

Rocket UniVerse

Release Notes

Version 11.3.5

January 2023
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Rocket UniVerse 11.3.5

This section provides information on the important updates, new features and customer issues that were fixed in Rocket UniVerse 11.3.5.

Important updates and new features in Rocket UniVerse 11.3.5

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AIX 7.3 Certification

UniVerse 11.3.5 is now certified on AIX 7.3.

RHEL 9 Support

UniVerse 11.3.5 is now certified on RHEL 9.

Python upgrade

The version of Python shipped with UniVerse in this release has been upgraded to 3.11.

OpenSSL upgrade

The version of OpenSSL shipped with UniVerse in this release has been upgraded to 1.1.1n.

Printer Performance improvement

Changes have been made to the UniVerse spooler which can improve the performance in a high volume spooler configuration. Two new `uvconfig` parameters have been added related to the `usplog` file(s). The `SP_USPLOG_GROUP` parameter defines the number of active `usplog` files. The `SP_USPLOG_MERGE_INTERVAL` parameter specifies how often the individual `usplog` files are merged into a single `usplog` file comprising all active printers. See the *Administering UniVerse on Windows and UNIX Platforms* guide for more information on these `usa` command option.

The new `usa` option `-M` has been added to force the merge operation at the time the `usa` command is executed. See the *UniVerse User Reference* for more information on this `usa` command option.

Subscriber accepting logs from an older protocol level

Previously, when using U2 Replication, the publisher and subscriber were required to be running the same Replication protocol level for Replication to function correctly. Starting in 11.3.4.9006, U2 Replication has been enhanced to allow a subscriber to accept replication logs from a publisher system running 11.3.1. This will allow a customer to upgrade the subscriber system to 11.3.4.9006 or 11.3.5 and have the subscriber system still accept replication logs from an 11.3.1 publisher. When running in this configuration, some things to note:

- A failover operation to a hot standby subscriber running with this new functionality release will be successful.
- Replication between the failed over publisher will be suspended with any subscribers running the 11.3.1 release.

- A failback to the original publisher will not be possible if the publisher is still running the 11.3.1 release.
- The 11.3.4.9006 or 11.3.5 system running with the newer protocol level can accept logs produced on a system running with the 11.3.1 protocol level. However, the reverse is not possible. An 11.3.1 system cannot accept logs from a publisher system running 11.3.4.9006 or 11.3.5.

See the *Replication protocol level* topic in the *U2 Data Replication User Guide* for more information.

callHTTP PATCH method added

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. For more information on the `PATCH` method, see the *UniVerseBASIC Commands Reference* and *UniVerseBASIC Extensions* guides.

uvinstall.log file now available for UniVerse installations on Unix

Starting in this release, the installation and upgrade scripts for Unix and Linux systems capture installation information in an installation log. The log is created in the `saved_logs/uvinstall.log` file in the UniVerse home directory. With these changes, most installation details are now captured in the log file rather than on the screen.

New uvconfig parameter to turn off the requirement for WRITE permission on catdir

Previously, when calling a subroutine in the global catalog space (`uvhome/catdir`), the reference count in the header of the catalog entry was incremented on each call. This required write permissions to the global catalog space for anyone calling a globally cataloged program. In this release, the `uvconfig` parameter `CAT_REF_CNT` has been introduced to control whether the reference count is incremented. When set to 0, the reference count will no longer be incremented, which eliminates the requirement for all users to have write permissions to the global catalog space. See the *Administering UniVerse on Windows and UNIX Platforms* guide for more information on the `CAT_REF_CNT` parameter.

UniVerse 11.3.5 Enhancements and Fixes

The following enhancements were added and customer issues were fixed in UniVerse 11.3.5.

Enhancements

Issue number	Description	Component
UNV-21303	Beginning with this release, the <code>PHANTOMSAMEUV</code> <code>uvconfig</code> parameter has been enhanced with an added value. When the parameter is set to a value of 2, the phantom process will be started with the same binary as the parent <code>uvsh</code> process. The OS level 'ps' output will show the process as 'phantom' rather than the actual executable name (which is the behavior when set to a value of 1).	Other
UNV-29588	Beginning with this release, the Replication error message <code>invalid log sequence</code> has been enhanced. The message will now display both the current LSN number and the expected LSN number. This change will be useful when diagnosing the cause of the error.	Replication

Issue number	Description	Component
UNV-29774	Beginning with this release, the <code>VERBOSE</code> option has been added to the <code>ACCOUNT.FILE.STATS</code> command. When using the <code>ALL</code> option with the new <code>VERBOSE</code> option, the name of the each file being will be displayed as it is being processed. This will provide useful diagnostic information in the event a particular file causes issues with the command.	File Tools
UNV-31221	Starting in this release, the installation and upgrade scripts for Unix and Linux systems capture installation information in an installation log. The log is created in the <code>saved_logs/uvinstall.log</code> file in the UniVerse home directory. With these changes, most installation details are now captured in the log file rather than on the screen.	Installation
UNV-31223	Previously, when calling a subroutine in the global catalog space (<code>uvhome/catdir</code>), the reference count in the header of the catalog entry was incremented on each call. This required write permissions to the global catalog space for anyone calling a globally cataloged program. In this release, the <code>uvconfig</code> parameter <code>CAT_REF_CNT</code> has been introduced to control whether the reference count is incremented. When set to 0, the reference count will no longer be incremented, which eliminates the requirement for all users to have write permissions to the global catalog space.	Security
UNV-32253	Beginning with this release, the <code>PATCH</code> method has been added to the <code>BASIC CallHTTP</code> functionality. The <code>PATCH</code> method provides the ability to modify an existing HTTP resource as compared to the <code>PUT</code> method, which only allows a complete replacement of a document.	U2 Basic - CallHTTP
UNV-32423	Starting with this release, the <code>uvdiag</code> script has been updated to version 4.4.2 for Windows platforms.	Support Tools
UNV-32822	Beginning with this release, changes have been made to the UniVerse spooler which can improve the performance in a high volume spooler configuration. Two new <code>uvconfig</code> parameters have been added related to the <code>usplog</code> file(s). The <code>SP_USPLOG_GROUP</code> parameter defines the number of active <code>usplog</code> files. The <code>SP_USPLOG_MERGE_INTERVAL</code> parameter specifies how often the individual <code>usplog</code> files are merged into a single <code>usplog</code> file comprising all active printers. The new <code>usa</code> option <code>-M</code> has been added to force the merge operation at the time the <code>usa</code> command is executed.	Spooler
UNV-32977	The version of OpenSSL supplied with UniVerse 11.3.5 has been updated to 1.1.1n.	SSL
UNV-32987	The version of Python shipped with UniVerse in this release has been upgraded to 3.11.	Python
UNV-33044	Beginning with this release, UniVerse is now certified on RHEL 9.	Installation
UNV-33262	Beginning with this release, GCI related functionality has been implemented which allows for switching the identify of an existing <code>uvsh</code> process. See the UniVerse GCI User Guide for more details.	General Call Interface, Server Processes
UNV-33355	The online HELP documentation has been updated to match the 11.3.5 documentation set.	TCL Tools

Fixes

Issue number	Description	Component
UNV-1601	Prior to this release, the <code>SYSTEM(33)</code> function or the <code>@COMMAND.STACK</code> variable would return garbage characters when executed in a background process. This could be a normal PHANTOM or a UO process. In this release, they will return the empty string as is expected for a non-interactive process. This issue has been resolved.	U2 Basic
UNV-2041	Prior to this release, the <code>BASIC COMPARE()</code> function returned incorrect results under a specific condition. The condition involves a left justified compare of 2 strings of unequal length. If the shorter string matched the same characters in the longer string, the shorter string would incorrectly be considered greater. For example, ABC would be considered greater than ABCD. This issue has been resolved.	U2 Basic
UNV-2896	Prior to this release, an argument to the <code>ENV</code> command which contained spaces would be incorrectly truncated at the first space. In this release, the full argument including the spaces will be passed to the <code>ENV</code> command resolving this issue.	TCL Tools
UNV-5354	Prior to this release, the <code>fixtool</code> command would incorrectly clear the relative path to an index in the header of the data file if the <code>-filepath</code> option was used. This issue has been resolved.	Files - Corruption
UNV-15288	Prior to this release, writing a record with an <code>@ID</code> containing mark characters would fail with a WRITE error. However, there would be no indication as to the reason for the failure. In the current release, the error message has been enhanced to indicate the specific reason for the failure.	Error Reporting, U2 Basic
UNV-20317	Prior to this release, executing the <code>fixtool</code> command on a Type 25 (btree) file would indicate the file had been scanned and no errors were found. This was incorrect as <code>fixtool</code> does not function against Type 25 files. In this release, a message is displayed indicating Type 25 files are not supported.	Indexes
UNV-24257	Prior to this release, the BASIC functions <code>TANH()</code> , <code>SINH()</code> , and <code>COSH()</code> did not return correct results. This issue has been resolved.	U2 Basic
UNV-26388	Prior to this release, using a negative number with the <code>SLEEP</code> command or function would cause the process to sleep for a very long period of time. In the current release, a negative argument is ignored and the command returns immediately.	U2 Basic
UNV-26904	Prior to this release, setting the <code>CENTURYPIVOT</code> uvconfig parameter to a 2 digit value did not work as documented. This issue has been resolved.	Server Processes, U2 Basic

Issue number	Description	Component
UNV-27304	<p>Prior to this release, running a <code>uv_repadmin reconfig</code> command on a failed-over publisher could result in a replication disablement. If a <code>DISTRIBUTION</code> phrase in the <code>repconfig</code> file on the failed-over publisher was added or removed, the failure would occur. An error similar to the following would be reported in the <code>uvrm.log</code> file and replication would become disabled.</p> <pre>Thu Apr 21 13:42:56 2022 Publishing group ACCT exit(4054) Uvpub: U_rep_dump_grpstatus() failed. Errno=0.</pre> <p>This issue has been resolved.</p>	Replication
UNV-27306	<p>Prior to this release, the <code>BASIC USERINFO()</code> function may have terminated unexpectedly when <code>NLSMODE</code> was enabled. If <code>NLSLCMODE</code> was also set to 1, then executing the <code>USERINFO()</code> function in a BASIC program would terminate the process. This issue has been resolved.</p>	National Language Support, U2 Basic
UNV-28706	<p>Prior to this release, compiling BASIC programs with certain syntax errors could cause the compiler to terminate unexpectedly. This issue has been resolved.</p>	Error Reporting - Crash, U2 Basic
UNV-29166	<p>Prior to this release, Python could fail with an error indicating the library <code>libreadline.so.5</code> could not be found. The behavior may have been platform dependent. This issue has been resolved.</p>	Python
UNV-29678	<p>Prior to this release, when the <code>TOJSON</code> keyword was incorrectly used in a Retrieve statement, the error would incorrectly indicate <code>TOXML</code>. This issue has been resolved.</p>	Query
UNV-30055	<p>Windows only. Prior to this release, defining a file policy using a full path to a UVNet file would cause an <code>AUDIT</code> configuration syntax error. This issue has been resolved.</p>	Audit Logging, UV/Net
UNV-30268	<p>Prior to this release, when <code>AUDIT</code> logging was enabled, updates done via a UVNet pointer were logged even though activity on the actual file was not being logged. This issue has been resolved as follows:</p> <ul style="list-style-type: none"> ▪ Local UVNet file access is logged only if one of the following is true: <ul style="list-style-type: none"> ▫ <code>DAT.BASIC.*</code> is on and no file policy or other restrictive policy is specified. ▫ <code>DAT.BASIC.*</code> is on and other policies are satisfied. If a file policy is specified, it must explicitly specify the UVNet file name as "<code><host>.<full-file-path></code>". ▪ Remote UVNet file access is logged if one of the following is true: <ul style="list-style-type: none"> ▫ <code>DAT.BASIC.*</code> is on and no other more restrictive policy is specified. ▫ <code>DAT.BASIC.*</code> is on and a specific file policy that includes the physical file path is specified. 	Audit Logging

Issue number	Description	Component
UNV-30330	Prior to this release, the <code>-noindex</code> option was incorrectly documented as being available with the <code>uvrestore</code> command. When it was used with <code>uvrestore</code> , it was ignored without displaying a message. In the current release, an information message indicating the option is not supported will be displayed.	Backup Tools
UNV-30544	Prior to this release, the <code>-g</code> option of <code>smat</code> or <code>analyze.shm</code> would always return a <code>no locks</code> message. In this release, the <code>-g</code> option will return active group locks if they exist. This issue has been resolved.	Locking
UNV-30609	Prior to this release, using <code>SSELECT</code> inside an I-type may have caused the process to terminate unexpectedly. This would occur if the command calling the I-type was a <code>SELECT</code> command. This issue has been resolved.	Error Reporting - Crash
UNV-30640	Prior to this release, the <code>timedate</code> part of a sequential AUDIT log file name may have been assigned incorrectly. This issue has been resolved.	Audit Logging
UNV-30651	Prior to this release, a situation existed where a <code>uvapi_slave</code> process might attempt to allocate memory when handling a signal. This could cause the process to hang. This issue has been resolved.	MQSeries, Server Processes, UOJ
UNV-31069	Previously, using <code>VLIST</code> on a program using the <code>DESCRINFO()</code> function may have caused the process to terminate unexpectedly. On some AIX systems, this may have caused the system to shutdown. This issue has been resolved.	U2 Basic
UNV-31087	Prior to this release, the <code>-setkeyinfo.index</code> option of the <code>encman</code> command would fail if the index on the file was defined with a relative path. This issue has been resolved.	Automatic Data Encryption
UNV-31135	Prior to this release, a UniVerse process might not have used the <code>openssl</code> version specified in <code>SSL_VERSION_PATH</code> . If the hidden file <code>.ssl_version</code> did not have read permissions for the user starting the UniVerse session, the specified version would be ignored. The default <code>openssl</code> version would be used instead. In the current release, the <code>.ssl_version</code> file will be created with read permissions for all users. If the permissions are manually changed to remove read permission, a warning message is displayed when a <code>uvsh</code> process is started and the process will not be able to use any functionality requiring SSL.	Security, SSL
UNV-31172	Prior to this release, using a DT conversion code specification with an invalid time zone specification would result in the <code>OCONV()</code> function terminating unexpectedly. This issue has been resolved.	U2 Basic

Issue number	Description	Component
UNV-31184	Prior to this release, the default size of the memory buffer used to hold the AUDIT logging configuration file information was 8K. When changes were made to the AUDIT configuration file while UniVerse was running, UniVerse AUDIT would reload the changes into memory. If the changes caused the memory required to be greater than current allocated memory, an error would be displayed and the changes would not be loaded. Stopping and restarting UniVerse was required to increase the memory buffer. In this release, the default size of the AUDIT configuration file memory buffer has been increased to 1MB.	Audit Logging
UNV-31185	Prior to this release, a uvtelnetd connection may have become stuck in an endless loop. If the process encountered an EWOULDBLOCK error while connecting, it might get stuck in a loop continually generating an error related to the connection issue. This issue has been resolved.	Telnet
UNV-31188	Windows only. Prior to this release, granting ADE encryption key permissions to domain groups might result in failures. The second time a uvsh process accessed the encryption keys, the process might terminate and generate a minidump file. This issue has been resolved.	Automatic Data Encryption
UNV-31220	Previously, RAID would terminate unexpectedly when it encountered the DESCRINFO () function using a socket handle argument. This issue has been resolved.	U2 Basic
UNV-31222	Previously, the output of the LISTUSER command was not included in COMO file output. This issue has been resolved.	TCL Tools, U2 Basic
UNV-31224	Previously, the privileged_user_audit setting in U2 Audit Logging did not turn on tracking for 'root', 'uvadm' and 'Administrator' (Windows) regardless of what other policies were configured. This issue has been resolved.	Audit Logging, Security
UNV-31226	Previously, the FILE . USAGE "Writes for update" and "Total writes" fields were not incremented when WRITEU was used on a file containing a trigger. This issue has been resolved.	File Tools
UNV-31246	Prior to this release, the new AUDIT_SEQ_LOG_GROUP uvconfig parameter is incorrectly displayed as AUDIT_LOG_MSG_LEVELS and incorrectly marked as being changed from the default. This issue has been resolved.	Installation
UNV-31312	Prior to this release, using the rcsman command to import a non-root certificate would cause the rcsman command to terminate unexpectedly without importing the certificate. This issue has been resolved.	Security, SSL
UNV-32011	Windows only. Prior to this release, the DB . TOXML command would terminate unexpectedly if the default encoding was modified via the XMLSETOPTIONS command. The BASIC XMAPCreate () function used by DB . TOXML was the specific command which failed. As such, the same issue could occur with a BASIC program using the XMAPCreate () function. This issue has been resolved.	XML

Issue number	Description	Component
UNV-32060	Prior to this release, executing a JAVA program that performed an SQL <code>SELECT</code> statement against the UniVerse database might have caused the session to terminate unexpectedly. If the SQL <code>SELECT</code> statement generated a large number of warning messages, such as <code>non-numeric data when numeric required</code> , the session would crash. The failure might have also corrupted UniVerse shared memory, requiring a database stop and restart to correct the problem. This issue has been resolved.	Server Processes, SQL
UNV-32087	Prior to this release, the <code>INFORM</code> option of <code>LIST . INDEX</code> would generate an error and fail to process a distributed file. This issue has been resolved.	Indexes
UNV-32243	Due to a change related to the handling of 64bit integer JSON data by the <code>UDOREAD</code> statement, the performance of the <code>UDOREAD</code> statement was significantly degraded. This issue has been resolved.	Performance, U2 Basic - U2 Dynamic Objects
UNV-32272	Prior to this release, the UniVerse shutdown process may have incorrectly reported a failure if the 3rd party Nessus tool was installed on the system. The method used by the shutdown script to determine all UV processes had exited incorrectly flagged a Nessus process. In this release, the script has been modified to ensure only UV processes are considered. This issue has been resolved.	Server Processes
UNV-32282	Beginning with 11.3.1, the <code>BASIC ENCODE</code> function incorrectly returned a status code of 4 when the file argument could not be opened. In this release, the correct status code of 3 is returned, resolving this issue.	U2 Basic
UNV-32294	Prior to this release, the contents of the <code>@RECORD</code> variable in an indexed subroutine may have been incorrect under certain conditions. When updates were being done inside a transaction, the <code>@RECORD</code> contents for <code>@IDX.IOTYPE 3</code> and <code>4</code> were reversed. The <code>@RECORD</code> variable contained the new record contents when <code>@IDX.IOTYPE</code> was <code>3</code> and the original contents when <code>@IDX.IOTYPE</code> was <code>4</code> . This issue has been resolved.	SQL
UNV-32326	Prior to this release, using the JDBC <code>execute</code> function to return a result set would fail to return any results on the second call to the same statement. A flag was not being reset after the first call, which caused the second call to be skipped. This issue has been resolved.	Server Processes, UCI
UNV-32349	Prior to this release, the output of the "DTI" conversion code would omit the milliseconds if the milliseconds value was 0. In this release, the milliseconds will correctly display as 000 in this situation, resolving this issue.	U2 Basic
UNV-32519	Prior to this release, the BASIC <code>getSocketOptions()</code> function would terminate unexpectedly if the socket handle argument was closed. This issue has been resolved.	U2 Basic
UNV-32520	Prior to this release, the date conversion codes <code>DTD</code> and <code>DTM</code> incorrectly returned a 2 character month name in <code>INFORMATION</code> and <code>PI/Open</code> flavor accounts. In this release, the correct 3 character month will be returned. This issue has been resolved.	U2 Basic

Issue number	Description	Component
UNV-32575	Prior to this release, using file.writenamedfields within transaction boundaries in u2py would fail. Using it outside a transaction would work correctly. The issue of executing within a transaction has been resolved.	Python
UNV-32778	Prior to this release, a UniVerse process may have terminated unexpectedly under specific conditions. If a file contained an index based trigger and the subroutine called by that trigger did not exist, updating the file would cause the process to terminate. This issue has been resolved.	U2 Basic
UNV-32780	Prior to this release, some Retrieve statements in a PI/Open flavor account could terminate with a "double free" memory failure on Linux. This issue has been resolved.	Query
UNV-32781	Prior to this release, Replication would generate an <code>Unknown error 4</code> when the port used for Replication was blocked. This made diagnosing the problem difficult. In this release, an informative message will display indicating the actual cause of the problem.	Replication
UNV-32953	Prior to this release, a memory leak may have existed when using a combination of dimensioned and dynamic arrays. For example, using code similar to <code>ARRAY (X) <-1>="new value"</code> could result in memory not being properly released. This issue has been resolved.	U2 Basic
UNV-33058	Prior to this release, enabling FIPS mode on an RHEL 8 system could result in a significant performance impact when starting uv processes. The issue was related to an unnecessary library being included in the UniVerse build process. This issue has been resolved.	Performance
UNV-33104	Prior to this release, the UniCommand object did not trap an error when the command contained a syntax error or an illegal verb. The problem was caused by the server not correctly displaying the error message. This issue has been resolved in the current release.	UniRPCD
UNV-33195	Prior to this release, the BASIC compiler might have core dumped when compiling a list of programs from a Select list. The failure was due to a memory leak causing the compiler process to run out memory. This issue has been resolved.	U2 Basic
UNV-33250	HP only. Beginning with 11.3.2, uvtelnetd may have failed with the error <code>Unable to find library 'libu2gci.sl'</code> . This issue has been resolved.	Telnet
UNV-33294	Windows only. Prior to this release, fixtool would incorrectly display an error indicating the file was a Type 19 file when the file did not exist. In the current release, fixtool will correctly indicate the file cannot be opened.	File Tools
UNV-33303	A change made in 11.3.2 to support the Replication of Sequential I/O had the unintended side effect of slowing the performance of sequential I/O. The performance impact occurred whether or not Replication was configured. In this release, the performance of sequential I/O has been restored to the previous behavior when Replication is not configured.	Performance, Replication

Rocket UniVerse 11.3.4

This section provides information on the important updates, new features and customer issues that were fixed in Rocket UniVerse 11.3.4.

Important updates and new features in Rocket UniVerse 11.3.4

This section provides information on the important updates and new features in Rocket UniVerse 11.3.4.

FIPS Support with OpenSSL 1.1.1 on RHEL 8

FIPS Support is now available with OpenSSL 1.1.1 with the 11.3.4 version of UniVerse running on RHEL 8. Python and u2py functions are also available when using the RHEL 8 OpenSSL libraries with FIPS.

See the *Rocket UniVerse Security Features* manual and *Rocket UniVerse Python User Guide*, respectively, for more details.

MVX:P GA release of UniVerse

The 11.3.4 release of UniVerse is the base server release for the MVX:P GA release. Several new uvconfig parameters for configuring performance monitoring have been added at 11.3.4 to support MVX:P. These parameters are used to configure the number of files monitored on a session-by-session basis and on a system-wide basis.

The parameters are:

- `PERF_SESSION_SECTIONS`
- `PERF_SESSION_FILES`
- `PERF_SYSTEM_SECTIONS`
- `PERF_SYSTEM_FILES`

See the [PERF_MON_MODE uvconfig parameter](#) section regarding enabling and disabling the performance monitoring statistics for use with MVX:P.

PERF_MON_MODE uvconfig parameter

Prior to the 11.3.4 release of UniVerse, the default value of the `PERF_MON_MODE` uvconfig parameter was 1 to enable performance monitoring.

