JRH DB2I2 for DB2™ OS/390 & zOS

Installation Guide

Version 10.0

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JRH   **Golden State Software Inc.**

310-544-1497
29011 Golden Meadow Drive
Rancho Palos Verdes, CA 90275
United States

System Installation

Transfer Unzipped PC files to Host

Please use the following appropriate Host File transfer option to upload these files:

For **Initial Installation** of DB2I2:

PC file name	Host file transfer options	
DB2I2U0	Fixed/LRECL=80/BLKSIZE=0/Binary	Space allocation(CYL,(1,1))
DB2I2U1	Fixed/LRECL=255/BLKSIZE=0/Binary	Space allocation(CYL,(1,1))
DB2I2U2	Fixed/LRECL=80/BLKSIZE=0/Binary	Space allocation(CYL,(5,1))
DB2I2U3	Fixed/LRECL=80/BLKSIZE=0/Binary	Space allocation(CYL,(15,1))
DB2I2U4	Fixed/LRECL=80/BLKSIZE=0/Binary	Space allocation(CYL,(1,1))

For **Migration** from previous release or evaluation copy of DB2I2:

PC file name	Host file transfer options	
DB2I2U0	Fixed/LRECL=80/BLKSIZE=0/Binary	
DB2I2U1	Fixed/LRECL=80/BLKSIZE=0/Binary	
DB2I2U2	Fixed/LRECL=80/BLKSIZE=0/Binary	
DB2I2U3	Fixed/LRECL=80/BLKSIZE=0/Binary	
DB2I2U4	Fixed/LRECL=80/BLKSIZE=0/Binary	Space allocation(CYL,(1,1))

For **Fixes Apply (When you receive FIXU1, FIXU2 or DB2I2U3 with DB2I2U1 and DB2I2U2)**:

PC file name	Host file transfer options	
DB2I2U0	Fixed/LRECL=80/BLKSIZE=0/Binary	
FIXU1	Fixed/LRECL=80/BLKSIZE=0/Binary	
FIXU2	Fixed/LRECL=80/BLKSIZE=0/Binary	
FIXU3	Fixed/LRECL=80/BLKSIZE=0/Binary	
DB2I2U4	Fixed/LRECL=80/BLKSIZE=0/Binary	Space allocation(CYL,(1,1))

Use TSO RECEIVE to receive installation REXX from DB2I2U0

Go to ISPF command Shell and issue RECEIVE command to receive the DB2I2U0 file.

```
                              ISPF Command Shell
    Enter TSO or Workstation commands below:

    ===> RECEIVE INDSN('tsoid.DB2I2U0')
```

After you press ENTER key, you should have the following displayed.

```
    INMR901I Dataset JRHJ.DB2I2I from JRHJ on ????????
    INMR906A Enter restore parameters or 'DELETE' or 'END' +
```

Please enter the following and press ENTER key to receive the DB2I2U0.
The example below uses 'JRHJ.DB2I2.INSTALL.EXEC' as the receiving data set.
If you migrate from previous installation or applying fixes, make sure **use the same name to receive DB2I2U0.** For our example here 'JRHJ.DB2I2.INSTALL.EXEC', so that during the migration or fixes apply, DB2I2 will pick up setup information from previous installation. (Previous installation setup information is stored in an member called **INFO**)

```
    dsn('JRH.DB2I210.INSTALL')
```

```
    .
    .
    .
 IEB154I MIGR     HAS BEEN SUCCESSFULLY LOADED
 IEB154I MIGRC    HAS BEEN SUCCESSFULLY LOADED
 IEB154I MIGRR    HAS BEEN SUCCESSFULLY LOADED
 IEB154I MSSID    HAS BEEN SUCCESSFULLY LOADED
 IEB154I SSIDERR  HAS BEEN SUCCESSFULLY LOADED
 IEB154I UPDLOG   HAS BEEN SUCCESSFULLY LOADED
 IEB154I VIEWLOG  HAS BEEN SUCCESSFULLY LOADED
 IEB1098I 25 OF 25 MEMBERS LOADED FROM INPUT DATA SET REFERENCED BY SYS00706
 IEB144I THERE ARE 10 UNUSED TRACKS IN OUTPUT DATA SET REFERENCED BY SYS00704
 IEB149I THERE ARE 5 UNUSED DIRECTORY BLOCKS IN OUTPUT DIRECTORY
 IEB147I END OF JOB - 0 WAS HIGHEST SEVERITY CODE
 INMR001I Restore successful to dataset 'JRH.DB2I210.INSTALL'
 ***
```

Execute Install REXX in DB2I2.INSTALL.EXEC to generate installation JCL

Uses the example above, you should do the following:

TSO EX 'JRH.DB2I210.INSTALL(INSTALL)'

The following installation option screen is displayed which allows you to proceed the installation:

```
#MENU ----------- DB2I2 for DB2/OS390 and UDB/zOS Installation Menu -----------
Installation Option ===>


    I - Initial Installation                          DATE   - 11/02/27
    M - Migrates from previous Release of DB2I2       TIME   - 18:05
    F - Apply Fix                                     USERID - DB2ADM

    D - Dynamic Sort Setup
    G - Set up Global Variable Information
    P - Set up $DB2I2P DB2I2 standard PROC
    S - SSID setup
    T - Dynamic STEPLIB


    V - View/Maintain Activity Log




PF3=Exit  ENTER=To Process your Option selection
```

Initial Installation

Choose option I-Initial Installation if this is the first time you try to install DB2I2 product.

```
#INST -------- JRH DB2I2 for DB2/OS390 and UDB/zOS Installation Screen --------

DB2I2 PC Upload File 1      _____
DB2I2 PC Upload File 2      _____
DB2I2 PC Upload File 3      _____
DB2I2 PC Upload File 4      _____
DB2 Load Library            _____
DB2 Exit Library            _____
DB2 User Run Library        _____
DB2 DBRM Library            _____
DB2 StartUP Proc Library    _____
DB2I2 CLIST Library         _____
DB2I2 Other ISPF Library    _____
DB2I2 Load Library          _____
Installer TSOID             _____
SYSADMIN ID                 _____
DB2 SubSystem ID            _____

        Starting From DB2I2 V9 SSID and Global Variable Information are
              Defined in Separate Dataset out of CLIST library

SSID Information DSN         _____
Global Variable  DSN        _____

   Specify The following Alternate Library If do not have REXX370 Runtime
                   Or your zOS is not zOS 1.9 or Above
DB2I2 REXX Alternate Lib _____
PF3=Exit  ENTER=To Generate Installation JCL
```

Select option **I - Initial Installation check and JCL generation** to generate product installation JCL.
The following screen is displayed to allow you to enter your environment specific information.

