

# Release Notes UMRA

Updated 14-10-22





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## Version 11.40 Build 1773 Sep 29, 2022

### Enhancements

1. **SomToday:** (enhancement). Added the option to specify the property "Remote Identifier Domain" for the actions that use a remote identifier (ticket id 18423)
2. **Action: Setup Exchange session (Exchange 2010)** (Enhancement). Extended the authorization options so that "Modern Authorization" can be used for Exchange online. If one of the the Modern Authorization fields are specified and the URL field is left blank, instead of a direct remote powershell connection to the URL, the connection is made through the ExchangeOnlineManagement powershell module of Microsoft. Run "Install-Module ExchangeOnlineManagement" from an elevated Powershell command prompt on the server to install this module. (ticket id 18729)





## Version 11.39 Build 1772, Aug 12, 2022

### Enhancements

1. **Action: Convert Table to JSON** (new). Added a new action to convert a table variable to a JSON string. Result is a simple text variable containing the table in JSON format. (ticket id 7434)
2. **Action: Export variables Advanced** (new). Added a new action to export a variable to file. It supports more text encodings (such as UTF-7 and UTF-8) than the existing one. (ticket id 18185)
3. **Aura connector**. Added fields UserPrincipalName and password to the create and edit user actions, added field UserPrincipalName to the output of the get user actions. (ticket id 18076)
4. **Google GSuite**. Updated the shipped version of the connector to version 1.3.9





## Version 11.37 build 1770, July 9, 2021

### Enhancements

1. **Itslearning:** Added Customstring0 (referred to as CustomField6) as possible property for the create person action. (ticket id 12665)

### Fixes

1. **Action: Setup security.** When using the option "Use backup and restore privileges" the intended return value could in some situations be overwritten as a side effect by successful subsequent actions, thus reporting success inadvertently. (ticket id 1501)
2. **Cumlaude:** Objects in an array were not always returned by Powershell. Adjusted in an utility library. (ticket id 12311)





## Version 11.35 build 1768, Nov 13, 2020

### Enhancements

1. **SomToday:** Added EckID Column to the students and employees table (as extra column at the end). (ticket id 9521)
2. **SomToday:** Added the possibility to retrieve students starting in future school years. (ticket id 9830)
3. **AFAS:** Extra dynamic action added "UmraPsAfasUpdateConnectorExecute" This allows the execution of update connectors by specifying the xml of the data to update directly. (ticket id 8979 and 9457)

### Fixes

1. **CumLaude:** The Edit User action failed when an EckID was specified. This is fixed. (ticket id 10033)
2. **CumLaude:** The Create User action now correctly creates a user with a disabled personal work space if such is specified. (ticket id 10332)





## Version 11.34 build 1767, April 23, 2020

### Enhancements

1. **SomToday:** Added support for setting the RemoteID attribute for students, employees, and caretakers. Note that retrieving existing Remote ID is not supported by the used API, and therefore it is only implemented on the 'Authorization' update actions. (ticket id 9137)
2. **AFAS:** Extra dynamic action "update object with flag" to be able to provide inserts with the updateobject action. (ticket id 8803)

### Fixes

1. **Itslearning.** Itslearning get persons incorrectly converted the DateOfBirth from local time to gmt, which might result in an incorrect value. This is now fixed. (ticket id 7202)
2. **SomToday** removed support for the openID attribute, as that was not correctly supported by the API .







## Version 11.33 build 1766, July 22, 2019

### Enhancements

1. **ItsLearning:** Added support for the ECK-Id when updating users. (ticket id 5947)
2. **CumLaude:** Added support for the ECK-Id when updating users. (ticket id 5577)
3. **SomToday:** Added support for the externId employee attribute.





## Version 11.32 build 1762 , May 25, 2018

### Enhancements

1. **Action: Send mail message (PS).** The license requirement for this action has been changed, it is now part of the "Base" function module instead of the "Powershell" function module. This enables the option to send mail messages using SSL. Note that the action requires the "Tools4ever Powershell service" to be installed.
2. **Aura connector.** Support for the CcMailAddress property of the user has been added to the relevant actions.
3. **Cumlaude (Natschool).** It is now possible to specify whether or not an associated personal folder should be created when creating a group.

### Fixes

1. **Action: Generate table.** The option to prevent writing the database connection string to the log was disabled by default, it is now enabled by default.
2. **Export project.** The options added in version 1758 for "Search LDAP", "Generate table", and "Update database" were not exported when exporting a project to XML format. This resulted in default settings for those options when importing the scripts from backup.
3. **Atvo3 (SOM):** It is enforced that the BSN value is not provided to UMRA.
4. **Itslearning:** When adding an Itslearning person to a role group (e.g. 'teacher'), the validity of the role name was explicitly checked before submitting the membership request to Itslearning . This check has been removed because it was too restrictive. Checking the validity of role names will now be done by Itslearning upon submit.





## Version 11.28 build 1758, Jan 18, 2018

### Fixes and enhancements

1. **Action: Delete Directory** (fix). The error status of the action was not correctly set for some errors, such as sharing violations.
2. **Action: If-Then-Else** (enhancement). The implementation of the condition "Has no value or does not exist" does not trigger on empty text values. An new selectable condition has been added called "Is empty string or has no value or does not exists" that will trigger on empty text values.
3. **Powershell Service installation** (Enhancement). On first startup, the PowerShell service will no longer unconditionally install the PowerShell libraries contained in the PowershellAgentlib.xmllib file that is shipped with the UMRA version. Instead it now verifies the versions of the individual libraries, and does not replace existing libraries that have a higher version number. This prevents issues when upgrading, if the existing libraries where updated manually to a later version than shipped with the UMRA version.
4. **Atvo3 (SOM)** (fix). Included Powershell library updated to version 23. Because of a change in the interface in SomToday, an extra argument must be specified when retrieving students.
5. **ITSL** (fix): Included Powershell library update to version 53. Fix for out-of-range birthday values, and group membership issues.
6. **Action: Powershell Custom Setup Remote Connection** (fix). Powershell library updated to version 6. Specification of some options could cause syntax errors in command.
7. **Action: Search LDAP** (enhancement). An option is added to make the output format more in line with the output of the generic table actions. This allows for better comparison between tables.
8. **Action: Search LDAP** (enhancement). An option is added to allow a paged search.
9. **Action: Generate table** (enhancement). An option is added to prevent writing the database connection details to the log file. This option is enabled by default.
10. **Action: Update database** (enhancement). An option is added to prevent writing the database connection details to the log file. This option is enabled by default.
11. **GUI**: (fix). When pressing the <delete> key in the script comment pane of the script editor, it will now delete the selected highlighted text in the comment, and no longer try to delete the currently selected action in the main action pane.





## Version 11.22 Build 1752 , Oct 6, 2017

### Fixes and enhancements

1. **AFAS** (fix). The Photo directory is no longer the root, but instead the specified directory. (30/Sept/2016)
2. **AFAS** (enhancement). Support is added for token based login. (30/Sept/2016)
3. **SAP** (fix). When installing the 64 bit UMRA service, the 32 bit Jvrlog.dll file is now copied to the service directory, as it is still required when interfacing with SAP. (11/Jul/2017)
4. **Action: Office 365 List all users licenses** (fix). The ServiceStatus field in the list is now filled with the provisioning status of the user for each individual service. (18/Jul/2017)
5. **Action: Hash text (new)**. A new action is provided to generate a hash value from a text variable. The resulting hash is stored as a base64 encoded string. Supported hash algorithms are MD5, SHA1, SHA265, and SHA512. (5/Oct/2017)





## Beta Version 11.20 Build 1747, April 11, 2016

### Fixes and enhancements

1. **Action: Office 365 Edit users** (fix). The "Office365BlockCredential" will now unblock the user if set to "No" (10/Mar/2016).
2. **Action: Powershell Custom Setup Remote Connection** (fix). The configuration parameters "Skip certificate check" and "ProxyAccessType" did not work correctly. (11/Mar/2016)
3. **Action: Edit Mailbox(Exchange2010)** (fix). In the previous version setting some optional boolean parameters to false had no effect. (4/Apr/2016)
4. **Action: Get Calendar Processing (Exchange2010)**(new). New action to retrieve the calendar processing settings of a mailbox. (4/Apr/2016)
5. **Action: Edit Calendar Processing (Exchange2010)** (new). New action to edit the calendar processing settings of a mailbox. (4/Apr/2016)
6. **Action: Get Calendar Notification (Exchange 2010)** (new). New action to retrieve the calendar notification settings of a mailbox. Note that there is no accompanying edit action, as exchange does not allow administrative access to the Set-CalendarProcessing commandlet. (4/Apr/2016)
7. **Action: Edit remote mailbox (Exchange2010)** (fix). The ImmutableId parameter is no longer ignored. (1/Apr/2016)
8. **Service configuration option: License expiration mail** (enhancement). Added an option to specify the relative threshold of free user licenses below which a warning email is sent. (11/Apr/2016)
9. **Installation Package** (fix). Some new installation components for the console, were registered with the incorrect feature (Forms Client). This could cause issues (for example missing files) when installing the console without installing the forms client. (11/Apr/2016)





## Version 11.19 Build 1746, March 1, 2016

### Major changes

1. **UMRA Service.** A 64 bit version of the UMRA service is now available as an option when performing a fresh install of the UMRA service. Main purpose is to allow the service to exceed the 2GB virtual memory limit for 32 bit systems. (8/Dec/2015).

### Build environment changes

1. General build environment. Data compression library "Zlib" is updated to version 1.2.8. This library is mainly used for showing large log files in the console. The update is required for 64 bit service support. Also updated in standard 32 bit service and console. (30/Oct/2015)
2. General build environment. Lotes Notes cpp Library (lcppn.dll) is updated to version 8.02 (was 8.0). The update is needed for 64 bit service support. Also updated in standard 32 bit service and console. (12/Nov/2015)
3. General build environment. OpenSSL library is updated to version 1.0.2d. This library is mainly used for license checks. The update is needed for 64 bit service support. Also updated in standard 32 service and console. (12/Nov/2015)

### Fixes and enhancements

1. **Google** (discontinuation legacy interface). The methods used by the legacy google actions, located at the "Google" node in the action tree, have now been retired by Google. Therefore these actions have now been removed from the action tree. Use the actions located at the "Google apps" node in the tree instead. (16/Nov/2015)
2. **Action: Convert value of variable** (fix). The conversion operation "Convert base 16 string containing Sid to Sid String" contained an error that resulted in incorrect conversion results. This has been fixed. (17/Nov/2015).
3. **GUI: Manage service projects window** (fix). The "Rename" operation's initial suggestion for the new name was the name as displayed in the tree (including the date), instead of only the actual name itself. Now it suggests only the original name. (17/Nov/2015)
4. **Action: Update database** (fix). When the SQL script contained multiple SQL statements, the error/success status of the UMRA project only reflected the result of the last statement. Failure of any but the last statement was only logged. Now the UMRA project error status will be raised on a failure in any of the configured statements. (19/Nov/2015)
5. **Action: Convert Table to HTML** (new). Added a new action to convert the table to HTML. Result is a simple text variable containing the table in HTML. Formatting options can be specified explicitly, or a preformatted template can be chosen. (26/Nov/2015)
6. **GUI: Dialog "Manage server Projects"** (enhancement). Added possibility to sort projects based on the modification or creation time. (4/Dec/2015)
7. **GUI: Dialog "Manage server Projects"** (fix). When importing projects, and not choosing for overwriting, the name of the new project in the tree was not correctly modified in the previous release. (4/Dec/2015)





8. **Action: Join table data** (enhancement). The name of the columns on which to join, can now be specified as a variable. (4/Dec/2015)
9. **Action: List printer documents** (fix). The number of columns of the result table was not correctly set when the table was empty. (4/Dec/2015)
10. **Action: Edit Mailbox(Exchange2010)** (enhancement). Added an option to suppress error messages when the mailbox does not exist. (11/Dec/2015)
11. **Powershell Service** (Enhancement/modification). When returning a result table, and a specific data member (column) is specified to be returned, but this member is not available in the actual data ("Member not found" message), this no longer results in an failure of the action. Instead the action returns successfully, and the missing values are replaced by a text indicating the error. (14/Dec/2015).
12. **Action: Create (enable) mailbox(Exchange 2010)** (enhancement). Added support for equipment, room and shared mailboxes. (15/Dec/2015).
13. **Action: Enable remote mailbox (Exchange2010)** (new). New action that calls the Enable-RemoteMailbox cmdlet to create a mailbox in the cloud-based service for an existing user in the on-premises Active Directory. (28/dec/2015)
14. **Action: Disable remote mailbox (Exchange2010)** (new). New action that calls the Disable-RemoteMailbox cmdlet to remove mailboxes from the cloud-based service but keep the associated user objects in the on-premises Active Directory. (28/dec/2015)
15. **Action: List remote mailboxes (Exchange2010)** (new). New action that calls the Get-RemoteMailbox cmdlet to retrieve the mail-related attributes of users in the on-premises organization that have associated mailboxes in the cloud-based service. (28/dec/2015).
16. **Action: Edit remote mailbox (Exchange2010)** (new). New action that calls the Set-RemoteMailbox cmdlet to modify the mail-related attributes of an existing user in Active Directory that's associated with a mailbox in the cloud-based service.(28/dec/2015)
17. **Exchange 2010/2013/2016** (enhancement). Verified compatibility of Exchange 2010 actions with exchange 2016. (28/dec/2015)
18. **Google Apps** (Enhancement). Updated the shipped version of the google apps connector to version 1.0.3.8. In total 40 new actions have been added, mainly regarding the management of classroom courses, mobile devices and managing the Google schema. (28/dec/2015)
19. **Action: Edit user (AD)** (fix). The "User must change password at next logon " setting was not set when a new password was also specified in the same Edit action. Note, that the "Edit user logon" action did not have this issue. (29/dec/2015)
20. **Action: Protect object (AD)** (new). An new action is added to set or clear the "Protect object from accidental deletion" flag for any object in the AD. (5/Jan/2016)
21. **Action: Generate table** (enhancement). The connection string builder dialog in the GUI, will now check if the console is connected to a 64 bit UMRA service. If so, it will display the 64 bit version of the standard windows dialog. As this is not possible in a 32 bit application, a small 64 bit application is started that implements the dialog. (14/Jan/2016)
22. **Logging** (enhancement). The logging will now also show in each log message the ID (generally a 4 digit number) of the associated execution thread in UMRA. This is especially useful in scenarios where several identical projects are running concurrently. (15/Jan/2016)
23. **Action: Encrypt/Decrypt text.** (new/enhanced). The existing "encrypt text" action is extended with new functionality that allows encryption and decryption of data with a self supplied password. (16/Jan/2016)





24. **Service configuration option: License expiration mail (new).** A service configuration option is added to enable an automated mail being sent when a license is close to its limits. (29/Jan/2016)
25. **GUI: Dialog about** (fix). Fixed some broken links to the web pages. (2/Feb/2016).
26. **Action: Send HTML mail message** (fix). SMTP sockets are now correctly closed after sending the message. (9/Feb/2016).
27. **GUI:Password Synchronization Manager service settings dialog** (enhancement). Added option to automatically open specified project for edit on exit of dialog. (9/Feb/2016)
28. **Action: Manage Table** (enhancement). In the operation "export to .csv", in the case of UTF\_7 or UTF\_8 encodings, the "Byte Order Mark" is now optional. (11/Feb/2016)
29. **Action: Manage Table** (enhancement). The operation "export to .csv", can be configured to save the output to a set of cyclic files. (11/Feb/2016)
30. **Action: List UMRA Licenses** (fix). When the listing contained site or demo licenses, this could cause an assertion failure. (18/Feb/2016)







## Version 11.05 Build 1733, Oct 22, 2015

### Fixes and enhancements

1. **Action: Convert value of variable** (fix). The operation to convert a GUID as returned by an AD query to a GUID in string format with separators, did not correctly account for the non-consecutive byte order in the original raw GUID. This has been fixed. The action is also renamed to "Convert raw GUID to base16 string GUID with separators". (28/Sep/2015)
2. **Action: Send a task start request to the task scheduler** (new). Added a script action to send an asynchronous start request ("run now") to a scheduled project. Previously this was only possibly manually by means of the management console. (9/Oct/2015)
3. **Task scheduling dependencies** (fix). When a project was specified to be dependent on a specific other project, the runtime check would always ensure that the other project was not running, irrespective of whether the governing checkbox was ticked. Now it behaves according to the checkbox. (09/Oct/2015).
4. **GUI: Dialog "Manage server Projects"**(enhancement). Projects will now record their creation and modification dates. The dialog will show the creation and modification date of the project. For existing projects the creation and modification date will be initialized with the create and modify time of the project file. (09/Oct/2015)
5. **GUI: Dialog "Open Umra Project"**(enhancement). This dialog shows after "File/open project". Server based projects will now show their creation and modification dates. (19/Oct/2015)
6. **Action:Manage Table** (fix). The operation "export table data to csv file" did not correctly release all its temporary memory. This could eventually lead to a lack of available memory in the umra service. This has been fixed (12/Oct/2015)
7. **Service Installation and Upgrade** (change). Upgrading an UMRA service is a major operation that can potentially have a significant impact on the current UMRA performance and behavior. To prevent unsolicited upgrades, a password protection is introduced: when upgrading an existing service from the GUI, a special "upgrade password" must be entered in order to proceed. (13/Oct/2015)
8. **Service Logging:** (enhancement). The main service log will, before each project execution, log the amount of free virtual memory available for the UMRA service. It will log a warning if it is below around 200MB. (15/Oct/2015)
9. **Action: Get global memory status** (new). Added a script action to retrieve the memory available to the process that runs the script. Can be used to send notification mails if the process gets low on memory. (19/Oct/2010)
10. **PSM** (fix). A minor memory leak and a handle leak have been fixed in the PSM dll. (20/Oct/2015)
11. **N@TSchool** (fix). Fixed a compatibility issue of the N@TSchool actions with version 4 of Powershell. Actions failed with the notification "Cannot overwrite variable tmpPersons because the variable has been optimized". This error will not occur anymore. (6/Oct/2015)
12. **Action: Powershell Custom Setup Remote Connection** (fix). Sessions based explicitly on a computer name instead of an URL failed because the "AllowRedirection" option was specified for the session, which is not allowed for such connections. Now this option is not longer set for such sessions (6/Oct/2015);





13. **PSM** (change). When upgrading the version of the PSM dll on a domain controller, the previous version will continue to operate until the required reboot of the domain controller, instead of being put in idle mode at the begin of the upgrade process. (22/Oct/2015)





## Beta version 11.03 Build 1731 25 Sept 2015

### Fixes and enhancements

1. **Action: Update date-time variable** (fix). The operation "Update display options" could, in case of an unsupported time formatting specification, cause the UMRA service to exit. This is fixed, and now it will treat the error as a normal script error. (25/Sep/2015);
2. **Action: Format Column**. (change). When a format is performed on a column in a table, and the field that must be formatted contains a table itself, (instead of a normal text value), the entire inner table is converted to a single text value before the formatting operation starts. In case of a 1 by 1 inner table, it is the contents of the only data field that is converted to text. Behavior is undefined for inner tables of other sizes.
3. **Aura connector** (enhancement). Support for branches has been added to the user 'create' and 'edit' and 'get' actions. (25/Sep/2015).





