

PLUS ADMINISTRATOR'S GUIDE



Attachmate®

**DATABridge™**



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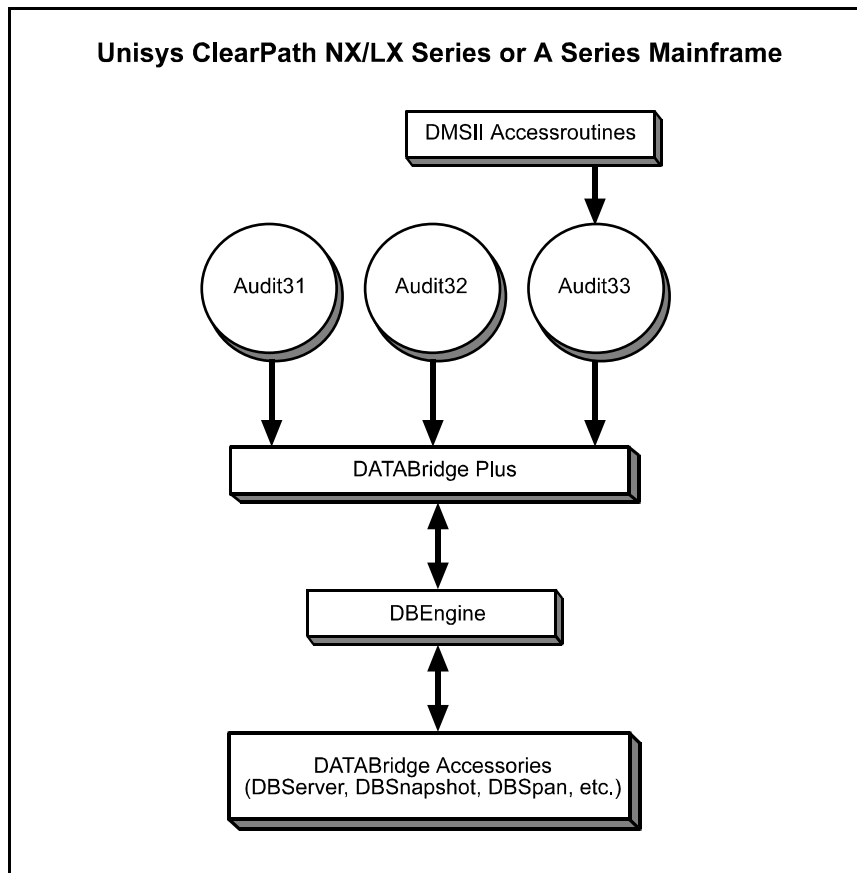
## Understanding DATABridge Plus

DATABridge Plus runs on all Unisys® MCP-hosted servers, such as the CS7xxx series, Libra series, ClearPath® NX/LX, or A Series. It is a system library that accesses DMSII audit files, including the current audit file, giving DATABridge the ability to perform near real-time replication of DMSII databases.

To use DATABridge Plus, you need a basic understanding of DATABridge and the DATABridge Accessories. See “[Glossary](#)” beginning on page 8 for a brief explanation of the DATABridge Accessories, or refer to the *DATABridge Host Administrator’s Guide* for a complete explanation of DATABridge and its Accessories.

### How DATABridge Plus Works

The following diagram shows how DATABridge Plus works:



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DATABridge Accessories request audit file information for a specific database from DBEngine. DBEngine then initiates the DATABridge Plus system library to access DMSII audit files, including the current audit file, for the specified database. DATABridge Plus submits the DMSII audit file records to DBEngine until DATABridge Plus locates the end-of-file marker. DBEngine then rolls back transactions to the last quiet point before the end-of-file marker.

DATABridge Plus:

- Supports MCP levels SSR 49.1 and later.
- Uses the same license key as the DATABridge host product.
- Is compatible with DATABridge Host 5.0 and later.

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## Installing DATABridge Plus

**Note:** It is recommended that you install DATABridge Plus into the same usercode and pack where you installed DATABridge.

Complete the following steps to install DATABridge Plus:

- 1 If you are upgrading, suspend DATABridge Plus. See [“Suspending the DATABridge Plus System Library”](#) on page 6.
- 2 Sign on to the usercode that was used to install DATABridge.
- 3 If the DATABridge Plus installation WFL has been moved or no longer exists, copy it from the release medium to your host.
- 4 To install, do one of the following:

- If installing from DVD, use the following command:

```
WFL UNWRAP *WFL/DATABRIDGE/INSTALL AS
      WFL/DATABRIDGE/INSTALL OUTOF *INSTALL FROM DBXX (CD) TO
      DISK (RESTRICTED = FALSE)
```

where *XX* is the version of the software with no decimals. For example, DB61.

*It is recommended that you install to a privileged usercode.* If you install to a nonprivileged usercode, all object files will be marked as restricted, which causes the installation WFL to pause (step 5).

