MVS and OS/390 Configuration Example

Document ID: 12326

Contents

Introduction

This document provides guidance for a Multiple Virtual Storage (MVS) and OS/390 configuration.

Prerequisites

Requirements

There are no specific prerequisites for this document.

Components Used

This document is not restricted to specific software and hardware versions.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

Log In to MVS

Follow these steps in order to log in to MVS:

In most cases, the initial log–in prompt looks similar to this:

```
IKJ56700A ENTER USERID – CEMVS1
```

1. Enter the user ID you are using for this session when you see the prompt.
2. Enter only your password, and press **Return** when you see the Time Sharing Option Extensions (TSO/E) log–on panel shown here:

```
------------------------------------------------------------------------------
---------------------------- TSO/E LOGON -------------------------------------


      Enter LOGON parameters below:

      Userid    ===> CEMVS1

      Password  ===>

      Procedure ===> IKJACCNT

      Acct Nmbr ===>

      Size      ===> 4096

      Perform   ===>

      Command   ===>

      Enter an 'S' before each option desired below:
             -Nomail       -Nonotice       -Reconnect        -OIDcard

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

   Enter a question mark (?) in any entry field in order to request context–sensitive help.
3. Select an option.

   In order to make a selection, type the reference label of a panel after the command prompt ("Select Option ===>") and press **Return**.

```
      ------------------------------------------------------------------------------

                          BIG COMPANY INC. INFORMATION SERVICES
      Select Option ===>

      --- PDF Functions ---        --- Local Functions ---    - End User Functions -

      0   Parms                 L0   SMP/E                 U0   Info Center
      1   Browse                L1   IPCS                  U1   NetView Inst. Facl.
      2   Edit                  L2   SDSF
      3   Utilities             L3   ISMF
      4   Foreground            L4   Info Center (Admin)
      5   Batch                 L5   Hardware Definition
      6   Command               L6   APPC/MVS Admin
      7   Dialog Test           L7   TPNS
      8   LM Utilities
      10  SCLM
      C   Changes
```

```
    T     Tutorial




      F1=HELP        F2=SPLIT        F3=END         F4=RETURN       F5=RFIND        F6=RCHANGE
      F7=UP          F8=DOWN         F9=SWAP        F10=LEFT        F11=RIGHT


  ------------------------------------------------------------------------------
```

Note: The instructions in this document are based on this first panel, which is the panel that appears in most implementations.

This and the remaining TSO panels can vary greatly. However, they vary from one shop to another. If you do not find choices similar to the ones listed under **PDF Functions** in the panel shown in Step 3 of Log In to MVS, look for a choice on your panel that is called **PDF** or **ISPF**, and select it.

Note: If the Program Function (PF) key selections shown on the bottom of the panel in Step 3 of Log In to MVS do not appear on your panel, type **PFSHOW ON** at the command line and press **Return** in order to turn them on.

In order to return to this first panel after you have progressed to other panels, press **F3**, or the PF key that corresponds to "End". Each time you press the End PF key, you move back one panel.

Determine if TCP/IP Is Running

Follow these steps in order to determine if TCP/IP is running.

1. From the first panel, select the **SDSF** option in order to reach the System Display and Search Facility (SDSF) panels. In this example, select **L2**.

   Note: If your shop does not use SDSF, there could be an option for Interactive Operator Facility (IOF). The IOF implementation is similar to SDSF.

```
  ------------------------------------------------------------------------------

                     BIG COMPANY INC. INFORMATION SERVICES
      Select Option ===> L2

      --- PDF Functions ---        --- Local Functions ---      - End User Functions -

      0    Parms                   L0   SMP/E                    U0   Info Center
      1    Browse                  L1   IPCS                     U1   NetView Inst. Facl.
      2    Edit                    L2   SDSF
      3    Utilities               L3   ISMF
      4    Foreground              L4   Info Center (Admin)
      5    Batch                   L5   Hardware Definition
      6    Command                 L6   APPC/MVS Admin
      7    Dialog Test             L7   TPNS
      8    LM Utilities
      10   SCLM
      C    Changes
      T    Tutorial




      F1=HELP        F2=SPLIT        F3=END         F4=RETURN       F5=RFIND        F6=RCHANGE
      F7=UP          F8=DOWN         F9=SWAP        F10=LEFT        F11=RIGHT


  ------------------------------------------------------------------------------
```

The SDSF menu panel is the next screen you see.