Please enter all the fields and proceed to generate Installation JCL:

```
DB2I2U1 PC UPLOAD FILE 1
DB2I2U2 PC UPLOAD FILE 2
DB2I2U3 PC UPLOAD FILE 3
DB2I2U4 PC UPLOAD FILE 4
DB2 LOAD LIBRARY
DB2 EXIT LIBRARY            (If not applicable, use the same name as DB2 LOAD)
DB2 USER RUN LIBRARY    (If not applicable, use the same name as DB2 LOAD)
DB2 DBRM LIBRARY          (where the DSNTIAD and DSNTEP2 DBRMs located)
DB2 STARTUP PROCEDURE LIBRARY
DB2I2 CLIST LIBRARY
DB2I2 OTHER ISPF LIBRARY
DB2I2 LOAD LIBRARY
Installer TSOID                (Make sure the installer TSOID has minimum BINDADD authorization
SYSADMIN ID
DB2 Sub-System ID
```

SSID Information DSN	Start from V9, SSID information is defined out of CLIST library
	If you specify a file name does not exist, it will be created.
	Make sure to copy your existing SSID information
	from you V8 DB2I2 CLIST library if you migrate from DB2I2 V8 (SSID)
Global Variable DSN	Start from V9, Global Variable Information is defined out of
	DB2I2 CLIST library. If you specify a file name does not exist,
	It will be created. Make sure to copy your existing Global
	Variable information from you V8 DB2I2 CLIST library
	If you migrate from DB2I2 V8 (GLOBVAR)
DB2I2 REXX Alternate Lib	Start from DB2I2 V9, REXX Runtime library is required to Run DB2I2.
	Unless your organization have REXX370 complier installed or
	your zOS is 1.9 or Above, you need to install DB2I2U4 – IBM Rexx
	Alternate runtime library.

The following is a sample of screen input:

```
#INST -------- JRH DB2I2 for DB2/OS390 and UDB/zOS Installation Screen --------

DB2I2 PC Upload File 1    JRH.DB2I2U1_____
DB2I2 PC Upload File 2    JRH.DB2I2U2_____
DB2I2 PC Upload File 3    JRH.DB2I2U3_____
DB2I2 PC Upload File 4    JRH.DB2I2U4_____
DB2 Load Library          DSNA10.SDSNLOAD_____
DB2 Exit Library          DSNA10.DBAG.SDSNEXIT_____
DB2 User Run Library      DSNA10.DBAG.RUNLIB.LOAD_____
DB2 DBRM Library          DSNA10.DBAG.DBRMLIB.DATA_____
DB2 StartUP Proc Library  SVTSC.PROCLIB_____
DB2I2 CLIST Library       JRH.DB2I210.CLIST_____
DB2I2 Other ISPF Library  JRH.DB2I210.ISPFLIB_____
DB2I2 Load Library        JRH.DB2I210.LOAD_____
Installer TSOID           DB2ADM_
SYSADMIN ID               DB2ADM_
DB2 SubSystem ID          DBAG___

        Starting From DB2I2 V9 SSID and Global Variable Information are
             Defined in Separate Dataset out of CLIST library

SSID Information DSN       JRH.DB2I210.SSID_____
Global Variable  DSN      JRH.DB2I210.GLOBAL.VARIABLE_____
   Specify The following Alternate Library If do not have REXX370 Runtime
                 Or your zOS is not zOS 1.9 or Above
DB2I2 REXX Alternate Lib  JRH.DB2I210.REXX.ALTLIB_____

PF3=Exit  ENTER=To Generate Installation JCL
```

After Press Enter Key, DB2I2 Install should display the following Screen:

```
Checking PC Upload File 1: JRH.DB2I2U19.N.......
Checking PC Upload File 2: JRH.DB2I2U29.N.......
Checking PC Upload File 3: JRH.DB2I2U39.N.......
Checking PC Upload File 4: JRH.DB2I2U49.N.......
Generating DB2I2 Installation JCL...........
***
```

And the result JCL returned from option selection.

```
//DB2ADM01 JOB (ACCT),'DB2I2 AD',                                   JOB03796
//            NOTIFY=&SYSUID,COND=(0,NE),REGION=4M,                 00020000
//            CLASS=A,MSGCLASS=H                                    00030000
//* Insert Jobcard information here
//* ===================================================================
//*        D B 2 I 2      M I G R A T I O N      J C L          +
//*              By  JRH GoldenState Software Inc.               +
//*                 (C) Copyrighted  1997-2011                   +
//* ===================================================================+
//* DB2I2 PC UPLOAD FILE 1    JRH.DB2I2U1
//* DB2I2 PC UPLOAD FILE 2    JRH.DB2I2U2
//* DB2I2 PC UPLOAD FILE 3    JRH.DB2I2U3
//* DB2I2 PC UPLOAD FILE 4    JRH.DB2I2U4
//* DB2 LOAD LIB              DSNA10.SDSNLOAD
//* DB2 EXIT LIB              DSNA10.DBAG.SDSNEXIT
//* DB2 USER RUN LIB          DSNA10.DBAG.RUNLIB.LOAD
//* DB2 DBRM LIB FOR DSNTIAD DSNA10.DBAG.DBRMLIB.DATA
```

```
//* DB2 STARTUP PROC LIB     SVTSC.PROCLIB
//* DB2I2 TOOL CLIST LIB     JRH.DB2I210.CLIST
//* DB2I2 TOOL OTHER LIB     JRH.DB2I210.ISPFLIB
//* DB2I2 TOOL LOAD LIB      JRH.DB2I210.LOAD
//* Installer TSOID          DB2ADM
//* SYSADMIN ID              DB2ADM
//* DB2 SubSystem ID         DBAG
//* DB2I2 SSID DSN           JRH.DB2I210.SSID
//* Global Variable DSN      JRH.DB2I210.GLOBAL.VARIABLE
//* DB2I2 REXX Alternate LIB JRH.DB2I210.REXX.ALTLIB
//* ============================================================ +
//* STEP00: Allocate All DB2I2 tool Libraries
//* STEP01: Create Installation REXX Exec To DB2I2.INST.CLIST
//* STEP02: Execute DB2I2.INST.CLIST Installation Rexx Exec
//* STEP03: Bind package & Plan for execution FOR EACH DB2 SUBSYSTEM
//*         Repeat STEP03 for each DB2 subsystem
//* STEP04: COPY DSNTIAD, DSNTEP2 AND DSNTIAUL FROM DB2 USERLIB
//* ============================================================ +
//*----------------------------------------------------------------------+
//STEP00   EXEC PGM=IEFBR14
//*----------------------------------------------------------------------+
//DDPLIB    DD  DSN=JRH.DB2I210.ISPFLIB,
//          DISP=(NEW,CATLG,DELETE),
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=0,DSORG=PO),
//          UNIT=SYSALLDA,SPACE=(TRK,(180,5,100),RLSE)
//DDCLIST   DD  DSN=JRH.DB2I210.CLIST,
//          DISP=(NEW,CATLG,DELETE),
//          DCB=(RECFM=FB,LRECL=255,BLKSIZE=0,DSORG=PO),
//          UNIT=SYSALLDA,SPACE=(TRK,(15,15,30),RLSE)
//DDLOAD    DD  DSN=JRH.DB2I210.LOAD,
//          DISP=(NEW,CATLG,DELETE),
//          DCB=(RECFM=U,LRECL=32760,BLKSIZE=0,DSORG=PO),
//          UNIT=SYSALLDA,SPACE=(TRK,(300,15,50),RLSE)
//DDLOAD2   DD  DSN=JRH.DB2I210.REXX.ALTLIB,
//          DISP=(NEW,CATLG,DELETE),
//          DCB=(RECFM=U,LRECL=32760,BLKSIZE=0,DSORG=PO),
//          UNIT=SYSALLDA,SPACE=(TRK,(15,15,5),RLSE)
//*----------------------------------------------------------------------+
//STEP01   EXEC PGM=IEBGENER
//*----------------------------------------------------------------------+
//SYSUT2    DD DSN=DB2ADM.DB2I2.INST.CLIST,DISP=(NEW,PASS),
//          UNIT=SYSALLDA,
//          SPACE=(TRK,(1,1),RLSE),DCB=(RECFM=FB,LRECL=80,BLKSIZE=0)
//SYSPRINT DD SYSOUT=*
//SYSIN     DD DUMMY
//SYSUT1    DD DATA,DLM=ZZ
/* REXX ------------------------------------------------------------ */
/* DB2I2_INST: Installation REXX EXEC for JRH DB2I2                  */
/* Author:  JRH Goldenstate Software Inc.                           */
/* ---------------------------------------------------------------- */
/* REXX */
/* trace ?r */
x=Msg("On")
x=Prompt("On")
Say "** DB2I2I01 - Receiving DB2I2U1"
  Queue "DSN('JRH.DB2I210.CLIST')"
  Address Tso,
    "Receive Indsn('JRH.DB2I2U1')"
  If rc \= 0 Then
  Do
    Say "** DB2I2I01E - Receiving DB2I2U1 Fail"
    Exit(16)
  End
Say "** DB2I2I02 - Receiving DB2I2U2"
  Queue "DSN('JRH.DB2I210.ISPFLIB')"
  Address Tso,
    "Receive Indsn('JRH.DB2I2U2')"
```

