IBM Developer for z Systems – for ISPF Developers

Module 6 – Remote Systems - ISPF 3.x and Batch Job Management

DevOps

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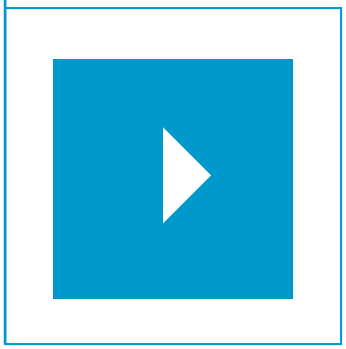
UNIT

The IDz Workbench

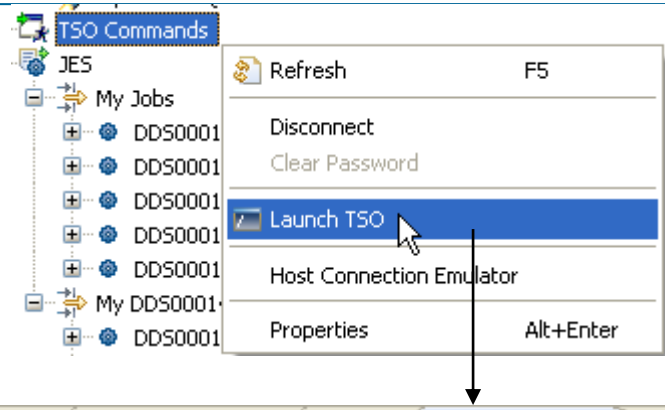


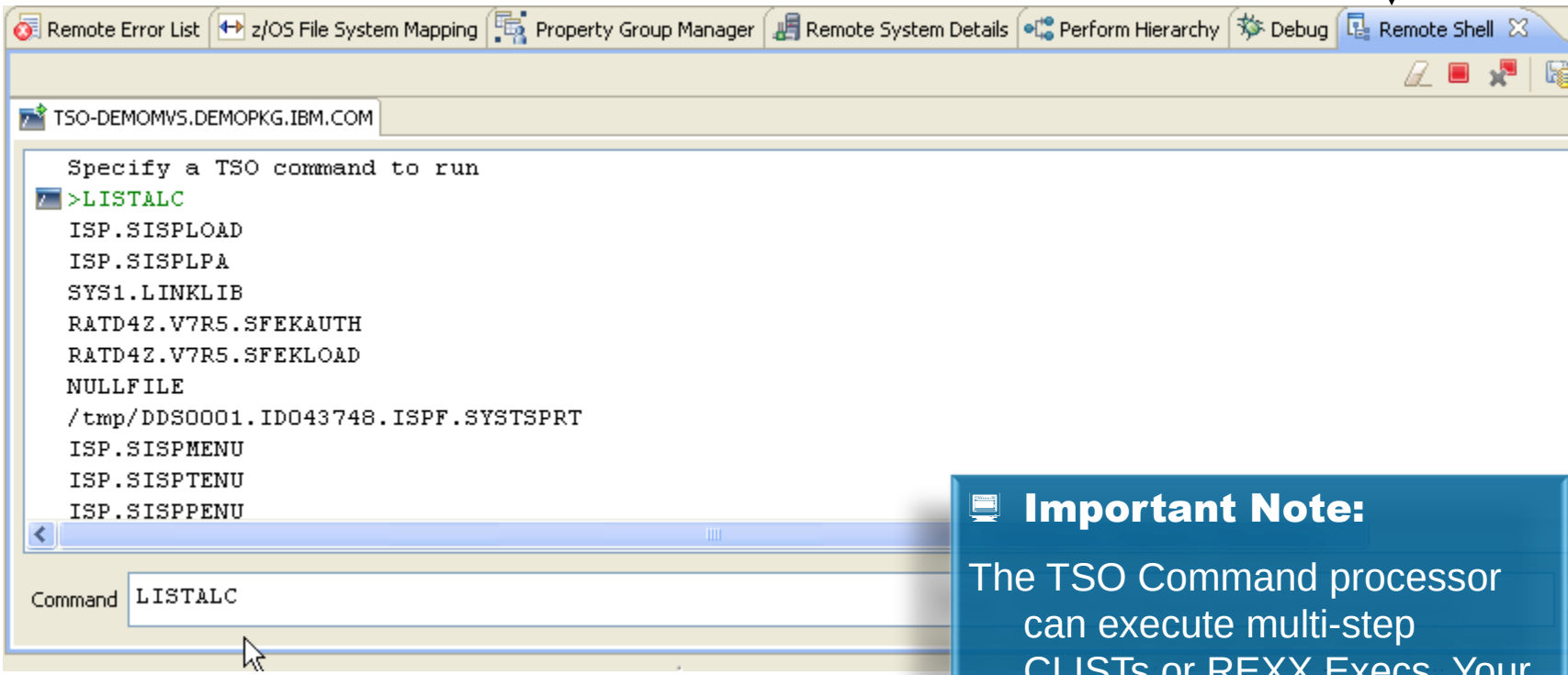
Topics:

- z/OS Dataset Management
- Submit and Manage z/OS Jobs
- **Issue TSO Commands and Host Connect Emulation**

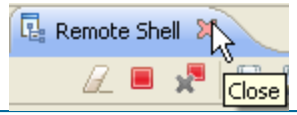
TSO commands

- Right-click **TSO Commands**, then select **Launch TSO** from the context menu.
- Enter a:
  - TSO command
  - CLIST
  - REXX Exec
- Press ↵**Enter** (note the up/down arrows retrieve previous commands)





