Synergy DBL
Version 10.3.1b
Release Notes
August 2015

These release notes describe changes that have been made in
Synergy DBL in version 10.3. These notes also describe any
last-minute corrections and modifications made after the
documentation was published.

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IMPORTANT NOTES AND WARNINGS

-- If you are upgrading from a previous version of Synergy, we
strongly recommend that you review the Quick Migration Guide and
the Updating Synergy/DE manual for important upgrade information.

-- You should always check the Synergex secured web site
(http://www.synergex.com) for any patches that may be available
for this version. Log into the Resource Center and then navigate
to the Downloads page.

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Compatibility

-- Based on recommendations from the NIST (National Institute
of Standards and Technology) Computer Security Division, we
enhanced the DATA_ENCRYPT and DATA_DECRYPT routines for
better security. We recommend that everyone using these
routines upgrade to a minimum version of 10.1.1a for improved
security. All prior versions of Synergy/DE (9.3.1, 9.5.1, 9.5.3,
and 10.1.1) that access data encrypted with 10.1.1a or later
will require a hot fix from Synergex. THIS CHANGE MAY BREAK YOUR
CODE IF USED ALONGSIDE OLDER VERSIONS. [tr#34363]

-- Version 10 will run traditional code compiled and linked with
Synergy/DE 6.1 and higher. You do not have to recompile unless
you want to take advantage of performance improvements (or to
debug if you're coming from a version prior to 9).

-- If you have code compiled with a version prior to version 9,
you must recompile in order to debug.

-- If you are using non-Synergex-provided classes and you rebuild
any object module using a class, YOU MUST REBUILD all object
modules using that class.

-- (.NET) If your application uses global commons, global data
sections, or public class fields that are accessed across
assemblies, any time one of those elements changes, YOU MUST
RECOMPILE all projects that reference the assembly containing
them. As an example, in version 10, the UI Toolkit globals
changed, so therefore any application that uses
Synergex.SynergyDE.tklib.dll must be recompiled. To ensure that
this occurs, we have changed the assembly version of the tklib.dll

to force a recompile. We recommend that you use assembly versioning on your dependent projects as well. (Traditional Synergy does not have this problem because names are resolved at runtime, not at build time.)

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Version 10.3.1b notes and warnings

-- An "Invalid operation" error (INVOPER) is now reported in every case where a READS, FIND(MATCH:Q_SEQ), or WRITES follows a Select, unless context has been reestablished with a READ, FIND, or WRITE statement. (Until READ, FIND, or WRITE is called in this situation, sequential context is undefined.) Previously, there was one case where this error was not reported: after using Dispose with a Select in a FOREACH statement. This has been corrected, but note that THIS CORRECTION MAY BREAK YOUR CODE. Previously, the runtime would allow your program to call READS, FIND(MATCH:Q_SEQ), or WRITES without reestablishing context after a FOREACH Select was Disposed (even though the results were undefined). Now it will report the error. [tr#35907]

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Version 10.3.1a notes and warnings

-- When using the Synergy HTTP document transport API, note that SSL 2 and SSL 3 protocols are not secure, and TLS 1.0 has known vulnerabilities. We recommend using TLS 1.1 or TLS 1.2 for secure sites. For more information, see Section 3.1 in

nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-52r1.pdf

TLS 1.1 and TLS 1.2 are available on OpenSSL 1.0.1.

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Version 10.3.1 notes and warnings

-- The following versions are the minimums supported in 10.3.1:

    AIX 6.1
    Solaris 10
    HP-UX 11i v3

[tr#34993, tr#34994]

-- (.NET) In rare cases issuing a STOP statement in a WinForms or low-level Windows application caused a segmentation fault. This has been fixed. You must recompile your code with 10.3.1, and the "Target Synergy runtime" option (on the Build page of Visual Studio Project Designer) must also be set to "10.3.1." If it's set to an earlier version, you won't get this fix. [tr#35491]

-- (Windows, UNIX) We now support a minimum revision of OpenSSL 1.0.1j on Windows and 1.x on all UNIX platforms except HP-UX, where it is 0.9.8. See Synergex KnowledgeBase article 100001979 for detailed information on OpenSSL requirements and installation. THIS CHANGE MAY BREAK YOUR CODE. [tr#33997]

-- (Windows, UNIX) Synergy/DE 10.3 on Linux and Windows 32-bit systems requires a processor with at least SSE2 instructions (i.e., AMD Athlon 64 or higher and Pentium IV or higher). For Windows, the Sysinternals Coreinfo tool can indicate this. Programs like LMU will fail to operate and the installation will fail without this instruction support. [tr#35398]

-- The performance of simple groups has been optimized.
THIS MAY BREAK YOUR CODE, as it affects groups in global
commons, global data sections, global literals, and global
non-CLS structures, and it is not compatible with assemblies
built with older versions of the compiler. As a result, all
code that exposes groups in global enties across an assembly
boundary needs to be recompiled. [tr#31997]

-- The minimum Framework supported is now CLR 4.0.30319. This
version or higher is required in order to install Synergy.
[tr#34961, tr#34965]

-- We now strictly enforce that the xfServer version be at least
as high as the client version.

-- The minimum supported Linux version requires a minimum of
GCC4.4 compatible libstdc++ and libtinfo.so.5 and OpenSSL 1.03
to use Synergy/DE 10.3. This support was from 2010 onwards, but
lower Linux versions may be able to download the required
OpenSSL and libncurses (containing libtinfo) packages to enable
runtime-only support. [tr#34992]

-- Because prototypes are built differently in the traditional
compiler in 10.3.1 and higher, your existing prototypes must be
rebuilt, or a PRTLOAD error will occur. [tr#34308]

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Version 10.1.1 notes and warnings

-- Doing a FOREACH over a new instantiation of a class that
implements IDisposable now causes the class's Dispose method
to be called when the FOREACH loop is exited. THIS CHANGE MAY
BREAK YOUR CODE. [tr#34212]

-- (Windows) Synergy/DE is now always installed to the default
Program Files\Synergex location, and this path cannot be
changed during installation. Existing installations of Synergy/DE
can be upgraded to version 10 and will remain in their current
location. (If you need to install Synergy/DE to a non-default
location, there is an undocumented way to do this via the command
line. Contact Synergy/DE Developer Support for more information.)