However, performance monitoring was only enabled if the CURE package was authorized. At the 11.3.4 release, the CURE package no longer exists and MVX:P performance monitoring will be enabled if `PERF_MON_MODE` is set to 1.

The default value for `PERF_MON_MODE` has been changed to 0 at 11.3.4. However, on an upgrade install the previous setting will be maintained. Therefore, changing `PERF_MON_MODE` to 0 might be required to disable the MVX:P performance monitoring.

BASIC Sequential I/O changes

The implementation of the Replication of BASIC Sequential I/O at the 11.3.2 release resulted in some changes in the behavior of Sequential I/O related to unopened file variables. Changes have been made at UniVerse version 11.3.4 to restore the behavior that existed prior to version 11.3.2.

See [UniVerse 11.3.4 Enhancements and Fixes , on page 12](#) for specific information regarding the affected behaviors and resolutions.

UniVerse AUDIT logging for Client updates

The UniVerse AUDIT data event `DAT.CLIENT`, which previously was only available in the 12.1.1 release, has now been included in the UniVerse version 11.3.4.

Documentation

Only those manuals that were updated for the 11.3.4 release are included in the documentation library and the RBC download. Please refer to the 11.3.2 documentation for the latest full documentation set and the 11.3.3 documentation for updates that occurred between 11.3.2 and the current version.

UniVerse 11.3.4 Enhancements and Fixes

The following enhancements were added and customer issues were fixed in UniVerse 11.3.4.

Enhancements

Issue number	Description	Component
UNV-28682	Beginning with this release, cipher suites supporting TLSv1.3 are available.	Security
UNV-30157	Beginning with this release, FIPS capability now exists with the OpenSSL 1.1.1 version available on RHEL 8.	SSL
UNV-30464	Beginning with this release, Python and u2py functions are available when using RHEL 8 OpenSSL library with FIPS. Python/u2py functions can be leveraged regardless of which OpenSSL is used.	Python
UNV-30475	Beginning with this release, the AUDIT DAT.CLIENT event functionality, which was previously only available in UniVerse 12.1.1, is now available in UniVerse 11.3.4.	Audit Logging

Fixes

Issue number	Description	Component
UNV-29537	Linux only. Beginning with 11.3.2, using the BASIC NOBUF statement on an unopened sequential file variable would cause the process to terminate unexpectedly. This issue has been resolved.	Error Reporting
UNV-29627	The new <code>TODATE ()</code> function introduced at UniVerse 11.3.2 returned an incorrect value when converting dates prior to 12/31/1961. In four-year increments, the internally converted date was off by one for the entire year. For example, all dates in the year 1961 were off by one. The years 1960, 1959, and 1958 were correct. The problem repeated itself again in 1957, 1953, 1949, and so on. The problem was related to the leap year calculation performed by the <code>TODATE ()</code> function. This issue has been resolved.	U2 BASIC

Issue number	Description	Component
UNV-29935	Beginning with 11.3.2, using the READSEQ statement on a file variable, which had already been closed with the CLOSESEQ statement, would cause the process to terminate unexpectedly. At the current release, the READSEQ will take the ELSE clause as expected. This issue has been resolved.	U2 BASIC
UNV-30110	Using the EXPLAIN keyword on a lengthy (> 60,000 characters) Retrieve or SQL SELECT statement could result in the statement terminating unexpectedly. This was caused by not having enough internal memory allocated to store the results. This issue has been resolved.	SQL
UNV-30147	Windows only. Beginning with 11.3.2, the BASIC WRITEBLK or WRITESEQ statements would terminate unexpectedly when writing to a COM port device. This issue has been resolved.	U2 BASIC
UNV-30153	Beginning with 11.3.2, using the BASIC READBLK or READSEQ statement on a file variable that had not been opened would cause the process to terminate unexpectedly. This issue has been resolved.	U2 BASIC
UNV-30159	Windows only. A problem was found when the UniVerse TelnetInputFlag registry key was set to 1. A UniVerse session waiting at the Press any key... prompt would incorrectly page a report when the PAKTIME uvconfig parameter setting expired. This issue has been resolved.	Server Processes
UNV-30204	Windows only. Beginning with this release, the performance of the BASIC INPUT statement when AUTOLOGOUT is enabled has been improved. The registry key AutologoutInputFlag has been added to enable this new functionality. For best results, the new key should be used in conjunction with the TelnetInputFlag, which was implemented at a previous release. During installation, these registry keys are set to 1 to enable this functionality.	Performance, Telnet, U2 BASIC
UNV-30276	Prior to this release, a Retrieve statement with multiple selection clauses might not have returned the correct results when the CONV keyword was used. The CONV keyword could be incorrectly applied to subsequent selection clauses causing them to fail. If the CONV keyword was used in the last selection clause, no problem existed. This issue has been resolved.	Query
UNV-30299	Windows only. Beginning with release 11.3.2, any process that triggered break logic was disconnected and generated a minidump file if PORT . STATUS was executed by another process. This issue has been resolved.	Error Reporting - Crash
UNV-30361	Previously, when connecting via UniRPC with PAM authentication, the uvapi_server process could terminate unexpectedly if password validation failed. Password validation failures can include incorrect passwords or PAM modules that did not load properly. This issue has been resolved.	Error Reporting - Crash, UniRPCD

Issue number	Description	Component
UNV-30362	<p>Beginning with 11.3.2 on RHEL 8, the UniVerse-supplied OpenSSL 1.1.1b libraries did not contain the symbol <code>EVP_KDF_ctrl</code>, which caused PAM authentication to fail. The system OpenSSL 1.1 libraries will now be loaded by default when doing PAM authentication, resolving this issue.</p> <p>Additionally, the environment variable <code>U2PAM_OPENSSL_LIB_VER</code> is now available if there is a need to define a different OpenSSL version from the default OpenSSL 1.1 version. When using the <code>U2PAM_OPENSSL_LIB_VER</code> variable, the UniRPC daemon must be restarted to have the variable take effect.</p>	Error Reporting - Crash, UniRPCD
UNV-30487	<p>Previously, the <code>encman -fixenc -delkeyinfo</code> command would only indicate one key was deleted when deleting all keys. The command output now displays a message for each key deleted. This issue has been resolved.</p>	Automatic Data Encryption
UNV-30499	<p>Prior to this release, the BASIC compiler did not produce valid object code for the <code>createCertificate()</code> function. This could result in process core dumps or unexpected results when running the BASIC program. Further, using <code>VLIST</code> on the program could also cause a core dump. This issue has been resolved.</p>	U2 BASIC
UNV-30534	<p>Prior to this release, processes might terminate unexpectedly when using 'R' type verbs that included calling a security subroutine. The problem was intermittent and the frequency of events varied based on the version of UniVerse and the operating system platform. This issue has been resolved.</p>	Error Reporting - Crash
UNV--30535	<p>Beginning with 11.3.1.6024, EDA no longer converted decimal type data correctly with the SQL Server external database. All decimal type data would be treated as non-conforming data. This issue has been resolved.</p>	External Database Access
UNV-30610	<p>Prior to this release, deleting records from a file that had an index file larger than 4GB could result in free chain corruption of the index file. Under certain conditions, a 64-bit address was not handled properly when placed on the free chain, resulting in the corruption. This issue has been resolved.</p>	Indexes
UNV-30984	<p>Linux only. Beginning with version 11.3.1, attempting to call a GCI subroutine through an ODBC query would fail and the error message <code>Invalid GCI subroutine</code> was generated. The problem was related to the dynamic linking functionality introduced at the UniVerse 11.3.1 release. This issue has been resolved.</p>	General Call Interface, UCI, Uni Call Interface

Rocket UniVerse 11.3.3

This section provides information on the important updates, new features and customer issues that were fixed in Rocket UniVerse 11.3.3.

Important updates and new features in Rocket UniVerse 11.3.3

This section provides information on the important updates and new features in Rocket UniVerse 11.3.3.

ADE tool to validate encryption

A new ADE tool that enables you to validate that encryption components are synchronized has been added to UniVerse. See the *Validate Encryption Components* topic in the *UniVerse Security Features* guide for more information.

Python version 3.9.2

Python version 3.9.2 is now bundled with this release of UniVerse and supported on the AIX, Linux, Solaris Sparc, Solaris X86, and Windows platforms.

To start the UniVerse supplied version from the OS level on AIX or Solaris, the path to the UniVerse version should be defined via the *LIBPATH* or *LD_LIBRARY_PATH* environment variable.

For more information on the Python Version 3.9.2 upgrade, see the *Python User Guide*.

Documentation updates

Only those manuals that were updated for the 11.3.3 release are included in the documentation library and the RBC download. Refer to the 11.3.2 documentation for all other manuals.

UniVerse 11.3.3 Enhancements and Fixes

The following enhancements were added and customer issues were fixed in UniVerse 11.3.3.

Enhancements

Issue number	Description	Component
UNV-18181	Enhanced UniVerse with a new ADE tool that enables you validate that encryption components are synchronized. See the <i>Validate Encryption Components</i> topic in the <i>UniVerse Security Features</i> guide for more information.	Automatic Data Encryption

Issue number	Description	Component
UNV-27814	Beginning with this release, additional information has been included in the <code>STAT.FILE</code> file related to file sizing. Field 31 contains the number of groups over 100% full and can be displayed with the dictionary item <code>GRP.OVR.100</code> . The percentage of groups over 100% full is included in field 32 and can be displayed with the dictionary item <code>PCT.GRP.OVR.100</code> . The I-type dictionary <code>FILESIZE.MB</code> can be used to display the file size in megabytes. And the dictionary phrase (PH) <code>PCT.GRP.OVR</code> can be used to sort records by the <code>PCT.GRP.OVR.100</code> and <code>FILESIZE.MB</code> fields.	File Tools
UNV-28936	Beginning with this release, the error message <code>Unable to decrypt the data: Data was not previously encrypted by U2</code> has been enhanced to include the affected file name and the pid and parent pid of the process generating the message.	Automatic Data Encryption, Error Reporting
UNV-29199	Prior to this release, running out of available memory while reading a large record could cause the UV process to terminate with a core dump. In the current release, a runtime error will be produced indicating insufficient memory is available for the read operation and the program will return to TCL. This issue has been resolved.	Error Reporting - Crash, U2 Basic
UNV-29455	Windows only. Beginning with this release, the <code>UseShortUserNames</code> registry key can now be set to a <code>REG_BINARY</code> type. This new capability allows for controlling how short user names are used with TCL, UniObjects, and Telnet. The bit settings are as follows: First bit on: TCL uses short names Second bit on: UO uses short names Third bit on: Telnet uses short names Prior to this release, <code>UseShortUserNames</code> registry could only be used to control the behavior of Telnet.	UniRPCD
UNV-30178	Python. Starting with UniVerse 11.3.3, the version of python that comes bundled with UniVerse is 3.9.2. Note: For AIX, a minimum level of 7100-04-06-1806 and 7200-02-02-1806 is recommended to ensure Python functions correctly.	Python

Fixes

Issue number	Description	Component
UNV-25996	<p>Prior to this release, under certain conditions the AUDIT logging <code>uvaudd.errlog</code> file could be filled with an excessive number of warning messages similar to:</p> <pre>WARNING: 2020/11/23 21:56:55 pctrl[503] reclaimed, was held by process 6647.</pre> <pre>WARNING: 2020/11/23 21:56:55 pctrl[505] reclaimed, was held by process 6649.</pre> <p>This issue has been resolved in the current release.</p>	Audit Logging, Security
UNV-26910	<p>Prior to this release, under certain conditions the <code>ENCRYPT . INDEX</code> command may have partially encrypted the index. This would result in some portions of the index still being stored in clear text. This issue has been resolved in the current release.</p>	Automatic Data Encryption, Security
UNV-28361	<p>Starting with this release, the <code>uvdiag</code> script has been updated to version 5.3.0 for UNIX and Linux platforms.</p>	Support Tools
UNV-28651	<p>Prior to this release, a BASIC program which ran out of memory could terminate the UV session and drop to the shell level with no error message reported. In the current release, the program will generate a runtime error indicating insufficient memory is available and drop to TCL. The error will also be recorded in the UniVerse <code>errlog</code> file including the user, account, program, and line number of the failure. This issue has been resolved.</p>	Server Process
UNV-28922	<p>Prior to this release, using the <code>BCI SQLerror</code> call could have intermittently resulted in the process terminating with a core dump. This was a memory related issue which has been fixed in the current release.</p>	BCI
UNV-29797	<p>Prior to this release, the <code>ENCODE BASIC</code> function could terminate the <code>uvsh</code> session with a core dump if the result variable contained an integer. This issue has been resolved in the current release.</p>	U2 Basic
UNV-29802	<p>Prior to this release, the <code>!EDIT . INPUT</code> subroutine may have incorrectly returned control characters when called while <code>COMMAND.EDITOR</code> mode was ON. This issue has been resolved.</p>	TCL Tools
UNV-29902	<p>Prior to this release, repeatedly entering and exiting a Python shell from UniVerse could result in process delays. This behavior was related to a Python history file being updated on entry and exit. As the file grew in size, each subsequent invocation would lead to slower and slower processing. This issue has been resolved.</p>	Python
UNV-29931	<p>Prior to this release, the execution of the <code>MERGE . LIST</code> command could result in small memory leaks. This could be an issue when executed repeatedly in a long running background process. The memory leak issue has been resolved in the current release.</p>	TCL Tools
UNV-30073	<p>Solaris only. In the 11.3.2 release, the <code>LD_LIBRARY_PATH</code> environment variable required the inclusion of <code>\$UVHOME/bin</code> and <code>\$UVHOME/python/lib</code> in order for python to work correctly. This is no longer a requirement in the current release.</p>	Python

Issue number	Description	Component
UNV-30167	Windows Only. Starting with 11.3.2, BASIC functions working with PKCS#12 certificates such as <code>addCertificate()</code> , <code>analyzeCertificate()</code> , and <code>setPrivateKey()</code> failed to work correctly. This issue has been resolved in the current release.	Security, SSL, U2 Basic
UNV-30170	Prior to this release, the SQL <code>UPDATE</code> command may have stored incorrect information under specific conditions. The conditions include updating a numeric multivalued field. If the first value in the update string was a negative decimal number, the decimal scaling of the multivalues in the field would be applied incorrectly. This issue has been resolved in the current release.	SQL
UNV-30172	Prior to this release, when auditing was enabled and the syslog logging type was used, if <code>AUDIT_LOG_MAX</code> was greater than 1, then the auditing daemon could crash and write incorrect entries into the log file. This issue has been resolved.	Audit Logging
UNV-30202	Beginning with 11.3.2, new BASIC functions were added for UTC Datetime and Geospatial functionality. This new functionality was added to the Linux and Solaris platforms only. In the current release, code compiled on a Linux or Solaris platform using the new opcodes will be recognized on other 11.3.3 platforms. When these new opcodes are encountered at runtime, a warning message will be displayed indicating the new functions are not yet supported on that platform.	U2 Basic
UNV-30286	Prior to this release, changing the Python console size could cause the execution of the <code>PYTHON</code> command in a UV process to terminate the session. If the console size was changed after using <code>PYTHON</code> , a subsequent invocation of <code>PYTHON</code> would terminate the session. This issue has been resolved in the current release.	Python
UNV-30335	Windows only. Prior to this release, an encrypted index was incorrectly stored in <code>&KEYSTORE&</code> with a Unix style pathname (for example, <code>C:/U2/UV/HS.SALES/I_CUSTOMER/INDEX.000</code>). This issue has been resolved in the current release.	Automatic Data Encryption
UNV-30363	Prior to this release, the BASIC compiler did not produce valid object code for the <code>openSecureSocket()</code> function. This could result in process core dumps or unexpected results when running the BASIC program. Further, using <code>VLIST</code> on the program could also cause a core dump. This issue has been fixed in the current release.	U2 Basic

Rocket UniVerse 11.3.2

This section provides information on the important updates, new features and customer issues that were fixed in Rocket UniVerse 11.3.2.

Important updates and new features in Rocket UniVerse 11.3.2

This section provides information on the important updates and new features in Rocket UniVerse 11.3.2.

Replication of Sequential I/O

Replication has been enhanced to include the replication of Sequential I/O. This means that for existing installations already running Replication, additional I/O may now be replicated. If the application performs sequential I/O on a file that is replicated either in an ACCOUNT level group or explicitly in a FILE level group, the sequential I/O updates will now be replicated. See the *U2 Data Replication User Guide* for more information.

OpenSSL 1.1.1 support

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

- Using EDA with the MS SQL ODBC driver on Linux requires a minimum driver version of 17.4. Changes made in the MS SQL ODBC driver in version 17.4 allow it to work with OpenSSL 1.1.1.
- The upgrade to OpenSSL 1.1.1 includes support for TLSv1.3. When connecting to an 11.3.2 server with a client which does not support TLSv1.3, the connection may fail. In this situation, TLSv1.3 support should be disabled in the uvconfig file.

See the *Security Features User Guide* and *BASIC Commands Reference* manual for more information.

Default Root Certificate

A default root certificate with basic protection is now available. The `UPDATE .CER` command has been added for installing the certificate. See the *Security Features User Guide* and the *BASIC Commands Reference* manual for more information.

EDA Support for MySQL and Postgres

Windows and Linux versions of UniVerse now support the use of EDA with MySQL and Postgres. See the *EDA Reference Guide* for more information.

RHEL 8 support

UniVerse 11.3.2 is supported on RHEL 8. This requires that the libraries `libnsl.x86_64` and `compat-libs.x86_64` be installed on the system. The installation script will confirm these libraries exist before proceeding with the installation. If they do not exist, a message will be displayed indicating the libraries should be installed before restarting the installation process.

Python version 3.7

Python version 3.7 is now bundled with this release of UniVerse and supported on the AIX, Linux, Solaris Sparc, Solaris X86, and Windows platforms.

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

For more information on the Python Version 3.7 upgrade, see the *Python User Guide*.

Index based triggers

The new keyword *ALL.NULLS* has been added to the `CREATE . INDEX` command to support the use of an index subroutine to perform trigger like behavior. The *ALL.NULLS* keyword indicates the index will not contain any data and a `BUILD . INDEX` is not required. The index can be used immediately after creation. Attempting to run `BUILD . INDEX` on an *ALL.NULLS* index will exit with a message indicating a build is not required.

The `BASIC INDICES ()` function has been modified to support this new feature. Two new values are returned in field 1 of the dynamic array returned by the `INDICES (filename, indexname)` function. Value 18 can contain a 'Y' or 'N' to indicate whether the index is an *ALL.NULLS* index. Value 19 will contain the same information for each part file when the file is a distributed file.

See the *BASIC Commands Reference* and *User Reference* manuals for more information.

UTC DATE TIME support

This release contains multiple improvements supporting UTC DATE and TIME. The functionality includes the addition of multiple new conversion codes supporting different date and time formats, a new @-variable to specify the time zone, and new BASIC functions supporting this functionality. See the *BASIC Commands Reference* and *BASIC User Guide* manuals for more information.

Geospatial support

The new `GCDISTANCE ()` function has been added to BASIC. The function calculates the distance between two points based on supplying the longitude and latitude coordinates of each point. See the *BASIC Commands Reference* manual for more information. Note, this functionality is not currently available on Windows platforms.

TCL online HELP

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

UniVerse 11.3.2 Fixes

The following customer issues were fixed in UniVerse 11.3.2

Issue number	Description	Component
UNV-16597	Beginning with this release, Sequential I/O performed with BASIC statements such as <code>OPENSEQ</code> and <code>WRITESEQ</code> to a published file is now replicated to the subscriber. Note, if Replication was already running on an earlier release, updates which were not previously replicated may now be replicated if the application uses Sequential I/O.	Replication
UNV-17602	Beginning with this release, the <code>ALL.NULLS</code> keyword has been added to the <code>CREATE . INDEX</code> command. The <code>ALL . NULLS</code> keyword is used when the index will never contain any data. This would be the case when using an index to perform trigger like functionality. When the <code>ALL.NULLS</code> keyword is used, a <code>BUILD . INDEX</code> is not required and the index can be used immediately. The BASIC <code>INDICES ()</code> function has been updated to include information on whether an index is an <code>ALL.NULLS</code> index.	Indexes, Performance
UNV-17732	Previously, the <code>MAKE . MAP . FILE</code> command incorrectly produced <code>Cannot read file</code> error messages when processing GCI entries in the catalog space. This issue has been resolved by eliminating these messages.	General Call Interface, TCL Tools
UNV-23644	Beginning with this release, an EDA driver for Postgres is available on the Linux and Windows platforms.	External Database Access, Replication
UNV-23690	Beginning with this release, the <code>RUNPY</code> command in UV shell supports command line arguments.	Python
UNV-25032	Prior to this release, the <code>BUILD . INDEX</code> command leaked memory when the <code>CONCURRENT</code> keyword was used. Depending on the size of the index, the <code>BUILD . INDEX</code> command could exit unexpectedly due to running out of memory. This issue has been resolved.	Indexes
UNV-26101	Previously, when an <code>HTTP 4xx</code> status code was encountered, <code>callHTTP</code> would only return code 400 with no additional information. Beginning with this release, full responses from <code>HTTP 4xx</code> status codes are returned from the web server. This modification enhances the ability to troubleshoot requests returning 4xx status codes.	Error Reporting, U2 Basic - CallHTTP
UNV-26488	Beginning with this release, we always use utf-8 encoding to transfer strings between BASIC and Python regardless of whether the NLS is on or off. The <code>uvmark</code> is converted to the <code>uvutf-8</code> mark during the transfer.	Python
UNV-26564	Previously, the command failed when trying to RUN a BASIC program from Python. This issue has been resolved.	Python
UNV-27283	Previously, with NLS enabled, using the <code>format</code> function in Python with a dynamic array consisting of Chinese characters did not work. This issue has been resolved.	National Language Support
UNV-27425	Beginning with this release, the <code>PORT . STATUS</code> command in UV shell and <code>port.status</code> system command support reporting level 1 python callstack for the <code>LAYER.STACK</code> option.	Python, TCL Tools, U2 Basic

Issue number	Description	Component
UNV-27537	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 <code>u2py.File.fileinfo</code> function can provide a lot of information about an open file.	Python
UNV-27656	With the current release, the uvcleanup daemon is now able to decrement the reference count of a shared RD group lock when a user is terminated unexpectedly. Previously, if the terminated user was not the current owner of the RD lock, the reference count would not be decremented. This could result in a persistent RD group lock blocking other operations until the lock was manually released. The lock table now has information on the users sharing the RD lock allowing uvcleanup to handle shared RD lock cleanup.	Locking
UNV-27703	Beginning with this release, support for the combined date and time datatype (datetime) has been expanded. This implementation is supported by several new BASIC functions (NOW, TODATE, TODATETIME, TOTIME), the DT conversion code which has several new options, and the new @TZ (timezone) @-variable.	U2 Basic
UNV-27704	Beginning with this release, when NLS is on and Python encoding is UTF-8, the uv marks are converted to uvutf-8 marks and passed with the u2string from BASIC to Python as a python string correctly through the UniBasic Python API function.	National Language Support, Python
UNV-27715	<p>A problem was found with the new DT conversion code introduced at the 11.3.1.6023 release. When using <code>ICONV()</code> with dates in January or selective month end dates (for example 03/31/90), the internal date was incorrectly returned as the empty string. This issue has been resolved.</p> <p>Note: A related problem exists that impacts the Windows version of UniVerse only. Certain daylight saving time dates prior to 1986 are not handled correctly by the Windows function used to perform the conversion. The converted value might be off by one hour. This is due to the Windows function not accounting for historical changes in the start and end date of daylight saving time. A resolution for this behavior will be researched.</p>	U2 Basic
UNV-27733	Beginning with this release, UniVerse has been upgraded to support OpenSSL version 1.1.1 on all platforms. This includes AIX, HP, Linux, Solaris Sparc, Solaris X86, and Windows.	Security, SSL
UNV-27772	Previously, device-licensed connections could not use the Python integration because the OS-level environment variables were not set up. This issue has been resolved.	Device Licensing, Python
UNV-27775	Beginning with this release, Python version 3.7 is bundled with UniVerse on AIX, Linux, Solaris Sparc, Solaris X86, and Windows.	Python
UNV-27798	Previously, when executing a command similar to <code>u2py.run("runpy PP filename.py")</code> , the command would run successfully but subsequent commands would crash unexpectedly. This issue has been resolved.	Python