- **Close the view when finished**

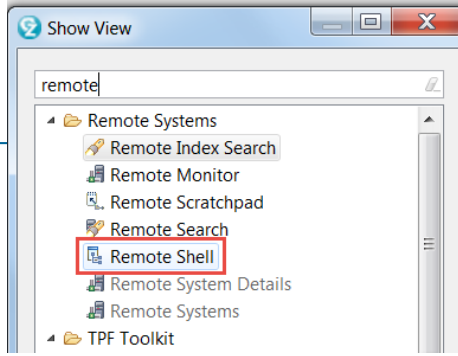


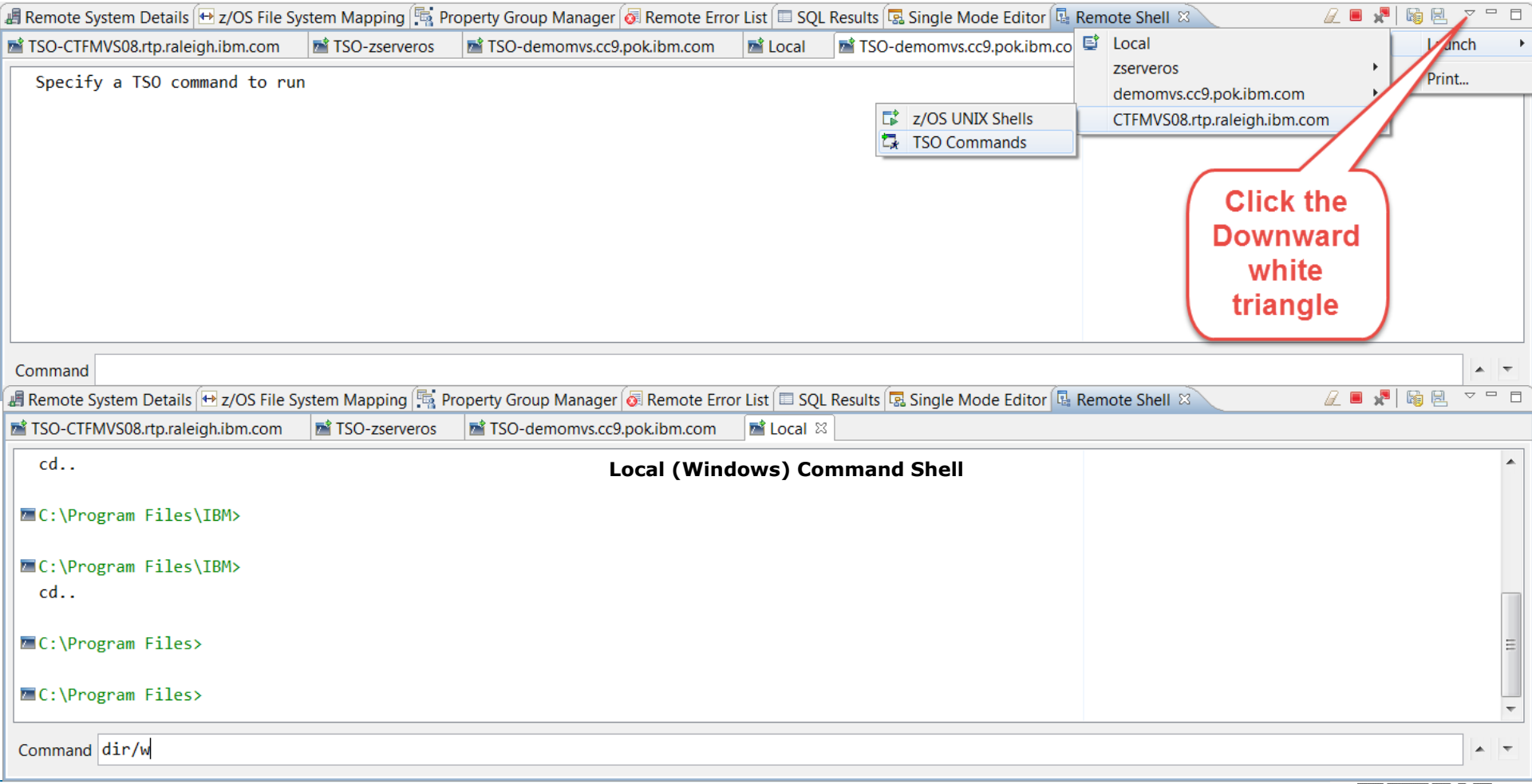
Important Note:

The TSO Command processor can execute multi-step CLISTs or REXX Execs. Your Systems Programming staff will have to configure for this

TSO Command Shell –
As part of your default z/OS Projects Perspective

- You can add the TSO Command Shell to any Perspective
  - Window ➔ Show View ➔ Other ➔ Remote Shell
- From a Command Shell you can issue Remote or Local (Windows) commands