## Version 11.02 Build 1730, Aug 20 2015

### Major Changes

1. **Action: Go to label (change/enhancement).** Action behavior has been modified for the case that the destination label is specified by a variable, but at runtime this variable does not contain a valid destination label. Options have been added to specify how such an event should be handled. For new "Go to" actions the default behavior is to raise an error and follow the options specified in the standard "onerror" tab, instead of jumping to the end of the script. Existing actions in scripts will keep the original behaviour, by automatically selecting the "legacy" option on upgrade. (07/Aug/2015)

### Fixes and enhancements

1. **UMRA installation package (fix).** Updated the version number of several file resources to automatically match the version and build number of the console . This fixes the issue that on upgrades some files were not replaced with newer ones. (03/Aug/2015);
2. **UMRA installation package (fix).** The installation procedure will now recognize the installation location of installations done with the previous installation package creation software, and unregister them. (18/Aug/2015)
3. **Action: Manage Table (enhancement).** The operation "Log table data" will, in addition to the name of each column, display the name of the underlying data type of each column when known. (04/Aug/2015)
4. **Action: Format Column (enhancement).** The action logs a warning message when trying to modify columns that do not contain textual data, and an error message if conversion from formatted text back to the original type actually fails. (04/Aug/2015)
5. **Action: Manage Table (enhancement).** The operation "export table data to csv file" supports output to UTF-8 and other character encodings. (13/08/2015);
6. **Action: Send mail message (PS) (enhancement).** Added support to specify the port number of the SMTP service. (13/08/2015);
7. **PSM (fix).** Fixed an issue with updating the "PendingFileRenameOperations" registry setting in version 1725, required for the installation procedure for the notification dll. (14/Aug/2015)
8. **Action: Manage Table (enhancement).** The operation "Get the data at the specified row and column of the table" now supports variables in the specification of the name of the output variable. (18/aug/2015).
9. **Action: Set Variable (fix).** The option "Set only if variable does not yet exists" now also works for dynamic variables. (18/Aug/2015)
10. **Action: If then else (enhancement).** The "left" variable in conditions statements can now be a dynamic variable. (18/Aug/2015)
11. **Action: If then else (enhancement).** Added the condition "does not exist", in addition to the existing "has no value or does not exist", to be able to distinguish between a non-existent table variable, and an empty table. (18/Aug/2015).
12. **Action: Generate generic Table (fix).** Database queries reading "uniqueidentifier" columns now properly display leading 0 chars in the result. (20/Aug/2015);





13. **Action: Generate generic Table (fix).** Database queries with empty result sets could potentially cause stability issues. (20/Aug/2015);
14. **Action: @VO (fix).** The first connection attempt after a start of the Powershell service might fail. (27/Aug/2015)





## Version 11.00 Build 1725, July 20, 2015

### Major Changes

1. **The build environment is updated to Visual studio 2013.** All major UMRA applications are now built with Visual studio 2013. (23/June/2015)
2. **New Installation package.** The software installation package (...Setup.exe) is created with different package creation software. (23/June/2015)
3. **Feature: disabling script actions** (new). Individual script actions in a script can be disabled ("commented out"). Select the actions to disable and select "Disable" from the context menu (or press Ctrl-D). (21/April/2015)
4. **Console: Undo changes** (new). Modifications made to the script in an open project can be undone by choosing "Undo" from the context menu or by pressing ctrl-z. Redo is also implemented (29/May/2015)
5. **Sharepoint online connector** (new). A new basic connector to Sharepoint online is added. (30/June/2015).
6. **Exchange 2003** (discontinuation). Operations that target Exchange 2003 are no longer supported. (23/June/2015)

### Fixes and enhancements

1. **Action: Manage Table** (enhancement). Added the operation "Combine columns". The contents of several columns are combined(merged) in a new column (9/April/2015)
2. **Powershell Service** (fix). When implicitly converting time values from the format used by the Powershell service to the format used in the UMRA service, an exception could be thrown if the source value was out of bounds. This happened if the time represented a date before Jan 1, 1601. Now it will set any invalid date to exactly 1 jan 1601, without generating an error. (10/April/2015)
3. **UMRA service** (enhancement). Added the option to change the location of the log directory. In the "Advanced" tab of the service properties, it is now possible to specify a new location for the service log files. Restart the service in order to effectuate the changes. (28/April/2015)
4. **Action: Generate generic Table** (fix). Fixed an error in reading sql database data of the special type "uniqueidentifier", resulting in incorrect values. (30/Apr/2015).
5. **UMRA service installation** (change). On a fresh install of the UMRA service, the suggested target location of the service files will be in the directory ...\\Tools4ever\\UmraService, instead of in ...\\UmraService. (01/May/2015)
6. **Powershell Service Installation** (enhancement). There will now be a default exe.config file added with .net options, for compatibility with exchange2007. (11/May/2015)
7. **Export Project** (fix). Projects that contained dependency items in the scheduler could not be exported to .xml format (29/May/2015)
8. **Action: Set client access attributes(Exchange2010)** (fix). When unspecified or set to No/false, the parameter IgnoreDefaultScope is no longer propagated to the exchange commandlet. This caused problems in configurations like Exchange online that did not recognize this option. (2/jun.2015)





9. **Action: Exchange Setup connection.** (fix). The connection to the exchange server has an implicit feature to reconnect a timed-out or broken connection. This feature did not function properly due to changes introduced in version 1710 to support the ProxyAccessType parameter. This now repaired. (2/June/2015).
10. **Action: Powershell Custom Setup Remote Connection** (enhancement). Added the configuration parameters "Skip certificate check" and "ProxyAccessType". (2/June/2015)
11. **Action: Office 365 List users** (enhancement). Option added to retrieve deleted users. (6/June/2015).
12. **Action: Office 365 List all users licenses** (new). New action to retrieve the license information of all users in a single table. (6/June/2015).
13. **Action: Office 365 Restore user** (new). New action to restore users that are currently in the recycle bin. (6/June/2015).
14. **It's Learning** (fix). Prevents the error 'Cannot add a member with the name "EndPoint" because a member with that name already exists.' (6/June/2015).
15. **Action: Generate generic table** (enhancement). When reading the table from a text (CSV) file, added a option to explicitly specify the character encoding of the source file. This allows reading files encoded in UTF-8 and UTF-7, or any of the installed Windows encodings. (8/June/2015)
16. **Action: Generate table** (change). For database queries, when the data is of type "float" or "real", the value will be only converted to the exponential format when the number is very small or very large. Note that floating point values are converted to text, and not to the "numeric" UMRA data type. (23/June/2015)
17. **Action: Generate generic Table** (fix). For LDAP queries: When the ODN of the object that is used as binding root contained a forward slash, the binding would fail. This is because a forward slash is an reserved character in a binding string. Now the forward slash will be automatically escaped, and the bind will succeed. (26/June/2015)
18. **Powershell Service** (fix). The data structure that is actually returned by the Powershell "where" statement in case of an empty result set has changed in recent versions of Powershell. This resulted in a "Member not found" error in the service, when the service tried to interpret the results, and convert those in a UMRA table. Now when no relevant data is found, it is assumed to be a valid empty result set, and only a warning will be logged. (3/July/2015)
19. **Project Import** (fix). When importing projects from XML format, reading very large unsigned numbers could fail. This could result in incorrect options for the project dependency configuration. (3/July/2015)
20. **Name Generation** (fix). When in the advanced setting of a specific name generation method the option "limit total length name prior to final formatting" was specified, the length was limited, but the mentioned subsequent formatting was not performed. (3/July/2015)
21. **Action: Generate generic table** (enhancement). When reading a file with a UTF8 or UTF7 encoding and the file contains Byte Order Markers, the encoding is recognized automatically, overruling the configuration in the action. (6/July/2015)
22. **Action: Set Error** (new). An action to set the error status of a script. This causes the "OnError" handler of a parent script to be called on finish. (6/july/2015)
23. **Action: Clear Error** (new). An action to clear the error status of a script. (6/july/2015)





## Version 10.32 Build 1710 March 27, 2015

### Major changes

1. **Task scheduling** (enhancement). Added options to make a project's execution dependent on the status of other scheduled projects. (20/Feb/2015)
2. **Action: Get UMRA task schedule** (new). This new action creates a UMRA table variable with the same information as available in the task scheduling overview in the console. (20/Mar/2015)
3. **Lync Connector** (new). Added a new basic connector to Microsoft Lync server 2013 to manage users in Lync server 2013: list, edit, enable/disable, and granting policies. (13/Mar/2015)

### Fixes and enhancements

1. **Powershell Service** (fix). Fixed the location of the VC2010 CRT files, so the manual installation of the VC2010 redistributable package is no longer required. (9/Jan/2015)
2. **Action: Convert value of variable** (enhancement). Added the two conversion options "Convert base16 GUID to base32 GUID", and "Convert base32 GUID to base16 GUID". Typically used to convert the base16 GUID string as returned by the "Get user (ad)" action, to a base32 GUID string required by the office 365 "Immutable ID" parameter. (23/Jan/2015)
3. **Action: Convert value of variable** (enhancement). Added the two conversion options "Convert base16 string containing Sid to a Sid string", used to convert a hex SID to a SID in the SDDL format and "Convert base16 string containing raw GUID to base16 string containing GUID with separator". (19/Mar/2015)
4. **Action: Move - rename (AD)** (enhancement). Added the resulting Object Distinguished Name as an optional output parameter. (23/Jan/2015)
5. **Action: Generate Table (AD)** (fix). Added a check (retry mechanism) so that different instances of the action will not concurrently access the same file, as this could cause service instability. This could especially occur when several project instances were started concurrently, for example by start notifications received from the PSM module. (27/Jan/2015)
6. **Action: Manage table** (fix). Fixed the issue that when the operation "Export to .csv" failed, an error was logged, but the error was not properly propagated to the script status. (20/Mar/2015)
7. **Action: Edit mailbox (Exchange 2010)** (Enhancement). Added the option to set the "DefaultPublicFolderMailbox" property. Applies to Exchange 2013. (16/Mar/2015)
8. **Action: Setup Exchange session (Exchange 2010)** (Enhancement). Added the option to specify the "ProxyAccessType" of the connection. (17/Mar/2015)
9. **Action: Manage Active Directory permission (Exchange 2010) (fix)**. Fixed the issue that in some rare cases an extra "server" parameter was inadvertently provided to the used commandlet. (19/Mar/2015).
10. **GUI: Open project/workspace** (enhancement). When the first workspace is shown in the GUI, it will open in the maximized view. When a project is opened from the task scheduling overview window, it will open in an existing open workspace instead of creating a new workspace. If the view is maximized, the project will open as maximized. (2/Mar/2015).







11. **GUI: Manage server projects** (enhancement). The open button is now the default button, so the enter key will now open the selected project(s) instead of canceling the dialog. (30/Jan/2015).
12. **GUI: Powershell service installation** (fix). When upgrading the Powershell service, the upgrade procedure will wait 10 seconds after the OS reports the service as stopped, before starting the actual installation. This is in order to prevent sharing violations on the executable files. (30/Jan/2015).
13. **Import xml projects** (fix). Fixed the issue that importing XML projects that contained the action "SAP multi generic function modules" failed. This has been fixed. (2/Feb/2015)
14. **PSM** (fix). Fixed an issue with determining the computer role that could prevent execution of PSM projects. (5/Feb/2015)
15. **Name Generation** (enhancement). Added an option to limit the total length of the generated string, including the generated iterator, to a fixed number. Characters in front of the iterator are removed until the limit is reached. (9/Feb/2015)
16. **AFAS** (enhancement). Added support for photos. (20/Feb/2015)
17. **AFAS** (fix). Fixed the issue that in some windows environments, the AFAS connector stopped while connecting with the following error in the log: " Specified key is not a valid size for this algorithm". (16/Mar/2015)
18. **Action: Setup Security** (fix). Fixed the issue that when continue on error was set to no, the action stopped as specified on the first encountered error, but the error status of the action was not set, so the on-error actions were not performed. This has been fixed (24/Feb/2015).
19. **Google Apps** (fix). Connector actions can now be run concurrently in different projects ; scripts can run at the same time without interfering each other. (17/Mar/2015).
20. **Google Apps** (fix). Each dynamic action resets general variables like "RetVal". (17/Mar/2015).
21. **Google Apps** (enhancement). "Google User Create" and "Google Group Create" return the ID of the created entity. (17/Mar/2015).
22. **Action: Powershell custom setup remote connection** (fix). Specifying the Username/Password combination is now optional for authentication mechanisms that do not require them. For instance, when using kerberos, without a username and password the connection will automatically use the security context of the calling process, i.e. the account with which the Powershell Agent Service is logged on. (23/Mar/2015)





## Version 10.29 Build 1705 December 29, 2014

### Major changes

1. **Powershell service** (enhancement). The Powershell service is ported to a new development environment and now supports .NET 4.0 functionality. Note that .NET 4.0 or higher must be installed on the server that runs the powershell service. (27/nov/2014)
2. **Google** (New). An entirely new set of Google Actions is added that makes use of the new powershell service. The new actions are located in the action tree at "Google Apps". It is recommended for new and existing implementations to use these new actions instead of the previous actions (located at "Google"), which are expected to become unsupported due to changes at Google. (19/Dec/ 2014)

### Fixes and enhancements

1. **It's Learning** (fix). Because of a update of It's learning, some parameters used in the connection changed from enum types to a string type. These are now supported. This means for example that creating users with roles works again. (20/aug/2014)
2. **Action: Remove duplicate Rows** (fix). When reading the action from disk, if the output variable specification is the same as the input variable specification, the output variable specification is cleared to prevent overwriting the input table. (28/Nov/2014)
3. **Action: Format variable** (enhancement). The option "Conversion: remove diacritical marks" now also converts the characters 0x04AA to C , 0x04AB to c, 0x04E6 to O and 0x04E7 to o. (28/Nov/2014)
4. **Project Scheduling** (modification). After a service (re)start, projects that would have their next scheduled time of execution in the past are no longer started immediately, but are rescheduled. (1/Dec/2014)
5. **Form action: Set variable** (fix). When configuring the form action "Set variable value", it showed some options that are specific to script actions, but not applicable in the context of a form action. Now these options are not shown when editing the configuration. (2/Dec/2014)
6. **Action: Manage Table** (enhancement). The operation "Search table" has an extra output variable that contains the number of matches. (2/Dec/2014)
7. **Action: Convert text to date-time** (fix). The year is now also correctly converted for dates before 1900. (4/Dec/2014)
8. **Office 365** (fix). Updated the Office 365 actions to work with the new .NET 4.0 powershell service. (11/Dec/2014)
9. **Logging** (enhancement). Log messages now contain project name and line number in the message. (22/Dec/2014)
10. **Admin console GUI, logbar** (enhancement). Double-clicking on log messages in the logging bar of the console will activate the specific project window on the specified line when applicable. (22/Dec/2014).
11. **Admin console GUI, Search and replace** (enhancement). The search and replace dialog now has the option to search through all projects on the server instead of only the projects in the open workspace. Note that text replacement will not be performed when this option is selected. (22/Dec/2014)





12. **Admin console GUI, project Script tab** (enhancement). The project script tab has an extra column containing the line number. (22/Dec/2014)





## Version 10.22. Build 1693 August 19, 2014

### Fixes and enhancements

1. **Action: It's Learning Add member to course** (fix). When the home organization is not specified, the home organization is not modified. (13/Aug/2014)
2. **Action: Manage mailbox email addresses** (Exchange2007) (fix). When a domain controller is specified, the domain controller is now used for both the Get-mailbox and get Set-mailbox commands that are implicitly issued by the action. (14/aug/2014)
3. **Action: Update date-time variable** (enhancement). Added a new option "Convert from Coordinated Universal Time (UTC) to historic local". This option will attempt to adjust for DST (Daylight Saving Time) at the indicated time rather than using the DST at the time of calculation. Note that it uses the current start and end times for DST, and not the historical ones to calculate this adjustment. (15/aug/2014)
4. **Admin console GUI** (fix). On occasion when opening a project that was small enough not to show the vertical scroll bar, the headers of the list of script actions overlapped with the first item in the list, making it invisible, until a scroll bar was shown by resizing. This has been fixed. (19/aug/2014)





## Version 10.20. Build 1691 August 8, 2014

### Fixes and enhancements

1. **Action: Edit distributionGroup (Exchange 2010)** (enhancement). Added support for the following parameters "BypassModerationFromSendersOrMembers", "BypassNestedModerationEnabled" and "BypassSecurityGroupManagerCheck". (28/Mar/2014)
2. **Action: Send mail message (PS)** (new). This action is an alternative for the existing actions that send a text or HTML e-mail message. This action uses the standard Microsoft Powershell Send-MailMessage commandlet as available in Powershell (version 2.0). Specific to this action is the possibility to use a SSL (TLC) connection to the SMTP server, specify the priority of the mail message and specify delivery notification options. It also allows the specification of credentials for the connection to the SMTP server. It can however only connect to the standard SMTP port (25) due to restrictions in the Send-MailMessage commandlet in Powershell 2.0. (17/Apr/2014)
3. **Action: List UMRA Licenses** (new). This action collects a detailed list of currently installed UMRA licenses in a table variable. (25/Apr/2014)
4. **Action: Manage table data** (enhancement). The list of operations is extended with the "Get the data at the specified row of the table" action. This will retrieve the value of each column of the specified row, and store it in a dynamically created variable based on the column name.(28/Apr/2014)
5. **Dynamic Actions** (enhancement). When creating a custom dynamic Powershell action that returns a table variable as output, the dimension can be specified as "dynamictable", instead of "table". 06/May/2014)
6. **General:** (Enhancement). All actions related to the AD or the Windows OS, and all dynamic actions (powershell) will update the special UMRA variable %UmraAction\_LastError%. If an UMRA action returns an error, this variable will contain a number representing the underlying system error if available. (15/May/2014).
7. **Action: It's Learning Setup Connection** (enhancement). Added the option to fix the 'member already deleted' bug when deleting a member from a group. (30/May/2014)
8. **Action: It's Learning Get hierarchy objects for persons** (enhancement). Added the option to retrieve courses in the same output table. (30/May/2014)
9. **Action: It's Learning Remove member from course** (enhancement). Added the result of the action, so UMRA can determine if a warning has been raised because the user is already removed from the group. (30/may/2014)
10. **Action: Attach ID file to DataBase (Lotus Notes)** (new): This action attaches the given ID file to the given database profile note. (20/May/2014)
11. **Action: It's Learning Get Persons** and **It's Learning Get Person Info** (fix). The birth date is now correctly returned. (04/Jun/2014)
12. **Action: Compare table data** (new). Compares two tables of identical design and reports the rows that are added, deleted, or changed. (17/Jun/2014)
13. **Action: Generate table** (fix). When importing data from a non-UNICODE text file, it now correctly uses the standard configured windows system code page instead of ISO-8859-1. (23/June/2014)