- If installing from uploaded files, upload DISKINSTALL and IMAGE files using a file transfer tool capable of binary/image transfers to the usercode where DATABridge is to be installed. Sign on to the usercode and then use the following command:

```
WFL UNWRAP *WFL/DATABRIDGE/INSTALL AS WFL/DATABRIDGE/
      INSTALL OUTOF DISKINSTALL
```

- 5 From CANDE, start the installation WFL as follows:

```
START WFL/DATABRIDGE/INSTALL ("PLUS"[, "familyname"])
```

where *familyname* is an optional pack name that defaults to DISK. This allows family substitution to determine where DATABridge Plus will be installed. If you use this parameter, do not type the [brackets], but do type the quotation marks. Use this optional parameter *only* if you used the optional pack parameter when installing DATABridge.

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- 6 When prompted, enter the access code (same as license key) located on your DATABridge host DVD package.

If the installation WFL pauses, continue with step 6.

*Otherwise, the installation procedure is complete.*

- 7 If you installed from DVD to a nonprivileged usercode and the installation WFL is paused, you must unrestrict OBJECT/DATABRIDGE/KEYENTRY, as in this example:

```
RESTRICT -FILE (ENGR) OBJECT/DATABRIDGE/KEYENTRY ON  
PRODUCTION
```

- 8 After you have unrestricted OBJECT/DATABRIDGE/KEYENTRY, transmit *mixnumber*OK to the install WFL job.

OBJECT/DATABRIDGE/KEYENTRY now runs.

- 9 When prompted, enter the access code (same as license key) located on your DATABridge host DVD package.

- 10 After the installation WFL completes, mark *all* of the DATABridge object files as unrestricted by entering the following from either the ODT or from a privileged usercode in MARC:

```
RESTRICT -FILE objectfilename
```

## **Installation Results**

The files listed below are copied to the usercode you designated when you installed DATABridge Plus:

```
(usercode) OBJECT/DATABRIDGE/AUDITSUPPORT  
(usercode) DATA/AUDITSUPPORT/README
```

## **What to Do Next**

Establish DATABridge Plus as a system library, as explained in the next section.



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## Establishing DATABridge Plus as a System Library

You *must* establish DATABridge Plus as a system library so that DBEngine can invoke DATABridge Plus to access the audit files.

To establish DATABridge Plus as a system library, enter the following command from either the ODT or from MARC:

```
SL DBAUDITSUPPORT=(usercode) OBJECT/DATABRIDGE/AUDITSUPPORT
  ON pack:TRUSTED, LINKCLASS=3
```

where *usercode* and *pack* are the usercode and pack name to which DATABridge Plus was installed.

The host responds with the following message to indicate that DATABridge Plus is established as a system library:

```
Function "DBAUDITSUPPORT=(usercode) OBJECT/DATABRIDGE/
  AUDITSUPPORT ON pack" ESTABLISHED
```

You can now use DATABridge as you normally would. DBEngine will automatically invoke DATABridge Plus to access audit files as needed.

**Note:** The DBEngine parameter file (DATA/ENGINE/CONTROL or, if the file is specific to a database, the database name is a node in the file name) contains a DBPlus parameter that specifies whether or not DBEngine should use DBPlus when replicating a database.

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## Suspending the DATABridge Plus System Library

If you need to suspend DATABridge Plus (to upgrade the DATABridge Plus software, for example), enter the following command from either the ODT or from MARC:

```
SL - DBAUDITSUPPORT
```

The host responds with the following message to indicate that DATABridge Plus is suspended:

```
FUNCTION "DBAUDITSUPPORT" IS NO LONGER ESTABLISHED
```

To reestablish DATABridge Plus as a system library, complete the steps in [“Establishing DATABridge Plus as a System Library”](#) on page 5.

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## Messages

You might receive the following messages while using DATABridge Plus:

Message	Meaning
AUDLEVEL= <i>n</i>	<p><i>n</i> is the audit level of the audit file DATABridge Plus is trying to open. DATABridge Plus supports audit levels 6 and 7. If, for example, your DMSII audit level changes to 8, you will receive this message.</p> <p>If you receive this message, contact Technical Support.</p>
Partial Audit Block <i>xxxx</i>	<p><i>xxxx</i> is additional information about the error.</p> <p>If you receive this message, contact Technical Support and provide the additional information listed in the error message.</p>
No File <i>filename</i>	<p>The audit file DATABridge Plus is trying to open is no longer on the original audit pack or on the AUDIT ON pack location.</p> <p>Copy the audit file to the original pack or the audit on pack location and then perform an FA command.</p>

If you cannot resolve a problem, do the following:

- 1 Troubleshoot the problem using information available from Attachmate Technical Support.

<http://www.attachmate.com/en-US/Support/>

This service directly links you to our internal help desk system, 24 hours a day, 7 days a week.