Issue number	Description	Component
UNV-28152	Prior to this release, the colon (:) character in a BASIC <code>CallHTTP</code> request would be encoded to '%3A'. This could cause failures when connecting to certain sites. In the current release, the default behavior is to not encode the colon character. If there is a requirement to encode the colon character, the environment variable <code>COLON_ENCODES</code> can be set.	U2 Basic - CallHTTP
UNV-28153	Prior to this release, the <code>uvcleanupd</code> daemon was unable to clear a semaphore lock if the semaphore lock did not have an owner. With the current release, the <code>uvcleanupd</code> daemon is now able to clear incorrectly held semaphore locks when the owner is 0. This issue has been resolved.	Locking
UNV-28179	Beginning with this release, a default self-signed root certificate is now available. This can be setup during the UniVerse installation or afterwards using the new <code>UPDATE .CER</code> command. The certificate can be used to deploy Rocket SSL-capable products. This feature is available on AIX, HP, Linux, Solaris Sparc, Solaris X86, and Windows.	Installation, Security, SSL
UNV-28185	Prior to this release, the behavior of the BASIC <code>GET</code> statement was inconsistent when used with <code>TIMEOUT</code> on an NLS enabled system. The <code>GET</code> statement might timeout at an interval different from that specified in the <code>TIMEOUT</code> statement. This issue has been resolved.	National Language Support, U2 Basic
UNV-28186	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. This issue has been resolved in the current release. The structure of the dynamic object table was modified to significantly improve the time to access information about the replicated file.	Files - Dynamic, Performance, Replication
UNV-28270	Windows only. Prior to this release, the BASIC <code>XDOMLocate</code> function could crash when encoding was set to UTF-8 by the <code>XMLSETOPTIONS</code> command. This issue has been resolved.	U2 Basic - XDOM API
UNV-28275	Beginning with v11.3.1.6023, the new conversion code, DT, was introduced to work with <code>TIMESTAMP</code> formatted data. When using <code>ICONV</code> , if the input time was within a daylight savings time period, the input converted value was off by 1 hour. This issue has been resolved.	U2 Basic
UNV-28279	Previously, Phantom processes were slower to start at v11.3.1 on some platforms compared to earlier releases. This issue has been resolved.	Performance SSL
UNV-28293	Beginning with this release, an EDA driver for MySQL is available on the Linux and Windows platforms.	External Database Access
UNV-28307	Beginning with this release, when converting a UniVerse file to an EDA file, the size of the EDA file is reduced from 132K to 3K.	External Database Access

Issue number	Description	Component
UNV-28310	Resolved the @U2PY issue where the level remained the former value after the previous python related operation was performed.	Python, U2 Basic
UNV-28317	Resolved the python upgrade issue that occurred when the old python home existed in the destination path.	Python
UNV-28324	Windows only. Prior to this release, if the UniRPC Service was started as a user other than SYSTEM, the output of LISTU reports UniRPC connections with ownership as the user starting the service. With this release, the LISTU results will show the correct username. Note: If SYSTEM is not used as the starting process, the XAdmin Telnet Configuration functionality will not work on UAC-enabled systems. This is because write permissions are needed to access the UniVerse registry keys.	UniRPCD
UNV-28328	Prior to this release, a python str converted from u2py.DynArray in python could be passed back to BASIC as a BASIC array. This issue has been resolved.	Python
UNV-28339	Previously, executing the AE command incorrectly displayed an informational message indicating that AE was a beta release. This issue has been resolved.	Editor - ED
UNV-28358	Fixed the RUNPY command line option which did not work properly on Q-pointer files or linked files to another account.	Python
UNV-28359	Added the name and path attributes to the u2py.File object.	Python
UNV-28363	Prior to this release, calling the PyCallFunction from a BASIC program could cause a UV abort. This issue has been resolved.	Python
UNV-28364	Prior to this release, the u2py.config.encoding option could be overwritten the first time the Python program was run, resulting in different results during the handling of the uvmark with the same u2py.DynArray. This issue has been resolved.	Python
UNV-28366	Changed the temporary file path location when capturing the output in the u2py.Command.run function from the current account directory into the value of the UVTEMP uvconfig items or the TMP (Windows) /TMPDIR (UNIX) environment variable (when UVTEMP is not available).	Python
UNV-28423	Previously, if a uvbackup process completed after midnight, the elapsed time would display as a negative value. This issue has been resolved.	Backup Tools
UNV-28426	Beginning with this release, the INPLACE option of RESIZE is no longer a valid option. A syntax error will be produced at the current release if the INPLACE option is used.	File Tools
UNV-28427	Starting with this release, the date format will now work on Era years. For example: SET .LOCALE TH-THAI *The current Era year is 08/4/2561 CRT OCONV (DATE () , 'D2 /DMN ') The Era year is output by two digits (08/4/61).	National Language Support

Issue number	Description	Component
UNV-28428	Beginning with this release, the UniVerse Online Help information accessed with the <code>HELP</code> command has been updated to sync with the current documentation set.	Documentation
UNV-28429	Starting with this release, the <code>BIT</code> field has been added to the <code>STAT . FILE</code> file used by the <code>ACCOUNT . FILE . STATS</code> command. This new field will indicate if the file is a 32-bit, 64-bit, or directory file, respectively with the values 32, 64, and <code>DIR</code> .	File Tools
UNV-28430	Beginning with this release, for both publisher and subscribers, the <code>DATA VOC</code> file will always be loaded into the account-level group if one exists. This will override configuring a <code>FILE=DATA VOC</code> phrase in a file-level group. This change ensures that <code>VOC</code> file updates will be replicated in the correct group.	Replication
UNV-28432	Beginning with this release, the <code>CLEANUP</code> semaphore option has been added to the <code>UNLOCK</code> command. When the "CLEANUP is cleaning up dead processes" message is persistent (indicating a problem), the " <code>UNLOCK CLEANUP SEMAPHORE</code> " command can be used to release the semaphore lock.	Server Processes
UNV-28433	Previously, the "MT" conversion specification of <code>ICONV ()</code> may not have worked correctly on UniVerse NLS-enabled databases. If <code>NLSLCMODE</code> was set to 1 and a locale was enabled, the <code>ICONV ()</code> function incorrectly returned the empty string. This issue has been resolved.	National Language Support, U2 Basic
UNV-28434	Starting at this release, when using the <code>COUNT {EDA filename}</code> command on an EDA file, a <code>SELECT COUNT (*) FROM file</code> statement is sent to an external database where the count is performed. The modification improves the <code>COUNT {EDA filename}</code> command performance.	External Database Access, Performance
UNV-28435	Previously, the <code>@LOGNAME</code> variable was not properly initialized to the user making the UVnet connection. This issue has been resolved.	Security, UV/Net
UNV-28436	Previously, the <code>MASTER</code> command did not allow the entry of either negative or positive values to identify the user number. At the current release, the absolute value of the number supplied is used to identify the user in the LCT table, which resolved this issue.	TCL Tools
UNV-28438	Previously, a semaphore could become locked when using the <code>RECORDLOCKED</code> function in a continuous tight loop and aborting the process with a <code>Ctrl+C</code> (or similar interrupt). This prevented users from logging in and out, or accessing the UniVerse lock table. This issue has been resolved.	Locking
UNV-28439	Windows only. Starting in UniVerse 11.3.1, the values generated for <code>INODE</code> exceed the default column width of the <code>LIST . READU</code> command and the full value is not displayed. Using the truncated value displayed by <code>LIST . READU</code> with the <code>UNLOCK</code> command would fail. The <code>DETAIL</code> option of <code>LIST . READU</code> can be used to display the full <code>INODE</code> value.	Locking
UNV-28440	Previously, the <code>XDEMO</code> example program <code>FINDWAREHOUSE_PYFUNC</code> 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

Issue number	Description	Component
UNV-28441	Beginning with this release, the <i>INFORM</i> option of <code>LIST . INDEX</code> will display whether an index is 32-bit or 64-bit, the index size, and when the index was last built. In NLS mode the index build date is not available and will show N/A in that column.	File Tools, Indexes
UNV-28442	UNIX/Linux only. Previously, when starting <code>uv.load</code> as root, attempting to select <code>uvadm</code> as the owner would fail if <code>uvadm</code> was a PAM/LDAP user. This capability is now allowed. Note: Previously, this functionality would work if you started the script as <code>uvadm</code> instead of root.	Installation
UNV-28443	Beginning with 11.3.1, the <code>ps</code> results on UNIX for the <code>uv</code> , <code>uvsh</code> , <code>uvdls</code> , and <code>uvsh.d</code> executables included a full path that was different from prior releases. Starting with this release, the results have been restored to the behavior that existed prior to the 11.3.1 release.	Server Processes
UNV-28444	Prior to this release, if the <code>SYS.UTILITY</code> Audit Logging event was enabled, UniVerse spooler commands (such as <code>usa</code> or <code>usm</code>) would be incorrectly executed twice. This issue has been resolved.	Audit Logging
UNV-28445	Beginning with this release, the <code>USE_PYTHON_DICT</code> example BASIC program has been added to the <code>XDEMO</code> account.	Python, U2 Basic
UNV-28446	Starting with this release, the <code>XDEMO</code> account has been updated to version 3.1.4. This includes a fix for repeated calls to the <code>FINDWAREHOUSE_PYFUNC</code> program.	Python
UNV-28447	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. Starting with this release, 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
UNV-28448	Previously in UniVerse 11.3.1, the " <code>analyze.shm -p</code> " command could core dump. This issue has been resolved with the current release.	Server Processes
UNV-28449	Beginning with 11.3.1.6004, the BASIC <code>LOCATE</code> function did not work properly when locating text strings that began with the <code>'</code> character. These strings would incorrectly match strings without the leading <code>'</code> character. This issue has been resolved.	U2 Basic
UNV-28450	Previously, the child <code>usd</code> process spawned to print a UniVerse job on UNIX might not have exited and instead remained as a defunct process. This issue has been resolved.	Server Processes
UNV-28451	Previously, attempting to add a password to an ADE master key generated via <code>SYSGEN</code> incorrectly failed with a message indicating that the master key had changed. This issue has been resolved.	Automatic Data Encryption
UNV-28455	Starting with this release, the <code>uvdiag</code> script has been updated to version 5.2.1 for UNIX and Linux platforms.	Support Tools
UNV-28456	Starting at 11.3.1, the BASIC <code>RND ()</code> function generated a warning when its argument was an integer greater than 32 bits. This issue has been resolved.	U2 Basic

Issue number	Description	Component
UNV-28457	<p>Starting with this release, the following new <code>uvconfig</code> parameters were added to support Audit Logging enhancements:</p> <p><code>AUDIT_LOG_COMPRESS</code>: If the value is 1, the log data will be compressed block by block when data is output from the system buffer to sequential log files.</p> <p><code>AUDIT_LOG_START_DISABLED</code>: Determines whether audit logging is disabled after UniVerse is started.</p> <p><code>AUDIT_LOG_MSG_LEVELS</code>: Controls the type of messages are output to audit logging message files.</p>	Audit Logging
UNV-28458	<p>Prior to this release, when using a <code>SELECT</code> statement with the <code>CURRENT_DATE</code> keyword in SQL-style queries, when the field being compared was an indexed field, the index was not used to resolve the query. For example, for the following statement:</p> <pre>SELECT @ID FROM TEST WHERE ATYPE=CURRENT_DATE;</pre> <p>If <code>ATYPE</code> was a multivalued field, <code>CURRENT_DATE</code> returned nothing.</p> <p>This issue has been resolved.</p>	Indexes, SQL
UNV-28459	<p>Starting with this release, <code>HS.OLEDBINFO</code> now supports the <code>BASE TABLE</code> table type allowing the <code>BASE TABLE</code> parameter to be used with the <code>JDBC getTables()</code> method.</p>	SQL
UNV-28460	<p>Windows only. Previously, the resize operation might have failed to copy the temporary resize file to the original file if the file was opened by another user. This issue has been resolved by ensuring that the resize operation has exclusive access to the file before proceeding.</p>	File Tools
UNV-28461	<p>Previously, if a <code>WRITE</code> operation failed to complete the index update portion of the write, the <code>WRITE</code> failure message provided no indication that the failure was related to the index file.</p> <p>Starting with this release, the error message indicates the index update failure and warns that the index and data file might now be out of sync.</p> <p>Example:</p> <pre>Program "UNV24630": Line 3, WARNING: WRITE failure on index file /disk1/uvtest/ I_TEST/INDEX.000, index may no longer be synchronized with file TEST.</pre>	Indexes, U2 Basic
UNV-28462	<p>Previously, when a file was deleted normally, a message indicating that the operation was successful was logged to the UniVerse <code>errlog</code> file. At sites where the <code>DELETE.FILE</code> operation was frequent, these messages cluttered the error log file making it difficult to detect real errors. This issue has been resolved by eliminating the successful delete file messages from <code>errlog</code>.</p>	Error Reporting

Issue number	Description	Component
UNV-28465	Beginning with this release, the new <code>TCL REINIT . PYTHON</code> command has been added to control the re-initialization of the Python environment. The available options to the command are <code>ON/OFF/STATUS</code> . The default value is <code>ON</code> . The <code>STATUS</code> option shows the current setting.	Python
UNV-28466	Windows only. Prior to this release, a cross-domain login was always allocated a negative user number and the UniVerse login cache was not used. This caused each login attempt for the user to be slow because the advantages of the login cache were not available. This issue has been resolved.	Telnet
UNV-28467	Previously, using the <code>SYSADM</code> menus to designate programs to run in shared memory could fail with an abnormal termination. This issue has been resolved.	Shared Memory
UNV-28468	Previously, the <code>AE</code> command did not work on the Solaris x86 platform. This issue has now been resolved.	Editor - ED
UNV-28469	Starting with this release, the <code>FILE . USAGE</code> commands are now available to be used with dynamic files.	Files - Dynamic
UNV-28470	Beginning with this release, UniVerse provides the ability to upgrade to a newer minor revision level of OpenSSL without the requirement of a new UniVerse version. An environment variable can be used to define the location of the new OpenSSL library or a file in <code>uvhome</code> can define the location. The location defined by either method will become effective when UniVerse is started. A <code>CONFIG ALL</code> enhancement has been added to display the version of the OpenSSL library that is currently in use. This functionality is not available on AIX. On AIX the new OpenSSL libraries would replace the UniVerse supplied libraries in <code>uvhome/bin</code> .	SSL
UNV-28487	Previously, after the <code>BUILD . INDEX</code> command was run with the <code>CONCURRENT</code> option, a <code>DELETE . INDEX</code> command did not remove the associated index directory. Information logging files were created in the index directory when the <code>CONCURRENT</code> option was used. This issue has been resolved and the log files are now removed with the <code>DELETE . INDEX</code> command.	Indexes
UNV-28488	Previously, when a process that is a member of the <code>uadm</code> group spawned a phantom, the parent process was unable to use the <code>renice</code> command to lower the priority of the phantom. This issue has been resolved.	UVADMIN (non-root command line or Motif)
UNV-28497	Support for RHEL/CentOS 8 has been added for this release. This requires that the libraries <code>libnsl.x86_64</code> and <code>compat-libs.x86_64</code> be installed on the system. The UniVerse installation script will confirm these libraries exist before proceeding with the installation. If they do not exist, a message will be displayed indicating the libraries should be installed before restarting the installation process.	Installation
UNV-28540	Prior to this release, <code>UDO BASIC</code> functions were not handling large integer values correctly in all cases. This issue has been resolved in the current release. Integer input data in the range -2^{64} to 2^{64} will be treated as 64bit integers.	U2 Basic, U2 Basic - U2 Dynamic Objects

Issue number	Description	Component
UNV-28569	Beginning with this release, the geospatial <code>GCDISTANCE</code> function has been added to BASIC. This function will calculate the distance between two points on the earth by providing the latitude and longitude of each point.	Performance
UNV-28600	In some cases, the memory allocated for RAID execution has been increased again to better handle debugging when indexed complex I-Types are used. This was previously changed via UNV-24653 on UniVerse 11.3.1.	Debug Tools, U2 Basic
UNV-28609	Previously, if the Intercall <code>ic_replace</code> function was used to replace an array element with the empty string, the Intercall client could core dump. This issue has been resolved.	InterCall
UNV-28612	Previously, the <code>UV_USERNO</code> environment variable was set to empty by <code>RUNPY</code> and <code>u2py.File()</code> . This issue has been resolved.	Python
UNV-28642	Previously, a dynamic file split/merge operation may have left a record lock set on the incorrect group. The problem was a timing issue related to updating the dynamic file information in the T30FILE table. The issue has been resolved with this release.	Replication
UNV-28643	Linux only. Beginning with this release, the UniVerse install process will insert the line <code>/usr/lib64</code> at the beginning of the <code>"/etc/ld.so.conf.d/UniVerse.conf"</code> file. This will avoid problems resulting from OS level commands using libraries in <code>uvhome/bin</code> .	SSL
UNV-28666	Previously, the BASIC <code>FMT</code> function in NLS did not work with Chinese characters. This issue has been resolved.	National Language Support
UNV-28682	Beginning with this release, cipher suites supporting TLSv1.3 are available.	Security
uNV-28749	In many certificates, the CN or SubAltName can contain a wildcard (*). For example: A certificate from <code>www.att.com</code> has CN name <code>*.att.com</code> . Previously, the SSL connection would fail if the authentication rule for peer name was <code>www.att.com</code> . This issue has been resolved.	Security
UNV-28861	Starting with 11.3.1, the BASIC <code>RND()</code> function generated a warning when its argument was an integer greater than 32 bits. This issue has been resolved.	U2 Basic

Rocket UniVerse 11.3.1

This section provides information on the important updates, new features and customer issues that were fixed in Rocket UniVerse 11.3.1.

Rocket UniVerse overview

This section provides information about the customer issues and enhancements made for UniVerse 11.3.1.

Important news at this release

UniVerse 11.3.1 includes several enhancements and changes that may demand additional system resources on some platforms. Internal tests showed the following results when testing memory usage. The results you encounter will vary depending on your operating system platform, the amount of users on your system, and overall usage. These results are not guaranteed.

- Due to the 10 KB user printer memory segments moving inside the main UV disk memory segment, the size of the segment has increased ($NUSERS * 10240$). This change and the changes to the default `uvconfig` file settings (for parameters such as `NUSERS`, `SHM_GNTBLS`, and `SHM_GNPAGES`) may increase overall shared memory usage by 60% from the 11.2.5 defaults based on the number of users configured. For systems over 256 users, these changes will have no impact on shared memory usage over the 11.2.5 release.
- When the `uvconfig` file parameter `PERF_MON_MODE` is set to 1 (default) for the SystemCure agent and the CURE add-on is licensed, memory usage increased from 30 MB to 1.9 GB depending on the platform, with the largest increase seen on Linux and HP. The increase in memory is due to the use of Java in the product and results can vary between Java 7 and Java 8. If SystemCure for UniVerse is not used, there is no impact.
- Memory usage of core daemons (`uvsmm`, `uvcleanupd`, `usd`, `uvdlockd`, and `unirpcd`) increased 2-13% on all platforms except AIX. On AIX, the daemons saw a 4% improvement in memory.
- The `uvsh` memory on HP and Linux platforms increased by 9%. On Windows, the `uvsh` memory increased by 17%. AIX showed an improvement of 12%, Sun Sparc by 10%, and Sun Intel by 4%.

At the 11.3.1 release, the Data Replication protocol level has changed. When upgrading an existing Data Replication system from 11.2.x to 11.3.1, consider the following important information:

- Both the publisher and subscriber systems must be upgraded to the 11.3.1 release in order for Data Replication to function.
- The replication logs from releases prior to 11.3.1 are not compatible with the 11.3.1 release. Before upgrading to 11.3.1, the publisher and subscriber systems should be in sync. That is, there should be no pending logs to be applied to any subscriber system.
- After performing the upgrade, the following steps should be performed before starting the UniVerse database:
 - Update the `uvhome/repstys` file to make sure the `VERSION` phrase is set to 113. The install script updates the local machine but remote machines will likely need to be updated.
 - Delete the hidden file `uvhome/.uvrepstyslog`.
- UniVerse can now be started with the `-init` option on the relevant publisher and subscriber systems.

UniVerse users now share a common pool of memory segments across all users. Previously, users had their own printer segment. Please review the section in the *New Features Guide* called "UniVerse user number assignment and management" before upgrading to 11.3.1.

Starting at UniVerse 11.3.1, UniVerse builds are 64-bit only on all platforms. As a consequence, Windows 2003 Server, Windows XP, and Windows Vista are no longer supported platforms. The Linux base platform is now RHEL 6.0, so 5.x is no longer supported.

GCI Libraries for Windows platforms must be 64-bit at release 11.3.1. Windows processes are created as either 32-bit or 64-bit. A 64-bit process would not be able to link to a 32-bit .dll and vice versa. Given this restriction, any existing 32-bit GCI libraries must be rebuilt as 64-bit in order to be accessed by the 64-bit versions of UniVerse.

Administering UniVerse on Windows and UNIX Platforms has been updated to remove the information about the outdated UniVerse Replication feature. Refer to the *U2 Data Replication User Guide* for more recent capabilities.

Beginning at 11.2.5, UniVerse supports the following security protocols:

- SSLv3
- TLSv1
- TLSv1.1
- TLSv1.2

The following protocols are enabled by default:

- TLSv1.1
- TLSv1.2

To enable any of the other protocols, make changes to the following locations:

- `uvconfig` (SSL_OPTIONS)
- `inetd.conf` (-P option) for UNIX
- `xinetd.conf` (server_args = -P option) for Linux
- `Computer\HKLM\SOFTWARE\Rocket Software\UniVerse\CurrentVersion` (SSL_PROTOCOLS) for Windows

Note: UniVerse 11.3.0 will only allow disabled security protocol TLSv1 to be enabled. SSLv3 is a high-vulnerability threat and most major producers of software that use security protocols have already disabled SSLv3. For more information about these security protocols, refer to the *Security Features Guide*.

UniVerse 11.3.1 Fixes

The following customer issues were fixed in UniVerse 11.3.1 build 6002.