```
--------------------------------------------------------------------------------
V1R3M3 ------------------ SDSF PRIMARY OPTION MENU -------------------------
 COMMAND INPUT ===>                                          SCROLL ===> PAGE

   Type an option or command and press Enter.

       LOG       - Display the system log
       DA        - Display active users of the system
       I         - Display jobs in the JES2 input queue
       O         - Display jobs in the JES2 output queue
       H         - Display jobs in the JES2 held output queue
       ST        - Display status of jobs in the JES2 queues
       PR        - Display JES2 printers on this system
       INIT      - Display JES2 initiators on this system

       TUTOR     - Short course on SDSF (ISPF only)
       END       - Exit SDSF

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       disclosure restricted by GSA ADP Schedule Contract with IBM Corp.


    F1=HELP      F2=SPLIT      F3=END       F4=RETURN    F5=IFIND      F6=FIND '-
    F7=UP        F8=DOWN       F9=SWAP      F10=LEFT     F11=RIGHT     F12=RETRIEVE
--------------------------------------------------------------------------------
```

2. Choose one of these options in order to determine if TCP/IP is running:

   ♦ Option 1 Use Display Active (DA) Command
   ♦ Option 2 View Command Entry from a TSO Console

Option 1 Use Display Active (DA) Command

You can display the active TCP/IP processes in order to determine if TCP/IP is running. Follow these steps:

1. Select **DA** in order to display active users of the system.
2. When the DA panel is displayed, enter **prefix tcpip*** at the Command Input line.

   This filters the list so that the list displays only the TCP/IP processes. If more than one TCP/IP stack is running, multiple entries are listed. If no entry appears, this can indicate that TCP/IP is not running. There is no restriction on the naming convention of the TCP stack, so it can be running under a different name.

```
--------------------------------------------------------------------------------
SDSF DA CPAC  PAGING   1  SIO   19  CPU  96%          LINE 1-1 (1)
 COMMAND INPUT ===> prefix tcpip*                           SCROLL ===> PAGE
 NP JOBNAME   STEPNAME PROCSTEP JOBID    OWNER    C POS DP PGN REAL PAGING    SIO
    TCPIP     TCPIP    TCPIP    STC05793 ++++++++ NS  71  5 483  0.00   0.00


    F1=HELP      F2=SPLIT      F3=END       F4=RETURN    F5=IFIND      F6=FIND '-
    F7=UP        F8=DOWN       F9=SWAP      F10=LEFT     F11=RIGHT     F12=RETRIEVE
```

Option 2 View Command Entry from a TSO Console

You can view the command output from a TSO console in order to determine if TCP/IP is running. Follow these steps:

1. Select **Log** in order to view the system log (syslog) file.

   A screen similar to this appears:

