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AIS+ EE

Advanced Image Solution+ Enterprise Edition

Version 1.0

Client Toolkit

**Installation and
Systems Programmer Guide**

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CICS	DB2	OS/390
TSO	ImagePlus	FAF
ISPF	IODM	FWA

Software Prerequisites for AIS+ EE 1.0 Client Toolkit

The following software components and release levels are required for the AIS+ Client Toolkit:

- OS/390 2.8 or higher
- Transaction Server 1.3 or higher
- DB2 6.1 or higher
- Content Manager ImagePlus 3.1 or higher
- AIS+ front end application

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Product Abbreviations

The following is an approved abbreviation for the Syscom AIS+ Enterprise Edition product name used in this publication and the full product name to which the abbreviation refers:

- AIS+** Is an abbreviation for Syscom AIS+ Enterprise Edition
- AIS+ EE** Is an abbreviation for Syscom AIS+ Enterprise Edition

Introduction

Welcome to SYSCOM's AIS+ EE 1.0 Client Toolkit software. This manual will guide you through the installation and verification process.

The Client Toolkit provides a set of API's that integrate with ImagePlus and FAF. Communications to the mainframe are accomplished via TCP/IP or APPC over SNA.

Product Overview

The Client Toolkit provides the following workstation API's:

- **Document List:** Returns a list of documents based on the arguments passed from the workstation API (i.e., Folder ID, Document Type, Tab Name, Start Date, End Date).
- **Folder List:** Returns a list of folders, based on full or partial primary and secondary index values passed from the workstation API.
- **Folder Note List:** Returns a list of folder notes based on the arguments passed from the workstation API (i.e., Folder ID, Start Date and Time, End Date and Time).
- **Folder Note View:** Returns a folder note based on the folder note information passed from the workstation API (i.e., Note Time Stamp).
- **Folder Note Add:** Adds a folder note to the FAF application based on the information passed from the workstation API (i.e., Short Description, Note Text).
- **Folder Note Delete:** Deletes a folder note based on the information passed from the workstation API (i.e., Note Time Stamp).
- **Note List:** Returns a list of folder notes based on the arguments passed from the workstation API (i.e., Folder ID, Start Date and Time, End Date and Time).
- **Document View:** Displays the documents selected from Document List or based on the passed values from the workstation API (i.e., Folder ID, Document Type, Tab Name, Start Date, End Date).
- **Document Print:** Prints the documents selected from Document List or based on the passed values from the workstation API (i.e., Folder ID, Document Type, Tab Name, Start Date, End Date).
- **Document Fax:** Fax documents selected from the Document List.
- **Folder Update:** Updates the folder primary index and secondary indexes based on the information passed from the workstation API (i.e., Folder ID, Secondary Index 1 (one), Secondary Index 2 (two) and Secondary Index 3 (three)).
- **Document Copy/Move:** Copies or moves a document from one folder to another based on the document information passed from the workstation API.
- **Document Delete/UnDelete:** Deletes or undeletes (if applicable) a document from one folder based on the document information passed from the workstation API.

- **Get Work:** Provides the ability to present document(s) to the operator that has been assigned to work on them. The documents are presented for one Folder ID at a time.
- **List Queue:** Allows for the list of queued items for a particular route unit, folder ID, operator assigned, or route code.
- **Work Management:** Provides workflow functions for a document or a batch of documents such as route, hold, assign, un-assign, and drop.
- **Operator Assignment:** Provides the ability to add or remove work queues (route code/unit code) for a given operator.
- **Document History:** Allows for the viewing of history events associated with a document.
- **Document Modify:** Allows for the modification and update of object specific fields such as Receive Date, Priority, Security Class, Object Description, and routing data.
- **Operator Profile:** Provides the ability to add new operators to your application, modify profiles of existing operators and delete operators which are no longer needed.
- **Form Profile:** Provides the functions that enable you to view, update or add a form profile.

Installation Process Overview

There is certain site-specific information (i.e. system libraries, DB2 authorities, data set naming standards) that you will need to have available during the installation process. Write your site-specific information in the table below to use as a reference throughout the installation process.

JCL Parameter	Description	Your Company's Value
AIS+ EE SOURCE LIBRARY	For Client Toolkit source members	
AIS+ EE OBJECT LIBRARY	For Client Toolkit Object modules.	
AIS+ EE CICS LOAD LIBRARY	For Client Toolkit CICS load modules.	
AIS+ EE COPY LIBRARY	For Client Toolkit Copybook modules.	
AIS+ EE BATCH LOAD LIBRARY	For Client Toolkit Batch load modules.	
AIS+ EE DBRM LIBRARY	For Client Toolkit DBRM modules.	
AIS+ EE INSTALL BASE LIBRARY	For Client Toolkit install modules.	
DB2 LOAD LIBRARY	Your DB2 load library that contains DB2's IKJEFT01 program	
DB2 RUNTIME LIBRARY	Your DB2 runtime library. If the library is concatenated in the system link, then this entry is not required.	
DB2 DBRM LIBRARY	Your DB2 system DBRM library	
DB2 SUBSYSTEM ID	The 4 character DB2 subsystem ID Client Toolkit will be running under	
DB2 VERSION	The DB2 version Client Toolkit will be running under	
VCAT CATALOG	The catalog Client Toolkit will be running under	
SQL OWNER ID	The DB2 administrative owner in building the Client Toolkit database and associated components	
STOGROUP NAME (DATA)	The storage group that will contain the Client Toolkit DB2 data	
STOGROUP NAME (INDEX)	The storage group that will contain the Client Toolkit DB2 indexes	
STOGROUP VOLSERS (DATA)	The DASD volumes used by the DATA STOGROUP	
STOGROUP VOLSERS (INDEX)	The DASD volumes used by the INDEX STOGROUP	
DATABASE NAME	The database name you will assign to Client Toolkit	

JCL Parameter	Description	Your Company's Value
FAF API VERSION	The IBM FAF API version Client Toolkit will be running under	
FAF DBRM LIBRARY	The FAF DBRM library	
FAF OWNER ID	The DB2 Administrator owner used when the FAF tables were created.	

Depending upon your site's policies and standards, one or more individuals may be required to install this product. The installation procedure is relatively simple and straight forward. If you are the one individual who is tasked to perform the installation, you must have the ability and authority at either the DB2 SYSADM (build everything) or DBADM (build all but the storage group) level. We will discuss this further when installing the Client Toolkit database. You will also need the ability to add new IBM CICS PPT, PCT, and RCT table entries to the Client Toolkit-targeted IBM CICS region. But foremost, you need access to IBM TSO to perform these functions.

Unload Software from the Tape

The first file on the tape contains the installation JCL job stream to unload the tape's files into the libraries you will target to eventually hold the Client Toolkit software. The sample JCL below should be coded and run to extract the first file into a PDS member capable of being edited.

```
//jobname JOB (accounting),'label',CLASS=?,
//  MSGCLASS=?,NOTIFY=?,REGION=?
//GENER EXEC PGM=IEBGENER
//SYSUT1 DD DSN=FLXEE10.UNLOAD.JCL,
//  DISP=OLD,
//  LABEL=(1,SL),
//  UNIT=?,
//  VOL=SER=FLXEE1,
//  DCB=(LRECL=80,RECFM=FB,BLKSIZE=3120)
//SYSUT2 DD DSN=?,
//  DISP=?,
//  SPACE=?,
//  UNIT=?,
//  DCB=(RECFM=?,LRECL=?,BLKSIZE=?)
//SYSIN DD DUMMY
//
```

The installation JCL stream should now be in a position to be modified. As you will see, the stream is a lengthy, yet simple set of PROCs. The FLXLOAD JCL stream will load all members into their correct location after allocating the following datasets:

- An Installation library named ***FLXEE10.INSTLIB*** with the following characteristics:
DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=3120)
SPACE=(3120,(250,250,30),,,ROUND)
- A Copybook library named ***FLXEE10.CPYLIB*** with the following characteristics:
DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=3120)
SPACE=(3120,(500,250,60),,,ROUND)
- A Source library named ***FLXEE10.SRCLIB*** with the following characteristics:
DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=3120)
SPACE=(3120,(500,250,60),,,ROUND)
- A SPUFI library named ***FLXEE10.SPUFILIB*** with the following characteristics:
DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=3120)
SPACE=(3120,(250,250,07),,,ROUND)
- A DBRM library named ***FLXEE10.DBRMLIB*** with the following characteristics:
DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=3120)
SPACE=(3120,(500,250,50),,,ROUND)
- A Object library named ***FLXEE10.OBJLIB*** with the following characteristics:
DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=6160)
SPACE=(6160,(1500,250,80),,,ROUND)

Please review the JCL and make any modifications necessary to conform to your site's naming conventions and standards. The bolded "**FLXEE10**" above is defaulted in the JCL and should be modified to conform to your sites high-level qualifier standards. If your site does not permit this form of dataset allocation, you will have to modify the 'DD' statements and space parameters accordingly.

After all of the modifications are completed, submit the FLXLOAD job and verify that each step completes with a condition code of zero (0). If a condition code other than zero is encountered, correct the problem and rerun the job. If you are building the PDSs within the job, delete and un-catalog them first, otherwise you may experience additional JCL errors upon the next execution.

DB2 Administration

This section assumes that the FAF API database and AIS+ EE has been fully installed. The FAF API database structure allows for multiple tablesets for some of the larger tables. If necessary, refer to the [IBM SAA ImagePus Folder Application Facility MVS/ESA Application Programming Interface System Programmer's Guide](#) for a more detailed explanation of tablesets. There are three options available to assure that the Client Toolkit takes advantage of these tablesets.

- (1) Create all tablesets for the FAF API tables. For the tablesets that will not be used, you should set them up with minimal space. This is the suggested option because it only requires altering the space on the tables and indices within the tableset when creating an application with a new tableset. An additional advantage is dropping and creating synonyms or rebinding any plans will not be necessary.
- (2) Create only the tablesets that you will be using and create synonyms for the other tablesets. This option is best if you cannot spare the minimum space required to create all the tablesets. Unfortunately, the synonyms must point to existing tables. Therefore, there is a risk of someone setting up a test application pointing to an assumed test tableset that is really a production tableset.
- (3) Create only the tablesets that you will be using and specify `VALIDATE(RUN)` on all the binds. This option will cause all DB2 validations to occur at run time, instead of bind time, which will detrimentally affect performance.

Client Toolkit DB2 tables

There are jobs and SPUFI members that need to be executed to install the Client Toolkit database architecture. These jobs should be modified to conform to your site's job card requirements and to point to the appropriate DBRM, DB2 system and application libraries. In addition, the space and bufferpool assignments must be modified to meet your application's requirements. For detailed information on the Client Toolkit tables, refer to Appendix B of this manual.

The table below lists all of the members and their functions and includes a column to check off when each task is completed (this will assure that no task is missed accidentally). Under the Job Function heading, there are also some modification issues that should be addressed for each individual member. These tasks are not designed to run parallel and must run in the sequence displayed on the chart.

After all of the modifications are completed, submit each job and verify that each step completes with a condition code of zero. You should also walk through the output to verify that all DB2 components were built correctly. Potential non-zero condition codes will appear if you are not authorized to perform all of the functions, rerun the job without first deleting the previously established database contents, or your supplied parameters are not permissible for your site's standards.

