IBM Digital Library

Frequently Asked Questions

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Chapter 1. Planning for the IBM Digital Library solution

Planning network communication

Q: I have some components on NT and others on AIX, and it seems like they cannot communicate. I've tried regenerating the network table with the utilities. What else can I do?

A: Regenerate the network table and pay special attention to the port number that you select for each server. The defaults on NT and AIX are different.

Table 1. Servers' default port numbers by operating system

Server name	AIX	Windows
Library server	23788	23788
Library server's utility server	23789	23788
Object server	23790	23789
Object server's utility server	23791	23789
SMS server	23792	23790

Chapter 2. System requirements

Windows prerequisites

Clients

Requirement: The Digital Library client must have 64 MB of RAM.

Q: When I run my System Administration client, the message: “This program has performed an illegal operation and will be shut down.” is displayed

A: When you run the System Administration Java client on Windows 95, the display (monitor) has to be configured to display 256 colors or up.

AIX prerequisites

Q: When I access certain index classes, I get frn7389 “The system has not yet generated the access modules, try again.”

A: Ensure that you have installed the DB2 Software Developers Kit (SDK). Run the db2ln command to create the symbolic links to the DB2 header files and libraries.

Q: I can’t start the library server. The failure was logged in frn/log/LIBSRVRX.dblog, and indicated a syntax error during database create.

A: Upgrade to AIX 4.2.1. Our documentation originally listed AIX 4.2 as the prerequisite, but because of the AIX errors, we need to upgrade this prerequisite to AIX 4.2.1. If you do not want to upgrade to AIX 4.2.1, you must install APAR IX71678 on top of AIX 4.2.

Part 2. Installing Digital Library

Chapter 3. Error Messages

Q: What should I do if I receive error messages while installing or using Digital Library?

A: Use the message number to look up the error message in the *Digital Library Messages and Codes* book. General error messages (or return codes) sometimes contain additional information.

For example, if you receive error 6288, look up FRN6288A in the *Messages and Codes* book. There is not enough information to solve the problem. The return codes are 8635 and 8645. You look up FRN8635A and you see that a timeout occurred. Then you look up FRN8645A and you see that the reply number returned by LibGetReplyInfo is too large.

Entries in the *Messages and Codes* book include an explanation of the error and a suggested action. Use the explanation and action information to fix the problem. If you cannot solve the problem using the error message information, call your IBM service representative.

Chapter 4. Installing Digital Library on Windows

Q: The NT installation failed. What should I do?

A: Ensure that the user ID you used to install Digital Library has NT administrator privileges and DB2 administrator privileges. If you use a version of DB2 other than DB2 5.0, you cannot install with the Windows NT default administration ID `administrator`. Earlier versions of DB2 do not support user names longer than eight characters.

Q: The uninstall on NT failed. What should I do?

A: If the uninstall fails on NT, you must remove the files manually. To remove the files manually, perform the following tasks:

1. Delete the FRNROOT directory.
2. Remove the Digital Library programs from:

   ```
   WINNT\profiles\ALL Users\Start Menu\Programs
   ```

   You access `ALL Users\Start Menu` by right-clicking on the Start button on the task bar.
3. Remove Digital Library from the NT registry. From a DOS prompt, enter:

   ```
   regedit
   ```

   Open HKEY_LOCAL_MACHINE—>SOFTWARE—>IBM and delete Digital Library.

Q: I'm using a ThinkPad, and either the icons won't load or the system administration client crashes after logging on. What should I do?

A: Get the correct display driver for Windows NT 4.0. The driver is not integrated into NT itself but is available from the ThinkPad Web site:

```
http://www.us.pc.ibm.com/support/tps/tpwnt.html
```

Q: I'm using a ThinkPad and the library server won't start. What should I do?

A: Get the correct display driver for Windows NT 4.0. The default VGA driver will not suffice. The correct driver is not integrated into NT itself but is available from the ThinkPad Web site:

```
http://www.us.pc.ibm.com/support/tps/tpwnt.html
```

Setting your Visual C++ environment

Q: MS Visual C++ 5.0 is installed correctly, but the DLLs are not generated. What should I do?