```
--------------------------------------------------------------------------------
 SDSF SYSLOG   5636.109 CPAC DATE 12/08/94 LINE   1,240   COLUMNS   1  80
 COMMAND INPUT ===>                                              SCROLL ===> PAGE
N 0000000 CPAC      94342 12:59:21.24 STC05835 00000010  ITP050I NO NETWORKS INIT
N 4000000 CPAC      94342 12:59:22.67          00000001  IST530I  AM GBIND   PEND
N 4000000 CPAC      94342 12:59:22.69          00000001  IST1051I  EVENT CODE = 0
N 4000000 CPAC      94342 12:59:22.71          00000010  IST1062I  EVENT ID = 000
N 4000000 CPAC      94342 12:59:22.76          00000001  IST314I  END
NC0000000 CPAC      94342 12:59:52.97 TSU05843 00000210  F TCPIP,DFLTAPPL,TSO
N 4040000 CPAC      94342 12:59:53.35 STC05793 00000010  MVPMVP079I MVP Default A
N 4000000 CPAC      94342 13:00:20.47 STC05849 00000010  ERB101I ZZ : REPORT AVAI
N 4040000 CPAC      94342 13:01:01.11          00000010  CSV210I LIBRARY LOOKASID
N 0200000 CPAC      94342 13:01:35.64 TSU05843 00000010  $HASP150 MILROY2  OUTGRP
N 0200000 CPAC      94342 13:01:50.54          00000010  $HASP160 PRT1       INACTI
N 4000000 CPAC      94342 13:02:25.26          00000001  IST530I  AM GBIND   PEND
N 4000000 CPAC      94342 13:02:25.36          00000001  IST1051I  EVENT CODE = 0
N 4000000 CPAC      94342 13:02:27.49          00000010  IST1062I  EVENT ID = 000
N 4000000 CPAC      94342 13:02:27.53          00000001  IST314I  END
N 4000000 CPAC      94342 13:03:01.88          00000001  IST590I  CONNECTIN  ESTA
N 0000000 CPAC      94342 13:03:12.44 TSU05843 00000210  IEA630I  OPERATOR MILROY
NC0000000 CPAC      94342 13:03:15.24 MILROY2  00000210  F T,Q
NR0000000 CPAC      94342 13:03:16.04 TSU05843 00000010  IEE345I MODIFY   AUTHORI
N 4000000 CPAC      94342 13:03:28.44          00000010  IST380I  ERROR FOR ID =
0100000 CPAC     00.18.50 STC05659 @05 ITP904E ITPECHO: ENTER NEW PARMS, 'U' OR
8000000 CPAC     19.56.40          *04 DSI803A CNM01    REPLY INVALID. REPLY WIT
****************************** BOTTOM OF DATA ******************************
   F1=HELP      F2=SPLIT      F3=END       F4=RETURN    F5=IFIND     F6=FIND '-
   F7=UP        F8=DOWN       F9=SWAP      F10=LEFT     F11=RIGHT    F12=RETRIEVE
--------------------------------------------------------------------------------
```

2. In order to view the system messages, press **F11**, or the PF key for "Right".

   The syslog keeps a record of all the system messages and command output that goes to the operator console. If you do not see the line reading `*** Bottom of Data ***`, type **M** at the Command Input prompt, and press the PF key for "Down" (in this case, **F8**).
3. When you are finished, issue the command **/D A,L** at the Command Input prompt. You must including the preceding forward slash mark [/].

   This command displays all jobs running on the MVS system.
4. The syslog screen does not update automatically; press the PF key for "Down" (in this case, **F8**) until you see the output from the **display** command.

   The output looks similar to this:

```
--------------------------------------------------------------------------------
 SDSF SYSLOG   5636.109 CPAC DATE 12/08/94 LINE   1,240   COLUMNS   1  80
 COMMAND INPUT ===>                                              SCROLL ===> PAGE
0210  D A,L
0010  IEE114I 13.04.13 94.342 ACTIVITY 884
0010   JOBS      M/S    TS USERS    SYSAS     INITS    ACTIVE/MAX VTAM     OAS
0010  00001    00016    00012      00018     00009    00012/00025        00000
```

