending, does not clear .name

Location, location, location

- :n   Go to a specific line
- Nx or x   Move down x lines
- Ux or –x   Move up x lines
- PF7   Move up a screen
- PF8   Move down a screen

- TOP   Go to top of file
- Bottom   Go to bottom of file

- /string   Go locate next occurrence of string
- -/string   Go locate previous occurrence of string
- ^/string   Locate a line without string

- Find string   String starts in Column 1
- NFind string   Line doesn't have string in Column 1
- FUp or FINDUp   Toward the Top

What else can effect locate

- SET VARBLANK <u>OFF</u>|ON
  - Allows string to have multiple blanks
  - /air plane locates air plane and air   plane
- SET SPILL <u>OFF</u>|ON
  - Allows words in string to be split across lines
- SET ARBCHAR <u>OFF</u>|ON char
  - Arbchar is like a wildcard in string
    - ARBCHAR ON $
    - /air$plane locates airplane, air   plane, or air in plane
- SET ZONE <u>1</u>|zone1 <u>*</u>|zone2
  - Restricts searches to items within the zone
- PRESERVE/RESTORE
  - PRESERVE Saves settings like ZONE, TABS, ARBCHAR etc.
  - RESTORE brings them back to what they were

ALL

- All works like locate but display all lines in file with string
  - ALL /string/   Only displays lines containing string
  - ALL   Displays all lines
- SHADOW ON shows: -- x line(s) -- not displayed
- Easy to find specific subdata
- SET SCOPE DISPLAY|ALL
  - ALL means changes hit all lines displayed or not

Range

- Limit the activity to within the defined range (except FILE/SAVE)

- SET RANge target1 target2

  - Target can be:
    - Absolute   :x
    - Relative   n or –n
    - Name   .name
    - String   -/string/ or /string/

- Default is :1 *

RANGE -/scal/ /scal/

```
 PROFILE  XEDIT    A1  V 255  Trunc=255 Size=15 Line=8 Col=1 Alt=0




=====  * * * Top of Range (Line=5) * * *
=====      'SET SCALE OFF'
=====      'SET PREFIX ON'
=====      'SET CMDLINE ON'
=====      'SET CURLINE ON 10'
=====      'SET COLOR TOFEOF PINK'
=====      'SET COLOR CURLINE YELLOW HIGH'
=====      'SET COLOR SCAL TURQ NOHIGH'
=====  * * * End of Range (Line=11) * * *












====> _

                                                          X E D I T 1 File
4B          @:00.1                              26/007
```

Change and Alter

- Change /string/newstring/ lines|1 occurrences|1 relative_position|1
  - Delimiter does not have to be a /
  - Lines can be # of lines, string, or .name
  - c/FRED/BARNEY/* *   change all lines all occurances
  - c/FRED/BARNEY/1 3 3   change this line 3 times starting with 3rd FRED

- ALter char1 newchar lines occurrences relative_position
  - Use for changing hex codes
  - Char1 and/or newchar can be 2-digit hex code
  - AL 5C 05
  - AL * $

So, how do we see those Hex codes?

```
TEST      FILE      A1  V 80  Trunc=80 Size=7 Line=0 Col=1 Alt=1




===== * * * Top of File * * *
===== zla001 zla003
===== zlb002"""""""""""""""""""""""""""""""""""""""""""""""""""""""""""""
===== zlb002"""""""""""""""""""""""""""""""""""""""""""""""""""""""""""""
===== zlb002"""""""""""""""""""""""""""""""""""""""""""""""""""""""""""""
===== zlb026 zlxc9124
===== zlb046 zlxc9134 zla015
===== zlb021
===== * * * End of File * * *




====> _

                                                          X E D I T  1 File
 4B                    :00.1                              26/007
```