Note that because Synergy/DE is now always installed under
Program Files, the distributed sample repository files, method
catalog, system catalog, and synergy.ini files may need to be
copied to a writable location outside Program Files and located
via the pertinent environment variables (RPSMFIL, GENESIS_HOME,
SFWINIPATH, etc.) [tr#33517, tr#33646]

-- (Windows) Visual C++ 2012 libraries are now installed by
Synergy/DE Client. If you are currently running a shared
installation and upgrading from version 8.1 through 9.5.3, you
must also upgrade the clients. If you do not wish to upgrade (or
uninstall/reinstall) the clients, and your shared installation
has not changed location, you can instead download the appropriate
Visual Studio 2012 redistributables (vcredist) from the Microsoft
website and install them on each client machine. See the version
10.1 installation instructions for more information. [tr#33272,
tr#33243]

-- (Windows, UNIX) ISAMC_REV now defaults to REV 6. All new files
created will be revision 6 unless the environment variable
ISAMC_REV is set to a lower revision. Also, setting ISAMC_REV to
2, 3, or 5 will no longer allow creation of files at those

revisions. [tr#33556]

-- In 9.5.1 and 9.5.3, the // operator was incorrectly evaluated
before * and /. This has been corrected, and these three
operators now have the same precedence and are evaluated from left
to right. THIS CHANGE MAY BREAK YOUR CODE if you rely on //
evaluating before * and /. You may need to add parentheses to
explicitly specify the evaluation order. For example, if you have

var = a * b // c

you would need to change it to this to get the same result:

var = a * (b // c)

[tr#34101]

-- (Windows, UNIX) The functionality for the OPEN options ALLOC
and NUMREC has been disabled. The functionality for system
option #15 has been removed. [tr#33176]

-- To match behavior of .NET, an unhandled exception now executes
all remaining FINALLY blocks in the call stack (including in the
same frame). Also, a STOP or CHAIN no longer executes any remaining
FINALLY blocks in the call stack (including in the same frame, a
FINALLY on the TRY from which the STOP was issued). Note: This
parenthetical case is a change in behavior and MAY BREAK YOUR CODE.
[tr#33048]

-- For version 10, we have reviewed areas in our source code and
published APIs that use version strings, evaluating them to ensure
that the buffers used are long enough to store a two-byte version
and identifying places where string comparisons are done against
the version. (Our version strings are stored left-justified.) To
ensure that string comparisons will continue to work in your
deployed applications, some existing version strings now use
alphabetic letters to represent versions 10 and higher. For
example, the SYN_VER define (dbl.def) is "A.1.1" in version 10 so
that existing string comparisons against earlier versions will
continue to evaluate as you expect. (Otherwise, comparing "10.1.1"
to "9.5.3" would result in "9.5.3" being evaluated as higher.)
Because you may be passing SYN_VER to some Synergy routines, we
have modified those routines in version 10 to handle both "A" and
"10".

If you currently use SYN_VER, when you start developing with
version 10, we recommend that you modify your code to use the new
SYN_VERSION define (in dbl.def), which is "10.0.3". We also
recommend that you review all version string logic in your
application for version 10.

-- %VERSN returns the runtime version in a text string (e.g.,
"DBL/MS Windows Version v.r.m "). If you have code that parses
the version number out of this string and then uses it in a string
comparison against an earlier version, we recommend you review
your code's string comparison logic before you run version 10.

CHANGE HISTORY

REVISION 10.3.1b

Compiler

-- When trying to make a structure into a typed box, an INVCAST error was previously reported. Boxing structures as alpha types now works correctly. [tr#34560]

-- The compiler now supports INIT on local data fields. Previously, using INIT on a variable defined with the DATA statement caused the compiler to crash. [tr#35957]

-- In 10.3.1 and 10.3.1a, the compiler reported an unexpected PROTOMISM error on a prototyped class with a private constructor. This has been corrected. [tr#36023]

-- If the accessibility of an overridden property method differs from the accessibility of the base method, the compiler now reports an E_BADACCESS error. Previously, the compiler produced code that resulted in a runtime exception for .NET code. [tr#36058]

-- We fixed an issue that caused the compiler to report an invalid E_IVLNG error for a prototyped decimal or implied-decimal field with a negative initial value. [tr#36068]

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Installation

-- Previously the links in relnotes.html did not work in Firefox. This has been corrected. [tr#35935]

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Runtime

-- (Windows, UNIX) We added an optional runtime option, /scl=<level>, to the OPEN statement OPTIONS qualifier to allow an xfServer client to specify the security compliance level, which defines which protocols will be used when encryption is enabled. Valid values for <level> are

0 = use the current Synergy default
1 = use protocols TLS 1.0, TLS 1.1, TLS 1.2 (current default)
2 = use protocols TLS 1.1 and TLS 1.2

SSLv3 and lower protocols are no longer supported.

Additionally, the information returned from GETFA("SLC") now includes the full cipher description: <ciphername> <protocol version> Kx=<key exchange> Au=<authentication> Enc=<symmetric encryption method> Mac=<message authentication code>.

(Note: Confusingly, in this output that comes from OpenSSL, TLS 1.0 ciphers are marked as being SSLv3 protocol, but they are really TLS 1.0.) [tr#35922]

-- (Windows, UNIX) We added an optional timeout parameter to the %SS_CONNECT socket routine that specifies the number of seconds to wait for a connection before the routine returns with an SS_ETIMEDOUT error. If the timeout parameter is not specified, the routine will wait indefinitely for either a successful connection or another error to occur. [tr#35931]

-- (Windows, UNIX) When running in debug mode or when BOUNDS_CHECK_FATAL is set, we now check for global symbol

references (either common or global data section) that range past the end of the containing psect. If found, a GBLSIZ fatal error occurs. [tr#35992]

-- (Windows, UNIX) We fixed an issue that could prevent a Select from returning all matching records when there was a type mismatch between a numeric field type specified in the Where condition and the defined key type in the file. As a result of this fix, field/key type mismatches can no longer be optimized unless the runtime can determine from the search criteria that no negative values will be returned. This may result in a noticeable decrease in performance unless the type mismatch is corrected or the Where expression is changed. For example, if key1 is a decimal field and it matches an alpha key, the Where expression (key1 < val) will not be optimized. However, if the Where expression is changed to (key1 > 0 .and. Key1 < val), it will be optimized if val is greater than 0. Correctly typing key1 as decimal in the file will also result in optimization. [tr#35651]

-- Stack memory attached to RCB arguments or an SQL bind now gets an RCBSTACK or SQLSTACK error on a THROW/CATCH when compiled with -qcheck. Also, if a routine is built with -qrefresh, an RCBREL or SQLREL error will be signaled. [tr#35966]

-- (Windows) We improved the way the winerrpost.log file is generated and updated. Previously, if an error that was logged to the file was encountered in a loop, the file could grow to an enormous size if the error didn't terminate the process. Furthermore, the information logged in the file wasn't sufficient to help diagnose errors. These issues have been corrected. [tr#35882]

