# Rocket UniData

## Release Notes

Version 8.2.2

July 2021
UDT-822-ALL-RN-3

# Rocket UniData release notes overview

These release notes provide information about customer issues and enhancements made for UniData 8.2.2.

## What's new in 8.2.2

### OpenSSL 1.1.1 support

This release of UniData has been upgraded to support OpenSSL version 1.1.1. Please note the following:

▪ Using the External Database Access (EDA) with the Microsoft SQL ODBC driver on Linux requires a minimum driver version 17.4. Changes made in the Microsoft SQL ODBC driver version 17.4 allows it to work with OpenSSL 1.1.1.

▪ The upgrade to OpenSSL 1.1.1 includes support for TLSv1.3. When connecting to a UniData 8.2.2 server with a client that does not support TLSv1.3, the connection might fail. In this situation, TLSv1.3 support should be disabled in the `udtconfig` file.

See the *Security Features Guide* and *UniBasic Commands Reference* for more information.

### Default Root Certificate

A default root certificate with basic protection is available starting with this release. The `UPDATE.CER` command has been added for installing the certificate.

See the *Security Features Guide* and *UniBasic Commands Reference* for more information.

### EDA Support for MySQL and Postgres

Windows and Linux versions of UniData now support the use of EDA with MySQL and Postgres. Support for the DATETIME datatype has now been added.

See the *External Database Access (EDA) Reference* for more information.

### Python version 3.7

Python version 3.7 is now bundled with UniData 8.2.2, and is supported on the AIX, Linux, Solaris SPARC, and Windows platforms.

In order to start the UniData-supplied version from the OS level on AIX or Solaris, the path to the UniData version should be defined by the LIBPATH or LD_LIBRARY_PATH environment variable.

A new ECL command of `REINIT.PYTHON` has been added, along with support of the UniBasic FILEINFO function in u2py. The ECL command `RUNPY` now has the ability to pass command line arguments. On UNIX platforms, auto-completion of commands and reserved words is now available.

The speed of reading from, and writing to, UniData files from u2py has been improved.

See the *UniData Python User Guide* for more information on Python version 3.7.

### ECL online HELP

The information displayed by the ECL `HELP` command has been updated at this release to sync with the current documentation. With this update, information on all ECL commands, and UniBasic statements and functions documented in the standard UniData documentation set, are now available via the `HELP` command.

## Performance

Changes have been made to dramatically improve the forward traversing of an array, not only at an attribute level, but also at the multivalue and multi-subvalue level for the `REPLACE`, `INS`, `INSERT`, `DEL`, `DELETE`, and `EXTRACT` functions in UniBasic. During Rocket development testing, perfomance improvements were up to 300 times faster with these updates.

The option of a new algorithm was added to collect and collate the results of multiple indices of a file when executing a UniQuery or SQL statement. This new algorithm may give better results than the engine's previous behavior and is dependent on the OS and the structure of the indices involved. Internal testing based on customer examples saw improvements of up to 600 percent were recorded, and common gain was up to 300 percent.

## TOJSON

The TOJSON operator has been added for use with the `LIST`, `SELECT`, and `SORT` verbs to produce output in a JSON format.

See the *UniQuery Commands Reference* for more information.

## UniBasic

- PATCH method support has been added to the `CallHTTP` function.
- `CLEARCOMMON` has a new option of `ALL` to reinitialize all named common areas with one command.
- Options used when a program was compiled can now be recorded and reported.
- `SYSTEM(1512)` has been added and will report the IPv6 address of a Telnet Client on Windows and `SYSTEM(512)` now only returns the IPv4 address.
- The `ENCODE()` function now supports `Base64`, `Base64A`, and `URLENCODE` encoding options.

See the *UniBasic Commands Reference* and *UniBasic Extensions* guide for more information.

## Audit

- Captured ADE-encrypted data can now be decrypted and read via the audman utility.
- Improved logging allows single records to be identified within a DATASET operation.
- The configuration of Audit has been improved so that lists and groups can be used when defining objects to be Audited.

See the *Security Features Guide* for more information.

## U2 Replication

The default values for several replication configuration parameters were increased in this release. These include NLOG_INFO, REP_BUFSZ, and LARGE_RECSZ.

The prior default values were typically too small to support normal replication volume. The replication configuration changes will not impact existing configurations where these parameters are already defined in the `repconfig` file.

If these parameters are not defined, the new default values will be used. If an existing replication configuration consists of many groups where these parameters are not defined, the configuration should be reviewed to ensure adequate shared memory is available for replication.

The previous and current defaults are noted in the following table:

| Configuration Parameter | Previous Default | Current Default |
|---|---|---|
| N_LOGINFO | 4096 | 16384 |
| REP_BUFSZ | 52488 | 536870912 |
| LARGE_RECSZ | 64 | 512 |

Changes to replication in UniData 8.2.2 have resulted in the replication protocol level being incremented. Publishers and subscribers must be running the same protocol level for replication to function correctly. Therefore, when upgrading to UniData 8.2.2, the publisher and subscriber systems also must be updated to UniData 8.2.2 for replication to function.

> **Note:** Replication logs from prior releases are not compatible with UniData 8.2.2. Therefore, the publisher and subscriber systems should be in sync prior to the upgrade.

See the *U2 Data Replication User Guide* for more information.

## TCA_SIZE

To better support sites running replication and using cross-group transactions, the default value of the TCA_SIZE udtconfig parameter has been increased to 2048000.

## Contacting customer support

Click the following link to find worldwide contact information for Rocket Support:

https://my.rocketsoftware.com/RocketCommunity/RCEmailSupport

U2 Technical Support is available Monday through Friday, 9:00 AM to 5:00 PM in the customer's time zone. After-hours, weekend, and holiday support is available for customers with priority 1, critical down systems, only. If you are experiencing a priority 1, critical down system, please call 1-855-577-4323 (Toll Free) or 1-781-577-4323 (Direct) or visit the link above for non-US phone numbers, and leave a message with your name, a phone number where you can be reached, your U2 product serial number, and a description of the problem. A U2 Support Engineer will return your call as soon as possible.

# Resolved issues

## UniData 8.2.2

The following customer issues were fixed and enhancements were made in UniData 8.2.2.

**Build 1000**

September 2020

| Key | Release Notes | Components |
|-----|---------------|------------|
| UDT-3770 | The UniData default is for all UniBasic common variables to be initialized to 0. On native Pick installations, common variables are not initialized. Starting with this release, `UDT.OPTIONS 127 U_PICK_DO_NOT_INIT_COMMON` has been added to allow programs compiled with `$BASICTYPE "P"` to perform in the same way as native Pick installations. | U2 Basic |
| UDT-3773 | Previously, if the index value in a UniBasic FOR/NEXT loop exceeded 214783467, the index would go negative due to an arithmetic overflow not being trapped. The index value then decreased in negative values until after another 2 billion recursions. This issue has been resolved. | U2 Basic |
| UDT-4088 | Windows only. Prior to this release, using an XML map with StartNode data containing a trailing slash would cause the UniData session to crash. This issue has been resolved. | U2 Basic, DB Tool |
| UDT-9523 | When using a `SELECT` against a multi-valued indexed field, an extra step is performed to return the results in descending order. This can result in the `SELECT` (without the index) returning results faster as compared to using the index due to the extra overhead for the sort process.<br><br>Starting with this release, the new `UDT.OPTIONS 125 (U_MV_SELIND_ASC)` has been added. If this option is enabled, the list will be returned in Ascending order. Without the overhead of the extra sort, the `SELECT` will run faster with the index. | Performance, Query |
| UDT-11140 | Prior to UniData 8.2.2, when running a query that had more than 254 characters in a column, in SQL Server 2008 R2 SP1 one of the following would occur:<br><br>• An error message generated<br><br>• The returned data was truncated at 254 characters<br><br>To correct this problem, the *COLUMN_DISPLAY_LENGTH* parameter was added to the `uci-config/uvodbc.config` file. You can set this value to determine how many characters to display in a column. If this parameter is not set, the default value is 254. | SQL |
| UDT-11789 | Previously, client-server connections using the unirpc interface could be clear text or secure using SSL. Starting with this release, new options have been added to unirpcd to enable secure SSL-only connections if required. | SSL |

| Key | Release Notes | Components |
|-----|---------------|------------|
| UDT-11920 | Starting with UniData 8.2.2, Python integration is available on the Solaris SPARC platform. | Python |
| UDT-11922 | Starting with UniData 8.2.2, Python integration is available on the AIX platform. | Python |
| UDT-12435 | Starting with UniData 8.2.2, if RW_REEVALUTE_VF is set to 1 then the Virtual Field index information is no longer placed in U2 Replication Logs. | Replication |
| UDT-12816 | Starting in version 8.1.0, when checking to ensure disk space was available to update a file, the check did not cover any space needed for index writes. This issue has been resolved. | Indexes |
| UDT-13934 | Linux only. Starting with this release, if you are at a Python prompt inside a UniData udt shell, you can now use the up and down arrow keys to traverse the Python command stack history. This functionality will not show commands run outside of Python. | Python |
| UDT-14224 | Previously, if the size of the variable returned in the `CAPTURING` clause of an `EXECUTE` / `PCPERFORM` statement approached or exceeded 2GB, then (depending on the underlying operating system) the variable would be returned as an empty string (Windows) or the process would hang or abort and produce a core file (Unix). This issue has been resolved. | U2 Basic |
| UDT-14277 | Windows Only. Starting with 8.1.0, users may have encountered an issue when trying to login to the demo account due to permissions of the `sys/VOC` file. This issue has been resolved. | Error Reporting |
| UDT-15391 | Starting with 8.1.0, if a globally cataloged program used locally defined UniBasic functions, it would abort. This issue has been resolved. | U2 Basic |
| UDT-15443 | Beginning with this release, the `PATCH` method has been added to the BASIC `CallHTTP` functionality. The `PATCH` method provides the ability to modify an existing HTTP resource as compared to the `PUT` method, which only allows a complete replacement of a document. | Basic Call Interface |
| UDT-15464 | Starting with UniData 8.2.2, a virtual field I-type that combines a date field and a time field can now be mapped to one datetime field in the external database for EDA. | External Database Access |
| UDT-15567 | Starting in UniData 8.2.2, a new ECL command `COMPILERFLAGS` was added to report the options used when a program was compiled. In order to report the options used, `UDT.OPTIONS 126 (U_REPORT_COMPILERFLAGS)` needs to be turned **ON**. | ECL Tools, U2 Basic |
| UDT-15700 | Starting with this release, the UniBasic `ENCODE()` function has been enhanced with further options of Base64, Base64A and URLENCODE. For more details please refer to the manual set. | U2 Basic |

| Key | Release Notes | Components |
|-----|---------------|------------|
| UDT-15716 | Starting with UniData 8.2.0, dynamic array access optimizations were added for the forward traversing of an array at an attribute level. Starting with 8.2.2, this has been further extended to the multi-value and sub-value levels and is controlled via `UDT.OPTIONS 123` (`U_NON_OPTIMIZED_ARRAY_ACCESS`). The new access optimization is turned on by default. | Performance, U2 Basic |
| UDT-15854 | Previously, performing a re-conversion on an EDA file that was in use would result in the loss of all data in the EDA file.<br><br>Starting in UniData 8.2.2, the conversion operation will set an exclusive lock on the EDA file. If the file is already in use, the conversion operation will exit with an indication that exclusive access to the file is needed. This resolves the issue by eliminating the possibility of data loss. | External Database Access |
| UDT-15869 | Beginning at this release, the `SYSTEM(512)` function will only return the IP address of the client in IPv4 format. If the client is not Telnet, or if the client's IP address is in IPv6 format, an empty string is returned.<br><br>The `SYSTEM(1512)` function has been added at this release. It will return the IP address of the client in either IPv4 or IPv6 format.<br><br>**Note:** Due to the new function calls used to support this functionality, the behavior exhibited when performing a Telnet connection to localhost has changed. Previously, the `SYSTEM(512)` function would return 127.0.0.1. At the current release, the returned IP address will be an empty string. | Telnet, U2 Basic |
| UDT-15879 | Prior to this release, when using the memresize utility to convert a 32-bit dynamic file to a 64-bit dynamic file, the utility needed to be executed twice in some situations. The first execution would convert the file to a 64-bit file and the second execution would reduce the overflow files into one file. Starting with this release, the memresize utility only needs to be executed once to perform this conversion. | Files |
| UDT-15992 | Starting with this release, a new option `-S` was added to UniBasic to show the inline line number of the included code when a caution or error is generated at runtime. | U2 Basic |
| UDT-16045 | Prior to this release, when an invalid account name was defined in repconfig, Replication would generate an error message in `rm.log` without indicating the account name. An additional message is now generated including the account name and the line number in repconfig where the account was defined. | Replication |
| UDT-16185 | Previously, if the `confcmd -m` command was used to set the master key or master key passwords with the content of a file, but the file name was not prefixed with the at symbol (@), the utility would use the text of the file path as the key or password instead of the contents of the file. Starting with this release, the confcmd utility now performs a check to see if the supplied key or password is actually a file on the system. If it is, a warning is displayed and the user is offered the option to abort the operation. | Automatic Data Encryption |

| Key | Release Notes | Components |
|-----|---------------|------------|
| UDT-16224 | An issue was discovered with UniData sessions not always exiting on disconnection. If a thread exits out and the UniData main thread is still running, it sends a signal to the UniData main thread. Previously, if the UniData main thread did not respond or did not exit out, the udt process did not exit out. This has been changed so that if the UniData thread does not exit out within one minute, an error message is sent to the Windows event log and the udt process exits out. | Telnet |
| UDT-16225 | Beginning with this release, the new TCL `REINIT.PYTHON` command has been added to control the re-initialization of the Python environment. The available options to the command are `ON/OFF/STATUS`. The default value is `ON`. The `STATUS` option shows the current setting. | Python |
| UDT-16232 | Prior to this release, when UniData child processes were closed, a check against unused files was completed up to the NFILES value. On AIX, the truss output displayed EBADF error messages. In this release, this unused file check has been restructured to reduce the number of EBADF error messages to less than 1% of the line counts in the truss output. This change will improve performance for some applications. | Performance, Server Processes |
| UDT-16255 | Starting with UniData 8.2.2, the option of a new algorithm was added to collect and collate the results of multiple indices of a file when executing a UniQuery or SQL statement. This new algorithm may give better results than the engine's previous behavior and is dependent on the OS and the structure of the indices involved. | Indexes, Performance, SQL |
| UDT-16271 | Starting with this release, the `AUDMAN` command now has the ability to decrypt ADE encrypted data stored within the Audit Logs. | Audit Logging |
| UDT-16278 | Starting with this release, changes have been made to improve the performance when a large number of sessions attempt to update the SAVEDLISTS at the same time and if it is located in the Elastic File System in AWS Cloud. | Files |
| UDT-16279 | Starting with this release, internal changes have been made to temporary list naming to avoid problems if the `SAVEDLISTS` directory is shared across instances of UniData. | ECL Tools, Files |
| UDT-16315 | Windows only. In some circumstances, cleanupd failed to completely cleanup a UniData session. When a session was forcibly terminated, cleanupd would release the locks and UniData license associated with the process. However, the pid of that session would remain in the LCT table and be reported by the `LISTUSER` and `PORT.STATUS` commands. A stop and restart of UniData was required to clean the LCT table. This issue has been resolved. | Server Processes |
| UDT-16349 | Windows Only. Previously, the creation or deletion of a trigger could return a message similar to:<br><br>`LsaQueryInfoTrustedDomain() failed,`<br>` error(6):`<br>`The handle is invalid.`<br>`'CUSTOMERS' is owned by user -1`<br><br>This issue has been resolved. | Triggers |