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```
  If rc \= 0 Then
  Do
     Say "** DB2I2I02E - Receiving DB2I2U2 Fail"
     Exit(16)
  End
Say "** DB2I2I03 - Receiving DB2I2U3"
  Queue "DSN('JRH.DB2I210.LOAD')"
  Address Tso,
     "Receive Indsn('JRH.DB2I2U3')"
  If rc \= 0 Then
  Do
     Say "** DB2I2I03E - Receiving DB2I2U3 Fail"
     Exit(16)
  End
Say "** DB2I2I04 - Receiving DB2I2U4"
  Queue "DSN('JRH.DB2I210.REXX.ALTLIB')"
  Address Tso,
     "Receive Indsn('JRH.DB2I2U4')"
  If rc \= 0 Then
  Do
     Say "** DB2I2I04E - Receiving DB2I2U4 Fail"
     Exit(16)
  End
Say "** DB2I2I05 - Creating",
     "'JRH.DB2I210.CLIST(CUSTOM)' information"
  Address Tso,
     "Alloc Fi(o1)",
     "Ds('JRH.DB2I210.CLIST(CUSTOM)') Shr Reuse"
  If rc \= 0 Then
  Do
     Say "** DB2I2I04E - Allocate",
         "'JRH.DB2I210.CLIST(CUSTOM)' Fail"
     Exit(16)
  End
  Reco.1 = Substr("ISPFLIB DSNAME:",1,20)||,
           "JRH.DB2I210.ISPFLIB"
  Reco.2 = Substr("LOADLIB DSNAME:",1,20)||,
           "JRH.DB2I210.LOAD"
  Reco.3 = Substr("SSID DSNAME:",1,20)||,
           "JRH.DB2I210.SSID"
  Reco.4 = Substr("GLOBAL VARIABLE DSN:",1,20)||,
           "JRH.DB2I210.GLOBAL.VARIABLE"
  Reco.0 = 4
  If 'JRH.DB2I210.REXX.ALTLIB' \= '' Then
  Do
     Reco.5 = Substr("REXX ALTLIB:",1,20)||,
              "JRH.DB2I210.REXX.ALTLIB"
     Reco.0 = 5
  End
  "Execio "Reco.0" DiskW O1(Stem Reco. Finis"
  If rc \= 0 Then
  Do
     Say "** DB2I2I05E - Creating",
         "'JRH.DB2I210.CLIST(CUSTOM)' Fail"
     Exit(16)
  End
  Address Tso "Free Fi(o1)"
Say "** DB2I2I06 - Generating",
     "'JRH.DB2I210.ISPFLIB($DB2I2P)' information"
  Address Tso,
     "Alloc Fi(o1)",
     "Ds('JRH.DB2I210.ISPFLIB($DB2I2P)') Shr Reuse"
  reco.1  = "//* $DB2I2P"||,
            "-------------------------------------------------------- **"
  reco.2  = "//DB2I2P   EXEC PGM=IKJEFT1B,REGION=0M"
  reco.3  = "//SYSPROC  DD DISP=SHR,"
  reco.4  = "//         DSN=JRH.DB2I210.CLIST"
```

```
reco.5  = "//ISPLLIB  DD DISP=SHR,"
reco.6  = "//         DSN=JRH.DB2I210.LOAD"
reco.7  = "//ISPSLIB  DD DISP=SHR,"
reco.8  = "//         DSN=JRH.DB2I210.ISPFLIB"
reco.9  = "//ISPMLIB  DD DISP=SHR,"
reco.10 = "//         DSN=ISP.SISPMENU"
reco.11 = "//ISPPLIB  DD DISP=SHR,"
reco.12 = "//         DSN=ISP.SISPPENU"
reco.13 = "//ISPTLIB  DD UNIT=SYSALLDA,SPACE=(TRK,(5,1,5),RLSE),"
reco.14 = "//         DCB=(LRECL=80,BLKSIZE=0,RECFM=FB,DSORG=PO)"
reco.15 = "//         DD DISP=SHR,"
reco.16 = "//         DSN=ISP.SISPTENU"
reco.17 = "//ISPCTL0  DD UNIT=SYSALLDA,SPACE=(CYL,(1,1)),"
reco.18 = "//         DCB=(LRECL=80,BLKSIZE=0,RECFM=FB)"
reco.19 = "//ISPCTL1  DD UNIT=SYSALLDA,SPACE=(CYL,(1,1)),"
reco.20 = "//         DCB=(LRECL=80,BLKSIZE=0,RECFM=FB)"
reco.21 = "//ISPWRK1  DD UNIT=SYSALLDA,SPACE=(CYL,(1,1)),"
reco.22 = "//         DCB=(LRECL=256,BLKSIZE=0,RECFM=FB)"
reco.23 = "//ISPPROF  DD UNIT=SYSALLDA,SPACE=(TRK,(1,1,5),RLSE),"
reco.24 = "//         DCB=(LRECL=80,BLKSIZE=0,RECFM=FB,DSORG=PO)"
reco.25 = "//ISPLOG   DD UNIT=SYSALLDA,SPACE=(CYL,(1,1),RLSE)"
reco.26 = "//SYSTSPRT DD SYSOUT=*"
reco.27 = "//SYSTSIN  DD DISP=SHR,"
reco.28 = "//         DSN=JRH.DB2I210.ISPFLIB(DB2I2BST)"
"Execio 28 DiskW O1(Stem Reco. Finis"
If rc \= 0 Then
Do
   Say "** DB2I2I06E - Creating",
       "'JRH.DB2I210.ISPFLIB($DB2I2P)' Fail"
   Exit(16)
End
Address Tso "Free Fi(o1)"
Say "** DB2I2I07 - Generating",
    "'JRH.DB2I210.ISPFLIB(#HEADER)' Information"
Address Tso,
    "Alloc Fi(i1)",
    "Ds('ISP.SISPPENU(ISREDDE2)') Shr Reuse"
"ExecIo * DiskR i1(Stem reci. Finis"
Address Tso "Free Fi(i1)"
Address Tso,
    "Alloc Fi(o1)",
    "Ds('JRH.DB2I210.ISPFLIB(#HEADER)') Shr Reuse"
"NEWSTACK"
first_attr = 'Y'
Do i = 1 to reci.0
  If Index(reci.i,'/-/') = 0 Then
  Do
     If left(reci.i,5) = ')BODY' Then
     Do
        x = ")ABC DESC('Db2i2') MNEM(1)"
        Queue x
        x = "PDC DESC('DB2I2 Help Menu')",
            "ACTION RUN(DB2I2) PARM('HELP 0')"
        Queue x
        x = "PDC DESC('How JRH DB2I2 Works')",
            "ACTION RUN(DB2I2) PARM('HELP 1')"
        Queue x
        x = "PDC DESC('Line Object Definition')",
            "ACTION RUN(DB2I2) PARM('HELPLO')"
        Queue x
        x = "PDC DESC('How To Select Line Object')",
            "ACTION RUN(DB2I2) PARM('HELP 3')"
        Queue x
        x = "PDC DESC('Global Line Object Option')",
            "ACTION RUN(DB2I2) PARM('HELP 4')"
        Queue x
        x = "PDC DESC('Db2i2 Execution Output')",
```