-- (Windows, UNIX) In versions 9.5.1 through 10.3.1a, a READS on a channel opened in input mode performed poorly if updates or deletes simultaneously occurred on another channel or by another process. This has been corrected. [tr#35936]

-- We made several improvements to the CurrentRFA method for the Select.AlphaEnumerator and Select.RestrictedAlphaEnumerator classes. This method now returns the correct RFA from a remote server with SCSPREFETCH, and it now returns the correct GRFA when a From class record is smaller than the actual ISAM file record. Additionally, if the "Stored GRFA" attribute of an ISAM file is configured, CurrentRFA now uses this attribute, which reduces CRC calculation overhead for each enumeration. [tr#35915]

-- (Windows, UNIX) The informational error "%DBR-I-OPWFND, Operation was FIND" was reported multiple times for an untrapped I/O error traceback on a Select channel. This has been corrected so that this informational error is no longer reported in this situation. [tr#35895]

-- (Windows, UNIX) In versions 10.1.1 to 10.3.1a, a Select with a Where expression that specified multiple adjacent segments failed to return all records that matched the criteria if it used EQ or EQS for the first segment and GE, GES, LE, or LES for the second and third segments. This has been corrected. [tr#35874]

-- Select now optimizes Where expressions regardless of the way comparisons are ordered. Previously, (Where)(0 < key) would not be optimized, even though (Where)(key > 0) was optimized. Additionally, the order of GE, GES, LE, and LES comparisons would sometimes prevent optimization for segmented keys when multiple

adjacent segments were compared. These issues have been corrected. [tr#35871, tr#35623]

-- An "Invalid operation" error (INVOPER) is now reported in every case where a READS, FIND(MATCH:Q_SEQ), or WRITES follows a Select, unless context has been reestablished with a READ, FIND, or WRITE statement. (Until READ, FIND, or WRITE is called in this situation, sequential context is undefined.) Previously, there was one case where this error was not reported: after using Dispose with a Select in a FOREACH statement. This has been corrected, but note that THIS CORRECTION MAY BREAK YOUR CODE. Previously, the runtime would allow your program to call READS, FIND(MATCH:Q_SEQ), or WRITES without reestablishing context after a FOREACH Select was Disposed (even though the results were undefined). Now it will report the error. [tr#35907]

-- (Windows, UNIX) Long exception messages caught by TRY-CATCH are now displayed in full, rather than truncated with the message "*** Warning: Message replacement too long ***." [tr#36045]

-- An exception explicitly thrown or rethrown that is unhandled or covered by an $ERR_CATCH when there's a TRY with a FINALLY somewhere within scope of the calling chain no longer generates a Signal Trap. [tr#36044]

-- (Linux) In 10.3.1 and 10.3.1a, secure connections failed with "OPENSSL1_0_0 not found" on Redhat and Fedora Linux. This has been corrected. On Ubuntu systems, you must use

ln -s libssl.so libssl.so.10

in the /usr/lib32 and /usr/lib/x86_64-linux-gnu directories for secure connections. [tr#36066]

Synergy Configuration Program (SynConfig)

-- SynConfig now supports setting the Security Compliance Level. [tr#35953]

Synergy DBMS

-- The isload CLEAR option now supports records larger than 20K. [tr#35970]

-- All output from fconvert (informational and error messages) now goes to STDOUT instead of STDERR. This allows direct use of the fconvert command through an OPEN pipe. [tr#36060]

-- We improved the performance of isutl -f (fastload) and fconvert -ai (append) when loading an existing ISAM file that is empty. [tr#35877]

-- Various issues with ISAM files configured with multiple fixed-length records (i.e., record type "multiple") have been resolved. Isutl -rs (add static RFA) no longer fails, and isutl -rc (add compression) is no longer allowed, as that configuration is not permitted. Also, change tracking is not allowed with multiple fixed-length files and now generates an error if attempted. [tr#36015]

Synergy HTTP document transport API

-- The default protocol is now set to TLS1.0/TLS1.1/TLS1.2 for
OpenSSL 1.0.1 and above, and TLS1.0 for OpenSSL versions below
1.0.1. [tr#35823]

-- We added a new encrypting rule set, HTTPDATA_RULES, to
%SYN_ESCAPE_HANDLE and %SYN_UNESCAPE_HANDLE that encrypts
data according to HTTP RFC 3986. This enables you to encrypt
data parts of the URI without affecting unreserved characters
in the URI. [tr#35990]

-- Previously, once HTTP_NOESCAPE was set it couldn't be unset,
which prevented automatic escaping from being turned back on. This
has been corrected. [tr#35951]

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Synergy .NET assembly API

-- Large strings were previously truncated at 65536 bytes on 32-bit
systems when returned from the .NET assembly API. This has been
corrected. [tr#36052]

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Utilities

-- An open error previously occurred with listelb and listdbr when
the ELB or DBR file had linked ELBs and the translated environment
variables exceeded 32 characters. This has been corrected.
[tr#35968]

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xfNetLink Synergy

-- We made a number of enhancements to encryption. We added
an optional parameter, SCL, to %RX_START_REMOTE and
%RX_DEBUG_START to allow you to override the default security
compliance level, which determines which protocols will be used
for encrypted communication. Valid values for the SCL parameter
are

0 = use the current Synergy default
1 = use protocols TLS 1.0, TLS 1.1, TLS 1.2 (current default)
2 = use protocols TLS 1.1 and TLS 1.2

Note that setting 0 means that the supported protocols could
change when you upgrade to a new version of Synergy.

SSLv3 is no longer supported.

The security compliance level is also set on the xfServerPlus
machine. The setting there should match the one on the xfNetLink
machine.

