

Databridge 6.5 Release Notes

June 2017



Micro Focus Databridge 6.5 includes new features, enhancements, and bug fixes.

Many of these improvements were made in direct response to suggestions from our customers. We thank you for your time and valuable input. We hope you continue to help us ensure that our products meet all your needs.

The documentation for this product is available on the Documentation Website in HTML and PDF formats on a page that does not require you to log in. If you have suggestions for documentation improvements, click comment on this topic at the bottom of any page in the HTML version of the Databridge documentation posted at the Documentation Website (need link).

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1 What's New?

This release includes several changes, fixes, and new features, which are described in detail in the section, "What's New In This Release" in Chapter 1 of the Databridge Installation Guide. The following outline the key features and functions provided by this version, as well as issues resolved in this release:

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1.1 What's New

The following upgrade to your Micro Focus product(s) is now available:

- ◆ Databridge Host 6.5
- ◆ Databridge Client 6.5
- ◆ Databridge Enterprise Server 6.5
- ◆ Databridge DMSII Client 6.5
- ◆ Databridge Twin 6.5

New in this release you will find:

- ◆ Support for MCP and DMSII SSR level 59.1 (version 18)

- ◆ Support for Windows Server 2016
- ◆ Support for SUSE SLES12
- ◆ Support for Windows SQL Server 2016
- ◆ Databridge Flat File Client available for purchase. Now export your valuable DMSII data to a flat file for use in your enterprise!
- ◆ Databridge Automated Cluster Support for Windows Add-On available for purchase. Now provide automated failover for Databridge in your windows-clustered environment.
- ◆ Databridge Console Add-On available for purchase. Now you can install additional copies of the console for remote access control and monitoring of Databridge!

Databridge Host Enhancements

- ◆ Software license keys (access codes) are stored in a separate file and monitored using the new DBLicenseSupport library. This prevents overwriting the DBEngine control file when installing a new release.
- ◆ License keys have an associated limit on the number of hosts that can use the product.
- ◆ The new DBLicenseManager program displays licensed products and installs product keys.
- ◆ WFL programs are installed with a node of SAMPLE in the title to avoid overwriting customer-modified WFLs. The SAMPLE files are automatically duplicated with the standard WFL name for first-time installations.
- ◆ The WFL/DATABRIDGE/INCLUDE/SSRTITLES file allows you to specify non-standard titles and locations for the DMSII software and compilers for each system software release. This avoids the need to customize individual WFLs or to perform manual compiles.
- ◆ All database access is through the DBDMSIISupport library, which is automatically compiled using WFL/DATABRIDGE/COMP for each database and change in update level.
- ◆ Unaudited databases may be cloned.
- ◆ If the new DBEngine parameter file option DYNAMIC NAMES is set the Extract Workers will be named EXTRACT/WORKERx/*dbname/structurenumber*.
- ◆ The new DBEngine parameter file option MANUAL COMPILE prevents automatic recompiles of DBSupport and DBDMSIISupport, which is useful if the DMALGOL compiler is not available.
- ◆ In most cases, there are no forced audit switches at the end of a clone.
- ◆ DBEngine displays its compile options. For example,

Example 1 DBEngine: Compile options: STATS DEBUG

- ◆ The AX STATUS command displays any STOP conditions.
- ◆ DBServer returns an error if its port is already in use. This prevents multiple copies of DBServer from sharing the same port.
- ◆ DBServer prevents denial of service attacks from tying up Workers.
- ◆ DBSupport uses less memory and allows a large number of filters in large databases.
- ◆ DBTwin and DMSII Client support the AUTHORIZED USERCODE option in a DBServer SOURCE, which allows only certain usercodes to access the source.
- ◆ The DBTwin status report shows version and parameter settings.

IMPORTANT: Databridge version 6.5 will be the final release that supports DBTanker.