Create DB2 tables

NAME	FUNCTION	EXECUTE SUCCESSFUL (Y)																														
FLXVIEWS	<p>This is a SPUFILIB member that creates views for the Client Toolkit on the following AIS+ front end tables:</p> <table border="0"> <tr> <td>AIS+ Table</td> <td>Client Toolkit View</td> </tr> <tr> <td>AISAPPL</td> <td>FLXAPPL</td> </tr> <tr> <td>AISTRAN</td> <td>FLXTRAN</td> </tr> <tr> <td>AISOPPF</td> <td>FLXOPPF</td> </tr> <tr> <td>AISFLDR</td> <td>FLXFLDR</td> </tr> <tr> <td>AISTABS</td> <td>FLXTABS</td> </tr> <tr> <td>AISDCMT</td> <td>FLXDCMT</td> </tr> <tr> <td>AISMSG</td> <td>FLXMSG</td> </tr> <tr> <td>AISGOPR</td> <td>FLXGOPR</td> </tr> <tr> <td>AISGRUP</td> <td>FLXGRUP</td> </tr> <tr> <td>AISDLOG</td> <td>FLXDLOG</td> </tr> <tr> <td>AISDRSN</td> <td>FLXDRSN</td> </tr> <tr> <td>AISDTAB</td> <td>FLXDTAB</td> </tr> <tr> <td>AISCOLL</td> <td>FLXCOLL</td> </tr> <tr> <td>AISRLTT</td> <td>FLXRLTT</td> </tr> </table>	AIS+ Table	Client Toolkit View	AISAPPL	FLXAPPL	AISTRAN	FLXTRAN	AISOPPF	FLXOPPF	AISFLDR	FLXFLDR	AISTABS	FLXTABS	AISDCMT	FLXDCMT	AISMSG	FLXMSG	AISGOPR	FLXGOPR	AISGRUP	FLXGRUP	AISDLOG	FLXDLOG	AISDRSN	FLXDRSN	AISDTAB	FLXDTAB	AISCOLL	FLXCOLL	AISRLTT	FLXRLTT	
AIS+ Table	Client Toolkit View																															
AISAPPL	FLXAPPL																															
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AISDRSN	FLXDRSN																															
AISDTAB	FLXDTAB																															
AISCOLL	FLXCOLL																															
AISRLTT	FLXRLTT																															
FLXVIEWW (WorkFlow)	<p>This is a SPUFILIB member that creates FluxWorks front end tables as views on the following AIS+ front end tables:</p> <table border="0"> <tr> <td>AIS+ Table</td> <td>Client Toolkit View</td> </tr> <tr> <td>AISWORK</td> <td>FLXWORK</td> </tr> <tr> <td>AISUNIT</td> <td>FLXUNIT</td> </tr> <tr> <td>AISUNRC</td> <td>FLXUNRC</td> </tr> <tr> <td>AISOPAS</td> <td>FLXOPAS</td> </tr> </table>	AIS+ Table	Client Toolkit View	AISWORK	FLXWORK	AISUNIT	FLXUNIT	AISUNRC	FLXUNRC	AISOPAS	FLXOPAS																					
AIS+ Table	Client Toolkit View																															
AISWORK	FLXWORK																															
AISUNIT	FLXUNIT																															
AISUNRC	FLXUNRC																															
AISOPAS	FLXOPAS																															
BFLXELOG	This job defines the tablespace, and creates the table and index for the Client Toolkit Error Log table.																															
BFLXEXIT	Define the tablespace, and create the table and index for the Client Toolkit User Exit table. This table is created so that the FWA (IBM Folder WorkFlow Application) customers can utilize their existing user exits. An entry in the FLXEXIT table is not required for AIS+ applications, but the FLXEXIT table <u>must be created</u> and defined with minimal space so that the bind jobs complete successfully.																															
BFLXPROG	Define the tablespace, and create the table and index for the Client Toolkit Program Function Codes table.																															

BFLXWKST or VFLXWKST	If Fax Router is installed, verify that table FAXWKST has been created. If table FAXWKST exists, run SPUFILIB member VFLXWKST to create the fax server IDs table FLXFXWK as a view on table FAXWKST. If FaxRouter is not installed or the FAXWKST table does not exist, run job BFLXWKST to create the fax server IDs table FLXFXWK.	
GRANT	This is a SPUFILIB member that can be used to grant access to the Client Toolkit tables.	
GRANTWK (WorkFlow)	This is a SPUFILIB member that can be used to grant access to the Client Toolkit tables for WorkFlow.	
CRESYNON	This is a SPUFILIB member that can be used to create SYNONYMS for the Client Toolkit tables.	
CRESYNW (WorkFlow)	This is a SPUFILIB member that can be used to create SYNONYMS for the Client Toolkit tables for WorkFlow.	

Insert Data in the DB2 tables

After all the tables are successfully created, run the following SPUFI members to insert data in the tables specific to the Client Toolkit. Refer to Appendix B for detailed information on each column in the Client Toolkit tables.

JOB NAME	JOB FUNCTION	EXECUTE SUCCESSFUL (✓)
INSPROG	Insert the program function codes. Do not modify these values.	
INSMMSG	Insert the Client Toolkit error message codes. If you will be passing any message codes from the user exits, they must be inserted into the FLXMSG table. It is recommended that the first three characters of these message codes are not 'FLX'.	
INSEXIT	Insert the exit names and exit flags for each application.	

CICS Administration

Included in your installation library are several members used to set up the AIS+ EE 1.0 Client Toolkit in your CICS region. Sample JCL is provided to load CICS definitions (includes all PPT and PCT entries for the Client Toolkit). Your communications protocol will determine the member(s) that should be used to install your PPT, PCT and RCT entries.

1. PPT and PCT Entries

In an SNA environment (APPC), use member FLXCSDAP. This member contains PPT and PCT entries for the APPC communications program, FLAPPC1P.

In a TCP/IP environment, use member FLXCSDTC. This member contains PPT and PCT entries for the TCP/IP communications program, FLTCIP1P.

In either environment, use member FLXCSDWK for workflow implementation.

2. RCT entries

In an SNA environment (APPC), use member FLXRCTA. This member creates an entry for transaction FLAP and associates it with the plan for the APPC communications program, FLAPPC1P. In a TCP/IP environment, use member FLXRCTT. This member creates an entry for transaction FLIP and associates it with the plan for the TCP/IP communications program, FLTCIP1P.

The FLXRCT* member should be included in your normal RCT stream and reassembled to include the entries required for the AIS+ Client Toolkit.

Include the Client Toolkit CICS load library in your CICS startup deck. It is recommended to install the Client Toolkit in the same region where AIS+ EE is installed.

Host Software Installation

Modify the Included JCL

The AIS+ EE 1.0 Client Toolkit software is shipped with sample JCL to linkedit the object modules into your AIS+ load libraries. The sample JCL called LINKCICS is located in the INSTALL dataset. Modify the members to conform to your site's JCL standards, including job card requirements and references to the appropriate system and application libraries.

The sample source modules for the user exits are provided.

Compiler Options

The Client Toolkit software is generated using the following compiler options:

DB2 SQL Precompiler options:

- APOST
- APOSTSQL
- FLAG(I)
- HOST(COB2)
- LINECOUNT(60)
- MARGINS(8,72)
- ONEPASS
- OPTIONS
- PERIOD
- NOSOURCE
- STDSQL(NO)
- SQL(DB2)
- NOXREF

NOTE: If your installation defaults are other than ISO, please include the following precompiler options as well:

- DATE(ISO)
- TIME(ISO)

IBM VS COBOL II options:

- NOADV
- APOST
- AWO
- BUFSIZE(4096)
- NOCMPR2
- COMPILE
- DATA(31)
- NODBCS
- NODECK
- NODUMP
- NODYNAM
- NOEXIT
- NOFASTSRT

- NOFDUMP
- FLAG(I)
- NOFLAGMIG
- NOFLAGSAA
- NOFLAGSTD
- LANGUAGE(EN)
- LIB
- LINECOUNT(60)
- NOLIST
- NOMAP
- NONAME
- NONUMBER
- NUMPROC(PFD)
- OBJECT
- OFFSET
- NOOPTIMIZE
- OUTDD(SYSOUT)
- RENT
- RESIDENT
- SEQUENCE
- SIZE(MAX)
- SOURCE
- SPACE(1)
- NOSSRANGE
- NOTERM
- NOTEST
- TRUNC(OPT)
- NOVBREF
- NOWORD
- XREF(FULL)
- ZWB

Link Edit Parameters:

- AMODE(31)
- RMODE(ANY)

Module Compilation

- If user exits will be used, either modify the source stub members provided or create copies of the members and modify them.
- Submit the COMPCICS JCL stream to compile any customized exit members. This member contains a step for DB2 precompiling, so if the user exits have DB2 access, use this job for them as well. If the user exits do not have DB2 access, make a copy of this JCL member, remove the DB2 precompile step, and submit for each of the non-DB2 exits.

Module Linkedit

- Assure that all object modules have been successfully unloaded from the files provided. Refer to Appendix A of this manual for a list of modules.
- Run jobs LINKCICS located in the install library. These jobs will link all the modules in the application. Make sure that the JCL streams have been modified prior to running them to conform to your shop standards. **Be sure to only include FLAPPC1P member if using APPC or FLTCIP1P if using TCP/IP.**
- Additionally, if running workflow, the link member LINKWORK must also be run to add the workflow programs.

Bind DB2 Plans

If	Run Plan	Successful()
APPC/Workflow	BNDCWA21	
APPC/WF/FAX	BNDFWA21	
APPC no WF/ no Fax	BNDCIA21	
APPC/FAX no Workflow	BNDFIA21	
TCPIP/Workflow	BNDCWT21	
TCPIP/WF/FAX	BNDFWT21	
TCPIP no WF/ no Fax	BNDCIT21	
TCPIP/FAX no Workflow	BNDFIT21	

- Update member PACKAUTH in the install library to adhere to your shops standards. Use DB2 interactive SPUFI to run SPUFILIB member PACKAUTH. This member will set up a package collection and grant authority to the packages in this collection.

Grant DB2 Plans

- Run SPUFI member GRANTPLN found in the SPUFILIB library. Depending on whether APPC or TCP/IP is used, uncomment the appropriate GRANT statement and execute. Plan FLAPPC1P is used for APPC and plan FLTCIP1P is used for TCP/IP.

VTAM LU and Mode Definitions

The AIS+ EE GUI Client can communicate with the AIS+ EE Client Toolkit host modules that reside in the FAF region via APPC communication protocol. The Client Toolkit uses dependent LU definitions with single session connections between CICS regions and the workstation DLL. Refer to Appendix E of this manual for a sample VTAM switched node definition. This configuration should be used as a sample only. Each site should create a PU definition that conforms to site standards and practices.

TCP/IP Configuration

In order for the AIS+ EE GUI Client or Web Client to communicate with the AIS+ EE Client Toolkit on the host, the CICS TCP/IP Socket Interface must be configured and running in the same CICS region where ImagePlus FAF and AIS+ EE reside. Detailed instructions for installation are available in the IBM manual *TCP/IP for MVS: CICS TCP/IP Socket Interface Guide and Reference*. Once the installation jobs have been run, the socket configuration can be verified by running EZAC (socket configuration transaction).

Three listener parameters are of particular importance to the Client Toolkit TCP/IP environment:

- PORT – This represents the port number the CICS Listener will use for accepting connections.
- TRANTRN – Specify YES. Yes indicates that the transaction code from the Transaction Initial Message should be translated from ASCII to EBCDIC.
- TRANUSR - Specify YES. Yes indicates that the user data from the Transaction Initial Message should be translated from ASCII to EBCDIC.

Once installed, the TCP/IP socket startup transaction EZAO should be executed. This will bring up the CICS TCP/IP Socket Interface in the CICS region. This can be verified by running the CICS active task list command, “CEMT I TASK”, to make sure that the socket listener is up and running. The socket listener transaction, commonly known as CSKL, will be listed as a task in the task list. Please note that the configuration of the CICS TCP/IP Socket Interface should be done in both the FAF & ODM regions.

See IBM's *TCP/IP for MVS: CICS TCP/IP Socket Interface Guide and Reference* for more details.

ODM Configuration

The IODM Workstation Configuration Table (IDWKCFTB) identifies characteristics about each image workstation associated with the Object Distribution Manager (ODM). There must be an entry in this table for each TCP/IP-connected workstation.

See IBM's *ImagePlus Object Distribution Manager MVS/ESA System Programmer's Guide* for more details.

Security Considerations

In a RACF environment, a universal access authority (UACC) of read must be granted for the Client Toolkit TCP/IP communications transaction, or FLIP. In tern, FLIP must have authority to access the CICS TCP/IP socket listener transaction, commonly known as CSKL. Finally, CSKL must have authority to access the transactions required to support the CICS TCP/IP Socket Interface: EZAC, EZAO and EZAP.

For RACF, see IBM's *OS/390 Security Server* manual for more details.

Workstation Installation

System Requirements

10 MB Drive Space
64 MB Memory
200Mhz or higher CPU

Installation Process

Run the program `x:\Setup.exe` where `x` is the drive location where the install program is located. A series of screens will appear to guide the user through the installation process. Each screen is not illustrated here, only those screens that require user input.

User and Company Name

When this screen appears, you can customize the user and company information.

Installation Location

The next screen will ask for the installation directory for the application.