HEXType

```
 TEST     FILE     A1  V 80  Trunc=80 Size=7 Line=3 Col=1 Alt=1
A99382F0 F0F21601 02030405 06070809 0A0B0C0D 0E0F1011 12131417 18191A1B 1C1D1E1F 20212223 24252627 28292A2B 2C2D2E2F 40404040 ...
 z l b 0 0 2 " " "  " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " " "

 =====  * * * Top of File * * *
 ===== zla001 zla003
 ===== zlb002""""";"""""""""""""""""""""""""""""""""""""""""""
 ===== zlb002""""";"""""""""""""""""""""""""""""""""""""""""""
 ===== zlb002""""";"""""""""""""""""""""""""""""""""""""""""""
 ===== zlb026 zlxc9124
 ===== zlb046 zlxc9134 zla015
 ===== zlb021
 =====  * * * End of File * * *




 ====> hext_

                                                              X E D I T  1 File
 4B                    :00.1                            26/011
```

Why Change and Alter are important

```
   TEST    FILE    A1  V 80  Trunc=80 Size=7 Line=3 Col=1 Alt=2




===== * * * Top of File * * *
===== zla001 zla003
===== zlb002"""""";"""""""""""""""""""""""""""""""""""""""""""
===== clb00"""""      """"""""""""""""""""""""""""""""""""""""
===== zlb002"""""";""""""""""""""""""""""""""""""""""""""""""
===== zlb026 zlxc9124
===== zlb046 zlxc9134 zla015
===== zlb021
===== * * * End of File * * *




====>  _

                                                    X E D I T  1 File
```

Verify Hex to display columns

```
TEST    FILE    A1  V 80  Trunc=80 Size=7 Line=3 Col=1 Alt=4




=====  * * * Top of File * * *
=====  zla00140A99381F0F0F3404040404040404040404040404040404040404040404040404040404040404040404040404040
=====  zlb00216010203040506070809A0B0C0D0E0F10111213141718191A1B1C1D1E1F2021222324252627282929A2B2C2D2E2F4040
=====  zlb00216010203040506070809A0B0C0D0E0F10111213141718191A1B1C1D1E1F2021222324252627282929A2B2C2D2E2F4040
=====  zlb00216010203040506070809A0B0C0D0E0F10111213141718191A1B1C1D1E1F2021222324252627282929A2B2C2D2E2F4040
=====  zlb02640A993A783F9F1F2F4404040404040404040404040404040404040404040404040404040404040404040404040404040
=====  zlb04640A993A783F9F1F3F440A99381F0F1F540404040404040404040404040404040404040404040404040404040404040404040
=====  zlb02140404040404040404040404040404040404040404040404040404040404040404040404040404040404040404040404040
=====  * * * End of File * * *






====> v 1 6 h7 54_

                                                             X E D I T  1 File
4B               :00.1                          26/018
```

Verify

- Verify [Hex] start_col end_col …
  - Up to 28 pairs can be specifed
  - Columns can be repeated
  - Can be in any order
    - V 1 8 20 27 60 66 1 8

Right/Left

- Not to be confused with SHIFT which moves data
- Right n   Shift view n columns right
- Left n   Shift view n columns left
- PF10 RGTLEFT

