IBM Application Discovery Connect for Mainframe V5.0.5

Configuration Guide
Chapter 1. Accessibility Features for IBM Application Discovery

Accessibility features assist users who have a disability, such as restricted mobility or limited vision, to use information technology content successfully.

Overview

IBM® Application Discovery includes the following major accessibility features:

- Keyboard-only operation
- Operations that use a screen reader

IBM Application Discovery uses the latest W3C Standard, WAI-ARIA 1.0 (www.w3.org/TR/wai-aria/), to ensure compliance with US Section 508 (www.access-board.gov/guidelines-and-standards/communications-and-it/about-the-section-508-standards/section-508-standards) and Web Content Accessibility Guidelines (WCAG) 2.0 (www.w3.org/TR/WCAG20/). To take advantage of accessibility features, use the latest release of your screen reader and the latest web browser that is supported by IBM Application Discovery.

The IBM Application Discovery online product documentation in IBM Knowledge Center is enabled for accessibility. The accessibility features of IBM Knowledge Center are described in the Accessibility section of the IBM Knowledge Center help (https://www.ibm.com/support/knowledgecenter/en/about/releasenotes.html).

Keyboard navigation

This product uses standard navigation keys.

Interface information

For alternative installation using Command Line Installation (CLI), refer to section Alternative Installation for ADDI Using CLI in IBM Application Discovery Installation and Configuration Guide.

The IBM Application Discovery user interfaces do not have content that flashes 2 - 55 times per second.

The IBM Application Discovery web user interface relies on cascading style sheets to render content properly and to provide a usable experience. The application provides an equivalent way for low-vision users to use system display settings, including high-contrast mode. You can control font size by using the device or web browser settings.

The IBM Application Discovery web user interface includes WAI-ARIA navigational landmarks that you can use to quickly navigate to functional areas in the application.

Related accessibility information

In addition to standard IBM help desk and support websites, IBM has a TTY telephone service for use by deaf or hard of hearing customers to access sales and support services:

TTY service
800-IBM-3383 (800-426-3383)
(within North America)

For more information about the commitment that IBM has to accessibility, see IBM Accessibility (www.ibm.com/able).
Chapter 2. Introduction

About IBM AD Connect for Mainframe

IBM Application Discovery Connect for Mainframe provides read only access to mainframe resources needed to deliver information to IBM Application Discovery Build Client (which sits on Windows®) to perform analysis.

IBM Application Discovery Connect for Mainframe Listener waits on idle and acts only when a request comes in from the IBM Application Discovery Build Client. Once the requested output is sent successfully, it returns to the idle state. Examples of the types of queries made by IBM Application Discovery Connect for Mainframe Listener to deliver the requested types of information to IBM Application Discovery Build Client include:

1. Mainframe Infrastructure, via operator commands.
2. Batch Schedule Data from CA Workload Automation CA 7® or IBM Tivoli® Workload Scheduler® via a job list command.
3. Libraries, Members and Source Code from CA Endevor® (via Endevor API) or ChangeMan® ZMF.
4. Source Members from PDS Libraries and Data Files from VTOC.
5. DB2® Information from SYSIBM tables including keys, triggers, packages, plans.
6. CICS® Information using DFHCSDUP including lists, files, maps, transactions.
7. SMF Performance Data directly from a library.
8. MQ Information using MQ commands including queue managers, queues and channels.
9. Information from Adabas using Adabas utility.
10. Information from Natural using Natural utility.
11. Information from Sapiens® using Sapiens reports.
12. Information from IMS.

Note: Starting with v5.0.3, the IBM AD Connect for Mainframe product is being distributed in SMP/E format. As a result, the EZL prefix has been changed to IAY. Any instance of EZL should be assumed to be IAY.

Minimum Requirements for Installation

The minimum installation requirements for IBM Application Discovery Connect for Mainframe are:

• z/OS® version 2.1 or later.
• The maximum disk storage space is 5 cylinders.

Minimum Version Requirements for Supported Products

• Any supported version of DB2.
• Any supported version of IMS.
• Any supported version of CICS.
• Any supported version of WebSphere® MQ.
• Any supported version of ChangeMan ZMF.
• Any supported version of CA Endevor. For Endevor version 17.0, make sure to have the RO79413 fix applied.
• Any supported version of CA Workload Automation CA 7.
• Any supported version of TWS or IWS.


Prerequisites Authorization for Running Connect for Mainframe

Before installing IBM Application Discovery Connect for Mainframe on the host machine (mainframe), the following steps are required (all in "read" mode):

1. Authorization to add IBM Application Discovery Connect for Mainframe’s load library to APF.
2. Authorization for running the IBM Application Discovery Connect for Mainframe’s listener.
3. Authorization to access all libraries specified in the STEPLIB card (see “Configuring the Listener PROC” on page 9 chapter).
4. Authorization to access TCP connections to IBM Application Discovery Connect for Mainframe.
5. Additional required authorizations according to analyzed area:

<table>
<thead>
<tr>
<th>Analyzed Area</th>
<th>Required Authorization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adabas</td>
<td>Authorization to issue an ADAREP command.</td>
</tr>
<tr>
<td>Control-M</td>
<td>Access to the libraries containing the control M data.</td>
</tr>
<tr>
<td>DB2</td>
<td>Rights to read from the DB/2 system tables (SYSIBM).</td>
</tr>
<tr>
<td>SMF</td>
<td>Access to the SMF dump files.</td>
</tr>
<tr>
<td>Libraries and Members</td>
<td>Access to the libraries.</td>
</tr>
<tr>
<td>Natural</td>
<td>Authorization to issue a Natural batch command and read Access to all Natural libraries (LOGON).</td>
</tr>
<tr>
<td>Operator commands</td>
<td>Normal RACF® security to allow the user to issue those commands.</td>
</tr>
<tr>
<td>WebSphere MQ</td>
<td>Authorization to perform PUT and GET from command and reply queues.</td>
</tr>
<tr>
<td>PDS libraries</td>
<td>Read-only access to the source libraries (for members not stored in Endevor)</td>
</tr>
<tr>
<td>CA Endevor</td>
<td>Authorization to use the CA Endevor API, used only for reading the list of members and retrieving a copy of those members. Authorization to access CA Endevor libraries and control files used during API processing.</td>
</tr>
<tr>
<td>CA-7</td>
<td>Read-only access the CA-7 initialization parameters member, Authorization to execute the commands: LJOB, JOB=<em>, LIST=ALL – lists all Jobs information, LGVAR, JOB=</em>, LIST=ALL – lists all global variables for Jobs.</td>
</tr>
</tbody>
</table>

Terms and Conventions

For the purposes of writing this guide, the following terms and conventions have been used:

• Command names are printed as shown.