14. **Action: Set variable** (enhancement). When creating a new date time value, it is possible to specify in detail the display format (text representation) of the value. (01/July/2014)
15. **Action: Update date-time variable.** (enhancement). The action is extended with the option "Update the display options", to change the display format of a date-time variable. (01/July/2014)
16. **Office 365 Edit user:** An error mentioning failure to comply to password policies is no longer displayed when editing user and nothing about the password is changed (23/jun/2014)
17. **Action: PowerShell Custom Action Execute** (new). Executes a custom powershell script. (01/Jul/2014)
18. **Action: PowerShell Custom Remote Command Execute** (new). Executes a custom powershell command on a powershell remote session. (01/July/2014)
19. **Action: PowerShell Custom Get Table** (new). Get a variable in the powershell session as table. (01/Jul/2014)
20. **Action: PowerShell Custom Get Text** (new). Get a variable in the powershell session as text. (01/Jul/2014)
21. **Action: PowerShell Custom Remote Set Array Parameter** (new). Initialize a parameter of the next remote command with an array. (01/July/2014)
22. **Action: PowerShell Custom Remote Set Parameter** (new). Initialize a parameter of the next remote command. (01/July/2014)
23. **Action: PowerShell Custom Setup Remote Connection** (new). Setup a remote PowerShell Session. (01/Jul/2014)
24. **Action: PowerShell Custom Close Remote Connection** (new). Close a remote PowerShell Session. (15/Jul/2014)
25. **Action: @VO Add caregiver authorization** (fix). Fixes again the error "Missing expression after unary operator '-'." (11/Jul/2014)
26. **Action: It's Learning Get course members** (update). Updated the version. No other changes. (11/Jul/2014)
27. **Action: It's Learning Get hierarchy info** (update). Updated the version. No other changes. (11/Jul/2014)
28. **Action: It's Learning Get courses for person** (update). Updated the version. No other changes.. (11/Jul/2014)
29. **Action: It's Learning Close Connection** (update). Updated the version. No other changes.. (11/Jul/2014)
30. **Action: It's Learning Get course exists** (update). Updated the version. No other changes.. (11/Jul/2014)
31. **Action: It's Learning Add member to course** (update). Added the option to set the home organization. (15/Jul/2014)
32. **Action: Generate table.** (enhancement) The number of supported database data types when using a select query has been extended with the types "decimal", "numeric", "real", "float" and "uniqueidentifier" (GUID). In UMRA these are converted to their textual representation. (15/July/2014).
33. **Action: Generate generic table.** (enhancement). For the database queries , the option to automatically escape single quotes found in referenced variables used by the query string, will only replace the variables in the second and higher level of reference, if the entire query is contained in a single variable. (17/July/2014)





34. **Action: Manage Table** (enhancement). The list of operations is extended with "Sort on multiple columns". (18/Jul/2014)
35. **Action: Format variable** (enhancement). To complement the existing actions, the list of format actions is extended with the following 6 actions "Shorten name: Remove before first matching character", "Shorten name: Remove before last matching character", "Shorten name: Remove before matching text" (case sensitive)", "Shorten name: Remove before matching text (case insensitive)", "Delete: Substring (case sensitive)", "Replace: substring (case sensitive)". (21/Jul/2014)
36. **Project window** (enhancement). Added an extra pane in which script comments can be entered. (24/Jul/2014)
37. **Action: It's Learning Add member to course** (fix). The option to set the home organization is not remembered for the next action after setting it to true once. (05/Aug/2014)





## Version 10.17 Build 1683 February 21, 2014

### Fixes and enhancements

1. **Import xml projects** (fix). Importing xml projects created by older versions failed if the project contained a join table action. This has been fixed. (12/Feb/2014)
2. **Variable names enforcement** (fix). By definition variables need to start and end with a % sign. Added a fail-safe to enforce this at runtime. This prevents text fragments from being incorrectly recognized as variables in case the incorrect specification was not caught by the GUI. (12/Feb/2014)
3. **Setup package** (enhancement). The setup package, and many of its contents are now digitally signed. (18/Feb/2014)
4. **Action: Generate generic table** (fix). For LDAP queries, the test button reported an error if the binding string contained variables and the test was performed on the server. (18/Feb/2014)







## Version 10.16 Build 1681 30 January 2014

### Major changes

1. **UMRA Com** (new). A new multi-threaded version of the UMRA COM object is available. It is implemented in the UMRAcomMT.dll file. See the appropriate section of the help [UMRA COM MT objects](#) for more detailed information (07/Jan/2014).
2. **Action: Generate generic table** (enhancement). Added support for SQL queries that return more than one result set. Specify a comma-separated list of output variables, one for each set (i.e. table) returned from the query. If more than one output variable is specified, UMRA will automatically switch to the new mode supporting multiple output sets. This feature can for instance be used to report the return values of stored procedures to UMRA. (2/Jan/2014)
3. **Action: List shares** (new). New action to retrieve a list of shares on a particular computer. (26/Aug/2013)

### Fixes and enhancements

1. **Action: Office 365 Get user info** (new). This action will return the license info of a single user. (20/Aug/2013)
2. **Action: Office 365 Create license options** (new). Generates an license options object for the create user action. (20/Aug/2013)
3. **Action: Office 365 Create user** (enhancement). Added support for the license option field. (21/Oct/2013)
4. **@VO** (fix). Prevent caching of location data, fixes some caching issues. (20/Aug/2013)
5. **Action: @VO Get students** (enhancement). Supports the ExternExportId field in the Somtoday after upgrading to somtoday 4.0 and newer (20/Aug/2013)
6. **Action: @VO Add caregiver authorization** (fix). Fixes the error "Missing expression after unary operator '-'." (20/Aug/2013)
7. **Teletop** (fix). Changed the login method, to be able to login after the hosting moved to it's learning. (21/Aug/2013)
8. **Avetica Moodle** (fix). All the time related fields now use the 24 hour format. (28/Aug/2013)
9. **Action: Avetica Moodle Edit homework** (fix). The Start Date/Time is correctly set.
10. **Action: Manage table** (enhancement). The list of table operations is extended with the "Copy column" operation. This will create a copy of a column within a table. (28/Aug/2013)
11. **Action: Manage table** (enhancement). The list of table operations is extended with the "Split column" operation. This will split a column in two new columns. (29/Aug/2013)
12. **Edictis** (fix): Support two ways of calling edictis and automatically detect which one should be used. (02/Sep/2013)
13. **Action: Manage table** (enhancement). The list of table operations is extended with the "Move column" operation. This will move a column within a table to a specified position. (15/Oct/2013)
14. **Action: Format column** (new). Formats all rows of a specified column of a table. This is like the "Format variable" action, but now for an entire column of a table. (18/Oct/2013)
15. **Action:Join table** (enhancement). The output can optionally be split into three tables, based on the result of the join. (12/Nov/2013)





16. **Action: Manage table** (modification). The commands "Search table" and "Sort on column index" do not report an error anymore when the input table contains no rows. (14/Nov/2013)
17. **Action: Get file/directory info** (fix). The last access time could in some circumstances be incorrectly reported as the write time. (14/Nov/2013)
18. **Action: Format variable value** (enhancement). The command "Conversion: Remove diacritical marks", now also works for the characters 0x008A, 0x008E and 0x009E (15/Nov/2013)
19. **Action: Delete user (AD)** (enhancement). New option "delete subtree" added to allow for implicit deletion of all child objects of an account. Without this option specified the deletion will fail if there are any child objects.(18/Nov/2013)
20. **Action: Generate generic table.** (enhancement). For the database queries , added an option to automatically escape single quotes found in referenced variables used by the query string.(19/Nov/2013)
21. **Action: Update database** (enhancement). Added an option to automatically escape single quotes found in referenced variables.(21/nov/2013)
22. **Action: Set variable** (enhancement). Added an option to only set the variable if it does not yet exists. (22/Nov/2013)
23. **N@TSchool** (fix): When retrieving group members of a group where the member count of users from a specific container was between 500 and 1000 only the first 501 users where retrieved. (07/sep/2013)
24. **Action: Get Terminal Services user settings** (enhancement). Added an option to ignore a particular type of error. (13/Dec/2013)
25. **Action: Generate generic table** (enhancement). For LDAP queries, the binding string is now allowed to be a multi-value variable. For each specified binding string a query is done, and results added to the output table. (16/Dec/2013).
26. **Action: Manage table** (enhancement). The list of table operations is extended with the "Count duplicate rows" and "Count duplicate rows (case sensitive) operations. This will count the number of times a particular value occurs in a specified key column, if the values occurs at least once . Results are in a table with two columns "Key" and "Count". (17/Dec/2013)
27. **Action: Manage table** (enhancement). The operation "Remove duplicate rows" optionally produces an extra table that contains all rows that have been removed from the main table.(19/Dec/2013)
28. **Action: Delete variable** (enhancement). It is now possible to specify the name of the variable to delete dynamically by means of a reference. use "%namevar%", where %namevar% is a variable that holds the name of the actual variable to delete. This is to complement the already existing support for dynamic variables in de "Set variable" and "Format variable" actions. (20/Dec/ 2013).
29. **Action: Create dynamic distribution group (Exchange2010)** (fix). The 'RecipientContainer' parameter is no longer ignored. (27/jan/2014)
30. **Action: Edit dynamic distribution group (Exchange2010)** (fix+enhancement). Fixed the 'RecipientContainer' parameter and added support for several other optional parameters. (27/jan/2014)





## Version 10.15 Build 1676 July 5, 2013

### Fixes and enhancements

1. **TopDesk** (fix): The url construction mechanism could sometimes generate an exception when particular fields were specified in some powershell versions. This has been fixed. (24/Apr/2013)
2. **Office365** (fix): The Office365 connector will not cause a crash anymore when loading a dll in the powershell agent after an Office365 session has been initiated. Such a situation could occur when some other Powershell-based connector was used in combination with the Office365 connector.(13/Jun/2013)
3. **Office365** (fix): The Office365 connector will pass all parameters for the first request after a session time-out has occurred. (01/Jul/2013)
4. **ITSL** (fix): Fixed the updating and retrieval of custom fields (especially the "nationalidentitynumber" in custom field 1). (01/Jul/2013)
5. **Action: It's Learning setup connection** (enhancement): Added the possibility to change the connection url. (03/Jul/2013)





## Version 10.14 Build 1673 April 2, 2013

### General fixes and enhancements

1. **Action: Send HTML mail message (fix):** Changed the underlying charset from bare ascii to Windows-1252. The new charset supports a larger selection of special characters especially in the subject line because the subject itself is plain text. (19/Mar/2013)
2. **Action: Edit mailbox (Exchange 2010) (enhancement):** Added support for specifying a Managed Folder Mailbox policy. (28/Mar/2013)
3. **Action: Edit distributionGroup (Exchange 2010) (enhancement):** Added support for multi-valued "ManagedBy" parameter. (28/Mar/2013)
4. **Exchange 2010 dynamic distributionGroup actions (new):** Added 4 new actions to support management of dynamic distribution groups in Exchange 2010 (and 2013). (28/Mar/2013)

### Exchange 2013 compatibility enhancements

To support Exchange 2013, the Exchange 2010 actions have been verified on compatibility with both Exchange server 2010 and Exchange server 2013 environments, and modified where required.

1. **Action: List mail public folders (Exchange 2010) (enhancement):** There are now different output tables (different columns) for Exchange 2010 environments and Exchange 2013 environments. (25/Feb/2013)
2. **Action: List public folders (Exchange 2010) (enhancement):** Uses separate output tables for Exchange 2010 and Exchange 2013 environments. (25/Feb/2013)
3. **Action: List MailboxExportRequests (Exchange 2010) (enhancement):** Uses separate output tables for Exchange 2010 and Exchange 2013 environments. (25/Feb/2013)
4. **Action: List public folder permissions (Exchange 2010) (enhancement):** Uses separate output tables for Exchange 2010 and Exchange 2013 environments. Also, collecting administrative rights is made optional as this is not supported by Exchange 2013. (25/Feb/2013)
5. **Action: Manage public folder client permission (Exchange 2010) (enhancement):** No error is generated when trying to remove all existing permissions of a user, when that user has no explicit permissions. (11/Mar/2013)





## version 10.13 Build 1671 February 12 2013

1. **Google** (fix): The contacts and advanced user data is now retrieved by means of the https connection as introduced by Google. (12/feb/2013)





## Beta version 10.12 Build 1670 February 06 2013

### Fixes and enhancements

1. **ITSL (enhancement):** Extended the handling of errors in ITSL when it is under heavy load. Also fixed a bug for the second address line. (17/Oct/2012)
2. **Action: AFAS Update object (added):** A new action to specify the fields of an object to update. (17/Oct/2012)
3. **AFAS (fix):** The correct get\_employee AFAS module is now shipped. (17/Oct/2012)
4. **AFAS Connector: UMRA\_Employees\_Employers.gcn. (removed)** This file is removed. (26/Nov/2012)
5. **AFAS Connector: 1.1 OLD\_AFAS UMRA\_Employees\_Employers.gcn. (added)** This file is the old Employees\_Employers.gcn file with an updated costcenter field. Because of version limitations in AFAS the costcenter description and costcenter contain the same information. The costcenter field has changed from 'Actuele gegevens per dienstverband' to 'Actuele gegevens per formatieverdeling'. The connector must be re-imported to reflect the changes. (Make sure the file is not read-only when importing) (26/Nov/2012)
6. **AFAS Connector: 1.1 NEW\_AFAS UMRA\_Employees\_Employers.gcn. (added)** This file is the old Employees\_Employers.gcn file with an updated costcenter field. This connector works only in newer AFAS versions. The costcenter field has changed from 'Actuele gegevens per dienstverband' to 'Actuele gegevens per formatieverdeling'. The connector must be re-imported to reflect the changes. (Make sure the file is not read-only when importing) (26/Nov/2012)
7. **Action: Lotus Notes Store ID file to Vault (added):** Use this new action to upload an ID file to the lotus notes Vault. (30/Jan/2013)
8. **SAP (enhancement):** Better support for Date in the generic action. (22/Jan/2013)





## Version 10.11 Build 1668 October 3 2012

### Fixes and enhancements

1. **Aura** (enhancement): Added support for the extra hash for aura onlin.e (01/aug/2012)
2. **Office365** (fix): The Office365 connector will now correctly support multiple connections to the same or different environments at the same time. However, to make this support the connection is not automatic released. Therefore an extra action has introduced which must be called before releasing the Powershell Agent session. (30/aug/2012)
3. **Action: @VO Get employees courses/classes** (fixed) A bug was introduced in 1667 which caused this action to return 0 records. This bug is fixed. (27/aug/2012)
4. **Action: @VO Get students** (enhancement): Added support for 7 extra fields including access card number and e-mail address (THIS MEANS THE RESULTING TABLE HAS MORE FIELDS, SO ANY FOR-EACH ACTIONS NEED TO BE MODIFIED). (30/aug/2012)
5. **Action: @VO Get employees** (enhancement): Added support for 4 extra fields including access card number (THIS MEANS THE RESULTING TABLE HAS MORE FIELDS, SO ANY FOR-EACH ACTIONS NEED TO BE MODIFIED). (17/sep/2012)
6. **Action: @VO Get caregivers** (enhancement): Added support for 2 extra fields for caregivers and 3 extra fields for caregiver relations, including e-mail address. (THIS MEANS THE RESULTING TABLE HAS MORE FIELDS, SO ANY FOR-EACH ACTIONS NEED TO BE MODIFIED). (20/sep/2012)
7. **Action: @VO Add caregiver authorization** (enhancement): Added separation of e-mail and username field, also added the OpenID field. (30/aug/2012)
8. **Action: @VO Add student authorization** (enhancement): Added separation of e-mail and username field, also added the OpenID field. (30/aug/2012)
9. **Action: @VO Add employee authorization** (enhancement): Added the OpenID field. (30/aug/2012)
10. **Action: @VO Get caregiver custom fields** (added): This action can be used to retrieve the custom fields of caregivers. (17/sep/2012)
11. **Action: Office 365 Release connection** (added): Use this action ALWAYS when a connection to Office365 is created (even if that action was not successful). The usage of this action will prevent memory and file leakage. (30/aug/2012)
12. **Action: Edit Mailbox (Exchange2010)** (enhancement): Added support for the parameters "Archive Database", "Archive Domain", "Archive Name", and "Archive warning quota". (23/sep/2012)
13. **Action: Edit Mailbox (Exchange2010)** (enhancement): Added support for the "WindowsLiveID" parameter. (01/oct/2012)





## Version 10.10 Build 1667 june 25 2012

### Fixes and enhancements

1. **Atvo3 (SOM)** (enhancement): Added support for 3 new lightweight calls to retrieve only specified data instead of one big call to retrieve all data. (14/jun/2012)
2. **UMRA COM** (fix). A new umra session was created only when creating a new instance of the com object. Now a new session is created for each separate connection. (14/jun/2012)
3. **Dynamic actions** (fix) smart quotes in input parameters are now threaded like normal quotes and escaped. (25/june/2012)
4. **Import project** (fix). Older Projects (from version 10.7 and before) containing the action "Load Ldap modification data" failed to import from xml. This has been fixed. It will however still log an error message about a missing 'LogStructureFlag', but that should be ignored.(25/june/2012)







## Version 10.9 Build 1664 may 18 2012

### Major changes

1. **Action: Get Active Directory permission (Exchange 2010)** (new). Added support for the "Get-ADPermissions" cmdlet in Exchange (1661, 25/april/2012)
2. **Action: Manage Active Directory Permissions (Exchange2010)** (new). Allows to set/remove access rights on AD objects in the Exchange environment. Mainly Used to Implement the "Send as" rights on a mailbox, as this is not supported by the mailbox permissions actions.(1661, 26/april/2012)
3. **Action: Manage Recipient Permissions(Exchange2010)** (new). Allows to set/remove "SendAs" rights in a hosted Exchange configuration (1661, 27/april/2012)
4. **PSM:** (enhancement). The Password Synchronization Manager software plugin on the DC can now optionally automatically switch between two or more UMRA services in case of connection failures. In such a configuration, when the primary UMRA service is taken offline, synchronization notifications are automatically rerouted to an alternative UMRA service so no notifications are missed.

### Fixes and enhancements

1. **Action: It's Learning Get person info** (enhancement). Added support to read the "Children" of a user. (1660, 02/apr/2012)
2. **Action: It's Learning Add child to parent** (enhancement). Added. (1660, 02/apr/2012)
3. **Action: It's Learning Create Person** (enhancement). Added support to create a parent. (1660, 02/apr/2012)
4. **Action: It's Learning Get persons** (enhancement). Added a column Children, containing the children of the user. (1660, 02/apr/2012)
5. **Atvo3 (SOM)** (enhancement): Added support for gzip compression. (02/apr/2012)
6. **Action: SAP Set user detail** (new): The parameter name is now always converted to uppercase. (1660, 02/april/2012)
7. **Action: Exchange2010 Create (enable) mailbox.** (fix) Parameter "ManagedFolderMailboxPolicyAllowed" is now only passed on when set to "true" (1660,10/april/2012)
8. **Action: Afas get employees** (fix): The parameter Active Reference Date works now as expected. (02/apr/2012)
9. **Action: Create user and mailbox** (Exchange 2010) (enhancement). Added support for AddressListPolicy . (1661, 16 april 2012)
10. **Action: Edit Mailbox (Exchange2010)** (enhancement). Added support for AddressListPolicy. (1661,/16/april 2012)
11. **Action: Format variable value (enhancement):** The function "Remove diacritical marks" will now also convert unicode characters 0x1E60, 0x1E62, 0x1E64, 0x1E66, 0x1E68 to 'S' and 0x1E61, 0x1E63 0x1E65, 0x1E67,0x1E67, to 's' . (1661, 28/april/2012)
12. **Action: Create user (AD)** (fix). Extended the support for creating accounts in Organizational Units, in case the name of the OU contains characters that are illegal in a LDAP string. When the Organizational Unit is specified as a separate property, illegal characters are now





automatically escaped correctly. Also implemented in the "Get user (AD)", "Create contact (AD), and "Create object (AD)" actions. (1661, 01/may/2012)

13. **Action: Generate Generic table** (fix). Fixed a small memory leak when using database queries. (1661, 02/may/2012)
14. **Action: Manage table data - Remove Duplicate rows (case insensitive)** (new): A new action option is added to support case insensitive compare when removing duplicate rows (1661, 02/may/2012).