===== * * * Top of File * * *
===== * This file contails the variable details for BUILDSYS and LNXNAMES
===== * mtrx=Titles in the Linux Matrix spreadsheet on Sharepoint
===== * ttls=Titles on the screen
===== * flds=tags in the LINUX NAMES File
===== * pos=Row.column on the screen
===== * len=field length
===== * prot=Protected field, N means data can be entered or changed.
===== * form=Format of the field, U=upper case, M=Mixed case, I=Ip address, N=Number, YN=Yes/No
===== * req=Required field. Won't save unless value specified if set to Y
===== * dup=Fields to use when creating duplicates of the current build
===== * startup_list are valid values for start_up
      |...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8....+....9....+...10....+...11....+...12....+
===== udscreen_mtrx 'Hostname Other_DNS_names   IP_Address . Gateway VLAN LAN NIC NICname Layer2 BCP_Hostname BCP_Full_Domain_Name
 BCP_IP BCP_Gateway Monitor Backup zVM_LPAR   Startup OS   Contact Group_Email Function .   .   '
===== udscreen_ttls 'Hostname Full_Domain_Name IP Netmask Gateway VLAN LAN NIC NICname Layer2 BCP_Hostname BCP_Full_Domain_Name
 BCP_IP BCP_Gateway Monitor Backup Run_on_System Startup OS_Level Contact Group_Email Function P2K_Group Vel_Class'
===== udscreen_flds 'hostname fqdn   ip netmask gateway vlan lan nic nicname layer2 bcp_hostname bcp_fqdn
 bcp_ip bcp_gateway monitor backup runsys   startup os_level contact grp_email function p2kgrp   veluclass'
===== udscreen_pos '7.2   8.2   9.2 9.25   9.54   10.25 10.2 11.2 11.25   10.54 18.2   19.2
 20.2   20.42   12.2 12.25 13.2   12.54 7.52   14.2   15.2   16.2   13.30   11.54'
===== udscreen_len '20   35   15 15   15   4   8   4   4   3   20   35
 15   15   3   3   6   6   12   40   25   64   35   8'
====> v 1 125_

                                                                      X E D I T 1 File

4B▌   ۞:00.1   26/014

PF10 RGTLEFT

```
 V$BLDSYS FIELDS   E1  V 241  Trunc=241 Size=21 Line=7 Col=1 Alt=0


 =====  * * * Top of File * * *
 ===== * This file contails the variable details for BUILDSYS and LNXNAMES
 ===== * mtrx=Titles in the Linux Matrix spreadsheet on Sharepoint
 ===== * ttls=Titles on the screen
 ===== * flds=tags in the LINUX NAMES File
 ===== * pos=Row.column on the screen
 ===== * len=field length
 ===== * prot=Protected field, N means data can be entered or changed.
 ===== * form=Format of the field, U=upper case, M=Mixed case, I=Ip address, N=Number, YN=Yes/No
 ===== * req=Required field. Won't save unless value specified if set to Y
 ===== * dup=Fields to use when creating duplicates of the current build
 ===== * startup_list are valid values for start_up
       |...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8....+....9....+...10....+...11....+...12....+
 ===== udscreen_mtrx 'Hostname Other_DNS_names  IP_Address . Gateway VLAN  LAN  NIC   NICname Layer2 BCP_Hostname BCP_Full_Domain_Nam
 ===== udscreen_ttls 'Hostname Full_Domain_Name IP  Netmask  Gateway VLAN  LAN  NIC   NICname Layer2 BCP_Hostname BCP_Full_Domain_Nam
 ===== udscreen_flds 'hostname fqdn              ip  netmask  gateway vlan  lan  nic   nicname layer2 bcp_hostname bcp_fqdn
 ===== udscreen_pos  '7.2      8.2               9.2 9.25     9.54    10.25 10.2 11.2  11.25   10.54  18.2         19.2
 ===== udscreen_len  '20       35                15  15       15      4     8    4     4       3      20           35
 ===== udscreen_prot 'N        Y                 Y   Y        Y       N     N    Y     Y       Y      N            Y
 ===== udscreen_req  'Y        Y                 Y   Y        Y       Y     Y    Y     Y       Y      Y            Y
 ===== udscreen_form 'M        M                 I   I        I       N     U    N     U       YN     M            M
 ===== udscreen_dup  '1.55     N                 *.15 N       N       N     N    N     N       N      2.55         N
 ===== startup_list  'EARLY NORMAL LATE NO'
 ====> _

                                                                                      X E D I T  1 File
```