• “Terms and Conventions” on page 4 in this guide are indicated as shown. For page numbers, refer to the Table of Contents at the beginning of this guide.
• File references are printed as shown.
• **Button names** and options/functions within a dialog box are printed as shown.
Chapter 3. Installation Media

Throughout all examples in this guide, the underlined text will indicate where a customer can change/use their own standards or naming conventions as IBM does not mandate.

Files Included in the Connect for Mainframe Distribution

This is part of the initial installation.

The following files are included:

- **IBM.HALT505.SMPMCS.BIN** – a compressed SMP/E MCS file, which acts as an inventory for all the software objects included in the SMP/E distribution.
- **IBM.HALT505.F1.BIN** – a compressed SMP/E REL file, containing all the load modules for IBM Application Discovery Connect for Mainframe.
- **IBM.HALT505.F2.BIN** - a compressed SMP/E REL file, containing all the DB2 DBRM members. These are required only if IBM Application Discovery Connect for Mainframe must connect to DB2 to retrieve application data.
- **IBM.HALT505.F3.BIN** – a compressed SMP/E REL file, containing all the sample JCL and PROCS needed to run IBM Application Discovery Connect for Mainframe.

Within the sample library (IBM.HALT505.F3.BIN), after it is uncompressed, the following individual members are provided:

- **IAYLSTNR** – a sample PROC for the IBM Application Discovery Connect for Mainframe listener started task. This PROC should be configured depending on the number of started tasks required and the SCM product that has to be accessed (eg. Endevor, ChangeMan ZMF, and so on). See the sections that follow for detailed explanations about how to configure the listener proc.
- **IAYDB2DB** – a sample job for creating the DBRM plan, required only if IBM Application Discovery Connect for Mainframe should access DB2.
- **IAYCA7** – a sample JOB for accessing CA7 (if not accessing in memory, but in batch)
- **IAYNATDB** – a sample JOB for accessing Adabas.
- **IAYNATLB** – a sample JOB for accessing Natural.
- **IAYNATMM** - a sample JOB for accessing Natural.
- **IAYXMLRQ** – a sample JOB for accessing ChangeMan ZMF.

Connect for Mainframe Installation Steps

Beginning with v5.0.3, IBM Application Discovery Connect for Mainframe is distributed in SMP/E format. For this version, please perform the following steps:

1. Follow the instructions found in the Installing IBM Application Discovery Connect for Mainframe chapter from the Program Directory document. It is a PDF included as part of the zipped installation package.
2. After installing via SMP/E, copy the load modules contained in the SMP/E *.SIAYAUTH library into the authorized load library from which the listener started task will run.
3. Copy the IAYLSTNR member from *.SIAYSAMP library into the procedure library from which you will run the listener started task. The listener PROC name for the started task could be any name that fits your site’s naming conventions.
If you are trying to install an older version of IBM Application Discovery Connect for Mainframe (any version prior to v5.0.3), please perform the following steps:

1. FTP the XMIT file (Vnnn.XMIT.LOADLIB) into a predefined sequential file on the mainframe with the following DCB parameters: LRECL 80, BLKSIZE 3120 and RECFM FB.
2. Use TSO RECEIVE command to create IBM Application Discovery Connect for Mainframe load library.
3. FTP the listener.txt into a member in a procedure library which will be used as the JCL for the listener started task. The listener PROC name for the started task could be any name according to the site's naming convention.

After IBM Application Discovery Connect for Mainframe has been installed, please perform the following configuration steps, which apply to all versions:

1. Configure the listener PROC as detailed in “Configuring the Listener PROC” on page 9.
2. Configure the needed JCLs as detailed below (as needed).
3. Define a User Id in RACF (with the correct authorizations) for the listener started task.
4. If DB2 access is needed, submit the IAYDB2BD (formerly EZLDB2BD) job. Remember that this is a sample job that has to be modified according to your site standards.
5. Create IBM AD Parm Library if needed (will contain the components sample jobs).
6. If ChangeMan ZMF is needed, add the IAYXMLRQ job (formerly XMLREQJB) job to the Parm library and modify it according to your site standards.
7. If Adabas is needed add the IAYNATDB job (formerly NATDBJOB) to the Parm library and modify it according to your site standards.
8. If Natural is needed, add the IAYNATLB job (formerly NATLBJOB) and IAYNATMM job (formerly NATMMJOB) to the Parm library and modify it according to your site standards.
9. Start the listener started task. Make sure that all required libraries defined in the STEPLIB (or otherwise defined in the linklist, etc.) are APF authorized, as this is required to ensure the integrity of program call chains. Also, ensure that the user id assigned to the started task has the correct authorizations.

Configuration for AD Build Configuration

Once IBM Application Discovery Connect for Mainframe and IBM Application Discovery Build Configuration are installed, open IBM Application Discovery Build Configuration, switch to the zOS tab and create a new zOS connection.

In the zOS Connection Wizard dialog window: type the Host IP or Host Name and the port number as set in the listener PROC. Click Save and then perform Test Connection. If the test connection succeeds, click Exit to exit the wizard.
Chapter 4. Technical Configuration Process

Configuring the Listener PROC

About this task

The basic listener looks like this:

```plaintext
//LISTEN PROC TCPIP=TCPPIP,PORT=46000,MAXTASK=20,PROGRAM=IAYCONN
//LISTEN EXEC PGM=IAYLISPR,PARM="&TCPIP,&PORT,&MAXTASK,&PROGRAM,N'
// REGION=0M
//STEPLIB DD DSN=IAYV143.MVS110.LOADLIB,DISP=SHR <-- the agents loadlib
//CPEOUT DD SYSOUT=X,HOLD=YES
//IAYOUT DD SYSOUT=X,HOLD=YES
//IAYERR DD SYSOUT=X,HOLD=YES
//CPEOUTRS DD SYSOUT=X,HOLD=YES
//CPEOUTRO DD SYSOUT=X,HOLD=YES
//CPESNAP DD SYSOUT=X,HOLD=YES
//SYSPRINT DD SYSOUT=X,HOLD=YES
//SYSUDUMP DD DUMMY
// PEND
```