```
0010    LLA      LLA      LLA       NSW  S  CNMNET   CNMNET   NET       NSW  S
0010    VLF      VLF      VLF       NSW  S  CNMPROC  CNMPROC  NETVIEW   NSW  S
0010    CNMPSSI  CNMPSSI  NETVIEW   NSW  S  APPC     APPC     APPC      NSW  S
0010    ASCH     ASCH     ASCH      NSW  S  JES2     JES2     IEFPROC   NSW  S
0010    TSO      TSO      STEP1     OWT  S  TPNSECHO TPNSECHO ITPECHO   OWT  S
0010    TPNSECHS TPNSECHS ITPECHO   OWT  S  TCPIP    TCPIP    TCPIP     NSW  S
0010    FTPSERVE FTPSERVE FTPSERVE  NSW  S  TPNS2    T        GO        IN   S
0010    RMF      RMF      IEFPROC   NSW  S  RMFGAT   RMFGAT   IEFPROC   NSW  S
0010    ACCEPT   S1                 IN   J
0010  CISCO02 OWT      LARRYP  OWT      LEP01   OWT      DSHIM    OWT
0010  VRAWAT  OWT      CISCO03 OWT      GLENN   OWT      CISCO06 OWT
0010  MILROY2 OWT      MURRAY1 OWT      CEMVS1  OWT      MURRAY2 OWT
***************************** BOTTOM OF DATA ******************************
  F1=HELP      F2=SPLIT      F3=END       F4=RETURN     F5=IFIND      F6=FIND '-
  F7=UP        F8=DOWN       F9=SWAP      F10=LEFT      F11=RIGHT     F12=RETRIEVE
--------------------------------------------------------------------------
```

You can see that TCP/IP is running on this machine.

Use of this method to obtain system information is similar to being on the system console. However, with this method commands must be preceded by a forward slash (/) in order for them to be reflected to the system. Also, the screen does not update automatically with this method.

Edit and Browse TCP/IP Profile

In order to edit the TCP/IP profile, you must know this information:

- What is the data set name for the TCP/IP profile?
- Is the TCP/IP profile data set cataloged? If not, what is the Volume Serial Number (VOLSER) of the Direct Access Storage Device (DASD) that it is on?
- Do you have authority to modify the TCP/IP profile?

With this knowledge, you may proceed to these instructions:

1. Select option **3** in order to move to the Utilities panel, then select option **4** in order to move to the Data Set List Utility panel.

The panel looks similar to this:

```
--------------------------------------------------------------------------
-------------------------- DATA SET LIST UTILITY --------------------------
 OPTION  ===>

   blank - Display data set list *        P  - Print data set list
   V     - Display VTOC information only   PV - Print VTOC information only

 Enter one or both of the parameters below:
   DSNAME LEVEL  ===>
   VOLUME        ===>


   INITIAL DISPLAY VIEW     ===> VOLUME   (VOLUME,SPACE,ATTRIB,TOTAL)
   CONFIRM DELETE REQUEST   ===> YES      (YES or NO)

 * The following line commands will be available when the list is displayed:

 B - Browse data set      C - Catalog data set      F - Free unused space
 E - Edit data set        U - Uncatalog data set    = - Repeat last command
 D - Delete data set      P - Print data set
 R - Rename data set      X - Print index listing
 I - Data set information M - Display member list
```

```
       S - Information (short)  Z - Compress data set     TSO cmd, CLIST or REXX exec

   F1=HELP       F2=SPLIT      F3=END        F4=RETURN     F5=IFIND     F6=FIND '-
   F7=UP         F8=DOWN       F9=SWAP       F10=LEFT      F11=RIGHT    F12=RETRIEVE
   -----------------------------------------------------------------------------
```

The data set name you are given for the TCP/IP profile is comprised of data set name qualifiers separated by periods (.). Consider the first qualifiers to be directories, and the last qualifier to be the name of the file in that directory. When you enter a qualifier at the "DSName Level" prompt, all the data sets that start with that qualifier are displayed. Consequently, if you type in the entire data set name, only one file is displayed.

2. Enter the data set name qualifiers after the DSName Level prompt.

If you enter only "TCPIP" (the highest–level qualifier), the output looks similar to this:

```
   -----------------------------------------------------------------------------
   DSLIST - DATA SETS BEGINNING WITH TCPIP ---------------- CHARS 'PROFILE' FOUND
   COMMAND ===>                                                  SCROLL ===> PAGE