SHARE in Orlando 2015

PF10 again moves back

```
    V$BLDSYS FIELDS    E1  V 241  Trunc=241 Size=21 Line=7 Col=1 Alt=0

===== * * * Top of File * * *
=====
=====
=====
=====
=====
=====
=====
=====
=====
=====
=====
        .+...10....+...11....+...12....+...13....+...14....+...15....+...16....+...17....+...18....+...19....+...20....+...21....+...
===== BCP_Hostname BCP_Full_Domain_Name BCP_IP BCP_Gateway Monitor Backup zVM_LPAR       Startup OS       Contact Group_Email Functi
===== BCP_Hostname BCP_Full_Domain_Name BCP_IP BCP_Gateway Monitor Backup Run_on_System Startup OS_Level Contact Group_Email Functi
===== bcp_hostname bcp_fqdn             bcp_ip bcp_gateway monitor backup runsys         startup os_level contact grp_email   functi
===== 18.2         19.2                 20.2   20.42       12.2    12.25  13.2           12.54   7.52     14.2    15.2        16.2
===== 20           35                   15     15          3       3      6              6       12       40      25          64
===== N            Y                    Y      Y           N       N      N              N       N        N       N           N
===== Y            Y                    Y      Y           N       N      N              N       Y        N       N           N
===== M            M                    I      I           YN      YN     R              S       U        M       M           M
===== 2.55         N                    N      N           N       N      1.40           N       N        N       N           N
=====
====> _
                                                                                        X E D I T  1 File
4B                  @:00.1                                         26/007
```

RIGHT 100


```
 V$BLDSYS FIELDS    E1  V 241  Trunc=241 Size=21 Line=13 Col=1 Alt=0


=====
=====
=====
=====
=====
      ....+...11....+...12....+...13....+...14....+...15....+...16....+...17....+...18....+...19....+...20....+...21....+...22....+
===== tname BCP_Full_Domain_Name BCP_IP BCP_Gateway Monitor Backup zVM_LPAR      Startup OS       Contact Group_Email Function .
===== tname BCP_Full_Domain_Name BCP_IP BCP_Gateway Monitor Backup Run_on_System Startup OS_Level Contact Group_Email Function P2K_
===== tname bcp_fqdn              bcp_ip bcp_gateway monitor backup runsys        startup os_level contact grp_email  function p2kg
=====       19.2                  20.2   20.42       12.2    12.25  13.2          12.54   7.52     14.2    15.2       16.2     13.3
=====       35                    15     15          3       3      6             6       12       40      25         64       35
=====       Y                     Y      Y           N       N      N             N       N        N       N          N        N
=====       Y                     Y      Y           N       N      N             N       Y        N       N          N        N
=====       M                     I      I           YN      YN     R             S       U        M       M          M        M
=====       N                     N      N           N       N      1.40          N       N        N       N          N        N
=====
===== * * * End of File * * *




====> right 100_
```

X E D I T 1 File

```
 V$BLDSYS FIELDS    E1  V 241  Trunc=241 Size=21 Line=13 Col=1 Alt=0
Total offset exceeds LRECL (241)
=====
=====
=====
=====
=====
      ....+...21....+...22....+...23....+...24>...+...25....+...26....+...27....+...28....+...29....+...30....+...31....+...32....+
===== Group_Email Function .          .        '
===== Group_Email Function P2K_Group Vel_Class'
=====  grp_email   function p2kgrp    veluclass'
=====  15.2        16.2    13.30     11.54'
=====  25          64      35        8'
=====  N           N       N         N'
=====  N           N       N         N'
=====  M           M       M         V'
=====  N           N       N         N'
=====
===== * * * End of File * * *



===> left 200
                                                              X E D I T  1 File
4B                      0 :00.1                           26/013
```

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

Pieces

- PUT n fn ft fm
  - Copy lines to a different file
  - Appends to end if file exists
- PUTD n fn ft fm
  - Same as PUT except Delete lines after copying
- GET fn ft fm firstrec number_of_recs
  - Pull a copy of records at curline