Edit the listen PROC and modify the following in the STEPLIB card:

Procedure

1. Change the default address space name for TCPIP if it differs at your site.
2. Decide on a communication port number for the listener by editing the PORT parameter in the PROC card. Note that an equivalent setup should also be done using the IBM Application Discovery Build Configuration installed on the Windows® system to correspond to the same the port. The port number should be unique and not used by other software. Any number can be selected.
3. Define the maximum number of tasks that can run in parallel (number of parallel requests from the PC server). Usually 5 to 10 should be enough.
4. If IBM Application Discovery Connect for Mainframe’s load library name would be changed as requested by your site standards, modify the STEPLIB card accordingly.
5. Change the default address space name for TCPIP if it differs at your site.
   a. For DB2, add the following to the STEPLIB card:
      ```plaintext
      // DD DSN=DB290.SDSNLOAD,DISP=SHR <-- it should be changed if local load lib name is different at your site.
      ```
   b. For IMS, add the following to the STEPLIB card:
      ```plaintext
      // DD DSN=IMS910.SDFSRESL,DISP=SHR <-- it should be changed if local load lib name is different at your site.
      ```
   c. For CICS CSD, add the following to the STEPLIB card:
      ```plaintext
      // DD DSN=DFH3290.CICS.SDFHLOAD,DISP=SHR <-- it should be changed if local load lib name is different at your site.
      ```
   d. For MQ, add the following to the STEPLIB card:
      ```plaintext
      // DD DSN=CSQ700.SCSQAUTH,DISP=SHR <-- it should be changed if local load lib name is different at your site.
      // DD DSN=CSQ700.SCSQLOAD,DISP=SHR <-- it should be changed if local load lib name is different at your site.
      ```
   e. For CA Endevor, add the following to the STEPLIB card, where hlq is the high level qualifier for Endevor:
      ```plaintext
      // DD DSN=hlq.ENDEVOR.AUTHLIB,DISP=SHR
      ```
In addition, add the following DD cards (2 cards per task, up to MAXTASK specified in the JOB card, with a different temporary file name per DD card). The DD cards should be numbered from 01 to nn to match the number of tasks defined in MAXTASK, modifying the numbers given below in red.

```plaintext
// APIEX001 DD DSN=&&IAYIN, SPACE=(3040,(40,40),,,ROUND),
// DCB=(BLKSIZE=2048,RECFM=VB)
// APIMS001 DD DSN=&&IAYOUT, SPACE=(3040,(40,40),,,ROUND),
// DISP=(NEW,DELETE,DELETE), UNIT=SYSDA,
// DCB=(BLKSIZE=13300,RECFM=FB)
```

f. For CA7, add the following to the STEPLIB card:

```plaintext
// DD DSN=CA7.loadlib, DISP=SHR <- it should be changed to site CA7 load lib name
```

6. When CA7 configuration is set to be used in batch mode – via dataset (so not in memory), add the following DD cards (+ card per task, up to MAXTASK specified in the JOB card)

```plaintext
// Create as many IAYINTn according to the number of MAXTASK parameter
// IAYINTnn DD SYSOUT=(*,INTRDR)
```

7. For IBM TWS, add the following DD Cards:

   a. //EQQMLIB DD DISP=SHR, DSN=TWS851. SEQOMSG0 | it should be changed if the TWS Message Library has a different name on your site. If an user library is defined for TWS messages, it should come first and the two libraries names should be concatenated.

   b. //EQQDUMP DD DISP=SHR, DSN=IAY.USER.TWS.EQQDUMP. Create a dataset called IAY.USER.TWS.EQQDUMP with record format VBA, record length 84 and block size 3120. Allocation should be just few tracks.

   c. //EQQMLGnn DD DISP=SHR, DSN=IAY.USER.TWS.MLOG.TASKnn. Create datasets called IAY.USER.TWS.MLOG.TASKnn as sequential files with record format VBA, record length 125 and block size 1632, where nn goes from 01 to the number of tasks specified in MAXTASK.

8. For TWS, add the following to the STEPLIB card:

```plaintext
// DD DSN=TWSnnn.SEQQLMD0, DISP=SHR <- it should be changed if local load lib name is different at your site
```

9. For ChangeMan ZMF, add the following DD cards (2 cards per task, up to MAXTASK specified in the JOB card. The files should be preallocated before the started task starts):

```plaintext
// Create as many XMLINnn according to the number of MAXTASK parameter
// XMLINnn DD DISP=SHR, DSN=IAY.SERENA.XMLINnn <--FOR CHANGEMAN
```

10. For Adabas add the following DD card (+ card per task up to MAXTASK specified in the JOB card. The files should be preallocated before the started)

```plaintext
// IAYDR0nn DD DISP=SHR, DSN=IAYV142.NATURAL.DB.TASKnn
```

11. For Natural, add the following DD cards (+ card per task, up to MAXTASK specified in the JOB card. The files should be preallocated before the started task starts):

```plaintext
// IAYINTR DD SYSOUT=(*,INTRDR)
```

---

**Specific Technical Configuration Steps**

TBA
Configuration for CA-7

IBM Application Discovery Connect for Mainframe is configured to access CA7 using the CA7 CCI P-P (program to program) interface. However, for extremely large batch schedules, this can consume large amounts of memory on loading. Where memory limits exist, the following job might be used to resolve, requiring a lower amount of memory and larger sequential files.

Note:

- Make sure to tailor the following file according to your site standards (a job for running the CA7 LJOB command). Note that the SYSIN data might change according to your site standards. Underlined text must be changed according to your specific needs.
- Make sure that this job is running on the same LPAR as the AD Connector started task. If your shop is configured in such a way that the job might be scheduled on another system, make sure that you use the SYSTEM=* parameter in the job cart, as shown in the example. The * indicates the system that submitted the job. It does not represent a wild card substitution for any system.
- Omit the BLKSIZE keyword or set the BLKSIZE value to 0 so that the block size can be set by the system. You can also set the block size by setting an appropriate BLKSIZE value. The block size can be up to five digits.

```jcl
//JOBNAME1 JOB (ACCT_CODE), 'PDMER NAME', CLASS=K, MSGCLASS=X
// NOTIFY=USERID
/***/
// SASSBSTR BATCH TERMINAL INTERFACE JCL */
/***/
//STEP010 EXEC PGM=SASSBSTR,PARM=1
//STEPLIB DD DISP=SHR, DSN=YOUR.CA7.LOADLIB
//UCC7CMDS DD DISP=SHR, DSN=YOUR.CA7.COMMDS
//BATCHIN DD DISP=SHR, DSN=YOUR.CA7.BATCHIN
//BATCHOUT DD DISP=SHR, DSN=YOUR.CA7.BATCHOUT
//SYSPRINT DD DISP=(NEW,CATLG), DSN=YOUR.CA7.REPORT.FILE%TK, <==== CHANGE DSN BUT KEEP THE %TK SUFFIX
// SPACE=(TRKS,(50,20),RLSE), DCB=(RECFM=FBA, LRECL=133, BLKSIZE=?) <=== REPLACED BY 3 DIGIT
//SYSUDUMP DD SYSOUT=* SYSIN DD *, DLM=##
// LOGON USERID <==== ADD A USERID FOR LOGON
// LJOB, JOB=*, LIST=ALL
// LOGOFF
```

Configuration for Sapiens

In order to access Sapiens systems, each Sapiens system should have a job on the mainframe that IBM Application Discovery Connect for Mainframe would invoke. Following is a sample job:

```jcl
//GMJIAYE JOB (GMJ,526), 'APPLDISC ', MSGCLASS=C,
// CLASS=A, PRTY=13, REGION=5M
// PROCS JCLLIB ORDER=(CKGN1.EMERGE.V4520.INCLUDES)
// DELETE EXEC PGM=IDCAMS
// SYSPRINT DD SYSOUT=*
// SYSIN DD * DELETE CKGN1.APPLDISC.TRAN.FIU
// /*
// GD EXEC PGM=IAYFI
// INCLUDE MEMBER=APPLDISC
// INCLUDE MEMBER=SNENVS
// INCLUDE MEMBER=IAYOABL
// INCLUDE MEMBER=IAYFUMP //TRANFILE DD DSN=CKGN1.APPLDISC.TRAN.FIU, SPACE=(CYL,(3,2), RLSE),
// DCB=(BLKSIZE=3000, LRECL=300, RECFM=FB)
// SYSPRINT DD SYSOUT=*
// /CEEDUMP DD SYSOUT=*
// /SYSDUMP DD SYSOUT=*
```

In order to access a specific Sapiens system, the library of the job and the job member name should be specified in IBM Application Discovery Build Configuration.

Note: Make sure that this job is running on the same LPAR as the AD Connector started task. If your shop is configured in such a way that the job might be scheduled on another system, make sure that you use the SYSTEM=* parameter in the job cart, as shown in the example. The * indicates the system that submitted the job. It does not represent a wild card substitution for any system.
When **IBM Application Discovery Connect for Mainframe** is required to access DB2, the following job, which creates the DBRM plan, should be used:

```
//IAYDB2BD JOB (20,FB3),IBMUSER,MSGLEVEL=(1,1),TIME=20, 
// CLASS=A,MSGCLASS=H,NOTIFY=SYSUID,REGION=6M   
//*  
//JOBLIB DD DSN=DSN910.SDSNLOAD,DISP=SHR <= DB2 Loadlib  
//BINDUNL EXEC PGM=IKJEFT01,DYNAMNBR=20,COND=(4,LT)  
//SYSTSIN DD *  
//SYSOUT DD *  
//SYSUDUMP DD *  
//DSN SYSTEM(DB9G) <= DB2 Subsystem name  
BIND PLAN(IAYSRC) +  
MEM(IAYDB2BD, IAYDB2VL, IAYDB2TB, IAYDB2TS, IAYDB2PL, IAYDB2CL, +  
IAYDB2SG, IAYDB2PR, IAYDB2IX, IAYDB2KY, IAYDB2TG, IAYDB2VW, +  
IAYDB2PK, IAYDB2PX, IAYDB2RT, IAYDB260 ) +  
CURRENTDATA(NO) ACT(REP) ISO(CS) ENCODING(EBCDIC) +  
LIB('IAYV143.MVS110.DBRMLIB.DATA') <= DBRM lib derived from hlq.SIAYDBRM  
END  
//SYSIN DD *  
GRANT EXECUTE ON PLAN IAYSRC TO PUBLIC;  
/*
```

Edit the IAYDB2BD job and modify the following:

1. In the JOBLIB card verify that the library name is set correctly according to your DB2 installation.
2. In the SYSTSIN card, set the DSN SYSTEM name to be your DB2 subsystem name.
3. In case the loadlib library name was modified after the transmit, update the LIB entry of the SYSTSIN card accordingly.

For the situation when the members bound into a collection and the plan points to the collection, 2 more additional jobs need to be used.