A: If you are using Visual C++ 5.0, you must update the path, include and lib environmental settings to enable the DLL generation. To update the path, include and lib settings:

1. From the DOS prompt, enter:

   ```
   vcvars32
   ```

   The vcvars32.bat file is located in your `\MSDEV\bin` directory.

2. Check the new values for these variables by issuing the `set` command. For example, enter: `set path`
3. If the values of these system variables do not match the values defined in the system environment settings, update the system environment settings.

To update the environment variables path, include, and lib:
1. Open Start—>Settings—>Control Panel.
2. Double-click the system object.
3. Click the Environment tab.

Complete the following steps for the path, include and lib settings.

4. Select the name of the variable that you want to change.
5. Type the new value in the Value field. The new value must be the value displayed when you run vcvars32.bat and enter the set command.
6. Click Set.

Q: MS Visual C++ 5.0 is installed correctly, but the linker program fails. What should I do?

A: If you are using Visual C++ 5.0, then you must change some environmental settings to enable the linker program.

Currently, the linker program expects the compiler directories to be `x:\msdev\bin` and `x:\msdev\lib`; these directories do not exist in Visual C++ 5.0. you must update the path, include and lib environmental settings.

To update the path, include and lib settings:
1. From the DOS prompt, enter:
   ```
   vcvars32
   ```
   The vcvars32.bat file is located in your `\MSDEV\bin` directory.
2. Check the new values for these variables by issuing the `set` command. For example, enter: `set path`
3. If the values of these system variables do not match the values defined in the system environment settings, update the system environment settings.

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Complete the following steps for the path, include and lib settings.

4. Select the name of the variable that you want to change.
5. Type the new value in the Value field. The new value must be the value displayed when you run vcvars32.bat and enter the set command.
6. Click Set.

Installing the Digital Library components

Q: Why can’t I see the text search server names in the text search administration window of the system administration program?

A: You must install the text search client on the system administration machine to access the text search server. When you install the text search client, you are prompted for a host name. The host name must be the host name of the text search server.

Chapter 5. Installing AIX Components

Q: My AIX-based components meet the system requirements listed in the *Digital Library Planning and Installation Guide*, but I'm having trouble with the library server and client toolkit. What should I do?

A: Check the level of your compiler. The *Planning and Installation Guide* lists a previous level, but Digital Library requires a recent update, which is in CSet++ 3.1.4.0 with PTF U451810, or AIX CSet++ 3.1.4.7.

Q: Why do some Digital Library directories have an "s" in the permission string? For example, some directories have permissions that look like this: `rwxrwsrwx`. Is this correct?

A: No. An "s" that appears in the execute position of the group permisson signifies Set-group-ID-on execution. The "s" is an error. Change this "s" to an "x". Enter:

```
chmod g+x filename
```

where `filename` is the file name of the file you want to modify.

Getting started

Q: How do I get JDK 1.1.2 for AIX?

A: The *Planning and Installation Guide* and the README file contain detailed information about the Java Development Kit (JDK). You can get the JDK from the AIX BonusPack CD-ROM. If you do not have the AIX BonusPack CD-ROM, contact your IBM representative.

Q: I created an AIX file system for the DL databases, but I cannot write to them. What's the problem?

A: Make sure that the database administrator owns the file system. For example, if the user ID inst1 owns your DB2 instance, make sure that inst1 owns the directory `/home/inst1`. You should also check that the instance configuration and group association are correct, as explained in the "Getting Started" section of the *Planning and Installation Guide*.

Installing the AIX library server

Q: I can't start the library server. The failure was logged in the frn/log/LIBSRVRX.dblog, and indicated a syntax error during database create.