Issue number	Description	Component
UNV-1453	In previous versions, the BASIC LOCATE statement did not handle decimal values correctly when using the numeric sort options AR or DR. This issue has been fixed by now sorting numeric values with decimals correctly.	U2 Basic
UNV-1595	Prior to this release, the transaction cache file created when a transaction exceeded TXMEM was created using the NLSNEWFILEMAP <code>uvconfig</code> file setting when NLS was enabled. The information written to the transaction cache file could be corrupted if NLSNEWFILEMAP was not set to NONE. At the current release, the transaction cache files are always created with a map of NONE, resolving the issue.	National Language Support

Issue number	Description	Component
UNV-1892	Windows and Linux platforms only. Prior to this release, when performing a <code>TOXML</code> with a <code>LIST</code> statement on a file that has attributes that are F correlatives, a core dump could result. This issue has been resolved.	Query, XML
UNV-1916	Starting at this release, the <code>CREATE . INDEX</code> , <code>BUILD . INDEX</code> , and <code>DELETE . INDEX</code> commands will restore the original HUSH value after processing is complete. A <code>BRIEF</code> option is available for these commands. For <code>CREATE . INDEX</code> and <code>DELETE . INDEX</code> , <code>BRIEF</code> suppresses screen display. For the <code>BUILD . INDEX</code> command, it will skip a check to see whether the dictionary item has changed since the last build of an index.	Indexes
UNV-1952	A new routine named <code>*HS.WRTFINFO</code> is available. This routine updates the UniVerse account's file information cache (<code>.hs_fileinfo</code>) needed for ODBC access to the account's database files. The routine updates the file information cache based on files specified in the <code>HS_ENABLED_FILES</code> select list. An entry will also be created in <code>HS_FILE_ACCESS</code> for each file in the select list with permission <code>"READ_WRITE"</code> . The <code>*HS.WRTFINFO</code> routine is run at TCL within the UniVerse account.	SQL
UNV-1999	Prior to this release, using the <code>ANALYZE . FILE</code> command on dynamic files might have resulted in negative load factors being reported. This issue has been resolved.	File Tools
UNV-2639	The help information for the <code>fixtool</code> utility has been updated to display the options available for the utility. The <code>fixtool -help</code> command no longer displays a message indicating incorrect number of arguments. The command now only displays the help information.	Files - Corruption

Issue number	Description	Component
UNV-2696	<p>Beginning at this release, new TCL commands are available related to the currently existing TANDEM command. Individual UniVerse sessions can change the default TANDEM behavior. To allow a session to be used by TANDEM, use the <code>ENABLE . TANDEM</code> command. To forbid the session from becoming used by TANDEM, use the <code>DISABLE . TANDEM</code> command. When the <code>DISABLE . TANDEM</code> command is used with the <code>FORCE</code> option, the TANDEM connection is broken if it is already used by TANDEM. When an active connection is present, but the <code>FORCE</code> option is not used, <code>DISABLE . TANDEM</code> prints the following message:</p> <pre>TANDEM operation is disabled. However TANDEM connection currently active (consider using FORCE option to disconnect the connection).</pre> <p>You can check whether a session is used by TANDEM by using the <code>GET . TANDEM . STATUS</code> command. <code>GET . TANDEM . STATUS</code> returns 0 if the session is not used, or a pid if the session is used. The pid is the process ID of the TANDEM process.</p> <p>If the target UniVerse session has TANDEM disabled and the TANDEM process tries to connect to that session, TANDEM reports the following message then exits:</p> <pre>Requested session has TANDEM operation disabled.</pre> <p>If the target UniVerse session interrupts the TANDEM connection by using the <code>DISABLE . TANDEM FORCE</code> command, the TANDEM process prints the following message and exits:</p> <pre>User has broken TANDEM connection. TANDEM terminated.</pre> <p>Finally, a new <code>uvconfig</code> file parameter has been added at this release: <code>TANDEM_FLAG</code>. This parameter specifies whether TANDEM can be used to connect to other sessions. The default value is 1, meaning the ability to use TANDEM is enabled.</p>	Automatic Data Encryption
UNV-3043	<p>Prior to this release, the <code>fixtool</code> command did not properly recognize syntax errors when using the <code>-start</code> and <code>-stop</code> options. In some cases, no processing would be done and no errors would be reported. In other cases, the entire file could be processed. The syntax errors are now caught and an appropriate error is displayed. This issue is resolved.</p>	Files - Corruption

Issue number	Description	Component
UNV-3391	<p>In this release, UniRPC and UniRPCD supports both IPv4 and IPv6 addresses. IPv6 compatibility provides the ability to create more IP addresses, as IPv4 addresses are running out. In addition, IPv6 utilizes a more secure data package including end-to-end encryption and better name resolution with the Secure Neighbor Discovery (SEND) protocol.</p> <p>Note: UniVerse device licensing is not supported on IPv6 protocols. If you are connected using an IPv6-only client, the <code>uvlictool</code> command displays 127.0.0.1 (localhost) as the IP address. If you are using IPv6 protocols while device licensing is enabled, please contact support@rocketsoftware.com for assistance.</p>	UniRPCD
UNV-3888	<p>Prior to this release, the <code>CREATE . FILE</code> command on a dynamic file only allowed a separation size of 4 or 8. Starting with this release, the separation can be now be a multiple of 2K. The <code>GROUP.SIZE</code> argument can accept values other than 1 and 2 (separation of 2K and 4K) and create the separation as 2K multiples of the specified <code>GROUP.SIZE</code>.</p>	Files - Dynamic
UNV-3970	<p>Previously, using single or double quotes in an I-descriptor expression could cause the <code>BUILD . INDEX</code> process to incorrectly build alternate keys (indexes). This problem has now been resolved.</p>	Indexes
UNV-4013	<p>Prior to this release, the <code>od</code> command syntax used in <code>uv . load</code> to check existing transaction logging log files was incorrect on Linux. This caused syntax errors to be generated during the install process. This issue has been resolved at the current release.</p>	Installation
UNV-4764	<p>Prior to this release, when the <code>PORT . STATUS</code> command is in use and another user tries to run it, the following error displays:</p> <pre>PORT.STATUS is currently being run by another user, try again later.</pre> <p>This message does not allow you to locate the user who is locking <code>PORT . STATUS</code>. Starting with this release, the message has been updated to include the current user information:</p> <pre>PORT.STATUS is currently being run by user #nn, try again later.</pre> <p>Where <code>nn</code> is the user number who is using <code>PORT . STATUS</code>. The <code>TCL LISTUSER</code> command can be used to identify the user.</p>	Locking
UNV-5349	<p>Prior to this release, the Data Replication configuration parameter <code>RW_SKIP_TRIGGER</code>, which allows for running a trigger on the subscriber, was not supported. Support for this functionality has been added at this release.</p>	Data Replication
UNV-5379	<p>Starting at this release, the <code>uvlstt</code> and <code>uvgstt</code> commands have been added. These commands show the percentage of LCTs and GCTs in use on a system.</p>	Shared Memory

Issue number	Description	Component
UNV-5410	Starting at UniVerse 11.3.1, the UniVerse BASIC compiler accepts 64-bit integers in the source code as well as the previously accepted 32-bit integer. 64-bit integer operations are useful in applications that deal with large amounts of data, such as scientific and engineering applications, large databases, and so on. The extended precision of the integer math within BASIC is automatically enabled, 64-bit signed, and allows larger operations in integer mathematics without automatic conversion to floating point arithmetic.	Basic Call Interface, U2 Basic
UNV-5612	Beginning at UniVerse 10.2.12, the <code>BUILD.INDEX</code> program was changed to use the <code>INDICES</code> BASIC function. When the dictionary was not defined as either 'S'ingle or 'M'ultivalued', the index could fail to build and report the following message: <pre>Single-valued field "@Ak.0" not valid with WHEN. SELECT did not complete as expected. Please verify!</pre> This issue has been resolved.	Indexes
UNV-5416	Previously, when the <code>uvlictool</code> command was executed on a large system with more than 999 users, the "seat #" and "pid" columns in the <code>uvlictool</code> output would blend together. This issue is now fixed. The "seat #" column has been increased to five digits and the "pid" column has been increased to eight digits.	Licensing
UNV-5645	Beginning at this release, UniVerse has added a new <code>HMAC</code> function in BASIC. The format of this function is: <pre>hmac= HMAC(hmacAlg, hmacKey, hmacData, [outFormat])</pre> For a full description of this function, see the <i>UniVerse BASIC Commands Reference</i> . The <code>HMAC</code> implementation is in full compliance with RFC 2104. The function returns <code>hmac</code> as the result, whose length is determined by the digest algorithm. For example, for MD5, the length is 16 bytes. For SHA1, it is 20 bytes. For SHA256, it is 32 bytes, and so on. All lengths are for binary format.	U2 Basic
UNV-11321	At this release, the <code>MQI_ErrMsg</code> text file has been added to <code>\$UVHOME</code> . This file will now be used by MQI to report error messages.	MQSeries
UNV-11596	The <code>SYSTEM(105)</code> BASIC function reports on the NLS configuration parameters in the <code>uvconfig</code> file. Prior to this release, the value for <code>NLSDEF SOCKMAP</code> was not reported. At this release, the value of <code>NLSDEF SOCKMAP</code> is reported in attribute 18 of the result. The <code>EQUate</code> value for this parameter is <code>NLS\$DEF SOCKMAP</code> .	National Language Support, U2 Basic

Issue number	Description	Component
UNV-12311	<p>On UNIX and Linux platforms, additional debug versions of some files are now included with the media and installed with the product (but not active by default). These additional files include:</p> <ul style="list-style-type: none"> ▪ <code>usd.d</code> ▪ <code>uvapi_server.d</code> ▪ <code>uvrepmanager.d</code> ▪ <code>uvcleanup.d</code> ▪ <code>uvreptool.d</code> ▪ <code>uvsmm.d</code> <p>This will cause roughly a 5% increase in the size of the installation.</p>	Build
UNV-12317	<p>Prior to this release, the <code>RELATIVE.PATH</code> option of the <code>CREATE . INDEX</code> command would fail if the account path contained a string matching the file name. For example, if the account path was <code>/disk1/TESTACCT</code> and the file name was <code>TEST</code>, the command would fail. This issue has now been resolved.</p>	Indexes
UNV-13646	<p>Starting at this release, the following <code>uvconfig</code> file parameters have been increased (From -> To):</p> <p><code>NUSERS</code>: 64 -> 256</p> <p><code>SHM_GNTBLS</code>: 20 -> 40</p> <p><code>SHM_GNPAGES</code> 32 -> 64</p> <p>Also, when starting UniVerse, <code>NUSERS</code> is changed with the following conditions:</p> <p>If <code>NUSERS</code> > (number of licenses * 2), then <code>NUSERS</code> is used</p> <p>If <code>NUSERS</code> < (number of licenses * 2), then "number of licenses * 2" is used</p> <p>These changes were done to reduce the occurrence of the "No More LCTs" and "No More GCTs" messages. The value in the <code>uvconfig</code> file for <code>NUSERS</code> will only become active after running the <code>uvregen</code> command in the UniVerse home directory. To see the active <code>NUSERS</code> value, run the <code>uvsms -h</code> command. Previously, if <code>NUSERS</code> was less than the number of licenses, it was increased to the number of licenses.</p>	Performance
UNV-13728	<p>Prior to this release, Data Replication 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 timeout and increase overhead. Starting with this release, FILE level replication groups have been limited to look only at the specific files that have been referenced.</p>	Replication
UNV-14411	<p>At this release, error messages written to <code>errlog</code> now include the account path name up to 64 characters. If the path is more than 64 characters, part of the path is replaced with an ellipsis (...).</p>	Server Processes

Issue number	Description	Component
UNV-14457	<p>Starting at 11.1.11, if UniVerse was installed as uvadm, the MASTER OFF command only worked if the target session was also logged in as uvadm, otherwise an error message similar to the following displayed:</p> <pre>Unable to control shared memory ID for MASTER operation.</pre> <p>At this release, the MASTER, UPDATE .ACCOUNT, and MESSAGE commands will be run with an effective uid of 0 which resolves the problem.</p>	UVADMIN (non-root command line or Motif)
UNV-15293	<p>Starting at this release, the INFORM, -INFORM, and -INFORMME options have been added to the LIST . INDEX command. These options list the physical path and physical index file names for each of the requested fields. The additional -INFORM and -INFORMME options were added in case the word INFORM was already used as a field name in a data file. These options can be used with the ALL option of the LIST . INDEX command. When using this option with the ALL option, output is sorted alphabetically by the dictionary field name, not the INDEX.### name.</p> <p>An example output of this command is:</p> <pre>>LIST.INDEX CUSTOMER ALL INFORM Alternate Keys for CUSTOMER Index path: /usr/uv/HS.SALES/I_CUSTOMER File Index INDEX.001 CITY INDEX.002 PRODID INDEX.000 ZIP</pre>	Indexes

Issue number	Description	Component
UNV-15882	<p>Beginning at this release, UniVerse has been enhanced to support the OAuth 2.0 protocol for CallHTTP functions. Specifically, users can now set the Bearer tag in the HTTP request message. Users can also add OAuth2 specific authentication data as a DIRECT type of the Authorization header. The changes are shown in the following examples.</p> <p>Setting the Bearer tag:</p> <pre>ret = setRequestHeader("Authorization", "Bearer value-calc-by-OAuth2-alg")</pre> <p>This creates an HTTP request with the header: "Authorization: Bearer <i>value-calc-by-OAuth2-alg</i>"</p> <p>Adding OAuth2 specification:</p> <pre>ret = setRequestHeader("Authorization", "DIRECT hmac code")</pre> <p>This creates an HTTP request with the header "Authorization: <i>hmac-code</i>"</p> <p>The syntaxes require that "Bearer" and "DIRECT" be specified as they are input and are case sensitive.</p> <p>The Bearer and DIRECT tags are not supported in <code>setDefaultHTTPHeader("Authenticate", ...)</code>. You must always assemble it and call the <code>setRequestHeader()</code> API to set it for a connection.</p>	U2 Basic, U2 Basic - CallHTTP
UNV-15926	<p>On previous versions of UniVerse, the <code>uvregen</code> command might have reported varying numbers for the disk segment size on Windows platforms. This issue was resolved by fixing an error related to the DBSHMSZ variable.</p>	Licensing
UNV-16110	<p>In previous versions of UniVerse on Windows platforms, the <code>\$DEFINE</code> statement might have caused UniVerse to abnormally terminate when using <code>\$DEFINE</code> in conjunction with an internal (local) function. This issue has been resolved.</p>	U2 Basic
UNV-16575	<p>Starting at this release, the NETWORK and CONNPL <code>cpio</code> packages are no longer included with UniVerse release media on UNIX and Linux platforms. The functionality in these <code>cpio</code> files are included with the MAIN <code>cpio</code> package instead. Also, in the Install/De-install menu options in the UniVerse System Administration Menu, the UVNet, UCI, UVCS, UVODBC, EDA, CONNPL, AUDIT, iPHANTOM, and CONNPL packages can no longer be modified. All of these packages are included with the core UniVerse product and do not need to be uninstalled.</p>	Build, Code Cleanup, Installation, UVNet
UNV-17242	<p>Starting at this release, <code>NOTIFY IGNORE</code> is the default setting for UniVerse sessions initiated by UO. When <code>NOTIFY IGNORE</code> is set, PHANTOM processes exit completely when finished processing and the "Done" message is no longer displayed.</p>	U2 Basic
UNV-17341	<p>Prior to this release, when the <code>Count()</code> command encountered an unassigned (empty) parameter, an exception occurred and the session would terminate. This issue has been resolved by checking whether the string is empty, and returning 0 if it is.</p>	U2 Basic

Issue number	Description	Component
UNV-17658	<p>UniVerse users now share a common pool of memory segments across all users. Previously, users had their own printer segment. Certain customer applications could be impacted if they capture the user number. For more information, see the <i>New Features Guide</i>. The following changes have the most impact on customers:</p> <ul style="list-style-type: none"> ▪ The @USERNO value has been changed for sessions. The value for @USERNO is now the position in the LCT table for a given pid. For phantoms and UniRPC connections, the @USERNO value is the negative representation of the position in the LCT table. Any interactive session will be a positive number. A value of zero is not used. Background and phantom processes show the @USERNO as a negative number. ▪ The USERINFO(<i>Code, Value, Userinfo</i>) function has been added. This BASIC function allows you to get the pid of an existing user or get the user number based on the pid. ▪ The LISTUSER command has been added. Use LISTUSER to list all the users currently logged in with information such as user type and login timestamp. ▪ On UNIX platforms, the USE_FIXED_PORT parameter in the uvconfig file can be used to emulate prior behavior (11.2.x and earlier) where user number assignment is based on the relative position of the tty device in the unohist file. 	Shared Memory, UVNet
UNV-17863	<p>Prior to this release, when using the RESIZE command to alter a file's separation, the new file did not alter the LARGE.RECORD size, which could adversely affect performance. This issue has been resolved, and the RESIZE command now properly resets LARGE.RECORD size based upon 80% of buffer size, as would be the case with the CREATE.FILE command.</p>	File Tools
UNV-18249	<p>In previous versions, when the UniVerse BASIC ENCODE() function was used to decode Base64-encoded data according to RFC 4648, an incorrect result of 0 was returned, indicating success when the output was actually null. This issue has been resolved.</p>	U2 Basic
UNV-18319	<p>For HP Itanium only, the HP library called MallocNextGen is required. If this library is not found specifically in the path /usr/lib/hpux64/libmallocng.so, then the UniVerse installation or upgrade will end before making any modifications to the system. This library incorporates a better memory manager.</p>	Third-party Libraries
UNV-18495	<p>Starting at release 11, transaction logs can be corrupted if shutdown fails and LOGBLSZ is not at the default of 512. This has been resolved by resetting the offset of the logging operating system file descriptor to 512 if the block size is 512, or zero if the block size is non-512.</p>	Transaction Logging
UNV-18555	<p>In UniVerse 11.2.x, when a login disconnect occurred, the tl_server.exe program generated an unhandled exception at 0xc0000374. This issue has been resolved.</p>	Error Reporting, Error Reporting - Crash, Telnet

Issue number	Description	Component
UNV-18580	<p>At this release, the General Call Interface (GCI) has changed from statically linking the functions inside new executables (such as <code>uvsh.new</code>) to a dynamically linked shared library called <code>libu2gci.so</code> or <code>libu2gci.sl</code>. On Linux platforms, the shared library extension is <code>.so</code> – shared object. This is the same on most UNIX platforms, except on HP-UX, which uses the <code>.sl</code> extension – shared library.</p> <p>If prior to 11.3.1 you relied on the UniVerse GCI Administration menu to incorporate GCI functions into UniVerse, no major rework is required to generate the <code>libu2gci.so/.sl</code> file. However if you have made custom build scripts or makefiles, then converting the GCI library from static linking to dynamic linking might require significant changes. For more information, see the chapter about dynamic linking in <i>Administering UniVerse on Windows and UNIX Platforms</i>.</p>	General Call Interface, Infrastructure
UNV-18618	<p>Starting at this release, for EDA on the SQL server driver, the UniVerse DATE data can be mapped to the SQL server DATE data type and is set to this mapping by default. The UniVerse TIME data can be mapped to the SQL server TIME data type and is also set to this by default. Both UniVerse DATE and TIME data types still support mapping to the SQL server DATETIME data type for backwards compatibility purposes.</p>	External Database Access
UNV-18792	<p>Prior to this release, using the INSERT option with the <code>SQLExecute</code> statement could fail to create the requested number of items. This was caused by <code>MWExecute()</code> using the UCICount datatype as the counter. When the <i>n</i> count reached 65536, it turned back to 0. This has been resolved by changing the data type of <code>saved_done</code> from UCICount to UVOD_stmt.</p>	SQL, U2 Basic
UNV-18824	<p>To help prevent malicious software from silently installing and causing computer-wide infection, Microsoft developed the UAC feature. Unlike previous versions of Windows, when an administrator logs on to a computer running Windows Vista or higher, the user's full administrator access token is split into two access tokens: a full administrator access token and a standard user access token. During the logon process, authorization and access control components that identify an administrator are removed, resulting in a standard user access token. The standard user access token is then used to start the desktop. Since all applications inherit their access control data from the initial launch of the desktop, they all run as a standard user as well. After an administrator logs on, the full administrator access token is not invoked until the user attempts to perform an administrative task.</p> <p>Due to this restriction with UAC, administrators that have write access to the file at the operating-system level are unable to write to the file from within UniVerse. They receive a read-only error. The only solution is to disable UAC.</p>	TCL Tools

Issue number	Description	Component
UNV-18851	<p>Applies to UNIX and Linux platform installations only. At UniVerse 11.2.3, a <code>startuv.log</code> file was added to report both startup and shutdown messages. There is no separate log for only shutdown messages. This style of logging was adopted from UniData. The previous <code>startuv.log</code> file is moved at the start of the startup procedure to the <code>UVHOME/saved_logs</code> directory.</p> <p>Starting at this release, if UniVerse fails to shut down properly when using the <code>uv -admin -stop</code> command, a suggestion has been added to the messaging noting that the <code>-force</code> option should be used. The output is similar to the following:</p> <pre>Stopping UniVerse... Deadlock daemon has been stopped. RM has been stopped. Uvcleanupd has been stopped. Unirpcd has been stopped. stopuvsmm failed.</pre> <p>Not all UniVerse processes were successfully terminated. "2" process(es) are still attached to the main UniVerse memory segment. UniVerse has NOT been successfully terminated. Aborting shutdown request!</p> <pre>Please execute 'uv -admin -stop -force' to shutdown UniVerse completely.</pre> <p>Also with this change, when attempting to shut down UniVerse with the <code>-force</code> option, the "Stopping UniVerse" message on the screen indicates that the <code>-force</code> option was used, and the <code>startuv.log</code> file reports that the <code>-force</code> option was used.</p> <p>Note: If the <code>-force</code> option is not used to completely shut down UniVerse and a startup attempt is made, UniVerse will report an already started message, which was added at UniVerse 11.2.3.</p>	Error Reporting, Shared Memory
UNV-19105	<p>Starting at this release on UNIX and Linux platforms, during a UniVerse installation or upgrade, the <code>unirpcd</code> process is not started when UniVerse is started. This allows for the <code>unirpcd</code> process to be properly updated near the end of the process. When UniVerse starts up again at the end of the installation for the licensing steps, the <code>unirpcd</code> process is started as normal. The <code>unirpcd</code> process will be started during normal startups of UniVerse after the installation or upgrade process.</p>	Installation
UNV-19144	<p>Windows platforms only. Beginning at UniVerse 11.2, a loopback condition created from file Q-pointers could cause UniVerse to abnormally terminate. This issue has been resolved.</p>	Error Reporting - Crash, Query
UNV-19380	<p>Prior to this release, the <code>MATCHES</code> operator could produce incorrect results when the comparison string used quotes and there was a character check for the <code>~</code> character. This issue has been resolved by adding in functionality from the UniData <code>pattern()</code> function for PI/OPEN compatible pattern matching. This function will be used when <code>PI_MATCHFIELD</code> flag is set to 1.</p>	U2 Basic