Setup Type

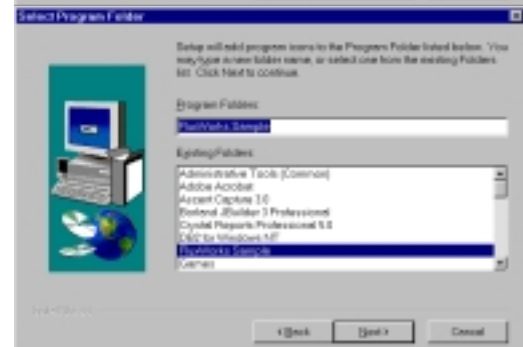
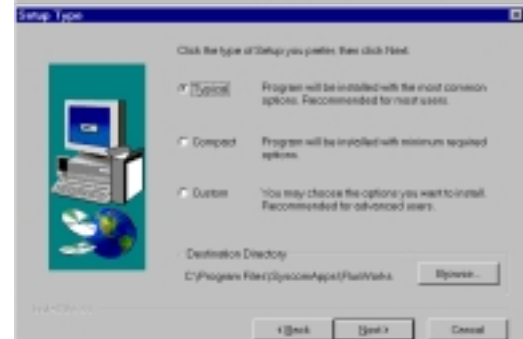
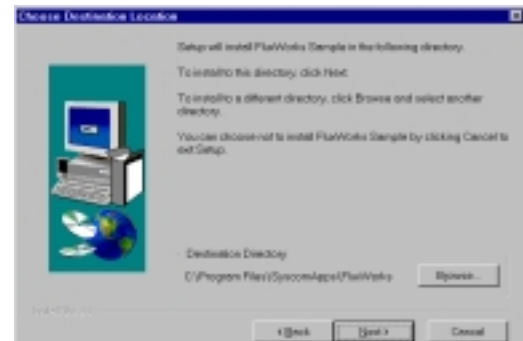
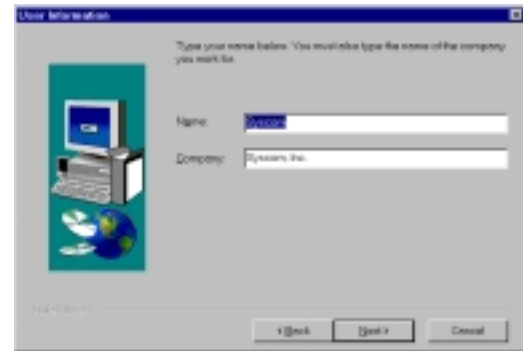
Generally, you will want to select a **Typical** install. A Typical install includes the DLLs, OCX, sample code and the Comm test application. A **Compact** install will only install the DLLs and OCX file without any of the sample code. The **Custom** install provides you the option of what to install with the setup. The **Application** group *must* be installed for the application to function properly.

Select Program Folder

This is the last step in the installation, simply accept the default if you want the application to go into the Fluxworks Sample group. To place the application in a different group, simply select the other group from the list and click the Next button.

Summary Screen

If all of the options appear correct, press the Next button on this screen and the application will begin its install. Once the installation is complete, the configuration program will automatically run.

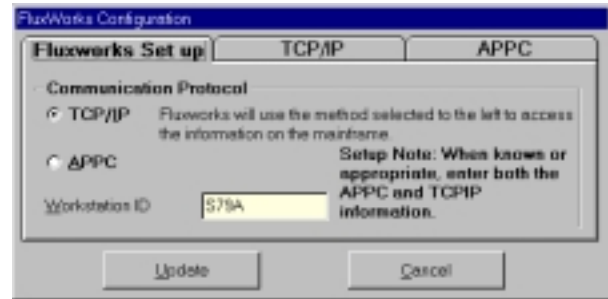


Configuration Program

The configuration program is used to set up the Client Toolkit registry settings so the application can function properly.

Client Toolkit Set up Tab

On this tab, indicate the method of communication with the host (either APPC or TCP/IP) and enter the workstation ID required by the ODM region to return images to the workstation. You will need your host System Administrator to provide you with this information.

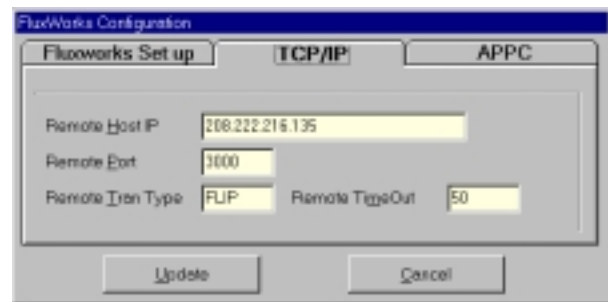


TCP/IP Tab

On this tab, enter the host's IP address where Imageplus/390 resides. Enter the port number of the ImagePlus FAF and Client Toolkit CICS region.

Enter the transaction name for the host Client Toolkit TCP/IP communication program. By default, the transaction name is FLIP.

The Remote Time Out measures the amount of seconds the Client Toolkit workstation communication program will wait for a response from the host.



APPC Tab

This tab has only one field, the Symbolic Destination Name required for the APPC communication. The symbolic destination name must match the side information table name in the APPC communication software being used: for example, WallData Rumba, Attachmate and Pcomm.

When all of the information is entered, click the Update button and the information will be updated in the registry.



APPC Setup

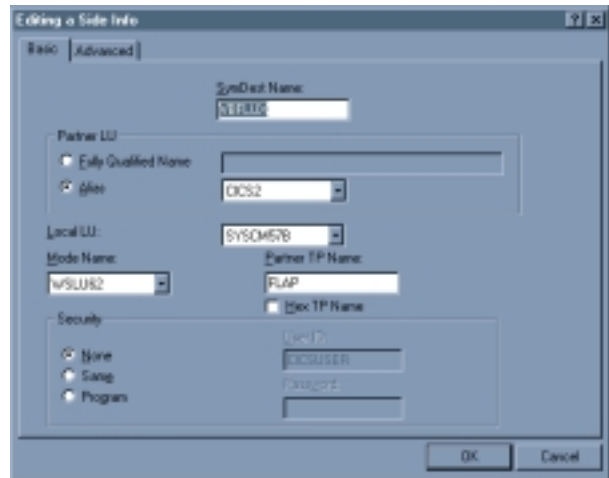
Basic Side Information

The **SymDest Name** should match the value that was entered as the **Fluxworks SDN** entered on the APPC tab of the configurator.

The Partner LU **Alias** should match the ImagePlus FAF region on the mainframe where the Client Toolkit resides.

The **Local LU** is the LU assigned to the workstation for connection to the ImagePlus FAF region.

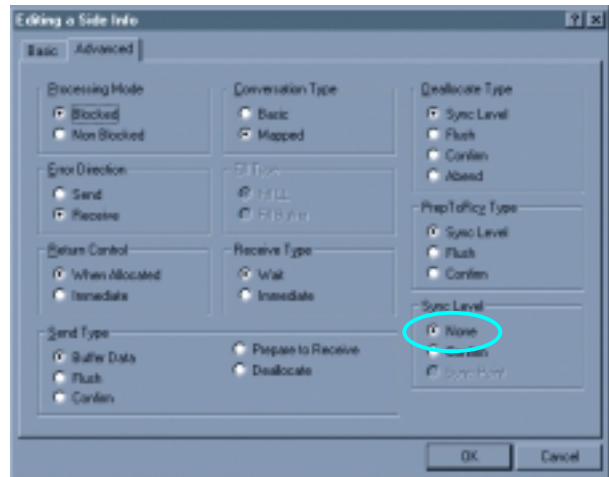
The **Mode Name** to be used for the VTAM connection to the mainframe.



Advanced Side Information

With the exception of the **Sync Level**, the defaults should be accepted.

Set the **Sync Level** to **None**.



These screens are from a RUMBA configured workstation, the user's actual screens may differ depending upon the version and communication package used.

Web Installation

See the AIS+ EE Web Client Installation Guide.

User Exits

Customer Data Exit

Introduction

The *AIS+ Customer Data Exit* is used to modify folder and document information based upon customer specific requirements. The customer data exit can also be used to access a folder ID with an alternate key.

Note: The format of the *AIS+ Customer Data Exit* copybook has been modified in AIS+ EE 1.0 to give users more flexibility in accessing data from subsequent exit calls. Therefore, you must be sure to compile your customized exit with the EE version of the copybook.

Access

The supplied sample exit (AIEX001P) is accessed by various Client Toolkit functions through the use of the CICS LINK command:

- Document List
- Note List
- Note Add
- Folder Update
- Document Copy/Move
- Work Management
- Get Work
- Document History

The customer exit name can be supplied in the Client Toolkit User Exit table (FLXEXIT). The FLXEXIT table will also contain a flag that indicates whether the front-end application is AIS+ or FWA. The value of this flag will determine the data area being passed. The flag can also be set so that the customer data exit is not called.

Program Processing Logic

The exit has three (3) different options that range from 0 to 2. The option will determine the information passed to the exit, the type of process to be performed, and the information to be passed back to the calling program.

OPTION CODE	DESCRIPTION
0	Determines whether the folder can be accessed. This option also permits the modification of the folder ID. The exit is called before any validations are made against the front-end tables.
1	Determines whether the folder can be accessed based on some additional information passed. The exit is called after the folder is successfully validated against the front-end tables.
2	Permits the modification or addition of folder information when creating new folders in the document copy/move function.

The installation of the AIS+ application requires profiles to be established for forms and folders prior to their being used by the application. The profiles represent a base default for respective items. The *AIS+ Customer Data Exit* can be used to further customize information beyond the default profile information. The information that will be returned from the exit will depend on the option passed.

Each data field which may be changed has an associated modification flag field. When the flag contains the value one (1), the calling program recognizes that the data field has been changed and handles it accordingly.

The exit will also return a code value indicating what the calling program should do upon receiving control back from the exit.

Return Code	Process
00	Proceed as normal as no changes were made.
01	Proceed as normal, but user fields have been modified.
12	Stop processing function as an error has been encountered. The message code to be used in the display is contained in the exit's message code field.

The exit must set the parameter's flag to one (1) if the value in the parameter is changed and is to be used by the calling program. The layout of this structure is contained in the COBOL copybook AILCSDTA.

PARAMETER NAME	OPTION CODE	FORMAT	I/O	DESCRIPTION
Application ID	0,1	Bin (2)	I	The application ID code identifies the application from which the exit is being called.
Folder ID	0,1	Char (26)	I/O	The folder ID field contains the unique identifier of the folder in the application
Folder ID Flag	0,1	Char (1)	O	The folder ID flag can have two values: 0 - Folder ID field unchanged 1 - Folder ID field changed
Folder ID Length	0,1	Bin (2)	I/O	The folder ID length field contains the actual length of the folder ID.
User Security Class	1,2,3,4,5	Char (2)	I	The user security class field contains the security class value assigned to the user
Language ID	1	Char (3)	I	The language ID field contains the identifier of the language used to communicate with the user.
Message Code	0,1,2,3, 4,5	Char (8)	O	The message code field contains the message code generated by the user exit when the return code is 12.
Option Code	0,1,2,3, 4,5	Char (1)	I	The option code can be set to a value of 0 or 1. The FluxWorks calling program tells the exit what to do based on the value of the option code.
Return Code	0,1,2,3, 4,5	Num (2)	O	The return code must be set to one of the following values that controls the subsequent processing: 00 - Continue processing 01 - Continue processing. Use the values updated by the exit. 12 - Stop processing this function and display a message.
User ID	1,2,3,4,5	Char (8)	I	The user ID field contains the ID that identifies the user to the FluxWorks application.

Function Security Exit

Introduction

The *AIS+ Client Toolkit Function Security Exit* is used to further validate an operator's access to a specific function.

Access

The supplied sample function security exit (FLEX001P) is accessed by all the Client Toolkit functions, except the host communications program through the use of a CICS LINK command.