A: Upgrade to AIX 4.2.1. Our documentation lists AIX 4.2 as the prerequisite, but because of the AIX errors, we need to upgrade this pre-req to AIX 4.2.1. If you do not want to upgrade to AIX 4.2.1, you must install APAR IX71678 on top of AIX 4.2.

Text search on AIX

Q: I installed text search, but I cannot log on to the system administration client. Why?

A: When you install the text search server, you must change the default user ID and password to a unique ID and password, for example: TSADMIN PASSWORD. The default user ID and password for text search is FRNADMIN PASSWORD.

If you have a separate user ID for the text search client and the text search server, run frnconfig.clt for both IDs and add the following statement to the profile for each ID:

```
. /home/userid/frn/frnsetup.clt
```

Q: I'm running on AIX and the sample loader program fails when it calls wakeUpService. Why?

A: You need to use the same ID for your Digital Library client and for text search. Change the default value in the TaskGuide to a valid Digital Library client user ID. To avoid reinstalling the text search component, you can also set the IMLCFGCL environment variable in your Digital Library client user ID's current session. Enter:

```
export IMLCFGCL=/home/tsclient/ts/client
```

where 'tsclient' is the text search client user ID, and the home directory is '/home/tsclient'.

Q: I installed Digital Library from one user ID, and when I try to start text search from another, it fails to initialize. What's the problem?

A: You probably did not define the environmental settings as global. You must reinstall the text search component and use the default setting of 'global.' Until you reinstall, try logging on from the user ID that you used to install Digital Library.

Part 3. Setting up and starting Digital Library

Chapter 6. Setting up your Windows environment

Problem determination for logon with Windows components

Q: On Windows 95, my Digital Library client takes a long time to initialize and the logon fails. The Logged error is: IsoSockGetHostName RC 9095. IsoInitialize RC 9019 Syntax problem in reading network table.

A: Use the fully-qualified host name (if using DNS) or use the IP address. The following steps prevent problems when working with a Windows 95 client:

- Keep your workstation ID the same as your host name.
- Don't specify Domain in the TCP/IP definitions.
- Use fully-qualified host names (or IP addresses) for the servers in the Network Table.

Q: On Windows 95, my Digital Library client takes a long time to initialize. Logon works, but I get the logged error:

```
IsoSockGetHostNameAddress RC=1 9095 can't resolve an address from the host
name your-host-name. IsoSockInit RC= -1. IsoInitialize RC 9008.
```

A: The client cannot resolve your host name. Your workstation name and your host name must be the same. DHCP resolves your workstation name. The following steps prevent problems when working with a Windows 95 client:

- Keep your workstation ID the same as your host name.
- Don't specify Domain in the TCP/IP definitions.
- Use fully-qualified host names (or IP addresses) for the servers in the Network Table.

Q: On Windows 95, my Digital Library client logs on and off the library server, but when I store or retrieve, it times out.

A: You have specified a domain in the TCP/IP settings. Delete the domain you have specified. The following steps prevent problems when working with a Windows 95 client:

- Keep your workstation ID the same as your host name.
- Don't specify Domain in the TCP/IP definitions.
- Use fully-qualified host names (or IP addresses) for the servers in the Network Table.

Chapter 7. Setting up your AIX environment

Generating and running setup scripts

Q: When I log out of my library server, object server, or client session, I lose my environment settings. Is there a way to avoid running the setup scripts every time I log in?

A: Yes. Add the set up scripts to your user ID's .profile:

For the library server add:

```
. /home/lsadmin/frn/frnsetup.lib
. /home/inst1/sqllib/db2profile
```

For the object server add:

```
. /home/osadmin/frn/frnsetup.obj
. /home/inst1/sqllib/db2profile
```

For the clients add:

```
. /home/cltadmin/frn/frnsetup.clt
. /home/inst1/sqllib/db2profile
```

Chapter 8. Starting your system

Starting the Digital Library servers

Q: Why don't I see the library server creating the database table for the index class or the DLLs for the index class when I start it for the first time?