## Version 10.8 BUILD 1659 (BETA) feb 14 2012

### Fixes and enhancements

**UMRA COM** (fix/enhancement). When the IUmra method "ExecuteProjectScript". is called, it sends its list of client-side variables to the UMRA service, as part of the initialization of the script to be executed. After execution the modified list as generated by the project is returned to the client. Any next call to ExecuteProjectScript will use this modified list for initialization. When the datasize of this list in the client exceeded the limit of 5MB, the call would fail, and result in an critical error. This limit has been lifted.





## Version 10.8 Build 1658, Dec 23 2011

### Major changes

1. Office 365 Connector (new): The Office 365 environment is supported with a set of dedicated UMRA actions. (1654, 06/December/2011)

### Fixes and enhancements

1. **Action: New MoveRequest (Exchange 2010)** (enhancement). Added support for the "AcceptLargeDataLoss" parameter.(1656, 12/dec/2011)
2. **Action: Edit Mailbox (Exchange 2010)** (enhancement). Added support for the "RoleAssignmentPolicy" parameter.(1656, 12/dec/2011)
3. **Action: List MoveRequests (Exchange 2010)** (fix). The 'RequestStyle' property is now returned in the table instead of the obsolete 'MoveType' property.(1656, 12/dec/2011)
4. **Action: Load Ldap modification data** (enhancement). The resulting LDAP structure is no longer unconditionally logged in the Umra log files. This logging is now optional, and is off by default (1654,30/nov/2011).
5. **RPC Communication Layer** (Fix): Fixed an issue in the use of the memory manager for the RPC layer, as for example used by the UMRA Com object. This could cause the calling application to crash if a UMRA com method "execute project" was executed concurrently with another RPC using the same memory manager .This has been fixed. It most notably solves an issue for the SSRPM service when executing UMRA projects on password resets. (1656, 12/dec/2011).
6. **Action: Copy directory** (fix): When the input for this action is invalid such that the specified destination directory itself is within the source scope, an endless recursion can occur. Basic validity checks to prevent this have been added. (1650,12/october/2011)
7. **Action: Send HTML mail message** (fix): Unicode Characters in the mail body text that are not in the standard ascii set, are now encoded as e.g. &#180. This ensures that the mail client program can display them properly. (1650,10/october/2011)
8. **Action: Google Get users (advanced)** (fix): When retrieving the users, the column names from column 8 are incorrect. The name of column 9 was overwritten with the name of number 10. Number 10 with the name of 11 etc. Therefor only 63 column names were shown. The contents of the table were correct. Now the column names are correct. If a join is used on columnname of one of the columns above number 8 make sure the join is working as intended. (1650,5/oktober/2011)
9. **Action: Manage table** (fix): When creating a new table, or adding a new column, now each column will automatically get a default column name. This is because some other operations may depend in specific circumstances on the availability of a column name. (1650,4/october/2011)
10. **Action: Format variable value** (enhancement): The function "Remove diacritical marks" will now also convert unicode characters 0x1E20 en 0x1E21 to 'G' and 'g' respectively. (1650,28/september/2011)





11. **Service Installation** (Enhancement): Increased minimum delay threshold in any query for the servicesatus. This should prevent initial connection issues after upgrade of UMRA service (1650, 29/september/2011)
12. **RPC Communication Layer** (Enhancement): Communication between different UMRA components has been modified to support ip6 networks.(1649,28/september/2011)
13. **Action: Convert to multi value variable** (fix): Some of the memory resources used in this action where not correctly released. This could cause a growth of the memory used by the Umra service when this action was used frequently. This has been fixed. (1648,22/september/2011)
14. **TeleTOP** (enhancement): Added a option to set the maximum number of worker threads.(1648,22/september/2011)
15. **N@TSchool** (fix): Groups can now successfully be retrieved recursively.(1648,22/september/2011)
16. **IT's Learning** (enhancement): An update to the IT's Learning Software has enabled us to implement significant performance enhancements.(1648,22/september/2011)
17. **IT's Learning** (fix): Solved a memory leak in the connector.(1648,22/september/2011)
18. **Action: SAP Generic function modules** (fix): : Fixed the output of single numeric and date fields and added support for single string fields.(1648,22/september/2011)





## Version 10.7 Build 1648, June 30, 2011

### Major changes

1. **Exchange 2010** (Enhancement). Added several actions in order to support the export of mailboxes to .pst files. (requires Exchange SP1) (1647,23/june/2011)
2. **Exchange 2010** (Enhancement). Extended the "Create user and mailbox" action to support the creation of linked mailboxes. (1647,23/june/2011)
3. **Exchange 2010** (Enhancement). Extended the "create user and mailbox" action to support the creation of room and equipment mailboxes. (1647,23/june/2011)

### Fixes and enhancements

1. **PowerShell: Dynamic actions** (fix): When the powershell script building from the xml specification generates an exception in the UMRA service, further processing of the action is cancelled to prevent potential critical errors in the Umra service engine. (1640, 20/December/2010)
2. **Action: Get variable length** (new): New action added that calculates the number of characters in a text variable. (1640,27/December/2010)
3. **Action: Create user (AD)** (fix): When setting the "User cannot change password" flag in this action, there was an error that could lead to a crash when specific inheritable rights were pre-existing on the organizational unit in which the user was to be created. This has been fixed. The fix applies also to all other actions that set this flag. (1640,28/december/2010)
4. **Action: Set variable** (enhancement): The option "resolve variable names in value immediately." is now also implemented for text-list variables. (1641,29/December/2010)
5. **Action: Send Mail Message** (fix): The Send Mail Message action would truncate the mail message send if there were any genuine UNICODE characters in the text (character codes higher than 255). This is fixed. Note that the resulting text message is encoded with code page 1252. (1641,30/December/2010)
6. **General** (fix): General issue with string conversion to and from unicode has been fixed, that could cause truncation of strings with non-standard characters. (1641, 30/january/2011).
7. **UMRA console** (fix): When opening multiple projects at once, all projects that are not already open in another workspace, will now open in the originally active workspace. Previously the default target workspace could change if a project was encountered that was already open in another workspace. (1641,30/march/2011)
8. **Action: Format variable** (enhancement). The variable to be formatted can be specified indirectly e.g. "%name%" where the variable %name% contains the name of the actual variable to be formatted, (1641,31/march/2011)
9. **Action: If then Else** (fix): The evaluation of the equations of the types like "older than # days" would cause an exception for the date 1/1/1601 (a.k.a. 'never') when used in countries with negative time zones. This is fixed. (1641, 5/april/2011)
10. **Action: If then Else** (enhancement): The evaluation of the type "older than # days" would not differentiate between dates before 1 jan 1970. Now it differentiates between dates from 2.jan 1601 upwards. (1641, 5/april/2011)





11. **Action: Setup LDAP session** (fix): The "on error" handler was not always called if an error occurred. This has been fixed. (1641, 5/april/2011)
12. **Google Apps connector** (fix): The "change password at next logon" option, that can be specified when creating or editing Google users, was not effective. This has been fixed (1641, 8/april/2011).
13. **Action: Lotus Notes Set item(s)** (fix): Setting an item of type "textlist" to an empty list could cause a critical exception. This has been fixed. (1641, 13/april/2011)
14. **Action: Lotes Notes Set Item(s)** (fix): Items of type "textlist" were not completely stored when exporting the project to an xml file, resulting in an empty list upon import. This has been fixed. (1641, 13/april/2011)
15. **Action: Manage multi-text value variable** (fix): The option "sort values in descending order" would clear the values. This has been fixed. (14/april/2011)
16. **Action: List files and/or directories** (change): In more circumstances the data collection will continue after an error has been encountered. (18/april/2011)
17. **Action: SAP Generic function modules** (new): A new action is added to support multiple custom RFC/BAPI function modules to be executed within the same SAP server session. (1641, 18/april/2011)
18. **Action: Manage Table Data** (fix): When Using de Table Data Operation "Complete rows", the resulting column count is now updated to reflect the size of the largest row. (1641,22/april/2011)
19. **Action: Edit user (no AD)** (fix): The account expiration date can now successfully be specified by means of a variable. (1641,22/april/2011)
20. **Action: Create user (no AD)** (fix): The account expiration date can now successfully be specified by means of a variable. (1641,22/april/2011)
21. **UMRA COM** (fix): When the IUmra method "ExecuteProjectScript". was called without a prior successful call to the method "Connect", this could cause an exception. This has been fixed. (1642,06/may/2011)
22. **UMRA COM** (Enhancement): The UMRA com object has been extended with two methods in order to allow access to individual records of the resulting log of the ExecuteProjectScript method. (1642 10/may/2011)
23. **UMRA COM** (Enhancement): The UMRA com object has been extended with a method "GetVariableInfo". to retrieve information of the type of data contained in a variable. Main purpose is to be able to determine whether or not the variable contains a table. (1643, 19/May/2011)





## Version 10.6, Build 1640, December 17, 2010

### Major changes

1. **AFAS Profit connector** (new): The HR-system AFAS is supported with a set of dedicated UMRA actions. (1638, 3/December/2010)

### Fixes and enhancements

1. **Google** (fix): For all Google script actions, when an action returns result data as a table, and the action succeeds but the result set is empty, a table with 0 rows is generated. Previously no output was generated at all for the table variable when the result set was empty. Now table formatting functions will therefore work correctly on the result variable also if the result set is empty.(1635, 03/November/2010)
2. **Google** (fix): Extended the log information in case Google returns errors as text/plain instead of html or xml. (1637, 18/November/2010)
3. **Google** (fix): The UMRA service will stop all Google related activity when it receives a stop command. (1637, 22/November/2010)
4. **Action: Google get group info** (fix): Fixed a crash when this action was used on a closed connection. (1637, 18/November/2010)
5. **Action: Google get user info (advanced)** (fix): Fixed a rare situation causing a table row mismatch resulting in a empty table. (1637, 18/November/2010)
6. **Action: Google get user info (advanced)** (fix): Advanced user information is now returned correctly (especially birthdate and organizations). (1637, 18/November/2010)
7. **Action: Google rename user** (fix): Fixed some problems when renaming and using the cache. (1635, 05/November/2010)
8. **Action: Google add nickname** (fix): Fixed the problem of adding a nickname to a user when the user name was not specified in lower case. (1635, 05/November/2010)
9. **PSM: Installation** (fix): When the installation of the PSM notification package had been initiated from a UMRA console running on a Windows XP 32 bit OS, the PSM dll would fail to load on 64 bit domain controllers. This has been fixed. (1637, 05/November/2010)
10. **Action: Create User (AD)** (fix): If the action failed because of rejection of the password by windows, the error was logged, but the action returned a success code. Now it correctly raises an error.(1736, 23/November/2010)
11. **Action: Create user and mailbox(Exchange 2007)** (fix): The specified "display name" property is no longer ignored by the action. (1637, 23/November/2010)
12. **License Check** (fix): The license check failed for licenses issued to an Organizational Unit that had special characters in its name (like "+students"). This is fixed (1637,26 nov 2010)
13. **Action: Update Group Memberships (AD)** (fix): If the user to change was located in an Organizational Unit with a forward slash ('/') in the name, the action failed. This is fixed. (1637, 26 November 2010)
14. **Action: Format variable value** (enhancement): The restriction on the maximum supported variable size has been relaxed by a factor 1000. It will now only log a warning, except for extreme cases. (1637,30 November 2010)







15. **UMRA Forms table** (adjustment): When specifying the column layout of a forms table at design time, the column widths are not anymore automatically resized to a total of 100% of the form width; instead, if the total width exceeds 100%, a horizontal scroll bar is shown in the resulting form. (1637,1 December 2010)
16. **Umra Forms table** (adjustment) : When specifying the column layout of a forms table, double clicking on an already configured column does not anymore remove the column from the list. (1638, 1 Dec 2010)
17. **Action: Set attribute (AD)** (fix): When de AD object variable to modify was specified, but contained no valid object, an error was logged and the action was not executed, but the "on error" actions where not performed. Now they are. (1638, 2 Dec 2010)
18. **Action: Send HTML mail message** (fix): Mail messages with text or .csv attachments did not display properly in some specific email clients. This has been fixed.
19. **Action: Send HTML mail message** (fix): Sending an email message could create and leave a temporary file a root directory of the computer. Now it does not.





## Version 10.5, Build 1634, October 29, 2010

### Fixes and enhancements

1. **FIPS compliancy** (fix): The UMRA Powershell Agent service is updated to use FIPS compliant encryption algorithms only (1632, 7/September/2010)
2. **Action: Setup Exchange Session (Exchange 2010)**. (fix) Automatic reconnect on timeout works now also without explicitly specified credentials. (1633, 10/October/2010)
3. **SAP** (fix): Support for the user detail 'PARAMETER1' in the Set detail and copy user actions. (1633, 23/September/2010)
4. **Action: Send HTML mail message** (enhanced): The [port number of the SMTP E-mail server](#) can now be specified. (1631, 2/September/2010)
5. **Action: Google Create contact** (fix): Fixed the crash, caused by using this action (1630, 20/August/2010)
6. **Action: Google Create user** (fix): Fixed the problem when suspended users where created in the cache, they also where connected to an invalid profile. (1630, 20/August/2010)
7. **Action: Google Create user** (fix): Fixed the problem of users where allowed to be created, while a nickname with the same name as the new username, already existed. (1630, 20/August/2010)
8. **Action: Google Rename user** (fix): Fixed the problem of users where allowed to be renamed to a username which was already being used as nickname. (1630, 20/August/2010)
9. **Action: Manage mailbox email addresses** (Exchange2007) (fix): The Remove address option is now also applied to existing projects. (1630, 23/August/2010)
10. **Action: Google Get contact info** (new): A new action is added to retrieve all the single valued attributes and all the primary table entries from a contact. (1630, 24/August/2010)
11. **Action: Google Contact remove** (fix): Fixed an error, which prevented the contact from being removed, when the contacts cache was not used. (1630, 24/August/2010)
12. **Action: Google get user info** (enhancement): Added the nicknames as output property. (1631, 01/September/2010)
13. **Action: Google get user info (advanced)** (enhancement): Added the nicknames as output property. (1631, 01/September/2010)
14. **Action: Google Remove member from group** (fix): The action will now respect the 'Remove as owner' property. (1633, 05/October/2010)
15. **Google** (fix): UMRA could crash if one script was closing the connection more times as it opened connections and an other script was at the same time processing modifications. (1630, 20/August/2010)
16. **Google** (fix): Fixed a rare condition where a Google Close Connection could close the connection of an other script. (1630, 24/August/2010)
17. **Google** (enhancement): Added more error checking and more information in case of errors in requests. (1630, 24/August/2010)
18. **Google** (fix): Fixed the problem of not reinitializing the cache if the process changes got errors other than 1300 or 1301 (entityexists or entitydoesnotexist). (1630, 20/August/2010)
19. **Google** (fix): Support for all unicode 2 bytes characters including diacritical marks and XML special characters like '<'. (1631, 31/August/2010)





20. **Google** (fix): Better support when retrieving big environments and the user/profile data is changed while retrieving. (1632, 06/September/2010)
21. **Action: @VO Get students courses/classes** (new): A new action to retrieve a student's courses and classes from an @VO3 environment. (1631, 01/September/2010)
22. **Action: @VO Get students custom fields** (new): A new action to retrieve a employee's custom fields from an @VO3 environment. (1631, 01/September/2010)
23. **Action: @VO Get employees custom fields** (new): A new action to retrieve a employee's custom fields from an @VO3 environment. (1631, 01/September/2010)
24. **Action: @VO Get employees courses/classes** (new): A new action to retrieve a employee's courses and classes from an @VO3 environment. (1631, 01/September/2010)
25. **Action: @VO3 Get caregivers** (fix): The action will return all the care givers, instead of just the ones, who have only one student when the normal filters or the legal representative filters are used. (1633, 10/September/2010)
26. **@VO** (fix): Fixed some school year and password issues causing the use of the current school year and corrupting the passwords in the authorization functionality. (1631, 01/September/2010)
27. **TeleTOP** (fix): The course year is not sent to TeleTOP when an old environment is used. (1631, 01/September/2010)
28. **Action: N@TSchool Get user info** (enhancement): The action has an option to not return the user attributes to improve speed (1633, 7/September/2010)
29. **Action: N@TSchool Get user info** (fix): Correctly return the user attributes, when requested. (1633, 7/September/2010)
30. **N@TSchool** (fix): Now all traffic is routed thru a proxy when requested. Some traffic was not routed thru a proxy, when proxy information was specified. (1633, 7/September/2010)
31. **UMRA COM** (fix): The UMRA client session between the UMRA COM object and the UMRA Service is automatically unique for each instance created for the UMRA COM object. In previous version this could cause a problem when the UMRA COM object was accessed by the same user in multiple ASP or ASPX pages simultaneously (1631, 7/September/2010).