Issue number	Description	Component
UNV-19532	At this release, on systems that have Audit Logging authorized, audit log files (&AUDLOG&) are automatically excluded in Data Replication.	Audit Logging, Data Replication
UNV-19581	<p>There are several enhancements to Audit Logging in UniVerse 11.3.1. For more information about the following new features, see the chapter about Audit Logging in the <i>Security Features Guide</i>.</p> <ul style="list-style-type: none"> ▪ New <code>audman</code> configuration commands have been added. Use the <code>audman</code> utility to manage Audit Logging and send requests to the <code>uvaudd</code> daemon. When using the <code>uvaudd</code>-related commands from the <code>audman</code> utility, the actions are logged into the <code>uvaudd.log</code> file. You can alternatively use XAdmin starting at version 4.12.0 to configure Audit Logging. ▪ New <code>uvconfig</code> file parameters for configuring Audit Logging have been added. ▪ Three audit log file types are now available: hashed log file, sequential log file (default), and the operating-system <code>syslog</code> file (for UNIX and Linux platforms only). Sequential log files provide a better performance of Audit Logging. The daemon process <code>uvaudd</code> manages all sequential and <code>syslog</code> file operations. ▪ UniVerse creates a directory named <code>lrgrecs</code> under the audit directory for storing large audit records. This applies to the sequential file and <code>syslog</code> file types only. 	Audit Logging, Performance
UNV-19774	Prior to this release, compiling a UniVerse BASIC program could abort instead of giving a meaningful error. For example, UniVerse might have aborted if the <code>SETTING</code> option was missing on the <code>LOCATE</code> command. This issue has been resolved.	U2 Basic
UNV-19798	Windows platforms only. Prior to this release, when using UniVerse Control to stop UniVerse Services on Windows, not all UniVerse processes may have been stopped. Other methods such as the Windows Task Manager were required to stop all processes. This issue has been resolved.	Server Processes
UNV-19854	Beginning at 11.2, a BASIC program that failed to compile might have generated a 0-length object file and would produce a "Compilation Complete" message. This issue has been fixed.	U2 Basic
UNV-19855	Starting at 11.2.3, the <code>umask</code> setting of the current user was incorrectly used to set the permissions on the object file created in the <code>.O</code> directory. At the current release, the permissions on the <code>.O</code> directory are used, resolving this issue.	U2 Basic
UNV-20002	Beginning at 11.2.0, a paragraph containing a malformed Retrieve statement followed by a blank line might have caused UniVerse to abnormally terminate. This issue has been resolved.	Query
UNV-20005	<p>Starting at UniVerse 11.3.1 on UNIX and Linux only, <code>uvdiag</code> includes a check for file suspension. If <code>SUSPEND.FILES</code> is enabled, the following message displays:</p> <pre>Performing UV Read operation... Warning: File suspension is active!</pre>	Support Tools

Issue number	Description	Component
UNV-20047	In previous versions, adding a particular selection criteria to a LIST command that had a BY.DSND sort incorrectly affected the sort order. This issue has been fixed.	Dictionaries, Indexes, Query
UNV-20073	For default files included with UniVerse, the file sizing parameters have been tuned to reduce overflow in these files. This change includes changing the default size for the VOC when creating new UniVerse accounts. File sizing parameters to customer data files have not changed.	Files - Static
UNV-20164	Windows platforms only. Starting with release 11.2.3, UniVerse used a different set of functions in Microsoft's socket 2 libraries. This allowed users the ability to communicate with IPv6 alongside IPv4 Internet protocols. With the new functions, a five second delay could be experienced if DNS reverse lookup on some sites could not be resolved. This issue has been resolved.	U2 Basic, U2 Basic - CallHTTP, U2 Basic - SOAP API
UNV-20202	Starting at this release, as part of the enhancement for IPv6 support, two new functions have been added to UniVerse BASIC: <code>setIpv</code> and <code>getIpv</code> . These functions allow an outgoing connection on a socket to be set as IPV4 IPV6 IPVANY IPV4_IPV6 IPV6_IPV4. The default value is IPV4. For more details, see the <i>UniVerse BASIC Commands Reference</i> .	UVNet
UNV-20550	Prior to 11.3.1, when using the wizard to perform a clean UniVerse installation on Windows platforms, if you clicked Yes to create the <code>u2\uv</code> and <code>u2\unishared</code> directories, then clicked back to change the paths to something else, the <code>u2\uv</code> and <code>u2\unishared</code> original directories were still incorrectly created. This issue has been fixed.	Installation
UNV-20641	In previous versions, a memory leak might have occurred when using nested EXECUTE CAPTURING statements in BASIC programs. At 11.3.1, this issue has been resolved.	Performance
UNV-20698	At 11.3.1, auditing and subkey functionality is not available in the Personal Edition of UniVerse.	Device Licensing, Installation, Licensing
UNV-20746	<p>Prior to this release, the AE command could not be defined as a remote VOC command. If this was done, an error similar to the following would occur:</p> <pre> Program "*AE": pc = A06, Unable to open the operating system file "/disk1/uv112/catdir/AE_ICOM1". [ENOENT] No such file or directory Program "*AE": pc = A06, Unable to load file "AE_ICOM1". Program "*AE": pc = A06, Unable to load subroutine. </pre> <p>This problem has now been fixed. The AE program now works properly when the AE VOC entry is defined as an "R" type.</p>	Editor - ED, Security
UNV-20819	Beginning at 11.2.3, the U2 Toolkit Server Explorer failed to work properly and would cause a session to crash. This issue has been resolved.	Server Processes

Issue number	Description	Component
UNV-20827	Windows platforms only. Prior to this release, when attempting to use a Retrieve query to access a large file using a UVNet file pointer, UniVerse might have reported the file to be corrupt when it was not. This issue has been resolved.	UVNet
UNV-20875	<p>At 11.3.1, AMI code is removed from UniVerse as IBM is no longer supporting AMI. Please use the new MQI feature as an alternative.</p> <p>The U2 WebSphere MQ API (CallMQI) is a BASIC API that allows BASIC programs to interact with WebSphere MQ. The CallMQI interface is based on WebSphere MQ's core API, the Message Queue Interface (MQI). To use CallMQI, your system must have the following minimum requirements:</p> <ul style="list-style-type: none"> ▪ For WebSphere MQ 6, UniVerse versions 11.1.1 through 11.1.9 ▪ For WebSphere MQ 6, 7.0.x, and 7.1, UniVerse versions 11.1.10 through 11.2.4 ▪ For WebSphere MQ 7.5 and 8, UniVerse versions 11.2.5 and later <p>To use CallAMI, your system must meet the following requirements:</p> <ul style="list-style-type: none"> ▪ For WebSphere MQ 6, UniVerse versions 10.1 through 11.2.5 	MQSeries
UNV-20877	Starting at this release, the <code>uvconfig</code> parameter <code>OPTMEM</code> has been increased to a minimum of 256. If the value is set lower in the <code>uvconfig</code> file, when UniVerse starts, the minimum will be set to 256.	Indexes, Query
UNV-20905	Prior to this release, under certain conditions, using the <code>SET .INDEX</code> command with the <code>RELATIVE.PATH</code> and <code>FORCE</code> options might cause the indexes to be inaccessible. This could happen if the VOC file name did not match the operating-system file name. This issue has been resolved.	Indexes
UNV-20937	<p>Applies to Linux platforms only. Starting at this release, UniVerse is built on systems with the glibc libraries patched, including the fix for the GHOST issue. It is highly recommended that you patch your Linux servers to avoid the vulnerability. This can impact Redhat RHEL 5, 6, and 7. glibc 2.18 and higher will include a fix as well.</p> <p>The GHOST vulnerability (CVE-2015-0235) on Linux systems can allow remote attacks from the <code>gethostbyname()</code> and <code>gethostbyname2()</code> glibc functions. For full details, please see https://access.redhat.com/security/cve/CVE-2015-0235.</p>	Build
UNV-20941	Prior to this release, when NLS and Locales were enabled, the "DW" date conversion would return Sunday as the first day of the week. The NLSLCMODE <code>uvconfig</code> file parameter has been enhanced to allow the behavior to be configured. When NLSLCMODE is set to 2, the "DW" date conversion with return Monday as the first day of the week.	National Language Support, U2 Basic

Issue number	Description	Component
UNV-21041	Previously, when the MaximumAge password policy was set to 0 (never expire), UniVerse incorrectly displayed a warning message that the password was about to expire. This has been fixed.	Automatic Data Encryption
UNV-21046	At 11.2.x, if a large value was set for the MaximumAge password policy (such as 21449981), UniVerse incorrectly treated the password as expired. This issue has been fixed.	Automatic Data Encryption
UNV-21112	Prior to this release, when NLS was enabled, the BASIC compiler could handle real numbers incorrectly depending on the LOCALE enabled at compile time. This issue has been resolved by setting the NLS flag to OFF prior to converting, and then resetting the flag after converting to an integer. This is only done when converting to an integer.	National Language Support, U2 Basic
UNV-21145	Prior to this release, index builds could fail on an NLS file that used DEFAULT collation due to invalid characters in the indexed data. This issue has been resolved.	Indexes, National Language Support
UNV-21194	Prior to this release, if a BASIC compilation failed, it could leave a zero-length object file depending on where the error occurred. This issue has been resolved.	U2 Basic
UNV-21266	Prior to this release, if a user compiling a BASIC program did not have write access to the existing object, incorrect compilation errors were produced. Additionally, an invalid object code file name was produced. This issue has been resolved.	U2 Basic
UNV-21422	Prior to this release, when NLS was enabled, a BASIC format operation could cause the UniVerse session to terminate. This issue has been resolved.	National Language Support, U2 Basic
UNV-21436	Starting with this release, users have the option to run a silent installation for the UniVerse server on Windows platforms. See the <i>Installation Guide</i> for more information.	Installation
UNV-21442	Prior to this release on AIX only, UniVerse would not always unload shared object libraries when shutting down. This issue has been resolved.	Build, Installation
UNV-21481	Starting at this release, the <code>/etc/.Type1</code> file is no longer created on UNIX or Linux installations.	Installation

Issue number	Description	Component
UNV-21533	<p>Starting at this release, verification has been added to the UniVerse startup and shutdown script on UNIX and Linux platforms. If the process returns an exit status of 0, it means UniVerse started or shut down completely. If the startup or shutdown script fails for any reason, for example memory segments still exist after shutdown, then a non-zero return code is set. This allows user shell scripts to check for a return status with the "\$?" keyword and the correct exit code is returned. If a non-zero exit code is returned, the code and message will also be displayed in the <code>startuv.log</code> file in the UniVerse home directory.</p> <p>As part of this change, during UniVerse installation and upgrade processes, when UniVerse attempts to start the first time (after checksums are verified), if the startup process fails, the installation or upgrade process will also fail. Prior to this release, if for some reason UniVerse did not start properly, but the shared memory for UniVerse started up, the installation or upgrade process would continue but fail when accessing any UniVerse command.</p>	Server Processes
UNV-21591	<p>Prior to this release, using <code>PORT . STATUS</code> to get the status of a UniVerse session that was at a <code>DEBUG</code> or <code>BREAK</code> prompt would cause the session to terminate. This issue has been fixed.</p> <p>Note: <code>PORT . STATUS</code> can take longer to run if there are sessions at the <code>DEBUG</code> or <code>BREAK</code> prompt.</p>	Debug Tools, U2 Basic
UNV-21633	<p>Prior to this release, mapping date fields could return an invalid data type error. This issue has been resolved, and UniVerse 11.3.1 supports <code>DATE</code>, <code>TIME</code>, and <code>DATETIME</code>.</p>	External Database Access
UNV-21666	<p>At this release, you can retrieve the hostname using the <code>SYSTEM</code> function with the 9013 option: <code>SYSTEM (9013)</code>.</p>	U2 Basic
UNV-21715	<p>Starting at this release, an enhancement to External Database Access improves 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.</p>	External Database Access

Issue number	Description	Component
UNV-21728	<p>Prior to this release, when updating the DATE data type in a UniVerse EDA file, the following set of error messages might have been produced.</p> <pre> EDA SQL Server Driver: [Microsoft][SQL Server Native Client 11.0] [SQL Server] New transaction is not allowed because there are other threads running in the session. EDA SQL Server Driver: [Microsoft][SQL Server Native Client 11.0] [SQL Server] Violation of PRIMARY KEY constraint 'PK_DTYPE3_6_3214EC27EBFB7506'. Cannot insert duplicate key in object 'WINDOWS_NT_598.DTYPE3_6'. The duplicate key value is (TEST). </pre> <p>This problem has been fixed.</p>	External Database Access
UNV-21731	Starting with this release, EDA samples have been upgraded to Visual Studio 2010.	External Database Access
UNV-21822	<p>Beginning at this release on UNIX and Linux installations, a check is done for the <code>ed</code> command. If this executable is not found, the following message will be displayed when running the <code>uv . load</code> script and the install or upgrade will abort:</p> <pre> UniVerse cannot be upgraded! The 'ed' command was not found and is a required component. Please install the 'ed' command from your operating system's installation media. </pre>	Installation
UNV-21957	Previously, files converted to EDA were not being stored correctly if their record keys were case sensitive. For example "CNCLCD*m" and "CNCLCD*M" would have their records overwritten. This issue has been fixed and the schema allows for case-sensitive records.	External Database Access
UNV-22066	In prior releases, the <code>uvcleanupd</code> daemon did not properly clean up task locks when a process abnormally terminated. At this release, <code>uvcleanupd</code> releases task locks for dead processes.	Locking

Issue number	Description	Component
UNV-22085	<p>Applies to UNIX and Linux installations only. Starting at this release, before extracting the new files, if the call to shut down UniVerse fails and returns a non-zero status, the upgrade process will be stopped. If this happens, stop UniVerse completely before attempting another upgrade. Previously, the <code>uv.load</code> script would check to see whether the main UniVerse memory segment (0xacec) existed or any files in <code>uvhome/bin</code> were in use. This extra check adds more confirmation that UniVerse is completely shut down before loading the new files.</p> <p>Note: If UniVerse is shut down, the current status of LONGNAMES cannot be determine. Update this setting in the installation or upgrade main menu when executing the <code>uv.load</code> script again.</p>	Installation
UNV-22087	<p>At this release, the <code>uv</code> executable has been changed to a shell script. The former <code>uv</code> executable is renamed to <code>uvadmin</code>. This change was primarily done for setuid bit issues, but has an added benefit of allowing dynamic library variables to be set. If one of the <code>uv -admin</code> functions is needed, the script calls the <code>uvadmin</code> executable in UniVerse bin; otherwise, it calls the <code>uvsh</code> executable.</p>	Infrastructure
UNV-22111	<p>Previously, if the PSEMNUM value was changed in the <code>uvconfig</code> file, various commands including <code>LIST.LOCKS</code>, <code>LOCK</code>, <code>CLEAR.LOCKS</code>, and <code>smat -u</code> would still be hard coded to 64. Starting at this release, these commands will adjust their output based on the PSEMNUM value.</p>	Locking
UNV-22113	<p>Previously, installing NLS through the UNIX and Linux UniVerse System Administration menu (Package → Install Package) would cause the report to show that a record was locked by another user. This locked record caused the NLS Administration menu to not be added to the Package menu. The code for the installation process has been changed so that the record lock is not needed. Starting at this release, the NLS administration menu will appear as expected in the System Admin Package menu.</p>	Locking
UNV-22161	<p>Starting at this release, the <code>SET.INDEX filename INFORM</code> command will list the part files' index paths correctly when viewing the information using a Q-pointer in another UniVerse account. Previously, this would report an endless loop of 'Unable to open ""' errors.</p>	Indexes
UNV-22185	<p>Prior to this release, if the size of the replication buffer defined by <code>REP_BUFSZ</code> was smaller than the log information buffer defined by <code>N_LOGINFORM</code> for a replication group, then that group would not replicate data. This issue has been resolved.</p>	Replication

Issue number	Description	Component
UNV-22186	<p>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.</p> <p>With FIPS 140-2 support, you can:</p> <ul style="list-style-type: none"> ▪ configure UniVerse 11.3.1 to run in FIPS mode by modifying the uvconfig file, utilizing TCL commands, or the Windows Registry. ▪ convert certain persistent data, such as SCRs and SPLs, to be able to run under the FIPS mode. <p>For more information about FIPS 140-2 support, see the chapter about FIPS 140-2 support in the <i>Security Features Guide</i>.</p>	SSL
UNV-22260	<p>Starting at this release, the XDEMO account v3.1.0 has been added to the product. On UNIX and Linux platforms, there is an option to install the account (default is "yes"). On Windows platforms, the account is installed automatically. To remove the account, delete the XDEMO directory from the database home directory.</p>	Installation, Python
UNV-22285	<p>At UniVerse 11.2.x on UNIX and Linux platforms, if transaction logging failed, a message was shown to the screen referencing the UniVerse <code>errlog</code> file. In some cases, when transaction logging failed to start, the UniVerse <code>errlog</code> file was empty and the messages were in the <code>uvlogd.info</code> file instead. Starting at this release, if the <code>errlog</code> file is empty on startup and the <code>uvlogd.info</code> file can be found, then the message will report the <code>uvlogd.info</code> path location; if not, the <code>errlog</code> file is still referenced.</p> <p>The following example is the current output when this type of failure takes place:</p> <pre>Starting UniVerse... UVSMM is started. Unirpcd is started. Starting the UniVerse Transaction Logging daemon... Uvcleanupd is started. Deadlock daemon is started. UniVerse Transaction Logging daemon failed to start! Please review the /usr/logs/uvlogd.info file for errors. UniVerse has been brought up.</pre>	Transaction Logging

Issue number	Description	Component
UNV-22298	<p>Support for the Python development language has been added to UniVerse 11.3.1 on Linux and Windows platforms only. Python is a dynamic programming language that interfaces with UniVerse 11.3.1 as a native language, similar to BASIC. UniVerse is bundled with Python 3.4.1, but it can work with other Python 3.4.x feature releases by modifying the <code>.pyconfig</code> file to specify an existing Python installation that you want U2 to use. Other Python versions such as 3.5 are not allowed to import the <code>u2py</code> module in the Python environment.</p> <p>To license U2 Python on UniVerse, perform one of the following actions:</p> <ul style="list-style-type: none"> ▪ On Windows platforms, select the Python check box during installation. ▪ In XAdmin, from the Admin Tasks pane, double-click License. From the Update tab, select the PYTHON check box, or use the wizard and select PYTHON. ▪ On Linux platforms, add <code>PY : 1</code> to the Linux license screen on the package line. ▪ On either Windows or Linux platforms, using <code>uvregen</code>, enter <code>bin/uvregen -p PY:1</code> in <code>\$UVHOME</code>. <p>There are several UniVerse enhancements related to U2 Python. For more information about the following new features, see the new <i>U2 Python User Guide</i>.</p> <ul style="list-style-type: none"> ▪ Two TCL commands <code>RUNPY</code> and <code>PYTHON</code> have been added. <code>RUNPY</code> runs a Python program from TCL. <code>PYTHON</code> launches Python's interactive shell and can execute Python commands. ▪ A new BASIC variable type, <code>PYOBJECT</code> is available. <code>PYOBJECT</code> is used internally to receive a Python object. ▪ Three new <code>@variables</code> have been added: <code>@PYEXCEPTIONMSG</code>, <code>@PYEXCEPTIONTRACEBACK</code>, <code>@PYEXCEPTIONTYPE</code>. ▪ Several U2 BASIC API functions have been added, including <code>PyCall</code>, <code>PyCallFunction</code>, <code>PyCallMethod</code>, <code>PyGetAttr</code>, <code>PyImport</code>, and <code>PySetAttr</code>. ▪ The <code>u2py</code> extension module has been added to make use of the modified <code>UniObjects</code> API and provide access to the U2 server. 	Licensing, Python
UNV-22325	<p>Prior to this release, <code>WRITE</code> errors could occur when updating a file while indexes on the file were being built with the <code>CONCURRENT</code> option. This issue has been fixed.</p>	Indexes

Issue number	Description	Component
UNV-22394	Prior to 11.2.0, the UniVerse installation included the Xalan open source XML-related library. At 11.2, the Xalan library was replaced with the XQilla library due to support for Xalan no longer being available. This resulted in problems for UniVerse applications using certain XSLT functionality such as "include" which is not yet available in the XQilla library. Beginning at this release, the UniVerse installation contains both the Xalan and XQilla libraries, restoring the missing XSLT functionality. This issue is resolved.	U2 Basic - XDOM API
UNV-22461	<p>In Data Replication, a file cannot be replicated if the record key length is larger than 128 bytes. In previous releases, if an attempt was made to replicate a file with a key larger than 128 bytes, the uvrw process on the subscriber would abort with no errors reported. At this release, an error is reported on the publisher to uvsh and in the \$UVHOME/errlog file similar to the following:</p> <pre data-bbox="480 779 1086 831">Program "LONGID": Line 4, Cannot replicate for key size greater than or equal to 128.</pre> <p>The update to the published file is not impacted.</p>	Data Replication
UNV-22481	Prior to this release, XAdmin users were unable to add pattern match exclusions into the <code>repconfig</code> definition file on UniVerse. This issue has been resolved.	XTOOLSUB
UNV-22489	On Windows platforms, the UniVerse installation wizard has been updated to remove a misplaced "Back" button.	Installation
UNV-22491	<p>Prior to this release, if the <code>repconfig</code> file contained a mixture of account paths and account names referencing the same account, the error message produced did not contain enough information to detect the reason for the failure. At the current release, if the account name is defined first in the <code>repconfig</code> file, an error similar to the following now displays:</p> <pre data-bbox="480 1304 1038 1556">Mon Aug 22 07:24:42 Duplicate account names/paths are defined in repconfig line 4 and 52. Use either account names or account paths exclusively. Mon Aug 22 07:24:42 RM: Replication Configuration are inconsistent. Mon Aug 22 07:24:42 RM: Reconfiguration failed(-1)!</pre> <p>If the account path is defined first, the original message still displays. This behavior is scheduled to be addressed at a future release.</p>	Data Replication
UNV-22501	Starting at UniVerse 11.3.1, UniVerse builds are 64-bit only on all platforms. As a consequence, Windows 2003 Server, Windows XP, and Windows Vista are no longer supported platforms. The Linux base platform is now RHEL 6.0, so 5.x is no longer supported.	Build

Issue number	Description	Component
UNV-22533	Starting at 11.2.5, Audit Logging incorrectly allowed writes to the audit log files from operations other than audit operations. This issue has been resolved at 11.3.1 and any direct write operation to the audit log files will fail.	Audit Logging
UNV-22562	When showing the Deadlock Daemon Administration help in the UniVerse UNIX or Linux System Administration menu, the menu previously showed text referencing "UUV." This issue is now resolved.	UVADMIN (non-root command line or Motif)
UNV-22653	Prior to this release, after using the break key, attempts to start a child process with the SH command would hang if a COMO file was active. The behavior was not apparent on all platforms. This issue has been resolved.	TCL Tools
UNV-22675	<p>Previously, the <code>/tmp/user.uvconfig</code> file remained after UniVerse upgrades on UNIX and Linux platforms. This file is a copy of the existing <code>uvconfig</code> file prior to performing an upgrade. Starting at this release, this file is handled in the following ways:</p> <ul style="list-style-type: none"> ▪ If checksums do not verify the <code>uvconfig</code> file in the UniVerse home directory, the file will be replaced by the <code>/tmp/user.uvconfig</code> file and the <code>/tmp/user.uvconfig</code> file will be removed. ▪ The <code>/tmp/user.uvconfig</code> file will remain if the UniVerse upgrade fails for any other reason besides checksum failure. ▪ If the upgrade process completes properly, the <code>/tmp/user.uvconfig</code> file will be removed. <p>If the <code>/tmp/user.uvconfig</code> file remains and is no longer needed, then the file can be removed manually. It does not impact normal running of the UniVerse database.</p> <p>Additionally with this change, if installing as <code>uvadm</code>, and either there are write permission issues with the UniVerse home directory or temporary installation files, the installation or upgrade process will end with an appropriate message.</p>	Installation
UNV-22711	<p>Beginning at UniVerse 11.2.3, the ownership permissions on installed UniVerse files might have been set to a user ID of 2999. At the current release, the ownership permissions are properly set to the administrator's user ID. Specifically starting at 11.3.1, the following additional changes are made:</p> <ul style="list-style-type: none"> ▪ <code>NLS</code> and <code>sp.config</code> files have correct ownership permissions set on them. ▪ If UniVerse is installed or upgraded as root, a group ID of 1 is used. ▪ If UniVerse is installed or upgraded as <code>uvadm</code>, the <code>uvadm</code>'s group ID is used. <p>The additional changes at 11.3.1 closely restore the owner and group values set at UniVerse 11.1.x and earlier. Some files will still have a group ID of 0 but this matches previous 11.1.x and earlier behavior.</p>	Installation