In addition, when there is a protocol handshaking error and secure
communication cannot be established between xfNetLink and
xfServerPlus, the server closes the socket, logs an error, and
RX_SSLCONNECTERR (12323) is returned on the client. Previously,
this caused the client to hang. [tr#35923]

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REVISION 10.3.1a

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Compiler

-- A new global define, _DEBUG, is now supported for compiling with the debug option. This enables you to conditionally include or exclude code based on whether or not the program is compiled in debug mode. [tr#35724]

-- Compiling two sources with separate command lines that both used a built-in enumeration (such as Select's CTState) caused a SegVio. This has been fixed. [tr#35688]

-- Previously, an INVOPT error occurred when dbl was used in a .proj file with msbuild. This has been fixed. [tr#35421]

-- We made some minor corrections to the compiler when using -qnet to track changes made to the .NET compiler. [tr#35703]

-- A globally declared enumeration followed by an implicit main did not correctly recognize the implicit main. This has been fixed. [tr#35756]

-- A field initializer incorrectly reported an INVINITMBR error if the assignment statement that contained it was the first line in the routine. This has been fixed. [tr#35807]

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Installation

-- The Synergy/DE Windows installations now include VC++ merge modules. These merge modules were not included in Synergy/DE 10.3.1 distributions, which prevented Synergy projects from opening in Visual Studio on 64-bit systems that had only Visual Studio 2012 installed. NOTE: To use Synergy DBL Integration on a 64-bit system that has Synergy/DE 10.3.1 and Visual Studio 2012 only, you must either upgrade 64-bit Synergy/DE to 10.3.1a or download vcredist_x64.exe from http://www.microsoft.com/en-us/download/details.aspx?id=40784 and run it on the 64-bit system. [tr#35780]

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Linker and librarian

-- Previously, an INVOPT error occurred when dblink and dblibr were used in a .proj file with msbuild. This has been fixed. [tr#35421]

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Runtime

-- We added an %ATRIMTOSTRING() function to reduce overhead when creating a string from trimmed alpha variables. [tr#35609]

-- (.NET) We added support for thread-specific xfServer connections for Mono platforms. [tr#35591]

-- When buffering records stored to an ISAM file (using the BUFSTORE OPEN option) and also doing a sequential READS on the same channel, a certain condition sometimes caused a record to be returned out of sequence. Specifying LOCK:Q_NO_TLOCK or LOCK:Q_NO_LOCK increased the likelihood that this would occur. This has been fixed. Also, SCSPREFETCH (input caching) is no longer enabled implicitly on a channel opened with /BUFSTORE. [tr#35568]

-- When a program used IO_HOOKS and was compiled prior to 10.3.1

but run with 10.3.1 or later, a memory leak occurred. This has been fixed. [tr#35579]

-- In 10.3.1, a Select didn't return any records when the Where expression contained an OR operator with terms that referenced a field contained within a defined key, but the offset of the field didn't start at the beginning of the key. This has been fixed. [tr#35595]

-- In versions 10.1.1b through 10.3.1, a RTNNF error ("Cannot access external routine") occurred (with no filename) when loading a method when the MAXMEM value was exceeded and the routine being loaded referenced a crushed method name. This has been fixed. [tr#35641]

-- Converting from descriptor types to objects is now prohibited in conditional operators in traditional Synergy, as this could cause an invalid class handle error at runtime. A PLATSUPT compiler error is now reported in this situation. [tr#35679]

-- When using output I/O buffering (/BUFSTORE or OUTPUT sequential WRITES) with xfServer Connection Recovery, and the STORE or WRITES operation was retried with a successful reconnection to the original context using either reconnect_hook() or a retry of the STORE/WRITES on an $ERR_SRVCONRTY error, some records that should have been written to the file were not, due to the cache buffer not being flushed to disk. This has been fixed. [tr#35644]

-- A Select on a non-ISAM file using Orderby.Ascending(fld) or Orderby.Descending(fld) previously skipped the first record when the first record in the ordered selection was also the first record in the file. This has been fixed. [tr#35738]

-- On a big-endian machine, when passing an argument by value to a routine where the ^VAL argument has a specified size of less than the size of an address on that platform, the correct value (instead of 0) is now accessed. [tr#35801]

-- (.NET) We fixed a small memory leak caused by the Select class. [tr#35764]

-- (.NET) We fixed an issue that caused a System.OverflowException ("Arithmetic operand exceeds maximum size") to occur when storing an i8 value greater than 2147483647 on a 32-bit platform. [tr#35767]

-- (.NET) Converting a decimal 18446744073709551615 (2^64-1) to an unsigned long no longer causes a System.OverflowException. [tr#35772]

-- (.NET) We improved the performance of DM_ALLOC for both %MEM_PROC and the use of temporary descriptor types by eliminating the initial value (spaces) for these operations. Consequently, DM_ALLOC is now explicitly uninitialized, as documented. (In previous versions it defaulted to DM_BLANK.) [tr#35782]

-- (.NET) We fixed several issues that had the potential to cause threading problems for Select.OrderBy, record locking for the WAIT I/O statement qualifier, and concurrent opens using the secure sequential or caching open options. [tr#35652]

-- (.NET) Previously, the Select class returned the incorrect number of records in certain cases because the system garbage

collector prematurely released Where condition data. This has been fixed. [tr#35695]

-- (.NET) Previously, if an application used multi-threaded access to xfServer with connection recovery but without S_SERVER_THREAD_INIT, an incorrect error code was sometimes returned or the application could lock up. This has been fixed. [tr#35636]

-- (.NET) We fixed a memory leak that occurred if you created an AlphaEnumerator, used From (for the Select class) on the same channel, and then closed the channel. [tr#35663]

-- (.NET) Operations that assign unsigned integers (ushort or uint) to decimals now result in positive numbers. [tr#35658]

-- (.NET) If an ISAM file reaches a limit set with SIZE_LIMIT or RECORD_LIMIT, FileFullException is now thrown. (Previously, SynException was thrown.) [tr#35637]

-- (.NET) Previously, the negative sign (-) was not shown for negative values if you used ToString or an implicit string cast from an implied decimal with 0 decimal places. This has been fixed. [tr#35606]

-- (.NET) Previously, an unhandled exception would in rare cases cause the runtime to hang on shutdown. For example, this could happen if you pressed CTRL+C while xfServer was reconnecting. This has been fixed. [tr#35583]

-- (.NET) Previously, a thread shutdown would sometimes cause a .NET Framework segmentation fault after an I/O operation where the channel that was last used had been closed on another thread. This has been fixed. [tr#35575]

-- (.NET) Characters in the unsigned byte range (128-255) now work on Mono platforms when converting to/from a string. [tr#35570]

-- (.NET) XCALL SETDFN did not support PATHs/logicals or work with XCALL ISAMC. This has been fixed. [tr#35664]

-- (.NET) If you used the Select class for a segmented key where the order of the segments differed, some matching records would not be returned. This has been fixed. [tr#35612]

-- (.NET) Previously, no records would be returned if you used the Select class with an order that was different than the specified key and the comparison spanned more than one segment. This has been fixed. [tr#35573]

-- (.NET) We removed support for MonoTouch, which is no longer supported by Apple. [tr#35667]

-- (.NET) On Android and 32-bit iOS, using %DATE with an i8 variable caused an arithmetic overflow exception. This has been fixed. [tr#35654]