```
                "ACTION RUN(DB2I2) PARM('HELP 5')"
        Queue x
        x = "PDC DESC('Global Command Option')",
            "ACTION RUN(DB2I2) PARM('HELP 6')"
        Queue x
        x = "PDC DESC('DB2I2 Command - Summary')",
            "ACTION RUN(DB2I2) PARM('HELP 7')"
        Queue x
        x = "PDC DESC('DB2I2 Command - List')",
            "ACTION RUN(DB2I2) PARM('HELP 8')"
        Queue x
        x = "PDC DESC('*UDF, *UDQ, DB2I2 TSO Command')",
            "ACTION RUN(DB2I2) PARM('HELP 9')"
        Queue x
        x = "PDC DESC('DB2I2 Tutorial Mode')",
            "ACTION RUN(DB2I2) PARM('HELP LO')"
        Queue x
        x = ")ABCINIT"
        Queue x
        x = ".ZVARS=DB2I2HLP"
        Queue x
         "ExecIO 14 DISKW o1"
      End
      Else
      If left(reci.i,2) = '1415'x Then
         reci.i =  left(reci.i,length(strip(reci.i))-1)||,
                   '1540'x||'Db2i2'||'14'x
       QUEUE reci.i
    End
    Else
    Do
      reco='ba'x||,
           "&DB2I2HDR/ /"
      QUEUE reco
    End
    "ExecIO 1 DISKW o1"
    If left(reci.i,5) = ')ATTR' & first_attr = 'Y' Then
    Do
      reco=" "||'ba'x||" ",
           "TYPE(TEXT) INTENS(LOW) COLOR(BLUE) HILITE(REVERSE)"
      QUEUE reco
      "ExecIO 1 DISKW o1"
      first_attr = 'N'
    End
    Else
    If left(reci.i,5) = ')INIT' Then
    Do
      reco="VGET (DB2I2HDR) SHARED"
      QUEUE reco
      "ExecIO 1 DISKW o1"
    End
  End
  "ExecIO 0 DISKW o1(finis"
  Address Tso "Free Fi(o1)"
Say "** DB2I2I08 - Checking REXX Runtime Information"
  Call Off Error
  Address Tso "Call 'JRH.DB2I210.LOAD(VALIDT)'"
  If rc \= 0 Then
  Do
     Say "**" copies('-',68) '**'
     If 'JRH.DB2I29.REXX.ALTLIB' = '' Then
     Do
       Say "** DB2I2I08E - DB2I2 REXX Alternate Lib is Required"
       Say "** DB2I2I08E - Please Specify it on Installation Screen"
       Say "** DB2I2I08E - and Re-submit JCL to complete Installation"
       Say "**" copies('-',68) '**'
       Return 16
```

```
      End
      Else
      Do
        Say "** DB2I2I08W - TSO Logon Proc is Required to Use JRH DB2I2"
        Say "** DB2I2I08W - Please include the Following DD in your",
            "Logon Proc"
        Say "** DB2I2I08W - //STEPLIB DD DISP=SHR,DSN="JRH.DB2I29.REXX.ALTLIB
        Say "**" copies('-',68) '**'
        Return 4
      End
  End
  Else
      Say "** DB2I2I08 - REXX Runtime is OK, No Logon Proc is Required"
  Call Off Error
Return 0
ZZ
//*-----------------------------------------------------------------+
//STEP02   EXEC PGM=IKJEFT01
//*-----------------------------------------------------------------+
//SYSPROC  DD DSN=DB2ADM.DB2I2.INST.CLIST,DISP=(OLD,PASS)
//SYSTSPRT DD SYSOUT=*
//SYSTSIN  DD *
EX 'DB2ADM.DB2I2.INST.CLIST'
//*----------***   BIND PACKAGE/PLAN AND GRANT PLAN   ***-------------+
//* THE COLLECTION ID FOR THE DB2I2A PACKAGE IS DELIVERED AS DB2I2A   +
//*-----------------------------------------------------------------+
//STEP03   EXEC PGM=IKJEFT01,DYNAMNBR=100,REGION=4M,COND=EVEN
//STEPLIB  DD  DISP=SHR,DSN=DSNA10.SDSNLOAD
//         DD  DISP=SHR,DSN=DSNA10.DB9G.SDSNEXIT
//         DD  DISP=SHR,DSN=DSNA10.DB9G.RUNLIB.LOAD
//*-----------------------------------------------------------------+
//SYSABOUT DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSTSPRT DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//SYSTSIN  DD *
 DSN S(DBAG)
   BIND PACKAGE(DB2I2A)                      -
    OWNER(DB2ADM) QUALIFIER(SYSIBM) -
    MEMBER(DB2I2A10) LIBRARY('JRH.DB2I210.ISPFLIB') -
    ACTION(REPLACE) CURRENTDATA(NO) DEGREE(1)    -
    ENABLE(*)                                -
    EXPLAIN(NO)   FLAG(I) ISOLATION(CS)        -
    ENCODING(EBCDIC)                         -
    SQLERROR(NOPACKAGE)  VALIDATE(BIND)
   BIND PACKAGE(DB2I2A)                      -
    OWNER(DB2ADM) QUALIFIER(SYSIBM) -
    MEMBER(DB2I2E9) LIBRARY('JRH.DB2I210.ISPFLIB') -
    ACTION(REPLACE) CURRENTDATA(NO) DEGREE(1)    -
    ENABLE(*)                                -
    EXPLAIN(NO)   FLAG(I) ISOLATION(CS)        -
    ENCODING(EBCDIC)                         -
    SQLERROR(NOPACKAGE)  VALIDATE(BIND)
   BIND PACKAGE(DB2I2A)                      -
    OWNER(DB2ADM) QUALIFIER(SYSIBM) -
    MEMBER(DSNTIAD) LIBRARY('DSNA10.DBAG.DBRMLIB.DATA') -
    ACTION(REPLACE) CURRENTDATA(NO) DEGREE(1)    -
    ENABLE(*)                                -
    EXPLAIN(NO)   FLAG(I) ISOLATION(CS)        -
    ENCODING(EBCDIC)                         -
    SQLERROR(NOPACKAGE)  VALIDATE(BIND)
   BIND PACKAGE(DB2I2A)                      -
    OWNER(DB2ADM) QUALIFIER(SYSIBM) -
    MEMBER(DSNTEP2) LIBRARY('DSNA10.DBAG.DBRMLIB.DATA') -
    ACTION(REPLACE) CURRENTDATA(NO) DEGREE(1)    -
    ENABLE(*)                                -
    EXPLAIN(NO)   FLAG(I) ISOLATION(CS)        -
```

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```
    ENCODING(EBCDIC)                              -
    SQLERROR(NOPACKAGE)  VALIDATE(BIND)
  BIND PLAN(DB2I2A)                              -
  OWNER(DB2ADM) QUALIFIER(SYSIBM)                -
  PKLIST(*.DB2I2A.*)                             -
  NODEFER(PREPARE)  ACQUIRE(USE)                 -
  ACTION(REPLACE) CURRENTDATA(NO) DEGREE(1)      -
  CACHESIZE(1024)  DISCONNECT(EXPLICIT)          -
  ENABLE(*)                                      -
  EXPLAIN(NO)   FLAG(I) ISOLATION(CS)            -
  ENCODING(EBCDIC)                               -
  RELEASE(COMMIT)  SQLRULES(DB2)  VALIDATE(RUN)
  BIND PLAN(DB2I2AP)                             -
  OWNER(DB2ADM) QUALIFIER(SYSIBM)                -
  PKLIST(*.DB2I2A.*)                             -
  NODEFER(PREPARE) ACQUIRE(USE) DYNAMICRULE(BIND)-
  ACTION(REPLACE) CURRENTDATA(NO) DEGREE(1)      -
  CACHESIZE(1024)  DISCONNECT(EXPLICIT)          -
  ENABLE(*)                                      -
  EXPLAIN(NO)   FLAG(I) ISOLATION(CS)            -
  ENCODING(EBCDIC)                               -
  RELEASE(COMMIT)  SQLRULES(DB2)  VALIDATE(RUN)

  RUN PROGRAM (DSNTIAD) PLAN (DSNTIAD)
 END
//SYSIN    DD *
  GRANT  EXECUTE ON PLAN DB2I2A TO PUBLIC;
/*
//*-----------*** COPY DSNTIAD, DSNTEP2 AND DSNTIAUL  ***-------------+
//* COPY DSNTIAD, DSNTEP2 AND DSNTIAUL FROM DB2 USERLIB              +
//*-----------------------------------------------------------------+
//STEP04    EXEC PGM=IEBCOPY
//DDIN      DD DSN=DSN910.DB9G.RUNLIB.LOAD,DISP=SHR
//DDOUT     DD DSN=JRH.DB2I29.LOAD.N,DISP=SHR
//SYSUT3    DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSUT4    DD UNIT=SYSALLDA,SPACE=(CYL,(1,1))
//SYSPRINT DD SYSOUT=*
//SYSIN    DD *
  COPY INDD=((DDIN,R)),OUTDD=DDOUT
       SELECT MEMBER=(DSNTIAD,DSNTEP2,DSNTIAUL)
/*
```