Databridge Client Enhancements

- ◆ The Client can operate without using stored procedures, while still using host variables. This mode of operation improves performance and makes the Client less vulnerable to problems with triggers that are sometimes used to capture updates to certain tables. You can enable this mode globally and change it for individual data sets using the Client Configurator.
- ◆ The Client Manager Service can operate in a clustered Windows Server environment. The service starts and stops automatically on the corresponding node of the cluster when a node switch occurs. The service remembers the state of the data sources, and it restarts any runs that were aborted as a result of the cluster switch, thus making the switch totally automatic.
- ◆ A special mode allows you to handle DMSII reorganizations that cause large tables to be altered. In SQL Server, rename and copy the table using "SELECT INTO". In Oracle, rename and copy using "Copy Table As Select" (CTAS). These techniques are faster than the normal way the Client handles such situations and do not involve the log, thus avoiding the possibility of running out of disk space. The only problem with this technique is that you need to have enough disk space to hold a second copy of the table while the operation is in progress.
- ◆ If you cannot use the above method (i.e. don't have enough disk space), we have also enhanced the way initial values are applied to newly-added columns. Now the updates are done in batches instead of in one giant step to avoid the log file getting too big. The batch size for these updates is configurable, defaulting to 10,000 updates. We also extended this technique to the cleanup scripts.
- ◆ The Client protects against a rogue user running potentially harmful scripts from a directory he or she has access to. We do this by only running scripts that reside inside the Client working directory, which is protected by file security.
- ◆ The Windows Clients now allow you to configure up to 4 bulk loader threads which could speed up the data extraction process on a high-end server machines. The default number of bulk loader threads is 1.
- ◆ When the base structure of a REMAP is filtered out, the Client sets active=1 for the first REMAP of the base structure, thus allowing the REMAP to be replicated. This is also extended to embedded data sets where the parent data set is filtered out, while its REMAP is not.
- ◆ You can now force the Client to stop when the audit file access method of Databridge Enterprise switches away from the designated mode (normally direct disk). In the past, we just issued a WARNING and continued processing audits. This change gives the user the option to make it stop automatically when this happens.
- ◆ When upgrading the Client software, you no longer must use the migrate utility, provided your software is 6.1 SP3 or newer. The upgrade can use the same working directory and binary configuration files as the old Clients --- no need to do anything else. If the Client Control Tables are incompatible with the old software, the Client Manager Service automatically runs dbfixup. This makes it extremely simple to do an upgrade. All you have to do is install the new software and specify the same working directory as the old software in the Options tab of the setup program. The updatepath program now includes a checkbox to start the Client Manager service in the last dialog. You will need enable it to start the service.
- ◆ You can configure the Client to strip common prefixes from all item names without writing cumbersome user scripts. Many DMSII databases use the dataset name (or an abbreviated form it) as a common prefix, which is considered arcane in a relational database.
- ◆ You can store GUIDs represented as ALPHA(36) items in DMSII as columns of data type UNIQUEIDENTIFIER when using the SQL Server client.
- ◆ We enhanced the Client to display the correct exit code in many situations which used to display the somewhat meaningless catch-all exit code of 2099, "Internal Error". We also added a few new exit codes to the Client.