Issue number	Description	Component
UNV-22712	At 11.3.0, using the <code>DELETE . FILE</code> command and an EDA converted UniVerse file could cause the <code>DELETE . FILE</code> command to crash. This issue has been fixed at the current release.	External Database Access
UNV-22730	Prior to this release, when using the <code>SYSTEM(1302)</code> function directly or indirectly with the <code>!GET.USERS</code> subroutine call, the UniVerse process might have hung on an operating-system level futex lock. The problem could occur when the process holding the lock received an interrupt signal. This issue has been resolved.	U2 Basic
UNV-22806	<p>Prior to this release, users could have encountered errors when the <code>CONCURRENT</code> option of the <code>RESIZE</code> command was used on a multi-level file. While the multi-level file was being resized, application programs accessing the file might have ended with an error similar to the following:</p> <pre>Program "SalesOrderUpdate": Line 267, Unable to reopen file unit. [ENOENT] No such file or directory</pre> <p>This issue has been fixed.</p>	File Tools
UNV-22851	Beginning at this release, the UniVerse XML parser will only allow well-formed XML documents. Applications might need their XML code altered to use the <code>XDOMtransform</code> functionality at 11.3.1. General XML functionality can also be impacted with poorly-formed XML documents.	XML
UNV-22880	Beginning at this release, the <code>RESIZE CONCURRENT</code> operation will now support the use of a dynamic file (type 30) as the source file of the resize operation. Prior to this release, using <code>RESIZE CONCURRENT</code> on a dynamic file was not allowed.	File Tools
UNV-22913	<p>As part of the Data Replication enhancements, replication pacing has been added at this release. Replication pacing allows Data Replication to gracefully slow down the pace of publisher database updates when replication becomes overflowed. This reduces the likelihood of the replication logs overflowing and ultimately disabling Data Replication.</p> <p>Prior to UniVerse 11.3.1, when the total replication log file exceeded its limit, Data Replication was disabled. Starting at 11.3.1, pacing gracefully slows down the database updates to prevent too many replication overflows to the log files. As the publisher process slowly paces the updates, the subscriber is able to catch up according to priorities set by the administrator.</p> <p>Administrators can define a session priority level that guides the pacing mechanism in recognizing when to slow down and when to resume normal speeds. Instead of overflowing the log file, the number of data updates sent to the log file is reduced, minimizing the possibility of disablement.</p> <p>For more information, see the information about replication pacing in the <i>U2 Data Replication User Guide</i>.</p>	Performance, Data Replication

Issue number	Description	Component
UNV-22933	<p>Windows platforms only. Previously, when the Telnet client was closed without logging out, the ON.EXIT entry might not have executed and unhandled exceptions/access violations were written in the event log. This issue was caused by a timing error and has been resolved. The UniVerse Telnet process (<code>tl_server.exe</code>) has an input and output thread to read and write to the socket. When this thread notices that the socket is closed, it closes the pipe handle (which it uses to communicate with main thread) and terminates the input/output thread. A delay of four seconds has been added between the closing pipe handle and the terminating thread. You can configure this delay using XAdmin > Network Services > Telnet and entering a value in the Termination Pause field.</p>	Server Processes
UNV-22964	<p>As part of the Data Replication enhancements added at 11.3.1, the RELOGGER BASIC program has been added to the system catalog to help monitor replication. RELOGGER collects information from the replication system using the replication administration <code>uvreptool</code> and writes the information to a sequential log file. The information logged by RELOGGER describes how the replication system performs over a period of time. Using RELOGGER helps you understand and analyze how your replication system responds to changing workloads. For more information, see the <i>U2 Data Replication User Guide</i>.</p>	Data Replication
UNV-23009	<p>Applicable to UNIX and Linux platforms only, excluding HP. Starting at this release, the value for SHM_ATT_ADD (Shared Memory Attach Address) in the <code>uvconfig</code> file is determined at installation time (on HP, the SHM_ATT_ADD value is always set to zero). If the default value does not allow UniVerse to start, then additional values are tested. If all values fail to start UniVerse, the installation or upgrade will end. Previously, this SHM_ATT_ADD parameter testing was only enabled on Solaris (starting at UniVerse 11.2.5). Also, during UniVerse startup on Solaris only, the SHM_ATT_ADD testing is performed again and if the value is different, then the value in the <code>uvconfig</code> file will be changed. To change the attach address during UniVerse startup, the <code>uvregen</code> command is executed. If there are any other changes included in the <code>uvconfig</code> file, they will be updated after running the <code>uvregen</code> command.</p> <p>The typical error message seen if the SHM_ATT_ADD parameter is set incorrectly is as follows:</p> <pre>Error when attaching shm (21, 3197108224, 0), errno=22</pre> <p>If you see this error, an operating-system change might have been made that causes the starting address to change. To resolve, after installation, run <code>\$UVHOME/bin/saa_calc -w</code>. This will re-perform the tests executed during installation. This process will restart UniVerse several times until a valid address is found. The tests in <code>saa_calc</code> are more extensive than the re-test done during <code>uv.rc</code>. Contact Rocket support if further assistance is needed.</p>	Installation, Shared Memory

Issue number	Description	Component
UNV-23036	Beginning at 11.2.5, certain syntax errors in a BASIC program could cause the BASIC compiler to core dump. This issue has been resolved.	U2 Basic
UNV-23037	Prior to this release, a memory leak existed when accessing an index file that was created with the NLS COLLATE option. The memory leak was apparent on any type of access and did not require an index update. This issue has been resolved.	Indexes, National Language Support
UNV-23066	Applicable to UNIX and Linux platforms only. Previously during an upgrade process, when updating the <code>repsys</code> file with the correct version, the <code>host</code> command would be used to check for the IP address. On some systems, the <code>host</code> command was not found. Starting at this release, the UniVerse-supplied <code>hostinfo</code> command is used instead. This change avoids the failure to update the <code>repsys</code> file if the IP address was used.	Installation
UNV-23072	<p>On UNIX and Linux platforms, National Language Support (NLS) can now be installed during the installation and upgrade process.</p> <p>To enable NLS installation, specify the <code>-nls</code> command-line option.</p> <p>On installation, the NLS package will be installed with <code>NLSMODE</code> set to 1 and enabled with the <code>uvregen</code> command. On upgrades where NLS was previously installed, the upgrade will abort.</p> <p>Traditionally, NLS should be uninstalled before performing an upgrade. To override this check on upgrades, use the <code>-fnls</code> (force NLS) option instead. The <code>uvconfig</code> file parameter <code>NLSMODE</code> is not changed on upgrades.</p>	Installation, National Language Support
UNV-23081	Linux only. Prior to this release, UniVerse might terminate unexpectedly when using NLS. If invalid NLS data was present, using the BASIC <code>TRIM</code> function with this data could cause UniVerse to abnormally terminate. This issue has been resolved.	National Language Support
UNV-23127	Prior to this release, phantom processes might have incorrectly consumed file handles if the parent process exceeded the <code>MFILES</code> parameter. This issue has been fixed.	Server Processes
UNV-23141	<p>At this release, the settings available during installation have changed. The following example shows the <code>uv.load</code> script with some default values:</p> <pre> UniVerse installer : uvadm UniVerse administrator : uvadm uid=214 gid=200 1) UniVerse home directory: /usr/uv (currently: Not Installed.) 2) UniVerse-UniData shared directory: /usr/unishared (currently: Not Installed.) 3) Compile termInfo definitions: true 4) Install Media Path: /cdrom 5) Long File Names: OFF 6) Install XDEMO: YES Enter a field number to change, q to abort installation, or press <Return> to begin installation of UniVerse: </pre>	Installation, Python

Issue number	Description	Component
UNV-23149	Linux platforms only. A problem was found where the BASIC STATUS statement did not correctly return the number of bytes remaining in a named pipe. The STATUS statement would incorrectly return 0 when bytes were actually remaining. This issue has been resolved.	U2 Basic
UNV-23178	Linux platforms only. Prior to this release, attempting to open a socket on a file unit number of 1024 or higher would fail. Starting at this release, the limit has been raised to 8192. Prior to this change, an error message similar to the following would be seen in the protocol log when the limit was exceeded: <code>openSocket: socket 1024 out of fd_set range (1024)</code>	Server Processes
UNV-23190	Starting at UniVerse 11.2.5 on UNIX and Linux platforms, when UniVerse is upgraded, the existing UniVerse bin directory is checked for any files in use. This helps avoid situations where checksums will not verify later. To skip this check add the -sfc option to the command line. This code executes fuser on all files in the UniVerse bin directory. On some systems with a large number of files in the UniVerse bin directory, this can take a few minutes. Starting at this release, to avoid what appears to be a 'hang' situation, a status message is displayed for every 50 files processed. The output looks similar to the following: <code>Verifying that no files in /usr/uv/bin are in use. Now processing 50 of 259 file checks... Now processing 100 of 259 file checks... Now processing 150 of 259 file checks... Now processing 200 of 259 file checks... Now processing 250 of 259 file checks... No files were in use, continuing the upgrade. Downloading from /disk1/media to /usr/uv.</code>	Installation
UNV-23221	Prior to this release on the HP Itanium platform only, the unlock command could have failed to release a stuck group lock or login lock semaphore. When this occurred, stopping and restarting UniVerse was the only method for releasing the semaphore. This issue has been resolved.	Locking
UNV-23267	As part of the Data Replication enhancements added at 11.3.1, the U2 Replication Analyzer is available on github to aid in analyzing and visualizing data produced by the REPLOGGER BASIC program.	Build, Installation, Data Replication, Support Tools
UNV-23273	Prior to this release, when using the new UM (microsecond) option of the BASIC TIMEOUT statement, the combination of READBLK and TIMEOUT might not work as expected. This issue has been resolved.	U2 Basic

Issue number	Description	Component
UNV-23282	Beginning at 11.1, loading BASIC programs that call GCI functions into the shared memory catalog could cause UniVerse to abnormally terminate when the program was executed. This issue has been resolved. Additionally, the shared memory catalog space available on Linux has been increased to 16MB.	Shared Memory
UNV-23288	Prior to this release, the <code>CREATE . INDEX</code> command might have created the index directory with incorrect permissions. If the user creating an index for the first time on a data file was not the owner of the file, the index directory was created with full read/write permissions. At the current release, the "rw" permissions on the index directory are correctly based on the permissions of the data file.	Indexes
UNV-23299	Beginning at 11.3.0, in certain situations the "Done" message displayed when a phantom completes might have been included in the output captured by the <code>EXECUTE</code> or <code>CAPTURING</code> statement. If <code>NOTIFY ON</code> or <code>OFF</code> were enabled and a BASIC program was executing an operating-system level command via <code>SH -c</code> while using the <code>CAPTURING</code> clause, the "Done" message could have ended up in the capturing variable. This was due to a timing issue related to having the child phantom process finish while the <code>SH -c</code> command was processing. At the current release, the messages are suppressed in this situation, resolving the problem.	U2 Basic
UNV-23301	At this release, the <code>encman</code> utility has been enhanced to display all of the policy information without being prompted. The syntax is: <code>encman -passpolicy DISPLAY</code>	Security, Support Tools
UNV-23302	Prior to this release, certain BASIC socket and CallHTTP functions might have failed on HP machines. The failures could appear randomly. The use of protocol logging could also impact whether a failure would occur. The problem was caused by incorrect parameter types being passed to certain system functions. This issue has been resolved.	U2 Basic - CallHTTP
UNV-23319	On UNIX and Linux platforms, when upgrading to UniVerse 11.2.0 or higher from UniVerse 10.x or prior, the <code>REP_FLAG</code> setting was not set properly to zero. This issue is now fixed.	Installation, Replication
UNV-23331	At 11.2.4, a spelling mistake in Telnet-related variables prevented the use of Telnet and secure Telnet. This issue has been fixed. Additionally, the Disable Telnet Port and Disable SSL Telnet Port check boxes were selected in the Telnet tab for XAdmin users by default. The check boxes are now clear by default.	Installation, Telnet
UNV-23343	Starting at the UniVerse 11.3.1 release, the Windows <code>uvdiag</code> script has been updated to version 4.1.0.	Support Tools

Issue number	Description	Component
UNV-23348	At the current release, UO connections to the UniVerse database have been enhanced to allow for the execution of a command defined in the <code>UOLoginCommand</code> file in <code>\$UVHOME</code> . The <code>UOLoginCommand</code> file is a user-defined text file that can be created in the <code>\$UVHOME</code> directory. The text file contains a single line that can be either a specific command or a paragraph executing multiple commands. Specifically, this addresses the issue of the <code>DATE . FORMAT</code> command not working as expected when <code>EXECUTED</code> in the <code>UOLOGIN</code> paragraph. It can also be used for more general purposes. For more information, see the UCC 5.1.0 documentation.	Server Processes
UNV-23360	Prior to this release, if a Data Replication <code>uvrw</code> process attempted to update a file with a backward link (blink) error, the process would spin and consume CPU. At the current release, the <code>uvrw</code> process will abort the write operation (same as <code>uvsh</code>) and add an entry to the <code>uvrw.errlog</code> file.	Data Replication
UNV-23394	Beginning at 11.3.0, using the <code>LONGNAMES ON/OFF</code> command could have resulted in the following error appearing in the UniVerse <code>errlog</code> file: Verb "1" is not in your VOC. This issue has been resolved at the current release.	TCL Tools
UNV-23408	The root certificate store included with this release was updated as of 09/20/2016.	SSL
UNV-23414	Windows platforms only. Prior to this release, BASIC programs with a large number of recursive function calls could cause UniVerse to abort with an unhandled exception error during a BASIC compile operation. The problem was caused by a stack size limit. The stack size limit has now been increased and users will no longer see this failure. This issue has been resolved.	U2 Basic
UNV-23426	Linux platforms only. Previously, using a variable to define a GCI cataloged function with the <code>DEFFUN</code> statement resulted in an "Invalid GCI Subroutine" error. This issue has been resolved.	U2 Basic
UNV-23427	Starting at 11.2.5, during upgrade installations, the <code>uvconfig</code> file's <code>SHM_ATT_ADD</code> parameter for shared memory might have been reset incorrectly, causing an "available memory exceeded" error message. This issue has been resolved.	Installation
UNV-23429	Windows platforms only. Beginning at 11.2.5, the <code>LISTU</code> command incorrectly displayed the user name and UID of non-administrator <code>uvcs</code> connections. The user name was displayed as <code>SYSTEM</code> and the UID was displayed as <code>0</code> . This was a display-only issue as the <code>uvcs</code> processes were running with the correct user credentials. This issue has been resolved.	Security

Issue number	Description	Component
UNV-23435	As part of the 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 <code>repconfig</code> file GROUP phrase. If two or more groups are defined with the same name during startup, the replication manager and UniVerse fail to start. If attempted during a reconfiguration, <code>uv_repadmin reconfig -verbose</code> displays an error and Data Replication uses the previous configuration. In both cases, an error is logged to the <code>uvrm.errlog</code> file.	Data Replication
UNV-23438	Starting at 11.2.5, if a file name contained colons in its name, the <code>CATALOG</code> , <code>VCATALOG</code> , and <code>DECATALOG</code> commands could not handle the file. This issue has been resolved.	U2 Basic
UNV-23442	Prior to this release, when the root user started a PHANTOM using the <code>-U</code> option, the <code>@LOGNAME</code> variable was set to root rather than the user name supplied. The PHANTOM was running with the correct credentials, but <code>@LOGNAME</code> was set incorrectly. This issue has been fixed.	U2 Basic
UNV-23444	Starting at this release, the UniVerse BASIC CallHTTP call now correctly supports the Server Name Indicator (SNI). If a secure HTTP request is requested and the specified protocols include at least one TLS version, and a <code>ServerName</code> rule exists in the SCR, then an SNI extension will be added to the protocol handshake. This allows users to connect to a server that serves different virtual hosts on a single IP address.	SSL
UNV-23448	Prior to this release, when using <code>PHANTOM -U</code> with a user in the <code>uvadm</code> group, the process was not run as the designated user. This issue has been resolved.	U2 Basic
UNV-23449	<p>Prior to this release, the EDA conversion process might have unexpectedly ended if the file being converted contained an I-type dictionary item. If using the EDA Schema Manager tool, an RPC connection error would be displayed and the conversion process would not complete. This issue has been resolved at the current release.</p> <p>If this problem had been encountered at the previous release, it is recommended that you perform the following cleanup steps:</p> <ol style="list-style-type: none"> 1. Execute the <code>DELETE . FILE</code> command on the partially converted file. 2. Remove the <code>edaworking</code> VOC entry. 3. Remove the <code>edasave</code> and <code>edaworking</code> files at the operating-system level. 4. Delete the schema map for the file. 5. Restore the original UniVerse file to the account, and recreate the schema map. <p>Once this has been done, the conversion process can be executed again at the new release.</p>	External Database Access

Issue number	Description	Component
UNV-23450	Prior to this release, a memory allocation error existed in the SIGCHLD handler. A UniVerse session that started many phantoms could eventually hang due to the improper handling of the child phantoms when they exited. This issue has been resolved.	Server Processes
UNV-23454	Prior to this release, the <code>CREATE . INDEX</code> command added execute permissions to user/group/other on the <code>I_filename</code> directory, regardless of data file permissions. Now, the execute permissions are added to the <code>I_filename</code> directory based on the "r" permission settings on the data file.	Indexes
UNV-23457	Prior to this release, the <code>unlock</code> command could have hung on the lock or semaphore it was attempting to release. Changes have been made at the current release so the <code>unlock</code> command will not be impacted by any existing locks or semaphores. This issue has been fixed.	Locking, Support Tools
UNV-23459	At 11.1.0, with a UAC-enabled system, the UOJ or UCI server might have returned incorrect values for <code>SYSTEM(27)</code> . This issue has been resolved.	Server Processes
UNV-23460	Beginning at this release, UniVerse supports a token-based authentication method which allows users to implement a No-OS-Password-Logon protocol for their applications. For more information, see the "U2 servers token-based authentication" chapter in the <i>Security Features Guide</i> .	Security
UNV-23464	<p>As part of the Audit Logging enhancements at this release, improved error handling has been added. The <code>u2audit.config</code> file contains an <code>on_error</code> policy that can be configured to do the following in case of a fatal error:</p> <ul style="list-style-type: none"> ▪ Suspend Audit Logging until human intervention ▪ Attempt to log the condition to the <code>uvaudd.errlog</code> file, ignore the error, and continue ▪ Allow the <code>uvaudd</code> daemon to attempt recovery immediately and if recovery fails, write to the <code>uvaudd.errlog</code> file and disable Audit Logging <p>If the system appears to be hanging and Audit Logging is suspected to be the reason, you can use the <code>audman</code> utility to probe the system to determine the health of Audit Logging. If you decide to disable Audit Logging temporarily, use the following command:</p> <pre>audman -disableaudit [-force]</pre> <p>To reenable Audit Logging, use:</p> <pre>audman -enableaudit [-force]</pre> <p>For more information, see the section called "Daemon status, debugging facilities, and error recovery" in the <i>Security Features Guide</i>.</p>	Audit Logging
UNV-23470	As part of the Audit Logging enhancements, the <code>audman</code> utility can now decrypt an encrypted sequential audit log file using the <code>-decrypt infile outfile</code> option.	Audit Logging

Issue number	Description	Component
UNV-23485	Starting at 11.1 on AIX only, when updating records in UniVerse Type 1 or 19 files, the original file ownership was not maintained and was incorrectly replaced with the credentials of the user updating the record. This only happened for a non-root user. The issue has been resolved, and the original owner is maintained.	Editor - ED, Security
UNV-23489	Prior to this release, when using the <code>uvbackup</code> command on a directory, errors could be encountered if the first file to be backed up was less than four bytes in size. Once this occurred, subsequent files less than four bytes in size would also fail. The <code>uvbackup</code> command would report the files as corrupted and not include them in the backup image. This behavior may have been platform-specific. This issue has been fixed.	Backup Tools
UNV-23491	Beginning at 11.2, recompiling a program incorrectly resulted in the owner and permissions of the object file changing based on the user performing the compile. At the current release, the original owner and permissions will be retained. This issue has been resolved.	U2 Basic
UNV-23501	Prior to this release, if the <code>SHM.TO.LOAD</code> file contained an invalid program, attempts to start UniVerse sessions could hang. At the current release, the contents of <code>SHM.TO.LOAD</code> are validated on startup and invalid programs will be ignored, fixing this issue.	Shared Memory
UNV-23504	At 11.3.0, services in the <code>unirpcservices</code> file stopped working when short names were used in the client connection name column, and only worked with fully-qualified domain names. This issue has been resolved at this release.	Installation, UniRPCD
UNV-23506	Beginning at 11.2.4, SSL connections to UniVerse on HP-UX machines did not return a client IP address when commands such as <code>who -u</code> were used. Corruption of the <code>utmp</code> or <code>btmp</code> files could have also occurred. This issue has been resolved.	SSL
UNV-23515	Prior to this release, the use of the <code>BASIC MQPUT()</code> and <code>MQGET()</code> functions could have leaked memory. This could cause UniVerse processes to grow in size when these functions were used repeatedly during the same UniVerse session. The functions <code>MQOPEN()</code> and <code>MQINQ()</code> were also impacted to some degree. All of these memory leak issues have been resolved.	U2 Basic
UNV-23525	At 11.3.1, the SSL libraries are updated to use OpenSSL release 1.0.2h.	SSL
UNV-23537	In previous releases, if a phantom attempted to elevate to an iPhantom because it contained a <code>submitRequest()</code> call, but there were no licenses left, the process crashed. This issue has been resolved. At this release, the phantom completes normally without terminating on the <code>submitRequest()</code> call and a message is displayed in the <code>&PH&</code> record about reaching the license limit.	Licensing, U2 Basic - CallHTTP
UNV-23538	At this release, the Data Replication protocol level has been increased to 10008.	Data Replication
UNV-23539	At prior releases, InterCall would not accept passwords greater than eight characters. At this release, the maximum length for a password is up to 255 characters.	InterCall