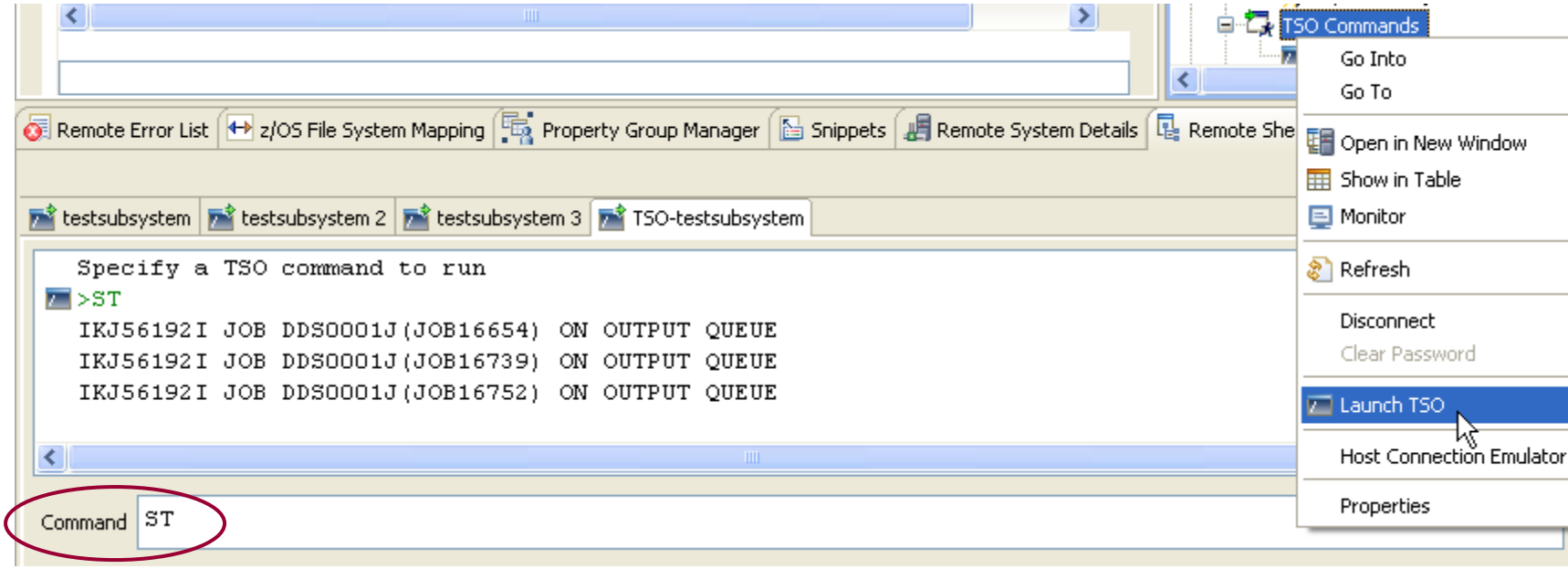




Using the TSO Command Shell to Obtain Batch Job Status

- You may wish to know when your jobs have finished
  - Or to display active IMS and CICS regions, etc.

- Steps:
  - Keep a TSO Command view open
  - Issue commands as if you were logged into native TSO



Unlocking a Dataset using IDz Host System Commands

- You will occasionally find that datasets are locked.
- To unlock them issue the following command from a TSO Command Shell:

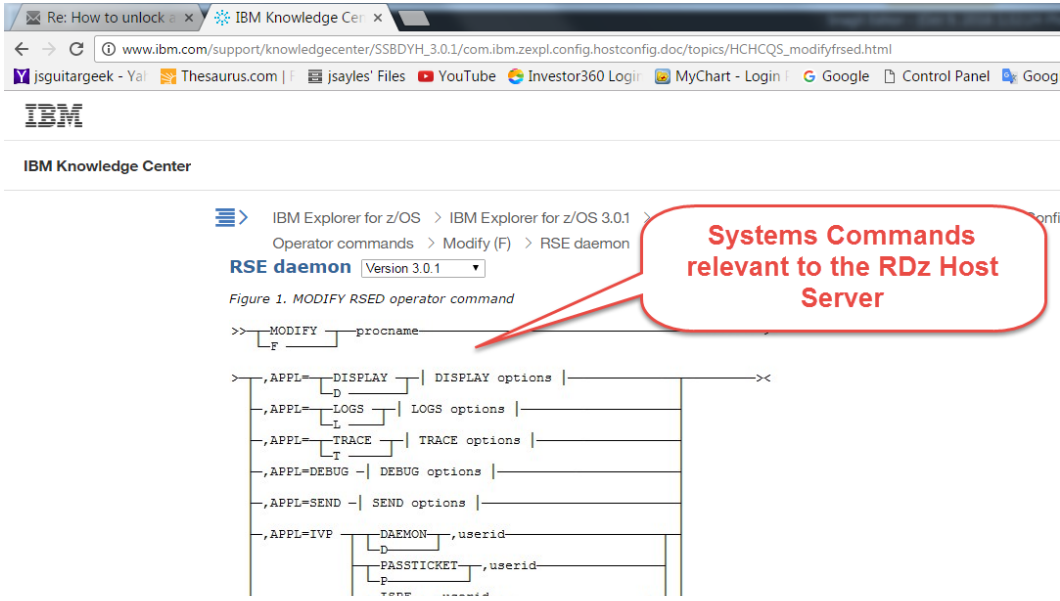
```
F RS03040,APPL=C U=USER170
```

  - This will tell the IDz Server on port 3040 to cancel USER170.
  - This should also free all locks held by that user.
- If you're not the one holding the lock,

```
F R03040,APPL=D O,D=dsn(member)
```

  - This will tell you who is (assuming it's somebody connected to port 3040) the client will tell you as well

You will need Systems-Level authority to issue this command



For more information on this topic:

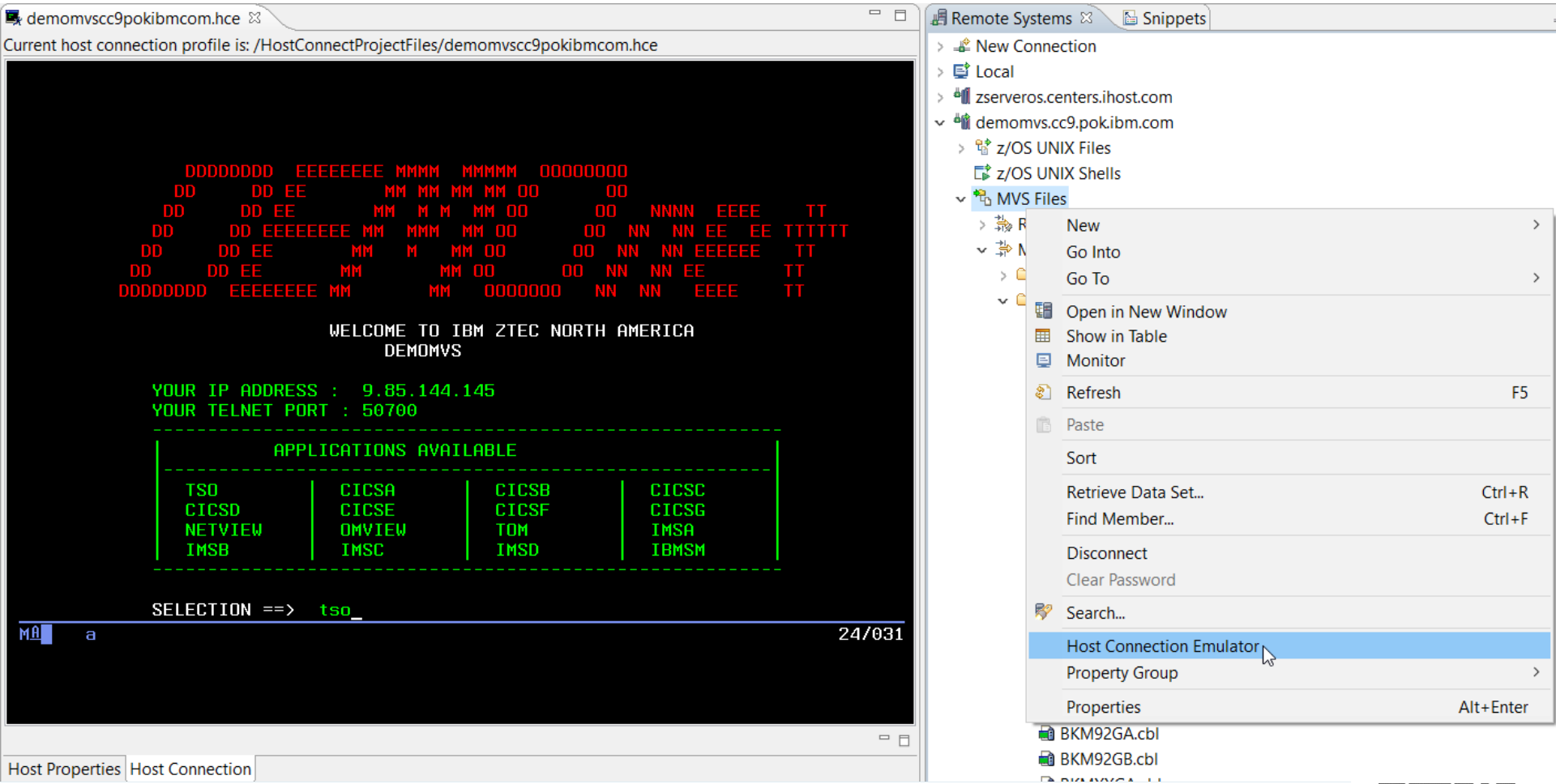
http://www.ibm.com/support/knowledgecenter/SSBDYH_3.0.1/com.ibm.zexpl.config.hostconfig.doc/topics/HCHCQS_modifyfrsed.html