- 2 Contact Attachmate Technical Support:

<http://support.attachmate.com/contact/>

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## Glossary

This section includes terms that are unique to DATABridge and DATABridge Plus, as well as terms that are standard for DMSII databases. For a complete list of DATABridge terms, refer to the *DATABridge Host Administrator's Guide*.

**Note:** Some of the terms below are standard terms for Unisys mainframes. Complete, detailed definitions for these terms can be found in Unisys ClearPath NX/LX series or A Series documentation.

**ABSN** Audit block serial number—The audit block serial number is a 10-digit number that identifies an audit block.

**Accessories** DATABridge Accessories access the services in DBEngine and DBSupport. Some of the Accessories provided with DATABridge are as follows:

- DBServer, which provides communication and DMSII database replication services to DATABridge Clients.
- DBSpan, which produces a replication of one or more data sets into flat sequential disk files. DBSpan updates the cloned flat files by appending the changes to the end of the flat files (unlike DBSnapshot, which replaces the changed records).
- DBSnapshot, which produces a one-time replication of one or more data sets into flat sequential disk files or tape.
- DBTanker, which provides filtered audit files for the DBSpan and DBServer Accessories.
- DBInfo, which produces a report of your DMSII database timestamps, update levels, DMSII release levels, etc.
- DBLister, which produces a report of the layout of the structures in your DMSII database, including structure numbers and key sets.
- DBAuditTimer, which closes the current audit file when it is older than a specified length of time.

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**Accessroutines** The Accessroutines program is a DMSII library program that controls access to the database, reads and writes records, and creates the audit trail. DATABridge Plus enables DATABridge to perform near real-time replication of DMSII databases by accessing the audit file *while* the Accessroutines program is creating it.

**AFN** Audit file number—The audit file number is a four-digit number that identifies an audit file.

**audit file** An audit file is created by the DMSII Accessroutines and contains the raw format of changes made to the DMSII database by update programs. Audit file records contain the deletes, creates, and modifies that were made to the various structures. It can contain hours, days, or weeks worth of information, depending on the frequency of changes made to a database.

DATABridge uses the audit file for the raw data of each database change to exactly replicate the primary database. DATABridge records the audit location (AFN, ABSN, SEG, IDX) between runs, so it can restart without losing any records.

**audit trail** The audit trail contains all of the audit files generated for a database. The audit trail consists of the audit files named as follows:

*dbname/AUDITnnnn*

where *dbname* is the name of the DMSII database, *AUDIT* is a literal, and *nnnn* is the AFN, a sequential number between 1 and 9999. For example, if you have a database named BANKDB, an audit file would be named similarly to the following:

BANKDB/AUDIT7714

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**CONTROL file** The DMSII CONTROL file is the runtime analog of the DESCRIPTION file. The DESCRIPTION file is updated only when you compile a modified DASDL, whereas the CONTROL file is updated each time anyone opens the database for updates.

The CONTROL file contains timestamps for each data set (when it was defined and updated). It contains parameters, such as how much memory the Accessroutines can use, and it contains titles of software, such as the DMSUPPORT library (DMSUPPORT/*database*name).

The CONTROL file controls database interlock. It stores audit control information and verifies that all database data files are compatible by checking their timestamp, version timestamp, and update level.

DATABridge uses the CONTROL file timestamp, the AFN for the current audit file, and the ABSN for the current audit block serial number.

**DASDL** Data and structure definition language—This is the language that defines DMSII databases. The DASDL must be compiled.

**DBEngine** DBEngine is a host library that provides services for DATABridge Accessories to retrieve data definition and data records for replication.

DBEngine reads the DESCRIPTION file, the CONTROL file, the database data files (via the DMSII Accessroutines), and initializes DATABridge Plus to read audit files.

**DBSupport** DBSupport provides formatting, translation, and filtering to the DATABridge Accessories. Once an Accessory receives data from DBEngine, the Accessory can call a filtering routine in DBSupport to determine if the data should be replicated, and if so, it then passes the data to DBSupport for formatting.

**DESCRIPTION file** The DESCRIPTION file contains the structural characteristics of a database (physical and logical). It is created from the DASDL source by the DASDL compiler and contains the layout (physical description), timestamp, audit file size, update level, logical database definition, and any static information about the database. It contains information about the database, not the data itself.

DATABridge must have access to the DESCRIPTION file before it can replicate a database. Additionally, DATABridge uses the DESCRIPTION file information for consistency checks between the primary database and the secondary or replicated database.

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**quiet point (QPT)** A point in time when no program is in transaction state. This can occur naturally, or it can be forced by a DMSII syncpoint. The quiet point is a point in time in the audit trail that DATABridge uses as a reference point to help synchronize cloning or tracking of the DMSII database. DATABridge uses quiet points to ensure an accurate snapshot of the data. Audit addresses of these quiet points are stored in the replicated database for database synchronization purposes.

**system library** A program that maps function names to library code files.