Issue number	Description	Component
UNV-23542	Starting at 11.2.5, SSL connections using the BASIC HTTP or SOAP functionality would fail if the connection was being made through a proxy server. This problem has been fixed.	Basic Call Interface, SSL, U2 Basic - CallHTTP, U2 Basic - SOAP API
UNV-23580	At the current release, the EDA . CONVERT command has been enhanced to check whether Data Replication is active. If Data Replication is active, the EDA . CONVERT command will terminate. A message will be displayed to the user indicating 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, Data Replication
UNV-23586	Prior to this release, problems were encountered when using the object updates report option of the Data Replication <code>uvreptool</code> command on the subscriber. An RPC disconnect would happen for the relevant replication group. This issue has been fixed at the current release.	Data Replication
UNV-23610	Starting at 11.2.5, if you used NLS and set a locale for numeric values or format masks (for example R15#5), incorrect results were displayed. This issue has been resolved.	National Language Support
UNV-23620	At this release, the EDA SQL Server driver supports SQL Server 2005 and greater. When setting up an EDA ODBC DSN with the SQL Server client, only the SQL Server Native Client <code>x.x</code> driver is supported, not the default SQL Server driver.	External Database Access
UNV-23628	At 11.2.5, 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.	External Database Access
UNV-23636	Previously, the TCL EDA . CONNECT command kept counter information for multiple connections. This could cause confusion if multiple EDA . CONNECT commands were used for different credentials. At 11.3.1, the EDA . CONNECT command has been modified to only keep the counter information for the last connection made. This change means that only one EDA . DISCONNECT command will be needed for a disconnection.	External Database Access
UNV-23639	<p>Previously, when the COPYI or COPY commands (in non-PICK flavor) were used and the TO value was surrounded by either single or double quotes, the copy would fail. For example:</p> <pre data-bbox="478 1497 1042 1604"> >COPYI FROM TEST ONE, "NEW ITEM" Record "ITEM" not found in file "TEST". 1 record copied. > </pre> <p>This issue is now fixed. Single and double quotes are allowed around the TO value in the command. An "Unmatched quote detected in command" error will occur if pairs of quotes are not used.</p>	File Tools

Issue number	Description	Component
UNV-23645	<p>If the UniRPC daemon failed to start on UNIX and Linux platforms, no messages were displayed. This issue is now fixed. Now, a generic "Unable to start unirpcd" message is displayed and warnings are displayed for the following events:</p> <ul style="list-style-type: none"> ▪ The <code>/etc/services</code> directory does not contain the <code>uvrpc</code> entry. ▪ The <code>unishared</code> path is invalid or empty (including if that path contains spaces on the end of the directory path). ▪ The <code>unirpcservices</code> file is empty. ▪ UniRPC is already running. <p>The rest of the UniVerse startup procedure was not modified. Exit codes were not modified with this change. The messages were added to aid in troubleshooting.</p>	UniRPCD
UNV-23647	<p>Prior to this release, the <code>HASH.AID</code> command might return inaccurate results for some of the file type, modulo, and separation combinations being reported. This issue has been resolved.</p>	File Tools
UNV-23648	<p>Prior to this release, calls to a BASIC subroutine from a UO connection would abort if the subroutine used transaction semantics and the <code>uvconfig</code> parameter <code>TP_COMMIT_LOGGING</code> was enabled. This problem has been fixed.</p>	Replication, U2 Basic
UNV-23649	<p>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:</p> <pre style="margin-left: 40px;">Error (line 2): Connection Pooling seat count is missing for account "AR"</pre>	Licensing
UNV-23657	<p>Prior to this release, selecting a file using selection criteria on an indexed field may have resulted in a core dump. The problem was a memory related issue. Therefore, the behavior was inconsistent and might have only been seen on specific platforms. The issue has been fixed.</p>	Indexes, Query

Issue number	Description	Component
UNV-23663	<p>The UniVerse <code>bin</code> directory is added to the <code>LD_LIBRARY_PATH</code> variable at the start of several scripts. This variable helps avoid dynamic library errors when running UniVerse default shell scripts on UNIX and Linux platforms. On AIX, the <code>LIBPATH</code> variable is set; on HP, the <code>SHLIB_PATH</code> 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.</p> <p>The database <code>bin</code> directory is added at the end of these variables in case they were previously set. The scripts changed were:</p> <ul style="list-style-type: none"> ▪ <code>uv</code> ▪ <code>uv.rc</code> ▪ <code>showuv</code> ▪ <code>uvdiag (v5.1.0+)</code> ▪ <code>uvipcrm</code> ▪ <code>updatercs.sh</code> <p>In the <code>uv</code> and <code>uv.rc</code> scripts, the UniVerse <code>bin</code> path is added to the end of the pre-existing variable values. Otherwise for the remaining scripts noted, the UniVerse <code>bin</code> path value is added to the start of the variables.</p>	Installation
UNV-23668	<p>Prior to this release, customers could have experienced situations where connection pool (CONNPL) licenses were being consumed by process IDs that were not associated with existing <code>uvapi_slave</code> processes. When this happened, the only way to release the licenses back to the available pool of licenses was to stop and restart UniVerse.</p> <p>Several changes have been made at the current release related to this situation.</p> <p>Changes have been made to the <code>uvapi_slave</code> process such that when the process exits, the connection pool license held by the process will always be released.</p> <p>The "<code>clean_lic</code>" option of the <code>uvlictool</code> command has been re-enabled at this release. When this option is used, the <code>uvlictool</code> will scan the license table and release any license associated with a pid that is not a valid UniVerse process.</p> <p>The <code>uvcleanupd</code> process has been enhanced to perform the same function as the <code>clean_lic</code> option of the <code>uvlictool</code> command when it runs on its regularly scheduled interval. This issue has been resolved.</p>	Connection Pooling
UNV-23673	<p>Prior to this release, under certain conditions, UniVerse files could be corrupted when MQ messages were incorrectly written into the UniVerse file. This could happen if the MQ connection closed for some unexpected reason and the application continued to write MQ messages. Under these conditions, the messages might be written into a currently open UniVerse file. This issue has been resolved.</p>	Files - Corruption

Issue number	Description	Component
UNV-23674	Prior to this release, a memory leak was present when reading from a UVNet file if the record being read did not exist. There was no memory leak if the record already existed in the file. This issue has been resolved.	UVNet
UNV-23675	Beginning at 11.2, 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
UNV-23683	At UniVerse 11.2.5, when upgrading on UNIX or Linux platforms, the upgrade process checked for any files in the UniVerse bin directory to see if they were in use. If more than one process had a file in use, only the first process was reported. This issue has been fixed. Starting at this release, all processes reporting the file in use will be reported.	Installation
UNV-23698	The TXWMFSYNCMODE parameter in the uvconfig file was misspelled as TXWMSYNCMODE. This issue has been fixed.	Transaction Logging
UNV-23700	Previously during upgrade installations, UniVerse built multiple HELP.FILE indexes, which consumed disk space. This issue has been fixed. At 11.3.1, when upgrading, UniVerse's installation process checks for the existence of the HELP.FILE index file and removes it before creating a new file.	Installation
UNV-23716	<p>Beginning at 11.2.3.4641, in the U2 CallMQI API, when a message ID or correlation ID had a null character in its twenty-four bytes, CallMQI would truncate the ID at the null character when presenting it to a BASIC program. This issue has been resolved.</p> <p>This issue was introduced in code changes related to release 11.2.3.4641. Versions of UniVerse between 11.2.3.4641 and this release could experience interoperability issues if exchanging IBM MQ messages between each other using CallMQI.</p> <p>In particular, this issue could affect systems using the Request/Response messaging style. An issue could arise if the current UniVerse release generates a Request message with a message ID that contains null characters, or is less than twenty-four bytes in length (the size of an IBM MQ message ID), and then one of the previously listed versions of UniVerse processes that Request message and generates a Response message back, where the Response message's correlation ID is set to the Request message's message ID. In this scenario, the Response message's correlation ID will be a truncated version of the original message ID. If the current UniVerse system then waits on the Response message, looking for a correlation ID that matches its original message ID, it will fail to find the Response message.</p>	MQSeries
UNV-23721	UNIX and Linux platforms only. Starting at 10.2.7, the BASIC INPUTCLEAR statement did not clear the type-ahead buffer completely for all characters. This issue has been resolved. At this release, when a function key is pressed that contains a multi-byte string, the INPUTCLEAR statement completely empties the buffer.	U2 Basic

Issue number	Description	Component
UNV-23725	In previous releases, if an attempt was made to use the <code>UDOWrite</code> 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
UNV-23726	Prior to this release, a problem handling special characters caused the <code>UDOWrite</code> function to produce incorrect results. This issue has been resolved by adding the ability to properly handle special characters such as <code><>'&</code> .	U2 Basic - U2 Dynamic Objects
UNV-23727	At 11.2.5, when a UniVerse process was interrupted by a signal having completed processing a menu item (VOC type = 'M') the process could get stuck in a loop. This issue has been resolved.	Server Processes
UNV-23728	Windows platforms only. Starting at this release, the PDB files (debug symbols) for UniVerse are installed to the symbols directory created under the UniVerse <code>bin</code> directory.	Installation
UNV-23733	Starting at this release, when UniVerse encounters an access violation or core dump on Windows, an exception text file and Windows <code>minidump</code> file will be generated in the <code>\$(UUVHOME)\minidump</code> directory. If assistance is needed to troubleshoot these access violations or core dumps, contact support@rocketsoftware.com .	Installation
UNV-23744	During upgrade installations, if a file was in use during the upgrade, UniVerse could not overwrite it and created a <code>*.rra</code> file that was updated when the system was rebooted. When upgrading at this release, the UniVerse installer checks to see whether UniVerse processes are running using the new <code>U2modulelist.exe</code> utility. If a process is running, a message is reported and the process is ended. Additionally, if a file is locked and in use, then a message will display requesting a reboot at the end of the installation.	Installation
UNV-23747	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
UNV-23776	Previously, when using the ProVerb <code>MV</code> command with an asterisk to reference the input buffer, invalid data was returned when there was no input available. This issue has been resolved.	Files - Corruption
UNV-23785	At the current release, changes have been made to UniVerse to limit the possibility of a system resource such as a semaphore being left set without a valid owner. When this condition occurs, the <code>unlock</code> command will be required to release the system resource. The <code>uvcleanupd</code> daemon can clean up semaphores left by dead processes if the semaphores have owner's information. If those semaphores do not have the owner's information, such as when the owner's value is 0, <code>uvcleanupd</code> cannot clean the semaphores and the <code>unlock</code> command is needed to clear them. See also UNV-23457, addressed at this release.	Locking

Issue number	Description	Component
UNV-23814	Prior to this release, when using UVNet to access a remote file, an invalid memory location pointer could be returned to the calling program. This could happen if the memory had already been freed by the unircp process. This behavior has been seen on the HP platform when using the mallocng library with an aggressive memory reclamation policy. When this occurred, the calling program could core dump when attempting to use the freed memory. This problem has been fixed at the current release.	UVNet
UNV-23818	At this release, the DISPLAY and INFORM options have been added to the NOTIFY command. The INFORM keyword displays whether the current NOTIFY setting is ON, OFF, or IGNORE. The DISPLAY keyword displays any phantoms that have completed but have not yet displayed the "Done" message. The DISPLAY option will work when using either NOTIFY ON or OFF.	TCL Tools
UNV-23819	At this release, the data buffer for EDA has been increased from 1K to 8K. This enhancement helps prevent the need for multiple SQLGetData function calls and increases overall system performance.	External Database Access
UNV-23820	<p>Prior to this release, the uvcleanupd daemon would hold the Login lock semaphore while both checking for dead UniVerse processes and cleaning up the information associated with those processes. On systems with many active users, the cleaning of the dead process could run for an extended period of time when a large lock table existed. Holding the Login lock semaphore could cause attempts to start new user processes to hang and receive the message "The CLEANUP is cleaning up dead processes, please wait awhile."</p> <p>At the current release, the uvcleanupd process has been enhanced to only hold the Login lock semaphore when necessary during the detection of dead UniVerse processes. This will reduce any delay experienced when the uvcleanupd process is running.</p>	Server Processes
UNV-23821	Prior to this release, the COUNT command on an EDA file would join all tables, which could result in poor performance. At this release, only single value tables will be used, increasing the performance of the SELECT and COUNT commands.	External Database Access
UNV-23828	Starting at 11.2.4, the uv.rc script added the who am i command to record the user running the script. This functionality did not work correctly if uv.rc was run in the background. The original change has been altered to resolve this issue.	Server Processes
UNV-23845	Windows platforms only. For Data Replication, when uvpub creates a publistener process, publistener inherits the file descriptors opened in uvpub. This caused problems with the uvpub processing being unable to unlink these files. The file descriptors are now marked as non-inherited to fix this issue.	Data Replication

Issue number	Description	Component
UNV-23850	<p>Prior to this release, the uvcleanup daemon might log cleanup messages similar to the following:</p> <pre> Mon Mar 28 08:35:35 2016 - ** Cleanup being performed for UserSig(-1) Mon Mar 28 08:35:35 2016 - Failure in LK_cleanup_pshm Mon Mar 28 08:35:35 2016 - ** Removed entry from signature table Mon Mar 28 08:35:35 2016 - ** Removed shared memory segment for User (-1), SegNo (acebffff) </pre> <p>This could happen when many processes were being cleaned up during the same interval. The problem was a timing issue that could have resulted in the uvcleanup daemon processing a user more than once. The second attempt would generate a message similar to the above since the process had already been cleaned up.</p> <p>At the current release, the uvcleanup daemon has been modified to ensure the cleanup process is only performed once for a given user. This change will eliminate this type of cleanup message being logged.</p> <p>This issue has been resolved.</p>	Server Processes
UNV-23885	<p>Prior to this release, Data Replication writer processes (uvrw) on the subscriber might have crashed with a "shmbuf.c" error similar to the following:</p> <pre> Size of memory requested (-126328832, -30841 local pages) is too big! Process 4868 Exit at C:\uvntbld\u2\u2shm\shmbuf.c,634: error=-1 </pre> <p>The error was related to updating a virtual field I-type on the subscriber. This problem was primarily seen on Windows and Linux platforms but could occur on other platforms as well. This issue has been fixed.</p>	Data Replication
UNV-23890	<p>The SELECT command on an EDA file has been enhanced at this release to only select from a single value table rather than joining tables. This will significantly increase the performance of a SELECT statement on an EDA file.</p>	External Database Access

Issue number	Description	Component
UNV-23900	<p>Prior to this release, when replicating to an EDA file on a subscriber, a failure to update the EDA file resulted in an error message similar to the following:</p> <pre>RW(2,3864) report: RW: DBwrite return -1,status=-2; fname=KIT,key=9999A.8019570P*0</pre> <p>This message only provided enough information to determine that the update failed and did not help to determine the cause of the failure. Beginning at this release, the error message returned by the external database is now included in the <code>uvrwr.errlog</code> file similar to the following example:</p> <pre>EDA SQL Server Driver: [Microsoft][SQL Server Native Client 10.0] [SQL Server] String or binary data would be truncated.</pre>	Error Reporting, External Database Access, Replication
UNV-23912	<p>Beginning at this release, the following enhancements have been made to the EDA driver log file.</p> <p>The logging level 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 definition for each log level is as follows.</p> <p>0: No log</p> <p>1: only report errors (with timestamp)</p> <p>2: Log EDA driver functions that only show SQL statements, not read/write data</p> <p>3: Log EDA driver functions and calling external database APIs that show only SQL statements, not read/write data</p> <p>4: Log EDA driver functions that show SQL statements and update data, not read data</p> <p>5: Log EDA driver functions and calling external database APIs that show SQL statements and update data, not read data</p> <p>6: Log EDA driver functions, show SQL statements, and read/write data</p> <p>7: Log all EDA driver functions and calling external database APIs, show SQL statements, and read/write data, but for looping get data, only show once</p> <p>8: Log all EDA driver functions and calling all external database APIs</p> <p>The <code>\$UVHOME/logs/eda.errlog</code> file has also been added to collect information about server-side EDA errors.</p>	External Database Access
UNV-23913	At this release, the <code>uvdiag</code> script for UNIX and Linux platforms has been updated to version 5.1.1.	Support Tools
UNV-23914	Starting at this release, changes were made to the server-side programs supporting XAdmin for the new Data Replication pacing functionality.	Data Replication

Issue number	Description	Component
UNV-23916	Prior to this release, the <code>uvbackup</code> command might have reported negative values for total bytes when the values exceeded 2GB. This issue has been fixed at the current release.	Backup Tools
UNV-24039	In prior releases, the <code>BUILD . INDEX</code> command displayed an asterisk (*) for every 1,000 records processed. At the current release, the interval has been increased to 10,000 to support larger index files.	Indexes
UNV-24058	<p>At the 11.3.1 release, UniVerse uses the HP <code>mallocng</code> library as the default for internal memory management. Internal benchmark results indicate that <code>mallocng</code> demonstrates an overall performance improvement compared with the standard system <code>malloc</code>. However, in specific cases, the <code>mallocng</code> library might perform rather poorly compared to the standard system <code>malloc</code>. The specific use case is when a string is incrementally increased in size by adding data to the end of string in a loop.</p> <p>For example, the following program runs much slower with the <code>mallocng</code> library compared to the standard system <code>malloc</code>.</p> <pre> STRING = "" NEW.DATA = STR("X",100) FOR X = 1 TO 1000000 STRING<-1> = NEW.DATA NEXT X END </pre> <p>On HP platforms, setting the following <code>mallocng</code> environment variable significantly improves the performance of <code>mallocng</code> in the above use case scenario. For more information about benchmarking and tuning the <code>mallocng</code> library functions, please refer to HP documentation.</p> <pre> # _MALLOCNG_DIST_OPTS=5000:200:200 # export _MALLOCNG_DIST_OPTS </pre> <p>UniVerse can also encounter the same performance impact when using <code>Retrieve</code> with an indexed field. If the index field contains an extremely large number of keys for a particular index value, the process of building the <code>SELECT</code> list would behave in a similar manner to the simple BASIC program noted above. The setting of the noted environment variable will also resolve performance issues when using this type of an indexed field as it does for the BASIC code noted above.</p>	Indexes, Performance, Server Processes

Issue number	Description	Component
UNV-24089	<p>Prior to this release, on 32-bit Solaris systems with U2 Audit Logging enabled, the records in the staging directory would not be moved into the audit log file. This problem is fixed. In addition, there are two new options added to the <code>audman</code> utility's <code>-writestagedlog</code> option:</p> <pre>audman -writestagedlog -count n audman -writestagedlog -n</pre> <p>The <code>-count</code> option writes <code>n</code> records from the staging directory into the audit log file until there are no records in the staging area. The <code>time</code> option (<code>n</code>) writes staging records for <code>n</code> seconds. If <code>n > 2</code>, it will run <code>n-1</code> seconds (or until no records are in the staging directory) then exits.</p>	Audit Logging
UNV-24090	<p>Starting at this release on Windows platforms, Data Replication is disabled during the install process. This behavior already existed on UNIX and Linux platforms.</p>	Installation
UNV-24111	<p>To enable or disable FIPS mode while in a specific session, use the following command at TCL:</p> <pre>SET.FIPS.MODE {ON OFF INFORM} {BRIEF HUSH}</pre> <p>If the <code>INFORM</code> option is used, the results report the current FIPS mode. Using <code>SET.FIPS.MODE INFORM</code> returns the same results as the new <code>GET.FIPS.MODE</code> command, which does not require any additional options and only reports the current status of FIPS mode.</p> <p>The <code>BRIEF</code> or <code>HUSH</code> options suppress the output from <code>SET.FIPS.MODE</code> and <code>GET.FIPS.MODE</code>. If an invalid option is given with <code>SET.FIPS.MODE</code>, only the usage line is displayed. <code>@SYSTEM.RETURN.CODE</code> are set in the following ways:</p> <ul style="list-style-type: none"> ▪ <code>SET.FIPS.MODE ON</code> or <code>SET.FIPS.MODE OFF</code> returns 0 for success of the command and -1 for failure ▪ <code>GET.FIPS.MODE</code> or <code>SET.FIPS.MODE INFORM</code> will return 1 if FIPS mode is on and return 0 if FIPS mode is off 	Security
UNV-24126	<p>Starting at UniVerse 11.3.1, dynamic library linking is used on UNIX and Linux platforms. With this change, the shipping method of debug files with the released product has changed. To use the debug files, set <code>LD_LIBRARY_PATH</code> to include <code>\$UVHOME/lib.d</code> (before <code>\$UVBIN</code>), and execute <code>uvsh.d</code>. The <code>lib.d</code> includes the debug libraries needed to review core files. Or, if only <code>uvsh.d</code> is needed, you can run <code>\$UVBIN/uv.d</code> which will call the <code>uvsh.d</code> and set <code>LD_LIBRARY_PATH</code> for you.</p>	Build, Debug Tools

Issue number	Description	Component
UNV-24133	<p>With the change to using dynamic libraries on UNIX and Linux platforms at 11.3.1, the staging step "Make a new UniVerse" (GCI.ADMIN, option 4) has been changed. Previously, the executables like <code>uvsh.new</code>, <code>uvapi_slave.new</code>, and so on were copied to the UniVerse home directory to test prior to running option 5 to install the new shell. At 11.3.1, the GCI subroutines are included in a <code>libu2gci.so/.sl</code> file.</p> <p>To test the modified GCI routines, set <code>LD_LIBRARY_PATH</code> (or <code>LIBPATH</code> on AIX) and include the UniVerse home directory first. Then when testing is complete and option 5 in the GCI.ADMIN menu is used, the <code>libu2gci.so/.sl</code> file from the UniVerse home directory is copied over to the UniVerse bin directory. Current users sessions will need to log out and back in to pick up the GCI changes. Please see the <i>Administering UniVerse on Windows and UNIX Platforms</i> and the <i>GCI User Guide</i> for information about these changes.</p>	General Call Interface
UNV-24134	<p>Starting at this release on Solaris only (Sparc and Intel), during the UniVerse installation or upgrade process, the <code>crle -64</code> command is used to add the UniVerse <code>bin</code> directory to the system default dynamic library search path. The default libraries of <code>/lib/64</code> and <code>/usr/lib/64</code> are placed first, then any third party libraries, then the current UniVerse <code>bin</code> directory. Lastly, any other UniVerse <code>bin</code> paths are included at the end. Using this functionality will lessen or possibly eliminate the need to set <code>LD_LIBRARY_PATH</code> when referencing the UniVerse <code>bin</code> directory.</p> <p>To skip this update, set <code>LD_NOCONFIG=yes</code> as an environment variable. You can turn off the use of <code>crle</code> using the same method. It is recommended to set this variable only during the session running <code>uv.load</code> or <code>uv.install</code>.</p>	Installation
UNV-24163	<p>Prior to this release, the semaphores used by Data Replication might not have been released under certain conditions. This would cause UniVerse processes to wait on the stuck semaphore while consuming CPU resources. Data Replication has been modified to ensure that processes holding the replication semaphore cannot be terminated without releasing the semaphore. This issue is resolved.</p>	Data Replication
UNV-24167	<p>Prior to this release, the use of the <code>uv_repadmin report</code> command would always be logged in the <code>uvrm.log</code> file. The output is no longer logged which reduces the volume of output in the <code>uvrm.log</code> file.</p>	Data Replication
UNV-24192	<p>Starting at this release, the values of the environment variables <code>LANG</code>, <code>PATH</code>, <code>ENV</code>, <code>LD_LIBRARY_PATH</code>, <code>LIBPATH</code> (AIX), and <code>SHLIB_PATH</code> (HP) are logged in the <code>startuv.log</code> file during UniVerse startup.</p>	Basic Call Interface, External Database Access, Server Processes
UNV-24196	<p>Starting at this release, the <code>SET.FIPS.MODE</code>, <code>GET.FIPS.MODE</code>, <code>GET.TERM.TYPE</code>, and <code>COMO</code> commands can use the <code>BRIEF</code> option to suppress the output. If an invalid option is given with <code>SET.FIPS.MODE</code> or <code>GET.FIPS.MODE</code>, only the usage line is displayed.</p>	Security, TCL Tools