Issuing Multi-Step REXX Execs and CLISTs

- (z/OS Explorer) Host Config Guide - Legacy and Interactive ISPF Gateway
- Interactive ISPF Gateway
- Upper Case
- Must prefix with TSO ...
- (can still abbreviate)
- Must be aware of Logon Proc (Properties off of TSO)
- Can't be in TSO Command Shell & HCE at the same time
- Must have separate LOGON Procs between HCE and TSO Command Shell

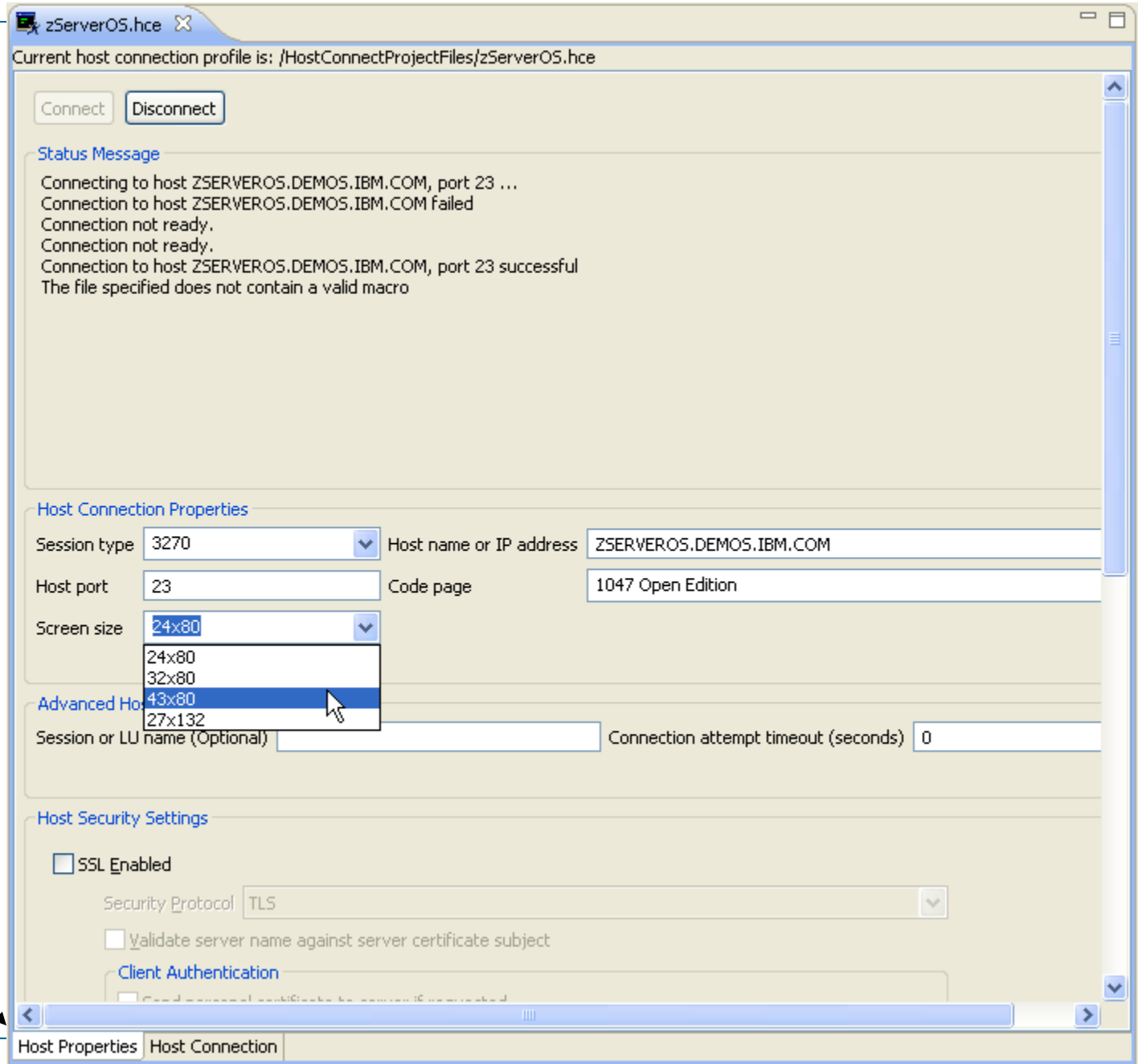
TSO Host Connection Emulation (HCE)