Program Processing Logic

The function security exit passes the signed on user information and the code of the function that is requested from the workstation. The function code is 4 bytes long and is stored in the DB2 table FLXPROG. Currently, the contents of this table are as follows:

FLUX_FUNCTION_CODE	FLUX_PROGRAM_NAME	FLUX_PROGRAM_DESC
0001	FLFD003P	FOLDER LIST BY TYPE
0003	FLNT001P	FOLDER NOTE LIST
0005	FLNT004P	FOLDER NOTE ADD
0007	FLNT003P	FOLDER NOTE DELETE
0009	FLNT002P	FOLDER NOTE VIEW
0011	FLDC001P	DOCUMENT LIST
0013	FLDC002P	DOCUMENT VIEW
0015	FLDC003P	DOCUMENT PRINT
0017	FLFD002P	FOLDER LIST BY ID
0019	FLFX001P	DOCUMENT FAX
0021	FLSO001P	SIGN-ON
0023	FLSO002P	APPLICATION SELECT
0025	FLFD006P	FOLDER UPDATE
0027	FLDC004P	DOCUMENT COPY/MOVE
0029	FLDC005P	DOCUMENT DELETE/ UNDELETE
0031	FLSA002P	OPERATOR ASSIGNMENT
0033	FLDC006P	DOCUMENT HISTORY
0035	FLWM001P	GET WORK
0037	FLWM003P	WORK MANAGEMENT
0039	FLDC007P	DOCUMENT MODIFY
0041	FLWM002P	LIST QUEUE
0043	FLSA003P	OPERATOR PROFILE
0045	FLSA004P	FORM PROFILE

The exit will also return a return code value indicating what the calling program should do upon receiving control back from the exit.

Return Code	Process
00	Proceed as normal as no changes were made.
12	Stop processing function as an error has been encountered. The message code to be used in the display is contained in the exit's message code field.

Parameter List Structure

The table below defines the fields (format and usage) used by the *Function Security Exit*. The layout of this structure is contained in the COBOL copybook FLXSCRTY. The value of the function code is passed in the SCRTY-FLUX-FUNCTIONCD field.

PARAMETER NAME	FORMAT	I/O	DESCRIPTION
Application ID	Bin (2)	I	The application ID code identifies the application from which the exit is being called. The application ID code is not passed to the security exit from the Sign-on function.
User ID	Char (8)	I	The User ID signed on to FluxWorks
FluxWorks Function Code	Char (4)	I	The function code that identifies the function requested by the workstation program.
Folder Security Class	Char (2)	I	The folder security class field contains the security class assigned to the folder ID. Note: The folder security class will not be passed from the following functions: <ul style="list-style-type: none"> • Sign-on • Application Selection • Folder List
User Security Class	Char (2)	I	The user security class field contains the security class value assigned to the user. The User Security class is not to the security exit from the Sign-on and the Application Selection functions.
Message Code	Char (8)	O	The message code field contains the message code generated by the user exit when the return code is 12.

Return Code	Num (2)	O	The return code must be set to one of the following values that controls the subsequent processing: 00 - Continue processing 12 - Stop processing this function and display a message.
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Prefetch Exit

Introduction

The *AIS+ Prefetch Exit* can be used to determine whether an image needs to be pre-fetched prior to executing a view or print request.

Access

The supplied sample exit (AIEX015P) is accessed by Client Toolkit Document View and Document Print functions. A data area is passed between the exit and the calling program to allow the calling program to supply and receive integral data.

Program Processing Logic

The exit has three (3) different options ranging from 1 to 3. The option will determine the information passed to the exit, the type of process to be performed, and the information to be returned.

Option Code	Description
1	This option will process at the <i>object</i> level. It verifies the location of the active object.
2	Currently not available.
3	Currently not available.

When the exit returns control to the calling program, it will also return a return code value and a message code. The return code indicates what action the calling program should take as a result of the exit.

Return Code	Implication
0	All involved images reside on DASD. Let the view or print request continue normally
16	A fatal error occurred in the exit. Halt processing and return error message.

Parameter List Structure

The table below defines the fields (format and usage) used depending on the option code. The actual parameters for the exit are contained in the COBOL copybook AILPFDTA.

Parameter Name	Option	Format	I/O	Description
Option Code	All	Char (01)	I	This value tells the exit what to do .
Function Code	n/a	Char (02)	I	Currently not used.
Return Code	All	Num (02)	O	Returns a value of 0, 4, or 16. This tells the calling program what to do.
Message Code	All	Char (08)	O	Returns a code that correlates to an entry in the FLXMSGs table. If value exists, this message will be displayed immediately. Only applies when Return Code exceeds zero.
Application	All	Bin (02)	I	This code tells the exit which application is active.
Folder Token	2,3	Char (26)	I	When a particular folder is being processed, this value identifies the folder.
Object Time	1	Char (26)	I	When a particular object is being processed, this value identifies the object.
Create Site	1	Char (04)	I	When a particular object is being processed, this will help identify the object.
Tab Code	2	char (16)	I	When a particular folder tab is being processed, this will help identify the folder tab.

Delete Object Exit

Introduction

The AIS+ *Delete Object Exit* provides the option to allow the AIS+ Document Delete function to delete the document physically from the image application.

Access

The supplied sample exit (AIEX017P) is accessed by the Client Toolkit Document Delete function. A data area is passed between the exit and the calling program to allow the calling program to supply and receive integral data.

Program Processing Logic

The Document Delete program passes a group of parameters outlined below to the exit. The exit will then interrogate these fields and based on the criteria defined by the user, determine whether the document will be deleted physically or logically from the FAF (EYPT) tables.

When the exit returns control to the calling program, it will also return a return code and a message code. The return code indicates what action the calling program should take as a result of the exit. The following return code values are outlined in the chart below.

Return Code	Implication
0	No changes have been made in the delete object exit. Continue the process normally.
1	Changes may have been made in the delete object exit. After the changes have been applied, the program will continue processing normally.
04	A Warning message was returned from the exit. The calling program will display the Warning message, assuming no errors exist, and continue processing normally. Any changes made in the exit will also be applied.
12	A fatal error occurred in the exit. Halt processing and return error message.

Parameter List Structure

The table below defines the format and the usage of the fields passed to the Delete Object Exit. The actual parameters for the exit are contained in the COBOL copybook AILDOBJT.

Parameter Name	Format	I/O	Description
Object Code	Char (01)	I	Value '1'
Function Code	Char (02)	I	Currently, this parameter is not available.
Return Code	Num (02)	O	Returns a value of 0, 1,4, or 12. This tells the calling program what action to take.
Application ID	Bin (02)	I	This code tells the exit which application is active.
Folder Type	Char (02)	I	The folder type of the folder being processed.
Folder Length	Bin (04)	I	The length of the folder ID passed in.
Folder ID	Char (26)	I	The folder ID of the document being processed.
Folder Token	Char (26)	I	The timestamp token code of the folder ID.
Delete Reason Code	Char (02)	I	The Business-defined reason code for deleting the requested object.
Delete Option	Num (01)	N/A	Defaults to 2. (Delete all versions of the object.)
Delete Control	Num (01)	O	The delete control. 1 - Delete the object from the FAF API index and OAM storage. 2 - Delete the object from the FAF index only. The default is 1.
Object Version	Num (01)	N/A	Defaults to 1.
User ID	Char (08)	I	The user ID of the person performing the function.

Parameter Name	Format	I/O	Description
Message Code	Char (08)	O	Returns a code that correlates to an entry in the AIS+ Message table. If value exists, this message will be displayed immediately. Only applies when Return Code exceeds zero.
Delete Indicator	Char (01)	O	Flag returned: L - Logical Delete P - Physical Delete
Delete Indicator Change Flag	Char (01)	I	1 - Delete indicator changed 0 - Delete indicator not changed
Delete Option Change	Char (01)	N/A	Not used
Delete Control Change	Char (01)	O	1 - Delete control changed 0 - Delete control not changed
Object Version Change	Char (01)	N/A	Not used.
Multiple Objects	Char (01)	I	1 - Object exists in more than one folder. 0 - Object exists in only one folder.
Delete Multiple Objects	Char (01)	I	Hard coded value in the exit copybook to be determined by the user. 1 - Yes 0 - No

Validate Data Exit

Introduction

The *AIS+ Validate Data Exit* is used to validate folder, document, and workflow information based upon customer specific requirements.

Access

The supplied sample exit (AIEX002P) can be accessed by on-line programs through the use of a CICS LINK command. A data area is passed between the exit and the calling program to allow you to customize the data areas as needed.

Program Processing Logic

The exit has five (5) different options that range from 1 to 5. The option will determine the information passed to the exit, the type of process performed, and the information passed back to the calling program.

Option Code	Description
1	The exit will validate the folder information prior to the folder being created.
2	The exit will validate the folder information prior to the folder being updated.
3	The exit will validate the folder ID and the document information prior to adding the document.
4	The exit will validate the folder ID and the document information prior to updating the document.
5	The exit will validate the folder ID and the document information, including routing information, prior to adding the document to the folder and routed.

The installation of an AIS+ application requires profiles to be established for forms and folders prior to their being used by the application. Routing information can also be established for workflow used by the application. The profiles represent a base default for respective items. The *AIS+ Validate Data Exit* can be used to validate information prior to adding or updating folder and/or document information. The option in use determines the information that will be returned from the exit.

The exit will return a code value indicating what the calling program should do after the exit is invoked.

Return Code	Process
00	Proceed as normal as no errors were encountered.
04	A Warning message was returned from the exit. The calling program will display the Warning message, assuming no errors exist, and continue processing normally. Any changes made in the exit will also be applied.
12	Stop processing function as an error has been encountered. The message code to be used in the display is contained in the exit's message code field.

Parameter List Structure

The table below defines format and usage of the fields passed to the Validate Data Exit. The parameter list layout is contained in the COBOL copybook AILVLDT.

Parameter Name	Option Code	Format	I/O	Description
Aging Date	5	Char (10)	I	The date from which aging of a document is based.
Application ID	1,2,3,4,5	Bin (2)	I	The application ID code field identifies the application from which the exit is being called.
Assigned User ID	5	Char (8)	I	The assigned user ID field contains the ID of the user assigned to work on the document.
Awake Document	5	Char (1)	I	The awake document field indicates whether the suspended documents in the folder should be made available for processing. The awake document indicators are: 0 - Suspended documents in the folder should not be made available for processing 1 - Suspended documents in the folder should be made available for processing
Create Date	1,2	Char (10)	I	The create date field contains the date the folder was created. This date must be earlier than or the same as the system-generated date.
Date Format	1,2,3,4,5	Char (1)	I	The date format field contains the format used in the language specified for the application. The values are as follows: 1 - mm/dd/yyyy 2 - dd/mm/yyyy 3 - dd.mm.yyyy 4 - yyyy-mm-dd 5 - dd-mm-yyyy 6 - dd mm yyyy
Document Date Filed	3,4	Char (10)	I	The document date filed field contains the date the document was filed in the application.
Document Date Received	3,4,5	Char (10)	I	The document date received field contains the date when a document was added to the application.
Document Description	3,4,5	Char (60)	I	The document description field contains the description given to a document.
Document Description Length	3,4,5	Bin (2)	I	The document description length field contains the length of the document description.
Document Security Class	3,4,5	Char (2)	I	The document security class field contains the security class assigned to each document.

Parameter Name	Option Code	Format	I/O	Description
Expiration Date	5	Char (10)	I	The expiration date field contains the last date by which the document must be processed.
File Tab	3,4,5	Char (16)	I	The file tab contains the name of the file tab in the folder under which the document is stored.
Folder Description	1,2	Char (60)	I	The folder description length field contains the actual length of the folder description.
Folder Description Length	1,2	Bin (2)	I	The folder description length field contains the actual length of the folder description.
Folder ID	1,2,3,4,5	Char (26)	I	The folder ID field contains the unique identifier of the folder in the application.
Folder ID Length	1,2,3,4,5	Bin (2)	I	The folder ID length field contains the actual length of the folder ID.
Folder Secondary Index 1	1,2	Char (40)	I	The folder secondary index 1 field contains the value that groups folders within an application.
Folder Secondary Index 1 Length	1,2	Bin (2)	I	The folder secondary index 1 length field contains the actual length of folder secondary index 1.
Folder Secondary Index 2	1,2	Char (40)	I	The folder secondary index 2 field contains the value that groups folders within an application.
Folder Secondary Index 2 Length	1,2	Bin (2)	I	The folder secondary index 2 field length contains the actual length of folder secondary index 2.
Folder Secondary Index 3	1,2	Char (40)	I	The folder secondary index 3 field contains the value that groups folders within an application.
Folder Secondary Index 3 Length	1,2	Bin (2)	I	The folder secondary index 3 length field contains the actual length of folder secondary index 3.
Folder Security Class	1,2	Char (2)	I	The folder security class field contains the security class assigned to the folder.
Folder Type	1,2	Char (8)	I	The folder type field contains the value used for classifying folders.
Form Number	3,4,5	Char (16)	I	The form number field contains a code that identifies the type of document.
Function Code	1,2,3,4,5	Char (2)	I	The function code field specifies the AIS+ function that called the exit.
Hold Date	5	Char (10)	I	The hold date field contains the date until which a document is on hold.
Hold Time	5	Char (8)	I	The hold time field contains the time on the hold date until which the document is on hold.