Multiple file

- XEDIT fn|= ft|= fm|=

- Q RING
  - DMSXQR530I 2 file(s) in storage
  - USER   DISKMAP A1 F 100 Trunc=100 Size=705 Line=508 Col=1 Alt=0
  - USER   DIRECT   C1 F 80 Trunc=72 Size=4743 Line=4740 Col=1 Alt=0

- SCREEN n <u>Horizontal</u>|Vertical

  - Split into 2 or more screens
  - Can define up to 16 screens with SCREEN DEFINE

Column commands

- CAppend string   Add to the end on the line
- CDelete x   Deletes x number of characters
- CFirst   Put column pointer in col 1
- CInsert string   Insert string at column pointer
- CLAst   Move column pointer to end of zone
- CLocate ??   Move column pointer to …
  - could be an absolute column number
  - Relative column number
  - String
    - /string finds first occurrence on a line and goes to next line
    - CL string finds next occurrence, even if on same line

Saving data and leaving the file

- AUTOSAVE n A|mode
  - Save file every n changes. Creates an AUTOSAVE file that can be used to recover if terminal session gets terminated or lost. QUIT leaves AUTOSAVE file intact. FILE or SAVE erases AUTOSAVE FILE.
- SAVE fn ft fm
  - Save data to disk, reset ALT=0
- SSAVE fn ft fm
  - If fileid was changed or file exists, replace file.
- FILE fn ft fm
  - Save the file and QUIT
- FFILE
  - If fileid was changed to an existing file, replace file and quit
- QUIT
  - Leave file.
- QQUIT
  - Leave file without saving even if changes were made.

EXECs

- Three types of EXEC languages
  - EXEC   &CONTROL OFF (default)
  - EXEC2   &TRACE OFF
  - REXX   /* */

A split screen exec

```
/* Assign to PF2, when PF2 hit splits at that location          */
/* If past column 20, splits vertically. On cmdline reset to 1 screen */
  'COMMAND EXTRACT /CURSOR/SCREEN/CMDLINE/LSCREEN/PREFIX'
  if cmdline.2 = cursor.1 then do
    'COMMAND SCREEN 1'
    exit
  end
  scrn_hgt = lscreen.5
  scrn_wth = lscreen.6
  v_split = 20
  if (prefix.1 = 'ON' & prefix.2 = 'LEFT') then v_split = 26
  if cursor.2 > v_split then do
    if lscreen.4 /= 1 then cursor.2 = cursor.2 + lscreen.4 – 1
    scrn_wth1 = cursor.2 – 1
    scrn_sth2 = scrn_wth – cursor.2 + 1
    'COMMAND SCREEN WIDTH' scrn_wth1 scrn_wth2
    exit
  end
  else do
    if lscreen.3 /= 1 then cursor.1 = cursor.1 + lscreen.3 – 1
    scrn_hgt1 = cursor.1 – 1
    scrn_hgt2 = scrn_hgt – cursor.1 + 1
    'COMMAND SCREEN SIZE' scrn_hgt1 scrn_hgt2
    exit
  end
```

SHARE
in Orlando 2015

SPLSCR in action

```
PROFILE  XEDIT    B1  V 255  Trunc=255 Size=36 Line=0 Col=1 Alt=0




      * * * Top of File * * *
=====
=====  /* Standard profile for XEDIT on my account. */
=====     'SET MSGMODE OFF'
=====     'CMSEDIT ON'
=====     'SET SCAL OFF'
=====     'SET CASE MIXED IGNORE'
=====     'SET STAY ON'
=====     'SET SHADOW OFF'
=====     'SET CURLINE ON 10'
=====     'SET MSGMODE ON'
=====     'SET WRAP ON'
=====     'SET COLOR TOFEOF PINK'
=====     'SET COLOR CURLINE YELLOW HIGH'
=====     'SET COLOR SCAL TURQ NOHIGH'
=====     'SET COLOR PREFIX TURQ NOHIGH'
=====     'SET COLOR IDLINE WHITE NOHIGH'
====>

                                                         X E D I T  1 File
4B                   :00.1                          10/007
```

