z/OS Introduction and Workshop

TN3270, FTP, and SSH Access
Unit Objectives

After completing this unit, you should be able to:

• Briefly describe 3270
• Access z/OS using TN3270 Emulator
• Access z/OS using SSH client (PuTTY)
• Access z/OS using FTP
3270 Protocol

3270 is an IBM display device introduced in 1971
- Text only display
- Session attributes determine screen number of rows and columns
- Existed long before HTML and Browsers
- VT100 (text display) introduced in 1978

3270 protocol is a 'data stream' consisting of commands and orders to:
- Write data to display device
- Read data from display device

3270 Emulator Keyboard Mapping vs. PC Keyboard Layout
- 3270 protocol 'enter' command, x'7D', is used to send screen data
- PC keyboard right side 'Ctrl' is mapped by emulator to generate 'enter' command
- Emulator keyboard mapping can be changed
3270 Emulator Mapping to Physical Keyboard

Right side Ctrl key generates 3270 'enter' command by default
TN3270 Configuration Customization Options

IP address (target system)
Port number (target system application)
Model size (screen # rows and # columns)
Code page (1047 recommended)

Keyboard Mapping
TN3270 signon screen following successful configuration

```
======  ==============  ====  ====
======  ==============  ====  ====
    ==  ==  ==  ==  ==  ==
    == ==  == ==  ==  ==
    == ==  == ==  ==  ==
    == ==  == ==  ==  ==
MVR22GA  ***  z/OS V2 R2  via TCPIP Telnet ***
```

Choose from the following commands:
(Not all applications are available in every system.)

- TSO - Logon TSO (24x80)
- IMS - Logon IMS
- CICS - Logon CICS TS 5.3
- CICS42 - Logon CICS TS 4.2

Cursor placed here automatically
TN3270 signon screen following successful configuration

```
 ======  =========  ======  ======
 ======  =========  ======  ======
 ======  =========  ======  ======
 ===    ===    ===    ===
===    ==>WELCOME==TO THE=====
===    IBM Innovation Center - Dallas== ===
===    ===    ===    ===    ===
 ======  =========  ======  ======
```

MVR22GA  ***  z/OS V2 R2  via TCPIP Telnet ***

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TSO   - Logon TSO (24x80)
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CICS42 - Logon CICS TS 4.2

tso

```
  type tso – then 'enter' command – right side Ctrl key
```

```
IKJ56700A ENTER USERID -
zibm050
```

```
  type your assigned ID – then 'enter' command – right side Ctrl key
```
Tab to Password field enter bluesky, New Password required with verification

--- TSO/E LOGON ---
IKJ56447A Reenter the new password in the NEW PASSWORD field for verification

Enter LOGON parameters below:  

RACF LOGON parameters:

Userid ==> ZIBM050

Password ==> *New Password ==>

Procedure ==> DBPROCBG  

Group Ident ==> 

Acct Nmbr ==> FB3

Size ==> 32768

Perform ==> 

Command ==> 

Enter an 'S' before each option desired below:

-Nomail -Nonotice -Reconnect -OIDcard

PF1/PF13 ==> Help  PF3/PF15 ==> Logoff  PA1 ==> Attention  PA2 ==> Reshow

You may request specific help information by entering a '?' in any entry field.
TSO logon writes message to display device

ICH70001I ZIBM000  LAST ACCESS AT 10:49:16 ON TUESDAY, APRIL 4, 2017
ZIBM000 LOGON IN PROGRESS AT 10:51:44 ON APRIL 4, 2017
NO BROADCAST MESSAGES

z/OS Introduction and Workshop

Today is 4 Apr 2017

Time in Central USA is 10:51:49

You logged on with ID ZIBM000

Have Fun!
TSO logon writes message to display device

Enter to proceed to ISPF

**Total allocation time** - **14.606627** secs

*** []

when *** is displayed, enter to proceed
TSO automatically starts ISPF

Menu Utilities Compilers Options Status Help

ISPFF Primary Option Menu  More: +

0 Settings  Terminal and user parameters  User ID: ZIBM050
1 Dev  Display source data or listings  Time: 14:01
2 Ed  Create or change source data  Terminal: 3278
3 Util  Perform utility functions  Screen: 1
4 Foreground Interactive language processing  Language: ENGLISH
5 Batch Submit job for language processing  Appl ID: ISR
6 Command Enter TSO or Workstation commands  TSO logon: DBPROCBG
7 Dialog Test Perform dialog testing  TSO prefix: ZIBM050
8 LM Facility Library administrator functions  System ID: S0W1
9 IBM Products IBM program development products  MVS acct.: FB3
10 SCLM SW Configuration Library Manager  Release: ISPF 7.2
11 Workplace ISPF Object/Action Workplace