| Key | Release Notes | Components |
|---|---|---|
| UDT-16370 | Starting with 8.2.2, the default setting of the RW_SKIP_TRIGGER in U2 Replication will be set to 1. | Replication |
| UDT-16371 | Prior to this release, when using the `setPrivateKey()` function with an encrypted key file using a blank password, a status of 4 was returned. The status meant that the key file could not be accessed because it was non-existent or it had a wrong pass phrase and was a result of the default security level. Beginning at this release, the `setPrivateKey()` function will accept encrypted keys with blank passwords. | Security, SSL, U2 Basic |
| UDT-16386 | When UniData was started or U2 Replication was reconfigured, U2 Replication scanned the VOC file of an account level group to load information on the files to replicate. If multiple file pointers defined the same file, the replication daemon would randomly select one of the VOC pointers and assign it as the primary reference. This could cause updates to be missed on the subscriber if the VOC pointer defined as the primary reference was removed. The rw processes on the subscriber would attempt to apply updates to the file based on the primary reference and would discover the file did not exist. Errors would be written to the replication log files indicating that updates did not occur.<br><br>Beginning at this release, the U2 Replication loading process has been modified. When multiple VOC pointers exist for the same file, the pointer where the VOC name matches the `DATA` file will be defined as the primary reference. This pointer is typically the one created at file creation and is less likely to be deleted.<br><br>Note: Updates done on the subscriber are based on the primary reference file name on the publisher. Therefore, the same VOC entry needs to exist on the subscriber or updates can be lost. | Replication |
| UDT-16387 | Windows Only. The `-a` option has been added to the `deleteuser` command. This option will remove all UniData user sessions from the system. A warning message is displayed for confirmation before removing users. Also, a `-s` option is added to suppress this prompt. The new syntax is `deleteuser -a [ -s]`. Please be careful before using these options as it will log all users off of UniData. Other existing syntax options not noted here are still available for this command. | Server Processes |
| UDT-16390 | Windows Only. Previously, the `NEWPCODE` command path parameter was case-sensitive where Windows itself is not case-sensitive. Starting with this release, the `NEWPCODE` command is no longer case-sensitive. | U2 Basic |
| UDT-16393 | Windows only. Previously, when the audit logging configuration file using "audman -config" was edited and a program policy with a path starting with a forward slash was specified, audman would crash when saving the file and exiting the program. This issue has been resolved. | Audit Logging |

| Key | Release Notes | Components |
|-----|---------------|------------|
| UDT-16399 | Starting with UniData 8.2.2, the following repconfig and udt-config parameter defaults have been increased. In repconfig *LARGE_RECSZ* to 512, *N_LOGINFO* to 16384 and *REP_BUFSZ* to 536870912. In udtconfig *TCA_SIZE* to 2048000. | Replication |
| UDT-16402 | Prior to this release, when using the `DAT.CLIENT.WRITE/ DELETE` operation in Audit on a dataset, only one operation with all the IDs in a single log record was created. Starting with this release, a separate log record will be created for each ID involved in the operation. | Audit Logging |
| UDT-16405 | Starting with this release, the UniBasic `setPrivateKey` function now accepts unencrypted PKCS#8 formatted private keys with or without a password. | SSL, U2 Basic |
| UDT-16410 | Starting with UniData 8.2.2, a new parameter of *TOJSON* has been added to the `LIST` and `SORT` UniQuery verbs to output results in a JSON format. For further details please refer to the manual set. | ECL Tools |
| UDT-16416 | Replication. If an update failed on the subscriber, it was not always reported in the log files.<br><br>Consequently, there was no record that the subscriber database was out of sync with the publisher. This issue was caused by changes made for UDT-2270, which stopped recording errors to the replication logs due to performance impact. This change has been reversed. | Replication |
| UDT-16427 | Windows Only. UniData uses function calls to the Windows environment in order to establish the relationship between the User ID (UID) and Security Identifier (SID). These function calls are run on a domain controller and can take some time to run. Previously UniData repeated these calls each time the relationship needed to be identified and checked which could result in certain commands or logins taking longer to perform that expected. Starting with this release once the relationship has been identified, it is stored in a cache to speed up subsequent checking of the relationship when it is needed. | Error Reporting, Performance |
| UDT-16438 | Prior to this release, if the `BL#` command was used when debugging a large globally cataloged program in the UniBasic Debugger, the execution of the program would hang or an error message similar to the following would be displayed:<br><br>`***Line 9 is not an executing statement or program was not compiled with -D option`<br><br>This issue has been resolved. | UniBasic Debugget |
| UDT-16442 | Starting with 8.1.2, a UniBasic program could fail to complete the compilation phase if the `-X` option was used. On Windows, this would result in a hung telnet session or an unexpected termination of the udt executable performing the compilation. On UNIX, the session would terminate or no `compliation finished` message would be displayed. This issue has been resolved. | Error Reporting, U2 Basic |
| UDT-16443 | Previously, `CallHTTP` failed on certain responses because it did not process HTTP status code 207 correctly. This issue has been resolved. | U2 Basic |

| Key | Release Notes | Components |
|---|---|---|
| UDT-16445 | Staring at 8.2.0 , If a program used a `WRITEV` or `FIELDWRITE` command resulting in the firing of a trigger that performed an update to another file, then the session could end abnormally. Although only seen and reproduced on Windows, the underlying error could also be experienced in UNIX. This issue has been resolved. | U2 Basic |
| UDT-16455 | Previously, logging off with `CHAIN QUIT`, or using any `CHAIN` command after invoking Python, caused a minidump or coredump. This issue has been resolved. | Python |
| UDT-16469 | Windows Only. Starting with this release, `udt.exe` processes that could not be previously terminated in taskmanager or using the `taskkill` command can now be terminated. | Telnet |
| UDT-16471 | Beginning at 8.2.0, when a UniBasic program was compiled using the `-D` option, a new INCLUDE file stack was also produced. This stack would be used during the program's execution to report the included program name and line location in the following format:<br><br>`In BP_MAIN.PROG at line 2, BP\INCLUDE1 at line 4, BP\INCLUDE2 at line 1`<br><br>`WARNING: UNINITIALIZED VARIABLE USED! Zero Assumed!`<br><br>With this change, running large programs compiled with the `-D` option and close in size to the value of MAX_OBJ_SIZE may have caused access violations/core dumps.<br><br>This issue has been resolved. | Error Reporting |
| UDT-16479 | Starting with this release, the `-a` and `-c` options have been added to `lstt` command to assist with debugging LCT problems. For further details please refer to the manual set. | Error Reporting, Shared Memory |
| UDT-16488 | Starting with UniData 8.2.0, the `STATUS()` result of the `SELECTINDEX` command was changed so that a status code of 1 is returned if the index name is missing, and also if no records are selected. This change was made to bring the functionality in line with the documentation.<br><br>At this release, a new udtconfig parameter named *SELECTINDEX_RTN_STATUS* has been provided. When set to 1 (default), this parameter causes the `SELECTINDEX` command and the `STATUS()` result to function the way it did prior to UniData 8.2.0. This means that a return status code of 1 will only mean that no records are selected and will allow applications to give the same result as they did prior to the change in case developers did not realize the mistake in the documentation. If the *SELECTINDEX_RTN_STATUS* parameter is set to 0, then the new UniData 8.2.0 behavior will be used. | Indexes, U2 Basic |

| Key | Release Notes | Components |
|---|---|---|
| UDT-16490 | Prior to UniData 8.2, if you used the construct, `READV value FROM file,key,0 ELSE ....,` if the key existed, the value was returned as 1. If the key did not exist, the value was returned as 0.<br><br>Starting with 8.2.0, if the key exists, the value that is returned is the contents of attribute 1 from the record. If the key does not exist the value is returned as null.<br><br>This change in behavior was not expected and has been returned to the results seen at versions prior to 8.2.0. | U2 Basic |
| UDT-16497 | Windows only. Prior to this release, if a large number of writes occurred during a UniData transaction and indexes were used, the process would produce an exception violation when the `TRANSACTION COMMIT` or `TRANSACTION ABORT` command was executed. This issue has been fixed. | Error Reporting, Transaction Logging, Triggers |
| UDT-16500 | Starting with 8.2.0, when updating a UniData file within a Transaction (i.e. `TRANSACTION START … TRANSACTION COMMIT`), if the file had an index that was built on a virtual dictionary, users saw the following message: `Illegal buffer in U_free_buf()`. The index and the file were updated correctly. This issue has been resolved.<br><br>**Note:** This issue was previously fixed in 8.1.1, and re-emerged again at 8.2.0. | Shared Memory, U2 Basic |

| Key | Release Notes | Components |
|---|---|---|
| UDT-16506 | Prior to this release, when writing to a large dynamic file with at least one index and if the indexed value was to be written to an index other than the primary index file (idx001), the process ended unexpectedly with an error similar to the two following examples.<br><br>`In BP/_TEST at line 8 Index:open part file TESTFILE/idx003 failed(0)`<br><br>`In BP/_TEST at line 8 Index: invalid offset for read: 0`<br><br>`In BP/_TEST at line 8 Index: read node error(0)`<br><br>`In BP/_TEST at line 8 Index: Can not split node`<br><br>`In BP/_TEST at line 8 1:Inserting index value(s) error in U_append_strtuple for file 'TESTFILE', key 'TESTING11', number=259`<br><br>`In BP/_TEST at line 8 Index:open part file TESTFILE/idx002 failed(0)`<br><br>`In BP/_TEST at line 8 Index: invalid offset for read: 1440428032`<br><br>`In BP/_TEST at line 8 Index: read node error(0)`<br><br>`In BP/_TEST at line 8 1:Inserting index value(s) error in U_append_strtuple for file 'TESTFILE', key 'TESTING1111', number=200`<br><br>This issue has been resolved. | Indexes |
| UDT-16521 | Starting in UniData 8.2.2, the `encman -audit` command will now report the specific details of audit password policy changes. Prior to this release, the `encman -audit` command only reported that a password policy change had occurred. | Automatic Data Encryption |
| UDT-16523 | Starting with UniData 8.2.2, the `ALL` option has been added to the BASIC `CLEARCOMMON` statement. The `ALL` option will result in setting the contents of variables in all named common blocks to a value of 0. | U2 Basic |
| UDT-16525 | Prior to this release, long-running odbc query sessions could have crashed with an access violation/coredump. This issue has been fixed. | Error Reporting, UNIRPCD |
| UDT-16539 | Starting with this release, improvements have been made to the error messages produced during an EDA conversion to better understand the error that was encountered. | External Database Access |
| UDT-16542 | Prior to this release, the SQL syntax of `LIKE '?'` was not supported in all SQL modes. Customers may have seen this as an error with the `LINQ.Contains()` function. This issue has been resolved. | SQL |
| UDT-16549 | In previous versions, SSL protocols TLSv1.1 and TLSv1.2 were not available in Python. This issue has been resolved. | Python |

| Key | Release Notes | Components |
|---|---|---|
| UDT-16550 | Prior to this release, during EDA reconvert, the request failed at the rename table stage because the table name was too long, leaving tables in the external database inconsistent with the EDA stub file. `LIST FILE ALL` would fail with the error `'table or view doesn't exist'`. This issue has been resolved. | External Database Access |
| UDT-16564 | Previously, converting an EDA file with an index to an SQL Server worked properly the first time; however, during additional conversions, EDA could not run the EDA `CONVERT` command again on an existing EDA file due to a drop in the SQL Server index failure. This was caused by an incorrect SQL server index reference. This issue has been resolved. | External Database Access |
| UDT-16567 | Starting with this release, the XDEMO account has been updated to version 3.1.4. This includes a fix for repeated calls to the `FINDWAREHOUSE_PYFUNC` program. | Python |
| UDT-16572 | Starting with UniData 8.2.1, if the guide utility was used against a dynamic file, the following message might have incorrectly displayed:<br><br>`warning(development internal): file: UD_SQLTABLES fileno:0 U_O_FFL_BITS[0] doesn't contain U_O_TMP_bits[0].`<br><br>This issue has been resolved, and a new `-nw` option has also been added. This option functions the same way as the *SUPPRESS_ORPHAN_BLOCK_ERROR* environment variable. For example, the `has no link` warning messages are suppressed from the error log file. | Error Reporting |
| UDT-16574 | Prior to this release, an SQL query on a view returned incorrect results. This issue has been resolved. | SQL |
| UDT-16575 | Starting with 8.2.2, the install scripts now give `world permissions` to the U2 Logging `logs` directory and its sub-directories. | Installation |
| UDT-16576 | Starting with UniData 8.2.1, when making a UO.NET call or U2 Toolkit connection that uses the `LockRecord` function, the udapi_slave process could generate an access violation/coredump. This issue has been resolved. | Error Reporting, UNIRPCD |
| UDT-16579 | Prior to this release, when making an ODBC connection to an account that had a `LOGOUT` paragraph that performed a BASIC program with a `CHAIN` command, the udsrvd process would coredump. This issue has been resolved. | Error Reporting, UNIRPCD |
| UDT-16595 | As a result of a fix in the 8.1.2.2022 release, if an attempt was made via VSG to look at Files / Tables or Views on that release, then VSG would have disconnected from the server with an error. This issue has been resolved. | Server Processes |
| UDT-16599 | Starting with this release, in UniBASIC, the `setHTTPDefault` function's `AUTHENTICATE` option now allows passwords to contain colons. If the password or realm contains colons, you must use a value mark (@VM) to separate all parts, for example:<br><br>`jons@VMpassword:with:colons@VMsupport` | U2 Basic |

| Key | Release Notes | Components |
|---|---|---|
| UDT-16604 | Prior to this release, if an EDA write failed on the subscriber and `RW_IGNORE_ERROR` was set to `0`, replication would not suspend. This prevented customers from realizing that database updates had been lost. This issue has been resolved. | Replication |
| UDT-16610 | In rare situations, when user processes were exiting, the internal cleanup of memory could have generated a core dump. This was typically seen when large or too many files were used. This issue has been resolved. | Error Reporting |
| UDT-16611 | Staring with 8.2.0, if a program used a `WRITEV` or `FIELDWRITE` command resulting in the firing of a trigger that performed an update to another file, then the session could end abnormally. Although only seen and reproduced on Windows, the underlying error could also be experienced in UNIX. This issue has been resolved. | U2 Basic |
| UDT-16612 | Starting with UniData 8.2.1, when running a program in the debugger, running `N#` with the `R` option did not repeat the `N#` command when Enter was pressed. This issue has been resolved. | UniBasic Debugger |
| UDT-16625 | Starting with UniData 8.2.1, when running a program in the debugger, the `BP` option failed to set a break point. This issue has been resolved. | UniBasic Debugger |
| UDT-16626 | In UniData 8.2.0 and 8.2.1, when using triggers, in some rare cases, processes could have stopped prematurely with `illegal buffer in U_free_buf` and `out of BUF_TYPE` errors. This issue has been resolved. | U2 Basic |
| UDT-16627 | Starting with release 8.2.2, a default site-specific root certificate will be deployed during installation to aid the set up of other MV SSL interfaces and components. The certificate can also be added manually via the `UPDATE.CER` command with the default passord: `R0cketU2`. | Security, SSL |
| UDT-16631 | HP Only. Starting with UniData 8.1.0, support for local functions was added. On HP only, if the program containing local functions was globally cataloged, the process would core dump. This issue has been resolved. | Performance, U2 Basic |
| UDT-16643 | Starting with UniData 8.2, with the addition of the audit logging functionality, when large program stacks were stored in memory, the process might have core dumped. This issue has been resolved. | Error Reporting, U2 Basic |
| UDT-16644 | Prior to this release, performing an `ODBC SELECT` query with a range of dates using the `@date` expression in ODBC fails. This issue has been resolved. | SQL |
| UDT-16646 | Linux only. Prior to this release, Python did not support auto-completion. This issue has been resolved. | Python |
| UDT-16649 | Prior to this release, if a user ran a `CLEAR-FILE` on a dynamic file with 30+ part files, the process would core dump. This issue has been resolved. | Error Reporting, Files |
| UDT-16651 | If large MQI requests are received in UniData, the UniData process could core dump. On Linux, this might show as an `invalid free` error. This issue has been resolved. | Error Reporting, MQSeries |