Parameter Name	Option Code	Format	I/O	Description
Language ID	1,2,3,4,5	Char (3)	I	The language ID field contains the identifier of the language used to communicate with the user.
Message Code	1,2,3,4,5	Char (8)	O	The message code field contains the message code generated by the user exit when the return code is 12.
Option Code	1,2,3,4,5	Num (1)	I	The option code is set to a value from 1 to 5. The AIS+ calling program tells the Validate Data exit what to do based on the value of the option code field.
Override Priority Indicator	5	Char (1)	I	The override priority indicator field contains the value used to set the priority of a routed document. The values are: 0 - Normal 1 - Low 2 - Medium 3 - High
Return Code	1,2,3,4,5	Num (2)	O	The return code must be set to one of the following values that controls the subsequent processing: 00 - Continue processing 12 - Stop processing this function and display a message.
RLOB	5	Char (6)	I	The RLOB field specifies the routing line-of-business used to generate the routing destination for the document.
Route Code	5	Char (6)	I	The route code field contains the route code value which, along with the unit code value, determines in which routing queue the document is placed.
Routing Decision	5	Char (1)	I	The routing decision field indicates whether to add the document or add and route the document. The routing decision indicators are: 0 - Add the document to the folder 1 - Add and route the document to the folder
Supervisory Authority	1,2,3,4,5	Char (1)	I	The supervisory authority field indicates whether the user can perform supervisory functions. The supervisory authority indicators are: N - Cannot perform supervisory functions Y - Can perform supervisory functions
Time Format	1,2,3,4,5	Char (1)	I	The time format field contains the format used in the language specified for the application. The values are as follows: 1 - 12-hour format (hh:mm xx) 2 - 24-hour format (hh:mm) For 12-hour time, a number from 01 to 12 specifies the hour (hh), 00 to 59 specifies the minutes (mm), and AM specifies a.m. or PM specifies p.m. (xx) The colon (:) and

Parameter Name	Option Code	Format	I/O	Description
				<p>space () are required.</p> <p>For 24-hour time, a number from 00 to 23 specifies the hour (hh) and 00 to 59 specifies the minutes (mm). The colon (:) and three spaces () are required.</p> <p>For example, to specify 10:30 in the evening, the time parameter value is:</p> <p style="padding-left: 40px;">10:30 PM for 12-hour time</p> <p style="padding-left: 40px;">22:30 for 24-hour time.</p>
Transaction Type	5	Char (6)	I	The transaction type field contains a classification of the document indicating the type of work that must be performed on the document.
Unit Code	5	Bin (4)	I	The unit code field contains the unit code value, along with the route code value, that determine which queue the document is routed to for processing.
User Data	1,2,3,4,5	Char (253)	I	The user data code field contains the unit code value, along with the route code value, that determine which queue the document is routed to for processing.
User Data Length	1,2,3,4,5	Bin (2)	I	The user data length field contains the length of the user data.
User Date	3,4,5	Char (10)	I	The user date field contains a user-defined date associated with a document.
User Exit Area	1,2,3,4,5	Char (20)	I/O	The user exit area field contains the data passed from one user exit to another.
User ID	1,2,3,4,5	Char (8)	I	The user ID field contains the ID that identifies the user to the AIS+ function for which the exit is being called.
User Parameter 1	5	Char (4)	I	The user parameter 1 field contains a user-defined parameter that determines the unit code and route code values when it is used along with the user parameter 2 field.
User Parameter 2	5	Char (4)	I	The user parameter 2 field contains a user-defined parameter that determines the unit code and route code values when it is used along with the user parameter 1 field.
User Security Class	1,2,3,4,5	Char (2)	I	The user security class field contains the security class value assigned to the user.

Operator Administration Security Exit

Introduction

The *AIS+ Operator Administration Security Exit* provides the option to disallow administrators access to certain security functions for specific operators.

Access

The supplied sample exit (AIEX018P) is accessed by various on-line programs via a CICS LINK command. A data area is passed between the exit and the calling program to allow the calling program to supply and receive integral data.

Program Processing Logic

The exit has seven (7) different functions. The function code will determine the information passed to the exit, the type of process to be performed, and the information to be returned.

Function Code	Description
1	This function will provide the ability to disallow an administrator inquire access to a specific operator's security profile
2	This function will provide the ability to disallow an administrator add capability for a specific operator Identifier
3	This function will provide the ability to disallow an administrator update capability to a specific operator's security profile
4	This function will provide the ability to disallow an administrator delete capability to a specific operator's security profile
5	This function will provide the ability to disallow an administrator copy capability for a specific set of operator Identifiers
6	This function will provide the ability to disallow an administrator group assignment capability for a specific operator identifier
7	This function will provide the ability to disallow an administrator operator assignment capability for a specific operator identifier

When the exit returns control to the calling program, it will also return a return code and a message code. The return code indicates what action the calling program should take as a result of the exit. The following values are outlined in the chart below.

Return Code	Implication
0	Administrator has access to perform function for operator Identifier entered.
12	Administrator does not have access to perform function for operator Identifier entered. Message Code returned from exit will be displayed on screen.

Parameter List Structure

The table below defines the format and the usage of the fields passed to the Operator Administration Security Exit. The actual parameters for the exit are contained in the COBOL copybook AILOPADM.

Parameter Name	Format	I/O	Description
Application ID	Bin (02)	I	This code tells the exit which application is active.
Function Code	Char (02)	I	This indicates to the exit what function in AIS+ called the exit.
Return Code	Num (02)	O	Returns a value of 0, or 12. This tells the calling program what action to take.
Message Code	Char (08)	O	This message code will be used to retrieve message to be displayed on screen. If the return code is 12, a value must be in this field.
User ID	Char (08)	I	The user ID of the administrator performing the function being passed.
User Security Class	Char (02)	I	The security class of the administrator performing the function being passed.
Modify User ID	Char (08)	I	The user ID of the operator which is being manipulated.
Modify User Security Class	Char (02)	I	The security class of the operator which is being manipulated.
Copy From User ID	Char (08)	I	The user ID of the operator whose information is being copied. Only used for Function code '5'.
Copy From User Security Class	Char (02)	I	The security class of the operator whose information is being copied. Only used for Function code '5'.

Work Flow Exit

Introduction

The *AIS+ Client Toolkit Work Flow Exit* provides options that allow the inquiry, update and delete of entries in the Work Flow table (FLXWORK).

Access

The supplied sample exit (FLEX002P) is accessed by Client Toolkit functions through the use of the CICS LINK command. A data area is passed between the exit and the calling program to allow the calling program to supply and receive integral data.

Program Processing Logic

The exit has four (4) different options ranging from 1 to 4. The option will determine the information passed to the exit, the type of process to be performed, and the information to be returned.

When the exit returns control to the calling program, it will also return a return code and a message code. The return code indicates what action the calling program should take as a result of the exit. The following return code values are outlined in the chart below.

Return Code	Implication
00	Successful completion. Continue the process normally.
12	Stop processing function as an error has been encountered. The message code to be used in the display is contained in the exit's message code field.

Parameter List Structure

The table below defines the format and the usage of the fields passed to the Work Flow Exit. The layout of this structure is contained in COBOL copybook FLXEXWRK. The value of the function code is passed through FLX-WORK-FUNCTIONCD.

Parameter Name	Format	I/O	Description
Function Code	Char (02)	I	Currently, this parameter is not available.
Application ID	Bin (02)	I	This code tells the exit which application is active.
Folder Token	Char (26)	I	The folder token of the document in Workflow.
Object Time	Char (26)	I	The object time of the document in Workflow.
Create Site	Char (04)	I	The create site of the document in Workflow.
Destination Folder Token	Char (26)	I	The destination folder token of the document in Workflow.
Operator ID	Char (08)	I	The Operator ID of the employee assigned to work the document in Workflow.
Routing Flag	Char (01)	O	A flag that indicates whether the document or employee is assigned in Workflow. Values are Y and N.
Return Code	Num (02)	O	Returns a value of 00 or 12. This tells the calling program what action to take.
Message Code	Char (08)	O	Returns a code that correlates to an entry in the AIS+ Message table. If value exists, this message will be displayed immediately. Only applies when Return Code exceeds zero.
SQL Code	Bin (03)	O	DB2 SQL Code.

Appendix A: Program List

CICS MODULES

ONLINE PROGRAMS	INSTALLED SUCCESSFUL ()
FLTCIP1P (If using TCP/IP)	
FLAPPC1P (If using APPC)	
FLAIH01P	
FLDC001P	
FLDC002P	
FLDC003P	
FLDC004P	
FLDC005P	
FLDC006P	
FLDC007P	
FLEX001P	
FLEX002P (If WorkFlow)	
FLFD002P	
FLFD003P	
FLFD006P	
FLFX001P (If Fax integration)	
FLNT001P	
FLNT002P	
FLNT003P	
FLNT004P	
FLSA002P (If WorkFlow)	
FLSA003P	
FLSA004P	
FLSO001P	
FLSO002P	
FLWM001P (If WorkFlow)	
FLWM002P (If WorkFlow)	
FLWM003P (If WorkFlow)	

Appendix B: DB2 Architecture

Database Information

All information is maintained in a series of IBM DB2 tables. Each table resides in its own tablespace and, in turn, all tablespaces reside under one database.

There are twenty-two (22) tables used by the Client Toolkit software (including views of AIS+ tables). These tables are in addition to the IBM FAF tables used by the respective products. The Client Toolkit supports the tablesets for the following IBM FAF tables: EYPTOBJT, EYPTFOLD, EYPTSNDX, EYPTNOTE, EYPTUERS, EYPTVNT AND EYPTONAM. Please refer to the appropriate IBM product manual for further information relative to the IBM DB2 tables.

Description	Table/View Name
Profile for each application used	FLXAPPL
Collection information	FLXCOLL
Profile for each form used by an application	FLXDGMT
Log maintained for document deletions.	FLXDLOG
Delete reason codes used when deleting a document.	FLXDRSN
Default Tab	FLXDRTAB
FAF Customer Data exit name for an application.	FLXEXIT
Client Toolkit error log table. An entry is written to this table when the error message cannot be send back to the workstation.	FLXELOG
Profile for each folder used by application	FLXFLDR
Operator group assignments	FLXGOPR
Form Group Table	FLXGRUP
All messages used within application	FLXMSGS
Operator work queue assignment (for WorkFlow)	FLXOPAS
Profile for each operator using an application	FLXOPPF
Program Function Codes associated with each function called by the workstation.	FLXPROG
RLOB/Transaction Type	FLXRLTT
Tabs associated for a folder type	FLXTABS
CICS Transactions IDs	FLXTRAN
Routing unit codes (for WorkFlow)	FLXUNIT
Routing queues (for WorkFlow)	FLXUNRC
Work Detail (for WorkFlow)	FLXWORK
Fax Server Ids	FLXFXWK

DB2 Plan

Based on the communications protocol, your installation will use one of the two plans, FLAPPC1P (associated with transaction FLAP) or FLTCIP1P (associated with transaction FLIP). Either FLAP or FLIP is invoked every time a request is made on the workstation. Based on the function code passed, the communications program (FLAPPC1P or FLTCIP1P) executes a CICS LINK to the appropriate program. Both plans consist of all these program members.

DB2 Table X-Ref

The following information displays cross-reference usage of the Client Toolkit DB2 tables by program and by table usage.