- ◆ We significantly reduced the number of messages written to the screen and the log file during data extraction for Windows Clients, as they served no practical purpose other than creating clutter on the screen and the log file. We now show the “creating temp file” message only the first time we get a record for the table. We no longer show the starting bcp messages. Instead we use one message that indicates that the temporary file size threshold has been reached and we are starting bulk loader operations.
- ◆ We enhanced the Client logging for runs launched by the Client Manager Service so that all logging for operations that lock the data source get written to the main log file. This makes the log easier to follow, as you no longer need to look in two places.
- ◆ 64-bit counters are now used for statistics. This eliminates any possibility of overflow during full clones.
- ◆ MISER database customers no longer have to set the parameter `suppress_dup_warnings` to true to prevent real errors from being suppressed. The client automatically does this for the history virtual datasets that would otherwise generate bogus warnings.
- ◆ The Databridge Client Manager Service is no longer vulnerable to short messages, which would cause it to hang. The timeout period, which defaults to 2 seconds is configurable.
- ◆ The Databridge Client Manager Service times out rogue connections that send no input, thus preventing a denial of service attack from succeeding.
- ◆ The Databridge Client Manager Service times out runs when they do not reconnect within the timeout period. This avoids hanging the console when a Client run encounters a problem that causes it to exit before reconnecting to the service.
- ◆ The Client Console for the AIX and HP-UX platforms now uses GTK rather than motif, while the AIX console is available in 64-bit form.
- ◆ The console operator may now add command line options for runs initiated from the console.
- ◆ The Client Console can customize and enforce stricter password rules. Options include a minimum length for passwords, requiring certain types of characters in a password, and the ability to force users to change their passwords on first use.
- ◆ We implemented a Flat File client that works like DBSPAN. This client uses an ODBC database to hold the Client Control Tables.
- ◆ The "auto_reclone" parameter has been deprecated, as this feature did not work correctly with online garbage collection reorgs. The two options that are available are to stop the client when a garbage collection is detected, or let the client deselect the affected data sets and reclone them later when all the reorgs are completed. The -y option for the process command makes it easy to reclone these data sets without having to do anything else.
- ◆ The "max_wait_secs" parameter now accepts two values, the second of which is optional and defaults to 60. When the second parameter is non-zero, it enables code that breaks up long wait-and-retry loops, implemented by the Engine alone, into smaller wait-and-retry loops in the Engine with the client repeatedly issuing DBWait remote procedure calls until the period of inactivity exceed the value specified by the first value. For example, you can break up a 1 hour loop into 60 one minute loops, which ensures that the line does not go idle for long periods of time.
- ◆ The index suffixes for the Oracle client now can use the environment variable `$(INDEX_NAME)`, which gets replaced by the actual index name when the suffix is applied. See the section on "SQL Statement Suffixes" in Appendix C of the Client Administrator's Guide.
- ◆ The client implements row filtering for secondary tables derived from items (or GROUPS) that have OCCURS clauses that are not flattened. This is done by using a text file to specify the filtering criteria for such tables using a SQL like syntax.

- ◆ The client implements the flattening of unsigned NUMBER items and ALPHA items with OCCURS clauses to a CHAR or VARCHAR column instead of making each occurrence of the item into a separate column. This process is referred to as flattening the OCCURS to a string. You can have fixed format strings and CSV format strings where the delimiter can be selected.
- ◆ The DMSII time handling code now supports NUMBER(12) items that represents time in the format "HHMMSSmmmmmm", where the last 6 digits are the fractional part of the seconds.
- ◆ The SQL Server client can now handle table names that are TRANSACT-SQL reserved words by enclosing them in square brackets in all SQL statements it uses. In order to maintain backward compatibility we implemented the configuration parameter "bracket_tabnames" that enables this feature.
- ◆ The -k option was added to force the Client to drop tables rather than run cleanup scripts in a multi-source environments when recloning datasets. This is designed to be used after a DMSII reorganization that requires certain data sets to be reclone. Using the -k option for the first such clones makes the process a lot simpler, as manually dropping the tables to get them recreated with the new layouts are no longer required.

Databridge Enterprise Enhancements

- ◆ The COPY command line can now specify the HIDE option to prevent displaying the progress dialog. Copies from the MCP environment to the Windows environment can also specify the OVERWRITE option, which will automatically overwrite an existing Windows file. If HIDE is specified without OVERWRITE, existing files will be unchanged.
- ◆ The list of files copied is now consolidated in a single file called "Files copied.txt" in the same subdirectory as the file transfer log files for a particular host (either TO or FROM).
- ◆ The client user ID is passed to DBServer for verification when using the AUTHORIZED USERCODE option.
- ◆ Network transmissions are buffered for improved throughput.
- ◆ DBEnterprise prevents denial of service attacks from causing copies of DBEnterprise to hang.
- ◆ DBEnterprise uses the COMMIT DURING IDLE DATABASE setting from the DBEngine parameter file.
- ◆ DBEnterprise supports Windows clustered systems.
- ◆ The Disk Properties dialog shows the base pack serial number.