| Key | Release Notes | Components |
|-----|---------------|------------|
| UDT-16655 | Previously, attempting to add a password to an ADE master key generated via `SYSGEN` incorrectly failed with a message indicating that the master key had changed. This issue has been resolved. | Automatic Data Encryption |
| UDT-16661 | Previously, the path used in `pip.exe` was a hard-coded absolute path which lead to problems if Python was moved from it's default location. It has been changed to a relative path so it can be found even if the default location is changed. | Python |
| UDT-16667 | Prior to this release, the EDA server would look up the `libodbc.so` file instead of the `libodbc.so.1` file based on the *ODBCPATH* environment variable.<br><br>1. It loads the `libodbc.so` file from the `/usr/local/lib` by default without the *$ODBCPATH* environment variable setting.<br><br>2. Check the `$ODBCPATH/lib` path. If it does exist, it loads the `libodbc.so` file from that path. Otherwise, the driver will search `/usr/local/lib`, `/usr/lib64`, and then `/usr/lib`. | External Database Access |
| UDT-16668 | Prior to this release, the EDA driver would not work with Microsoft the ODBC driver for Linux. The EDA COM driver was unable to locate the `libodbc.so` file in the `$ODBCPATH/lib` folder. This issue has been resolved.<br><br>Now, if the *$ODBCPATH* environment variable is not set, the driver will search `/usr/local/lib`, `/usr/lib64`, and then `/usr/lib`.<br><br>If the *$ODBCPATH* environment variable is set, the driver will search `$ODBCPATH/lib`, and then `$ODBCPATH`. | External Database Access |
| UDT-16673 | Due to recent changes for SQL memory corruption issues (UniData 8.1 tickets UDT-16525 and UDT-15206), calls to the `ISMB` function (single or multi-byte language check) may have core dumped. This issue has been resolved. | Error Reporting |
| UDT-16682 | Previously, if a secure HTTP connect failed during SSL handshake phase when `submitRequest()` was run, it was difficult to obtain a detailed error reason. This issue has been resolved by calling `getSocketErrormessage()`.<br><br>**Note:** When `submitRequest()` is called to send an `HTTP` request via a secure HTTP connection, and there is an SSL-related error that prevents the request to be sent, `submitRequest()` returns error code `3`, which indicates a generic network error. This error code is not a socket error code and should not be used in getSocketErrorMessage(). Instead, you should pass `0` as the error code to `getSocketErrorMessage()`. | U2 Basic |
| UDT-16683 | Previously, Replication did not update the subscriber correctly when an individual transaction contained more than 32,767 updates. This issue has been resolved. | Replication |

| Key | Release Notes | Components |
|---|---|---|
| UDT-16684 | (Unix Only.) An enhanced UniData Performance Monitoring tool, called `udtpm`, has been added in this release. This command-line driven monitoring tool provides information about UniData users and system activity. Refer to the Pre-Release Documentation for UniData Performance Monitoring Tool (https://my.rocketsoftware.com/RocketCommunity/articles/How_To/Pre-Release-Documentation-for-UniData-Performance-Monitoring-Tool-udtpm) on the Rocket Community site for additional information. | Performance |
| UDT-16694 | Previously, when using the performance monitor options in the Extensible Administration Tool (XAdmin), no results were shown when connecting to a UniData 8.2.x server. This issue has been resolved. | Performance |
| UDT-16704 | When using `CallHTTP` to access a server and the response is using chunked encoding, well-formed chunks were expected. If incomplete or ill-formed chunks were received, the database process could crash. This issue has been resolved. | U2 Basic |
| UDT-16718 | Starting in this release, the error message `repsys local replication not defined` was updated to include the local hostname. | Replication |
| UDT-16719 | Prior to this release, the cleanupd daemon could crash when attempting to clean up a dead udt process. If a udt process was terminated while updating replication logs during a transactional database update, the cleanupd process might crash when cleaning up the LCT slot for that process. After restarting cleanupd, the process would continue to crash when reaching that LCT slot again. The only resolution was to stop and restart UniData. This issue has been resolved. | Replication |
| UDT-16731 | Prior to this release, in rare circumstances when processes were run, invalid addresses pointing to GLM segments might have been left in LCT information. When new users logged in and the LCT information was referenced again, newly run processes failed. These failures prevented additional users from logging in and required a database or server reboot. This issue has been resolved, and the invalid address information is now properly cleared. | Error Reporting |
| UDT-16739 | Prior to this release, on UNIX and Linux systems with command line lengths longer than 16 KB, the UniData psfmt utility core dumped, which caused the `showud` command to return no results. This issue is now resolved. | Installation, Server Processes |
| UDT-16742 | Starting with UniData 8.2.0, on AIX, HP, and Sun platforms, if UniData BASIC or guide commands were used and the `UD.ACCOUNT` file entry for the data account only contained one line of data, the process would core dump. This issue has been resolved. | Error Reporting, U2 Basic |
| UDT-16753 | Starting with this release, the Device and Inode fields were removed from the `LIST.LOCKS` command, as they are invalid for these types of locks. Resolving this issue also ensures the same `XAdmin` functionality works correctly when clearing locks. | Server Processes |

| Key | Release Notes | Components |
|---|---|---|
| UDT-16758 | Prior to this release, if UniData was moved to another server and the Recoverable File System was active, the encman retag process on the failover system corrupted the key store, making it unusable. This issue has been resolved. | Automatic Data Encryption, Recovreble File System |
| UDT-16761 | Prior to this release, when trying to run a BASIC program from Python, the command failed. This issue has been resolved. | Python |
| UDT-16762 | Linux only. Prior to this release, processes would core dump if the `readnamefields` Python function was used. This issue has been resolved. | Python |
| UDT-16794 | Previously, EDA would only allow the TRANS I-type fields to be mapped to an SQL Server view. Beginning with this release, EDA can now map the SUBR or TRANS data to SQL Server data type fields. | External Database Access |
| UDT-16797 | Prior to this release, when using the EDA `Scalar` function with the SQL Server `UPPER` function, it will return the following error:<br><br>`Create EDA Component failed(1):CREATE VIEW CUSTOMER.CUSTOMER_V( UPCASE_LNAME, ID, FNAME, LNAME, NONCONFORMING_FLAG, UNMAPPED_U2FIELD) AS SELECT CUSTOMER.UPPER(CUSTOMER.LNAME), CUSTOMER.ID, CUSTOMER.FNAME, CUSTOMER.LNAME, CUSTOMER.NONCONFORMING_FLAG, CUSTOMER.UNMAPPED_U2FIELD FROM CUSTOMER.CUSTOMER CUSTOMER`<br><br>`EDA SQL Server Driver: [Microsoft] [SQL Server Native Client 11.0][SQL Server]Cannot find either column "CUSTOMER" or the user-defined function or aggregate "CUSTOMER.UPPER", or the name is ambiguous.`<br><br>`Create EDA file components CUSTOMER.CUSTOMER failed.`<br><br>This issue has been resolved. | External Database Access |
| UDT-16804 | In UniData 8.2.0, coding changes were made to ensure files could not exceed their predefined limits. (UDT-12686.) The *MAX_FLENGTH* parameter in the `udtconfig` file applies only to 32-bit dynamic files, but was also incorrectly applied to 32-bit static files when the 8.2.0 coding changes occurred. This resulted in the `CLEAR.FILE` command failing if it was applied to a 32-bit static file that was already larger than the size defined by *MAX_FLENGTH*. This issue has been resolved. | Files |
| UDT-16828 | Prior to this release, using the `LIST` command on an EDA file might core dump if the Whole Record flag was set to Yes and not all fields were mapped. This issue has been resolved. | External Database Access |

| Key | Release Notes | Components |
|-----|---------------|------------|
| UDT-16829 | Prior to this release, UniData error logs could contain the following error message: `msgno = 30147. args = (null)`, which was intended to inform users that some memory was double freed. In this release, this message has been improved to be more descriptive.<br><br>Starting with UniData 8.2.0, two RFS (Recoverable File System) users also reported receiving this message, which has also been resolved with this release. | Error Reporting, Shared Memory |
| UDT-16838 | Changes made to resolve ODBC issues in version 7.3.7.6629 and version 8.2.0 resulted in users experiencing SQL query failures and receiving the following error message: `out of BUF_TYPE`. Both the original issue (UDT-15206) and this issue have been resolved with this release. | SQL |
| UDT-16840 | AIX only. Starting with UniData 8.2.0, the result of a exponent calculation with two integers did not always return a whole number, which could cause follow-up condition checking to unexpectedly fail. This issue has been resolved. | U2 Basic |
| UDT-16844 | Previously, when executing the `EDA.CONVERT` command, if a key length was greater than 80 characters, then the process could crash with a core dump. This issue has been resolved. | External Database Access |
| UDT-16846 | Windows only. Starting with UniData 8.2.1, when running the `memresize` command with the `NOPROMPT` option, the following occurred:<br><br>-Changes were not made to the file.<br><br>-An empty `c:\udt.errlog` file was generated.<br><br>-The `memresize` executable crashed with a core dump.<br><br>Also, if the `NOPROMPT` option was not specified, the `memresize` command did not prompt the user.<br><br>Both sets of issues have been resolved. | Files |
| UDT-16849 | Starting with this release, the `RENAME` option has been added to the `EDA.CONVERT` command. Use this option with the `EDA.CONVERT` command if it is used against a database file that has I-types pointing to the same file. | External Database Access |
| UDT-16882 | Audit. Starting with this release, improvements have been made to allow for easier tuning of the list of files, users, programs and executables to be included/excluded in the audit configuration. For more information, in UniData 8.2.1, search for UDT-16882 in the Rocket Support Knowledge base or refer to the documentation set.<br><br>Â | Audit Logging |
| UDT-16883 | Prior to this release, the `TRANS_COMMIT_LOG` file was not correctly updated if the file pointers pointed to a remotely replicated file and the account in which the transaction was run was not replicated. This issue has been resolved. | Replication, Transaction Logging, U2 Basic |
| UDT-16890 | Starting with UniData 8.2.0, when the `glm_tool` utility was used and option 1 was selected to show the map of locks, a core dump would occur in UNIX and an exception violation displayed in Windows if more than one active read waiter was present. This issue has been resolved. | Locking |

| Key | Release Notes | Components |
|---|---|---|
| UDT-16915 | The udtdiag script for UNIX and Linux platforms has been updated to version 5.2.1 in this release. | Support Tools |
| UDT-16919 | Prior to this release, if you were using the `glm_tool` option to show the `'Holding Transactions and Waiting Queues for a Given Lock'` the prompts displayed when asking for the `fid.ino` and `fid.dno` were in the reverse order. This issue has been resolved. | Locking |
| UDT-16930 | (Windows only.) Beginning at this release, the `CALLC` pointer type has been updated to 64-bit to match 64-bit UniData builds. To use this variable type, custom applications must be recompiled in 64-bit mode. | U2 Basic |
| UDT-16932 | Starting with 8.2.1, if the recoverable file system (RFS) was active and the last attribute in an RFS file was indexed, the associated index would become corrupted when a record was created or updated via the `WRITE` statement. This issue has been resolved. | Indexes, Recoverable File System |
| UDT-16933 | Starting with 8.2.2, the OpenSSL libraries that UniData comes supplied with have been upgraded to version 1.1.1b. | Security |
| UDT-16937 | Audit. Prior to this release, when using the `DELETE` command at ECL, the records and filename were not populated in the auditing records. This issue is has been resolved. As part of this change starting with this release, the `DELETE` command at ECL event was changed to be tracked by the `DAT.QUERY.COMMAND` event type instead of the previously used `SYS.COMMAND` event type. | Audit Logging |
| UDT-16942 | Prior to this release, if an index had a NO.DUP constraint on a subscribing system with replication, the replication writer process might have incorrectly failed to update the file with a message similar to the following:<br><br>`Tue Oct 23 11:18:36 2018; RW report:`<br>`RW(2, 8978778):RW violated nodup`<br>`constrain(0, 0); (LSN=35797828)Insert on`<br>`PIECE.LOCATION('53CF84D5-B910-176F-F876-`<br>`DFA1B8562DEA') is canceled.`<br><br>This issue has been resolved. | Replication |
| UDT-16944 | Starting with 8.2.1, if the *@TRANSACTION.ID* grew to a certain size, the *@LEVEL* variable became damaged, which subsequently corrupted the value returned via `SYSTEM(16)`. This issue has been resolved. | U2 Basic |
| UDT-16949 | The `USE.PYTHON.DICT` program was added at UDT 8.2.1 in the XDEMO account. The location of the file was incorrectly placed in the `XDBP` file. Starting with this release, this program is now called `USE_PYTHON_DICT` and is in the `PBP` directory. | XDEMO |

| Key | Release Notes | Components |
|---|---|---|
| UDT-16956 | Prior to this release, `WRITE` commands written to a log file would not be logged via Audit Logging if the following occurred:<br><br>▪ The file had an update trigger.<br><br>▪ The `WRITE` command came from a subroutine and not a parent program.<br><br>▪ There was a `READ` command (of any kind, from any file) in the trigger routine.<br><br>▪ The trigger called a subroutine.<br><br>This issue has been resolved. | Audit Logging |
| UDT-16964 | Prior to this release, when users attempted to use the `memresize` utility and UniData could not locate the partition information for the temporary resize area in its list of file systems (sms -F), it displayed a message similar to the following: `Warning: Nov 30 04:37:27, Can't find the partition (-9223371860761116672) information in shared memory`. Starting with this release, this message has been improved to be more helpful to administrators. | Files |
| UDT-16974 | When indexes overflow and the RFS (Recoverable File System) is used, memory structures are swapped in and out to allow for additional data. During the swap, the index is locked. Prior to this release, in rare situations, duplicate locks caused the database to hang during the checkpoint phase. Starting with this release, changes were made to prevent duplicate locks, and the subsequent hang, from occurring. | Recoverable File System |
| UDT-16975 | Previously, if audit logging was enabled against a non-existing file and the UniBasic `DELETE` command was used, the process would crash. This issue has been resolved. | Audit Logging |
| UDT-16982 | Prior to this release, if Automatic Data Encryption (ADE) was active, data was copied from an unencrypted file to an encrypted file, and both files had indexes, users received a message similar to the following when they attempted to write to the encrypted file:<br><br>`In BP/_TEST at line 10 Index: invalid 'nkeys' (772330356) of node 16384.`<br><br>`In BP/_TEST at line 10 1:Inserting index value(s) error in U_append_strtuple for file 'MYFILE', key 'A:DEFG:DEFG', number=7.`<br><br>This issue has been resolved. | Automatic Data Encryption, Indexes |
| UDT-17001 | The UniData smm process cycles every minute by default. Prior to this release, if this cycle was delayed beyond 60 seconds, users received a message similar to the following: `mm set U_smm_check_flag to 1. seconds passed since last check:61`. Starting with this release, users will only receive this message if the interval time, plus 10%, has been reached. | Server Processes |

| Key | Release Notes | Components |
|-----|---------------|------------|
| UDT-17011 | Starting with UniData v8.2.1, build 9114 (UDT-16956), changes were made to better support triggers with auditing. Updates and deletes were correctly tracked in the audit logs, but new data records that included trigger executions were not. This issue has been resolved. | Audit Logging |
| UDT-17024 | Starting with UniData 8.1.0, if an NFA file was opened into a *COMMON* variable and then subsequently the file was not closed before logging out of UniData, an error message similar to the following would display on logout"<br><br>`In at line 1, Your NFA server has gone down, errno is 9.`<br><br>This issue has been resolved | Network File Access |
| UDT-17029 | Starting with UniData 8.2.0, if the *udtconfig* parameters *MAX_CAPT_LEVEL* and/or *MAX_RETN_LEVEL* were set higher than a value of 2, any processes performing an `EXECUTE` command in a subroutine could core dump. This issue has been resolved. | U2 Basic |
| UDT-17039 | Starting with UniData 8.2.0, if a BCI (Basic Call Interface) variable was used within a named common area, the memory being used by that variable may have been incorrectly doubly released upon completion of the UniData session. On Windows this may have produced a minidump. This issue has been resolved. | Error Reporting |
| UDT-17040 | Prior to this release, client-server connections using the unirpc interface could be clear text or secure, using SSL. Starting with this release, new options have been added to unirpc, which enable secure SSL-only connections. Refer to the UniData Security Features Manual for more detail. | SSL |
| UDT-17042 | Starting with UniData 8.1.0, if the 'over' file header in a dynamic file was corrupt but the 'data' file header was not, UniData would incorrectly treat the file as a directory.<br><br>Starting with this release, if this type of corruption is encountered, file operations are blocked and a message similar to the following displays:<br><br>`: LIST MYFILE`<br>`hashtype 0 is error for dynamic hashfile.`<br>`Open file error.` | Files - Corruption, Files - Directory, Files - Dynamic |