Synergy DBMS

-- We added a new file creation option to the ISAMC routine, bldism, and XDL keyword files. If ERASE_ON_DELETE is specified at file creation, when a record is deleted (or moved internally by ISAM), it will be erased (i.e., nulled out). Without this flag

enabled, records that are deleted are only marked deleted; their contents remain in the file until the space is reused, which has been the behavior until now. ERASE_ON_DELETE cannot be used with change tracking. [tr#35481]

-- We removed an unsupported system call to allow the Synergy runtime to run with limited support on Red Hat Enterprise Linux 5. [tr#35712]

-- When isutl -f (fastload) is used without the -k option (counted input file), the operation is aborted if the ISAM file is configured with one or more integer or auto keys, and a message is displayed to indicate that a counted file must be used. [tr#35616]

-- When running isutl -f (fastload) to a file containing autokeys, the autokeys values were not being preserved (regardless of whether or not the -ak option was specified). This has been fixed. [tr#35616]

-- By default (if the -r "input record size" option is NOT specified), when using fconvert with a relative file for input, the OPEN scans the first record to determine the record size (see OPEN option RECSIZ=-1). If the first record contains binary data, it's possible the open may encounter a premature line terminator or EOF condition. The -r "input record size" specification now correctly overrides the OPEN RECSIZ scan and ignores binary data in the first record. [tr#35805]

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Synergy HTTP document transport API

-- OpenSSL version 1.0.1 added support for protocols TLS 1.1 and TLS 1.2, and by default, the HTTP document transport API supports them as well. We've also added support to turn off these two new protocols, if desired, by not specifying them as desired protocols in the API. In addition, we added two new defines, SSLVER_TLS1_1 and SSLVER_TLS1_2, to SSLVER_ALL. [tr#35794]

-- The %HTTP_GET, %HTTP_PUT, %HTTP_POST, and %HTTP_DELETE routines previously did not return headers when an error occurred. This has been fixed. [tr#35656]

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Utilities

-- Previously, an INVOPT error occurred when dblproto and dbl2xml were used in a .proj file with msbuild. This has been fixed. [tr#35421]

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REVISION 10.3.1

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Compiler

-- We added support for simple properties. [tr#34689]

-- We added support for STATIC classes. [tr#34691]

-- We added support for READONLY STATIC class fields. [tr#34690]

-- The following operators are now supported for enumerations: bitwise OR (.BXOR.), bitwise NOT AND (.BNAND.), and bitwise NOT (.BNOT.). [tr#34441]

-- We reduced prototype dependencies of private members.
Prototypes now don't include private methods, private properties,
and private classes. Due to runtime restrictions, private data
members must be loaded (records, groups, fields, structs); however,
if a field is marked as private and its type is a handle or array
of handles, it is represented as object or array of object in the
prototype (to reduce dependencies). The version number and format
of the prototype files require that prototypes be rebuilt or a
PRTLOAD error will occur. [tr#34308]

-- If the maximum number of files is exceeded when using a command
file to redirect input, a MAXIF error is generated. [tr#34444]

-- If a local data field or catch variable hides another local
field or catch variable, a level 3 W_HIDEW2 warning is now
reported. A level 4 warning was reported in previous versions.
[tr#35012]

-- Using an implied-decimal initial value of length 33 or greater
could previously crash the compiler. This has been fixed.
[tr#35485]

-- Initial values on class fields of type float, decimal, and
implied decimal coming from a prototype file were not loaded
correctly, causing PROTOMISMCH errors. This has been fixed.
[tr#35282]

-- (UNIX) You can now unbox an object variable to a Synergy fixed
array ([*]a). Previously, the compiler reported an invalid INVEXPR
error. [tr#34627]

-- (UNIX) An "invalid INVNUMDIM" error was reported if ^M was used
with an array that had no element number and that was part of a +=
statement. This has been fixed. [tr#35064]

-- (UNIX) The compiler no longer crashes if NEW is used with a type
whose name differs only in case from the name of a local parameter
of that type. [tr#35145]

-- (UNIX) In version 10.1.1c, the compiler did not report an
INITVERR error as expected when it encountered a mismatched data
type for an initial DATA statement value. This has been fixed.
[tr#35184]

-- (UNIX) Previously, the compiler did not ensure that required
parameters were passed when a system method was called without
qualifiers. This has been fixed. [tr#35185]

-- (UNIX) The length method of a property that returned an array
of strings gave an incorrect runtime result. This has been fixed.
[tr#35229]

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Installation

-- Framework CLR 4.0.30319 or higher is required in order to
install Synergy. [tr#34965]

-- We added experimental support for Mono on 64-bit Linux systems.
If a system has Mono, you should add synrnt.dll (included with
your distribution) to the global assembly cache. [tr#35292]

-- Dbs services created by dbssvc.exe are now affected by the

installation package. On uninstall, all dbssvc services will be
removed. On upgrade, all dbssvc services are shut down and
restarted after the upgrade is complete. [tr#25302]

-- (UNIX) During the execution of install.sde, choosing to skip
a chosen but non-existent installation package such as lm.gz by
typing "s" at the prompt has been fixed to properly skip the
package and complete the installation of the other selected
packages. [tr#34502]

-- Previously, the installation could fail if the license server
was selected but no licensee name was provided. This has been
fixed. [tr#35106]

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Runtime

-- (Windows, UNIX) We added a new ChangeTracking class to
retrieve the current change tracking information from an SDMS
ISAM file. The class also contains the ChangeTrackingEnabled
property, which returns whether or not change tracking is enabled
on the file, and the ApplySnapshot method, which applies another
snapshot to the file. [tr#34234, tr#34553]

-- We added the String.Replace(str,str) method. [tr#34320]

-- (.NET) We added initial iOS runtime support. [tr#34709]

-- (.NET) The debugger's SHOW CHANNELS command now shows the open
mode. [tr#34636]

-- (Windows, UNIX) We added ISCONFIG, a subroutine that enables
you to modify the user-defined text in an ISAM file's data
header. This routine has the following syntax where <channel> is
the channel on which the file is open, "TEXT" indicates that the
change is for the file's user-defined text (this is the only
option currently available for this argument), and <text_string>
is the new text for the file:

    ISCONFIG(<channel>, "TEXT", <text_string>)

Note that if <text_string> is longer than the space allocated for
user-defined data header text, the string will be truncated.
[tr#33686]

-- You can now use AS in traditional Synergy to indicate the type
of members in a collection. Note that this feature does not yet
result in type conversions, so essentially it is useful only for
unboxing. [tr#35020]