Go from horizontal to vertical

```
PROFILE  XEDIT    B1  V 255  Trunc=255 Size=36 Line=0 Col=1 Alt=0




===== * * * Top of File * * *
===== /* Standard profile for XEDIT on my account. */
=====     'SET MSGMODE OFF'
====>
                                                                    X E D I T  1 File

 PROFILE  XEDIT    B1  V 255  Trunc=255 Size=36 Line=0 Col=1 Alt=0


                                          _




===== * * * Top of File * * *
===== /* Standard profile for XEDIT on my account. */
=====     'SET MSGMODE OFF'
=====     'CMSEDIT ON'
=====     'SET SCAL OFF'
=====     'SET CASE MIXED IGNORE'
=====     'SET STAY ON'
====>
                                                                    X E D I T  1 File

4B            © :00.2                                    12/055
```

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```
=====  * * * Top of File * * *                        =====  * * * Top of File * * *
===== /* Standard profile for XEDIT on my account. */ ===== /* Standard profile for XEDIT on my account. */
=====     'SET MSGMODE OFF'                            =====     'SET MSGMODE OFF'
=====     'CMSEDIT ON'                                 =====     'CMSEDIT ON'
=====     'SET SCAL OFF'                               =====     'SET SCAL OFF'
=====     'SET CASE MIXED IGNORE'                      =====     'SET CASE MIXED IGNORE'
=====     'SET STAY ON'                                =====     'SET STAY ON'
=====     'SET SHADOW OFF'                             =====     'SET SHADOW OFF'
=====     'SET CURLINE ON 10'                          =====     'SET CURLINE ON 10'
=====     'SET MSGMODE ON'                             =====     'SET MSGMODE ON'
=====     'SET WRAP ON'                                =====     'SET WRAP ON'
=====     'SET COLOR TOFEOF PINK'                      =====     'SET COLOR TOFEOF PINK'
=====     'SET COLOR CURLINE YELLOW HIGH'              =====     'SET COLOR CURLINE YELLOW HIGH'
=====     'SET COLOR SCAL TURQ NOHIGH'                 =====     'SET COLOR SCAL TURQ NOHIGH'
=====     'SET COLOR PREFIX TURQ NOHIGH'               =====     'SET COLOR PREFIX TURQ NOHIGH'
=====     'SET COLOR IDLINE WHITE NOHIGH'              =====     'SET COLOR IDLINE WHITE NOHIGH'
=====     'SET COLOR CMDLINE WHITE'                    =====     'SET COLOR CMDLINE WHITE'
====>  _                                               ====>
 4B                         :00.1                                         27/007
```

SHARE in Orlando 2015

Show the PF keys on the screen

```
/* Display PF keys on the screen */
  'COMMAND EXTRACT /CMDLINE/LSCREEN/PF*/RESERVED/COLOR SCALE/'
  select
    when cmdline.1 = 'ON' then pfline1 = lscreen.1 – 3
    when cmdline.1 = 'BOTTOM' then pfline1 = lscreen.1 – 2
    otherwise pfline1 = lscreen.1 – 1
  end
  pfline2 = pfline1 + 1
  if reserved.0 > 0 & word(reserved.1,1) = pfline1 then do
    'COMMAND SET RESERVED' pfline1 'OFF'
    'COMMAND SET RESERVED' pfline2 'OFF'
  end
  pl = ((lscreen.2 -36) + 1) % 6                    /* 6 PFxx=/line and a blank on 5 */
  pfline1t = 'PF1= 'left(pf1.2,pl) 'PF2= 'left(pf2.2,pl) 'PF3= 'left(pf3.2,pl) ,
    'PF4= 'left(pf4.2,pl) 'PF5= 'left(pf5.2,pl) 'PF6= 'left(pf6.2,pl)
  'COMMAND SET RESERVED' pfline1 color.1 'NONE PS0' color.3 pfline1t
  pfline2t = 'PF7= 'left(pf7.2,pl) 'PF8= 'left(pf8.2,pl) 'PF9= 'left(pf9.2,pl) ,
    'PF10='left(pg10.2,pl) 'PF11='left(pf11.2,pl) 'PF12='left(pf12.2,pl)
  'COMMAND SET RESERVED' pfline2 color.1 'NONE PS0' color.3 pfline2t
  exit
```

How it looks on a mod-5