| Key | Release Notes | Components |
|-----|---------------|------------|
| UDT-17055 | Starting with UniData 8.2.0, UniData on UNIX or Linux switched from being statically linked to dynamically linked. If external C programs were added via `CALLC` functionality and the return type was a pointer, double, float or char, symbol errors similar to the following could occur:<br><br>`Could not load program udsrvd:`<br><br>`rtld: 0712-001 Symbol U_ltoa was referenced`<br><br>`from module /disk1/ud82/work/`<br>`libu2callc.so(), but a runtime definition`<br><br>`of the symbol was not found.`<br><br>`rtld: 0712-002 fatal error: exiting.`<br><br>`Additional symbols that could be referenced in the above error include U_dtoa, U_ftoa and U_getzeroret. This issue has been resolved by properly defining the noted symbols.` | UDT- Linking |
| UDT-17060 | Windows only. Starting with UniData 8.1.2 build 2001 or 8.2.0, if the `P` command was used in the UniData debugger and it was not a dual terminal debugging session, the process would generate an access violation and disconnect the session. Previously, if this situation occurred, users would have received an appropriate error message. This issue has been resolved. | Debug Tools |
| UDT-17073 | Starting in September 2018, our source code was moved to a Git repository. One result of this move was that some empty and unnecessary `.keep` files were incorrectly shipped with the products. This issue has been resolved. | Build |
| UDT-17074 | Starting with UniData 8.2.0, the `udtmon` utility failed to report the correct values for the `File I/O` option. This issue has been resolved. | Performance, Support Tools |
| UDT-17078 | AIX only. Starting with UniData 8.1.0, if the same UniBasic variable was used as both a string and a file pointer in an OPEN statement, the file could not be opened. This issue has been resolved. | U2 Basic |
| UDT-17079 | Starting with UniData 8.2.0, if the `OSBREAD` statement read a file whose length was an exact multiple of the block length being used, then the `OSBREAD` statement would take one extra iteration than was necessary to detect the end of the file. This issue has been resolved. | U2 Basic |
| UDT-17080 | Starting with UniData 8.2.0, the `SCHEMA_LIST_USERS` API may have returned the following error message:<br><br>In `C:\U2\ud82\sys\CTLG\s\SCHEMA_LIST_USERS` at line 49 Unable to read definition for routine `U_get_list_user` from VOC.<br><br>In `C:\U2\ud82\sys\CTLG\s\SCHEMA_LIST_USERS` at line 49 C function `U_get_list_user` not found<br><br>This issue has been resolved. | API |

| Key | Release Notes | Components |
|---|---|---|
| UDT-17085 | Starting with UniData 8.2.1, when using `NFA` and the `READVU` UniBasic command, the full data record was returned rather than the field number specified. This issue has been fixed. | Network File Access |
| UDT-17097 | Windows Only. Starting with UniData 8.1, the telnet server would not always display the message `Licenced # of users has been reached` back to the Telnet Client. This issue has been resolved. | Telnet |
| UDT-17102 | Starting with this release, the udtsetup script has been updated to version 1.3.0. | Installation |
| UDT-17114 | Starting with UniData 8.2.0, changes were made in UDT-15324 to the error handling of the `OSBREAD` statement to be consistent with other statements. If the `OSBREAD` statement is positioned past the end of the file, then the `ON ERROR` clause of the statement is taken, `STATUS()` is set to a new value of `5` and the variable used to contain the result of the `OSBREAD` statement wouldl not be changed. Prior to 8.2.0, if the `OSBREAD` was positioned past the end of the file then the result variable would almost certainly return an empty string. A new `UDT.OPTION 124` has been added to revert to the prior behaviour to allow old code to function without modification. | U2 Basic |
| UDT-17116 | Starting with this release, the `CT` and `CP` commands have been enhanced to allow the use of quoted record ids primarily to allow for record ids with spaces. | ECL Tools |
| UDT-17135 | In a previous release, if the return information of the *SUBROUTINE* parameters is not set for the new record value, the old record value remains in the field and the file overwrites itself with the old value in the transaction. This issue has been resolved. | Triggers |
| UDT-17146 | Audit. Prior to this release, if a `BEFORE` or `AFTER UPDATE TRIGGER` is used and the `WRITE` of the record was performed in a UniBasic subroutine, then no write action would be recorded in the audit log. This issue has been resolved. | Audit Logging |
| UDT-17147 | Audit. Prior to this release, if a `AFTER DELETE TRIGGER` is used and the `DELETE` of the record was performed in a UniBasic subroutine, then no delete action would be recorded in the audit log. This issue has been resolved. | Audit Logging |
| UDT-UDT-17149 | Linux only. Prior to this release, running the `RESIZE CONCURRENT` command could produce an intermittent error with a message similar to the following: `glibc detected *** /disk1/ud82/bin/udt: free(): invalid pointer: 0x000000000 14eb730 ***`. The issue has been resolved. | Files |
| UDT-17150 | HPUX / Linux only. Prior to this release, if a file was resized from 32-bit to 64-bit, a `false` error message similar to `Thu May 9 05:20:45 2019; cwd=/disk1/614824/TESTRESIZE 1:blk check error in U_read_hash_gblk for file 'TEST-RESIZE', key '198', number=33198` could be produced and a subsequent `'guide' of the file` would report no errors. This issue has been resolved. | Files |

| Key | Release Notes | Components |
|---|---|---|
| UDT-17159 | Prior to this release, if a record was deleted from a dynamic `WHOLEFILE` and the block was in level two overflow, a message similar to the following could be produced:<br><br>`In BP/_UDT-17159 at line 15 1:movlen error in U_arrange_block for file 'JDSTEST', key '', number=616`<br><br>`In BP/_UDT-17159 at line 15 1:movlen error in U_delete_record for file 'JDSTEST', key '', number=616`<br><br>`In BP/_UDT-17159 at line 15 1:movlen error in delete_from_group for file 'JDSTEST', key 'MEMBER#000000115627#UPD#SEC', number=616`<br><br>The file would then be broken and need repairing, running guide against the file would produce errors such as:<br><br>`JDSTEST`<br><br>`File Integrity:`<br><br>`Group 3848, block 12773 bytes used 201 and bytes left 790 are inconsistent`<br><br>`Group 3848, block 12773 is pointed to by multiple links`<br><br>`Warning: The 2395th block of file has no link.`<br><br>`Warning: The 2557th block of file has no link.`<br><br>`Warning: The 3644th block of file has no link.`<br><br>`Warning: The 10946th block of file has no link.`<br><br>`Warning: The 11314th block of file has no link.`<br><br>`Warning: The 14856th block of file has no link.`<br><br>`Files processed: 1`<br><br>`Errors encountered: 2` | Files |
| UDT-17169 | Starting with 8.2.2, the `udsrvd.d` file is now included for Unix and Linux platforms. | Server Processes |
| UDT-17174 | Audit. Prior to this release, the UniBasic statements `SELECT` and `SELECTINDEX` would have been incorrectly tracked if the file had a `DAT.BASIC.READ` event set against it. This issue has been resolved. | Audit Logging |

| Key | Release Notes | Components |
|---|---|---|
| UDT-17630 | Starting with this release, support for RHEL/CentOS 8 has been added. You must install the 64-bit versions of the `libnsl` (not `libnsl2`) and `ncurses-compat-libs` files for UniData to install on RHEL/CentOS 8. If these packages are not found, an error displays when the installation/upgrade scripts are executed. | OS |
| UDT-17636 | In a previous release, when using udtmon with option `configuration` graphic scale and default graphic scale file, the udtmon session core dumps. The problem reported on AIX and Linux for UniData 8.1.2 and 8.2.1. This issue has been resolved. | Server Processes |
| UDT-17638 | Starting with this release, the bundled version of Python included with UniData has been upgraded to version 3.7. | Python |
| UDT-17652 | Replication. Prior to this release, repeated field level updates of the same record could result in the record not being correctly updated on the subscriber. This problem has been resolved. | Replication |
| UDT-17666 | Starting with v8.2, the `PP` command in the UniBasic debugger was not working correctly. | UniBasic Debugger |
| UDT-17669 | In versions 8.2.1.9119 and 8.2.1.9120, a `DELETE` command issued against a file that was EDA mapped as a subscribing object of a single server replication may not have succeeded which caused the `udsub` process to die. | External Database Access, Replication |
| UDT-17672 | Prior to this release, if the `NEWPCODE` failed, no error was produced which left no way to detect an error. Starting with this release, if `NEWPCODE` fails it will produce the following message:<br><br>`NEWPCODE BP\missingprogram`<br><br>`errno=2: No such file or directory`<br><br>`Can not access program BP\missingprogram` | U2 Basic |
| UDT-17676 | Prior to this release, when trying to run a program compiled on very old versions of UniData,a message similar to the following would be produced:<br><br>File `BP_UDT-17676-TEST` was compiled using a compiler version prior to 2.0 and cannot run in a higher environment.<br><br>This message has now been expanded to include:<br><br>`Please re-compile the program and then try again.`<br><br>On Windows only, the compiled code would have been left locked and you would have been unable to delete that code or recompile until UniData was restarted. This is has also been fixed as part of this release. | U2 Basic |
| UDT-17679 | Starting with 8.2.0, The `SCHEMA_DISPLAY_SCHEMA` Schema API retrieves the `ColumnNullableFlag` data from the `UD_SQLTABLES` tables, but returned an incorrect result. This issue has been resolved. | Schema API |

| Key | Release Notes | Components |
|---|---|---|
| UDT-17680 | For AIX only, when using the *OPENSSL_FIPS* environment variable, using the openssl command shipped with UniData would cause this error:<br><br>`1152921504606846944:error:2D06B06F:FIPS routines:FIPS_check_incore_fingerprint:fingerprint does not match:fips.c:232:`<br><br>This issue is now resolved. Due to this change, the OpenSSL version shipped with UniData on AIX is now 1.0.2p-fips. | SSL |
| UDT-17681 | Prior to this release, the counts produced within the `File I/O` option of the udtmon tool were being double-counted. | Performance, Support Tools |
| UDT-17683 | Prior to this release, the entire replication dynamic object table was searched sequentially. Since the replication object table is scanned on the first I/O to a replicated file to obtain information on the file, a sequential search could negatively impact performance when the dynamic object table was very large.<br><br>This issue has been resolved. The structure of the dynamic object table was modified to significantly improve the time to access information about the replicated file. | Replication |
| UDT-17694 | Starting with 8.2.1, if a replication subscriber was promoted to a failed-over publisher and the existing sessions had not been disconnected from the failed-over publisher prior to the fail-over, then the compilation of a UniBasic program would not have been replicated to the failed-over subscriber. | Recoverable File System, Replication |
| UDT-17715 | Previously, using `WRITEV` inside while inside a transaction did not complete if the record had been locked and deleted and `STATUS()` failed to report the error. This issue is has been resolved. | U2 Basic |
| UDT-17717 | Beginning with this release, the `PATCH` method has been added to the BASIC `CallHTTP` functionality. The `PATCH` method provides the ability to modify an existing HTTP resource as compared to the `PUT` method, which only allows a complete replacement of a document. | U2 Basic, Call HTTP |
| UDT-17718 | Windows only. Starting with this release, if a `udsrvd ODBC` process crashes with an access violation, a `minidump` result file is produced. | Error Reporting |
| UDT-17721 | Starting with UniData 8.1.0, when multiple indexes were created on a dynamic file, the process could core dump. This issue has been resolved. | Indexes |
| UDT-17722 | Starting with UniData 8.1.2, during an EDA conversion operation, a core dump could occur in the EDA Oracle driver when the Oracle API `OCIStmtExecute()` function was called. Users saw the RPC Call Error: The RPC failed, possibly the server process exited abnormally. The EDA Oracle driver has been fixed, resolving this issue. | External Database Access |
| UDT-17724 | AIX Only. Starting with UniData 8.2.0, the udtmon process may have core dumped when showing the second set of results. This issue has been resolved. | Support Tools |

| Key | Release Notes | Components |
|---|---|---|
| UDT-17725 | Starting with UniData 8.1, the performance of the UniBasic DIM array = " " statement on HPUX, AIX and Solaris showed a performance degradation from versions 7.2/7.3 of UniData. Although only measurable with repeated iterations (in the tens of thousands) of the command, with this modification, some of that performance degradation has been corrected. | Performance, U2 Basic |
| UDT-17728 | Windows Only. Starting with 8.2, the `Help>About` of `confprod` would report the wrong version. This issue has been resolved. | Licensing |
| UDT-17731 | Starting with this release, the environment variables *SSL_CERT_DIR* and *SSL_CERT_FILE* have been added to work with the Python SSL module to set the directory location and file name of CA certificates should they not be in the default locations. (For example `SSL_CERT_FILE=/etc/pki/tls/cert.pem SSL_CERT_DIR=/etc/pki/tls/certs`) | Python |
| UDT-17733 | Before this release, only the BASIC `FILEINFO` function provided a lot of information about an open file, but u2py did not provide a way to achieve this. Now, the `u2py.File.fileinfo` function can provide a lot of information about an open file. | Python |
| UDT-17734 | Beginning with this release, the `PORT.STATUS` command in UD shell and port.status system command support reporting level 1 python call stack for the `CALL.STACK` option. | Python |
| UDT-17735 | Beginning at this release, the `RUNPY` command in a UD shell supports command line passing of arguments. | Python |
| UDT-17738 | Previously, the current account directory was used as location to store temporary files when capturing the output in `u2py.Command.run` function. This has now been changed to the value of TMP in `udtconfig`. | Python |
| UDT-17741 | Previously, a Python upgrade issue may have occurred if the old Python home existed in the new destination path. This issue has been resolved.<br><br>Â<br><br>Â | Python |
| UDT-17745 | Starting with this release, the name and path attributes of a file have been added to the `u2py.File` object. | Python |
| UDT-17750 | Prior to this release, the options used with the `BASIC` command on a publisher where not carried through to the subscriber with U2 Replication. This issue has been resolved. | Replication, U2 Basic, Compile/ Catalog Tool |
| UDT-17762 | Prior to this release, after exiting a UniData session, the following error message could be produced:<br><br>`unfree buffer in sbr_merge.c at 675` | Files |

| Key | Release Notes | Components |
|---|---|---|
| UDT-17770 | Beginning with this release, UniData provides the ability to upgrade to a newer minor revision level of OpenSSL without the requirement of a new UniData version. An environment variable can be used to define the location of the new OpenSSL library or a file in `udthome` can define the location. The location defined by either method will become effective when UniData is started.<br><br>A `VERSION ALL` enhancement has been added to display the version of the OpenSSL library that is currently in use. The `-v` option has also been added to `showconf` to do the same.<br><br>This functionality is not available on AIX. On AIX the new OpenSSL libraries would replace the UniData supplied libraries in `udthome/bin`. | SSL |
| UDT-17776 | Audit. Prior to this release, if the `TRANS` or `OCONV(Tfile;a;n;n)` functionality was used to read information from a secondary file, the read of the secondary file was not tracked in Auditing. This issue has been resolved. | Audit Logging |
| UDT-17795 | Audit. Prior to this release, if a `BEFORE` or `AFTER UPDATE TRIGGER` were used and a subsequent `WRITE` of a record was performed in the UniBasic trigger subroutine, then no write action would be recorded in the audit log. This issue has been resolved. | Audit Logging |
| UDT-17800 | Replication. Starting with this release, the performance of the `LIST.REPLICATION.FILE` command has been improved when a large number of files are tracked in U2 Replication. | Replication |
| UDT-17801 | Audit. Prior to this release, the timeout for audit to successfully start was hard-coded as 60 seconds and if exceeded would lead to UniData failing to start. If other components such as replication or the RFS took longer than 60 seconds to start this would have also resulted in the Audit timeout being breached.<br><br>Starting with this release, a new *udtconfig* parameter called *AUDIT_STARTUP_TIMEOUT* is available to change the default 60 seconds to a different whole seconds value. If this situation occurs, the *AUDIT_STARTUP_TIMEOUT* value should be increased. The message in the UniData startup logs would be similar to:<br><br>`Fri Jan 10 09:11:31 2020; Error: SMM has not yet completed the startup process and the Audit setup could not start as it has reached the timeout (the default is 60 seconds), please increase the parameter AUDIT_STARTUP_TIMEOUT to allow for the longer startup time of SMM` | Audit Logging, Replication |
| UDT-17815 | Replication. Starting with this release, improvements have been made to decrease the amount of time it takes to load the replication object table on UniData startup. | Replication |
| UDT-17819 | Beginning in version 8.2.0, if any Z_ or Y_ prefixed temporary files remained in the `PH` directory and were inaccessible by the next process that attempted to reuse them, the process would coredump. This issue has been resolved and a warning message is now given. | Error Reporting, U2 Basic |