-- The Where.In selections for the Select statement are now
optimized when an ISAM key field is specified by translating to a
set of OR conditions. Since IN(F,A,B) results in the equivalent
(Where)(F.eq.A.or.F.eq.B), doing both head and tail optimization
of each individual part (which would normally not occur because
of the .OR.) has greatly improved performance. Also, if the
expression contains an additional AND condition (such as
IN(F1,A,B).and.(Where)F2.eq.C), each comparison of A and B
includes the AND part of the expression, making separate passes
for each IN parameter specified. [tr#34453]

-- (.NET) We now support %DLL_CALL on .NET. [tr#35011]

-- (.NET) We changed the default font for W_ in .NET to Consolas

to scale better, especially with SYN_RESIZE_SCALE. If a user
runs on an unsupported Windows XP or Server 2003 machine, the
Consolas font will need to be installed from Microsoft. [tr#34510]

-- We now provide a notification when an invalid service name is
specified on the dbssvc unregister command line. [tr#35467]

-- (.NET) Using an environment variable with a trailing backslash
(\) and XSUBR in .NET incorrectly generated an "index out of range"
exception. This has been fixed. [tr#35429]

-- (.NET) The concurrent use of XCALL GETLOG/SETLOG on multiple
threads previously corrupted the environment or caused a
segmentation fault. This has been fixed. [tr#35456]

-- (.NET) If %MEM_PROC(DM_RESIZ+DM_STATIC) was used on a local
handle, an INVHLD error occurred (which did not happen in
traditional Synergy) and memory was leaked. Although this is
invalid code, the compatibility should have been the same. This
has been fixed. [tr#35457]

-- (.NET) Sometimes a container was too small when
SYN_RESIZE_SCALE was set. This has been fixed. [tr#35461]

-- (.NET) Using a System.String type function on a STOP statement
is now allowed. A STOP statement cannot be used with the -portable
compiler option; an E_NOTSUPT error is reported in this situation.
[tr#35492]

-- (.NET) Pressing CTRL+P in Print Preview mode caused a
segmentation fault if main() was not marked with the attribute
{STATHread}. This has been fixed to report an E_ARGMIS error
if the attribute is missing and CTRL+P is pressed. [tr#35500]

-- String.EndsWith and String.StartsWith reported false positives
when compared with a longer string. This has been fixed.
[tr#35437]

-- Creating an ISAM file with the maximum record size with
compression no longer generates an ISAM file where any record
stored generates either "Internal ISAM error - Data segment size
mismatch with leaf" (in 10.1) or a segmentation fault (prior to
10.1). [tr#35459]

-- (.NET) In rare cases issuing a STOP statement in a WinForms or
low-level Windows application caused a segmentation fault. This
has been fixed. You must recompile your code with 10.3.1, and the
"Target Synergy runtime" option (on the Build page of Visual
Studio Project Designer) must also be set to "10.3.1." If it's set
to an earlier version, you won't get this fix. [tr#35491]

-- (UNIX) The synsslx check for libcrypto.so was wrong for modern
64-bit Linux like Unbuntu and caused SSL failures. This has been
fixed. [tr#35168]

-- (UNIX) Using rsynd on 32-bit UNIX with LDAP is unsupported but
no longer causes a core dump. Using XCALL GTPPN on 32-bit UNIX
with LDAP returns zero for the group and member instead of doing a
core dump. [tr#35174]

-- (UNIX) If %DLL_OPEN could not open a file via its full path or
find the target file in LD_LIBRARY_PATH, the code appended DBLDIR
to the beginning of the path and looked there. Then the runtime
reported this updated path in the error message rather than the

original path. Additionally, there was no way to get the error text from dlerror() to find out why it failed. These have been fixed, and the <reserved2> argument from XCALL ERROR shows the resulting system error text. [tr#35288]

-- (Windows, UNIX) When storing records to a non-TBYTE ISAM file where the index file (.ism) reached the maximum 2 GB before the data file (.is1) and an $ERR_FILFUL error was generated, it was observed that after running isutl -v on the file, an Index error was generated, indicating an error in the index freelist and unreferenced index blocks. This has been fixed. [tr#35359]

-- (.NET) S_SERVER_THREAD_INIT no longer generates an error in the primary AppDomain. [tr#35396]

-- (.NET) XCALL SETLOG no longer causes unhandled exceptions if two threads use either XCALL SETLOG concurrently or XCALL GETLOG at the same time as XCALL SETLOG. [tr#35396]

-- A signal trap occurred on OPEN when using a search path that contained a remote filename specification. This has been fixed. [tr#35148]

-- (Windows, Unix) Previously, creating an ISAM file from an XDL file would result in a "file not found" error if the OPEN specified "" for the file. This has been fixed. [tr#35146]

-- We resolved an ISAM data corruption issue caused during file update with a non-TBYTE file that resulted in a file exhibiting a data file at or exceeding 4 GB (>=4294967296) in size. [tr#35179]

-- The GETFA subroutine with one of the keywords ALQ, FFB, or HBK now returns the correct size value when the specified file exceeds 2 GB in size. As before, if the size of the field passed to return the size is too small, the value will be truncated to the size of the field. However, if the return field is an integer and it is too small, we now return the largest positive value that will fit in the return field instead of a negative value. So, if the size of the return field is an i2, any file that is greater than 32767 bytes will return the value of 32767 (which is the largest positive value allowed by the i2). [tr#34951]

-- (Windows) Doing a STOP chain to a command file in the form STOP '@cmdfile' no longer causes the RUN license and any other license currently logged in by that application to remain logged in. [tr#35131]

-- (.NET) In addition to setting the environment, the logicals RUSER SCSCOMPR and ISAMC_REV are supposed to update the current execution environment. On .NET this did not occur, and only the initial environment was updated. This has been fixed. [tr#34752]

-- (.NET) When CTRL+C was disabled with XCALL FLAGS, ALT+F4 still shut down the app when using W_ routines. This has been fixed. [tr#35071]

-- (.NET) The correct versions of the OpenSSL libraries were not always found, especially when using ClickOnce. This has been fixed. This change affects the HTTP document transport API, xfNetLink Synergy, xfServer client with encryption, and the encryption routines (DATA_ENCRYPT and DATA_DECRYPT). For ClickOnce deployments using these capabilities, OpenSSL must already be installed in DBLDIR on the target machine; you

cannot install the OpenSSL libraries via ClickOnce. In addition, other non-.NET windows products no longer look in path and now expect the DLLs to be copied to dbl\bin. [tr#35129]

-- (Windows, UNIX) The parsing of URIs for HTTP functions incorrectly stripped the query from the URI when the URI did not contain a path. This has been fixed. (Note: This was released on OpenVMS in 10.1.1d.) [tr#35327]