```
   PROFILE  XEDIT    B1  V 255  Trunc=255 Size=36 Line=0 Col=1 Alt=0




=====  * * * Top of File * * *
=====  /* Standard profile for XEDIT on my account. */
=====     'SET MSGMODE OFF'
=====     'CMSEDIT ON'
=====     'SET SCAL OFF'
=====     'SET CASE MIXED IGNORE'
=====     'SET STAY ON'
=====     'SET SHADOW OFF'
=====     'SET CURLINE ON 10'
=====     'SET MSGMODE ON'
=====     'SET WRAP ON'
=====     'SET COLOR TOFEOF PINK'
=====     'SET COLOR CURLINE YELLOW HIGH'
=====     'SET COLOR SCAL TURQ NOHIGH'
PF1= HELP MENU        PF2= SPLSCR        PF3= QUIT        PF4= TABKEY        PF5= SCHANGE 6      PF6= ?
PF7= BACKWARD         PF8= FORWARD       PF9= =           PF10=RGTLEFT       PF11=SPLTJOIN       PF12=CURSOR HOME
====> _
                                                                                           X E D I T  1 File
 4B                    0:00.1                                        26/007
```

SHARE in Orlando 2015

On a mod-2


```
 PROFILE  XEDIT     B1  V 255  Trunc=255 Size=36 Line=0 Col=1 Alt=0




=====  * * * Top of File * * *
===== /* Standard profile for XEDIT on my account. */
=====     'SET MSGMODE OFF'
=====     'CMSEDIT ON'
=====     'SET SCAL OFF'
=====     'SET CASE MIXED IGNORE'
=====     'SET STAY ON'
=====     'SET SHADOW OFF'
=====     'SET CURLINE ON 10'
=====     'SET MSGMODE ON'
=====     'SET WRAP ON'
PF1= HELP ME PF2= SPLSCR   PF3= QUIT      PF4= TABKEY  PF5= SCHANGE PF6= ?
PF7= BACKWAR PF8= FORWARD PF9= =          PF10=RGTLEFT PF11=SPLTJOI PF12=CURSOR
====> _
                                             X E D I T  1 File
4B
                        :00.2                                    23/07
```

SHARE in Orlando 2015

PIPES

- PIPE is not part of the nucleus
  - Must specify PIPE ….
- PIPE returns the highest return code of all stages

SHARE
in Orlando 2015

From easy to complex

- Easy stuff

  ```
  /* Populate a stem, omit comments */
  'PIPE < V$BLDSYS FIELDS *' ,
         '| nfind *' ,
         '| stem fields.'


  /* Remove blank lines */
  'PIPE stem ld.' ,
         '| locate' ,
         '| stem ld.'
  ```

- More complex

  ```
  /* Compare lists of files on two disks */
  'PIPE (endchar ?) < FILES DISK'fm1 'A' ,
         '| c: collate MASTER' ,
         '| > FILES ONBOTH A' ,
         '?' ,
         '< FILES DISK'fm2 'A' ,
         '| c:' ,
         '| > FILES ON'fm1 'A' ,
         '?' ,
         'c:' ,
         '| > FILES ON'fm2 'A'
  ```

References

- XEDIT User's Guide
- XEDIT Commands and Macro Reference
- CMS PIPELINES User's Guide
- REXX/VM Reference
- REXX/VM User's Guide
  - Manuals can be found at http://www.vm.ibm.com/library/

  And don't forget about HELP
  (Help Menus can be a great place to start).