A: In Version 1, messages were displayed on the screen while the library server created database tables and DLLs. These messages are not displayed in Version 2. Instead, you can query the library server status with the command utility.

To check the status, enter: `frncmd libsrvrx status` (where libsrvrx is the server name).

If the server has not yet started, the command may fail, but try it again in a few moments. You should see a message like"`Optimization Status: optimizing class 8`" (The number value will vary as there are 12 classes that need to be created.).

Q: How do I make the object server start in the background on AIX?

A: To start the object server in the background, add the following command to the frnxlbnm line in the `frnstart.obj`script:

```
nohup&
```

It is best to start the object server in the background. When you start the object server in the foreground and you close your session or if the session terminates abnormally, you may have to recover the databases.

Q: After running a while, the library server runs out of virtual memory. How do I fix it?

A: Increase the value of the FRNHEAPSIZE environment variable to 2048.

Starting the system administration program

Q: Why can't I access the object server from the system administration program? (When I click on the object server icon, I get an error.)

A: To access the object server from the system administration client, you must start the system managed storage (SMS) server on the object server machine. The system administration program communicates with the SMS server, not directly with the object server. For more information, see the online help.

Setting up text search

Q: Why can't I start the text search server on AIX?

A: Before your start the text search server on AIX, you must perform the following tasks:

- Run frnconfig.clt and frnsetup.clt in the current session.

- Update the LIBPATH and IMLCONFIGSRV environment variables before starting text search.

  To update the variables, use the following commands (or add them to the user ID's .profile):

  – # export LIBPATH=$LIBPATH:.:/usr/lpp/frn/bin:/usr/lpp/frn/lib
  – # export IMLCONFIG=/home/tsadmin/ts

You must start text search from the /usr/lpp/frn/bin directory.

Q: I've set up my user ID and installed the text search server and client components on the correct machines, but I still can't start the text search server. When I try to start the server, I receive an error: "Not able to load text from the message file." What's the problem?

A: Make sure that the LANG environment variable is set to En_US and that the LIBPATH is set to: `.:/usr/lpp/frn/bin:/usr/lpp/frn/lib`

Creating a text search index

Q: If I run the text search server on AIX and want to create a text search index from the system administration program on NT, what do I do?

A: To create a text search index from your NT system administration, perform the following tasks:

1. Ensure that the text search server has been started from your AIX machine.
2. Ensure that the Digital Library user ID used by text search server is unique.

   Check for a unique ID by examining a file called IMLusmgr.dat in the /home/tsadmin/ts/dlinst directory. In IMLusmgr.dat, the text search server user ID should be "tsadmin." You can update this file with the imlpsw command, which is documented in step 2 under "Setting up text search" in the *Planning and Installation Guide* (or enter the command without any parameters, and the syntax for imlpsw will print to the screen). Also, when following the instructions in the *Planning and Installation Guide*, make sure the index is created under the text search server user ID directory. For example, the index should be created in /home/tsadmin/ts/tmindex, not under the text search client user ID.
3. Start the system administration client.
4. Select text search in the server drop down list that is over the left pane.
5. Right-click the index object.
6. Select **New**.

Running the loader program

Q: What should I do if the sample loader program won't work on Windows NT?

A: Check the following possibilities:

- Make sure you defined the text search index called "TMINDEX" using the system administration tool.
- Unpack the sample files from "samples.jar". To unpack the files, enter: `jar -xvf samples.jar`
- Start the library server, object server, and text search server.