-- (UNIX) In versions 9.3.1 through 10.1.1c, the %ABS function returned 0 for user-defined functions. This has been fixed. [tr#34996]

-- (UNIX) Previously, a call to SYN_UNESCAPE_HANDLE in rare cases corrupted the output string and resulted in duplicate characters. This has been fixed. [tr#35176]

-- (UNIX) With versions 9.3.1 through 10.1.1c, variables were not always cleared as expected when running a pre-9.3 .dbr that used INIT. This has been fixed. [tr#35199]

-- (UNIX) %DATETIME_TO_I8 now appropriately adjusts to daylight savings time, and when used in a keyed READ with a timestamp key, it reads the expected record. [tr#35261]

-- (UNIX) If the message argument to the SEND statement has a length of 0, an ARGSIZ error is now signaled. [tr#35289]

-- (.NET) The Select.CTinfo.SnapshotTime property now returns the correct snapshot DateTime. [tr#35533]

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Synergy Configuration Program (SynConfig)

-- The Synergy Configuration Program now supports enabling the xfServer Connection Recovery feature. [tr#35404]

-- Adding or modifying an xfServer or xfServerPlus service with a Service name or Display name that is not unique across all services now generates an appropriate message box instead of an empty one. [tr#35026]

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Synergy DBMS

-- We added a new file creation option, NOROLLBACK (",[NO]ROLLBACK" or XDL FILE keyword ROLLBACK yes|no), which prohibits the rollback function when change tracking is enabled. Also, the ctutl utility has a new change tracking command option, -n, that prohibits rollbacks on a file. It can be used with or without the -a command. [tr#34450]

-- We added a new file creation option, SIZE_LIMIT (",SIZE_LIMIT=<value>" or XDL FILE keyword "SIZE_LIMIT <value>", where <value> is the maximum number of megabytes that the data .is1 file is allowed to grow). If a STORE or WRITE operation will cause the file to exceed this size, a FILFUL error will be generated and the record will not be stored. [tr#34132]

-- We added a new file creation option, RECORD_LIMIT (",RECORD_LIMIT=value" or XDL FILE keyword "RECORD_LIMIT value", where value is the maximum number of active records allowed in a file). If a STORE or WRITE operation will exceed this number, a RECLIMIT error will be generated and the record will not be

stored. [tr#34474]

-- Bldism now recognizes the NETWORK_ENCRYPT option and can create files with network encryption. [tr#35430]

-- We enhanced isutl to better detect and correct the kind of ISAM data corruption with non-TBYTE files (shown in tr#35179) where the data file appears to be at or exceeding 4 GB (greater than 4294967296). However, due to the severity of the corruption, the file header may become damaged, in which case isutl will recommend using fconvert to extract the data to a new file. [tr#35187]

-- ISAM records that exceed the old 64K limit are now allowed when a file is created with ",variable" and 0 for the maximum record size. A file of this type can be created or accessed in 64-bit traditional Synergy or 32- or 64-bit Synergy .NET. [tr#33307]

-- We added error checking when writing the "extend" area of the primary file (for anything not merged at the end of the file) and also when writing the OrderBy intermediate (temporary) file with information for the Select when OrderBy is specified. [tr#35008]

-- Fconvert no longer creates an ISAM file when an exception file exists. [tr#21439]

-- Fconvert now records the number of exception records written when optimized. [tr#34842]

-- Running isutl -r when an old .257 file existed caused unexplained "Sort work file in use" errors. A .257 file results if a failure occurs during the data sort phase of isutl (typically in FILFUL situations). The error situation was possible if the .257 file was not removed by either re-running isutl or physically removing it from the file system. We've resolved the problem by automatically removing old .257 files. [tr#34376]

-- (UNIX) An "Internal ISAM error - File may be corrupt" error with the informational text "Unable to locate bucket" no longer occurs on a DELETE operation in very large variable-length records or compressed record files (greater than 4 GB) [tr#35123]

-- (UNIX) With previous version 10 releases, some ISAM files created with version 9.5.3b or earlier and configured with TBYTE could falsely exhibit file corruption. Running isutl -v on such a file reported "Bad reset PAGE offsets." This has been fixed, and the -v option for isutl has been updated to report this situation and suggest using isutl -r to correct it. The fastest way to correct this condition is to patch your file to REV 6 using isutl -p. [tr#35181]

-- (UNIX) Isutl -p previously caused a memory fault error if it patched a pre-REV 6 file that was compressed but contained data that didn't compress well (i.e., records without much white space or many zeros). This has been fixed. [tr#35212]

-- (UNIX) Running isutl -r or -v no longer fails with "I/O error: No disk space" (when plenty of disk space is available) on a non-TBYTE file when the index file is greater than 2,147,483,647. (A workaround to this is to delete the index file and re-index. If you can add TBYTE, do so now. Otherwise, a higher packing density may suffice.) [tr#35361]

-- (Windows, UNIX) The isutl utility no longer allows an index file to exceed 2,147,483,647 bytes when re-indexing a file that is not

configured with TBYTE. It now fails with the error "Index or data exceeds maximum size" and a message indicating that only the data file (.is1) remains, and suggests re-indexing with the addition of TBYTE (-qfile=tbyte). [tr#35361]

-- (Windows, UNIX) The error $ERR_SIZLIMIT (rather than$ERR_FILTUL) is now generated when either part of an ISAM file (.ism or .is1) will exceed 2 GB when updating a file that was not configured with the TBYTE file option. [tr#35361]

-- The index and data headers of an ISAM file pair are now compared on OPEN and will generate an $ERR_NOTISM error ("Not an ISAM file") if they are different. [tr#35360]

-- In version 10.1.1, -ln and -le needed to be at the end of the isutl command string. This has been fixed. [tr#35035]

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Synergy HTTP document transport API

-- We increased the maximum HTTP header size to 2048 to better accommodate QAUTH packets. [tr#35080]

-- We updated routines in the Synergy HTTP document transport API so that a variable used for an error argument will now be cleared if the routine completes without error. Variables used for <out_headers> arguments are now also cleared. [tr#34641]

-- The HTTP_ routines caused an "Unhandled exception" error in the .NET runtime when the log file parameter was a zero-length string. This has been fixed to ignore the string. [tr#35117]

-- We changed the stack allocations to use ALLOCA instead of stack allocations for header buffers. [tr#35126]

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Synergy .NET API

-- The minimum Framework supported is now CLR 4.0.30319. We no longer distribute gennet.exe, which supports 2.0. [tr#34961, tr#34966]

-- Property initializers used within lambdas reported INVINITMBR errors. This has been fixed. [tr#35257]

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Synergy routine call block API