## Version 10.5, Build 1630, August 20, 2010

### Fixes and enhancements

1. **Action: Send HTML mail message (new):** A new action to send HTML E-mail message that can also contain one or more attachments. See [Script Action: Send HTML mail message](#) for more information. (1626,10/August/2010)
2. **Action: SAP Generic function module (new):** A new action is added to support any RFC/BAPI function module. See [SAP - SAP Generic function module](#) for more information. (1625, 9/August/2010)
3. **Action: Setup Exchange Session (Exchange 2010).** (fix) Modified optional prerequisite test to better reflect the current prerequisites. (1625, 27/July/2010)
4. **Action: Edit Distribution Group (Exchange 2010)** (fix) The "Room List" switch is now not specified at all (instead as false) when not explicitly set, to prevent errors in outlook live, that does not support this parameter. (1625,27/July/2010)
5. **Action: Add Distribution Group member (Exchange 2010)** (new): A new action is added to add an Exchange 2010 distribution group member to an existing distribution list. See [Introduction to Exchange 2010](#) for generic information on using Exchange 2010 UMRA actions. (1625, 27/July/2010)
6. **Action: List Distribution Group members (Exchange 2010)** (new): A new action is added to list the members of an Exchange 2010 distribution list. (1625, 27/July/2010)
7. **Action: Remove Distribution Group member (Exchange 2010)** (new): A new action is added to remove a member from an Exchange 2010 distribution list. (1625, 27/July/2010)
8. **Action: Sap get users** (fix): When the search pattern is was used, it was ignored by the action. This issue is fixed (1623, 16/June/2010)
9. **Action: List mailboxes (Exchange 2010)** (enhancement): Added MailboxPlan column to advanced table. so it can be listed if it is supported in the used Exchange 2010 environment, for instance in Outlook Live. (1623,17/June/2010)
10. **Action: Create user and Mailbox (Exchange 2010)** (enhancement): Added optional MailboxPlan specification for Outlook Live support (1623,17/june/2010)
11. **Action: Edit Mailbox (Exchange 2010)** (enhancement): Added option MailboxPlan specification for Outlook Live support. (1623,17/june/2010)
12. **Action: List mailboxes (Exchange 2010)** (enhancement): Added optional RecipientTypeDetails filter parameter. (1623,17/june/2010)
13. **Action: List Users (Exchange 2010)** (enhancement) Added optional RecipientTypeDetails filter parameter. (1623,17/june/2010)
14. **Action: List Contacts (Exchange 2010)** (enhancement) Added "Error when not found" option flag. (1623,17/june/2010)
15. **Action: Sap Set user detail** (fix): When the detail value is table with multiple rows, not only the last row is send to SAP multiple times, but all different rows are send to SAP. (1623,07/July/2010)
16. **Action: Manage mailbox email addresses** (Exchange2007) (fix): The Remove address option worked incorrectly (1623, 15/July/2010)
17. **Action: Create Mail User (Exchange2010)** (fix): Removed the mandatory tag from some action properties to allow use for Outlook Live. (1627,13/august/2010)





18. **Action: Create Mail Contact (Exchange2010)** (fix): Removed the mandatory tag from some action properties to allow use for Outlook Live. (1627,13/august/2010)
19. **Action: Sap Remove user detail** (fix): Sometimes the detail was not cleared in rare conditions, this is fixed. (1626,12/August/2010)
20. **Google** (enhanced): The support of google apps is enhanced. See UMRA Google module for more information. (1623, 16/June/2010)





## Version 10.4, Build 1623, May 28, 2010

### Major changes

1. **SAP** (enhanced): The support of SAP systems is enhanced. See [UMRA SAP module](#) for more information. (1613, 15/April/2010)
2. **Exchange 2010** (New): Official support for Exchange 2010 has been added. Over 50 dedicated actions to support various Exchange 2010 features to manage mailboxes, distribution lists, public folders and more (1619, 18/may/2010)
3. **@VO 3 connector** (new): The hosted student information system @VO is supported with a set of dedicated UMRA actions (1615, 22/April/2010)
4. **Avetica Moodle connector** (new): The hosted student information system Moodle is supported, when hosted by Avetica, with a set of dedicated UMRA actions (1615, 22/April/2010)
5. **Edictis connector** (new): The webservice of Edidictis are supported with a set of dedicated UMRA actions (1615, 22/April/2010)
6. **Google Apps connector** (new): The action **Google Rename user** is added to the Google Apps connector (1615, 28/April/2010).

### Fixes and enhancements

1. **Action: Set variable** (enhancement): The name of the variable to create now may contain names of earlier defined variables. This allows for the names of the variable to be dynamic. For instance %%NewVarName%%. or %Administrator of %CurDomain%. T4E\_ID 680 (1601, November 27, 2009)
2. **Action: Manage Table data** (enhancement): Table data operation "Get the number of table rows", now sets the found rowcount to 0 even if the specified table does not exist. Previously the rowcount variable was not generated at all in that situation. This could cause issues if the script did not explicitly check for errors. t4E\_ID 777 (1601, November 26, 2009).
3. **Action: Delete Directory** (fix): When the "Delete directory option" was specified in order additionally delete the specified directory itself, and an error occurred in the deletion process of this directory, the "on error" handler was not invoked. Now the "on Error" handler will be correctly invoked. T4E\_ID 776 (1601, November 26, 2009).
4. **Action: If-Then-Else** (fix): When specifying a date-time value as a condition criteria, the value is updated when the interface dialogs are re-opened. The difference in time corresponds with the difference between local and GMT time zone settings. The issue is fixed (1615, 22/April/2010)
5. **Action: Update database** (enhancement): An option is added to prevent contents of database statement being shown in the log files. This is useful if the statements contain sensitive information, for instance a password. See [Script Action: Update database - SQL Statements](#) for more information. (1615, 28/April/2010).
6. **Action: Execute command line** (enhancement): A property is added to prevent the command line being shown in log file. This is useful if the command line contains sensitive information, for instance a password (1615, 28/April/2010).





7. **Action: Format variable value** (enhancement): A option is added to prevent the input and output text values from being shown in the log files (1615, 28/April/2010).
8. **UMRA Forms** (fix): When a UMRA Forms project used an initial project and the initial project accessed the UMRA Powershell Agent service, memory errors could cause the UMRA Service not to respond correctly. This issue is fixed (1613, 19/April/2010).
9. **UMRA Forms** (fix): When the UMRA Forms client is started, the File, Exit menu option did not always work when the application was not connected to an UMRA Service. The issue has been resolved (1613, 19/April/2010)
10. **UMRA Forms** (fix): When an UMRA Forms table was configured with multiple selection disabled and the index of the selected item was stored in a variable, the index could be incorrect if the end-user resorted the UMRA Forms table. The issue has been resolved (1614, 27/April/2010).
11. **UMRA Forms** (fix): When a generic table, generated in a previously executed project, is sorted before it is shown in the UMRA Forms client, the indices of selected items could be incorrect. This issue has been resolved (1615, 28/April/2010)
12. **NTFS file system** (fix): When specifying the file and directory security settings an error can occur when specifying a deny permission entry. UMRA will deny the permissions as specified, but also the so called synchronize permission is denied. The issue has been resolved (1614, 20/April/2010).
13. **UMRA Automation** (fix): When scheduled projects run for over 24 hours, the UMRA Session could expire in previous versions. This might cause problems when UMRA Session variables are used. The problem has been resolved (1615, 22/April/2010)
14. **UMRA COM** (enhancement): The UMRA COM object is extended with method **HideVariable** to prevent the contents of the variable data from being shown in log files. See [HideVariable](#) for more information (1619, 3/May/2010)
15. **Generic table** (fix): The octet string data type, used in Active Directory to represent for instance SID and GUID values is now supported in UMRA (1618, 29/April/2010).
16. **TeleTOP connector** (enhancement): Added support for the TeleTOP course code enhancements. Also improved connection stability in unstable network environments (1615, 22/April/2010)
17. **Google Apps connector** (fix): Fixed the retrieval of user memberships information when the cache is overridden (1615, 22/April/2010)
18. **Google Apps connector** (enhancement): Added support for renaming users (1615, 22/April/2010)
19. **It's Learning connector** (enhancement): Improved the performance and overall connection stability of the connector (1615, 22/April/2010)





## Version 10.3, Build 1601, November 19, 2009

### Major changes

1. **TOPdesk connector** (new): The helpdesk information system TOPdesk ([TOPdesk](http://www.topdesk.com), [http://www.](http://www.topdesk.com)) is supported with a set of dedicated UMRA actions (1587, 26/August/2009)
2. **Google Apps connector** (new): The information system Google Apps is supported with a set of dedicated UMRA actions (1587, 26/August/2009)
3. **TeleTOP connector** (new): The student information system [TeleTOP](http://www.teletop.nl) is supported with a set of dedicated UMRA actions (1587, 26/August/2009)
4. **N@tSchool connector** (new): The student information system [N@tSchool](http://www.natschool.nl) is supported with a set of dedicated UMRA actions (1575, 10/June/2009)
5. **It's Learning connector** (new): The student information system [It's Learning](http://www.itslearning.nl) is supported with a set of dedicated UMRA actions (1599, 4/November/2009)
6. **Aura connector** (new): The school library system [Aura](http://www.aura.nl) is supported with a set of dedicated UMRA actions (1575, 10/June/2009)
7. **Execute command line at UMRA Forms client** (new): When an UMRA form is submitted, as a response, a command line can be executed by the UMRA Forms client computer. See [Form action - Execute command line at client workstation](#) for more information (1560, 2/April/2009).
8. **Get Out-Of-Office info (Exchange 2007)** (new): The action collects the Out-Of-Office information of a particular account. See [Script Action: Get Out-Of-Office info \(Exchange 2007\)](#) for more information (1572, 2/June/2009)
9. **Set Out-Of-Office info (Exchange 2007)** (new): The action sets the Out-Of-Office information of a particular account. See [Script Action: Set Out-Of-Office info \(Exchange 2007\)](#) for more information (1572, 2/June/2009).

### Powershell

1. **Powershell Agent service - Session time to live** (enhancement): The time-to-live idle time of a [Powershell Agent service session](#) can be configured by setting a registry value. See Registry settings for more information. (1570, 12/May/2009).
2. **Script action: Check Powershell Agent service session** (new): The action can be used to check if an previously created Powershell Agent service action is still available and removed upon expiration. See [Script Action: Check Powershell Agent service session](#) for more information (1570, 13/May/2009).
3. **Keep-alive signalling** (enhancement): To prevent expiration of idle Powershell Agent sessions, the UMRA Forms client sends keep-alive signal to the UMRA Service. The UMRA Service forwards these signals to the Powershell Agent service, keeping the sessions initialized through the UMRA Forms client alive. In case the UMRA Forms client is open for a longer period, e.g. a day, the session information is not lost.(1570, 19/May/2009)
4. **Variable list** (enhancement): The available variables that can be used in script properties, generated from dynamic actions, is now limited to the properties section of the dynamic actions. In previous version, also variable names from the script section were copied to the







variable list. Since these variable are not available in the UMRA variable list, these variables should not be presented to the end-user. (1570, 22/May/2009)

5. **Powershell not installed** (fix): When Powershell is not installed on the machine that runs the Powershell Agent service, a correct error message is shown when executing the action **Setup Powershell Agent service session**. In previous versions, the Powershell Agent service and the call UMRA software could crash (1571, 25/May/2009)
6. **Powershell Agent service import library** (fix): When importing the Powershell Agent service library, some incorrect error message were shown. The issue has been resolved (1571, 25/May/2009)
7. **Project execution using UMRA COM** (fix): When using UMRA COM to execute projects that access the UMRA Powershell Agent service, a problem could occur causing projects not to terminate completely. The issue has been resolved. (1578, 17/June/2009)
8. **Powershell Agent service manual installation** (enhancement): A online help topic is added that described how to setup the Powershell Agent service manually. See [Manual installation of the Powershell Agent service](#) for more information. (1579, 30/June/2009)

#### Lotus Notes

1. **Lotus Notes - action: Execute agent script** (new): The action creates, executes and deletes a Lotus script agent in an existing database. The action can be used for instance to automate the approval of administration process requests. See [Script Action: Execute agent script](#) and [Lotus Notes example projects](#) for more information (1558, 30/March/2009).
2. **Lotus Notes - action: Execute agent script** (enhanced): The action is extended with some new properties to better control the action. See [Script Action: Execute agent script](#) and [Lotus Notes example projects](#) for more information (1593, 28/September/2009).
3. **Lotus Notes - action: Get item size** (new): The action retrieves the size of a single specified Lotus Notes document item. See [Get item size](#) for more information. (1558, 30/March/2009).
4. **Lotus Notes - action: Set item(s)** (enhanced): The action now checks the total size of the item. If the action would exceed the Lotus Notes item size limit, the action is not executed. The action size limit is 32k bytes for summary items and 64k bytes for all other items. (1558, 30/March/2009)
5. **Lotus Notes - action: Set item(s)** (enhanced): The action now checks the total size of the item. If the action would exceed the Lotus Notes item size limit, the action is not executed. The action size limit is 32k bytes for summary items and 64k bytes for all other items. (1558, 30/March/2009)
6. **Lotus Notes - action: Update profile document** (enhanced): The action now supports different Lotus Notes type values and can also be used to delete fields and/or sign profile documents only. See [Script Action: Update profile document](#) for more information (1568, 24/April/2009).
7. **Lotus Notes - action: Update profile document** (enhanced): The action is further enhanced to add a profile document field that contains the date and time of the profile document signature. See [Script Action: Update profile document](#) for more information (1569, 1/May/2009).
8. **Lotus Notes - action: Register person (advanced)** (fix): The action is extended with 2 new properties, 'Roaming - Replica servers' and 'Roaming - Create replica files in background' to





support roaming profiles. See [Script Action: Register person \(advanced\)](#) for more information. (1585, 24/July/2009)

9. **Lotus Notes - example project 'Remove Roaming profile'** (new): An example project is added to show how to create an administration request to remove the roaming profile of a Lotus Notes user account. See [Lotus Notes example projects](#) for more information (1585, 24/July/2009).
10. **Lotus Notes - example project 'Lotus Notes ID Vault - Reset password'** (new): An example project is added show how to use the Lotus Notes ID Vault to reset password of user accounts in Lotus Notes. See [ID Vault](#) and [Lotus Notes example projects](#) for more information (1593, 28/September/2009).
11. **Lotus Notes - action: Delete document** (new): New properties are added to support another method to specify the note or document to be deleted. See [Script Action: Delete document](#) for more information (1593, 28/September/2009).

## Actions

1. **Update numeric variable - Convert number to text (format)** (new): The action is extended with the option to convert a number to a text value according to a C-language 'printf' format specification. See [Script Action: Update numeric variable](#) for more information (1558, 30/March/2009).
2. **Execute command line** (enhanced): A property is added to specify the maximum output buffer size in case the output is to be stored in a variable. See [Script Action: Execute Command Line](#) for more information (1579, 26/June/2009).

## Fixes and enhancements

1. **Action: Update date-time variable - subtract date-time value** (new): A new function is added to subtract a date-time value stored in a variable from another date-time value. See [Script Action: Update date-time variable](#) for more information (1566, 17/April/2009).
2. **Action: Set variable** (fix): For hidden variables, in log files, the value of the variable was not shown but when the action was executed, it was shown. The issue has been resolved (1577, June 12, 2009).
3. **Set attribute (AD)** (fix): The escape sequences, introduced in UMRA build 1558, are changed to [r], [n], [r\n] and [t] to allow attribute specifications containing for instance \t: \\SERVERNAME\Share\tsmith. See [Script Action: Set attribute \(AD\)](#) for more information. (1563, 9/April/2009).
4. **Add action to script - window update** (fix): When composing an UMRA script using menu option **Add action to script**, the script window is now updated correctly. In previous versions, the actions displayed were not always updated immediately. (1562, 7/April/2009)
5. **Script action: Set Terminal Services user settings** (fix): In special circumstances, UMRA could crash when the action was executed and failed with the following error message: Cannot determine NETBIOS domain controller name of domain controller... The issue has been resolved (1562, 7/April/2009).
6. **Powershell Agent service** (fix): When received a stop signal, the Powershell Agent service is now stopped more gracefully (1562, 8/April/2009).





7. **Generic table - LDAP table column name** (fix): The name of a column of a LDAP generic table is set to the name of the attribute. This was changed in build 1558 to the display name but causes problems in existing implementations. (1565, 15/April/2009)
8. **Vista - Windows Server 2008 - UAC** (fix): The UMRA Console is started with elevated administrative access on the Vista and Windows Server 2008 platforms. In previous versions, this was not the case. Depending on the system configuration access denied errors could occur for instance when the UMRA Service was installed. (1566, 17/April/2009)
9. **Action: Update database** (fix): When testing the statements of action **Update database**, the option to **Run test on UMRA Service** is no longer available. In previous version, the option could be selected but was not functional (1566, 17/April/2009).
10. **64-bit UMRA COM DLL** (fix): In UMRA 10.1, build 1577, the 64-bit UMRA Automation DLL UmraCom64.dll had an incorrect version number (1577, June 12, 2009).
11. **PSM, UMRA session** (fix): When accessing an UMRA project through UMRA PSM, the global UMRA session list is now correctly updated. In previous versions, the UMRA Service was not updated correctly. (1588, August 31, 2009).





## Version 10.0, Build 1558, March 27, 2009

### Major changes

1. **Session support of the Powershell Agent service:** A Powershell Agent service session allows a more interactive usage of the Powershell runtime environment. For instance to store Powershell variables that can be used in subsequent Powershell scripts. For more information, see [Powershell Agent service session](#). (1528, 10/November/2008)
2. **SAP support** (new): Over 30 actions are added to support SAP. The UMRA SAP actions can be used to create SAP accounts, reset passwords, add users roles and profiles and so on. See [UMRA and SAP](#) for more information. (1480, 5/September/2008)
3. **UMRA Console: Open referenced project** (new): When configuration a project with the UMRA Console application, the menu option **Open referenced project** opens the associated project for For-Each and Execute script actions. (1546, 29/January/2009).

### Actions

1. **Get Out-Of-Office info (Exchange 2000/2003)** (new): The action collects the Out-Of-Office information of a particular account. See [Script Action: Get Out-Of-Office info \(Exchange 2000/2003\)](#) for more information (1539, 6/January/2009).
2. **Set Out-Of-Office info (Exchange 2000/2003)** (new): The action sets the Out-Of-Office information of a particular account. See [Script Action: Set Out-Of-Office info \(Exchange 2000/2003\)](#) for more information (1539, 6/January/2009).
3. **Set variable - hidden variable** (enhancement): With action [Set variable](#) it is possible to hide the value of the variable. In log files, the value is not shown. (1528, 6/November/2008)
4. **Edit share** (enhancement): The property 'Cache parameter' is added to support [share caching options](#) (1543, 28/January/2009).
5. **Set attribute (AD)** (enhancement): The action supports carriage return, line-feed insertion in the Active Directory attribute. See [Script Action: Set attribute \(AD\)](#) for more information. (1546, 30/January/2009).
6. **Delete multiple variables** (new): The action supports [deletion of multiple variables](#) from the project variable list with a single action. (1546, 6/February/2009)

### Table management

1. **Manage table data - Get the number of table columns** (new): The new action is added. See [Script Action: Manage table data](#) for more information (1546, 5/February/2009).
2. **Manage table data - Copy row** (new): The new action is added. See [Script Action: Manage table data](#) for more information (1546, 5/February/2009).
3. **Manage table data - Copy multiple rows** (new): The new action is added. See [Script Action: Manage table data](#) for more information (1546, 5/February/2009).
4. **Manage table data - Copy table** (new): The new action is added. See [Script Action: Manage table data](#) for more information (1546, 5/February/2009).
5. **Manage table data - Remove multiple rows** (new): The new action is added. See [Script Action: Manage table data](#) for more information (1546, 5/February/2009).





6. **Manage table data - Remove a specified column** (new): The new action is added. See [Script Action: Manage table data](#) for more information (1546, 5/February/2009).
7. **Manage table data - Sort on column name** (new): The new action is added. See [Script Action: Manage table data](#) for more information (1546, 5/February/2009).
8. **Manage table data - Convert multi-value variable to table** (new): The action accepts single value variables. (1546, 11/February/2009).
9. **Manage table data - Replace column name** (new): The new action is added. See [Script Action: Manage table data](#) for more information (1546, 5/February/2009).
10. **Manage table data - Get column name** (new): The new action is added. See [Script Action: Manage table data](#) for more information (1546, 5/February/2009).
11. **Manage table data - Search table** (new): The action is extended with search features. See [Script Action: Manage table data](#) for more information (1546, 5/February/2009).