--- Other Install Products ---

D Debug Tool  Debug Tool Utility V13.1
SD SDSF  System Display and Search Facility
IP IPCS  Inter Problem Control Facility
IS ISMF  Inter Storage Management Facility
SM SMP/E  SMP/E and CBPDO Dialogs
HC HCD  HW Configuration Definition Dialog
R RACF  Resource Access Control Facility
S DESORT  Data Facility Sort
OE OEDIT  OpenEdition MVS Edit files
OB OBROWSE  OpenEdition MVS Browse files
OS OSHELL  OpenEdition MVS ISPF Shell
BR READ  BookManager READ/MVS
BB BUILD  BookManager BUILD/MVS
BI READ INDEX  BookManager Index Utility

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Option --> =0[ ]
F1=Help  F2=Split  F3=Exit  F7=Backward  F8=Forward  F9=Swap
F10=Actions  F12=Cancel
ISPF Settings

Before

Log/List Function keys Colors Environ Workstation Identifier Help

ISPF Settings

Options

Enter "/*" to select option
/ Command line at bottom
/ Panel display CUA mode
/ Long message in pop-up
/ Tab to action bar choices
/ Tab to point-and-shoot fields
/ Restore TEST/TRACE options
/ Session Manager mode
/ Jump from leader dots
/ Edit PRINTDS Command
/ Always show split line
/ Enable EURO sign

Member list options

Enter "/*" to select option
/ Scroll member list
/ Allow empty member list
/ Allow empty member list (nomatch)
/ Empty member list for edit only

Terminal Characteristics


Terminal Type 3
1. 3277 2. 3277A 3. 3278 4. 3278A
5. 3290A 6. 3278T 7. 3278CF 8. 3278KN
9. 3278CN 10. 3278AR 11. 3278CY 12. 3278HN
13. 3278CU 14. 3278IS 15. 3278L2 16. BE163
17. BE190 18. 3278TH 19. 3278CU 20. DEU78
21. DEU78A 22. DEU78T 23. DEU90A 24. SH116
25. SH131 26. SH500 27. 3278GR 28. 3278L1
29. OTHER

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Command ==> F1=Help F2=Split F3=Exit F7=Backward F8=Forward F9=Swap
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Return
Exit
F3
Program Function key display off, 'x' to terminate ISPF session, then logoff of TSO

Before

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<th>ISPF Primary Option Menu</th>
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<td>Command Enter ISPF or Workstation commands TSO logon: DBPROCB6</td>
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OE OEDIT OpenEdition MVS Edit files
OB OBRNWE OpenEdition MVS Browse files
OS OSHELL OpenEdition MVS TSO Shell
BR READ BookManager READ/MVS
BB BUILD BookManager BUILD/MVS
BJ READ INDEX BookManager Index Utility
DU MVS/DITTO MVS/DITTO Utility
IN INSPECT INSPECT for C/370 and PL/I
MQ MQSeries MQSeries 3.0.0
D2 DB21 Perform DB2 Interactive Functions
DM DB2ADM DB2 Admin Tool
QM QMF Query Management Facility for DB2
CO CICS PD/MVS CICS PD/MVS Online Customization
F1-Help F2-Split F3-Exit F7-Backward F8-Forward F9-Swap
F10-Actions F12-Cancel

Enter X to Terminate using log/list defaults

After

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F10-Actions F12-Cancel

Ready logoff
SSH connection

```
enter key is PC labeled enter key
use same TN3270 access
assigned ID and your password
```

```
login as: zibm000
zibm000@192.86.32.159's password:
ZIBM000:/u/zibm000: >exit
```
FTP connection

```
[paulnewt@oc3806684886 ~]$ ftp 192.86.32.159
Connected to 192.86.32.159 (192.86.32.159).
220-FTPSERVE IBM FTP CS V2R2 at S0W1.DAL-EBIS.IHOST.COM, 16:38:51 on 2017-04-04.
220 Connection will close if idle for more than 5 minutes.
Name (192.86.32.159:paulnewt): zibm000
331 Send password please.
Password:
230 ZIBM000 is logged on. Working directory is "ZIBM000".
Remote system type is MVS.
ftp> quit
```

- enter key is PC labeled enter key
- use same TN3270 access assigned ID and your password
Unit Summary

Having completed this unit, you should be able to:

✔ Briefly describe 3270
✔ Access z/OS using TN3270 Emulator
✔ Access z/OS using SSH client (PuTTY)
✔ Access z/OS using FTP