-- (UNIX) A recursive error condition was fixed when doing argument scope checking using the routine call block API and programs built with -qcheck. [tr#34974]

-- (UNIX) When using RCB_SETARG, RCB_SETARGS, or RCB_INSARG with a temporary literal value, the value specified will no longer change after being set. In addition, using literals to RCB_SETARG will no longer cause an F_RCBREL error on segment reclamation of the routine where the literal was set if the RCB handle is still active. [tr#34978]

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Utilities

-- (UNIX) Constructor arguments no longer cause an error in dbl2xml. [tr#34968]

-- (UNIX) Functions without an explicitly declared return value
where the first FRETURN was another unresolved function call
caused dblproto to crash. This has been fixed. [tr#35252]

-- (UNIX) Using dblproto on a parameter whose type was a handle
to an unresolved type marked the parameter as optional. When
compiled and the type was resolved to class, the parameter was
marked as required. Because the prototype didn't match the
declaration, an unexpected PROTOMISMC error was reported.
Dblproto now correctly marks the parameter as required when
the type is a handle. [tr#35259]

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xfNetLink Synergy

-- We added support for the following xfNetLink Synergy routines
to the .NET runtime: %RX_START_REMOTE, RX_SHUTDOWN_REMOTE,
%RXSUBR, %RX_RMT_TIMOUT, %RX_RMT_SYSINFO, %RX_CONTINUE,
RX_GET_ERRINFO, RX_GET_HALTINFO. For more information, see the
xfNetLink & xfServerPlus User's Guide. [tr#34825]

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DOCUMENTATION CORRECTIONS AND ADDITIONS

None.

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RESTRICTIONS

The following restrictions have been identified in version 10.3.
See the RESTRICT.TXT file for restrictions identified in earlier
versions.

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Runtime

-- (.NET) The .NET DrawString function doesn't support the
ATTR_UNDR Windowing attribute underlining an entire untrimmed
buffer. [tr#35287]

-- (.NET) On Windows Phone and Windows Store, the ERRMOD routine
always returns a line value of 0. [tr#35599]

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Synergy Windows printing API

-- Lines drawn by the Synergy Windows printing API's DWP_LINE
function are reduced in thickness after the first page when the
pen is not deleted and recreated for each page. [tr#33894]

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OPEN INCIDENTS

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Compiler

-- Casting ^M of a structure on a handle to @a gives an E_INVCAST
error. The workaround is to add an intermediate (a) cast.
[tr#34560]

-- (Windows, UNIX) An expected NFND error does not occur when a
local variable matches the leading edge of the search path. For
example, a method call of variable e of type joe that does not

have the method defined matches an e in a higher scope of a different class that does have the method defined. [tr#35469]

-- When building a project, a CLSCRC error can occur when linking an ELB if the base classes aren't first in the prototyping order. [tr#35752]

-- After INIT is called on an array, all elements will contain the initial value of the first element. [tr#36008]

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Debugger

-- (OpenVMS) A second connection to remote debug port is not producing an error. You cannot have two sessions on the same port. [tr#31408]

-- The debugger does not support multi-level casting of objects. [tr#32571]

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Runtime

-- (UNIX) When you execute an LPQUE command, the underlying shell is emitting escape sequences to reset terminal wrap, turn on the cursor, and reset all attributes. However, the shell should not emit any escape sequences for LPQUE. Note that this only occurs when running a UI Toolkit or low-level windowing application. [tr#23243]

-- %ERRMOD and the stack trace for a system error in UI Toolkit and the Synergy windowing API do not show the unmangled name. [tr#34310]

-- Certain XDL keywords like (NETWORK_ENCRYPT, TRACK_CHANGES, DUPLICATES, etc.) that have yes/no responses are not validated against invalid responses. [tr#34554]

-- Enabling a new network adapter or moving a mobile device that activates a new adapter (e.g., wired to wireless) causes xfServer access to fail with a network error when xfServer is running on the same machine as the client application. The workaround is to change the metric on the adpater in the IPv4 config settings. [tr#34498]

-- SORT/MERGE does not generate an error when one of the keyfields does not belong to the specified record. [tr#34813]

-- (.NET) An OPENELB of an assembly whose name has trailing spaces fails. You can use %ATRIM as a workaround. [tr#34392]

-- (.NET) A dynamic array of Synergy structure types causes a non-blittable error when it contains a boolean type. [tr#31494]

-- (OpenVMS) When calling ISAMC with a file specification that includes a file version number, the version is not honored, and each time ISAMC is called, a new version of the file is created. The workaround is to call XCALL DELET before ISAMC. [tr#35088]

-- (Windows, UNIX) Using a remote spec (@server) in a search list logical doesn't work. "DAT=@myserver,dat" works only if the file exists on myserver; if the file is only in the dat directory (or any other directories following dat in the search list logical),

it won't be found. "DAT:dat,@myserver" works only if the file exists in the dat directory (or any other directories preceding the remote server spec in the search list logical). [tr#35395]

-- GetCTInfo on a non-change-tracking Select produces an object that generates the wrong information. [tr#35534]

-- (OpenVMS) A pipe command ignores the part of the command after the comma when the command is issued in an OPEN statement. The command will run as expected when the pipe is opened in one statement and the command is written to the channel with WRITES. [tr#35746]

-- Incorrect instantiation of the AlphaEnumerator, RestrictedAlphaEnumerator, and CTInfo classes should generate an error but doesn't. [tr#36006]

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Synergy DBMS

-- Attempting to run isutl -r, fconvert, or irecovr at the same time any other instance of isutl -r, fconvert, or irecovr is running generates the error "Operation not allowed due to backup mode." [tr#25195]

-- The isutl utility does not detect .is1 header corruption. [tr#23168, tr#23169]

-- When copying a file using fconvert (without a description file) that contains portable integers (file options ",i=n:m"), the portable integer definitions aren't transferred to the new file. If a description file is used (-d) that contains the portable integer definitions, they are transferred correctly. [tr#32314]

-- When the ISAM file passed to isutl has a non-.ism extension, .ism is added to the end of the filename reported in the isutl log file (after the existing extension). [tr#35350]

-- When the ISAM file passed to isutl is specified using a logical, the logical is included in the filename reported in the isutl log file. [tr#35351]

-- When specifying a remote description file that is an FDL file, fconvert generates an "%FCONVERT: Invalid par file - Bad file option FDL_VERSION" error and fails. [tr#35868]

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Synergy .NET assembly API

-- When using the Synergy .NET assembly API in conjunction with DevExpress 10.1.4, the embedded DevExpress undo/redo controls do not change to an enabled state when the text in the textbox changes. [tr#31554]