| Key | Release Notes | Components |
|-----|---------------|------------|
| UDT-17823 | Replication. Prior to this release, if an attempt to replicate the `TRANS_COMMIT_LOG` file was made, it would only be replicated if the primary file reference was under the control of the account level group in which the transaction was started. This issue has been fixed. | Replication |
| UDT-17824 | Audit. Prior to this release, if a `DAT.BASIC.WRITE` Event was logged and multi-level triggers were used and the writes were performed within those trigger subroutines, the auditing records associated with those writes were not logged. This issue has been fixed. | Audit Logging |
| UDT-17836 | Audit. Prior to this release, if audit consolidation was enabled and multi-level triggers were used, the processes performing audited actions would terminate abnormally. This issue has been fixed. | Audit Logging, Error Reporting |
| UDT-17849 | Starting with UniData 8.1.0, if the `BUILD.INDEX` command was used with a virtual dictionary using the `SUBR` function and the called subroutine attempted to repeatedly open the file that the index is being built on, the file would fail to open in the subroutine. This issue has been resolved. | Indexes, Recoverable File System |
| UDT-17854 | Previously, when the `repconfig` file was incorrectly configured with a combination of account names and account paths, the error message generated did not clearly identify why U2 Replication would not start. At the current release, the error messages now clearly identify the cause of the failure. | Replication |
| UDT-17855 | Beginning in this release, UniData EDA supports MySQL on Windows. | External Database Access |
| UDT-17856 | Beginning in this release, UniData EDA supports MySQL on Linux. | External Database Access |
| UDT-17857 | Beginning with this release, UniData EDA supports PostreSQL on Linux. | External Database Access |
| UDT-17858 | Beginning in this release, UniData EDA supports PostgreSQL on Windows platforms. | External Database Access |
| UDT-17912 | As a result of the changes made for UDT-17666 in version 8.2.1.9121, the Debugger `PL` command stopped working. This issue has been resolved. | UniBasic Debugger |
| UDT-17913 | Prior to this release, when a parent process spawned a child process (for example, via the `PHANTOM` command), the open file handles of the parent process were inherited by the child process. This then consumed the available file handles and could lead to the child process failing because there were no available file handles (even though the child process had not itself opened these files). This issue has been resolved. | ECL Tools, U2 Basic |
| UDT-17968 | Beginning with 11.2.5.4842, a Replication configuration consisting of FILE level groups only may have caused commands like `CREATE.FILE` and `DELETE.FILE` to terminate unexpectedly. Additionally, the same type of configuration may have caused `uvrepmanager` to terminate during UniVerse startup. Both issues have been resolved with the current release. | Replication |

| Key | Release Notes | Components |
|---|---|---|
| UDT-17971 | Linux only. Beginning with this release, the UniData install process will insert the line `/usr/lib64` at the beginning of the `/etc/ld.so.conf.d/UniData.conf` file. This will avoid problems resulting from OS level commands using libraries in udthome/bin. | SSL |
| UDT-17979 | Beginning with this release, the new `TCL REINIT.PYTHON` command has been added to control the re-initialization of the Python environment. The available options to the command are `ON/OFF/STATUS`. The default value is `ON`. The `STATUS` option shows the current setting. | Python |
| UDT-17980 | Beginning with this release, the `USE_PYTHON_DICT` example BASIC program has been added to the XDEMO account. | Python, U2 Basic |
| UDT-17981 | Previously, the XDEMO example program `FINDWAREHOUSE_PYFUNC` did not return any data. It now returns information indicating the program is deprecated due to the link it used no longer being available. However, the program and Python code are still available for review. | Python, XDEMO |
| UDT-17982 | Beginning with this release, for both publisher and subscribers, the `DATA VOC` file will always be loaded into the account-level group if one exists. This will override configuring a `FILE=DATA VOC` phrase in a file-level group. This change ensures that `VOC` file updates will be replicated in the correct group. | Replication |
| UDT-17995 | Previously, the command failed when trying to `RUN` a BASIC program from Python. This issue has been resolved. | Python |
| UDT-18032 | Prior to this release, if the `Too many constants` message was encountered when attempting to compile a large program, the program would not be compiled. This was because hard-coded limits were reached with UniData. As a result, on AIX, the `mchinfo` executable would core dump. This issue has been resolved. | U2 Basic |
| UDT-18033 | Starting in version 8.2.1, if a process timed-out due to the inactivity period defined by the `TIMEOUT` command, and if the `Press Any Key To Continue` message was encountered in the LOGOUT paragraph, the process would core dump. This issue has been resolved. | Error Reporting |
| UDT-18035 | Starting with 8.2.0, if a `SELECT` statement that was too long was used in an `EXECUTE` statement in UniBasic with a `RETURNING` clause would cause the program to terminate and abort. This issue has been resolved. | Query |
| UDT-18038 | Due to changes made for UDT-17776 in UniData 8.2.1.9123, the use of a `TRANS` or `OCONV(Tfile)` with Audit could result in a process core dumping. This issue has been resolved. | Audit Logging |
| UDT-18057 | Beginning with this release, the performance of u2py has been improved when reading and writing UniData files. | Python, Performance |
| UDT-18059 | Prior to this release, the permissions on the `TRANS_COMMIT_LOG` file could have changed when upgrading UniData which could result in the file being no longer accessible for some users. This issue has been resolved. | Installation, Replication |

| Key | Release Notes | Components |
|---|---|---|
| UDT-10865 | UniData provides an option to backup the current installation directory and registry entries during an upgrade, and creates a backup directory where the `UDRestore` executable is placed. Prior to this release the restore option failed. This issue has been resolved. | Installation |
| UDT-18069 | Prior to this release, the `DECRYPT.INDEX`, `DELETE.INDEX` and `DELETE.FILE` commands would not remove encrypted index information from the `KEYSTORE` if the index was related to a dynamic file. As a result, correcting the now orphaned `KEYSTORE` entries required performing a cumbersome process. This issue has been resolved. | Automatic Data Encryption |
| UDT-18093 | Starting with 8.2.0, if a `udcs` process used a UniBasic Subroutine to Â call Python the process would abort. This issue has been resolved. | Python |
| UDT-18102 | Starting with this release, changes were made to support the EDA Data Verification Tool that is part of the EDA Schema Manger. | External Database Access |
| UDT-18183 | Windows Only. Starting with 8.2.0, if a user was configured with an alternative `UDTHOME` in the UDTelnet Users space, then the alternative `UDTHOME` was not set correctly when using the Secure Telnet Server. This issue has been resolved. | Security, Telnet, U2 Basic |
| UDT-18194 | Prior to this release, using the `uv_repadmin reconfig` command could result in `invalid log sequence errors`. This could happen under the following specific conditions. The `reconfig` command was run on the publisher, the replication configuration included multiple subscribers, and one of the subscribers was in a suspended state at the time of the `reconfig` operation. This issue has been resolved with the current release. | Replication |
| UDT-18212 | Prior to this release, when using the UniBasic `CALCULATE` function, the session could result in a minidump/core dump. This could happen if a process selected a large number of records and then repeatedly ran the `CALCULATE` function. This issue has been resolved. | Error Reporting |
| UDT-18251 | UDT-16930 that was included in 8.2.1 build 9114 to correct a problem with 64bit pointers in `CALLC` inadvertently introduced a problem the char pointer variables being passed. This issue has been resolved. | Third-party Libraries |

# UniData 8.2.1

The following customer issues were fixed and enhancements were made in UniData 8.2.1.

**Build 9101**

July 2017

| Key | Release Notes | Components |
|---|---|---|
| UDT-8877 | The UniData replication log files have been updated to use a consistent date format throughout. The log files will now use the format `Fri Jun 09 15:27:12 2017`. This will improve consistency throughout the logs and improve their ability to be parsed by scripts. | Replication |
| UDT-11773 | Windows only. Beginning at 8.2.1, a command line tool is available for SSL configuration on GitHub. It can be downloaded from: https://github.com/RocketSoftware/Certificate-management-Tool | SSL, Support Tools |
| UDT-13087 | Windows only. Prior to this release, the UniData services had to run as a local system account. Starting at this release, you can run the UniData services as a Network Service account, Local Service account, domain, or local user account with administrator privileges in addition to the local system account. | Installation, Server Processes |
| UDT-13202 | The ability to update U2 Data Replication cross-group transactions asynchronously on the subscriber has been added at this release. | Performance, Replication |
| UDT-14961 | U2 Data Replication now supports field-level updates. This will improve the speed and efficiency of replication, as only updated fields need to be replicated to the subscriber instead of entire records. For more information about how to use field-level replication, see *U2 Data Replication User Guide*, *Administering UniData on Windows and UNIX Platforms*, and *UniBasic Commands Reference*. | Performance, Recoverable File System, Replication, U2 Basic |
| UDT-15086 | Prior to 8.2.1, if GUIDE reported a `file has no link` error and a fix was attempted with dumpgroup and fixgroup utilities, the problem was not fixed. Starting at this release, the file has no link message and is now classified as a warning. | Files - Corruption, Files - Dynamic, Files - Resizing |
| UDT-15102 | Prior to this release, the use of the BASIC `MQPUT()` and `MQGET()` functions could have leaked memory. This could cause UniData processes to grow in size when these functions were used repeatedly during the same UniData session. The functions `MQOPEN()` and `MQINQ()` were also impacted to some degree. All of these memory leak issues have been resolved. | MQSeries |
| UDT-15110 | Prior to this release, in the event that the `RESIZE CONCURRENT` command failed or was interrupted on a multi-level file, the RESTORE / CONTINUE options of the verb would fail. This issue has been resolved. | Files - Resizing |
| UDT-15487 | As part of the U2 Audit Logging enhancements made at this release, data events for client connections to the server (such as InterCall, UO.NET, etc.) are logged. These data events include DAT.CLIENT.DELETE, DAT.CLIENT.READ, and DAT.CLIENT.WRITE. | Audit Logging |
| UDT-15554 | Prior to this release, any new updates generated while U2 Data Replication deferred updates were being synced were also replicated to the subscriber. This caused problems where users required a hard cut-off time. Starting at this release, U2 Data Replication is synced to the point when the initial sync command is issued. Any new updates after the sync command will not be sent to subscriber during this time. This is true for both a manual sync by the user or scheduled sync defined by SYNCINTERVAL. | Replication |

| Key | Release Notes | Components |
|---|---|---|
| UDT-15556 | Prior to this release, the maximum size of the shared memory replication buffer for a single replication group was limited to 2GB. That limit has been removed starting at this release. | Server Processes |
| UDT-15651 | Windows only. Prior to this release, NFA users may have experienced an NFA server crash when the accumulated memory used by the NFA service (`udnfa.exe`) exceeded 4GB. This issue has been resolved. | Network File Access |
| UDT-15686 | Starting at this release, the Windows `udtdiag` script has been updated to version 4.2.0. | Support Tools |
| UDT-15926 | Beginning at UniData 8.1.2, when performing a failover operation from publisher to subscriber, U2 Data Replication may have failed to apply all pending updates to the subscriber. If updates had reached the subscriber (Sub Got) but had not yet been loaded into the replication buffer (Sub Available), these updates were lost during the failover operation. The number of updates that were not applied and were lost is the delta between the 'Sub Available' and 'Sub Got' LSN counts and this applied to each replication group. This situation may have occurred in situations where the subscriber system was overloaded and not keeping up with the publisher. Using the new Delayed Standby replication feature could have exacerbated this situation and made it more likely to occur.<br><br>**Note:** Note: The LSN counts are viewable in the XAdmin Replication Status screen or via the reptool command-line tool. This issue has been resolved. | Replication |
| UDT-15929 | Previously, if the EDA Schema Manager could not connect to an external database when running a conversion, it returned an error message similar to the following:<br><br>`Map Schema XXX failed on lex check.`<br><br>The new message that displays is:<br><br>`EDA SQL Server Driver: [Microsoft]`<br>`[SQL Server Native Client 11.0][SQL`<br>`Server]Login failed for user 'sa'. Map Schema`<br>`_CURRENT_MAP_SCHEMA_ failed on lex check.` | External Database Access |
| UDT-15945 | At UniData 8.2.0, a warning message was added to the product when NFILES was dynamically changed if it was below the allowed image. This message should have appeared only in smm logging; however, it was also being displayed to the screen multiple times. At this release, the message has been changed and will only be displayed once in the logs. The new message displays similar to the following:<br><br>`Warning: NFILES defined in udtconfig is`<br>`larger than the system allowed number of`<br>`concurrent open files. It was internally`<br>`changed to 249. You should either raise the`<br>`system limit or reduce NFILES. After the`<br>`change you must restart UniData.` | Server Processes |
| UDT-16000 | An issue was discovered in which the `RELEASE` command did not release the file lock when using NFA. This has been corrected. | Network File Access |

| Key | Release Notes | Components |
|---|---|---|
| UDT-16019 | Windows only. Previously, in trial versions of UniData, a not authorized message displayed when a value was modified in confprod, but the message was not logged in the `smm.errlog` file. This has been corrected so that the message is added to the `smm.log` and `smm.errlog` files. | Licensing |
| UDT-16025 | Previously, when EDA tried to convert data files located outside of the current data account, the following error occurred:<br><br>`In /disk1/srcman/alpha/ud82_170123_105023/`<br>`sys/CTLG/e/EDAMAPSUB at line 1017 'dfiles/`<br>`MS.MEMBER' does not exist in VOC file. Open`<br>`source file failed.`<br><br>Beginning at 8.2.1, this issue is fixed and EDA supports multi-level file conversion. | External Database Access |
| UDT-16085 | At this release, the `udtdiag` script for UNIX and Linux platforms has been updated to version 5.1.3. | Support Tools |
| UDT-16090 | Prior to this release, problems were encountered when the Base64-encoded feature was used to save a `.jpg` file to a UniData dynamic file included in U2 Data Replication with Data Compression enabled. This issue is resolved at this release. It is recommend that you do not enable Data Compression for `.jpg` files when using U2 Data Replication, as you will not see any performance benefits. | Replication, UNIRPCD |
| UDT-16140 | Previously, when EDA converted a TRANS field, if there was no reference then the server-side process core dumped. This issue has been corrected. | External Database Access |
| UDT-16159 | Previously, when EDA converted a TRANS field to SQL Server, it failed to create a view and an error message was displayed. This has been corrected. | External Database Access |
| UDT-16167 | Prior to this release, the performance monitor option of reptool failed to clear its previous results when starting a subsequent monitor period. This issue has been fixed. | Replication |
| UDT-16172 | Windows only. Prior to this release, U2 Data Replication could fail to start or failover when there were more than 111 groups being replicated. This issue has been fixed. | Replication |
| UDT-16185 | Previously, if the `confcmd -m` command was used to set the master key or master key passwords with the content of a file, but the file name was not prefixed with the at symbol (@), the utility would use the text of the file path as the key or password instead of the contents of the file. Starting at this release, the confcmd utility now performs a check to see if the supplied key or password is actually a file on the system. If it is, a warning is displayed and the user is offered the option to abort the operation. | Automatic Data Encryption |
| UDT-16188 | A new udtconfig tunable named *MAX_REP_GROUPS* has been added to specify the maximum number of replication groups that are allowed at startup. This ensures that the system can meet the UniData semaphore needs for large numbers of replication groups when both RFS and replication are enabled. The default value is `512`. | Recoverable File System, Replication |

| Key | Release Notes | Components |
|-----|---------------|------------|
| UDT-16189 | Previously, if replication was enabled but had not started when a user logged in, the user could change records before replication started, leading to lost updates on the subscriber. To prevent this, a new option has been added so that a user cannot log in until the Replication Manager is fully started if replication is enabled. | Replication |
| UDT-16207 | UNIX and Linux only. `udtsetup` has been updated to version 1.2.4. | Installation |
| UDT-16216 | An issue was discovered in which RFS recovery would hang for a very long time during startud after a crash and recovery. This issue was due to a faulty Before Image log record and has been resolved. | Recoverable File System |
| UDT-16217 | Beginning at 8.2.1, the minimum SSL protocol was set to TLSv1 and SSLv3 was turned off by default. However, the ability to enable this protocol was not working. That issue has been resolved. SSLv3 can now be added to the `udtconfig` *SSL_PROTOCLS* parameter or the Windows *SSL_PROTOCOL* registry key. It can also be enabled via the `inetd.conf/xinetd.conf` capabilities on UNIX or Linux. | Security, SSL, Telnet |
| UDT-16241 | Previously, during the `failover -back -verbose` on the original publisher, if there were a large number of logs, `ud_repadmin failover -back -verbose` sometimes finished before all the updates were applied. This has been fixed so that it now handles `failover -back -verbose` timeout. | Replication |
| UDT-16260 | Windows 10 Creator Edition and subsequent Windows 10 releases only. Prior to this release, Telnet clients would not be able to run DOS commands through PCPERFORM or the '!' (bang) prefix at ECL. This issue is now resolved. | ECL Tools, Telnet |
| UDT-16276 | Windows only. Prior to this release, when using the UniBasic `CALCULATE` function, the session could result in a core dump. This could happen if a process selected a large number of records and then ran the `CALCULATE` function. This issue has been fixed. | Error Reporting - Crash |
| UDT-16283 | Windows only. On previous releases, when starting a UniData session from a Console session via the command prompt, if a PHANTOM process was launched, the PHANTOM process would also be terminated when the UniData session was terminated, even if the PHANTOM process had not completed. This issue has been resolved. | Server Processes |
| UDT-16290 | Starting at this release on UNIX/Linux, an example replication exception action script named `except_script_example` is included in the UniData `bin` directory. | Installation, Replication |
| UDT-16291 | Starting at UniData 8.1.0, users were unable to set a breakpoint against a globally cataloged program in the UniData Debugger. This issue has been resolved. | UniBasic Debugger |
| UDT-16295 | Prior to this release, RFS could crash and users would see a message similar to the following:<br><br>`U_snd_msg: msglen[6266] exceeds limit`<br><br>This was due to a problem with large index keys exceeding 2K. This issue has been resolved. | Recoverable File System |