- When you load the sample data, make sure you run the command from the correct directory: x:\FRNROOT\SAMPLES\JAVA (for Windows NT) /usr/lpp/frn/samples/sdk/java (for AIX)
- Enter the java TLoadSample command. For example:

```
java TLoadSample sample.dat sample.log frnadmin password LIBSRVRN
```

For Windows NT

- If you get an error message that the system cannot find the TLoadSample class, make sure the value for the environment variable `CLASSPATH` starts with a period and a semicolon.
- If you get an error message about `SimLibCreateItem` failing, it is possible that the library server failed to dynamically create the DLL files. Use the DIR command to check for the presence of DLL files in the `x:\FRNROOT\\dll` directory. If there are no DLL files, make sure the system environment variables `LIB` and `INCLUDE` have Microsoft C/C++ and DB2 in the path.
- For example, for Microsoft C++ 4.2, the `INCLUDE` should have the following path in it:

  ```
  x:\SQLLIB\INCLUDE;x:\MSDEV\INCLUDE;x:\MSDEV\MFC\INCLUDE;x:\FRNROOT\INCLUDE
  ```

  and the `LIB` should have the following path in it:

  ```
  x:\SQLLIB\LIB;x:\MSDEV\LIB;x:\MSDEV\MFC\LIB;x:\FRNROOT\LIB
  ```

  Restart the Library Server to change the environment settings and generate the DLL files.
- Index text using the system administration tool.
- If you are using the GA NT code driver 113, dated 9/30/97, you need to get a code fix. The fix is available from the following ftp site:

  ```
  //service.boulder.ibm.com/ps/products/digital_library/fixes/v2.0/enu/
  ```

Q: We would like to load PDF, Lotus Freelance, and Lotus WordPro data types into Digital Library. How do we do it?

A: Digital Library comes with many data types predefined. Open `DkConstant2.h` in the `include` directory to see a listing of all the predefined data types. Lotus Freelance is predefined as 152. PDF and Lotus WordPro are not defined.

You can load undefined data types into Digital Library with the Java toolkit application. The Java toolkit will prompt you for a data type number. You can assign any unique number to the undefined data type. When you assign a new number, check the list of predefined data types to ensure that you are not overwriting one of the data types.

You must remember the number you assigned to each data type when you load it. The number is for your coding efforts. Digital Library will still see that data type as an unknown data type. The programmer must recognize the new data type number in his client application and process it correctly.

Alternatively, you can modify the sample loaders to input the new number for the new data types in the content-type field.

Running the sample application

Running the dynamic page builder sample

Q: After I configured Dynamic Page Builder and Net.Data, I ran a sample query and received syntax errors from the browser. The error stated that Net.Data did not read the macro file correctly. What might be the problem?

A: When you add the server name, library name, user ID, and password to the frn*.d2w files, leave the double quotation marks (“) in the string. For example, your string should read, “`LIBSRVRN`”, not `LIBSRVRN`. These double quotation marks tell Net.Data that a string is being passed in.

Part 4. NLS FAQ

Chapter 9. GTR documentation (text search for DBCS languages)

Q: Where can I find information about GTR, the text search engine for double-byte character set languages?

A: There are two manuals that describe how to use the GTR search engine component of TextMiner; *Text Search Using TextMiner Application Programming Reference* and *Guide to Object-Oriented and Internet Application Programming*.

The C language interface is documented in *Text Search Using TextMiner Application Programming Reference*.

In Chapter 2, under “Deciding which type of document index to use”, the GTR index is referred to as “Ngram.”

In Chapter 6, “Calling the API functions,” the Search API is the primary way to access GTR. The following APIs also access GTR:

CreateIndex

GetIndexInfo

GetIndexingRules

GetMatches

GetProfile

OpenDocument

ReorgIndex

Search

SetIndexingRules

The interface for Digital Library’s C++, Java, and ActiveX interfaces are documented in *Guide to Object-Oriented and Internet Application Programming*:

In Chapter 3, under the “TextMiner - text search engine” heading, there is a section called “GTR Query.”

In Chapter 4, under the “TextMiner” heading, there is a section called “GTR Query.”

In Chapter 5, under the “Advanced Topics” heading, there is a section called “TextMiner” and “GTR Query” is a subsection of “TextMiner”.

Chapter 10. Installing the Japanese version of Digital Library

Installing the Japanese version of Digital Library on AIX

Q: What should I do before installing DL on AIX so that I can use the Japanese language?