- **Right-click over an RSE option**
- From the Context Menu select **Host Connection Emulator**
- **Select your mainframe application;** TSO, IMS, CICS, etc.
- **Login** – as per normal



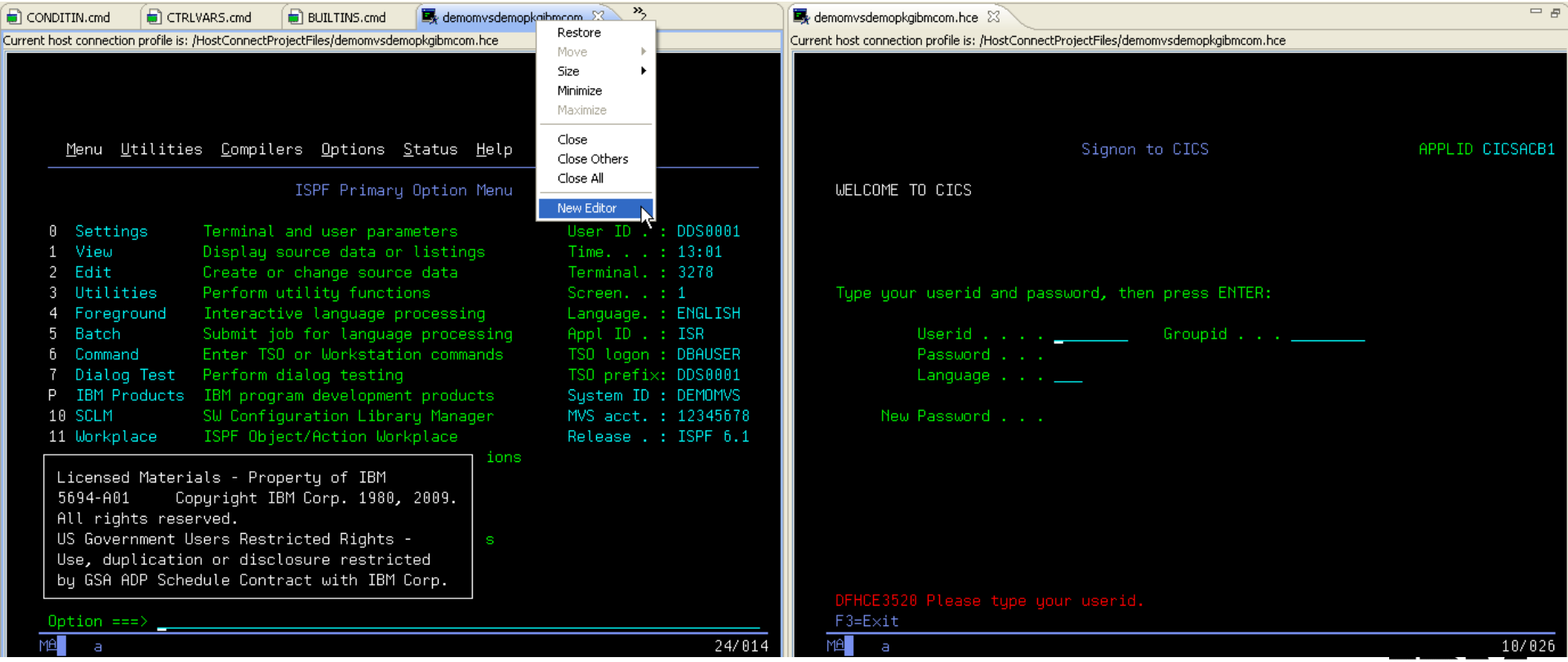
Customizing your Host Connection Properties

- From the Host Properties tab, you can change the following settings:
  - Screen size
  - LU name
    - For CICS and IMS testing
  - Code page
  - Connection timeout
  - Security