| Key | Release Notes | Components |
|-----|---------------|------------|
| UDT-16296 | Prior to this release, a BASIC program that contained a `SETINDEX` statement could cause RFS to crash because of a problem with large index keys (above 2K). This issue has been resolved. | Recoverable File System |
| UDT-16311 | Previously, if an administrator specified a non-existent directory when trying to start up a UniData database with U2 Data Replication enabled, an error message displayed indicating that the Replication Manager could not be started and to check the `rm.errlog` file. This error message has been updated to include additional information to make it more useful to the user. | Error Reporting, Replication |
| UDT-16314 | Prior to this release, if udtelnetd was unable to set a write lock on the `utmp` file, which is a special non-text data file in the `/var/run/utmp` directory on Linux systems that records all logins and logouts from the system, the udtelnetd process might have hung while holding a read lock on `utmp`. This behavior would cause all subsequent login attempts to hang until the udtelnetd process was removed. This issue has been resolved. For more information about the `utmp` file, refer to the `utmp man` page in Linux. | Telnet |
| UDT-16316 | Linux only. Beginning at 8.1.0, the `OCONV` Z function zero suppress option did not work for the MR and ML codes. This issue has been resolved. | U2 Basic |
| UDT-16317 | Windows only. Beginning in 8.1.2, the silent installation option did not work due to missing paths. This has been corrected and the silent installation now works as expected. | Installation |
| UDT-16319 | An issue was reported in which some records were not converted correctly during EDA conversion from UniData files to SQL Server, with only a single record converted instead of all records. This was due to a limit on the number of associations in the map file. This limit has been removed. However, users should be aware that if they convert more than 10 tables and do not set the whole record flag, they should not run the `LIST` or `SELECT` commands in UniData. This is because all of the associations are multivalued tables that must be joined to run the commands. These commands will take a very long time to run and may cause the session to become unresponsive. | External Database Access |
| UDT-16330 | Previously, a core dump would sometimes occur in a session when executing multiple `LIST DICT` commands in a row due to memory corruption. This has been fixed. | Error Reporting - Crash |
| UDT-16350 | Starting at 8.1.0, if an AFTER event trigger was used within a transaction, the session would report an error or abort. This problem has been fixed. | Triggers |
| UDT-16379 | Previously, if a user attempted to load a globally cataloged program with a Windows-restricted file name and that program did not exist, the sbcs process would become unresponsive. This issue has been fixed. | U2 Basic |

# UniData 8.2.0

The following customer issues were fixed and enhancements were made in UniData 8.2.0.

## Important news at this release

▪ UniData 8.2.0 was a controlled release and only available on the Linux platform.

▪ Starting at this release, the makeudt tool has been deprecated. For more information, see the release notes for [UDT-15885](#) and [UDT-15796](#).

**Build 9004**

February 2017

| Key | Release Notes | Components |
|---|---|---|
| UDT-804 | Beginning at this release, when a UniBasic program is compiled using the -D option, a new INCLUDE file stack is also produced. This will be utilized during the program's execution to report the included program name and line location in the following format:<br><br>`In BP_MAIN.PROG at line 2, BP\INCLUDE1`<br>`at line 4, BP\INCLUDE2 at line 1`<br>`WARNING: UNINITIALIZED VARIABLE USED!`<br>`Zero Assumed!` | U2 Basic - Compile/ Catalog Tool |
| UDT-843 | Prior to this release, problems were encountered when using the object updates report option of the U2 Data Replication `reptool` command on the subscriber. An RPC disconnect would happen for the relevant replication group. This issue has been fixed at the current release. | Replication |
| UDT-896 | Starting at this release, if a program is compiled with the -D option and the V option is used in the debugger, the debugger will step through any included code items. | UniBasic Debugger |
| UDT-3413 | Prior to this release, the `memresize` command would fail when the disk partition was greater than 1 terabyte. This issue has been resolved. | Files - Resizing |
| UDT-3971 | Beginning at this release, new ECL commands have been added to enhance the existing TANDEM functionality. These commands are `ENABLE.TANDEM`, `DISABLE.TANDEM`, and `GET.TANDEM.STATUS`. In addition to the new commands, a new `udtconfig` tuneable has been added (`TANDEM_FLAG`) to control the default behavior of these commands. For more details on these commands and the tuneable, see the *UniData Commands Reference* manual and the *Administering UniData on UNIX and Windows Platforms* manual. | Automatic Data Encryption |
| UDT-4080 | Starting at UniData 8.2.0, U2 Audit Logging functionality has been added. U2 Audit Logging is a component of UniData security. UniData databases are composed of data objects and system programs, which are resources to the U2 Audit Logging subsystem. When UniData accesses a resource, it triggers an audit event and an audit log record may be generated, depending on the audit configuration. For more information about audit logging capabilities, see the U2 Audit Logging chapter in the *UniData Security Features* manual. | Audit Logging |
| UDT-4168 | Prior to this release, running a UniQuery `SELECT` command using the SAMPLE option while using an active select list may have resulted in the prior list remaining active after the execution of the command. This issue has been resolved. | Query |

| Key | Release Notes | Components |
|-----|---------------|------------|
| UDT-8138 | Beginning at 8.2.0, file triggers can be maintained by users if they are members of the group(s) defined by the TRIGGER_ADMIN configurable. Previously, only the file owner or those with administration privileges could maintain the triggers. For more information, see the *Administering UniData on Windows and UNIX Platforms* guide. | Security, Triggers |
| UDT-8519 | Prior to this release, building an index with line feed characters in the data caused `BUILD.INDEX` to fail with an error; however, no error message displayed. Starting at this release, an error message similar to the following is displayed if the index build fails because of line feed characters in the data:<br><br>```<br>> BUILD.INDEX CD_VENDOR_MASTER TAX_ID<br>One "*" represents 1000 records<br>Invalid character CHAR(10) (line delimiter<br>for udtsort) found in indexed key:<br>@ID = (1*19066)<br>Indexed field name = (TAX_ID)<br>Indexed key value =(<br>VTJTYWx0ZWSjWoiItCxO3WvZ7PyJ438YSEDDFoVadfg=<br>)<br>Errors encountered in index building process.<br>Index build abandoned.<br>``` | Error Reporting, Indexes |
| UDT-9227 | Prior to this release, users may have experienced `VCATALOG` failures if used repeatedly. This issue is resolved. | U2 Basic - Compile/ Catalog Tool |
| UDT-9327 | Prior to this release, U2 Data Replication for UniData evaluated every file pointer in the VOC file of an account even if the group was defined as a FILE level replication. This could cause a time-out and increase overhead. Starting with this release, FILE level replication groups have been limited to look only at specific files that have been referenced. | Replication |
| UDT-9599 | Prior to this release, when an invalid target was supplied to the `ud_repadmin` tool, the tool would report inconsistent error messages. Beginning at this release, if an invalid target is specified, `ud_repadmin` will report the error as follows:<br><br>▪ If an invalid target (for example, `nosuchtarget`) is specified, the following error message is reported:<br><br>```<br>Unable to access "nosuchtarget":<br>No such replication.<br>```<br><br>▪ If an invalid target (for example, `nosuchtarget`) is specified along with other valid targets, the error message still reports but since other valid targets do exist, it proceeds to execute the corresponding commands and reports "Command succeeded!" if the command works, as shown:<br><br>```<br># ud_repadmin suspend -verbose<br>nosuchtarget primary<br>Unable to access "nosuchtarget":<br>No such replication.<br>Command succeeded!<br>```<br><br>This issue is fixed. | Replication |

| Key | Release Notes | Components |
|-----|---------------|------------|
| UDT-9770 | Starting at this release, an enhancement has been made to External Database Access to improve the speed of inserting data to the Oracle data store. The SQL statements have been modified to check for the existence of a record before issuing a delete statement. | External Database Access |
| UDT-9964 | Windows only. Prior to this release, messaging in the `udtsort.errlog` file used only UNIX newlines. This made it difficult to view in Notepad. Starting at this release, Windows carriage returns and new lines are used so that the file displays properly in Notepad. | Error Reporting |
| UDT-10218 | Prior to this release, the `STATUS()` function in BASIC would erroneously return `0` even if the `SELECTINDEX` was unsuccessful. Now, the `STATUS()` function will correctly return a value of `1` if the key is not found or no values are returned. | Indexes, U2 Basic |
| UDT-10666 | Prior to this release, when Automatic Data Encryption (ADE) commands failed while using a UO.NET or UniObjects for Java connection, no error message would be displayed or returned. This issue is resolved. | Automatic Data Encryption, Server Processes |
| UDT-10668 | Windows only. Prior to this release, the `ENCRYPT.FILE` and `DECRYPT.FILE` commands would fail when using a UO or UO.NET connection. This issue has been resolved. | Automatic Data Encryption, Server Processes |
| UDT-12439 | Prior to this release, the CAPTURING or RETURNING clause of the `EXECUTE` or `PCPERFORM` command would generate a `Y_###...` or `Z_###...` file in the `_PH_` directory even if no results were returned. On various file systems, especially on AIX JFS2 partitions, this could lead to bottlenecks due to the limit of simultaneous file creations allowed within the file system. Starting at UniData 8.2.0, these files are now only created if the CAPTURING or RETURNING clause returns more than 1,024 bytes or an OS-level command is called. | Performance |
| UDT-12911 | Prior to this release, when running the `FILE.STAT` command against a dynamic file, the results failed to show the actual file size. This issue has been resolved. | Files - Resizing |
| UDT-13082 | Starting at this release, a new replication type of Delayed Standby has been introduced. This provides the capability to define a standby U2 Data Replication subscriber to always be a defined period of time behind the publisher. For more details, see the *U2 Data Replication User Guide*. | Replication |
| UDT-13357 | Prior to this release, if the size of the replication object table exceeded the data size of the kernel, the `repmanager` would fail to start and users would see a message relating to not enough space. This message has now been expanded to suggest which parameter needs changing and will be similar to the following:<br><br>`getopt: Not enough space`<br>`Please check system ulimit settings,`<br>`current data size is 1000 kbytes.` | Replication |
| UDT-13398 | Starting at this release, the grammar used in the `CONVERT.SQL` command has been changed for zero count messages. For example: `0 files have been converted.` | Error Reporting |

| Key | Release Notes | Components |
|-----|---------------|------------|
| UDT-13408 | Starting at this release, the field delimiter used by `udtsort` is configurable via the SORT_FLD_DELIMITER configurable in the `udtconfig` file. Its default value is 127, which was the hard-coded value prior to this release. The allowed values are 0 to 255. | Indexes |
| UDT-13595 | Prior to this release, the UniBasic `ENCODE()` function, when used to decode Base64-encoded data according to RFC 4648, would return a result of 0 indicating success; however, the output was actually null. This issue is now fixed. | U2 Basic |
| UDT-13656 | While `RESIZE` is not a replicated command within U2 Data Replication, it can be used with some limitations (see the *U2 Data Replication User Guide*). Beginning at this release, a check has been added to the `RESIZE` and `MEMRESIZE` commands to see if a file is actively being replicated by checking the replication status for the file. If the file is being replicated, users will see a message similar to the following:<br><br>`Replication is running,`<br>`can not RESIZE 'REPTESTML10,L5' file,`<br>`please suspend replication first`<br>`or use CONCURRENT option`<br><br>This issue has been resolved. | Files - Resizing, Replication |
| UDT-13671 | Prior to this release, the EDA data source connection test would return a success message if the _PH_ folder VOC entry was not present, even if the connection actually failed. This issue has been fixed. | External Database Access |

| Key | Release Notes | Components |
|-----|---------------|------------|
| UDT-13674 | Due to an internal coding error within the RFS (Recoverable File System) and HASH-TYPE 1 file access, a very large file that was originally created as a non-recoverable file with existing records will hash differently when converted to a recoverable file. This will result in the inability to access some items in the file. A guide utility run against this file will show errors such as:<br><br>```Group 2097152, block 5,`<br>`record number 0 = "PH01YZx><<RiRN0026876"`<br>`is in wrong group,`<br>`key length 21, hash value 0```<br><br>This will only occur if the modulo of the file exceeds 2^24 (~ 16M). These errors can be corrected by converting the file back to a non-recoverable file before any updates are applied, or by resizing the file while it is recoverable. These actions will reorganize the items in the conforming groups.<br><br>If the file was originally created as a recoverable file or records were only loaded into the group after the conversion to recoverable, then the problem will not be evident. If the file is converted to non-recoverable, errors similar to the example described above will occur.<br><br>A utility (`scanfor_RFS_hash_prob`) has been created to detect this situation before doing an upgrade so that preparations can be made to fix the file after the upgrade. We have also introduced an optional `UD73_RFS_HASH_COMPAT` tuneable to return the hashing results back to prior to the fix. For more details on this issue, refer to Rocket U2 Support for more details. | Recoverable File System |
| UDT-13703 | Windows only. Prior to this release, when UniData was uninstalled, it failed to remove the UDTBIN value from the Windows *PATH* variable. This issue has been resolved. | Installation |
| UDT-13810 | Windows only. Prior to this release, `memresize` failed to correctly evaluate drive letters or paths if passed via an argument such as TMPPATH. This issue has been resolved. | Files - Resizing |
| UDT-13992 | Prior to this release, the error messages for the `MQGETERROR()` function were hard-coded. Starting at this release, the `MQI_ErrMsg` text file has been added and is now used by the function. | MQSeries |
| UDT-14073 | Prior to this release, the `stopud` command did not ensure that all its shared object libraries were released. This issue has been resolved. | Build |
| UDT-14094 | Windows only. Starting at the UniData 8.1.1 release, the Windows `udtdiag` script has been updated to version 3.03. | Support Tools |
| UDT-14141 | Prior to this release, mapping date fields in EDA could return an invalid data type error. To resolve this issue, support has been added for the `DATE`, `TIME`, and `DATETIME` data types. | External Database Access |
| UDT-14174 | Prior to this release, if the MaximumAge password policy was set to 0 (for example, if it was set to never expire), UniData incorrectly displayed a warning message that the password was about to expire. This issue has been resolved. | Automatic Data Encryption |