Submit the JCL to install DB2I2 V9.

There are few changes for the V9 Installation procedure:

- A member named CUSTOM is created and saved in DB2I2 CLIST library which contain the following information:

```
****** ************************* Top of Data ****************************
000001 ISPFLIB DSNAME:       JRH.DB2I210.ISPFLIB
000002 LOADLIB DSNAME:       JRH.DB2I210.LOAD
000003 SSID DSNAME:          JRH.DB2I210.SSID
000004 GLOBAL VARIABLE DSN:  JRH.DB2I210.GLOBAL.VARIABLE
000005 REXX ALTLIB:          JRH.DB2I210.REXX.ALTLIB3
****** ************************* Bottom of Data *************************
```

ISPFLIB DSNAME:	contain the name of DB2I2 V10 ISPF Library
LOADLIB DSNAME:	contain the name of DB2I2 V10 Load Library
SSID DSNAME:	contains the name of the SSID information file
GLOBAL VARIABLE DSN:	contains the name of the Global Variable information file
REXX ALTLIB:	contains the name of the REXX Alternate Library

This information will be loaded each time an user login DB2I2.
DO NOT CHANGE THE FORMAT OF THIS DATASET

- Unlike Previous release of DB2I2, a member named $DB2I2P in DB2I2 ISPFLIB is generated automatically based on your ISPF system setup.

- A member named #HEADER in DB2I2 ISPFLIB is generated which will be used to present the tool bar for DB2I2 V9.

The Following are common errors when process installation JCL:

- ** DB2I2I01E - Receiving DB2I2U1 Fail
  ** DB2I2I02E - Receiving DB2I2U2 Fail
  ** DB2I2I03E - Receiving DB2I2U3 Fail
  ** DB2I2I04E - Receiving DB2I2U4 Fail

  The size of receiving file is too small or needed to be compressed.
  Make sure free up the input file U1, U2, U3 and U4 if you upload these files with TSO or FTP.

- ** DB2I2I05E – Creating CUSTOM Fail
  Make Sure DB2I2U1 is received successfully

- ** DB2I2I06E – Creating $DB2I2P Fail
  Make Sure Logon with a logon proc with ISPPLIB contains IBM default ISPPLIB. (The library contains a member named ISREDDE2)

- ** DB2I2I08E – REXX Alternate Library is required
  Make Sure specify REXX Alternate Library if your zOS is not 1.9 or above and no REXX370 run time library is installed.

- If you have error about can not find **ISREDDE2** during installation, Use
  ```
      P - Set up $DB2I2P DB2I2 standard PROC
  ```
  Option to fix this problem.

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Migrate from previous Installation

Choose M-Migration if you try to migrate from a previous installation.

```
#MENUM ----------- DB2I2 for DB2/OS390 and UDB/zOS Migration Screen----------------


 Existing DB2I2U0
 Installation
 REXX EXEC Library        JRH.DB2I210.INSTALL_____


 PF3=Exit  ENTER=To Process Migration
```

Please enter the **previous DB2I2U0 REXX EXEC library name** here to allow installation procedure to copy all system setup files for you. The same installation screen like the one with initial installation option is displayed with all the information copy from previous installation. You can make any changes for the new installation on this screen. After you have done the changes and press Enter key to generate the Migration JCL.

```
   #INST -------- JRH DB2I2 for DB2/OS390 and UDB/zOS Installation Screen --------

    DB2I2 PC Upload File 1    JRH.DB2I2U1_____
    DB2I2 PC Upload File 2    JRH.DB2I2U2_____
    DB2I2 PC Upload File 3    JRH.DB2I2U3_____
    DB2I2 PC Upload File 4    JRH.DB2I2U4_____
    DB2 Load Library          DSNA10.SDSNLOAD_____
    DB2 Exit Library          DSNA10.DBAG.SDSNEXIT_____
    DB2 User Run Library      DSNA10.DBAG.RUNLIB.LOAD_____
    DB2 DBRM Library          DSNA10.DBAG.DBRMLIB.DATA_____
    DB2 StartUP Proc Library  SVTSC.PROCLIB_____
    DB2I2 CLIST Library       JRH.DB2I210.CLIST_____
    DB2I2 Other ISPF Library  JRH.DB2I210.ISPFLIB_____
    DB2I2 Load Library        JRH.DB2I210.LOAD_____
    Installer TSOID           DB2ADM_
    SYSADMIN ID               DB2ADM_
    DB2 SubSystem ID          DBAG___

            Starting From DB2I2 V9 SSID and Global Variable Information are
                  Defined in Separate Dataset out of CLIST library

    SSID Information DSN       JRH.DB2I210.SSID_____
    Global Variable  DSN      JRH.DB2I210.GLOBAL.VARIABLE_____
       Specify The following Alternate Library If do not have REXX370 Runtime
                    Or your zOS is not zOS 1.9 or Above
    DB2I2 REXX Alternate Lib  JRH.DB2I210.REXX.ALTLIB_____

    PF3=Exit  ENTER=To Generate Installation JCL
```

Please make a copy of the following files before proceed:
- o *DB2I2 CLIST Library*
- o *DB2I2 Other ISPF Library*
- o *DB2I2 Load Library*
- o *DB2I2 Rexx Alternate Library*