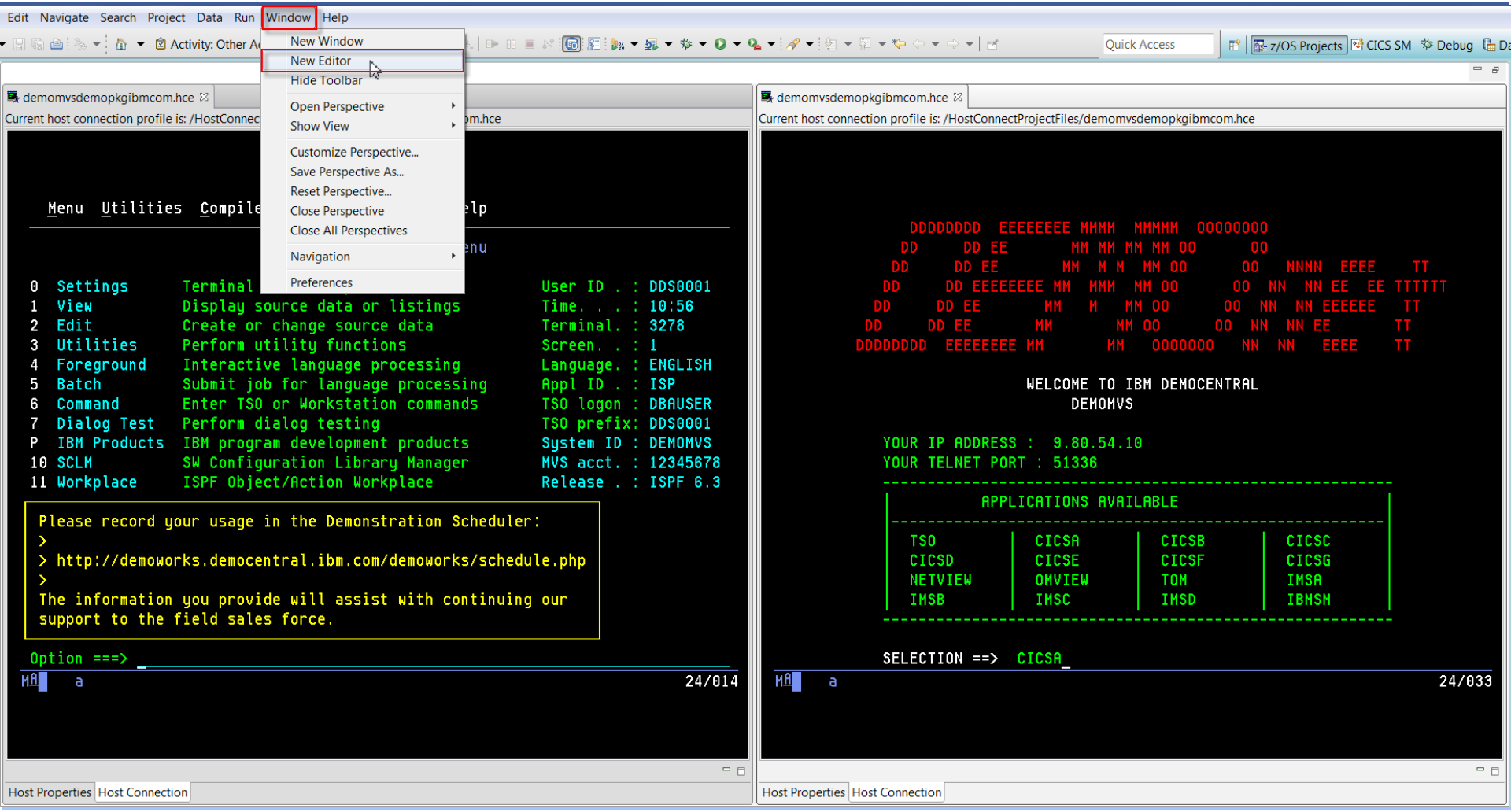
Connect to a Second LPAR from HCE

- You can connect to a separate LPAR – or open a 2nd emulator session into a different subsystem:
  - Connect to your first LPAR using Host Connection Emulator
  - Right-click over the view tab
  - Select **New Editor**
  - Connect to z/OS through a 2nd emulation session



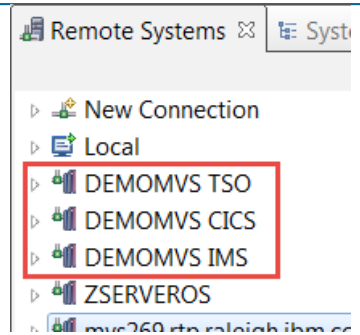
Connect to a Second LPAR from HCE – v9 and Later

- If you are using IDz version 9 or later, access the New Editor functionality from the Window menu



How can you tell which HCE window is which?

- The window for HCE will be named the RSE connection name
- If you want to uniquely identify HCE windows:
  - Create separate, named connections to your LPAR(s)
  - Launch Host Connection Emulator from the different connections



DEMOMVSTSO.hce

DEMOMVS TSO Connection

```
  Menu  Utilities  Compilers  Options  Status  Help

                    ISPF Primary Option Menu

0  Settings      Terminal and user parameters          User ID . : DDS0001
1  View          Display source data or listings       Time. . . : 09:51
2  Edit          Create or change source data          Terminal. : 3278
3  Utilities     Perform utility functions             Screen. . : 1
4  Foreground    Interactive language processing       Language. : ENGLISH
5  Batch         Submit job for language processing    Appl ID . : ISP
6  Command       Enter TSO or Workstation commands     TSO logon : DBAUSER
7  Dialog Test   Perform dialog testing                TSO prefix: DDS0001
P  IBM Products  IBM program products                  System ID : DEMOMVS
10 SCLM          SW Configuration Library Manager      MVS acct. : 12345678
11 Workplace     ISPF Object/Action Workplace          Release . : ISPF 7.1
12 z/OS System   z/OS system programmer applications
13 z/OS User     z/OS user applications

     Enter X to Terminate using log/list defaults


Option ===> _
 F1=RETRIEVE  F2=SPLIT     F3=END       F4=RETURN    F5=RFIND     F6=RCHANGE
 F7=UP        F8=DOWN      F9=SWAP      F10=LEFT     F11=RIGHT    F12=RETRIEVE
MA   a                                                          22/014
```

DEMOMVSCICS.hce

DEMOMVS CICS Connection

```
            ADTOOLS BIRTHDAY/RETIREMENT SAMPLE APPLICATION

        YYMMDD_     <== PLEASE ENTER BIRTHDATE IN YYYYMMDD FORMAT

           B    <=== ENTER REQUEST
                     B : SEE YOUR BIRTHDAY          (LINK TO PROGRAM CDAT2)
                     R : CALCULATE RETIREMENT       (LINK TO PROGRAM CDAT3)
                     C : CLEAR AND START OVER
                     @ : ABEND WITH S0C7




        F3/F12/CLEAR TO TERMINATE, ENTER TO PROCESS
MA   a                                                          08/022
```