| Key | Release Notes | Components |
|-----|---------------|------------|
| UDT-14203 | Beginning at 8.1.0, the port number generated in the address of the `dbgterm` utility may have been miscalculated. This would then lead to the value not being recognized as a valid port number in a subsequent ECL `DEBUGLINE.ATT` command. This issue has been resolved. | Debug Tools |
| UDT-14229 | Starting at this release, you can retrieve the hostname using the UniBasic `SYSTEM` function with the 9013 option: `SYSTEM (9013)`. | U2 Basic |
| UDT-14235 | Prior to this release, the schema used when converting files in EDA was case insensitive in relation to record keys. This would result in records being overwritten if only the case of the keys differed. For example, `CNCLCD*m` would be overwritten by `CNCLCD*M`. This issue has been resolved. | External Database Access |
| UDT-14355 | The Federal Information Processing Standard (FIPS) Publication 140-2 is a United States Federal Government computer security standard used to accredit cryptographic modules. FIPS 140-2 support is essential for a software product to be eligible for procurement by U.S. Federal Government agencies, as well as other government and non-government entities. With FIPS 140-2 support, you can:<br><br>▪ Configure UniData 8.2.0 to run in FIPS mode by modifying the `udtconfig` file, utilizing TCL commands, or the Windows Registry.<br><br>▪ Convert certain persistent data, such as SCRs and SPLs, to be able to run under the FIPS mode.<br><br>For more information about FIPS 140-2 support, see the chapter about FIPS 140-2 support in the *Security Features Guide*. | SSL |
| UDT-14379 | Starting at this release, a new demonstration account called XDEMO has been added to the product and can be found under the UniData home directory. | Installation, Python |
| UDT-14471 | Beginning at this release, if either the `udapi_server` or `udapi_slave` process encounters a hang condition because they are unable to write to their associated pipe channels, an error message will be sent to the Windows event log and the processes will exit. | UNIRPCD |
| UDT-14480 | Prior to this release, XAdmin users were unable to add pattern match exclusions into the `repconfig` definition file. This issue has been resolved. | XTOOLSUB |
| UDT-14542 | The licensing parameters available via the `confcmd` command are now included in the help information for the tool. They can be seen with the `confcmd -h` command. This tool was first available in UniData 7.2.0. | Installation |
| UDT-14669 | Prior to this release, if the final line in a U2 Basic program was a comment line (for example, if the line started with an asterisk (*), exclamation point (!), or REM statement) and the line did not terminate with a CHAR(10), the program would not be compiled. This issue has been resolved. | U2 Basic |
| UDT-14681 | Beginning at 8.1.0, when creating an SCR via a subroutine call from a master program, the new security protocol options would fail the second time the subroutine was called from the master program. This issue has been resolved. | SSL, U2 Basic |

| Key | Release Notes | Components |
|---|---|---|
| UDT-14708 | Prior to this release, some U2 Data Replication users experienced a replication performance problem that resulted in U2 Data Replication being unable to catch up to U2 database updates during peak loads. This could have also resulted in U2 Data Replication becoming disabled or even failing. Replication pacing has been implemented to alleviate this problem. See the *U2 Data Replication User Guide* for further information on this feature. | Performance, Replication |
| UDT-14924 | Prior to this release, the *@LEVEL* variable was incorrectly decremented when UDT.OPTIONS 41 was set to ON. This issue has been resolved. | U2 Basic |
| UDT-14954 | Windows only. Prior to this release, an internal coding error may have prevented the use of the Telnet and Secure Telnet services or for both ports to be disabled. This issue has been resolved. | Installation, Telnet |
| UDT-14994 | Prior to this release, an error would have been produced when writing to decrypted fields using the `WRITEV` command. This issue has been resolved. | Automatic Data Encryption |
| UDT-14998 | Windows only. Prior to this release, an internal failure to release file handles may have resulted in a failure to clean up replication logs completely. This issue has been resolved. | Replication |
| UDT-15001 | The root certificate store included with this release was updated as of March 7, 2016. | Build, SSL |
| UDT-15027 | As part of the U2 Data Replication enhancements added at this release, the replication manager daemon has been updated to verify that there is only one group name defined in the `repconfig` file GROUP phrase. If two or more groups are defined with the same name during startup, the replication manager and UniData fail to start. If attempted during a reconfiguration, `ud_repadmin reconfig -verbose` displays an error and U2 Data Replication uses the previous configuration. In both cases, an error is logged to the `rm.log` and `rm.errlog` files. | Replication |
| UDT-15032 | Starting at this release, changes were made to the server-side programs supporting the Extensible Administration Tool (XAdmin) for the new replication pacing function using XAdmin version 4.3.0 or later. | Replication |
| UDT-15061 | Beginning at 8.2.0, the type property has been added to the UDOSetProperty() function, which allows users to set the data type for the function. To use this property, enter 3 to set the type as a number, or enter 4 to set the type as a string. Note that this parameter is only valid if the value parameter is a string constant; otherwise, the type parameter is ignored. | U2 Basic - U2 Dynamic Objects |
| UDT-15067 | At UniData 8.1.0, the NUSERS default was increased to 256; however, the related N_GLM_GLOBAL_BUCKET parameter was not increased. Starting at this release, the default value for the N_GLM_GLOBAL_BUCKET parameter has been increased to 769. | Installation |
| UDT-15089 | Starting at UniData 8.2.0, the SSL libraries have been updated to use OpenSSL release 1.0.2h. | SSL |
| UDT-15103 | After upgrading to 8.1.1, tables that were previously normalized with views and working from ODBC would return errors due to a linking problem. This issue has been fixed. | Schema API |

| Key | Release Notes | Components |
|---|---|---|
| UDT-15105 | Starting at 8.1.0, an internal error caused the UniBasic extensions components that utilize an SSL connection to fail if the connection was being made through a proxy server. This problem has been fixed. | SSL, U2 Basic - CallHTTP |
| UDT-15112 | Prior to this release, if a process opened more files than the number defined by the NFILES configurable in `udtconfig` and files were then subsequently rotated out of the rotating file pool, there was the potential for header information to be written to the wrong UniData file. This issue has been resolved. | Files - Corruption, Files - Dynamic |
| UDT-15113 | Prior to this release, if a `RESIZE CONCURRENT` command was being run a on a multi-level file and another session attempted to update the file, incorrect file corruption messages would appear in that session and could result in the session aborting. This issue has been resolved. | Files - Corruption, Files - Dynamic, Files - Resizing |
| UDT-15115 | Prior to this release, the `RESIZE` command would not work on a subscribed multi-level file. This issue has been resolved. | Files - Resizing, Replication |
| UDT-15125 | Prior to this release, users running a PHANTOM process with RFS enabled could experience an "unfree buffer" error message repeated multiple times in the _PH_ output record. This could result in very large _PH_ records and could also result in using all the space in a file system. This issue has been resolved. | Recoverable File System, Shared Memory |
| UDT-15126 | Starting at this release, an enhancement was made to UniBasic to control the mark character where the REMOVE statement and function will stop. This is done by the use of the @REMOVE.ATTRIBUTE @variable. For more details, refer to the *UniBasic Commands Reference* manual. | U2 Basic |
| UDT-15132 | Starting at this release, the `EDA.CONVERT` command has been enhanced to check whether U2 Data Replication is active. If U2 Data Replication is active, the `EDA.CONVERT` command will terminate and a message will be displayed to the user indicating U2 Data Replication should be suspended before performing the operation, and that a sync operation should be performed after the `EDA.CONVERT` command completes. | External Database Access, Replication |
| UDT-15148 | UNIX only. Starting at UniData 8.1.0, if the `createSecurityContext()` BASIC function was used from a globally cataloged program on UNIX, a memory or segmentation fault occurred resulting in the process aborting. This issue has been resolved. | U2 Basic - CallHTTP |
| UDT-15150 | Starting at this release, -add and -remove options were added to the `credman` tool to allow users to add or remove entries from the members list for a given token. | SSL |
| UDT-15168 | At 8.1.1, in the EDA Schema Manager, an error related to password length could occur when changing the password of an EDA data source. This issue has been resolved. | Automatic Data Encryption, External Database Access |
| UDT-15169 | Starting at this release, the EDA SQL Server driver support has been extended to SQL Server 2005 and greater, although when setting up an EDA ODBC DSN with the SQL Server client only the SQL Server Native Client x.x driver is supported, not the default SQL Server driver. | External Database Access |

| Key | Release Notes | Components |
|---|---|---|
| UDT-15173 | Starting at this release, a new configurable has been introduced into U2 Data Replication called `RW_QUEUESZ`. This is used with the new intelligent write queue mechanism to reduce or eliminate the locking conflict previously experienced when updating the same record repeatedly on the subscriber. For more details, see the *U2 Data Replication User Guide*. | Performance, Replication |
| UDT-15181 | Starting at this release, an account-based licensing error message has been updated. When the seat count is missing for an account, the ID of the account is listed. The message that displays is similar to the following:<br><br>```Error (line 2): Connection Pooling seat count is missing for account "AR"``` | Licensing |
| UDT-15186 | UNIX only. Prior to this release, if the UniRPC daemon failed to start, a generic message was displayed. Starting at this release, warnings are displayed for the following events:<br><br>▪ The `/etc/services` file does not contain the `uvrpc` entry<br><br>▪ The Unishared path is invalid or empty (including paths that contain spaces at the end of the directory path)<br><br>▪ The `unirpcservices` file is empty | UNIRPCD |
| UDT-15190 | Prior to this release, a problem was discovered where a replication writer process did not attach itself to the locking queue correctly if it was unable to gain the lock immediately. This could result in severe performance issues because the replication writer process would immediately retry to get the lock and block other replication writer processes. This problem has now been resolved. | Locking, Performance, Replication |

| Key | Release Notes | Components |
|-----|---------------|------------|
| UDT-15195 | UNIX only. Starting at this release, in order to avoid dynamic library errors when running UniData default shell scripts, the UniData bin location has been added to the *LD_LIBRARY_PATH* variable. On AIX, the *LIBPATH* variable is now set, and on HP the *SHLIB_PATH* variable is set. These modified environment variables are only active during the running of the scripts noted. After the scripts exit, the pre-existing values for these variables will return.<br><br>The scripts changed were:<br><br>• `startud`<br>• `stopud`<br>• `startunirpcd`<br>• `stopunirpcd`<br>• `showud`<br>• `udtinstall/updatesys`<br>• `udtdiag` (v5.00)<br>• `udtinfo`<br>• `udipcrm`<br>• `updatercs.sh`<br><br>In the `stopud`, `startud`, `stopunirpcd`, and `startunirpcd` scripts, the UniData bin path is added to the end of the pre-existing variable values. Otherwise, for the remaining scripts noted, the UniData bin path value is added to the start of the variables. | Installation |
| UDT-15206 | Prior to this release, the error message `warning: get_rest_blks, grp_hd_buff is null` may have been reported in the `sm.log` file and caused RFS to crash when certain ODBC queries were run from MS Access or SQL Server. This issue has been resolved. | Recoverable File System |
| UDT-15208 | Prior to this release, problems existed when using the XDOM functionality to create an XML document with a default namespace. When a new node was added with a default namespace, the namespace was incorrectly added as `xmlns=""`. This issue has been resolved. | U2 Basic - XDOM API |
| UDT-15212 | Starting at 8.1.0, if an attempt was made to use the `UDOWrite` function to produce XML, it would cause the program to abort and produce a core file or segmentation violation. This issue has been resolved. | U2 Basic - U2 Dynamic Objects |
| UDT-15215 | Prior to this release, it was found that `udapi_server` processes may have indefinitely waited for `udapi_slave` resources to be released. This resulted in high CPU usage during the exiting process. Internal code changes have been made to avoid this situation. | UNIRPCD |

| Key | Release Notes | Components |
|---|---|---|
| UDT-15218 | UniData has upgraded its XML libraries to ICU 4.9.1.2, Xerces 3.1.1, and Xqilla 2.3.0. In addition, the `XDOMLocate` function has been enhanced, and the `XDOMLength`, `XDOMItem`, `XDOMGetElementByID`, `XDOMGetElementsByName`, `XDOMGetElementByTag`, `XDOMGetChildNodes`, and `XDOMQuery` functions have been added. For more information, see the *UniBasic Commands Reference*. | U2 Basic - XDOM API |
| UDT-15230 | Windows only. Starting at this release, the PDB files for UniData are installed to the symbols directory created under the UniData `bin` directory. | Installation |
| UDT-15231 | Prior to this release, a problem handling special characters caused the UniBasic `UDOWrite` function to produce incorrect results. This issue has been resolved by adding the ability to properly handle special characters such as the greater than sign (>), less than sign (<), quotation marks ("), single quotation marks ('), and ampersands (&). | U2 Basic - U2 Dynamic Objects |
| UDT-15240 | Prior to this release, the `updatevoc` utility only added records relating to new commands or enhanced features. Base verbs like LIST, SORT, SELECT, etc. were not added if they were missing. Starting at this release, all default verbs will be added by the utility if the commands are missing. | ECL Tools, XDEMO |
| UDT-15281 | Prior to this release, UniData files could become corrupted where MQ messages were incorrectly written into the UniData file. This could happen if the MQ connection was closed unexpectedly and the application continued to attempt to write messages to the connection. Under these conditions, the messages could be written mistakenly written to a UniData file. This issue has been resolved. | MQSeries |
| UDT-15290 | Windows only. Prior to this release, if the `ITYPE` function was used in UniBasic and the dictionary being evaluated contained an `N` reference to another dictionary, this would result in the `ITYPE` function failing with a virtual attribute error. This issue has been resolved. | Query, U2 Basic |
| UDT-15294 | Starting at this release, the data buffer for EDA has been increased from 1K to 8K. This enhancement reduces the need for multiple `SQLGetData` function calls and increases overall EDA system performance. | External Database Access |
| UDT-15302 | Windows only. Starting at this release, U2 logging has been extended to allow specific and separate logging of the Kerberos S4U component. | Error Reporting |
| UDT-15323 | Beginning at this release, a new `HMAC` function has been added to UniBasic to allow compliance with the RFC 2104 standards. For more information, refer to the *UniBasic Commands Reference* manual. | U2 Basic |
| UDT-15324 | Prior to this release, the `OSBREAD` command may have failed to locate the EOF (End of File) condition if an attempt was made to read from a position that exceeded the file size limit. This issue has been resolved. | U2 Basic |

| Key | Release Notes | Components |
|-----|---------------|------------|
| UDT-15331 | When I-Type values were being referenced in UniQuery commands, a core dump may have happened causing heap and shared memory corruption. In turn, this could have caused other unrelated processes on the system to crash. This issue has been fixed. | Error Reporting - Crash |
| UDT-15332 | Prior to this release, the `DROUND` function may have incorrectly returned a 0 even if the number set in an `INPUT` or `EXTRACT` statement appeared to be an integer. This issue has been resolved. | U2 Basic |
| UDT-15337 | Prior to this release, if multiple encryption keys were used to encrypt multiple fields, it would lead subsequent attempts to create/build indexes to fail when using one of the previously declared keys. This issue has been fixed. | Automatic Data Encryption |
| UDT-15370 | Starting at this release, the default answer to Transferring the Master Key in `udtinstall`, `updatesys`, and `udtsetup` on UNIX/Linux has been changed from No to Yes. | Installation |
| UDT-15380 | Starting at this release, support has been added for query parameters to be passed within a URL for GET, POST, PUT, and DELETE methods. For example, `http://webserver/?ID=xxxx&NAME=smith`. For more information about these query parameters, see the *UniData UniBasic Extensions* manual. | U2 Basic - CallHTTP |
| UDT-15385 | Prior to this release, the `fixfile` utility had problems processing more than 100 groups at a time if the number of corrupted groups was excessive. This caused the application to stop. The problem has been corrected by adding a limitation feature with the ability for override. For more details, see the `fixfile` details in the *UniData Commands Reference* guide. | Files - Corruption |
| UDT-15387 | Starting at 8.1.0 the `deleteuser` command may have caused UniData to hang intermittently. Diagnostic capabilities have been added in order to allow further tracing of this situation. Contact the Rocket Support team for more information. | Other |
| UDT-15388 | Prior to this release, the replication writer (`udrw`) process was failing to bypass the logout proc / paragraph, which may have resulted in unexpected interaction with the application environment. This issue has been resolved. | Replication |
| UDT-15392 | Beginning at this release, EDA support has been extended to include the Oracle client version 12.1. | External Database Access |
| UDT-15406 | When using `CALLC`, the client session could abort with an access violation. This issue started at 8.1.0 and is now resolved. | Error Reporting - Crash |

| Key | Release Notes | Components |
|-----|---------------|------------|
| UDT-15414 | Some users experienced a replication checksum error when replication was suspended between byte-swapped machines, for example, if AIX was the publisher and Windows the subscriber. This occurred when replication was suspended and records were added to the publisher, and then the `ud_repadmin` sync command was executed. When this happened, replication would fail to sync with a checksum error on the subscriber similar to the following:<br><br>`Fri Jan 06 03:44:15 2017 Subscribing Group`<br>`demo_acct_G0 started suspending.`<br>`Fri Jan 06 03:44:15 package received by`<br>`subscriber has wrong checksum(2255)!`<br><br>This issue has been resolved. | Replication |
| UDT-15425 | Beginning at this release, the logging levels for the EDA Common driver, the EDA Oracle driver, the EDA SQL Server driver, and the EDA DB2 driver can now be set to values between 0 and 8. The `$UDTHOME/logs/eda.errlog` file has been introduced to collect information about server-side EDA errors. For more information, refer to the *External Database Access* manual. | External Database Access |
| UDT-15432 | Starting at 8.1.0, the `deleteuser` command may have failed to remove non-interactive processes such as a phantom or udcs connections without any notification of the failure. This problem has been resolved. | Licensing, Support Tools |
| UDT-15433 | Beginning at 8.2.0, the guide_51 tool has been removed from UniData. | Files - Corruption |
| UDT-15435 | Prior to this release, whenever a `ud_repadmin report` command was issued, an unnecessary error message similar to the following was generated into the replication event logging file `rm.log`:<br><br>`Mon Oct 6 16:05:45 2015:`<br>`Request DBA Report to ALL received`<br><br>Beginning at this release, the event will no longer be recorded in the `rm.log` file. | Replication |