FluxWorks Table	Programs Using As Read-Only	Programs Performing Modifications
FLXAPPL	FLDC001P, FLDC002P, FLDC003P, FLDC004P, FLDC005P, FLDC006P, FLDC007P, FLFD002P, FLFD003P, FLFX001P, FLNT001P, FLNT002P, FLNT003P, FLNT004P, FLSA002P, FLSA003P, FLSA004P, FLSO001P, FLSO002P, FLWM001P, FLWM002P, FLWM003P	
FLXCOLL	FLDC007P	FLSA004P
FLXDGMT	FLDC001P, FLDC002P, FLDC003P, FLDC004P, FLDC005P, FLDC007P, FLSO002P, FLWM001P, FLWM002P	FLSA004P
FLXDLOG		FLDC005P
FLXDRSN	FLDC005P	
FLXDTAB	FLDC007P	FLSA004P
FLXELOG		FLAPPC1P, FLTCIP1P
FLXEXIT	FLSO002P	
FLXFLDR	FLDC001P, FLDC002P, FLDC003P, FLDC004P, FLDC005P, FLFD002P, FLFD003P, FLFD006P, FLSA003P, FLSA004P, FLSO002P, FLWM001P, FLWM002P, FLWM003P	
FLXGOPR	FLDC001P, FLDC002P, FLDC003P, FLDC004P, FLDC005P, FLDC007P, FLSA003P, FLWM001P, FLWM002P	
FLXGRUP		FLSA004P
FLXMSG	FLDC001P, FLDC002P, FLDC003P, FLDC004P, FLDC005P, FLDC006P, FLDC007P, FLFD002P, FLFD003P, FLFD006P, FLFX001P, FLNT001P, FLNT002P, FLNT003P, FLNT004P, FLSA002P, FLSA003P, FLSA004P, FLSO001P, FLSO002P, FLWM001P, FLWM002P, FLWM003P	
FLXOPAS	FLSA003P, FLWM001P, FLWM003P	FLSA002P
FLXOPPF	FLNT001P, FLSO001P, FLSO002P, FLWM001P, FLWM002P, FLWM003P	FLSA002P
FLXPROG	FLAPPC1P, FLTCIP1P	

FLXRLTT	FLSA003P, FLSA004P, FLWM001P, FLWM003P	
FLXTABS	FLDC001P, FLDC002P, FLDC003P, FLDC004P, FLDC006P, FLDC007P, FLSA004P, FLSO002P, FLWM001P, FLWM002P	
FLXTRAN	FLDC002P, FLDC003P, FLDC004P, FLDC005P	
FLXUNIT	FLWM001P, FLWM002P, FLWM003P	
FLXUNRC	FLSA002P, FLWM002P, FLWM003P	
FLXWORK	FLSA002P, FLWM002P	FLEX002P, FLWM001P, FLWM003P
FLXFXWK	FLSO002P	

FAF Table	Programs Using As Read-Only	Programs Performing Modifications
EYPTFOLDxx	FLDC004P, FLFD002P, FLFD003P, FLFX001P, FLWM002P	
EYPTNOTExx	FLFD002P, FLFD003P, FLNT001P	FLNT003P, FLNT004P
EYPTONAMxx	FLFX001P	
EYPTOBTxx	FLDC001P, FLDC002P, FLDC003P, FLDC004P, FLDC005P, FLDC006P, FLDC007P, FLFD002P, FLFD003P, FLFX001P, FLWM001P, FLWM002P, FLWM003P	
EYPTSNDXxx	FLFD002P, FLFD003P	

Refer to the *AIS+ System Administration Manual* for more information on the AIS+ tables.

FLXAPPL - Application Profile

Each application that will function within the Client Toolkit software must have an entry within the FLXAPPL table. The FLXAPPL table is a view of AISAPPL table.

FLXCOLL – Collection/Form

Each form (document type) that is used within an application under the Client Toolkit software has the ability to have a specific collection name assigned to it. The FLXCOLL table is a view of AISCOLL table.

FLXDCMT – Document Profile

Each document type, for an individual application, that will be processed within the Client Toolkit software must be defined to the system. The FLXDCMT table is a view of AISDCMT table.

FLXDLOG – Delete/UnDelete Log

This table contains information on documents that have been deleted and undeleted, and folders that have been deleted from the system. This table exists because on the FAF deletion of an entity, all elements associated with the entity are also removed at the time of deletion. The FLXDLOG table is a view of AISDLOG table.

FLXDRSN – Delete/UnDelete Reason

This table contains the various reasons for deleting and undeleting documents and deleting folders from the system. The FLXDRSN table is a view of AISDRSN table.

FLXDTAB – Default Folder Tabs

Each document type (or form), for an individual application, must be assigned to a tab within a folder. The FLXDTAB table is a view of AISDTAB table.

FLXELOG - Error Log

This table contains information on any errors encountered when communication with the workstation fails. Since information will always be added to this table, you will have to remove entries from this table on a regular basis.

The following table contains the naming conventions used for the Client Toolkit Error Log table.

DB2 Component	FluxWorks Supplied Name	Your Company Naming Convention
Storage Group	N/A	
Database	N/A	
Tablespace	FLXTSEL	
Table	FLXELOG	
Index	FLXIXEL1	

Insertions to the table can be frequent. A single unique index is supplied that uses the function code, the terminal ID, and the error timestamp.

Each FLXELOG entry has a length of 49 bytes, 41 bytes of data and 8 bytes for the DB2 header. Each index entry has a length of 34 bytes.

The following information describes the contents of an FLXELOG data row:

COLUMN	TYPE & LENGTH	KEY	DESCRIPTION
FLXELOG_FUNCTIONCD	CHAR(4) NNWD	1:4A	The program function code that was requested from the workstation
FLXELOG_TERMID	Char (4) NNWD	1:4A	The CICS terminal ID where the error occurred.
FLXELOG_COMMAND	Char (15) NNWD		The CICS command that failed.
FLXELOG_ERRTIME	Timestamp NNWD	1:26A	The DB2 timestamp, when the error log entry is made.
FLXELOG_RESPCODE	INTEGER NNWD		The CICS response code returned from the command that failed.
FLXELOG_CONVSTATE	INTEGER NNWD		The conversation state of the APPC after the APPC command failed.

FLXEXIT - User Data Exits

For each application, this table contains a row with exit names and exit flags. The exit name identifies the CICS program name that will be called. The exit flag identifies whether the exit is called from an AIS+ front end application or a FWA front end application. An entry for each application is required in this table for FWA customers.

The entries are added to this table through the SPUFI member INSEXIT.

The following table contains the naming conventions used for the User Exit table.

DB2 Component	FluxWorks Supplied Name	Your Company Naming Convention
Storage Group	N/A	
Database	N/A	
Tablespace	FLXTSEX	
Table	FLXEXIT	
Index	FLXIXEX1	

Insertions to the table are not frequent. A single unique index is supplied that uses the Application ID code.

Each FLXEXIT entry has a length of 55 bytes, 47 bytes of data and 8 bytes for the DB2 header. Each index entry has a length of 2 bytes.

The following information describes the contents of an FLXLOG data row:

COLUMN	TYPE & LENGTH	KEY	DESCRIPTION
FLXEXIT_APPLIDCD	SMALLINT NNWD	1:2A	The Application ID code that will be calling the customer data exit.
FLXEXIT_CSDT_NAME	Char (8) NNWD		The Customer Data exit name. Refer to the "Customer Data Exit" documentation in the "User Exits" section of this manual.
FLXEXIT_CSDT_FLAG	Char (1) NNWD		The front end application using the Client Toolkit software. Valid values are: A - AIS+ F - FWA
FLXEXIT_VLDT_NAME	Char (8) NNWD		The Validation Data exit name. Refer to the "Validation Data Exit" documentation in the "User Exits" section of this manual.
FLXEXIT_VLDT_FLAG	Char (1) NNWD		The front end application using the Client Toolkit software. Valid values are: A - AIS+ F - FWA
FLXEXIT_SCRTY_NAME	Char (8) NNWD		The Function Security exit name. Refer to the "Function Security Exit" documentation in the "User Exits" section of this manual.
FLXEXIT_SCRTY_FLAG	Char (1) NNWD		The front end application using the Client Toolkit software. Valid values are: A - AIS+ F - FWA
FLXEXIT_OPADM_NAME	Char (8) NNWD		The Operation Administration Security exit name. Refer to the "Operation Administration Security Exit" documentation in the "User Exits" section of this manual.
FLXEXIT_OPADM_FLAG	Char (1) NNWD		The front end application using the Client Toolkit software. Valid values are: A - AIS+ F - FWA
FLXEXIT_WORK_NAME	Char (8) NNWD		The Work Flow exit name. Refer to the "Work Flow Exit" documentation in the "User Exits" section of this manual.
FLXEXIT_WORK_FLAG	Char (1) NNWD		The front end application using the Client Toolkit software. Valid values are: A - AIS+ F - FWA

FLXFLDR - Folder Profile

Each folder type that will be processed within the individual application of the Client Toolkit software must be defined to the system. An entry represents the characteristics, or profile, the folder will be governed by while executing under Client Toolkit. The FLXFLDR table is a view of AISFLDR table.

FLXGOPR - Operator Group Assignment

Each group of forms that an operator can access / view must be defined to the system. The FLXGOPR table is a view of AISGOPR table.

FLXGRUP - Form Group Profile

Each unique group to which a form is assigned must be defined to the system. The FLXGRUP table is a view of AISGRUP table.

FLXMSGs - Messages

Each message used by the Client Toolkit and the various system exits is maintained in this table. The FLXMSGs table is a view of AISMSGs table.

Initial entries for the Client Toolkit are created in this table through the use of the SPUFILIB member INMSGs.

FLXOPAS - Operator Assignment (for WorkFlow)

Each queue (route unit/route code) that an operator can process must be defined to the system. The FLXOPAS table is a view of AISOPAS table.

FLXOPPF - Operator Profile

Each operator/user who needs access to an application within the Client Toolkit must be defined to the system. The FLXOPPF table is a view of AISOPPF table.

FLXPROG - Program FunctionCodes

Each program in the Client Toolkit is assigned a 4-character function code that is passed from the workstation program.

Initial entries are created in this table through the use of the SPUFILIB member INSPROG.

The following table contains the naming conventions used for the Program Function Codes table.

DB2 Component	FluxWorks Supplied Name	Your Company Naming Convention
Storage Group	N/A	
Database	N/A	
Tablespace	FLXTSPG	
Table	FLXPROG	
Index	FLXIXPG1	

Insertions and modifications to the table are extremely infrequent. A single unique index is supplied that uses the function code in ascending order.

Each FLXPROG entry has a length of 45 bytes, 37 bytes of data and 8 bytes for the DB2 header. Each index entry has a length of 4 bytes.

Column	Type & Length	Key	Column
FLUX_FUNCTION_CODE	Char (4) NN	1:1A	The function code associated with the program.
FLUX_PROGRAM_NAME	Char (8) NN		The Client Toolkit CICS program name corresponding to the function id.
FLUX_PROGRAM_DESC	Char (25) NN		Short description that describes the Client Toolkit CICS program.

FLXRLTT – RLOB/Transaction Type

Each routing line-of-business and transaction type combination associated with a category of work and user supplied parameters within an application must be defined to AIS+. The FLXRLTT table is a view of AISRLTT table.

FLXTABS - Folder Tabs

Each folder tab, for an individual application, that will be processed must be defined to the system. The FLXTABS table is a view of AISTABS table.

FLXTRAN - CICS Transaction IDs

The FLXTRAN table is used to determine the “bad” transaction for display object and print object API calls. The FLXTRAN table is a view of AISTRAN table.

FLXUNIT – Unit Code (for WorkFlow)

Each routing unit associated with a category of work and user supplied parameters must be defined to AIS+. The FLXUNIT table is a view of AISUNIT table.

FLXUNRC – Unit/Route Code (for WorkFlow)

For each queue within an application, a routing queue consisting of a routing unit and a route code must be defined to AIS+. The FLXUNRC table is a view of AISUNRC table.

FLXWORK – Work Detail (for WorkFlow)

Each document that resides in routing has an entry in the Work Detail table. The FLXWORK table is a view of AISWORK table.