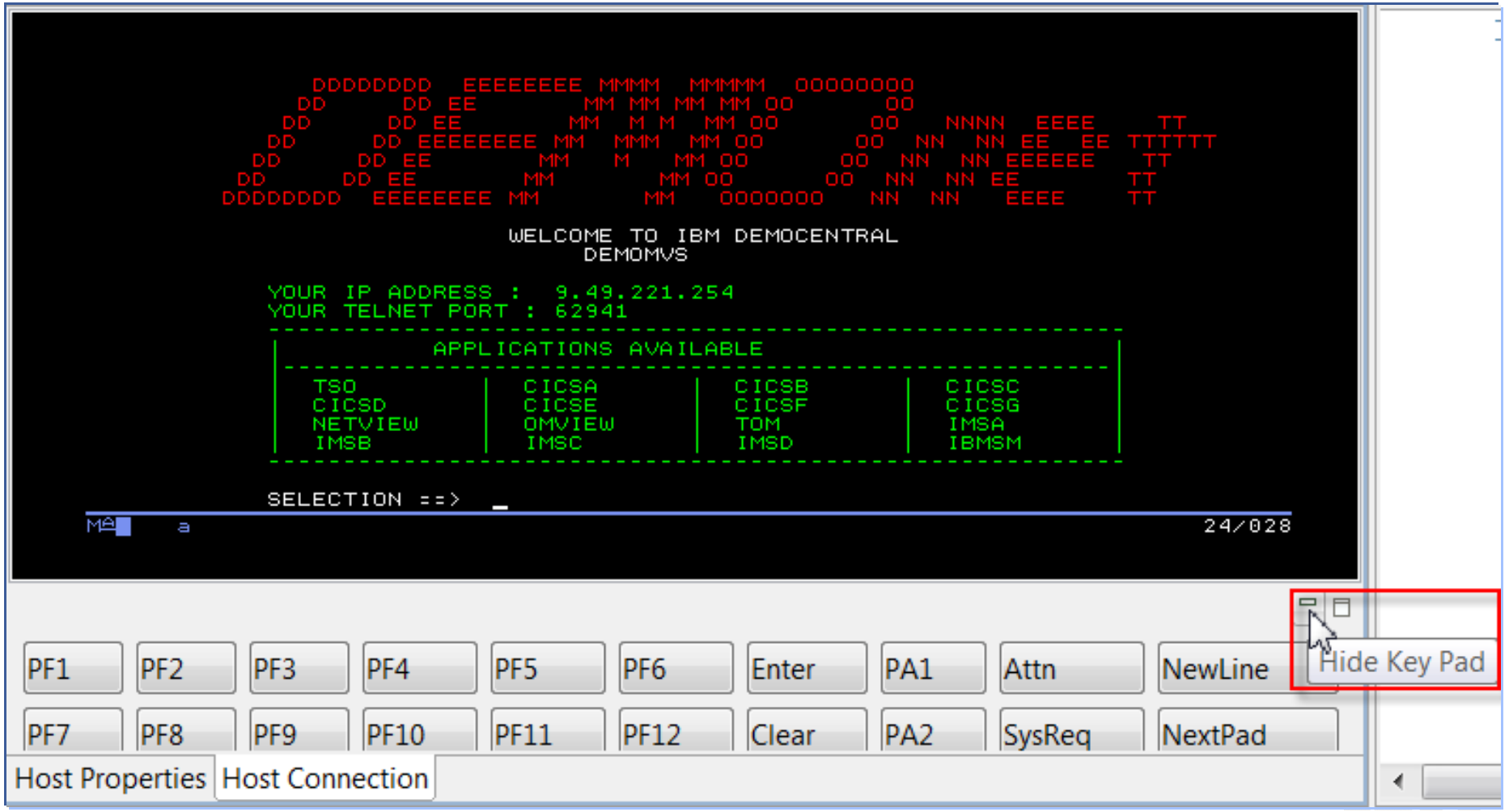
Host Properties | Host Connection

DEMOMVSIMS.hce

DEMOMVS IMS Connection

Hide/Show Keypad – for PF Keys in the Emulator

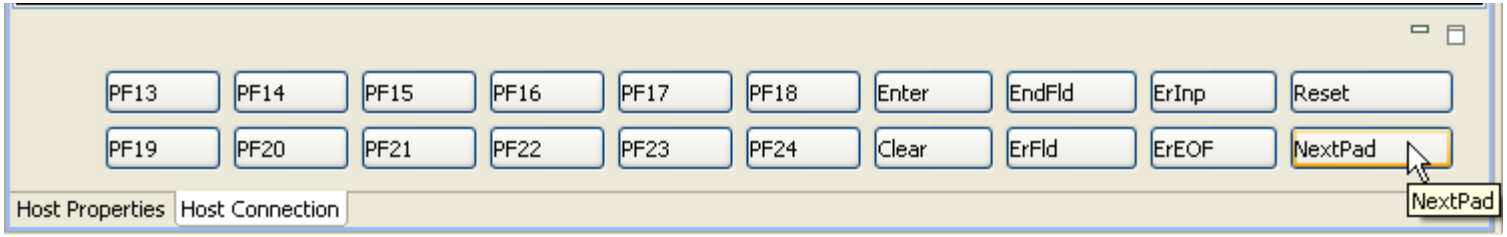
- Use the two icons on the bottom/right-hand side of the window, to:
  - Hide the PF-Key Pad
  - Show the PF-Key Pad



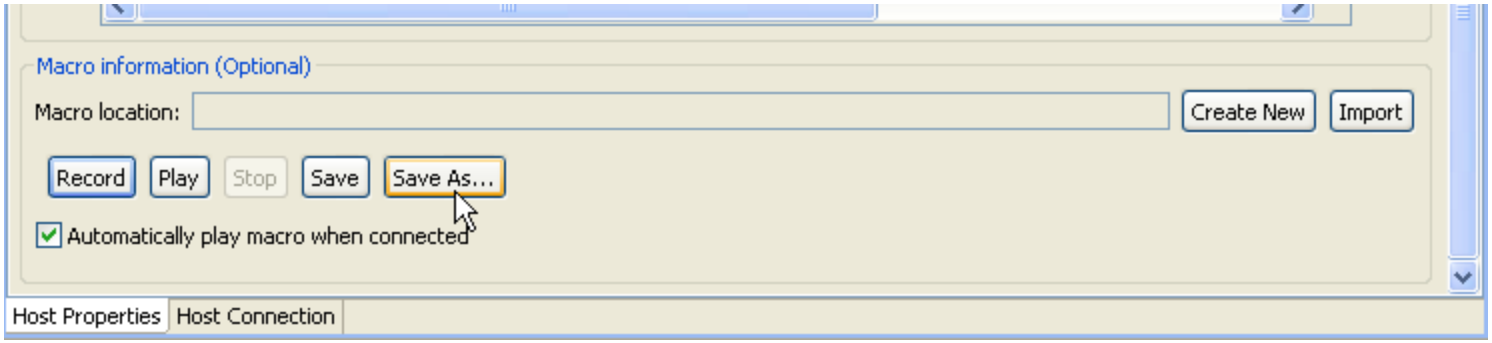
Other HCE Considerations

- HCE is a Java plugin – it runs locally (on your desktop)