#### Powershell - dynamic actions

1. **Time Powershell Agent service** (fix): The time as shown in log messages generated by the Powershell Agent service is now correct (1520, 21/October/2008).
2. **Upgrade of dynamic actions** (fix): The upgrade procedure of dynamic actions is enhanced (1520, 17/October/2008)
3. **Directory of Powershell Agent service** (enhancement): It is now possible to specify the directory where the Powershell Agent service is installed (1542, 13/January/2009).
4. **Powershell Agent service - UMRA Service** (fix): When multiple (> 10) scheduled tasks access the Powershell Agent service simultaneously from within the UMRA Service, the RPC service can become to busy, causing errors and Powershell scripts not being executed. The error is now handled correctly and the RPC call is retried until it succeeds or the expiration period is passed (1506, 7/October/2008).
5. **Powershell Agent service - UMRA Service** (fix): In rare circumstances, the UMRA Service could crash when multiple scheduled tasks access the Powershell Agent service simultaneously. This is caused by some XML libraries not being thread-safe. The issue has been resolved (1506, 7/October/2008).

#### UMRA COM object

1. **New interface methods** (new): A number of interface methods are added, mainly dealing with UMRA COM object tables. Methods are added to check license information, store tables in the variable list, manage table contents and column names using the UmraDataTable interface. See [UMRA COM object reference](#) for more information (1543, 27/January/2009).

#### Lotus Notes

1. **Lotus Notes - Update profile document** (enhancement): The action is extended: item flags can be specified for the updated profile document and the profile document can be signed when changes are applied (1536, 12/December/2008).
2. **Lotus Notes - Copy document** (new): Copy a Lotus Notes document from one database to another Lotus Notes database. See [Script Action: Copy document](#) for more information (1536, 23/December/2008).





3. **Lotus Notes - Get quota** (new): Retrieve the quota and size of a Lotus Notes database. See [Script Action: Get quota](#) for more information.
4. **Lotus Notes - Update profile document, 'Log archiving'** (new): Online help is updated to show how the action is used to set [log archiving for a Lotus Notes database](#) (1543, 28/January/2009).

#### Fixes and enhancements

1. **Password Synchronization Manager** (fix): Some memory issues are resolved in the Password Synchronization Memory DLL (1480, 10/September/2008)
2. **Password Synchronization Manager** (fix): An issue is fixed for domain controllers with a name of 15 characters. In previous versions, error 111 could occur, generated by the Password Synchronization DLL, running on the domain controller. (1506, 7/October/2008)
3. **XML** (fix): The handling of special characters (white-space, carriage return, line feed, tab) in XML export and import procedures is now correct (1480, 5/September/2008).
4. **XML** (fix): For some UMRA objects, the XML export was not complete, e.g. the result file did not contain all of the UMRA object data. This could lead to incomplete backups. (1480, 5/September/2008)
5. **XML** (fix): The indentation of exported projects to XML files is now correct. (1527, 30/October/2009)
6. **XML** (fix): When importing a project from an XML-file that contains a generic table with an imported file, the separator character settings are now correct. In previous version, the comma (,) separator was always selected (1546, 5 February/2009).
7. **Recent projects** (fix): In rare circumstances, the UMRA Console application lost the list with recent projects. The issue has been resolved (1515, 16/October/2008)
8. **Logging of service projects cache parameters** (enhancement) The projects cache parameters are now logged in the UMRA Service log in startup. The log message has the following format: Service projects cache initialized with parameters 'Enabled=1', 'Delay=300' (1522, 22/October/2008)
9. **Manage service projects** (fix): When the buttons of the 'Manage service projects' are clicked in a certain order, the UMRA Console application could crash. The issue has been resolved. (1528, 7/November/2009).
10. **Thread mechanism** (enhancement): To prevent delays in large networks, specific tasks are performed in separate threads. (1543, 14/January/2009).
11. **Form security - group selection** (enhancement): When setting the accounts for form project security, available groups are now by default shown in the dialog to select User and/or Groups (1542, 12/January/2009).
12. **Importing project files with period (.) in file name** (fix): It is now possible to import a project file with multiple periods (.) in the file name. Example: form.with.period.ufp (1543, 13/January/2009).
13. **Name generation - output variable** (enhancement): The names of output variables can now be renamed when configuration name generation algorithms. (1546, 29/January/2009).





## Version 9.1 Build 1478, August 1, 2008

### Major changes

1. **XML project file format** (new): UMRA supports the XML standard to import and export UMRA projects and scripts. See [UMRA XML project and script files](#) for more information (1458, 3/June/2008).
2. **Password Synchronization Manager (PSM)** (new): This new PSM module will catch every password change in a Windows Active Directory domain and start an UMRA project. The UMRA project will forward the password change to other systems and applications. Refer to the section on [PSM](#) for more information (1474, 8/July/2008).

### Groups

1. **Update group memberships (AD)** (new action): The new action allows the addition, removal and synchronization of group memberships for an account. Lists can be specified for each operation. For example, when synchronizing, the user account (or other type of account) will only be a member of the specified groups when the action is completed. See [[Script Action: Update group memberships \(AD\)](#)] for more information (1437, 2/April/2008).
2. **Create group (AD)** (fix): The **Common Name** of a new group can now start with a #-character (1462, 12/June/2008).

### Tables

1. **Manage table data, Set column name** (enhancement): The action Manage table data now supports the function to set the name of a column (1433).
2. **Manage table data, Search cells with matching contents** (enhancement): In a table, search through all rows and the specified or all columns to find tables cells with matching text contents (1441, 14/April/2008).
3. **Manage table data, Complete rows** (enhancement): Search through all rows of a table and add empty text values to each row so that the total number of columns is equal for all rows. If all rows already have an equal number of cells, no changes are made (1441, 14/April/2008).
4. **Get user (AD)** (enhancement): The action is extended with property Globally Unique Identifier (GUID). When the user object is successfully retrieved, the GUID of the user account can be stored in a variable (1458, 2/June/2008).
5. **Get users table (locked out/Disabled/Password) (AD)** (fix): When the domain **Account lockout duration** is specified as 0 (account is locked out until administrator unlocks it), the action functions correctly (1462, 12/June/2008).
6. **Store indices of selected rows in table variable** (new): The indices of the selected rows of UMRA form tables, can be stored in a table variable (11/June/2008, 1462).





## Actions

1. **For Each** (enhanced): The dialog window to configure the For-Each action is extended with more options to configure the column variables passed to child project (1435, 21/March/2008).
2. **Execute command line** (enhanced):. A property is added to allow the removal of carriage-return line-feed characters at the end of the output variable value (1438, 3/April/2008).
3. **Generate random number** (enhanced): For the minimum and maximum values, variable names can now be specified. (1441, 14/April/2008)
4. **Delete directory** (enhanced): The logic to calculate the correct directory name is improved to support directory names with multiple dots (.) in the full path (1441, 14/April/2008).
5. **Execute script** (enhanced): The action description as shown in the script window of an UMRA project now shows the name of the script to execute (1442, 18/April/2008).
6. **Get user (AD)** (fix): When an output variable is specified for the display name, and no display name is found for the user account, no UMRA error is generate. (1456, 29/May/2008).
7. **Format variable value** (new): The functions of the action 'Format variable value' can now be specified using variables. Also, when formatting functions are used in name generation algorithms, variables are supported (1437, 28/March/2008).
8. **Format variable value** (enhanced): The case conversion functions of the action now supports the special characters ä, Ä, ö, Ö, ü and Ü. (1471, 2/July/2008).
9. **Get attribute (AD)** (fix): When an attribute is not found, and property 'Convert to text flag' is set to 'No' and no errors must be generated if not found, the action now no longer generates an error (1462, 16/June/2008).
10. **Create local group** (fix): When the group cannot be created since it already exists, no error is generated if 'Error if group already exists' is set to 'No'. (1473, 9/July/2008).

## Exchange

1. **Manage mailbox e-mail addresses (Exchange 2007)** (enhancement): The action now contains an additional property **Domain controller** to allow specific server binding and avoid replication issues (1462, 16/June/2008).
2. **Enable distribution group (Exchange 2007)** (new): A new action to mail-enable distribution groups (1462, 16/June/2008).
3. **Set client access attributes (Exchange 2007)** (new): A new action to set client access attributes including Outlook Web Access (OWA), MAP, IMAP and POP (1462, 16/June/2008).

## Powershell

1. **Powershell agent service**: The service now supports more data types used to return output tables. For example the data of file system ACL's. (1425, 11/Feb/2008)
2. **Powershell agent service** (fix): A memory issue with encrypted data has been resolved. When using encrypted script phrases, the agent service could consume little memory resources that were not released properly. Eventually (after months or years without a reboot), this might cause problems for the computer running the Powershell Agent service (1425, 18/Feb/2008)







3. **Powershell return data** (new): Simple string and data values can be returned to UMRA with a more simple method. See [Single value output data](#) for more information (1467, 26/June/2008).
4. **Powershell encrypted variable input** (new): For input text properties, the value can be encrypted. In this case, the actual contents of the property is not shown in log files, UMRA script files and so on. See [Encrypted properties](#) for more information (1467, 27/June/2008).
5. **Powershell - Active Directory permissions management** (new): New UMRA actions are added to manage Active Directory permissions: [Script Action: Get AD permissions](#), [Script Action: Add AD permission](#), [Script Action: Remove AD permission](#), [Script Action: Set AD permissions \(advanced\)](#), [Script Action: Get owner](#), [Script Action: Set owner](#) (1473, 8/July/2008).
6. **Powershell - Group management** (new): New UMRA actions are added to manage Active Directory groups: [Script Action: Set Managed By](#), [Script Action: Get \(nested\) group memberships](#) (1473, 8/July/2008).
7. **Powershell - File system** (new): A new action is added to get disk space information: [Script Action: Get disk space](#) (1473, 8/July/2008).
8. **Powershell - Active Directory utility** (new): A new actions is added to determine the role of the primary domain controller: [Script Action: Get PDC \(AD\)](#) (1473, 8/July/2008).-

#### Lotus Notes

1. **Lotus Notes - Support new action to reset the password of an Lotus Notes ID file.** See [Lotus Notes action: Generate recovery password](#) for more information (1433).
2. **Lotus Notes - Support new action to configure Out-Of-Office.** See [Lotus Notes action: Out-Of-Office](#) for more information (1433).
3. **Lotus Notes - Move person (advanced)** (new): The existing action **Move person** cannot be used to move a person if the person is currently located in an organizational unit. To support this operation, the action **Move person (advanced)** is added. See [\[Script Action: Move person \(advanced\)\]](#) for more information (1438, 3/April/2008).
4. **Lotus Notes - Update profile document** (new): The new action can be used to specify the value of a specific field of a database' profile document. See [Script Action: Update profile document](#) for more information (1473, 8/July/2008).
5. **Lotus Notes - Sign/Unsign document** (fix): In previous versions, the action could apparently execute with no error, but the resulting document (adminp request) was not accepted. The error occurred when creating administration requests for Domino version 7 servers. (For version 6.X Domino servers, the problem was not found). The issue has been resolved (1440, 9/April/2008).
6. **Lotus Notes - Update ACL** (fix): The ACE name that is specified as part of the Access Control Entry specification can now hold variables. In previous versions, variables were not replace at run-time by their actual values. (1142, 21/April/2008).
7. **Lotus Notes - UMRA Service fix:** When using an initial project with UMRA Forms projects, the UMRA Service did not properly release the resources used for Lotus Notes databases that were initialized in the initial project. Eventually, this could prevent the UMRA Service and other applications being able to access Lotus Notes databases (1435, 19/March/2008).
8. **Lotus Notes - Create document** (enhancement): The action now exports the document e.g. notes ID of the created document.





9. **Lotus Notes - Register person (advanced)** (enhancement): The action now supports the creation of mail file replicas using property Mail – Mail file replicas (1447, 29/April/2008).
10. **Lotus Notes - Set items** (fix): The order of **text item values** of **text list** items as specified with action **Set items** is now preserved. (1462, 12/June/2008).
11. **Lotus Notes - Example projects** (new): Several UMRA Lotus Notes example projects are added. Almost all of these project show how to setup Lotus Notes administration requests in order to manage Lotus Notes accounts and mailboxes.

#### Forms:

1. **Variable generic table column names** (new): The names of columns in a variable generic table can be specified as variables (%NameColumnA%, %NamceColumnB%, etc) (1458, 2/June/2008).
2. **Name of client computer** (new): When a form is submitted by clicking a button, a variable, **%UmraClientComputerName%**, is generated. The variable holds the name of the client computer and can be used by the UMRA Service. See [Built-in variables](#) for more information (1462, 11/June/2008)

#### Database

1. **Database connection lost when database reset.** With UMRA Forms, an error could occur when databases were reset or restarted. In these situation, the UMRA Service was not able to reconnect to the database unless the UMRA Service was restarted. The problem was caused by an incorrect update of the database connection cache maintained by the UMRA Service (1433).
2. **UMRA Console log with test query** (new): When executing a test query of a table from the UMRA Console application (Setup generic table, Run test, Test...) the query is now written to the UMRA Console log (1458, 2/June/2008).

#### Automation

1. **UMRA Automation 64-bit support (new):** The UMRA Automation software is now available for both 32-bit and 64-bit platforms. As a result, web-pages that are part of IIS web-site can run on 32-bit and 64-bit IIS platforms. See [UMRA COM on 64-bit platforms](#) for more information (1445, 23/April/2008).
2. **Name of automation project** (fix): When creating a new automation project, the new project must now have an unique name. (27/May/2008, 1455)
3. **Automation log files** (fix): The specific automation log file settings, e.g. maximum log files size and maximum number of log files per project are now preserved when the UMRA Service is restarted (1462, 12/June/2008).

#### General

1. **UMRA on Vista and Windows Server 2008** (fix): All UMRA applications now run on Windows Vista and Windows Server 2008 with no problems (1462, 12/June/2008).





2. **Fix error 20403:** When transferring large amounts of data (> 1 MB) from either UMRA Forms or the UMRA Console application, an error could occur with error code 20403. This specially happened when variables storing big tables were used. (1433)
3. **Project name variable:** When a project is executed, the name of the project is now stored in a variable. Two variables are used for this purpose: %UmraProjectName% and %UmraProjectNameStack%. Variable %UmraProjectName% contains the name of the (deepest) project that is currently executed. %UmraProjectNameStack% contains the name of all projects: the deepest child project and all parent projects. See [Built-in variables](#) for more information (1435, 20/March/2008).
4. When a project is executed, the following new UMRA variables are generated: %CurrentSystemDate%, %TimeStamp%, %UmraFormSubmitDomain%, %UmraFormSubmitUsername%, %UmraPath%, %SystemRoot%. See [Built-in variables](#) for more information (1455, 28/May/2008).
5. **Error importing large amount of projects.** An error could occur when importing large amounts (> 250) of projects in a single operation. The operation has been changed to support more projects (1433).
6. **Distinguished names with slash (/):** The following actions – properties are updated to support distinguished names containing one or more forward slashes: action Set attribute (AD), property Active Directory object LDAP name, action Create object (AD), property LDAP Container, action Set group memberships (AD), property Active Directory name, action Create user (AD), property LDAP Container, action Remove specific group memberships (AD), properties Group name (LDAP) and Account name, action Move cross domain, properties Source object and Target container, action Create contact (AD), property LDAP Container, action Get user table (...), property LDAP path, action Create group (AD), property LDAP Container, action Move – rename (AD), property OU-Container LDAP name, action Get object (AD), property LDAP name (1438, 8/April/2008).
7. **Script error handling (fix):** When the error handling settings of a script action are updated, the project is now marked as dirty (e.g. needs to be saved due to changes in the project) (1458, 2/June/2008).
8. **Log variables - Display of Carriage Return Line Feed:** When a variable value contains carriage-return and/or line-feed characters, the action Log variables will show these characters ([cr],[lf],[crlf]).
9. **Scheduler tab shown (fix):** When an automation project is scheduled to run once, and the run time is passed, the project window now shows the scheduler tab. In previous versions, the scheduler tab was only shown if the project schedule time was in the future (1462, 11/June/2008).
10. **Drop down lists, edit field (fix):** In a number of dialogs and tabbed windows, the the edit field of drop down lists now automatically scrolls in a horizontal direction when text is entered. In previous versions, the length of the entered text was limited (1462, 13/June/2008).





## Version 9.0 Build 1425, February 1, 2008

### New Features

1. **Major new area of functionality:** Support of Powershell. The UMRA software is extended with the Powershell Agent service. The service supports the integration of UMRA and Powershell. New actions that can use any Powershell cmdlets can be added to UMRA in a dynamic manner to extent the functionality of UMRA. For more information, see [Powershell Agent service](#).
2. **Major new area of functionality:** Support of Exchange 2007. Based on the new Powershell Agent service, over 25 new action are added to UMRA to support the management of Exchange 2007 mailboxes and other resources. For more information, see [Exchange 2007](#).

**This new functionality is licensed as a separate module. Existing users should contact Tools4ever for an upgrade of their licence keys when required.**





## Version 8.0 Build 1343, May 4, 2007

### New Features

1. **Major new area of functionality:** Management of IBM's **Lotus Notes** environments. In addition to the existing possibility to manage the Lotus Notes Directory with LDAP, UMRA has been extended to interface with native **Lotus Notes** environments; it can now create, delete and move **Lotus Notes** user's and resources directly, and perform a vast number of other **Lotus Notes** related actions. This functionality is completely integrated with the current functionality of UMRA. For this purpose no less then **25 new UMRA script actions** have been created see [Lotus Notes Actions](#) for an overview.

For a description how to configure umra to start using these actions, see [Configuring the UMRA Console for use with Lotus Notes](#) and [Configuring the UMRA service for use with Lotus Notes](#) .

This new functionality is licensed as a separate module. Existing users should contact Tools4ever for an upgrade of their licence keys when required

2. **New project hierarchy** for server based projects.  
The projects on the server can now be organized in a tree structure. Note that the tree structure is currently only for display purposes, and is visible when the projects listed with the menu option **UMRA Service, Manage server Projects**.
3. **Update the license Mechanism.** Updated the license mechanism to facilitate a new licence that specifically allows the SSRPM (Self Service Reset Password Management) product of Tools4ever to interface with UMRA.
4. **New Action.** A new action [Script Action: Count licensed - domain/OU accounts](#) has been added. Use this action in a script to find out how many user accounts are there in the domain/ou and compare these with the number allowed according to the license. This action allows to find out if a domain is nearing the limit specified in the license. You may want to use this in a scheduled script that sends an email to an UMRA administrator if the license count is almost reached.