A: Check the setting for the environment variable LANG. If it is not set to the locale you desire, you must reset it. For example:

```
export LANG=ja_JP
```

or

```
export LANG=Ja_JP
```

This directs the install program to find the Japanese message files. If you choose to create a database for the library server during installation, the database is created using the code page defined by the LANG setting of the library server user. In this example, this is a Japanese locale, and therefore a Japanese code page.

Installing the Japanese version of Digital Library on NT

Q: How about installing DL on my Japanese Windows NT workstation? Do I need to do things similar to AIX?

A: No. For Windows NT, the install program detects the system locale and uses it automatically.

Chapter 11. Starting the Japanese version of DL

Q: After I install the Japanese version of DL on my machine, how do I start it? Do I have to do different things for NT and AIX?

A: On AIX, the library server uses the environment variable LANG to determine which language message file and which code page it uses. You must set LANG before starting the library server. On Windows NT, DL uses the system default locale; you do not have to set it.

Chapter 12. Preparing to use the Japanese version of system administration

Q: I install DL on an AIX system using the Japanese locale and start the system administration tool from a Japanese Windows NT workstation. When I click Fileroom to view the index classes, “No Item” is displayed. Does this mean the system doesn’t have any initial index classes?

A: No. The DL default installation includes initial index classes and their key fields. But the index class names were created in English, even though the database was created in Japanese code page. To see index classes and their key fields from a Japanese application, you need to configure your library server to be viewable in the Japanese language:

1. Start the library server.
2. Start the system administration tool to connect to the library server.
3. From the system administration tool, take the following steps:
   a. Create a new language definition. (Library Server Parameter->Language Definitions->Selected->New)
   b. Enter “Japanese” for the Name and “JPN” for the Language Code, and click OK.
   c. Create a new library server configuration. (Library Server Parameter->Configurations->Selected->New).
   d. On the Performance page of the library configuration notebook, enter the code page number for your library server.
   e. On the Defaults page, select “Japanese” for the default language, and click OK.
   f. Exit the system administration tool.
4. Shutdown the library server.
5. Modify the library server setup file, frnsetup.lib, to export. For example:
   `FRNDBCFG=new-config-name`
6. Restart the library server.
7. On the client machine where you started the system administration tool, set FRNDEFLANG to “JPN.”
8. Restart the system administration client. Now you should be able to see the default index classes and their key fields.

Chapter 13. Load sample data in Japanese environment

Q: I ran TLoadSample on my Japanese machine and the program was terminated with the following error messages. What does this mean, and how do I fix it?

```
Connecting datastore, please wait...
Exception name DKDatastoreAccessError
Exception message DGL0384A: Error in getting catalog information:
SimLibListClasses, rc = 6314
COM.ibm.mm.sdk.common.DKDatastoreAccessError:
DGL0384A:Error in getting catalog information: SimLibListClasses, rc = 6314
at COM.ibm.mm.sdk.server.PIndexClassSchema.(Compiled Code)
at COM.ibm.mm.sdk.server.DKDatastoreDL.connect(Compiled Code)
at TLoadSample.main(Compiled Code)
```

A: The TLoadSample is designed to load sample data in English and the DLSAMPLE index class name was originally created in English. If you recently installed DL and have not defined the Japanese language for your library server, your library server will not have any index classes and key fields in its Japanese name space. Under this condition, if you run an application using the Japanese locale and try to list index classes, you get this error. To fix it, check your client environment variable FRNDEFLANG.

Q: I defined the Japanese language for my library server and ran TLoadSample on my Japanese machine. Then the program stopped with the following message. What happened?

```
Exception name DKUsageError
Exception message DGL0426A: Index class not found
```

A: When you define the Japanese language for library server, the existing database index class and key field names are duplicated (with minor variations) and stored in the Japanese name space. To search on the English name DLSAMPLE, direct the library server to find the name in its English name space. To do that, make sure your client environment variable FRNDEFLANG is set to ENU.

Index

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