Issue number	Description	Component
UNV-24202	At this release, the <code>EDA.EXCEPTION</code> command has been added to utilize the <code>EDA_EXCEPTION</code> file. The <code>EDA_EXCEPTION</code> file is a multilevel file with each subfile relating to one EDA data source. The name of the subfile is <code>EDA_datasource</code> . The <code>EDA_EXCEPTION</code> file resides in the UniVerse home directory. Enter <code>EDA.EXCEPTION ON</code> to utilize the <code>EDA_EXCEPTION</code> file.	Documentation, External Database Access
UNV-24206	Starting at 11.2.5 on Windows only, using the <code>OPENSEQ</code> statement on a named pipe such as <code>\\.\pipe\from_rebexamples_6116</code> would result in an error. This issue has been fixed.	Error Reporting, U2 Basic
UNV-24208	Starting at 11.3.1 on UNIX and Linux platforms, the GCI build process has been changed from a static to a dynamic library file. The file is called <code>libu2gci.so</code> (on HP, the extension is <code>.sl</code>). When performing upgrades to later UniVerse versions, if the <code>libu2gci</code> file was modified, it will be backed up. After the base environment is updated, the existing <code>libu2gci</code> file is restored. It is recommended to rebuild your GCI <code>libu2gci.so/sl</code> file when upgrading to a later major release of UniVerse.	Installation
UNV-24212	Prior to this release, the use of the MCN conversion specification with a value that was interpreted as a scientific notation, for example <code>500E13</code> , could cause a core dump. This issue has been fixed.	U2 Basic
UNV-24251	Due to GCI being changed to a dynamically linked library at this release, the files included in the <code>OBJcpio</code> package are no longer needed and have been removed from the media. This includes both the <code>OBJcpio</code> file and the <code>lduv</code> command.	Build
UNV-24262	Prior to this release, an error with <code>HEADING</code> statements in UniVerse BASIC could cause UniVerse to core dump. This issue has been resolved by increasing the temporary buffers used for the <code>HEADING</code> and <code>FOOTING</code> processing.	U2 Basic
UNV-24280	As part of the U2 Audit Logging enhancements made at this release, data events for client connections to the server (such as <code>intercall</code> , <code>uo.net</code> , and so on) are logged. These data events include <code>DAT.CLIENT.DELETE</code> , <code>DAT.CLIENT.READ</code> , and <code>DAT.CLIENT.WRITE</code> .	Audit Logging
UNV-24307	In previous versions, the Japanese date and time strings were in the wrong format. At this release, the locales tables have been corrected.	National Language Support
UNV-24362	On AIX platforms, if an incorrect or expired password was entered for the UniObjects server, an incorrect error code was returned from the <code>U2.Data.Client.U2Connection()</code> . This issue has been resolved.	Server Processes
UNV-24383	Prior to this release, when the <code>LOGIN</code> lock semaphore was held by a dead process, the <code>uvcleanupd</code> process would hang waiting for the <code>LOGIN</code> lock semaphore to be released. At the current release, the <code>uvcleanupd</code> process will time out and continue normal cleanup activity. The <code>LOGIN</code> lock semaphore will need to be cleared with the <code>unlock</code> command. See issue UNV-23457, which is also fixed at this release.	Locking

Issue number	Description	Component
UNV-24392	<p>UniVerse 11.3.1 includes support for SystemCure. Rocket SystemCure for UniVerse 1.1.0 is a new product that offers simplified discovery, monitoring, visualization, and triggering of actions or notifications for UniVerse system events. Rocket Software will be conducting a beta program for SystemCure. To participate, visit http://info.rocketsoftware.com/UniVerseSystemCureBeta.html.</p> <p>In order to access the UniVerse database, a SystemCure add-on license will be needed in Rocket Business Connect for each serial/license number.</p> <p>To add the license on Windows, select the SystemCure check box during installation.</p> <p>On the UNIX license screen, add the <code>CURE:1</code> option to the Package List line. When using the <code>uvregen</code> tool from the command line, add the <code>-p CURE:1</code> option. The performance memory segment and SystemCure agents will not start unless the CURE licensing add-on is enabled and licensed.</p> <p>The <code>uvconfig</code> file has been updated to include two new parameters for SystemCure. <code>PERF_MON_MODE</code> specifies whether to enable performance monitoring. The default value is 1 - enable performance monitoring. Change this value to 0 to disable performance monitoring. <code>PERF_MON_FILE</code> specifies the number of UniVerse files that performance monitoring needs to trace in each UniVerse session. This value is ignored if <code>PERF_MON_MODE</code> is disabled or Rocket SystemCure for UniVerse is not licensed.</p>	SystemCure
UNV-24405	Previously, if a syntax error existed in BASIC source code, the compiler aborted on HP-UX systems. At this release, this issue is fixed by a change in how the local subroutine is processed.	U2 Basic - Compile Catalog Tools
UNV-24453	Starting at 11.2.5, when the <code>&EDAMAP&</code> entry was not in the VOC file, the EDA Schema Manager tool crashed. This issue has been fixed. If this situation occurs at 11.3.1, instead of crashing, the EDA Schema Manager tool deletes the old <code>&EDAMAP&</code> OS file and recreates the new <code>&EDAMAP&</code> file successfully.	External Database Access
UNV-24468	The TRANS function caches file I-node numbers in order to eliminate reopening files for each record processed. Prior to this release, the functionality did not work properly when the I-node was greater than 2GB. This resulted in the file being reopened for every record. This issue has been fixed.	Performance, Query
UNV-24491	A fix was applied at the 11.1 release to address a problem with UVNet user numbers conflicting with other UniVerse users. The fix involved basing the UVNet user number on the <code>uvnetd</code> process ID, rather than the local user number. This had an unintentional impact when using case sensitive host names to make multiple <code>uvnet</code> connections from the same session. To address this situation, UniVerse has been changed to make the host name case insensitive. This ensures that only one <code>uvnetd</code> process gets created and eliminates any lock contention related to multiple <code>uvnetd</code> sessions being created when case sensitive host names are used. This issue has been resolved.	Locking, UVNet

Issue number	Description	Component
UNV-24545	At this release, the U2__UNIVERSEv11.3 conditional compiler directives for UniVerse BASIC has been added.	U2 Basic
UNV-24556	Beginning at 11.2.5.4814, compiling a <code>SELECT</code> list of BASIC programs could have aborted with an EMFILE error. The failure was dependent on the number of programs in the <code>SELECT</code> list and the operating system <code>nfiles</code> setting. The issue was caused by temporary files not being closed which eventually resulted in reaching the limit for the number of open files. This issue has been resolved.	U2 Basic
UNV-24579	<p>At this release, the <code>uvconfig</code> file parameters for <code>MAX_REP_SHMSZ</code> and <code>MAX_REP_SHMSZ_GB</code> have updated descriptions to better describe their functionality. <code>MAX_REP_SHMSZ</code> is the maximum shared memory buffer segment size for a replication group. This value includes consideration for <code>REP_BUFSZ</code>, <code>N_LOGININFO</code>, distributions, and group control information. The default value is 1,073,741,824 (1 GB) and it must be less than 2 GB.</p> <p><code>MAX_REP_SHMSZ_GB</code> is the maximum shared memory segment size, in GB, for a replication group. The default value is 0. If this value is configured, then the maximum shared memory buffer size for a replication group is the sum of <code>MAX_REP_SHMSZ_GB * 1GB + MAX_REP_SHMSZ</code>.</p>	Data Replication, Shared Memory
UNV-24614	Windows platforms only. Previously, when connected to large Windows domains (40,000+ users) and using the <code>SYSTEM(1402)</code> BASIC function, the program would hang while retrieving all of the users on the domain. A hang could also be seen when opening the audit screens in XAdmin. Starting at this release, the list of users are limited to a 256 KB buffer. With the 256 KB buffer size, about 30,000 users can be returned and the hangs in both cases no longer occur.	Telnet
UNV-24618	<p>Prior to this release, the <code>uvcleanupd</code> process may not have released the database license when cleaning up a dead UniVerse process. The <code>uvcleanupd</code> process removed the pid from the LCT table and the associated printer shared memory segment. However, on a busy system with many users logging in and out, the <code>uvcleanupd</code> process may have timed out while attempting to gain access to the license table. Under these circumstances, the license would not have been released. This issue has been resolved by ensuring that the license cleanup happens on the next pass. Additionally, the messages logged by <code>uvcleanupd</code> have been enhanced to include the user pid and to indicate the status of the license cleanup process.</p> <p>Also, the <code>uvlictool clean_lic -a</code> functionality has been returned to <code>uvlictool</code>. In the event that a database license seat is not returned to the pool of available licenses, the <code>uvlictool clean_lic -a</code> command can be used to return database licenses that are not associated with an active UniVerse session.</p>	Licensing

UniVerse 11.3.1 Port Notes

HP

Platform	HP-UX B.11.31 - 64bit
Operating System	HP-UX den-ci312 B.11.31 U ia64 0185205032 unlimited-user license
Porting Date	Mon Oct 17 23:47:59 MDT 2016
UniVerse Release	11.3.1 113_161017_6002
Ported by	svnsrc
Compilers Used	HP C/aC++ for Integrity Servers B3910B A.06.28 [Nov 21 2013]
Source Revision	103068

AIX

Platform	AIX 7.1 - 64bit
Operating System	AIX den-ci26 1 7 00F846134C00 7.1.0.0
Porting Date	Mon Oct 17 21:20:54 MST 2016
UniVerse Release	11.3.1 113_161017_6002
Ported by	svnsrc
Compilers Used	IBM XL C/C++ for AIX, V10.1 Version: 10.01.0000.0008
Source Revision	103068

Linux

Platform	RedHat LINUX 6.0 Enterprise - 64bit
Operating System	Linux den-ci123.u2lab.rs.com 2.6.32-71.el6.x86_64 #1 SMP Wed Sep 1 01:33:01 EDT 2010 x86_64 x86_64 x86_64 GNU/Linux
Porting Date	Mon Oct 17 21:23:12 MDT 2016
UniVerse Release	11.3.1 113_161017_6002
Ported by	svnsrc
Compilers Used	gcc version 4.4.4 20100726 (Red Hat 4.4.4-13) (GCC)
Source Revision	103068

SUN INTEL

Platform	SOLARIS 2.11 x86 - 64bit
Operating System	SunOS den-ci58 5.11 11.3 i86pc i386 i86pc
Porting Date	Mon Oct 17 21:52:28 MDT 2016
UniVerse Release	11.3.1 113_161017_6002
Ported by	svnsrc
Compilers Used	cc: Sun C 5.13 SunOS_i386 2014/10/20 CC: Sun C++ 5.13 SunOS_i386 2014/10/20
Source Revision	103068

SUN SPARC

Platform	Solaris 2.11 - 64bit
Operating System	SunOS den-ci420 5.11 11.3 sun4v sparc sun4v
Porting Date	Mon Oct 17 23:37:48 MDT 2016
UniVerse Release	11.3.1 113_161017_6002
Ported by	svnsrc
Compilers Used	cc: Sun C 5.13 SunOS_sparc 2014/10/20 CC: Sun C++ 5.13 SunOS_sparc 2014/10/20
Source Revision	103068

Windows

Platform	INTEL
Operating System	Windows 2012 R2
Porting Date	Mon 10/17/2016 19:58:30.87
UniVerse Release	Version 11.3.1, Build 6002
Ported by	srcman
Compilers Used	Visual Studio 2010 SP1
Source Revision	103068
UV Configuration	Server, 64-bit(x64)

Rocket UniVerse 11.3.0

UniVerse 11.3.0 was a controlled release and only available on the AIX, HP Itanium, and Linux platforms.

The following customer issues were fixed in UniVerse 11.3.0.

Build 5000

Issue number	Description	Component
UNV-189	The WARNINGS command allows for warning messages to be suppressed when running UniVerse BASIC programs. The command accepts two parameters: ON or OFF. Prior to this release, if any invalid parameter was specified, the process could crash or display control characters. This issue is now fixed. At this release, if an invalid parameter is given the syntax is shown instead.	TCL Tools
UNV-942	Starting at this release, the messages in the UniVerse <code>errlog</code> file for when TXMODE in <code>uvconfig</code> is set to 0 have changed. The new messages look like: <pre>Tue Jun 3 13:01:21 -24808 root UniVerse Transaction Logging Daemon started Tue Jun 3 13:01:21 -24808 root TXMODE uvconfig parameter is set to 0. UniVerse Transaction Logging is inactive.</pre>	Transaction Logging
UNV-4826	Prior to this release, if the NOHEAD option was established as the default using the <code>SETPTR.DEFAULT</code> function, the value was lost when a new <code>SETPTR</code> command was executed. This issue has been resolved.	Spooler
UNV-5355	Prior to the this release, <code>fixtool</code> might have failed to fix a file that was corrupted due to a partial update being applied to the file. The situation was likely the result of a system crash in the middle of a multi-buffer update. <code>fixtool</code> is now able to correct such a situation.	Files - Corruption
UNV-12367	Prior to this release, the <code>list_readu</code> capability to read the lock table from a dump file did not support the use of the EVERY keyword. At the current release, the EVERY keyword can be used. For example: <pre># list_readu -s dump.file UV shared memory has been saved to file dump.file # list_readu -r dump.file EVERY</pre>	Data Replication, SYSADM
UNV-15645	Prior to this release, spawning phantom UniVerse processes from <code>cron</code> could appear to hang under certain conditions. If the user number of the spawned phantom happened to match the user number associated with <code>cron</code> process pid, starting new phantoms from <code>cron</code> would hang until the first phantom completed. This issue has been resolved.	Server Processes

Issue number	Description	Component
UNV-16003	At the current release, account-based licensing has been enhanced to ensure the same account path can not be defined more than once in the <code>acct_licn.def</code> file. Attempting to do this at the current release will result in an error message indicating that an account path has been duplicated.	Licensing
UNV-16180	<code>uvdiag</code> for UNIX and Linux platforms has been updated to version 4.05.	Support Tools
UNV-16333	<p>Prior to this release, some users encountered error messages that did not contain file names, such as in the following example:</p> <pre> Mon Oct 14 04:16:04 -2375 root Program "CUST.UPDATE": Line 705, WARNING: Internal file corruption detected during file open! File must be repaired, possible truncation. hsize: 8192 bsize: 8192 fsize: 107374131 </pre> <p>The error messages in the <code>errlog</code> file now contain the file names. This issue has been resolved.</p>	Error Reporting, Files - Corruption
UNV-16334	Prior to this release, using the <code>COUNT</code> command on a Type 1 or Type 19 file would result in a memory leak in the current UniVerse process. This issue has been resolved.	Query
UNV-16531	Linux platforms only. Prior to this release, the <code>!GET.USERS</code> subroutine might not have returned information correctly on the Linux platform. With the changes made at 11.3.0 related to user number assignment, the <code>!GET.USERS</code> subroutine now returns correct information across all platforms. This issue has been resolved.	Shared Memory, U2 Basic
UNV-17039	The ability to update Data Replication cross-group transactions asynchronously on the subscriber has been added at this release.	Performance, Data Replication
UNV-18226	At this release, the dictionary referenced in the <code>SYS.MESSAGE</code> VOC record in all accounts has changed from <code>D_SYS.HELP</code> to <code>D_SYS.MESSAGE</code> . When running <code>UPDATE.ACCOUNT</code> , the original <code>SYS.MESSAGE</code> record will be copied to the <code>&TEMP&</code> file. This change was done so that Retrieve queries against <code>SYS.MESSAGE</code> display better.	Other
UNV-18341	Prior to this release, the <code>audman</code> command would incorrectly allow setting a sweep interval that was less than the <code>uvsmm</code> checktime. The <code>audman</code> command now enforces that the sweep interval entered is greater than or equal to the <code>uvsmm</code> checktime.	Audit Logging
UNV-18375	Starting at this release, the accounts and SSL configuration options that reference UniVerse data accounts in XAdmin will work properly if the VOC file in the data accounts are dynamic files.	Server Processes
UNV-18497	Starting at this release, UniVerse supports PKCS #12 (Microsoft pfx) file formats. This enhancement creates an environment that allows the U2 certificate to recognize the pfx file format and import certificates into that store.	SSL

Issue number	Description	Component
UNV-18531	Beginning at 11.3.0, a new <code>uvconfig</code> file parameter <code>HTTP_DEFAULT_VERSION</code> has been added. Now, UniVerse recognizes two HTTP values: 1.0 and 1.1, which indicates whether the default HTTP version for BASIC CallHTTP API is HTTP 1.0 or HTTP 1.1, respectively. It defaults to 1.1.	U2 Basic - CallHTTP
UNV-18617	Prior to this release, if a dictionary contained an MTS conversion it would not work as expected with External DataBase Access (EDA) and could cause a failure to convert the time data to SQL Server. This issue has been resolved.	External Database Access
UNV-18686	Prior to this release, the maximum size of the shared memory replication buffer for a single replication group was limited to 2 GB. That limit has been removed at the current release.	Data Replication
UNV-18777	Prior to this release, the <code>FILEINFO(24)</code> function was incorrectly returning a value of 0 for a subscribed file when used in a BASIC program that was being executed by a <code>uvrw</code> process. This issue has been resolved.	Data Replication
UNV-19199	Prior to this release, the <code>AuditLog()</code> BASIC function may not have been executed when expected. If the <code>AuditLog()</code> function was executed in a BASIC subroutine that was being called from an Indexed I-type dictionary, the function would not execute when using ED or AE to update a record. This problem has been resolved at the current release.	Audit Logging
UNV-19300	Prior to this release, when using the <code>CURRENT</code> keyword with the <code>encman -export</code> command, the user was not prompted for the master key password. This problem has been resolved.	Automatic Data Encryption
UNV-19317	Starting at this release, on UNIX and Linux platforms, Data Replication is disabled during UniVerse upgrades. It is re-enabled after the licensing is performed at the end of the upgrade process.	Installation, Data Replication
UNV-19413	Prior to this release, when using Data Replication data link compression, a failback operation after a successful failover generated errors on those groups using data link compression. This issue has been resolved.	Data Replication
UNV-19502	Prior to this release, the <code>ENCRYPT.FILE</code> command was allowed on a pre-revision 12 UniVerse file. However, UniVerse ADE (Automatic Data Encryption) functionality is not supported on these older revision files. At the current release, attempting to use <code>ENCRYPT.FILE</code> on an older revision file will be restricted and a message will be displayed instructing the user to convert the file to the higher file revision.	Automatic Data Encryption
UNV-19660	Prior to this release, Data Replication would stop processing on the subscriber if the internal transaction ID used by UniVerse reached the 2 GB limit. Data Replication has been modified to correctly handle this situation at the current release.	Data Replication
UNV-19844	Prior to this release, the <code>UNICODE.FILE</code> function failed to convert files that contained records ending in chars 248, 249, or 250. Users would see an error indicating that the record contains a character not in the original map. This issue has been resolved.	National Language Support

Issue number	Description	Component
UNV-19949	Delayed standby replication has been added at this release. This provides the capability to define a standby Data Replication subscriber to always be a defined period of time behind the publisher.	Data Replication
UNV-20078	Prior to this release, if a transactional update on a subscriber did not contain the "end transaction" log, Data Replication would stop processing that replication group. At the current release, Data Replication will continue processing and generate an error in the replication logs indicating the "end transaction" log was missing.	Data Replication
UNV-20209	Prior to this release, when the Data Replication parameter N_LOGINFO was configured larger than the REP_BUFSZ parameter, the subscriber would not replicate any data in that replication group. This problem has been resolved.	Data Replication
UNV-20287	Prior to this release, when using single server Data Replication with a deferred subscriber, updates may not have been applied to the subscribed files. If SYNCINTVAL in repsys was set to a positive value, updates to the subscriber would not be automatically synced at the specified interval. This issue has been resolved.	Data Replication
UNV-20512	At the current release, the <code>uvregen -m</code> command has been enhanced so that it will only allow the changing of either the master key or password at one time. This was done to avoid the possibility of unintentionally changing either the master key or password due to entering one of the values incorrectly. Additionally, the messages reported by the command have been enhanced to accurately describe which option is being changed.	Automatic Data Encryption
UNV-20633	Prior to this release, the <code>analyzecertificate()</code> BASIC function would incorrectly display the result argument when the function was executed. This issue has been resolved at the current release.	SSL
UNV-20644	Prior to this release, the <code>XDOMAddChild()</code> BASIC function would always interpret special characters as UTF-8 regardless of the specified encoding when NLS mode was enabled. This issue has been resolved at the current release.	XML
UNV-20762	Prior to this release, when using the INTERNAL keyword with <code>LIST.READU</code> , entries in the waiters section were not reported in the internal format. At the current release, when using the INTERNAL keyword, entries in the waiters section will be displayed in the same internal format as file, group, and record locks.	Locking
UNV-21269	At 11.2.x on the HP Itanium platform, some customers experienced situations where RD or WR group locks were not being properly released. User processes requiring those locks would hang until the group locks were made available by a manual release. The behavior was related to a synchronization problem which could occur in a multi-CPU environment. The behavior was experienced in large user environments when the system was under heavy load. This issue has been resolved.	Locking

Issue number	Description	Component
UNV-21347	Prior to this release, when a deadlock situation existed the information displayed in the waiters section of LIST.READU had the device and inode displayed incorrectly. The device was displayed under the inode column and vice versa. Additionally, the "Owner" and "Waiter" column headings were not aligned correctly with the "Userno" column heading. These issues have been resolved.	Locking, TCL Tools
UNV-22371	Prior to this release, the latency values reported in XAdmin Replication Performance Monitor always displayed 0 values. This problem has been resolved and the UniVerse server will now provide the correct values to the XAdmin tool.	Data Replication
UNV-22862	Prior to this release, orphaned UniVerse processes waiting on a mutex lock might be left behind under certain circumstances. The behavior involved running a BASIC program calling GCI subroutines and using the break key. This problem has been resolved.	Other

UniVerse 11.3.0 Port Notes

HP

Platform	HP-UX B.11.31 - 64bit
Operating System	HP-UX den-ci31 B.11.31 U ia64 0185205032 unlimited-user license
Porting Date	Fri Sep 18 12:57:59 MDT 2015
UniVerse Release	11.3.0 113_150918_5000
Ported by	svnsrc
Compilers Used	HP C/aC++ for Integrity Servers B3910B A.06.28 [Nov 21 2013]
Source Revision	97297

AIX

Platform	AIX 6.1 64-Bit
Operating System	AIX den-ci28 1 6 00F7D9944C00 6100-05-01-1016
Porting Date	Tue Sep 15 20:53:12 MDT 2015
UniVerse Release	11.3.0 113_150915_5000
Ported by	svnsrc
Compilers Used	IBM XL C/C++ for AIX, V10.1 Version: 10.01.0000.0000
AIX OS Levels	Built on 6100-05-01-1016 Certified for use on: 7100-00-00-0000
Source Revision	97297

Notices

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Italy	800-878-295
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