Appendix C: Error Messages

FLX0001 INVALID APPLICATION ID PASSED
FLX0002 FOLDER TYPE DOES NOT EXIST FOR THE APPLICATION
FLX0003 FOLDER ID DOES NOT EXIST FOR THE APPLICATION
FLX0004 FOLDER ID ALREADY EXISTS FOR THE APPLICATION
FLX0005 SECONDARY INDEX 1 VALUE EXCEEDS THE INDEX LENGTH
FLX0006 SECONDARY INDEX 2 VALUE EXCEEDS THE INDEX LENGTH
FLX0007 SECONDARY INDEX 3 VALUE EXCEEDS THE INDEX LENGTH
FLX0008 FOLDER ID LENGTH LESS THAN MINIMUM LENGTH REQUIRED
FLX0009 SEC INDICES DO NOT EXIST, FOLDER LIST CANNOT BE USED
FLX0010 SECONDARY INDEX 1 VALUE IS LESS THAN THE MINIMUM LENGTH
FLX0011 SECONDARY INDEX 2 VALUE IS LESS THAN THE MINIMUM LENGTH
FLX0012 SECONDARY INDEX 3 VALUE IS LESS THAN THE MINIMUM LENGTH
FLX0013 A SECONDARY INDEX ENTRY IS REQUIRED
FLX0014 NO FOLDERS FOUND FOR THE INDEX LIST
FLX0015 REQUESTED NOTE NOT FOUND
FLX0016 THE OPERATOR ID DOES NOT EXIST
FLX0017 INVALID PASSWORD ENTERED
FLX0018 USER IS NOT ASSIGNED TO ANY VALID APPLICATION(S)
FLX0019 NO FORMS FOUND
FLX0020 FORM NAME DOES NOT EXIST FOR THIS APPLICATION
FLX0021 TAB NAME DOES NOT EXIST FOR THIS APPLICATION
FLX0022 NO DOCS. EXIST UNDER THIS SELECTION CRITERIA
FLX0023 FOLDERID IS CURRENTLY IN USE AS A TEMPID
FLX0024 REQUESTED FORM NAME CANNOT BE INDEXED
FLX0025 RECEIVE DATE IS INVALID
FLX0026 NOT AUTHORIZED TO ISSUE A FUTURE RECEIVE DATE
FLX0027 FUTURE DATE NOT ALLOWED FOR THIS DOCUMENT TYPE
FLX0028 FUTURE DATE NOT ALLOWED FOR THIS DOCUMENT TYPE
FLX0029 INVALID RLOB AND TRANTYPE COMBINATION
FLX0030 INVALID ROUTE UNIT VALUE
FLX0031 INVALID ROUTE CODE AND ROUTE UNIT COMBINATION
FLX0032 INVALID PRIORITY INDICATOR VALUE
FLX0033 INVALID HOLD DATE ENTERED
FLX0034 INVALID HOLD TIME ENTERED
FLX0035 USER NOT AUTHORIZED FOR FUNCTION
FLX0036 INVALID START DATE PASSED TO THE HOST
FLX0037 INVALID END DATE PASSED TO THE HOST
FLX0038 ERROR RETURNED FROM THE CUSTOMER DATA EXIT
FLX0039 INVALID COLLECTION CODE PASSED
FLX0040 INVALID OBJECT TIME PASSED
FLX0041 FOLDER TOKEN NOT FOUND FOR SPECIFIED FOLDER ID
FLX0042 OBJECT CLASS NOT FOUND FOR SPECIFIED OBJECT TIME
FLX0043 OBJECT CLASS NOT FOUND FOR SPECIFIED OBJECT TIME
FLX0044 NO NOTES EXIST UNDER THIS SELECTION CRITERIA
FLX0045 INVALID START TIME PASSED TO THE HOST
FLX0046 INVALID END TIME PASSED TO THE HOST
FLX0047 NO APPLICATION ID IS PASSED FROM THE WORKSTATION
FLX0048 NO TIMESTAMP IS PASSED FROM THE WORKSTATION
FLX0049 NO NOTE USERID IS PASSED FROM THE WORKSTATION
FLX0050 NO USERID IS PASSED FROM THE WORKSTATION
FLX0051 NO NOTE SHORT DESCRIPTION PASSED FROM THE WORKSTATION
FLX0052 NO NOTE TEXT IS PASSED FROM THE WORKSTATION
FLX0053 INVALID ALTPRT VALUE - MUST BE "Y" OR "N"
FLX0054 ENTRY FOR FLXEXIT TABLE MISSING, CONTACT SYSTEMS
FLX0055 ENTRY FOR FLXEXIT TABLE INVALID, VALID VALUES: A,X,F
FLX0056 EXIT NAME CAN NOT BE SPACES WHEN FLAG NOT X
FLX0057 OPERATOR IS NOT AUTHORIZED TO ADD FOLDERS.
FLX0058 INPUT LENGTH GREATER THAN ALLOWED FOLDER LENGTH
FLX0059 DOCUMENT CANNOT BE MOVED, MODIFY PENDING.
FLX0060 MOVE TO NEW FOLDER ID UNSUCCESSFUL, DUPLICATE OBJECT
FLX0061 DOCUMENT ALREADY DELETED
FLX0062 DOCUMENT NOT IN DELETED STATUS, CANNOT BE UNDELETED
FLX0063 INVALID REASON CODE PASSED

FLX0064 MULTIPLE OBJECTS CAN NOT BE DELETED.
FLX0065 OBJECT PENDING, CANNOT BE DELETED.
FLX0066 OBJECT PENDING, CANNOT BE UNDELETED.
FLX0067 THERE ARE NO DOCUMENTS IN ASSIGNED QUEUES.
FLX0068 AN INVALID ACTION CODE WAS SENT FROM THE WORKSTATION
FLX0069 NO ASSIGNMENTS EXIST FOR THIS OPERATOR
FLX0070 OPERATOR IS NOT AUTHORIZED TO PERFORM COPY FUNCTION
FLX0071 ASSIGNMENTS ALREADY EXIST FOR THIS OPERATOR
FLX0072 OPERATOR SUCCESSFULLY UPDATED
FLX0073 QUEUE STATUS MUST BE "A" OR "I"
FLX0074 OPERATOR IS NOT AUTHORIZED TO PERFORM DELETE FUNCTION
FLX0075 THE DEFAULT UNIT CODE MUST BE NUMERIC AND > ZEROES
FLX0076 CAN NOT DELETE, USER HAS WORK ASSIGNED IN THE QUEUE
FLX0077 CAN NOT DELETE, ASSIGNMENT DOES NOT EXIST
FLX0078 INVALID DEFAULT UNIT CODE
FLX0079 ERROR RETURNED FROM THE FUNCTION SECURITY EXIT
FLX0080 ERROR RETURNED FROM THE OPERATOR ADMIN SECURITY EXIT
FLX0081 SOURCE AND TARGET OPERATOR IDS CANNOT BE THE SAME
FLX0082 USER IS NOT AUTHORIZED TO WORK QUEUES IN APPLICATION
FLX0083 USER CANNOT ACCESS ANOTHER OPERATOR'S ASSIGNMENTS
FLX0084 ALL DOCUMENTS MAY NOT BE DISPLAYED
FLX0085 DOCUMENT NOT FOUND AND DELETED FROM WORKFLOW
FLX0086 THE NUMBER OF EVENTS MUST BE NUMERIC AND > ZEROES
FLX0087 ROUTE/PRINT/VIEW PROCESS REQUEST HAS BEEN PROCESSED.
FLX0088 DOCUMENTS IN PROCESS CANNOT BE UPDATED.
FLX0089 INVALID OPERATION FOR ITEMS ALREADY IN ROUTING.
FLX0090 INVALID OPERATION. DOCUMENT IS NOT IN ROUTING.
FLX0091 RLOB/TRANTYPE NOT VALID, PLEASE RE-ENTER.
FLX0092 ROUTE QUEUE DOES NOT EXIST FOR THIS OPERATOR.
FLX0093 INVALID DATE ENTERED, VALID FORMAT IS CCYY-MM-DD.
FLX0094 INVALID OPERATION. CAN NOT ASSIGN TO, ALREADY ASSIGNED.
FLX0095 INVALID OPERATION. NEW (RE)ASSIGN USER MUST BE ENTERED.
FLX0096 QUEUE ASSIGNMENT UPDATED SUCCESSFULLY.
FLX0097 OPERATOR NOT AUTHORIZED TO ASSIGN ITEMS.
FLX0098 DOCUMENT RETURNED TO SENDER.
FLX0099 NO PREVIOUS OPERATOR TO RETURN DOCUMENT TO.
FLX0100 THE PREVIOUS OPERATOR ID IS NOT ACTIVE.
FLX0101 THE PREVIOUS RLOB AND TRANTYPE DOES NOT EXIST.
FLX0102 THE PREVIOUS RT CODE AND RUNIT DOES NOT EXIST.
FLX0103 ROUTE UNIT DOES NOT EXIST.
FLX0104 INVALID PRIORITY INDICATOR ENTERED.
FLX0105 VALUE MUST BE > THAN OR = TO THE APPL. MAX PRIORITY.
FLX0106 RT CODE/RUNIT INVALID, PLEASE RE-ENTER.
FLX0107 THE ENTERED DATE/TIME COMBINATION IS INVALID.
FLX0108 INVALID DATE ENTERED.
FLX0109 HOLD DATE MUST BE GREATER THAN OR = TO TODAY'S DATE.
FLX0110 INVALID TIME, FORMAT IS HHMM IN 24-HOUR CLOCK.
FLX0111 TIME IS A REQUIRED ENTRY.
FLX0112 HOLD TIME MUST BE GREATER THAN CURRENT TIME.
FLX0113 DOCUMENT PRIORITY HAS BEEN UPDATED.
FLX0114 DOCUMENT EXPIRATION DATE HAS BEEN UPDATED.
FLX0115 DOCUMENT HOLD INFORMATION HAS BEEN UPDATED.
FLX0116 DOCUMENT DROPPED FROM ROUTING.
FLX0117 DOCUMENT UNASSIGNED.
FLX0118 FOLDER/DOCUMENT SECURITY LEVEL MUST BE NUMERIC
FLX0119 FOLDER/DOCUMENT SECURITY MUST BE BETWEEN 1 AND 99
FLX0120 COMMENTS NEED TO BE ENTERED FOR YOUR REQUEST
FLX0121 DOCUMENT CANNOT BE CHANGED, MODIFY PENDING
FLX0122 OBJECTS ALREADY EXIST AT THIS ROUTING DESTINATION.
FLX0123 ERROR RETURNED FROM THE WORK FLOW EXIT
FLX0124 INVALID PARAMETERS SENT TO WORK FLOW EXIT
FLX0125 OPERATOR ALREADY EXISTS, CANNOT PERFORM ADD.
FLX0126 OPERATOR ID CONTAINS INVALID CHARACTERS.
FLX0127 OPERATOR IS NOT AUTHORIZED TO PERFORM FUNCTION.
FLX0128 VALUE MUST BE A "Y" OR "N".
FLX0129 FOLDER ADD FLAG MUST BE "Y","N","I","T" OR "D"
FLX0130 DOC VIEW FLAG MUST BE "Y","N","H","B","A","W" OR "Q"
FLX0131 VALUE MUST BE A "Y", "N" OR "F"