**Create Packages Job:**

```
//IAYDB2BD JOB (20,FB3),IBMUSER,MSGLEVEL=(1,1),TIME=20, <= set the correct JOB info  
// CLASS=A,MSGCLASS=H,NOTIFY=SYSUID,REGION=6M  
//*  
//DSN910 JCLLIB ORDER=IAYV210.JCL  
//JOBLIB DD DSN=DSN910.SDSNLOAD,DISP=SHR <= DB2 load library  
//BINDUNL EXEC PGM=IKJEFT01,DYNAMNBR=20,COND=(4,LT)  
//SYSTSIN DD *  
//SYSOUT DD *  
//SYSUDUMP DD *  
//DSN SYSTEM(DB9G) <= DB2 subsystem name  
BIND PACKAGE (IAYSRC) OWNER(userdefined) +  
MEMBER(IAYDB2BD) LIBRARY('APPLDISC.DBRM.LIBRARY')  
BIND PACKAGE (IAYSRC) OWNER(userdefined) +  
MEMBER(IAYDB2VL) LIBRARY('APPLDISC.DBRM.LIBRARY')  
BIND PACKAGE (IAYSRC) OWNER(userdefined) +  
MEMBER(IAYDB2TB) LIBRARY('APPLDISC.DBRM.LIBRARY')  
BIND PACKAGE (IAYSRC) OWNER(userdefined) +  
MEMBER(IAYDB2TS) LIBRARY('APPLDISC.DBRM.LIBRARY')  
BIND PACKAGE (IAYSRC) OWNER(userdefined) +  
MEMBER(IAYDB2PL) LIBRARY('APPLDISC.DBRM.LIBRARY')  
BIND PACKAGE (IAYSRC) OWNER(userdefined) +  
MEMBER(IAYDB2CL) LIBRARY('APPLDISC.DBRM.LIBRARY')  
BIND PACKAGE (IAYSRC) OWNER(userdefined) +  
MEMBER(IAYDB2SG) LIBRARY('APPLDISC.DBRM.LIBRARY')  
BIND PACKAGE (IAYSRC) OWNER(userdefined) +  
MEMBER(IAYDB2PR) LIBRARY('APPLDISC.DBRM.LIBRARY')  
BIND PACKAGE (IAYSRC) OWNER(userdefined) +  
MEMBER(IAYDB2IX) LIBRARY('APPLDISC.DBRM.LIBRARY')  
BIND PACKAGE (IAYSRC) OWNER(userdefined) +  
MEMBER(IAYDB2KY) LIBRARY('APPLDISC.DBRM.LIBRARY')  
BIND PACKAGE (IAYSRC) OWNER(userdefined) +  
MEMBER(IAYDB2TG) LIBRARY('APPLDISC.DBRM.LIBRARY')  
BIND PACKAGE (IAYSRC) OWNER(userdefined) +  
MEMBER(IAYDB2VW) LIBRARY('APPLDISC.DBRM.LIBRARY')  
BIND PACKAGE (IAYSRC) OWNER(userdefined) +  
MEMBER(IAYDB2PK) LIBRARY('APPLDISC.DBRM.LIBRARY')  
BIND PACKAGE (IAYSRC) OWNER(userdefined) +  
MEMBER(IAYDB2PX) LIBRARY('APPLDISC.DBRM.LIBRARY')  
BIND PACKAGE (IAYSRC) OWNER(userdefined) +  
MEMBER(IAYDB2RT) LIBRARY('APPLDISC.DBRM.LIBRARY')  
BIND PACKAGE (IAYSRC) OWNER(userdefined) +  
MEMBER(IAYDB260) LIBRARY('APPLDISC.DBRM.LIBRARY')  
END  
//SYSIN DD *  
GRANT EXECUTE ON PLAN IAYSRC TO PUBLIC;  
/*
```
BIND PACKAGE (IAYSRC) OWNER(userdefined) +
  ACTION(ADD) ISOLATION(CS) ENCODING(EBCDIC) +
  MEMBER(IAYDB2PX) LIBRARY('APPLDISC.DBRM.LIBRARY')
BIND PACKAGE (IAYSRC) OWNER(userdefined) +
  ACTION(ADD) ISOLATION(CS) ENCODING(EBCDIC) +
  MEMBER(IAYDB2RT) LIBRARY('APPLDISC.DBRM.LIBRARY')
END

Note: The `PACKAGE` name appears also in the second job (see it below) under `PKLIST` and changing the name of the package will affect it.

Plan referring the packages JOB

Important: The owner must have the authority to perform `BIND` on the `PKLIST` specified in this job.

IBM AD ParmLib

If `ChangeMan ZMF`, `Adabas` or `Natural` is to be used, a PDS/E library should be created. This library would be referenced for now on as the `IBM AD ParmLib` and doesn’t have to be a `PROCLIB`.

In `IBM Application Discovery Build Configuration Admin`, the `IBM AD ParmLib` should be specified accordingly.

Configuration for Adabas

When `IBM Application Discovery Connect for Mainframe` is required to access `Adabas`, the following job should be created. In `IBM AD ParmLib` library, the member name must be `NATDBJOB`, and job name can be altered.

Note:

- The job is used by IBM Application Discovery Connect for Mainframe and therefore it shouldn’t be submitted manually.
- Make sure that this job is running on the same LPAR as the AD Connector started task. If your shop is configured in such a way that the job might be scheduled on another system, make sure that you use the `SYSTEM=*` parameter in the job cart, as shown in the example. The * indicates the system that submitted the job. It does not represent a wild card substitution for any system.

In addition, create datasets called `IAYV142.NATURAL.DB.TASKnn` as sequential files with record format FB and record length 133, where nn goes from 01 to the number of tasks specified in MAXTASK.
Configuration for Natural

The following 2 jobs should be created in **IBM AD ParmLib library** (job name can be altered).

**Note:** The jobs are used by **IBM Application Discovery Connect for Mainframe** and therefore shouldn’t be submitted manually.

1. **Member name must be **NATLB3JOB**.**

   ```
   /IAYLB3AT JOB SMA,MSGLEVEL=(1,1),
   // CLASS=A,MSGCLASS=X,REGION=4M
   /*
   // N AT EXEC PROC=NAT8889
   /*
   // CMPRINT DD DSN=IAYV142.NATURAL.LB.TASK%TKK,DISP=SHR // the DSN for IAYCA6nn DD. %TKK should remain as it is. 
   // CMSYNIN DD *
   LOGON %LIB
   L *
   FIN
   /*
   ```

   In addition, create datasets called **IAYV142.NATURALLB.TASKnn** as sequential files with record format FB and record length 133, where nn goes from 01 to the number of tasks specified in **MAXTASK**.

2. **Member name must be **NATMMJOB**.**

   ```
   /IAYMMMAT JOB SMA,MSGLEVEL=(1,1),
   // CLASS=A,MSGCLASS=X,REGION=4M
   /*
   // NAT EXEC PROC=NAT8889
   /*
   // CMPRINT DD DSN=IAYV142.NATURAL.MM.TASK%TKK,DISP=SHR // the DSN for IAYCB0nn DD. %TKK should remain as it is. 
   // CMSYNIN DD *
   LOGON %LIB
   L * %MEM
   L *
   FIN
   /*
   ```

   In addition, create datasets called **IAYV142.NATURAL.MM.TASKnn** as sequential files with record format FB and record length 133, where nn goes from 01 to the number of tasks specified in **MAXTASK**.

Configuration for ChangeMan ZMF

The following job should be created whenever accessing **ChangeMan ZMF** via XML service.

The job should be in a **PDS/E**, member name must be **XMLREQJB**, job name can be altered and the library doesn't have to be a **PROCLIB**.