Fixes Apply from previous Installation

Choose F-Apply Fixes if you try to apply fixes from a previous installation.

```
#MENUF ---------------- DB2I2 for DB2/OS390 Migration Screen -----------------


 Existing DB2I2U0
 Installation
 REXX EXEC Library        JRHJ.DB2I2.INSTALL.EXEC_____



 PF3=Exit  ENTER=To Process Migration
```

Please enter the **previous DB2I2U0 REXX EXEC library name** here to allow installation procedure to
copy all system setup files for you. The same installation screen like the one with initial installation option
is displayed with all the information copy from previous installation. You can make any changes only to
the PC upload files1, 2 and 3. After you have done the changes and press Enter key to generate the Apply
Fixes JCL.

```
#INST -------- JRH DB2I2 for DB2/OS390 and UDB/zOS Installation Screen --------

 DB2I2 PC Upload File 1    JRH.DB2I2.FIXU1_____
 DB2I2 PC Upload File 2    JRH.DB2I2.FIXU2_____
 DB2I2 PC Upload File 3    JRH.DB2I2.FIXU3_____
 DB2I2 PC Upload File 4    JRH.DB2I2.FIXU4_____
 DB2 Load Library          DSNA10.SDSNLOAD_____
 DB2 Exit Library          DSNA10.DBAG.SDSNEXIT_____
 DB2 User Run Library      DSNA10.DBAG.RUNLIB.LOAD_____
 DB2 DBRM Library          DSNA10.DBAG.DBRMLIB.DATA_____
 DB2 StartUP Proc Library  SVTSC.PROCLIB_____
 DB2I2 CLIST Library       JRH.DB2I210.CLIST_____
 DB2I2 Other ISPF Library  JRH.DB2I210.ISPFLIB_____
 DB2I2 Load Library        JRH.DB2I210.LOAD_____
 Installer TSOID           DB2ADM_
 SYSADMIN ID               DB2ADM_
 DB2 SubSystem ID          DBAG____

        Starting From DB2I2 V9 SSID and Global Variable Information are
             Defined in Separate Dataset out of CLIST library

 SSID Information DSN       JRH.DB2I210.SSID_____
 Global Variable  DSN      JRH.DB2I210.GLOBAL.VARIABLE_____
    Specify The following Alternate Library If do not have REXX370 Runtime
                   Or your zOS is not zOS 1.9 or Above
 DB2I2 REXX Alternate Lib JRH.DB2I210.REXX.ALTLIB_____

 PF3=Exit  ENTER=To Generate Installation JCL
```

Please make a copy of the following files before proceed:
- *DB2I2 CLIST Library if FIXU1 exist*
- *DB2I2 Other ISPF Library if FIXU2 exist*
- *DB2I2 Load Library if DB2I2U3 exist*
- *DB2I2 Rexx Alternate Library if DB2I2U4 exist*

Submit generated JCL to install all DB2I2 libraries

Execution condition code should be zero for all installation steps except STEP04, which could be a 4.

The following steps are for initial installation JCL:

- STEP00: Allocate All DB2I2 Libraries (For initial installation only)
- STEP01: Copy Installation REXX Exec To DB2I2.INST.CLIST
- STEP02: execute DB2I2.INST.CLIST installation REXX exec
- STEP03: Bind package & Plan for execution and Grant plan access
- STEP04: COPY DSNTIAD, DSNTEP2 AND DSNTIAUL FROM DB2 USERLIB (optional)

Please repeat job step STEP03 for each of the DB2 sub-system which you want to use DB2I2.
Check **SYSTSPRT on STEP03** to see if there are any errors. Condition code 16 means there is error for the installation. **Condition Code 4** means **LOGON Proc is required** to run DB2I2.

For Migration option, additional steps are generated to copy and restore system setup files:

- STEP00: Compress Existing DB2I2 Librarise
- STEP01: Copy Existing system files setup (for Migration only)
- STEP02: Create Installation REXX Exec To DB2I2.INST.CLIST
- STEP03: Execute DB2I2.INST.CLIST Installation Rexx Exec
- STEP04: Restore Existing system files setup (for Migration only)
- STEP05: Bind DB2I2A package

Please repeat job step STEP05 for each of the DB2 sub-system which you want to use DB2I2.
Check **SYSTSPRT on STEP03** to see if there are any errors. Condition code 16 means there is error for the installation. **Condition Code 4** means **LOGON Proc is required** to run DB2I2.

For Fixes Apply option, only the necessary steps related to the fixes apply are generated:

- STEP00: Compress Existing DB2I2 Librarise
- STEP01: Copy Installation REXX Exec To DB2I2.INST.CLIST
- STEP02: execute DB2I2.INST.CLIST installation REXX exec
- STEP03: Bind package

Please repeat job step STEP03 for each of the DB2 sub-system which you want to use DB2I2.

Set up all system files

You do not have to do the following setup if you are migrating from previous installation.

Setup SSID for each DB2 subsystem

Use the option **S - SSID setup** to edit the member **SSID** in the DB2I2 CLIST library. The SSID member contains one line for each DB2 sub-system. There are 2 default SSID entries shipped with the product. They are as follows:

SSID	DB2LOAD	DB2EXIT	DB2USER		SYSAFF	DB2 VERSION	CATALOG TABLE PREFIX	DSNTIAD	DSNTEP2	DSNTIAUL
	DSNDB06_VCATNAME	LOCATION	MIXED	UNITO	UNITW	UNITOU	UNITWU MODELDCB			
DSN1	SYS1.SDSNLOAD	SYS1.SDSNLOAD	SYS1.SDSNLOAD	NONE	5		SYSIBM*	DB2I2A	DB2I2A	DSNTIAUL
TDB2		NONE	N	SYSDA	SYSDA	SYSDA	SYSDA MODEL			

SSID	DB2 sub-system ID
DB2PROC	DB2 startup procedure library
DB2LOAD	DB2 system load library
DB2EXIT	DB2 system exit library. This is where usually the DSNZPARM located. Use the same name as DB2LOAD here if your shop do not use DB2EXIT library.
DB2USER	DB2 system user library. (The library usually contains some updateable load module such as DSNTIAUL and DSNTIAD). Use the same name as DB2LOAD here if your shop do not use DB2USER library.
SYSAFF	System affinity. Specify NONE if you do not want DB2I2 to generate sysaff on the generated Output JCL.
Catalog Table Prefix	DB2 catalog table prefix. Default is SYSIBM. Please refer to installation reference for the usage of this with the mirror db2 catalog tables.
DSNTIAD, DSNTEP2, and DSNTIAUL	enter the DB2 plan name for the IBM provided DSNTIAD, DSNTEP2, and DSNTIAUL programs. To support the remote execution, DB2I2 has bound both DSNTIAD and DSNTEP2 into collection DB2I2A. If you want to use other plan name for these fields, make sure the plan name you use support the remote package. (Bind the plan with *.collectionID.packagename)
DSNDB06_VCATNAME	enter the DSNDB06 VSAM catalog prefix.
LOCATION	Location name. Use the names defined in the SYSIBM.SYSLOCATIONS table for DB2 V4 or SYSIBM.LOCATIONS FOR DB2 V5. Enter NONE if your shop does not install DDF or location is not defined.
MIXED	enter Y if your DB2 environment allows MIXED data. Enter N if only BIT data and SBCS Allowed.
UNITO	Enter UNIT device for the DB2I2 command output files. The default if not specify is SYSDA.
UNITW	Enter UNIT device for the DB2I2 command work files. The default if not specify is SYSDA.
UNITOU	Enter UNIT device for the generated DB2 utility JCL output files. DB2I2 uses this device name in the filed of SYSREC, SYSCOPY, SYSPUNCH and others output files for various DB2 utility. The default if not specify is SYSDA.
.	
UNITWU	Enter UNIT device for the generated DB2 utility JCL work files. DB2I2 uses this device name in the filed of SYSUT1, SORTOUT, SYSMAP, SORTWK and others work files for various DB2 utility. The default if not specify is SYSDA.
MODELDCB	Enter model DCB information for generated DB2 utility work files.
*DB2_PROCLIB	Enter DB2 Start-Up Proc library.