FLX0132 THE PRINT INDICATOR CAN BE "Y", "N", "H" OR "W"
FLX0133 VALUE MUST BE A "Y" "N" "F" "T" "D" "O"
FLX0134 VALUE MUST BE A "Y", "P", "B", OR "N"
FLX0135 VALUE MUST BE "A" "P" OR "D"
FLX0136 THE QUEUE WORK INDICATOR MUST BE "N", "I" OR "X"
FLX0137 VALUE MUST BE EITHER "Y", "N", "U", "R" OR "X"
FLX0138 THE QUEUE CHECK INDICATOR CAN BE "Y", "N" OR "A"
FLX0139 YOU CAN NOT ASSIGN A SECURITY LEVEL HIGHER THAN YOU
FLX0140 FOLDER/DOCUMENT SECURITY LEVEL MUST BE ENTERED
FLX0141 FULL NAME MUST BE ENTERED
FLX0142 OPERATOR EMPLOYMENT STATUS MUST BE "A" OR "I"
FLX0143 OPERATOR EMPLOYMENT STATUS IS REQUIRED
FLX0144 CURRENT OPERATOR PROFILE CAN NOT BE DELETED
FLX0145 OPERATOR HAS WORK ASSIGNED, CAN NOT BE DELETED
FLX0146 OPERATOR IS DEFINED AS DEFAULT QUEUE, CAN NOT DELETE
FLX0147 CURRENT OPERATOR PROFILE CAN NOT BE DELETED
FLX0148 A DOCUMENT CANNOT BE ADDED THAT ALREADY EXISTS
FLX0149 FORM CANNOT HAVE DUPLICATE FOLDER TYPES
FLX0150 RETAIN PAPER REQUIRED, PLEASE ENTER
FLX0151 RETAIN PAPER MUST BE "Y" OR "N"
FLX0152 RLOB REQUIRED, PLEASE ENTER
FLX0153 TRANTYPE REQUIRED, PLEASE ENTER
FLX0154 RETENTION PERIOD IS NOT NUMERIC
FLX0155 PEND AWAKE FLAG MUST BE "Q" OR "A"
FLX0156 ALLOW INDEXING REQUIRED, PLEASE ENTER
FLX0157 ALLOW INDEXING MUST BE "Y" OR "N" OR "D"
FLX0158 STORAGE CLASS DOES NOT EXIST IN OAM
FLX0159 MANAGEMENT CLASS DOES NOT EXIST IN OAM
FLX0160 MANAGEMENT CLASS REQUIRED
FLX0161 STORAGE CLASS REQUIRED
FLX0162 COLLECTION NAME REQUIRED, PLEASE ENTER
FLX0163 A DOCUMENT DESCRIPTION MUST BE ENTERED
FLX0164 A FORM NAME MUST BE ENTERED
FLX0165 TAB DESCRIPTION DOES NOT EXIST FOR FOLDER TYPE
FLX0166 FUTURE DATE FLAG MUST BE A "Y" OR "N"
FLX0167 GROUP ID IS REQUIRED
FLX0168 A SPACE IS INVALID AS THE FIRST CHARACTER OF FOLDER ID
FLX0169 NOT AUTHORIZED TO GRANT ACCESS: VIEW NOTE IND
FLX0170 VALUE MUST BE A "Y" OR "N": VIEW NOTE IND
FLX0171 NOT AUTHORIZED TO GRANT ACCESS: LIST NOTE IND
FLX0172 VALUE MUST BE A "Y" OR "N": LIST NOTE IND
FLX0173 NOT AUTHORIZED TO GRANT ACCESS: DELETE NOTE IND
FLX0174 VALUE MUST BE A "Y" OR "N": DELETE NOTE IND
FLX0175 NOT AUTHORIZED TO GRANT ACCESS: ADD NOTE IND
FLX0176 VALUE MUST BE A "Y" OR "N": ADD NOTE IND
FLX0177 NOT AUTHORIZED TO GRANT ACCESS: UPDATE FOLDER IND
FLX0178 VALUE MUST BE A "Y" OR "N": UPDATE FOLDER IND
FLX0179 NOT AUTHORIZED TO GRANT ACCESS: LIST FOLDER IND
FLX0180 VALUE MUST BE A "Y" OR "N": LIST FOLDER IND
FLX0181 NOT AUTHORIZED TO GRANT ACCESS: DELETE FOLDER IND
FLX0182 VALUE MUST BE A "Y" OR "N": DELETE FOLDER IND
FLX0183 NOT AUTHORIZED TO GRANT ACCESS: DEFINE FOLDER IND
FLX0184 VALUE MUST BE A "Y" OR "N": DEFINE FOLDER IND
FLX0185 NOT AUTHORIZED TO GRANT ACCESS: ADD FOLDER IND
FLX0186 VALUE MUST BE "Y", "N", "I", "T" OR "D": ADD FOLDER IND
FLX0187 NOT AUTHORIZED TO GRANT ACCESS: DROP DOCUMENT IND
FLX0188 VALUE MUST BE A "Y" OR "N": DROP DOCUMENT IND
FLX0189 NOT AUTHORIZED TO GRANT ACCESS: ROUTE DOCUMENT IND
FLX0190 VALUE MUST BE A "Y" OR "N": ROUTE DOCUMENT IND
FLX0191 NOT AUTHORIZED TO GRANT ACCESS: VIEW DOCUMENT IND
FLX0192 "Y", "N", "H", "B", "A", "Q" OR "W": VIEW DOCUMENT IND
FLX0193 NOT AUTHORIZED TO GRANT ACCESS: UPDATE DOCUMENT IND
FLX0194 VALUE MUST BE A "Y", "N" OR "F": UPDATE DOCUMENT IND
FLX0195 NOT AUTHORIZED TO GRANT ACCESS: SCAN DOCUMENT IND
FLX0196 VALUE MUST BE A "Y", "N" OR "F": SCAN DOCUMENT IND
FLX0197 NOT AUTHORIZED TO GRANT ACCESS: PRINT DOCUMENT IND
FLX0198 VALUE MUST BE "Y", "N", "H" OR "W": PRINT DOCUMENT IND
FLX0199 NOT AUTHORIZED TO GRANT ACCESS: MOVE DOCUMENT IND

FLX0200 VALUE MUST BE A "Y" OR "N": MOVE DOCUMENT IND
FLX0201 NOT AUTHORIZED TO GRANT ACCESS: LIST DOCUMENT IND
FLX0202 "Y", "N", "F", "T", "D", OR "O": LIST DOCUMENT IND
FLX0203 NOT AUTHORIZED TO GRANT ACCESS: FAX DOCUMENT IND
FLX0204 VALUE MUST BE A "Y" OR "N": FAX DOCUMENT IND
FLX0205 NOT AUTHORIZED TO GRANT ACCESS: DELETE DOCUMENT IND
FLX0206 VALUE MUST BE "Y", "N", "P" OR "B": DELETE DOCUMENT IND
FLX0207 NOT AUTHORIZED TO GRANT ACCESS: DEFINE DOCUMENT IND
FLX0208 VALUE MUST BE "Y" OR "N": DEFINE DOCUMENT IND
FLX0209 NOT AUTHORIZED TO GRANT ACCESS: COPY DOCUMENT IND
FLX0210 VALUE MUST BE "Y" OR "N": COPY DOCUMENT IND
FLX0211 NOT AUTHORIZED TO GRANT ACCESS: QUE WORK IND
FLX0212 VALUE MUST BE "N", "X" OR "I": QUE WORK IND
FLX0213 NOT AUTHORIZED TO GRANT ACCESS: QUE LIST IND
FLX0214 VALUES "N" "Y" "U" "R" "X" "Q" "T" "S" "V":QUE LIST IND
FLX0215 NOT AUTHORIZED TO GRANT ACCESS: OPERATOR ASSIGN IND
FLX0216 VALUE MUST BE "Y" OR "N": OPERATOR ASSISN IND
FLX0217 NOT AUTHORIZED TO GRANT ACCESS: QUE CHECK IND
FLX0218 VALUE MUST BE "N", "Y" OR "A": QUE CHECK IND
FLX0219 NOT AUTHORIZED TO GRANT ACCESS: QUE ASSIGN ADM IND
FLX0220 VALUE MUST BE "N" OR "Y": QUE ASSIGN ADM IND
FLX0221 NOT AUTHORIZED TO GRANT ACCESS: WORK FLOW ADM IND
FLX0222 VALUE MUST BE "N" OR "Y": WORK FLOW ADM IND
FLX0223 NOT AUTHORIZED TO GRANT ACCESS: APPL ADM IND
FLX0224 VALUE MUST BE "N" OR "Y": APPL ADM IND
FLX0225 NOT AUTHORIZED TO GRANT ACCESS: SECURITY ADM IND
FLX0226 VALUE MUST BE "N" OR "Y": SECURITY ADM IND
FLX0227 CANT GRANT DELETE DOC ACCESS W/ A DOC IN PENDING STATUS
FLX0228 VALUE MUST BE "A", "P" OR "D": SORT WORK QUE IND
FLX0229 MAX NUM LIST MUST BE NUMERIC AND > ZEROES

Appendix F: VTAM and CICS Setup

VTAM Example

```
*/  
*/ DOC: THIS MEMBER CONTAINS VTAM LOCAL DEFINITION STATEMENTS  
*/ FOR USE ON THE SYSCOM TERMINALS.  
*   DISCNT=NO,  
*/  
BNODE  VBUILD TYPE=SWNET,  
        MAXGRP=1,  
        MAXNO=5  
*  
SYSCOM70 PU  ADDR=01,          LOGICAL ADDRESS  
          MAXDATA=4105,  
          MAXOUT=7,  
          PASSLIM=7,  
          SECNET=YES,  
          VPACING=0,  
          PACING=0,  
          SSCPFM=USSSCS,  
          CPNAME=SYSCOM70,  
          IDBLK=05D,  
IDNUM=00070,  
          IRETRY=YES,  
          MAXPATH=1,  
          ISTATUS=ACTIVE,  
          DISCNT=(NO),  
          PUTYPE=2,  
          MODETAB=M32782,  
          DLOGMOD=M32782S,  
          USSTAB=USSTAB  
*  
          PATH DIALNO=010440000000070,  
          GRPNM=GRPIMAGE  
*  
SYSCM701 LU  LOCADDR=2          LOCAL ADDRESS  
*  
SYSCM702 LU  LOCADDR=3          LOCAL ADDRESS  
*  
SYSCM703 LU  LOCADDR=4          LOCAL ADDRESS  
*  
SYSCM704 LU  LOCADDR=5          LOCAL ADDRESS  
*  
SYSCM70A LU  LOCADDR=6,  
             MODETAB=IMGMODE,  
             DLOGMOD=WSLU62  
*  
SYSCM70B LU  LOCADDR=7,  
             MODETAB=IMGMODE,  
             DLOGMOD=WSLU62  
*
```

CICS FAF Region

Define a session and connection for communication from AIS+ EE GUI Client to the CICS FAF region. The following sample defines a FAF connection used at SYSCOM Inc. (as viewed with CEDA). Notice that this connection does not have security attached to it. For a secured transaction, the AttachSec parameter would be set to *Verify*.

```

CEDA View
Connection      : S70B
Group          : FAFCONN
DEscription    :
CONNECTION IDENTIFIERS
Netname        : SYSCM70B
INDsys         :
REMOTE ATTRIBUTES
REMOTESYSem    :
REMOTENAME     :
REMOTESYSNet   :
CONNECTION PROPERTIES
Accessmethod   : Vtam          Vtam | IRC | INdirect | Xm
PRotocol       : Appc          Appc | Lu61 | Exci
Conntype       :               Generic | Specific
SInglesess     : Yes           No | Yes
DAstream       : User          User | 3270 | SCs | STRfield | Lms
RECORDformat   : U             U | Vb
Queuelimit     : No            No | 0-9999
Maxqtime       : No            No | 0-9999
OPERATIONAL PROPERTIES
AUtoconnect    : Yes           No | Yes | All
INService      : Yes           Yes | No
SECURITY
SEcurityname   :
ATTachsec      : Local         Local | Identify | Verify | Persistent
                                   | Mixidpe
BINDPassword   :               PASSWORD NOT SPECIFIED
BINDSecurity   : No            No | Yes
Usedfltuser    : No            No | Yes
RECOVERY
PSrecovery     : Sysdefault    Sysdefault | None

```

The following sample defines an FAF session used at SYSCOM Inc. (as viewed with CEDA):

```

CEDA View
Sessions      : S70B
Group        : FAFCONN
Description ==>
SESSION IDENTIFIERS
Connection   ==> S70B
SESSName     ==>
NETnameq    ==>
MOnename    ==> WSLU62
SESSION PROPERTIES
Protocol     ==> Appc           Appc | Lu61 | Exci
Maximum     ==> 001 , 000      0-999
RECEIVEPfx  ==>
RECEIVECount ==>              1-999
SENDPfx     ==>
SENDCount   ==>              1-999
SENDSize    ==> 01920         1-30720
RECEIVESize ==> 01920         1-30720
SESSPriority ==> 000          0-255
Transaction :
OPERATOR DEFAULTS
OPERId      :
OPERPriority : 000           0-255
OPERRsl     : 0             0-24,...
OPERSecurity : 1           1-64,...
PRESET SECURITY
USERId      ==>
OPERATIONAL PROPERTIES
Autoconnect ==> Yes         No | Yes | All
INservice   :
Buildchain  ==> Yes         Yes | No
USERArealen ==> 000         0-255
IOarealen   ==> 00000 , 00000 0-32767
RELreq      ==> No          No | Yes
DIScreq     ==> No          No | Yes
NEPclass    ==> 000         0-255
RECOVERY
RECOVOption ==> Sysdefault   Sysdefault | Clearconv | Releasesess
| Uncondrel | None
RECOVNotify : None          None | Message | Transaction

```