- To see next set of function keys, click: NextPad



- You can Record/Play back/Save As… and Import keystrokes:



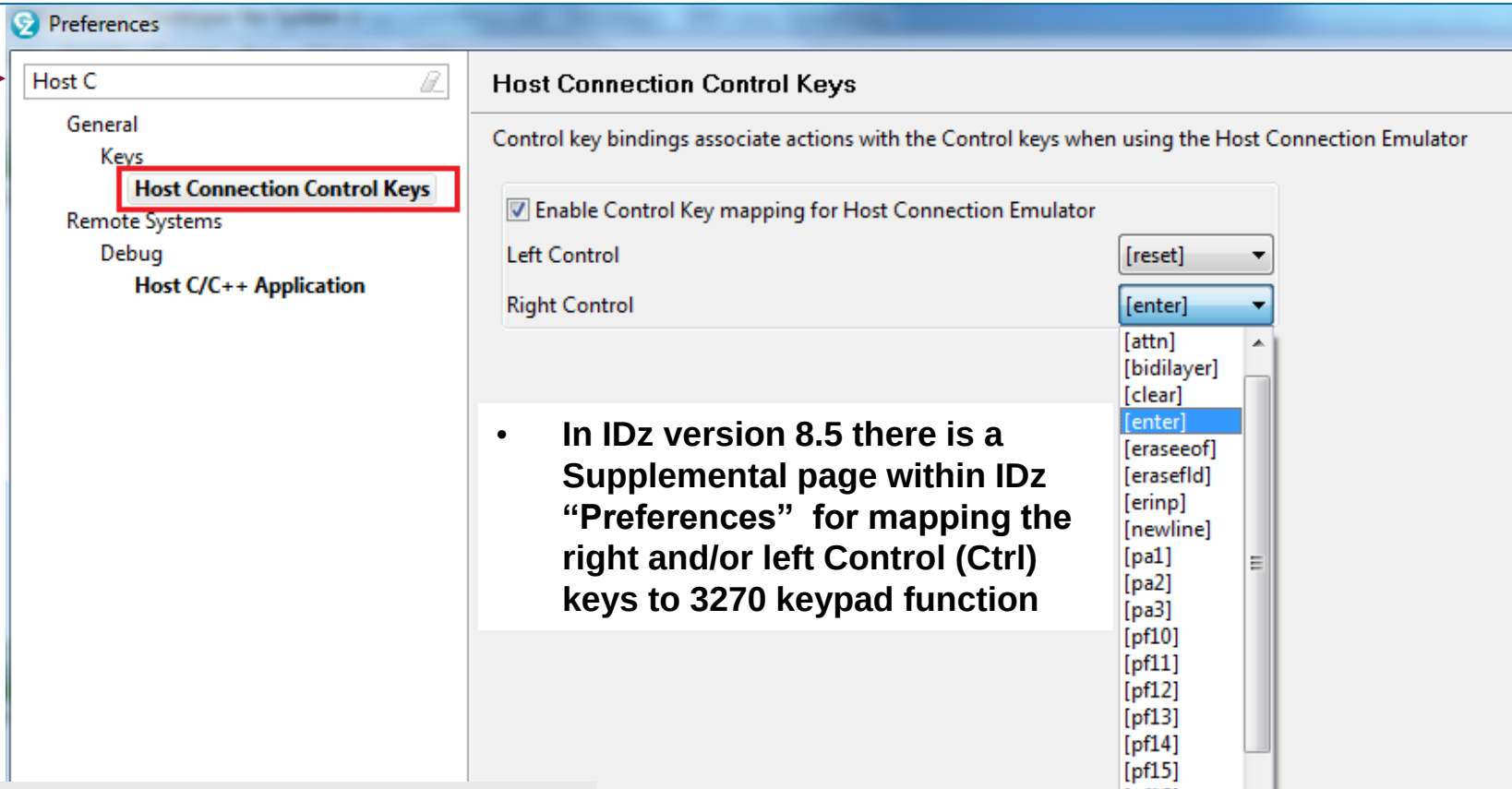
  - Useful for:
    - Logging into multiple applids
    - Doing/playing regression test scripts
    - See next slide for details

You can create a macro to automatically log on to a remote system. Macros are captured key strokes and screen progressions that complete repeatable tasks.

Defining/Recording/Playing Back a Macro

- **Creating a macro**
  - Open the Host Properties page for the remote system to work with.
  - Scroll to the Macro information area of the Host Properties page, and click **Create New**.
  - In the Save As window, type a name for the macro and click **Save**.
    - A typical naming convention is a file name with a **.macro** file extension, such as: **some_name.macro**
  - Click **Record**.
  - From the Host Connection window, capture a sequence of key strokes
    - Note: Not GUI (mouse) development ... just keyboard activity
  - To stop recording and save the macro, click:
    - **Stop**
    - **Save**
- **Playing a macro**
  - Import an existing macro from the file system and select **Play**.
    - This action plays the sequence that was recorded in the macro from the screen that was last open in the Host Connection Emulator window.
    - **Note:** If a macro must run from a particular screen, go to the required screen before starting the macro.

Mapping Left/Right “Ctrl” key in Host Connection Emulator - v8.5



- **In IDz version 8.5 there is a Supplemental page within IDz “Preferences” for mapping the right and/or left Control (Ctrl) keys to 3270 keypad function**

⏭ Optional Workshop

1. From Window > Preferences
2. Type Host C in the edit area (top left)
3. From Host Connection Control Keys map either the left or right Ctrl key to any of the options in the drop down box
4. Click OK
5. Test your new control key mappings

Copying Remote Shell Commands to TSO Through Host Connection Emulation

- You can copy/paste Remote Shell commands from the Command line (or results window) up to TSO through Host Connection Emulator (**HCE**)

- **Steps**
  1. Issue the command in the Remote Shell
  2. Select the command
  3. Right-click and select Copy
  4. Click inside of HCE
  5. Press Ctrl/V
     - Note that there is no Context Menu, but Ctrl/V works