**Note:**
- The job is used by **IBM Application Discovery Connect for Mainframe** and therefore it shouldn't be submitted manually.
- Make sure that this job is running on the **same** LPAR as the AD Connector started task. If your shop is configured in such a way that the job might be scheduled on another system, make sure that you use the **SYSTEM=*** parameter in the job cart, as shown in the example. The * indicates the system that submitted the job. It does not represent a wild card substitution for any system.

```
//IAYSERXL JOB (20,FB3),IBMUSER,MSGLEVEL=(1,1),TIME=20,
// CLASS=A,MSGCLASS=Z,NOTIFY=&SYSUID,REGION=6M
//XML EXEC PGM=SERXMLBC
//STEPLIB DD DISP=SHR,DSN=IAY.SERENA.V7R1M1.CMNZMF.LOAD <== User loadlib
// DD DISP=SHR,DSN=SERENA.SERCOMC.V7R1M1.LOAD <== Serena load library
// DD DISP=SHR,DSN=SERENA.CMNZMF.V7R1M1.LOAD <== Application Discovery load library
//DD DISP=SHR,DSN=SERENA.V7R1M1.SERCOMC.TCPIPORT <== Serena TCPIPORT file
//SYSPRINT DD SYSOUT=Z
//SERPRINT DD SYSOUT=Z
//SYSOUT DD SYSOUT=Z
//XMLIN DD DISP=SHR,DSN=IAY.SERENA.XMLIN <== The input PDS as defined in the Listener job
```
Note: Make sure the Changeman batch jobs are running on the same LPAR where the z listener is running.

In addition, create datasets called IAY.SERENA.XMLINnn as sequential files with record format VB and record length 255, where nn goes from 01 to the number of tasks specified in MAXTASK.

Create datasets called IAY.SERENA.XMLOUTnn as sequential files with record format VB and record length 5000, where nn goes from 01 to the number of tasks specified in MAXTASK.

The initial track allocation for the above datasets should be based on the formula: Maximum number of members in a ChangeMan library / 80 and another 10% for the additional allocation size.

For example, the biggest ChangeMan Library has 44000 members, so the initial allocation would be 44000/80 = 550 plus 55(10%) for the additional allocation size.

For Continuous Rule Validation via ChangeMan Integration the following step must be added in the compile skeleton(s) in ChangeMan:

```
//RUNTEST EXEC PGM=IAYCLINT,PARM='&SUBSYS,&CMPNAME,&CMPTYPE,&PKGNAME,<nn>,&SYSUID',
// REGION=0M
//STEP1 DD DSN=IAYV502.LOADLIB,DISP=SHR <= IBM AD load library
//COMPN DD DISP=(OLD,PASS),DSN=&&LIST <= ChangeMan Listing Report output
//SYSUDUMP DD SYSOUT=* 
//SYSPRINT DD SYSOUT=* 
//INDCB DD * 
<xxx.xxx.xxx.xxx><><ppppp> 
```

Where <nn> is the return code in case the validation couldn’t be launched, <xxx.xxx.xxx.xxx> is the IP address of the IBM Application Discovery Validation server and <ppppp> is the port.
### Communication Errors

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Invalid LU name or LU does not exist.</td>
</tr>
<tr>
<td></td>
<td><strong>Description:</strong> The LU name provided in the application entry is not defined in the external environment.</td>
</tr>
<tr>
<td></td>
<td><strong>Action:</strong> Correct the application entry to correspond with a valid partner LU alias or system ID. Refer to your support personnel in order to find the valid system identifications.</td>
</tr>
<tr>
<td>02</td>
<td>No free session is available.</td>
</tr>
<tr>
<td></td>
<td><strong>Description:</strong> When starting a conversation Comm/Booster finds that no sessions are available in order to start a conversation. This could happen because of a condition that tasks are hanging on the connection.</td>
</tr>
<tr>
<td></td>
<td><strong>Action:</strong> If tasks are hanging, free the connection by deactivating it or by deleting the tasks that are hanging. Try to determine the cause of hanging tasks (memory, deadlocks etc.). If this is not caused by hanging tasks, check the possibility of increasing the number of sessions.</td>
</tr>
<tr>
<td>03</td>
<td>Terminal options error.</td>
</tr>
<tr>
<td></td>
<td><strong>Description:</strong> Invalid connection definition, the connection was probably defined incorrectly.</td>
</tr>
<tr>
<td></td>
<td><strong>Action:</strong> Contact support personnel in order to check the connection.</td>
</tr>
<tr>
<td>04</td>
<td>Invalid request - internal error.</td>
</tr>
<tr>
<td></td>
<td><strong>Description:</strong> Comm/Booster has issued an invalid APPC request. This might be an internal logic failure.</td>
</tr>
<tr>
<td></td>
<td><strong>Action:</strong> Contact technical support.</td>
</tr>
<tr>
<td>05</td>
<td>Session not bound, allocation failed.</td>
</tr>
<tr>
<td></td>
<td><strong>Description:</strong> Conversation cannot be started because the session is not bound. This could be a configuration problem or an operational problem.</td>
</tr>
<tr>
<td></td>
<td><strong>Action:</strong> If this connection has worked before, contact the network operators in order to activate the connection.</td>
</tr>
<tr>
<td>06</td>
<td>Lost connection.</td>
</tr>
<tr>
<td>07</td>
<td>Lost connection.</td>
</tr>
</tbody>
</table>