For the list of software fixes and enhancements in previous releases, see [Previous Releases](#).

1.2 Issues Resolved by Databridge 6.5

This release resolves several issues, including those which were fixed by 6.2 Service Pack 2 and 6.3 and their Hot Fixes and Updates. For a detailed description of those fixes, see the Dataridge Installation Guide. Additional changes are listed below:

Client

- ◆ The "auto_reclone" parameter has been deprecated, as this feature did not work correctly with online garbage collection reorgs. The two options that are available are (1) Stop the client when a garbage collection is detected, (2) Let the client deselect the affected data sets and reclone them later when all the reorgs are completed. The -y option for the process command makes it easy to reclone these data sets without having to do anything else.

1.3 License Key Update

For Databridge 6.5, a new license key algorithm will be required for use on this release. This new key will be based on the components you currently have licensed. To prevent disruptions during your upgrade, a temporary key has been inserted and will expire on January 1st 2018.

Please ensure you have contacted Customer Care (<http://support.attachmate.com/contact>) to receive your new license key prior to Jan 1st 2018, or before installing this upgrade.

1.4 Security Guidelines

Databridge 6.5 includes the following security guidelines:

Table 1

For	To decrease security risk
Databridge Host	<p>Install Databridge Host to the Unisys mainframe under its own privileged usercode. This is preferable to installing under the usercode of the DMSII database. If you install and run Databridge under multiple usercodes, you must install a copy of DBEngine under each of those usercodes.</p> <p>Alternatively, you can establish DBEngine as a system library (SL).</p>
Databridge Client	<p>File security helps to protect Client operations by restricting access to the working directory and its files and subdirectories. Access is limited to the administrators and the system account, and to designated users (or on Windows, user groups). In Windows, you can enable file security via the option Enable File Security at installation, or by running the program <code>setfilesecurity.exe</code> as Administrator after installation.</p> <p>From the UserID box and the DBAdministrator box, specify users who can run Databridge Client and modify the working directory and its files. User IDs specified in the DBOperator box can monitor operations by reading the log files, but cannot run Databridge Client</p> <p>In UNIX, you restrict file access via the <code>umask</code> entry in the file <code>globalprofile.ini</code>. See Install Databridge Client on UNIX.</p>

For	To decrease security risk
Databridge Enterprise Server	<p>File security is automatically enabled when you install Databridge Enterprise. File security protects the configuration and log files by restricting privileges on the PC to users who need to modify the configuration.</p> <p>By default, any user in the Administrators group can modify the configuration files and delete the read-only log files. If you create a user group in Windows called DBEAdmins, only the users in that group will be able to alter the configuration files and delete log files. Likewise, if you create a group called DBEUsers, only the users in that group will be able to view the configuration. For more information, see "Implementing File Security" in the Databridge Enterprise Server Help.</p>

1.5 Version Information

The Databridge components and utilities are listed below with their version number in the base release of version 6.5.

Host

Table 2

Host	
DBEngine version:	6.5.0.048
DBServer version:	6.5.0.030
DBSupport version:	6.5.0.008
DBGenFormat version:	6.5.0.014
DBPlus version:	6.5.0.010
DBSpan version:	6.5.0.002
DBSnapshot version:	6.5.0.004
DBTwin version:	6.5.0.006
DMSIIClient version:	6.5.0.007
DMSIISupport version:	6.5.0.007
DBInfo version:	6.5.0.004
DBLister version:	6.5.0.002
DBTanker version:	6.5.0.001
DBAuditTimer version:	6.5.0.001
DBChangeUser version:	6.5.0.002
DBAuditMirror version:	6.5.0.001
DBCobolSupport version:	6.5.0.002