| Key | Release Notes | Components |
|---|---|---|
| UDT-15444 | Starting at 8.1.0, if a record was moved from one "over..." file to another "over..." file in a 32-bit Recoverable Dynamic file, it would result in an RFS crash and users would see a message in `sm.log` similar to the following:<br><br><pre>U_____Report Error____ Funcname:<br>U_append_strtuple...Syscall:<br>stack empty...U_Errno: 1...<br>Filename: /livedata01/PSDATA/PSTRCON.LD2 ...<br>Key: P*033575*1194459810*17688...<br>Number: 399272U_sbr_addrec error in<br>U_tm_wrtrec U_am_os_open(),<br>fname=/livedata01/PSDATA/PSTRCON.LD2/dat051<br>errno:2 TM[239]:U_am_os_open return error:<br>afid:2713, sub_nth:0x32,<br>aborted<br>Sat Jun 4 21:09:44 SM checked:<br>tm (udtno = 239, pid = 15575,<br>udtuid = 184, udtgid = 101, cur_request = 5 ):<br>Sat Jun 4 21:09:44<br>Stopped because of Sat Jun 4 21:09:44 IOT<br>instructionSat<br>Jun 4 21:09:44 - core dumped<br>Sat Jun 4 21:09:44 Sat Jun 4 21:09:44 -----<br>System Crashed at Jun 04 2016 21:09:44 -----<br>Sat Jun 4 21:09:44 All possible<br>CM & TMs & AIMGLOGs & BIMGLOGs<br>killed Dumping the system buffer to<br>"/rfs_log/dump/rfs.dump1"......Done.</pre><br><br>This issue has been resolved. | Recoverable File System |
| UDT-15450 | Starting at 8.1.0, adding records to to a 32-bit Recoverable Dynamic file could result in an RFS crash and and users would see a message in the sm.log similar to the following:<br><br><pre>U_am_os_open(),<br>fname=/disk1/ud81/demo/TESTDYN/dat043 errno:2<br>TM[1]:U_am_os_open return error: afid:4,<br>sub_nth:0x2a, aborted<br>Fri Jun 10 02:14:15 SM checked:<br>tm (udtno = 1, pid = 8913146, udtuid = 0, udtgid<br>= 0, cur_request = 5 ):<br>Fri Jun 10 02:14:15 Stopped because of<br>Fri Jun 10 02:14:15 IOT instructionFri Ju<br>n 10 02:14:15 - core dumpedFri Jun 10 02:14:15<br>Fri Jun 10 02:14:15<br>----- System Crashed at Jun 10 2016 02:14:15 -----<br>Fri Jun 10 02:14:15 All possible<br>CM & TMs & AIMGLOGs & BIMGLOGs killed<br>Dumping the system buffer to<br>"/disk1/ud81/bin/rfs.dump"......Done.</pre><br><br>This issue has been resolved. | Recoverable File System |

| Key | Release Notes | Components |
|---|---|---|
| UDT-15453 | Windows only. Beginning at this release, configurable diagnostics have been added to allow users to examine the acquisition and release of the internal control semaphores that are used to protect key internal memory structures within UniData. In order to turn on these traces, create two files, `udt.cfg` and `mchinfo.cfg`, in the `$UDTHOME\logs\config` directory with the following contents:<br><br>```<br>logging=true<br>handler = LogFile<br>LogFile.filename=<execname><pid><time>.txt<br>LogFile.type += DEBUG10<br>LogFile.module=MUTEX<br>LogFile.field=PROCID | TIME<br>LogFile.fileisze=100<br>LogFile.flush = true<br>```<br><br>The results of these traces will then be placed in the `$UDTHOME\logs\output` directory.<br><br>To disable this logging, remove the two `.cfg` files and restart any affected udt or `mchinfo.cfg` processes. | Licensing, Support Tools |
| UDT-15454 | WIndows only. Prior to this release, If a `CLEARFILE` or `CLEAR.FILE` command was issued from within UniBasic against a Dynamic File with more than one over file, the command would fail with a message similar to:<br><br>```<br>In BP\_CLEARIT at line n errno=13:<br>Permission denied<br>In BP\_CLEARIT at line n<br>Deleting dynamic file DYNTEST\over002 error<br>```<br><br>This issue has been resolved. | U2 Basic |
| UDT-15456 | UNIX/Linux only. Starting at this release, the values of the environment variables LANG, PATH, ENV, LD_LIBRARY_PATH, LIBPATH (AIX), and SHLIB_PATH (HP) are logged in the `startud.log` file during UniData startup. | Server Processes |
| UDT-15460 | Linux only. Prior to this release, when using BCI or EDA and attempted to connect with Microsoft SQL Server ODBC driver, the process could have failed and a core file may have been produced. This issue has been resolved. | Basic Call Interface, External Database Access |
| UDT-15462 | Prior to this release, setting the N_PARTFILE parameter too low with the RFS enabled could have led to dynamic file corruption. The internal algorithm that determines the default size of this configurable has been changed to avoid this situation. This issue has been resolved. | Files - Dynamic, Recoverable File System |
| UDT-15484 | Prior to this release, a problem occurred when making an ODBC query against UniData that caused in-memory configuration settings to be overwritten with new data, causing UniData to crash. Any ipclogs generated at the time of the crash showed the corrupted values in the in-memory configuration. This issue has been resolved. | Shared Memory |

| Key | Release Notes | Components |
|-----|---------------|------------|
| UDT-15485 | Windows only. Starting at 8.1.0, users saw a function sequence error message when re-converting an EDA schema with SQL Server 2014, and experienced some data loss. This issue has been resolved. | External Database Access |
| UDT-15492 | Windows only. Starting at this release, an enhancement has been made so that UniData can be installed as a non-administrator alongside this the previous restriction of needing to be an administrator for the following commands or executables has been removed:<br><br>`CLEAR.LOCKS`, `clearq`, `confprod`, `CONVERT.SQL`, `CREATE.TRIGGER`, `dbpause`, `dbresume`, `encman`, `DELETE.ENCRYPTION.KEY`, `DELETE.ENCRYPTION.WALLET`, `DELETE.TRIGGER`, `deleteuser`, `fixtbl`, `uslog_install`, `MAX.USER`, `MIGRATE.SQL`, `newhome`, `newversion`, `SET.TIME`, `SETLINE`, `smmtrace`, `startud`, `stopud`, `stopudt`, `SUPERCLEAR.LOCKS`, `udfile`, `udkill`, `udtlangconfig`, `UNSET.LINE`, `us_admin`, `WALLET.REMOVE.KEY`<br><br>This is done by utilizing the `UDTADMIN_GROUP` Registry key which is located under the main UniData Registry key (e.g. `HKEY_LOCAL_MACHINE\SOFTWARE\Rocket Software \UniData\8.2`).<br><br>The Registry key contains the Group Name to which users can be added to be considered an administrator of UniData. This functionality does not override any Windows Administrator permission checks, as some of the commands still require that level of permission based on how they are used, and as such, will still result in an error. | Installation, Security |
| UDT-15498 | Prior to this release, some users found that the `DATE.FORMAT` command did not work as expected when run with the `EXECUTE` command in the `UOLOGIN` program. In order to get the command to work as expected, a single line text file called `UOLoginCommand` can now be placed in the `$UDTBIN` directory to ensure these commands function as expected. | Server Processes, U2 Basic |
| UDT-15513 | Starting at 8.1.0 and in new installations, files that previously replicated successfully stopped replicating due to a problem with the replication writer processes and the rotating file pool. When this problem is encountered, the `rm.log` file contains an Open file failed message along with an error code of 24 similar to the following:<br><br>`RW(0, 28042):RW Open file failed(0, 24);`<br>`(LSN=149740389)Insert on CASH.DEPOSITS('11121~1')`<br>`is canceled`<br><br>This problem is now resolved. | Replication |

| Key | Release Notes | Components |
|---|---|---|
| UDT-15523 | Prior to this release, there was a problem where logins were not blocked during UniData RFS Recovery and users saw the following message:<br><br>`TM can only be started by SM`<br><br>This issue has been resolved. | Recoverable File System |
| UDT-15527 | Prior to this release, the UniData `TM` process did not set the SIGTERM handler correctly, which caused UniData to crash when RFS was enabled and the `TM` received a SIGTERM signal. This issue has been resolved. | Recoverable File System |
| UDT-15532 | Prior to this release, the RESTORE option of the `RESIZE CONCURRENT` command failed when used on a multilevel file that was also a subscribing object. This issue has been fixed. | Files - Resizing, Replication |
| UDT-15533 | Prior to this release, problems may have been encountered converting the EDA data type to the external database data type. This issue has been resolved. | External Database Access |
| UDT-15557 | Linux only. Prior to this release, non-conforming records produced after an EDA conversion via the Microsoft SQL Server ODBC would fail to display correctly when edited using ECL. In order to resolve the issue, the DRIVERNAME configurable has been modified to allow definitions of MSODBC and EASYSOFT (the defaults). For more details on how to set these values, refer to the *External Database Access* manual. | External Database Access |
| UDT-15569 | Windows only. In prior versions, if a UniData session was timed out as a result of the setting of the `TIMEOUT` command, the session might have terminated with an access violation. This issue is resolved. | ECL Tools, U2 Basic |
| UDT-15570 | Starting at this release, an enhancement has been made to UniData that will decrease the time it takes to recursively extract attribute-level values from an array. Nearly all UniData applications will benefit from improved performance without making any changes to their application. | U2 Basic, Performance |
| UDT-15571 | Prior to this release, when UniData detected that the value of NFILES exceeded the maximum number of simultaneous open files at the operating system, the value was reduced without warning. Beginning at this release, when the NFILES value is changed a warning message is added to the `smm.errlog`. | Error Reporting |
| UDT-15572 | Prior to this release, users experienced lengthy delays when starting the REPLOGGER utility, leading some to believe the utility stalled. This delay has been removed. | Replication |
| UDT-15607 | Prior to this release, the `UPCASE()` command and MCU conversion would not convert the default UniData mark characters (i.e., ASCII 252 to 255). This created a problem for string handling for when using several common Scandinavian and Germanic characters. Beginning at this release, UDT.OPTIONS 122 has been introduced. If this option is set to ON then the previously unconverted characters will be converted. The default value for this option is OFF. | U2 Basic |
| UDT-15609 | Prior to this release, the creation of EDA components may have failed if users attempted to verify the metadata for the EDA Map Schema. This issue has been resolved. | External Database Access |

| Key | Release Notes | Components |
|---|---|---|
| UDT-15615 | Prior to this release, users may have encountered a segmentation fault error when using the `XDOMGetNodeType` function within UniBasic. This issue has been resolved. | U2 Basic - XDOM API |
| UDT-15641 | Prior to this release, if attempting to verifying an EDA MAP after an EDA conversion command, EDA would incorrectly drop the existing Oracle tables. If an attempt was made to list the EDA file, the following error message would be displayed:<br><br>`tables or view does not exist`<br><br>This issue did not affect DB2 or SQL Server and is now resolved. | External Database Access |
| UDT-15644 | Prior to this release, EDA connections to Oracle that attempted to rollback a transaction would fail to remove any created tables during the transaction. This issue has been resolved. | External Database Access |
| UDT-15721 | Prior to this release, the replication writer processes (`udrw`) could have attempted to update the database files before the RFS recovery was complete, leading to the potential corruption of the files. If this was encountered, a message similar to the following would have been included in the `sm.log` file:<br><br>`TM can only be started by SM`<br><br>This issue has been fixed. | Recoverable File System, Replication |
| UDT-15756 | Windows only. Starting at this release, support to allow the XAdmin tool to change the registry entries for `SSL_PROTOCOLS` and `SSL_OPTIONS` for the UniData Telnet Services has been added. For more details on these registry entries, refer to the *Administering UniData on Windows and UNIX Platforms* and *Security Features* manuals. | SSL, Telnet |
| UDT-15759 | Prior to this release, it was possible that when creating common, running the `DELETECOMMON` command and then updating common again may have caused a process to abort and produce a core file or access violation. This issue has been resolved. | Error Reporting - Crash, U2 Basic |
| UDT-15780 | Prior to this release, the Host field in a callHTTP request may have been duplicated when using HTTP version 1.1, resulting in a failure of the request. This issue is resolved. | U2 Basic - CallHTTP |
| UDT-15796 | UNIX/Linux only. Starting at this release, the `makeudt` command is deprecated. In order to allow programs to be linked to UniData, see *Chapter 8: Dynamic Linking, CallBasic, and CALLC (UNIX only)* in the *Developing UniBasic Applications* manual. This issue is linked with [UDT-15885](). | UDT Linking |
| UDT-15810 | Windows only. Prior to this release, file handles were not correctly released when a Telnet session invoked from `udtelnetd` exited. This would result in a steadily increasing open file handle count for the `udtelnetd` process, potentially exhausting the system threshold for allowed file handles. This issue has been fixed. | Telnet |
| UDT-15831 | Windows only. Prior to this release, the `listuser` process would have inadvertently listed internal tool processes and/or UniData services. This problem has been resolved. | ECL Tools, Replication |

| Key | Release Notes | Components |
|---|---|---|
| UDT-15832 | When running `guide_ndx`, level 2 or 3, during the logical checking stage, a temporary file is used. Prior to this release, if that temporary file exceeded 2 GB then the `GUIDE_XERROR.LIS` file would report:<br><br>` Error while seeking /disk1/tmp/K03_24125`<br>` (Invalid argument)`<br><br>Starting at this release, changes have been made to allow `guide_ndx` to handle larger temporary files. The issue is resolved. | Indexes |
| UDT-15853 | UNIX/Linux only. Starting at this release, the `udtinstall` and `updatesys` commands will attempt to find the existing UniData serial number in use and display that as the default value in the installation/upgrade prompt. | Installation |
| UDT-15863 | Beginning at 8.1.1, the `XMAPClose()` function in UniBasic failed to release the memory created via the `XMAPCreate()` function, resulting in a memory leak. This issue has been resolved. | U2 Basic - XDOM API |
| UDT-15885 | Starting at this release, the makeudt tool has been deprecated, as the requirement to build the a new udt executable to link your C routines has been removed. The process that should now be followed to link your C routines is:<br><br>1. Create a makefile using `base.mk` as a template.<br>2. Add the `.o` files corresponding to your `.c` files to the `UDT_OBJS` and `NFASVR_OBJS` variables in the makefile you created.<br>3. Build using the following command: `% make -f yourmakefile all`<br>4. Shut down UniData and copy the `libu2callc.so` and `libu2callc_nfasvr.so` files to the `$UDTBIN` directory.<br><br>For more information about linking your C routines, see the *Administering UniData on Windows and UNIX Platforms* and the *Developing UniBasic Applications* manuals. This issue is linked to [UDT-15796](UDT-15796). | Uni Call Interface |
| UDT-15889 | Windows only. Starting at UniData 8.1.0, NFA connections to or from a Windows server would not work. This issue is now resolved. | Network File Access |
| UDT-15911 | Prior to this release, the `$UDTHOME/sys/LANGGRP` file on UNIX systems only supported the C locale. Starting at this release, more locales have been added to avoid issues when starting or entering UniData with other locale settings. | Installation |
| UDT-16042 | Prior to this release, customizations made to the UniData LOG_OVRFLO and REP_LOG_PATH configurables may have been lost when the UniData upgrade udtsetup process was used. This problem has been resolved. | Installation |
| UDT-16099 | At this release, the `udtsetup` script has been updated to version 1.2.3. | Installation |

# Notices

## Edition

**Publication date**: July 2021
**Book number**: UDT-822-ALL-RN-3
**Product version**: Version 8.2.2

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