### Environment Errors
<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| 11         | Invalid environment request-internal error.  
**Description:** One of the environment modules of Comm/Booster has issued an invalid request.  
**Action:** Contact technical support. |
| 12         | File is disabled.  
**Description:** Comm/Booster has tried to access a disabled file.  
**Action:** Enable all the files of Comm/Booster before attempting to use Comm/Booster. |
| 13         | File not open.  
**Description:** Comm/Booster has tried to access a closed file.  
**Action:** Open all the files of Comm/Booster before attempting to use Comm/Booster. |
| 14         | I/O error on file.  
**Description:** An I/O request has failed to one of the files of Comm/Booster.  
**Action:** Check that the application table file and the log file (if present) are defined correctly and accessible, correct the program and try again. |
| 15         | Record not found.  
**Description:** A record in one of the files was not found. This is probably an internal logic error.  
**Action:** Contact technical support. |
| 16         | Security violation.  
**Description:** The Service platform has rejected the user id and password of this transaction. If the service platform contains a security exit, this exit has rejected the security information. Otherwise, the security features of the service platform have rejected the conversation on security grounds.  
**Action:** Correct the user id and password and re-run the transaction. If the service platform contains a security exit, check that the exit is justified in rejecting the security information. If the service platform supports APPC security (i.e.CICS-RACF) check the security rules to correct the problem. If the user id and password do not match the client program should contain logic to notify the user that he is not logged on correctly. |
| 17         | Data set does not exist.  
**Description:** The application table or log file has not been found.  
**Action:** Check whether the product installation has been successful completed. |
| 18         | Invalid storage length.  
**Description:** An internal logic problem has occurred. This might happen as a result of a storage violation.  
**Action:** Check whether your program has corrupted storage. |
| 19         | Storage not available for **getmain**.  
**Description:** Comm/Booster has attempted to acquire storage but has failed. Check that at least 100K of storage is available for each transaction.  
**Action:** Correct the storage shortage and re-run the transaction. |
<p>| 20         | Transaction id error. |</p>
<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| 21         | End of data on retrieve.  
**Description**: An internal transaction has abended because no parameters were available to it. This is an internal error.  
**Action**: Contact technical support. |
| 22         | Length error.  
**Description**: An internal length error has been detected.  
**Action**: Contact technical support. |
| 23         | Program id error.  
**Description**: Comm/Booster has attempted to start one of its internal programs but the program id does not exist.  
**Action**: Check whether the product installation has been successful completed. |
| 24         | No disk space.  
**Description**: There is not enough disk space on one of the files.  
**Action**: Make sure that enough disk space is available for the applications table and log file. |
| 25         | Duplicate error.  
**Description**: This is an internal logic error.  
**Action**: Contact technical support. |
| 26         | End of file.  
**Description**: This is an internal logic error.  
**Action**: Contact technical support. |
| 27         | ENQ error.  
**Description**: This is an internal logic error.  
**Action**: Contact technical support. |

**Logging Errors**

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| 30         | Invalid logging state.  
**Description**: This is an internal logic error.  
**Action**: Contact technical support. |
| 31         | Invalid function.  
**Description**: This is an internal logic error.  
**Action**: Contact technical support. |
<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| 32         | Record not found.  
**Description:** This is an internal logic error.  
**Action:** Contact technical support. |
| 33         | Invalid function on slave side.  
**Description:** This is an internal logic error.  
**Action:** Contact technical support. |
| 34         | End of chain.  
**Description:** This is an internal logic error.  
**Action:** Contact technical support. |

### Conversation Errors

<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
</tr>
</thead>
</table>
| 42         | Invalid request on first call.  
**Description:** A client or service program has called Comm/Booster with a storage field equal to nulls (beginning of new conversation), but the application request field did not contain a valid request for a conversation initiation. This is most probably a programming error.  
**Action:** Correct the program and re-run the conversation. Refer to chapter 2 for conversation rules. |
| 43         | Error on getting application record.  
**Description:** The application record of the requested service application is not found at conversation initialization, and default entry is not defined.  
**Action:** Check the application table to check whether the application exists or whether a default entry is present. |
| 44         | Server was called after session termination.  
**Description:** A Comm/Booster request was made with an invalid conversation ID.  
**Action:** Correct the program according to the specified protocol. |
| 45         | Actual length greater than buffer length.  
**Description:** The value of actual length in the connection record is greater than the value of buffer length. This is invalid.  
**Action:** Correct the program to enter a consistent size. |
| 46         | Negative buffer size.  
**Description:** The buffer size in the connection record has been initiated to a negative value.  
**Action:** Correct the program to enter a valid buffer size. |
| 47         | Buffer size is over 32500.  
**Description:** The buffer size in the connection record has been initiated to a value above 32500 which is the maximum buffer size. |
<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Action</strong>: Correct the program to enter a valid buffer size.</td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>Conversation state error.</td>
</tr>
<tr>
<td><strong>Description</strong>: A conversation state error has been encountered. The application has issued a request incompatible with the current state. This is probably due to a programming error.</td>
<td></td>
</tr>
<tr>
<td><strong>Action</strong>: Correct the program according to the specified protocol.</td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>Quit received from partner.</td>
</tr>
<tr>
<td><strong>Description</strong>: The partner application has issued a quit request. The conversation has ended and a backout has been performed by Comm/Booster for transactions using level 2 recovery.</td>
<td></td>
</tr>
<tr>
<td><strong>Action</strong>: If this situation is acceptable in the protocol, the application should handle this as a remote quit request.</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>On recovery - record for recovery found in partner log file.</td>
</tr>
<tr>
<td><strong>Description</strong>: This is an internal logic error.</td>
<td></td>
</tr>
<tr>
<td><strong>Action</strong>: Contact technical support.</td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>Bad storage field.</td>
</tr>
<tr>
<td><strong>Description</strong>: This is an internal logic error.</td>
<td></td>
</tr>
<tr>
<td><strong>Action</strong>: Contact technical support.</td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>Invalid version.</td>
</tr>
<tr>
<td><strong>Description</strong>: The version field in the connection record is invalid. Comm/Booster cannot determine the format of the connection record.</td>
<td></td>
</tr>
<tr>
<td><strong>Action</strong>: Correct the program according to the specified protocol.</td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>Storage pointer is bad.</td>
</tr>
<tr>
<td><strong>Description</strong>: The storage field in the connection record is invalid. Comm/Booster cannot find the specified storage. The storage field has probably been overwritten.</td>
<td></td>
</tr>
<tr>
<td><strong>Action</strong>: Correct the program to handle the storage field according to protocol.</td>
<td></td>
</tr>
<tr>
<td>54</td>
<td>Data received is larger than expected.</td>
</tr>
<tr>
<td><strong>Description</strong>: The data received from the remote application is larger than the value in the buffer length field. The data has been returned to the application but was truncated. In this case the conversation is not aborted.</td>
<td></td>
</tr>
<tr>
<td><strong>Action</strong>: Correct the program to specify a correct buffer length field.</td>
<td></td>
</tr>
<tr>
<td>55</td>
<td>Security violation, execution denied.</td>
</tr>
<tr>
<td><strong>Description</strong>: Invalid security information has been provided.</td>
<td></td>
</tr>
<tr>
<td><strong>Action</strong>: Correct the program to specify the correct security information.</td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>On recovery session - complete with controlled exit.</td>
</tr>
<tr>
<td><strong>Description</strong>: Recovery was initiated and completed successfully.</td>
<td></td>
</tr>
<tr>
<td><strong>Action</strong>: Exit the session.</td>
<td></td>
</tr>
</tbody>
</table>