DO NOT delete the heading line from this SSID file.

---

* Please refer C. Post installation performance enhancement for the prefix information in this field. Default is SYSIBM.
* New for DB2I2 V9

Setup SORT dynamic allocation for generated utility JCL

Use **D - Dynamic Sort Setup** option to edit the member **$DYNSORT** in the DB2I2 LIB library if you want use the sort dynamic allocation feature for the generated DB2 utility jobs. Remove $DYNSORT from the DB2I2.LIB library if you do not want to use the sort dynamic allocation feature.

```
****** **************************** Top of Data ****************************
==MSG> /* --------------------------------------------------------------*/
==MSG> /*              DB2I2 Workbench $DYNSORT setup screen            */
==MSG> /*                 By JRH GoldenState Software, Inc.            */
==MSG> /*                    (C) Copyrighted 1997-2011                 */
==MSG> /* --------------------------------------------------------------*/
=NOTE= **        $DYNSORT Store SORT Dynamic Allocation Information       **
=NOTE= **        DB2I2 Use This Information to Prepare DB2 Utility JCL    **
=NOTE= **         Please Modify this line to Fit Your Shop Standard      **
=NOTE= **          If you try to Upgrade to New Release of DB2I2 or      **
=NOTE= **      Reinstall into different libraries, you can copy $DYNSORT **
=NOTE= **              From Previous Installed ISPF library.             **
=NOTE= *****************************************************************
000001 //* $DYNSORT-------------------------------------------------- **
000002 //DFSPARM DD *
000003   DYNALLOC=(SYSALLDA,5)
```

Setup Global Variable Information

Use **G – Setup Global Variable** option to setup the Global Variable information. Starting from V9, the Global Variable Information is defined outside of DB2I2 CLIST library. If the name specify from installation does not exist, DB2I2 Installer will create this file as new dataset and populate the following 2 global variable in it.

```
==MSG> /* ------------------------------------------------------------------*/
==MSG> /*                    DB2I2 Workbench SSID setup screen              */
==MSG> /*                    By JRH GoldenState Software, Inc.             */
==MSG> /*                       (C) Copyrighted 1997-2011                  */
==MSG> /* ------------------------------------------------------------------*/
=NOTE= **      Please Update And Add One Line For Each Global Variable      **
=NOTE= **           Which Can Be Shared By ALL JRH DB2I2 Users.            **
=NOTE= ** Format of Global Varialbe:                                        **
=NOTE= ** GV &global_var_name=.......                                       **
=NOTE= ** Example:                                                          **
=NOTE= ** GV &EXP=EXPLAIN DESC=N DET=N Q=ABCE                               **
=NOTE= ***********************************************************************
000001 GV &GVDSN='JRH.DB2I29.GLOBAL.VARIABLE'
000002 GV &MYGV=DB2I2.GLOBAL.VARIABLE
****** ************************** Bottom of Data **************************
```

Setup Batch PROC to execute the DB2i2 in batch mode

Use **P - Set up $DB2I2P DB2I2 standard PROC** option to edit the member **$DB2I2P** in the DB2I2.LIB library. Makes changes to these **underline fields: <u>SYS1.ISPMLIB</u>, <u>SYS1.ISPPLIB</u>, and <u>SYS1.ISPTLIB</u> to your shop standard ISPF MLIB, PLIB and TLIB library.**

Start from DB2I2 V9, $DB2I2P is automatically generated as part of the installation procedure. You do not need to modify this file any more.

If you do need to modify this file, make sure the first ISPPLIB contains the IBM ISPF default ISPPLIB. (The file contains member name ISREDDE2)

```
//DB2I2P   EXEC PGM=IKJEFT1B,REGION=0M
//SYSPROC  DD DSN=<DBACLIST>,DISP=SHR
//ISPSLIB  DD DSN=<DBALIB>,DISP=SHR
//ISPMLIB  DD DISP=SHR,DSN=SYS1.ISPMLIB
//ISPPLIB  DD DISP=SHR,DSN=SYS1.ISPPLIB
//ISPTLIB  DD UNIT=SYSDA,SPACE=(TRK,(1,1,5),RLSE),
//           DCB=(LRECL=80,BLKSIZE=0,RECFM=FB,DSORG=PO)
//           DD DISP=SHR,DSN=SYS1.ISPTLIB
//ISPPROF  DD UNIT=SYSDA,SPACE=(TRK,(1,1,5),RLSE),
//           DCB=(LRECL=80,BLKSIZE=0,RECFM=FB,DSORG=PO)
//ISPLOG   DD UNIT=SYSDA,SPACE=(CYL,(1,1),RLSE)
//SYSTSPRT DD SYSOUT=*
//SYSTSIN  DD DSN=<DBALIB>(DB2I2BST),DISP=SHR
```

After you complete Step 1 through Step 7, you have successfully completed the system installation of the DB2I2 software.

Please read the following section for the user setup. To invoke DB2I2, Please issue the following:

TSO EX 'db2i2.clist(DB2I2STA)'

Setup Dynamic STEPLIB

Use T – **Dynamic STEPLIB** option to edit the sample dynamic STEPLIB exit routine, which allows DB2I2 to invoke your Dynamic STEPLIB routine during user login to Db2I2 or issue SSID command to switch between different DB2 sub-systems.

Skip this option if your shop do not want to use dynamic STEPLIB.

```
/* REXX ----------------------------------------------------------
   DYNLIB:  Sample routine for Dynamically Allocate STEPLIB
   Description: Every time when you logon to DB2I2 or issue SSID command
                this routine will be invoked and passed with
                3 parameters:
                  DSNLOAD, DSNEXIT and DSNRUN.
                You can call one of your dynamic STEPLIB routine
                to allocate or switch different STEPLIBS.
                You can use one of the shareware STEPLIB to dynamically
                allocate or switch STEPLIB.

                Here is the information of STEPLIB:

                    http://members.rogers.com/mvs-jes2/


   ---------------------------------------------------------------- */
Parse Arg dsnload dsnexit dsnuser
x=MSG("off")
/* ---------------------------------------------------------------- */
/* To Activate Call to dynamicall STEPLIB routine:                 */
/* 1.  Remove the line below, and                                  */
/* 2.  Make the modification to the routine name STEPLIB           */
/* ---------------------------------------------------------------- */
Return 0   /* <----------------------------- Remove this line
             +----------------------------- Change STEPLIB
              ³
              V
             -------                                               */
Address TSO "STEPLIB DA("dsnload","dsnexit","dsnuser")"
Return rc
```

Multiple-Level Authorization Support

Use A – **Multiple-Level Authorization support** option to edit the Multiple level authorization support file. The multiple-level authorization support allows administrator to set up a list of db2i2 commands which can be used without granted with db2 table access authority.

There is a new plan DB2I2AP which has been bound with DYNAMICRULE(BIND). This allows any users who have been granted plan executed authorization to access the listed commands without additional DB2 authorization being granted. By doing this, we allows easy control as to who can access these commands.