DBLicenseManager version:	6.5.0.001
DBLicenseSupport version:	6.5.0.021

Table 3

FileXtract

Initialize version:	6.5.0.001
PatchDASDL version:	6.5.0.002
COBOLtoDASDL version:	6.5.0.002
UserdatatoDASDL version:	6.5.0.001
UserData Reader version:	6.5.0.000
SUMLOG Reader version:	6.5.0.002
COMS Reader version:	6.5.0.000
Text Reader version:	6.5.0.000
BICSS Reader version:	6.5.0.000
TTrail Reader version:	6.5.0.000
LINCLog Reader version:	6.5.0.002
BankFile Reader version:	6.5.0.000
DiskFile Reader version:	6.5.0.000
PrintFile Reader version:	6.5.0.000

Table 4

Enterprise Server

DBEnterprise version:	6.5.0.073
DBDirector version:	6.5.0.003
EnumerateDisks Version:	6.5.0.001
LINCLog version:	6.5.1026.73

Table 5

Client	
bconsole version:	6.5.0.000
dbutility version:	6.5.0.015
DBCClient version:	6.5.0.015
DBCIntCfgServer version:	6.5.0.015
dbscriptfixup version:	6.5.0.015
DBCIntControl version:	6.5.0.003
dbctrlconfigure:	6.5.0.003
dbfixup version:	6.5.0.002
migrate version:	6.5.0.000
dbpwenc version:	6.5.0.000
dbrebuild version:	6.5.0.015

2 System Requirements

Databridge 6.5 includes support for the following hardware and software requirement:

Databridge Host Unisys mainframe system with an MCP level SSR 53.1 through 59.1
DMSII or DMSII XL software (including the DMALGOL compiler)
DMSII database DESCRIPTION, CONTROL, DMSUPPORT library, and audit files

Databridge Enterprise Server ClearPath PC with Logical disks or MCP disks (VSS disks in MCP format)

-or-

Windows PC that meets the minimum requirements of its operating system, which is one of the following:

- ◆ Windows 7
- ◆ Windows Server 2016 (CORE mode must be disabled for installation and configuration)
- ◆ Windows Server 2012 R2 (CORE mode must be disabled for installation and configuration)
- ◆ Windows Server 2012
- ◆ Windows Server 2008 R2
- ◆ Windows Server 2008

Direct Disk replication (recommended) requires read-only access to MCP disks on a storage area network (SAN)

TCP/IP transport

To view the product Help, a supported Internet browser (such as, Internet Explorer, Firefox, or Google Chrome) is required. In addition, JavaScript must be enabled in the browser settings to navigate and search Help.

Databridge Client Console You can install Client Console to the same machine as the Client; however, this can drain resources and impact the performance of your relational database. Instead, we recommend that you install the Client Console to a machine that connects to the Client machine via TCP/IP transport.

Requires Java Runtime Environment (JRE). Download and install the latest version from [Oracle \(http://www.oracle.com\)](http://www.oracle.com). For more information, see [Java JRE Installation](#).

Databridge Client **NOTE:** Disk space requirements for replicated DMSII data are not included here. For best results, use a RAID disk array and store the client files on a separate disk from the database storage.

NOTE: Memory requirements do not include the database requirements when running the Client in the server that houses the relational database (consult your database documentation for these). The numbers are for a stand-alone client machine that connects to a remote database server.

If you run the console in the same machine as the Client, it will need an additional 1-2 GB of memory depending on how many data sources you have and how long you let it run. All log information is saved in memory.