**Workstation Specific Errors**
<table>
<thead>
<tr>
<th>Error Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>70</td>
<td>APPC interface error.&lt;br&gt;&lt;br&gt;<strong>Description:</strong> The APPC interface in the workstation has encountered an error. The APPC interface has probably abended.&lt;br&gt;&lt;br&gt;<strong>Action:</strong> Determine what the problem with the APPC interface is. If the problem reoccurs, contact the vendor of the APPC subsystem.</td>
</tr>
<tr>
<td>71</td>
<td>LU session limit exceeded.&lt;br&gt;&lt;br&gt;<strong>Description:</strong> The number of different APPC sessions has exceeded those allowed by the APPC interface. This is a workstation configuration problem.&lt;br&gt;&lt;br&gt;<strong>Action:</strong> Reduce the number of APPC sessions.</td>
</tr>
<tr>
<td>72</td>
<td>Too Many Conversations.&lt;br&gt;&lt;br&gt;<strong>Description:</strong> The number of ongoing conversations has exceeded the defined maximum that is allowed between the two platforms.&lt;br&gt;&lt;br&gt;<strong>Action:</strong> There may be a need to configure more sessions between the two platforms. If the problem recurs, some transactions may be hanging on the connection. If this is the case, determine the cause of the problem and correct.</td>
</tr>
<tr>
<td>73</td>
<td>Internal Error.&lt;br&gt;&lt;br&gt;<strong>Description:</strong> This is an internal logic error.&lt;br&gt;&lt;br&gt;<strong>Action:</strong> Contact technical support.</td>
</tr>
<tr>
<td>74</td>
<td>Internal Error.&lt;br&gt;&lt;br&gt;<strong>Description:</strong> This is an internal logic error.&lt;br&gt;&lt;br&gt;<strong>Action:</strong> Contact technical support.</td>
</tr>
<tr>
<td>75</td>
<td>Internal Error.&lt;br&gt;&lt;br&gt;<strong>Description:</strong> This is an internal logic error.&lt;br&gt;&lt;br&gt;<strong>Action:</strong> Contact technical support.</td>
</tr>
<tr>
<td>76</td>
<td>Reserved LU is in use.&lt;br&gt;&lt;br&gt;<strong>Description:</strong> The specified logical unit name has been reserved, and in use.&lt;br&gt;&lt;br&gt;<strong>Action:</strong> Do not use a reserved LU name.</td>
</tr>
<tr>
<td>81</td>
<td>Async: connection record not yet arrived.&lt;br&gt;&lt;br&gt;<strong>Description:</strong> A connection record has been passed to the non-blocking interface but the result is not yet available. This happens when the non-blocked application tries to check whether a reply is available yet. This is not necessarily an error and should be handled by the application. The conversation continues.&lt;br&gt;&lt;br&gt;<strong>Action:</strong> The calling program must retry later with the same connection record.</td>
</tr>
<tr>
<td>82</td>
<td>Async: Timeout.&lt;br&gt;&lt;br&gt;<strong>Description:</strong> A timeout has occurred when communicating through the non-blocking interface. This is similar to error type 81.&lt;br&gt;&lt;br&gt;<strong>Action:</strong> The calling program must retry later with the same connection record.</td>
</tr>
<tr>
<td>83</td>
<td>SRVRxT time out.</td>
</tr>
<tr>
<td>Error Code</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>-------------</td>
</tr>
<tr>
<td><strong>84</strong></td>
<td>User canceled conversation “simulated” timeout. &lt;br&gt;&lt;br&gt;<strong>Description:</strong> The user previously defined a simulated timeout which has now been emulated. &lt;br&gt;&lt;br&gt;<strong>Action:</strong> Further processing can be determined by the user.</td>
</tr>
<tr>
<td><strong>90</strong></td>
<td>Applrec not found in application table. &lt;br&gt;&lt;br&gt;<strong>Description:</strong> The application ID refers to an application table record not found in the application table. &lt;br&gt;&lt;br&gt;<strong>Action:</strong> Review the application table and correct as necessary.</td>
</tr>
<tr>
<td><strong>91</strong></td>
<td>Application table missing or Invalid. &lt;br&gt;&lt;br&gt;<strong>Description:</strong> The application table is missing in the path specified by the SRVAPPL specification and in the working directory. &lt;br&gt;&lt;br&gt;<strong>Action:</strong> Specify the SRVAPPL environment variable to point to a valid application table or create a valid application table in your working directory. For more information see chapter 5.</td>
</tr>
<tr>
<td><strong>92</strong></td>
<td>Workstation communication error. &lt;br&gt;&lt;br&gt;<strong>Description:</strong> The connection was lost during the conversation. The most probable cause for this is that the remote application has abended. If this is not the case, the session was deactivated by force. &lt;br&gt;&lt;br&gt;<strong>Action:</strong> Find the cause of the remote application abend and correct the problem. If the remote application was not abended check whether the connection was force deactivated.</td>
</tr>
<tr>
<td><strong>93</strong></td>
<td>Data conversion failed. &lt;br&gt;&lt;br&gt;<strong>Description:</strong> The data received or sent includes characters that cannot be converted from ASCII to EBCDIC or vice versa. &lt;br&gt;&lt;br&gt;<strong>Action:</strong> If the data is binary, correct the program to indicate binary data. Otherwise change the program to send only printable characters.</td>
</tr>
<tr>
<td><strong>94</strong></td>
<td>Conversion of data failed - malformed ASN1 data. &lt;br&gt;&lt;br&gt;<strong>Description:</strong> The data received or sent includes characters that cannot be converted from ASCII to EBCDIC or vice versa. &lt;br&gt;&lt;br&gt;<strong>Action:</strong> If the data is binary, correct the program to indicate binary data. Otherwise change the program to send only printable characters.</td>
</tr>
<tr>
<td><strong>95</strong></td>
<td>Data (de-) compression failed. &lt;br&gt;&lt;br&gt;<strong>Description:</strong> This is an internal logic error. &lt;br&gt;&lt;br&gt;<strong>Action:</strong> Contact technical support.</td>
</tr>
<tr>
<td><strong>96</strong></td>
<td>Timeout maximum entries reached. &lt;br&gt;&lt;br&gt;<strong>Description:</strong> The user has initiated a number of timeout requests in excess of the storage limits defined by Comm/Booster. &lt;br&gt;&lt;br&gt;<strong>Action:</strong> Contact technical support.</td>
</tr>
</tbody>
</table>
Documentation Notices for IBM Application Discovery

This edition applies to version 5.0.5 of IBM Application Discovery with the corresponding fix packs.


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