Multiple-level authorization information is stored in db2i2.clist(info). You should see the information below when you select this option. Add or remove any command to fit your organization requirement.

```
EDIT       JRH.DB2I2101.CLIST(INFO) - 01.03
Command ===>
****** ******************************************* Top of Data ****************************
000001 Customer Name:      EVALUATION COPY
000002 Release Date:       05/25/2011
000003 Version:            10
000004 Db2i2a:             DB2I2A10 DB2I2A  DB2I2AP
000005 Db2i2e:             DB2I2E   DB2I2E  DB2I2E
000006 Db2i2x:             DB2I2X
000007 -- The Following Db2i2 Commands Can be used by All Users W/O UserAuth Granted.
000008 -- Remove command from list if you do not want the Command to be used by All Users.
000009 -- DO NOT include DSNTIAD, DSNTEP2, DSNTIAUL and EXEC command in the following list.
000010 Public Commands:
000011 DRILLDWN AL       ALTER    AUTH     BIND     CHECK    COAUTH   COPY     COPYAUTH
000012 CPY2CPY  CREATE   CURSORD  DB       DBAUTH   DCLGEN   DDL      DELETE   DSADJ
000013 DSCOPY   DT                EXPLAIN  EXPLAINP FETCH    FLASH    FREE     FU
000014 GENVCAT  GRANT    IMPACT   INSERT   IP       IPC      IS       ISC      ISP
000015 ISPC     IX       IXC      LISTC    LISTDEF  LOAD     MIGR     MODIFY   MS
000016 MT       OI       PACKIT   PG       PGAUTH   PL       PLAUTH   PM       QUIESCE
000017 RBA      REBIND   REBUILD  RECOVER  REORG    REORGCHK REPAIR   REPORT   REVOKE
000018 RI       RSAUTH   RTAUTH   RUNSTATS SELECT   SELPATHU SELPATHV SHAUTH   SNAPSHOT
000019 SP       SPACE    SPACEADJ SQ       SQAUTH   STATS    SY       TB       TBC
000020 TBAUTH   TP       TPC      TR       TRAUTH   TS       TSC      TSIX     TSSET
000021 UNLOAD   UPDATE   USAUTH   VIRTUAL  VW
```

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User Setup

The first time when you execute the DB2I2STA command , you should see the following screen:

```
Command ===> DB2I2 command                              Scroll ===> CSR
****** ********************* Top of Data ***********************
==MSG> /* ----------------------------------------------------*/
==MSG> /*             DB2I2  DB2 Catalog Interface Tool Box    */
==MSG> /*                By JRH Golden State Software Inc.      */
==MSG> /*                   © Copyrighted 1997-2011            */
==MSG> /* ----------------------------------------------------*/
=NOTE= ** Please use 1. ISPF KEYS command to setup Hotkey for DB2I2
=NOTE= **              F4 key is a good candidate to assign to DB2I2
=NOTE= **           2. DB2I2 command SSID to setup DB2 Sub-System ID
=NOTE= **           3. DB2I2 command JOBCARD to setup Jobcard
=NOTE= *** Use DB2I2 command HELP to display any DB2I2 command Syntax
…………….  line object
****** ********************* Bottom of Data ***********************
```

Please follow the user setup steps below in sequence:

Setup ISPF Key for DB2I2 command

Use ISPF **KEYS** command to setup PF key for **DB2I2**. F4 key, which does not have a default value, is a good PF key to assign to DB2I2 command.

Once you setup this PF key, you can then process any of the DB2I2 command by pressing the designated PF key.

The instructions below explains the sequence how to execute a DB2I2 command:
* Enter DB2I2 command on the command line field
* Enter line object on the regular ISPF edit line
* Press preset PF key to invoke the DB2I2 command

Setup sub-system ID with SSID DB2I2 command

Issue SSID(db2-subsystem ID) and press PF key to set or switch to a DB2 sub-system.

Setup job card with JOBCARD DB2I2 command

Issue JOBCARD and press PF key to enter the JOB card information, which is required for DB2I2 batch processing.

Once you have done all the above steps, you are ready to explore the exciting DB2I2 for DB2/OS390.

*Post installation performance enhancement

To optimize the performance of the DB2I2 tool box as well as any other dynamic SQL against DB2 catalog tables, there are a set of 4 JCL jobs in the other Db2I2 ISPF system library **(<DBALIB>)**. They are as follows:

- **SYSIBMI** – contains a set of DDL to define additional indexes for DB2 catalog tables. This method is the recommended method to give you better performance for DB2I2, as well as any other SQL requires access to the DB2 catalog tables.(Please see next page for detail index column information)

The following 3 JCL members are used to create mirror DB2 catalog tables:

- **SYSIBMD** – contains DDL, which defines a set of mirror DB2 catalog tables.
- **SYSIBMU** – contains a set of unload JCL steps to unload DB2 catalog table to sequential files.
- **SYSIBML** – contains a set of load JCL to load all the unloaded files back to mirror DB2 catalog tables.

We recommend most shops to modify SYSIBMI and create additional indexes for your DB2 catalog tables. However, if for security or catalog contention issues, you can modify SYSIBMD, SYSIBMU and SYSIBML jobs to build a set of mirror DB2 catalog tables.

*Skip this section since IBM has made some additional indexes to the DB2 Catalog Tables.

Recommend indexable columns for SYSIBM catalog tables

Catalog Table Name	Proposed index column name	
SYSIBM.SYSCOLAUTH		
	CREATOR	ASC
	TNAME	ASC
	GRANTOR	ASC
	GRANTEE	ASC
SYSIBM.SYSDBAUTH		
	NAME	ASC
	GRANTEE	ASC
	GRANTOR	ASC
SYSIBM.SYSDBRM		
	PLNAME	ASC
	NAME	ASC
	NAME	ASC
	PLNAME	ASC
SYSIBM.SYSFIELDS		
	TBCREATOR	ASC
	TBNAME	ASC
	NAME	ASC
SYSIBM.SYSFOREIGNKEYS		
	CREATOR	ASC
	TBNAME	ASC
	RELNAME	ASC
SYSIBM.SYSPACKAGE		
	COLLID	ASC
	NAME	ASC
SYSIBM.SYSPLANAUTH		
	NAME	ASC
	GRANTEE	ASC
	GRANTOR	ASC
SYSIBM.SYSPLANDEP		
	DNAME	ASC
SYSIBM.SYSRELS		
	CREATOR	ASC
	TBNAME	ASC
	RELNAME	ASC
SYSIBM.SYSRESAUTH		
	QUALIFIER	ASC
	NAME	ASC
	NAME	ASC

Catalog Table Name	Propose d index column name	
SYSIBM.SYSSTMT		
	PLNAME	ASC
	NAME	ASC
	SEQNO	ASC
SYSIBM.SYSSYNONYMS		
	TBCREATOR	ASC
	TBNAME	ASC
SYSIBM.SYSTABAUTH		
	TCREATOR	ASC
	TTNAME	ASC
	GRANTEE	ASC
	GRANTOR	ASC
SYSIBM.SYSTABLEPART		
	IXCREATOR	ASC
	IXNAME	ASC
	PARTITION	ASC
SYSIBM.SYSTABLES		
	DBNAME	ASC
	TSNAME	ASC
SYSIBM.SYSTABLES		
	TBCREATOR	ASC
	TBNAME	ASC
SYSIBM.SYSVIEWDEP		
	DCREATOR	ASC
	DNAME	ASC
SYSIBM.SYSVOLUMES		
	SGNAME	ASC