Client - Windows

Unisys ES7000

-or-

Pentium PC processor 3 GHz or higher (multiple CPU configuration recommended)

2 GB of RAM (4 GB recommended)

100 GB of disk space **in addition to** disk space for the relational database built from DMSII data)

TCP/IP transport

One of the following operating systems:

- ◆ Windows Server 2016 (CORE mode must be disabled for installation and console cannot be run locally)
- ◆ Windows Server 2012 R2 (CORE mode must be disabled for installation and console cannot be run locally)
- ◆ Windows Server 2012
- ◆ Windows Server 2008 R2
- ◆ Windows Server 2008
- ◆ Windows 10
- ◆ Windows 8.1
- ◆ Windows 8
- ◆ Windows 7

One of the following databases:

- ◆ Microsoft SQL Server 2016
- ◆ Microsoft SQL Server 2014
- ◆ Microsoft SQL Server 2012
- ◆ Microsoft SQL Server 2008 R2 (up to SP1)
- ◆ Microsoft SQL Server 2005 (up to SP4)
- ◆ Oracle 11g, and 12c

Client - UNIX and Linux

One of the following systems:

- ◆ Sun Microsystems SPARCstation running Solaris 10 or later, and Oracle 11g Release 2, or 12c
- ◆ Hewlett Packard Itanium with HP-UX 11i v3 (B11.31) running Oracle 11g Release 2, or 12c
- ◆ IBM pSeries running AIX 5.3L or later (AIX 6.1 for Oracle 12c), and Oracle 11g Release 2, or 12c
- ◆ Intel X-86 with Red Hat Enterprise Linux Release 4 (Release 5 for Oracle 12c) or later, SUSE Linux Enterprise Server 11 SP1 or later, or UBUNTU Linux 7.1 or later running Oracle 11g Release 2, or 12c

2 GB of RAM (4 GB recommended)

100 GB of free disk space for installation (in addition to disk space for the relational database built from DMSII data)

TCP/IP transport

NOTE: Oracle 12c clients only exist as 64-bit programs.

NOTE: If you are using Oracle 11g, we strongly recommend that you upgrade Oracle 11g release 2, as the client is designed for this version of Oracle.

3 Installation Instructions for Hot Fixes and Updates

Before you install a hot fix (or update), quit all Databridge applications including the Console, and then terminate the service (daemon on UNIX). After the installation is complete, restart the service/daemon manually. In the case of Windows Installations there is a checkbox in the last dialog of the post-install program "updatepath" that allows you do this without having to go through the Windows control panel).

IMPORTANT: To avoid potential problems, we strongly recommend that you upgrade the Host, Enterprise Server, software simultaneously.

If you're updating the Client software, you must also update the Client Console as the older console is incompatible with the 6.5 service.

Databridge Host

1. On the MCP Server, upload DB65xxxxx.con using binary or image file transfer (where xxxx can be "HOTFIX" or "UPDATE" depending on the type of release).

```
ftp my_aseseries_host
<login>
bin
put DB65xxxxx.con DB65xxxxx
```

2. Log on to the Databridge usercode on the host and go to CANDE.
3. To unwrap encapsulated files in the DB65xxxxx file, use the following command:

```
WFL UNWRAP *= AS = OUTOF DB65xxxxx TO DISK (RESTRICTED=FALSE)
```

Databridge Client, Client Console and Enterprise Server

- ♦ On Windows, open the Windows32 or Windows64 folder of the Hot Fix or Update and double-click the file `databridge.D65xxxx.Wnn.exe`. All installed components such as the Client, the Console, or Enterprise Server will be updated.
- ♦ On UNIX, upload the appropriate tar files for the Client and Console from the update to the directories where these components are installed. (the Client and Console should be installed in separate directories to facilitate maintenance.) If you use Windows to process the extract of the tar file from the zip file, you must transfer the tar file to UNIX using binary FTP.

Continue by using the following command:

```
tar -xvf <filename>
```

where <filename> is the full name of the tar file. This command replaces the files in the Databridge install directory with updated files from the tar file.

NOTE: To avoid accidentally deleting the Databridge applications, we recommend that you always keep the install directory and the working directory separate.

4 Legal Notice

For information about legal notices, trademarks, disclaimers, warranties, export and other use restrictions, U.S. Government rights, patent policy, and FIPS compliance, see <https://www.netiq.com/company/legal/>.

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