### Enhancements

1. **Action enhanced: For Each.** The maximum number of possible variables that can be coupled to the table columns in the called project, has been increased from 20 to 300. (1307-1338)
2. **Action enhanced: If - Then - Else.** The variable argument was only allowed to exist of exactly a single variable. It has been modified so that is is allowed to consist of a text string that contains variables. (1307)
3. **Action enhanced: Move - rename user (AD).** The action has been extended to allow for the move and rename of other objects than users, like for instance **contacts**. Therefore the action has been renamed to **Move - rename (AD)**.(1307)





4. **Action enhanced: Load LDAP Modification Data.** The name of the attribute to modify can now also be specified as a variable, instead of fixed in the action.
5. **Action extended: Manage Table data.** The action is extended with three table data operation functions.
  - o Convert multi-text variable to table. Used to convert a variable of the type **text-list** to a table of a single column, and a row for each value in the text-list.
  - o Convert multi-value variable to table.
  - o Convert table column to multi text variable. Used to convert a specific column of a table to a text-list variable.
6. **Action extended: Fomat variable value.** New formatting functions have been added: Delete: Leading blank characters and Delete:Trailing blank characters
7. **Logging.** Added an option to be able to enable or disable logging to memory for server projects. With the project script tab selected, choose **Actions, Project script properties**, and select the **options** tab to access this functionality. switching it off may significantly increase performance when running projects from the delegation client.(1307)
8. **MySQL datatypes.** For MySql server support is added for the **date** datatype, which contains only the date, not a time. As UMRA itself does only support **date-time**, as a datatype, when reading it will be converted to a date-time value with the time set at 12.00 hr pm.(1307)

#### Major Fixes

1. **Generic table.** A memory leak has been fixed which occurred when reading multi-value values in a generic table; for instance when querying the Memberof attribute in an LDAP query. (1303)
2. **Action Create user (AD).** When a user cannot be created due to password complexity requirements, the temporarily created user object is now correctly removed from Active Directory(1307)
3. **Script Action: Move Exchange Mailbox.** A fix has been created for an crash problem introduced by SP2 of Exchange 2003.due to incompatibilities of the updated Exchange software.(1307)
4. **Script Action: Modify Exchange mailbox permissions 2000/2003.** A memory leak has been fixed (1307)
5. **Script Action: Move Exchange Mailbox.** Action could cause an exception if the specified user object variable was not valid, for example if it was the result of a failed Get user Action. Now it gives a correct error message and continues with proper error handling as specified.(1311)

#### Minor fixes

1. **Sheduler.** When a project was sheduled for daily execution, the scheduling could not be disabled (it could still be configured as never though). This has been fixed (1309)
2. **Generate generic table-LDAP Query.** The LDAP query filter could not contain variables, they where not resolved at run time. This has been fixed.(1309)
3. **Script Action: Execute script.** The name of the script to execute could not contain variables. now it can. (1311)





4. **Script Action: Update date-time variable.** The action parameters can now contain variables. (1311)
5. **Script Action: Format variable value,** the formatting function **Delete, all matching characters, specified as ASCII codes** deleted both upper and lowercase of the specified value when applicable. That is, when specifying 97, in order to delete 'a' accidentally also all occurrences of 'A' were deleted. This has been fixed.
6. **Script Action: copy directory.** When the copy fails because the destination drive is full, UMRA logged a correct error message, but the error handler (the "on error" part of the action) was not invoked. Now the error handler is invoked correctly.(1311)





## Version 7.6 ,Build 1302, August 23rd, 2006

### New Features

1. **Project Scheduler.** A major new mechanism to run projects has been added to the UMRA service: the UMRA **Scheduler**. UMRA projects can now be executed automatically at scheduled times by the UMRA service. Open a project and choose Actions-->Scheduler to view and specify scheduling information for the active project. Choose View-->Scheduler to see the scheduling overview of the UMRA Service. Press F1 in those windows for more information.
2. **New action - Join Table Data.** The [Script Action: Join table data](#) has been added.
3. **New action - Manage table data.** The [Script Action: Manage table data](#) is extended with an option to sort a table based on the column name.
4. **Action extended : Generate generic table.** The [Script Action: Generate generic table](#) , is extended with the option to generate a table from a .csv file, and to specify the names of the columns explicitly.
5. **Security improved.** All RPC communication between the UMRA console, UMRA Service,UMRA Com and the UMRA forms client is now encrypted by means of SSL.
6. **Aborting scripts.** A mechanism has been added to see which scripts are currently actively running, and also to make it possible to abort those running scripts if required. choose UMRA Service -> Control Running projects from the menu to go to the overview.
7. **Search and Replace.** A "search and replace" option has been added to search (and or replace) through all configured action property values and specifications in all projects in the active workspace. Useful for instance if you want to rename a variable that is used in a lot of places.

### Enhancements

1. **Service logging.** The service can be configured (choose UMRA Service-->Service properties;Advanced tab) to create user specific cyclic log files rather than general ones. The names of the log files are derived from the name of the account with which the a user connects to the service.
2. **Project logging.** Previously, at the start of each project execution, the values of all variables in the project where logged. This could be a lot of uninteresting data, especially if a project was called many times within a "for each" action. Now this can be switched off in the project options of a specific project (choose Actions-->Project script properties;Options tab)
3. **UMRA Com performance.** UMRA Com is extended with a new interface call (EnableReturnLog) to specify whether or not the log info generated by the service should be returned to the calling Com Object. By default the log information that the called service project generates is returned to the calling Com Object, so that it can be displayed if required. If this option is switched off, no log information is returned to the calling Com object. In both cases the log information is logged in the logfiles on the server. Disabling the return of log information increases the performance.







4. **UMRA command line Application.** The UMRA command line application "UMRACmd.exe", now has an extra command line option (-NoLog), which suppresses log information shown on the command line and increases performance.
5. **Column names in Database Query.** Form tables with database query: When the query is run in the console in the test tab, the column names as implicitly returned by the query are stored , so that they subsequently can be used with the specification of the columns to show.
6. **Action enhanced: Manage table data.** The [Script Action: Manage table data](#): Within the sub-option "Export to .csv", it is now optionally possible to write a header with the column names to the file.
7. **Extra variables in automation projects.** The %NowDay%, %NowYear% default variables are now also available in automation projects.
8. **Console GUI:** When creating a new project, the project name is now first proposed, before being used.
9. **Extra output variables in script actions.** The actions [Script Action: Create User \(AD\)](#), [Script Action: Create group \(AD\)](#) and [Script Action: Create object \(AD\)](#) have been extended, so they will now optionally output the Object Distinguished Name of the object they have just created, to a variable. In larger scripts, this name was often needed further on in the script. Previously it had to be explicitly retrieved by using for example the "Get attribute" script action. and that is now no longer required.
10. **Action enhanced: For-Each.** The [Script Action: For-Each](#) is extended with the possibility to specify which variables should be available to use for the called project. Making unavailable variables that are not used in the called project can drastically (> 10 times faster) improve performance.

#### Major Fixes

1. **Table in forms Client.** When a selection was made in a table, clicking on a column header to resort the table would change which items where selected. This has been fixed.
2. **Logging mechanism.** A potential critical error in the internal working of the logging mechanism on the service has been fixed. In some circumstances, when the execution of form script did not finish within the timeout period, and several other conditions where met, an error in the cyclic log mechanism could cause a critical failure in the UMRA service. This has been fixed.
3. **Script action Update date-time variable.** The [Script Action: Update date-time variable](#) did not work if the option "convert to 100ns interval since 1-1-1601" was chosen. This has been fixed.

#### Minor Fixes

1. Service logging - Several log files use a method of cyclic logging; that is, when a file *log1* has reached a specified limit, logging continues in file *log2*, etc. In some circumstances a few log messages that where generated at the time of file change, were not correctly written to file. This has been fixed.





2. LDAP name syntax. If the name-part of an object contains a forward slash "/", the format that LDAP uses to specify the name of the object was not handled correctly by UMRA. This has been fixed.
3. Script action "Manage table data", option "export to .csv file". The output file contained incorrect "new line" like characters. When read in certain applications (MS Access for example), this would result in the display of additional empty lines. This has been fixed.
4. The Action "Set variable" did not write a message to the log when it was executed. Now it does.
5. When creating a completely new name generation algorithm, it was not created with the specified name, but with a number. This has been fixed.
6. If a workspace contains more than 1 project, and has been modified, the user will be prompted to save the workspace when exiting the console.
7. A project is now also marked dirty when a script action is removed from the script. So the user is correctly prompted to save when exiting.
8. The next issue only occurred when using a forms project containing an initial project with a "Generate generic table" script action. The contents of this table can be stored in a variable and shown afterwards in a Form Table. The order of the entries as shown in the table was not the same as the order of the entries in the original file. This has been changed, so that, if no sorting method is selected, the original order of entries read from the file is maintained.
9. When using the [Script Action: Generate generic table](#) to perform an LDAP search query, the specified time-out values were not correctly used. For those queries which take a very long time to return the result, this could cause the search to fail. This has been fixed.
10. The Ctrl-C and Ctrl-V copy and paste actions now also work for the static text and input text fields in the forms client
11. The Set variable action has been modified. If the current value of a variable contains a reference to itself, it is no longer resolved even when the option "resolve now" is on.
12. When a project is opened, and closed immediately thereafter, it is now added to the list of recent projects. Previously, it was not added.
13. In [Script Action: Create Exchange Mailbox \(2003/2000\)](#). The name of the variable used for the User Object can now be specified. Previously this was always fixed to %UserObject%. and thus the action could not be used if the user object was stored in a different variable.

#### Cosmetic Fixes

1. The icons in the main button bar corresponding to the project tabs (script, form ,preview, network data etc), are now checked/unchecked depending on the existence of the associated project tabs in the active project.
2. Action format variable, sub-action Replace substring with ASCII codes. The description field has been enlarged.
3. Some irregularities in the display after vertically scrolling a form in the Forms Client have been fixed.
4. The UMRA log file UMRASvcFormLog.txt contained superfluous extra new line characters between log messages. This has been fixed.





## Build 1263, May 12th, 2006

### New features

1. **Workspace** - A new feature is the introduction of workspaces. This allows the user to structure complex projects more efficiently. For more information, see [UMRA workspace](#). (1263)
2. **GUI** - The main interface has been drastically improved. The key project concept of UMRA has always been the creation of an UMRA project script using input data from various sources ((CSV) files, databases, other applications). The main interface has been reworked to support this concept more strongly. See also [UMRA Basics](#) for more information on UMRA's basic concepts. Depending on the kind of solution you want to create (MASS, Forms, Automation), UMRA will include the relevant project components for the selected project. Also, as part of the overall interface makeover, the Personal Assistant, What's this help and Project Wizards have been removed. (1263)
3. **IMPORTANT - All MASS projects created in previous versions of UMRA (.UPJ files) have to be upgraded.** Please follow the procedure as described in Upgrading MASS projects from previous versions to upgrade these files. (1263)
4. **Copy directory script action** - when using this script action, the date, time and attribute stamps are now copied as well. (1263)
5. NETBIOS name of the computer accessing the **UMRA Service** is now stored in the UMRA variable %UmraClientComputer%. (1263)
6. **Remove SID History script action** - A script action has been added to remove the SID history of a (removed) user account. See [Script Action: Remove SID history](#) for more information. (1263)
7. **Rename directory service object (LDAP) script action** - UMRA contains several script actions to manage LDAP directory services. A script action has now been added to change the distinguished name of an entry in the directory service (only available for LDAP version 3). See [Script Action: Rename directory service object \(LDAP\)](#) for more information. (1263)

### Major fixes

1. **Setup LDAP session** - in the previous UMRA version, LDAP version 3 was not correctly initialized. LDAP sessions exist in version 2 and 3. Version 3 offers more functionality, which is why UMRA initializes the session based on version 3. This was incorrectly implemented, resulting in an error on Windows 2003. This has been fixed. (1263)

### Minor fixes

1. **Command line tools:** In previous versions, the port option of the command line did not work. This has been fixed. (1263)
2. **Modify Exchange mailbox permissions (2000/2003):** In previous versions, an error in a scenario where you have users A, B and C. User A has a mailbox and user B gets permissions for this mailbox. If user B was removed from Active Directory and a third user granted permissions to the mailbox of user A, an error would occur. This has been fixed. (1263)





3. **Set user group memberships (AD)** - In some rare situations, the group selections were unexpectedly cleared. This has been fixed. (1263)
4. **UMRA service** - In previous versions, if you had changed the data cache retry value, this value would be reset to the default value if the UMRA service was restarted. This has been fixed. (1263)

#### Cosmetic fixes

1. **Execute script script action:** The combo box for the **Project** property has been enlarged to display long path names. (1263)



## Build 1227, January 6th, 2006

### Major fixes

1. **Setup Security** - All directories and files for which security was set (using either propagation mode or not), were made read-only. This has been fixed. (1227)





## Build 1225, December 23rd, 2005

### New features

1. **Script actions to manage LDAP directory services:** [Script Action: Setup LDAP session](#), [Script Action: Load LDAP modification data](#), [Script Action: Delete directory service object \(LDAP\)](#), [Script Action: Add directory service object \(LDAP\)](#), [Script Action: Modify directory service object \(LDAP\)](#), [Script Action: Search LDAP](#). Examples of such directory services are Novell eDirectory, Linux OpenLDAP and Microsoft's Active Directory. All these directory services can now be managed using UMRA. (1225)

For general information on using UMRA for managing LDAP directory services using UMRA, see [Managing LDAP directory services using UMRA](#).

2. **New action - Delete attribute value (AD):** Script action has been added to delete a specific attribute value. For more information, see [Script Action: Delete attribute value \(AD\)](#). (1225)
3. **New action - Execute script:** Script action has been added to execute the script of another project and merge the updated variables into the current project. For more information, see [Script Action: Execute script](#). (1225)
4. **New action - Generate password:** Script action has been added to generate a password. For more information, see [Script Action: Generate password](#). (1225)
5. **New action - Get user table:** Script action has been added to generate a table containing information regarding locked-out users, disabled users and other user account control states. For more information, see [Script Action: Get user table \(AD\)](#) (1225).
6. **New action - List files and/or directories:** Script action has been added to obtain a list of files and directories in a variable. This variable can in turn be displayed in a form table. For more information, see [Script Action: List files and/or directories](#). (1225)
7. **New action - Set encrypted variable:** Script action has been added to set the value of the specified variable to the encrypted value of the entered text. For more information, see [Script Action: Set encrypted variable](#). (1225)
8. **Enhanced - Check form input:** An option has been added to check the string length of text which has been entered by the user in an input box. The variable contents check specification has been restyled. For more information, see [Form action - Check form input](#). (1225)
9. **Enhanced - Form property Initial Project:** The Initial Project tab has been renamed to Execution control and now includes an option to set a time-out for script execution. (1225)
10. **Enhanced - Manage table data script action:** Option has been added to remove rows and columns of a table. (1225)
11. **Enhanced - Return project form:** Option has been added to specify a variable for the returned project form. (1225)
12. **Enhanced - Table form field options:** An option has been added which can be activated to execute a default button when the user doubleclicks a table entry. For more information, see [Table form field - Options](#). (1225)





## Major fixes

1. **Manage Exchange recipient mail addresses (2000/2003) script action:** In previous versions, UMRA would crash if a non existing AD had been specified. This has been fixed. (1225)

## Minor fixes

1. **Edit User (AD) script action:** In previous versions, the on error actions did not work for this script action. This has been fixed. (1225)
2. **Execute service command script action:** The text in property **Wait for status completion** has been changed from "If set, the action will not complete until the services reports the requested state or the time-out period is expired." to "If set, the action will not complete until the service has the requested state or if the time-out period has expired." (1225)
3. **For-Each script action:** In previous versions, when a network location was specified in the **Script project** property, the path of the standard project location was included, which resulted in an execution error. This has been fixed (1225).
4. **Form elements - Display tab:** In previous versions, the option "Vertical pixel offset" would only work for text fields. It now also works for tables, checkboxes, radio buttons and standard buttons. (1225)
5. **Generate name(s) script action:** In the previous versions, the text under the **Iteration** property read "can only be used for mass projects". This is incorrect. It can also be used for Forms projects in a loop. This text has been removed. (1225)
6. **Generic table type Variable:** In previous versions, when you specified the table height in the **Options** tab, this specification would not be used if the variable did not contain any items. This has been fixed. (1225)
7. **LDAP attribute variables:** In previous versions, when the LDAP query of an existing LDAP Search was changed, any variables assigned to these attributes would disappear. In the new build, the variable specification remains intact when you add attributes to your LDAP search. When you change the order of appearance however, the mapping will no longer be correct. This is by design. (1225)
8. **Licensing:** In previous versions, when a DNS domain name had been licensed, UMRA would not accept a DNS name for the domain. This has been fixed. (1225)
9. **User name generation algorithm:** In the previous version, if you specified an "Arbitrary sequence" (e.g. "01,02,03") and clicked OK and then opened the iterator again, the iteration object had changed to "01, 02, 03" (spaces added). These spaces would also end up in the user account name. Each subsequent cycle would add another space. This has been fixed. (1225)

## Cosmetic fixes

1. **Table columns:** Table columns are now always dynamically resized when the table dimensions are adjusted. (1225)





2. **Project forms display name:** Project forms now also have a display name. By default, the display name is identical to the project name and is also shown in the Forms project client tree. (1225)
3. **Project execution status info:** When a form project is processed by the UMRA Service which takes a long time to complete, the message "Please be patient while your request is being processed" is displayed. (1225)







## Build 1201, September 30th, 2005

### New features

1. **New action - Configure service:** Script action has been added to configure Windows computer services. To be used in combination with the new script action [List services status](#). For more information, see [Script Action: Configure service](#). For an example project on how to use these script actions, see [Managing Windows computer services](#). (1201)
2. **New action - Convert value of variable:** Script action added to convert the value of a variable (logical AND, large integer to date-time or large integer to specified text). For more information, see [Script Action: Convert value of variable](#). (1201)
3. **New action - Delete object (AD):** Script action has been added to delete an existing Active Directory object. For more information, see [Script Action: Delete Object \(AD\)](#). (1201)
4. **New action - Edit share:** Script action has been added to edit an existing share. For more information, see [Script Action: Edit share](#). (1201)
5. **New action - Execute print job command:** Script action has been added to start, resume, pause or delete a print job. To be used in combination with the new script action [List printer documents](#). For more information, see [Script Action: Execute print job command](#). For an example project on how to use these script actions, see [Managing printer queues](#).
6. **New action - Execute service command:** Script action has been added to manage services, to be used in combination with the new script action [List services status](#). For more information, see [Script Action: Execute service command](#) and [Script action: List services status](#). For an example project on how to use these script actions, see [Managing Windows computer services](#). (1201)
7. **New action - Get terminal services user settings:** For more information, see [Script action: Get terminal services user settings](#). (1201)
8. **New action - Get user info:** Script action has been added to retrieve specific flags of the userAccountControl bitmask attribute (e.g. Account disabled" and "User must change password at next logon" ). For more information, see [Script Action: Get user info](#). (1201)
9. **New action - List printer documents:** Script action has been added to collect the printer documents for a specific printer. To be used in combination with the new script action [Execute print job command](#) to manage printer queues. For more information, see [Script Action: List printer documents](#). For an example project on how to use these script actions, see [Managing printer queues](#). (1201)
10. **New action - List services status:** See item 6. (1201)
11. **New action - Move cross domain:** Script action has been added to move a user account to another domain. For more detailed information, see [Script Action: Move cross-domain](#). For an example project on how to use this script action, see \$\$\$\$. (1201)
12. **New action - Move Exchange mailbox:** Script action added to move an Exchange mailbox. For more information, see [Script Action: Move Exchange mailbox](#). (1201)
13. **New action - Update database:** Script action added to update the record set of an existing database. For more information, see [Script Action: Update database - introduction](#). (1201)
14. **New action - Update date-time variable:** Script action has been added to performs basic numeric operations on date-time variables (e.g. to return the current date). For more information, see [Script Action: Update date-time variable](#). (1201)