   COMMAND      NAME                                       MESSAGE        VOLUME
   -----------------------------------------------------------------------------
               TCPIP.V2R2M1.PROFILE.TCPERROR                              CSCNCP
   E           TCPIP.V2R2M1.PROFILE.TCPIP                                 CSCCAT
               TCPIP.V2R2M1.SEZACMAC                                      CSRES1
               TCPIP.V2R2M1.SEZACMTX                                      CSRES1
               TCPIP.V2R2M1.SEZADBRM                                      CSRES1
               TCPIP.V2R2M1.SEZADPIL                                      CSRES1
               TCPIP.V2R2M1.SEZADSIL                                      CSRES1
               TCPIP.V2R2M1.SEZADSIM                                      CSRES1
               TCPIP.V2R2M1.SEZADSIP                                      CSRES1
               TCPIP.V2R2M1.TELNETSE.TCPXLBIN                             CSCCAT

   F1=HELP       F2=SPLIT      F3=END        F4=RETURN     F5=RFIND     F6=RCHANGE
   F7=UP         F8=DOWN       F9=SWAP       F10=LEFT      F11=RIGHT    F12=RETRIEVE
   -----------------------------------------------------------------------------
```

Note: Shown is a list of all the data set names that start with the high–level qualifier "TCPIP." In order to view a particular TCP/IP profile, place either a **B** or an **E** in the `Command` field of this screen to select the profile.

♦ If you enter a **B**, you can browse the TCP/IP profile, but you cannot make any changes.
♦ If you enter an **E**, you can edit the TCP/IP profile, provided you have the authority to do so. Any changes that you make to the TCP/IP profile are saved when you press the PF key that corresponds to "Exit".

If you accidentally make changes that you do not wish to save, type **cancel** after the `Command` prompt.

Determine if CHPID Is Online

Follow these steps in order to determine if the Channel Path Identifier (CHPID) is online.

1. Issue the command **D M=DEV(***XXX***)** (*XXX* is the device number to check) from the system console.

The output looks similar to this:

```
0210  D M=DEV(580)
0010  IEE174I 12.48.28 DISPLAY M 813
0010  DEVICE 580   STATUS=ONLINE
```

```
0010  CHP                     05 15 25 35
0010  PATH ONLINE             Y  Y  Y  Y
0010  CHP PHYSICALLY ONLINE Y  Y  Y  Y
0010  PATH OPERATIONAL        N  Y  N  N
```
2. Find the CHPID number in question, then find the row `CHP Physically Online`.

The `CHP Physically Online` output shows whether the CHPID is online or offline. Note the "Y" in this example.

Determine if Paths Are Online

In order to determine if the paths are online for a particular device, follow these steps:

1. Issue the command **D M=DEV**(*XXX*) (*XXX* is the device number to check) from the system console.

The output looks similar to this:

```
0210  D M=DEV(580)
0010  IEE174I 12.48.28 DISPLAY M 813
0010  DEVICE 580   STATUS=ONLINE
0010  CHP                     05 15 25 35
0010  PATH ONLINE             Y  Y  Y  Y
0010  CHP PHYSICALLY ONLINE Y  Y  Y  Y
0010  PATH OPERATIONAL        N  Y  N  N
```
2. Find the CHPID number in question, then find the row `Path Online`.

The `Path Online` output shows whether the path is online or offline. Note the *Y* in this example.

Determine if Devices Are Online

In order to determine if a device is online, issue the command **D U,,,*XXX*,2** from the system console. (*XXX* refers to the first of the two Common Link Access for Workstations [CLAW] devices.)

The output looks similar to this:

```
0210  D U,,,580,2
0010  IEE450I 12.50.16 UNIT STATUS 817
0010  UNIT TYPE STATUS  VOLSER VOLSTATE    UNIT TYPE STATUS   VOLSER VOLSTATE
0010  580  CTC  O                          581  CTC  O
```

The output listed under the `Status` field is one of these items:

Output	Definition
O	Online
OFFLINE	Offline
A	Allocated (Allocated to a system application such as TCP/IP)
A–BSY	Allocated Busy (Allocated to and in use by a system application such as TCP/IP)

Vary CHPID Online or Offline

In order to vary the CHPID online, issue the command **CF CHP(*XX*),ONLINE** from the system console. (*XX* is the CHPID to be varied online.) Wait for the output of this command to ensure that it completes successfully.

In order to vary the CHPID offline, issue the command **CF CHP(*XX*),OFFLINE** in the same way.

Vary Paths Online or Offline

In order to vary the path to a device online, issue the command **V PATH(*XXX−YYY,ZZ*),ONLINE** from the system console. (*XXX* is the first of the two CLAW devices, *YYY* is the second of the CLAW devices, and *ZZ* is the path to be varied online.) Wait for the output of this command to ensure that it completes successfully.

In order to vary the path to a device offline, issue the command **V PATH(*XXX−YYY,ZZ*),OFFLINE** in the same way.

Vary Devices Online or Offline

In order to vary the devices online, issue the command **V *XXX−YYY*,ONLINE** from the system console. (*XXX* is the first of the two CLAW devices, and *YYY* is the second of the CLAW devices.) Wait for the output of this command to ensure that it completes successfully.

In order to vary the devices offline, issue the command **V *XXX−YYY*,OFFLINE** in the same way.

Check Status of CIP

Follow these steps in order to check the status of the Channel Interface Processor (CIP).

1. From the first panel, select the option that takes you to the command panel (**6**, in this example).

```
        -----------------------------------------------------------------------------

                         CISCO SYSTEMS INC. INFORMATION SERVICES
        Select Option ===> 6

        --- PDF Functions ---        --- Local Functions ---     - End User Functions -

        0    Parms                  L0   SMP/E                   U0    Info Center
        1    Browse                 L1   IPCS                    U1    NetView Inst. Facl.
        2    Edit                   L2   SDSF
        3    Utilities              L3   ISMF
        4    Foreground             L4   Info Center (Admin)
        5    Batch                  L5   Hardware Definition
        6    Command                L6   APPC/MVS Admin
        7    Dialog Test            L7   TPNS
        8    LM Utilities
        10   SCLM
        C    Changes
        T    Tutorial



         F1=HELP      F2=SPLIT      F3=END      F4=RETURN     F5=RFIND      F6=RCHANGE
         F7=UP        F8=DOWN       F9=SWAP     F10=LEFT      F11=RIGHT

        -----------------------------------------------------------------------------
```

The TSO Command Processor panel is displayed next.

```
--------------------------------------------------------------------------------
------------------------ TSO COMMAND PROCESSOR ----------------------------
 ENTER TSO COMMAND, CLIST, OR REXX EXEC BELOW:

 ===> netstat devlinks




    F1=HELP       F2=SPLIT      F3=END       F4=RETURN    F5=RFIND     F6=RCHANGE
    F7=UP         F8=DOWN       F9=SWAP      F10=LEFT     F11=RIGHT    F12=RETRIEVE
--------------------------------------------------------------------------------
```

2. Issue the command **netstat devlinks** after the "===>" prompt, and press **Return**.

The system displays the response information directly on the screen. Press **Return** whenever "***" appears within the display.

Note: "***" is equivalent to "−−More−−".

```
--------------------------------------------------------------------------------
------------------------ TSO COMMAND PROCESSOR ----------------------------
 ENTER TSO COMMAND, CLIST, OR REXX EXEC BELOW:

 ===> netstat devlinks

 MVS TCP/IP Netstat V2R2.1


 Device CIP1              Type: CLAW        Status: Ready
 Queue size: 0           Address: 0580
    Link CHIP1           Type: IP          Net number: 1


 ***

    F1=HELP       F2=SPLIT      F3=END       F4=RETURN    F5=RFIND     F6=RCHANGE
    F7=UP         F8=DOWN       F9=SWAP      F10=LEFT     F11=RIGHT    F12=RETRIEVE
--------------------------------------------------------------------------------
```

This output provides the status of the CLAW device and other information pertinent to the CIP.

For more information about the **netstat** command, refer to the document Sample **netstat** Command Output.

Related Information

- **Technology Support**
- **Product Support**
- **Technical Support – Cisco Systems**

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