15. **Enhanced - Checkbox form element:** Added the option to set the initial state of a checkbox. For more information, see [Checkbox form field](#). (1201)
16. **Enhanced - database support for all database types:** For more information, see [Database setup - Other databases](#). (1201)
17. **Enhanced - Default service log file:** Increased from 1 MB to 20 MB. (1201)
18. **Enhanced - Error messages:** Error messages for database actions have been enhanced to get better insight into errors returned for database queries (update and select queries). (1201)
19. **Enhanced - For-Each:** Added a break condition for a For-Each loop. (1201)
20. **Enhanced - Format variable value:** Four formatting options added to search and replace for a string ending or starting with a specific substring. (1201)
21. **Enhanced - Form export:** Illegal file name characters are now replaced by underscores. In previous version, exporting forms did not work if a title included a colon (":"). (1201)
22. **Enhanced - Form projects:** Before a form is shown, the script of another form project can be executed by specifying an initial project. See also [UMRA Project Properties - Form Options](#). (1201)
23. **Enhanced - General:** Shortcut keys have been added for Open (CTRL + O), Save as (CTRL+shift+S) and Close CTRL+W (all related to projects). (1201)
24. **Enhanced - Generic table:** Added the possibility to use temporary variables for testing purposes. Variables can be specified which will be filled during run-time during the test. (1201)
25. **Enhanced - Generic table - Table type "Variable" added:** Using this table type, the content of a variable can be used as a generic table. For more detailed information, see [Viewing data from Active Directory, LDAP, databases](#). (1201)
26. **Enhanced - Get Object (AD):** class name, path, parent path, schema and guid properties can now be saved as a variable. (1201)
27. **Enhanced - Generic table - Database query:** The data type Memo in MS Access is now supported as well. (1201)
28. **Enhanced - Generic table - Exclusions:** In the previous version a message was displayed in the delegation client and the UMRA service log file if the service or console application could not manage to determine the members of an excluded global group. This is now also displayed in the console application if the preview window is constantly updated (see # 30 as well). (1201)
29. **Enhanced - Generic table - Exclusion tab:** Doubleclicking a global group now starts the edit function. (1201)
30. **Enhanced - Generic table - error messages:** If a database query returns a data type which is not supported by UMRA, the error message is only displayed for the first row. Note that this also applies to a situation where a table contains one row with multiple unsupported data type fields. (1201)
31. **Enhanced - If-Then-Else script action:** now includes the option to check if a text-list type variable contains a specific text. (1201)
32. **Enhanced - Log window:** Log Window now supports scrolling for longer messages.
33. **Enhanced - Manage table data:** Option has been added to add tables (assuming the number of columns in both tables is identical). (1201)
34. **Enhanced - Manage table data:** Option added to export table to a CSV file. (1201)





35. **Enhanced - Radio buttons:** Initial state of a radio button can now be set according to a variable. (1201)
36. **Enhanced - standard name generation algorithms:** these can now be pushed to any UMRA project. (1201)
37. **Enhanced - UMRA forms:** option added to specify if the form content, as shown in the preview, should be constantly updated during form design. See also [UMRA Project Properties - Form options](#). (1201)
38. **Enhanced - Update numeric variable:** Several options added to perform basic calculations on numeric variables. For more information, see [Script Action: Update numeric variable](#). (1201)
39. **Change - Form projects - Preview window:** The preview window in the console is now generated by the UMRA service. In the previous versions, the preview window was generated by the console (only the script was executed by the service). (1201)
40. **Change - General - Project timeout:** In the previous version, if a form was submitted in the client (in preview) and the cache was still empty, a timeout was given when the project could not be executed within 60 seconds. This timeout has been increased to 300 seconds. (1201)
41. **Change - Method of counting the number of user accounts:** this has changed for dns/ou license keys. Accounts ending on "\$" (computer accounts) are no longer included in the user count. For netbios keys nothing has changed. See also [Network bar - Count users](#). (1201)
42. **Change - Tree structure for script actions:** Variable actions have now been placed in Variable actions folder with subfolders for Variable operations, Table, Database, Name generation, Programming and Mail. (1201)

#### Major fixes

1. **Create user script action:** In previous versions, if the password of a newly created user did not meet the complexity requirement, an iteration occurred. As a result, the user was created 100 times. This has been fixed. (1201)
2. **Exporting Form projects:** In previous versions, file was exported even when the "Cancel" button had been clicked. This has been fixed. (1201)
3. **For-Each script action:** In the previous version, the label assigned to the For-each script action was no longer present if the project was saved, closed and opened again. Jumping to the label was then no longer possible. This has been resolved. (1201)
4. **Format variable value script action:** In the previous version, if a comma was replaced with a string which also included a comma, this comma would in turn also be replaced, resulting in a loop. This has been fixed. (1201)
5. **Generic table - Database queries:** In the previous version, an error message was displayed when a query retrieved data of an unsupported data type and the remaining fields would be placed in the wrong columns. This has been fixed. (1201)
6. **Generic table - Database queries:** In the previous version, no values were returned if the query included two fields containing unsupported data types. (1201)
7. **Generic table - Database queries:** In the previous version, numeric and autonumber data fields were interpreted as text, leading to an incorrect sort order in UMRA forms. This has been fixed. (1201)
8. **Generic table - Database queries:** In the previous version, Date-time fields were not retrieved correctly. This has been fixed. (1201)





9. **Script action Generate generic table:** binding to a variable. In the previous version, if the script action was executed several times, the binding variable would be overwritten by the actual value. (1201)

#### Minor fixes

1. **Create User script action:** Logon hours property. If the current settings were edited and cancelled, the changed logon hours would appear if you clicked the Edit button once more. This has been fixed. (1201)
2. **Form project - Minimize window:** In the previous version, if the window had been minimized, this setting would not be undone after restarting the console. This has been fixed. (1201)
3. **General:** If a script action was deleted in the previous version, the window focus was not automatically set to the next script action (e.g. to perform another delete operation). This has been fixed. (1201)
4. **Generate generic table script action:** In the previous version, the name of the output variable for the generic table did not appear in the combo box for other script actions. This has been fixed. (1201)
5. **Generate random number:** In previous versions, if the Generate random number action appears twice in a script, with an identical range, the same value was returned when the script was executed (in other words, the number was not entirely random). This has been fixed. (1201)
6. **Generic table - lastLogon attribute:** In the previous version, if the last logon data for a user account were retrieved through a generic table, the data were sorted on time instead of date. This has been fixed. (1201)
7. **Generic table--->LDAP Query--->Attributes Tab-->"Delete ALL" button:** In the previous version, this button only worked if entries in the attributes list had been selected. It now also works if this is not the case. (1201)
8. **Get attribute script action:** In the previous version, the list of values in the LDAP attribute display name property did not include "memberOf". This has been fixed. (1201)
9. **Get object script action:** In the previous version, no error message was displayed when a variable name was entered which was not specified between percentage signs (%<NameVariable>%.). This has been fixed. (1201)
10. **If-Then-Else script action:** In the previous version, if a label was specified for the Else condition and then disabled by deselecting the Else checkbox, the Else condition would still be executed. This has been fixed. (1201)
11. **Log Window:** the log window now supports scrolling for longer messages. (1201)
12. **Logging variables:** When logging variables containing large text arrays (e.g. the multi text result of an LDAP search action), the log now displays the number of text elements. In previous versions, this action resulted in an "Invalid error string" message in the log file. (1201)
13. **Mass projects, Generate Generic Table, test page:** In the previous version, the option "Run test on UMRA service" was available even though Mass does not use the UMRA service. This has been fixed. Send mail message action - In the previous version, "%Username%" was shown in the log file instead of the resolved value. This has been fixed. (1201)





14. **Manage table data script action:** In the previous version, the field Cell data value for the option Set the data for the specified row and column of the table only accepted a string of a limited pixel length. This has been fixed. (1201)
15. **Search Object script action:** In the previous version, the property values for this script action were not shown correctly in the log file (the action itself was executed correctly). This has been fixed. (1201)
16. **Send mail message script action:** In the previous versions, the "X-Sender:" field could not be edited. This has been fixed. (1201)

#### Cosmetic fixes

1. **Log variables script action:** In the previous version, the name of this script action changed to ""Write the current script variables in the log" when it was dragged to the script action window. This has been fixed. (1201)
2. **Generic table - Query tab:** In the previous version, the vertical scrollbar was not shown. This has been fixed. (1201)



## Build 1164, July 1st, 2005

### New features

1. **Form project - Generic table:** A new form field has been introduced. This form field allows you to display data from Active Directory and user information stored in other information systems and to use these data as input for an UMRA project script. For more detailed information, see [Viewing data from Active Directory, LDAP, databases](#). (1164)
2. **New action - For-Each function:** The For-Each function evaluates the rows of a table and executes a script for each row which is defined in another project form. This script action is created in <Project form1> whereas the action which needs to be executed as a result of the For-Each action is created in <Project form2>. This way, you can reuse complex For-Each constructions in other projects. For more information, see [Script Action: For-Each](#). (1164)
3. **New action - Generate generic table:** The generic table has also been made available as a script action. Unlike the generic table which is used in a form, the data are not shown in a form table, but used directly as input for an UMRA project script. See also [Viewing data from Active Directory, LDAP, databases](#). (1164)
4. **New action - Get primary group:** This script action retrieves the primary group of the user. For more information, see [Script action: Get primary group](#). (1164)
5. **New action - If-Then-Else function:** This script action has been introduced to be used in a project script to evaluate a condition. This new script action makes it possible for instance, to verify the last logon time of a user and to execute a certain action if the last logon time was more than an X number of months ago. For more information, see [Script Action: If-Then-Else](#). (1164)
6. **New action - Manage table data:** Allows you to manipulate data in an existing table or to create a new table. For more details, see [Script Action: Manage table data](#). (1164)
7. **New action - Merge multi-text variable values:** Merges Variable1 and Variable2 . For more details, see [Script Action: Merge multi-text variable values](#). (1164)
8. **New action - Rename file or directory:** With this action you can rename files and directories and move files to another volume. In previous versions this was only feasible by using the Copy directory, Delete directory and Execute command line script actions. For more information see [Script Action: Rename file or directory](#). (1164)
9. **New action - Remove group member:** This action has been added to remove the group member from a specific group. For more details, see [Script Action: Remove group member](#). (1164)
10. **New action - Remove specific group memberships (AD):** This script action allows you to remove specific group memberships. So far it was only possible to remove all group memberships using the action Remove user group memberships (AD). For more information, see [Script Action: Remove specific group memberships \(AD\)](#). (1164)
11. **New action - Send mail message:** This script action allows you to send an e-mail message as a result of a previous script action. For more information, see [Script Action: Send mail message](#). (1164)
12. **New action - Set primary group (AD):** This script action is only of interest for those customers who need to change the primary group. This is the case when there are any users





who log on to the network from a Macintosh client or who run POSIX-compliant applications. For more details, see [Script Action: Set primary group \(AD\)](#). (1164)

13. **New action - Update numeric variable:** With this new function you can increment the value of a variable. For more details, see [Script Action: Update numeric variable](#). (1164)
14. **Action - Delete directory:** A property has been added to ignore errors which are generated when the action is executed. (1164)

#### Critical fixes

1. **Name generation algorithm:** When a name generation algorithm contains an endless loop or when no unique names are generated by the algorithm, the UMRA software will now end the execution of the algorithm after a number of iterations. (1164)

#### Major fixes

1. **Create directory script action:** When the directory name is changed to make it unique, the new unique name is now exported. In previous versions, the incorrect already existing directory name was exported. (1164)
2. **UMRA Forms:** When the Control key is pressed while working with a table, the vertical scroll position of the table is no longer changed. In previous versions, the table was scrolled to the first entry of the list. (1164)
3. **Get attribute (AD) script action:** If the property is specified to get a multi-value attribute, the output Attribute value will always contain a multi text list, even if there are no values or just a single attribute value found. (1164)

#### Minor fixes

1. **Search object script action:** In the properties pane of a project window the properties values shown for properties Error if nothing found and Error if multiple found are now correct. (1164)
2. **UMRA Service:** When the UMRA Console or UMRA Automation software build number do not correspond with the build number of the UMRA Service, you are now forced to up- or downgrade the UMRA Service. In previous versions, you could continue to open a project. (1164)

#### Cosmetic fixes

1. **Manage Exchange recipient mail addresses (2000/2003) script action:** The default variable input name is changed from %AdObject% to %ActiveDirectoryObject%. (1164)





## Build 1141, April 29, 2005

### New features

1. **UMRA Automation:** A new module is introduced. The module supports the integration of the functions of User Management Resource Administrator with other products that are used to manage employee and user accounts. See \$\$\$ for more information. (1141)
2. **Delegation:** With UMRA, you can delegate control to helpdesk employees. See \$\$\$ for more information. (1117)
3. **Command line startup:** Run a project automatically with UMRA console when the application is started. See [UMRA Console - Command Line Options](#) for more information. (1141)
4. **Network tree:** For all Active Directory objects, all properties can be shown and managed from the UMRA console application. (1117)
5. **Action - Set attribute (AD):** A property is added to prevent the action from updating the user attribute if the new attribute value is empty. See [Script Action: Set attribute \(AD\)](#) for more information. (1117)
6. **Action - Get attribute (AD):** The action now supports multi-values and all Active Directory objects, not only users. See [Script Action: Get attribute \(AD\)](#) for more information. (1141)
7. **Action - Modify Exchange mailbox permissions (2000/2003):** With this action you can add and remove permission for Exchange mailboxes. See [Script Action: Modify Exchange mailbox permissions \(2000/2003\)](#) for more information. (1117)
8. **Action - Set Variable:** An option is added to specify when (other) variable names specified as part of the variable value must be resolved. See [Script Action: Set Variable](#) for more information. (1141)
9. **New action - Create contact (AD):** Create contact accounts in Active Directory. See [Script Action: Create contact \(AD\)](#) for more information. (1117)
10. **New action - Edit user logon:** Reset passwords and manage logon properties of user accounts. See [Script Action: Edit user logon \(AD\)](#) for more information. (1117)
11. **New action - Modify Exchange mailbox permissions:** Setup the permissions for new or existing Exchange 2003/2000 mailboxes. See [Script Action: Modify Exchange mailbox permissions \(2000/2003\)](#) for more information. (1117)
12. **New action - Manage Exchange recipient mail addresses:** Setup mail addresses for Exchange 2003/2000 mail recipients. See [Script Action: Manage Exchange recipient mail addresses \(2003/2000\)](#) for more information. (1117)
13. **New action - Dial-in user settings:** Specify dial-in and VPN settings for user accounts. See [Script Action: Dial-in user settings](#) for more information. (1117)
14. **New action - Set group membership (AD):** Set the Active Directory group memberships for user accounts and other Active Directory objects. See [Script Action: Set group membership \(AD\)](#) for more information. (1117)
15. **New action - Create group (AD):** Create a group in Active Directory. See [Script Action: Create group \(AD\)](#) for more information. (1117)
16. **New action - Get object (AD):** Access any Active Directory object to set and read properties. See [Script Action: Get object \(AD\)](#) for more information. (1117)







17. **New action - Create share:** Create a share on a directory and setup the share properties including security settings. See [Script Action: Create share](#) for more information. (1117)
18. **New action - Delete share:** Deletes a share from a directory. See [Script Action: Delete share](#) for more information. (1141)
19. **New action - Convert to multi-value variable:** Manage values of variables to be converted to multi-value values. See [Script Action: Convert to multi-value variable](#) for more information. (1117)
20. **New action - Manage multi-text value variable:** Manage values of multi-value variables. See [Script Action: Manage multi-text value variable](#) for more information. (1117)
21. **New action - Generate random number:** Generate a random number and assign the value to a variable. See [Script Action: Generate random number](#) for more information. (1141)
22. **New action - Generate name(s):** The name generation algorithms can now be used as a separate action. See [Script Action: Generate name\(s\)](#) for more information. (1141)
23. **New action - Convert text to date/time:** Convert a text value to a date/time value. Both values are stored in a variable. The method used to convert the text to a date/time value can be specified. See [Script Action: Convert text to date/time](#) for more information. (1141)
24. **New form action - Return other form:** When a submit button is pressed in a form, another form can be returned. See [Form action - Return other form](#) for more information. (1141)
25. **New form action - Iteratively execute project script:** Execute the project script for each item selected in a table. See [Form action - Iteratively execute project script](#) for more information. (1141)
26. **Name generation algorithm:** The configuration of the name generation algorithm is now always stored in the action that uses the algorithm, e.g. the actions [Script Action: Create User \(AD\)](#) and [Script Action: Create User \(no AD\)](#). In previous versions, the algorithm could be reloaded from configuration files each time a project was executed. See [Name Generation: Embedded algorithms](#) for more information. (1117)
27. **Export Variables script action:** The name of the export file can contain date related variables. See [Script Action: Export Variables](#) for more information. (1117)
28. **Export Variables script action:** For multi-value variables, a value separator character can be specified. See [Script Action: Export Variables](#) for more information. (1141)
29. **Create directory script action:** When creating a share for the new directory, the maximum number of connections for the share can now be specified. (1117)
30. **Name generation algorithm:** Methods can now be copied to make it more easy to create similar name generation methods. (1141)
31. **Form project:** The type of popup messages that must be shown when a form is submitted can now be configured. See [UMRA Project Properties - Form options](#) for more information. (1141)
32. **Logon hours:** The action to create and edit user accounts, both in Active Directory and NT, now supports user account logon hours. See [Script Action: Create User \(AD\)](#), [Script Action: Edit user \(AD\)](#), [Script Action: Create User \(no AD\)](#) and [Script Action: Edit user \(no AD\)](#) for more information. (1141)
33. **Formatting functions:** A function has been added to replace a substring in a text string with ASCII codes. With this function, a user defined control sequence (for example \n) can be converted to a carriage return - line feed sequence (13,10). (1141)
34. **UMRA Console:** The drag- and drop and cut-copy-paste functions have been extended. (1141)





35. **UMRA Service:** A new variable is automatically generated and updated when a form is submitted: %UmraFormSubmitAccount%. The variable contains the name of the user account that submitted a form. See [Built-in variables](#) for more information. (1141)

#### Critical fixes

1. **Demo version:** The demo version now supports all script actions. (1117)

#### Major fixes

1. **Edit user (AD) script action:** The attribute of a user account can now be cleared. In previous versions, an error occurred when the attribute was set to an empty value. (1117)
2. **Move - rename user (AD) script action:** When renaming a user account, the new name can contain comma's (.). (1117)
3. **Create directory - Copy directory script actions:** When setting the permissions of the target directories and files, in previous the versions, the specification of the Read permission incorrectly granted the Delete access right as well. The problem is fixed. (1117)
4. **Create directory script action:** When specifying the permissions for a share, an account can now be removed for the share from the list with permissions. (1141)
5. **Delete directory script action:** The script action now also delete files and directory that start with a dot (.). (1117)
6. **Format variable value script action:** A specification problem regarding the format functions and format function arguments has been resolved. (1141)
7. **Export Variables script action:** The variables can now be exported in UNICODE format. See [Script Action: Export Variables](#) for more information. (1141)
8. **Variables:** The special variables %NowMonth%, %NowDay% and %NowYear% can now be used in all modules (not only in mass projects). See [Built-in variables](#) for more information. (1141)
9. **Mass projects - input data:** The maximum number of columns read from a CSV file has been increased from 26 to 75 columns. (1117)

#### Minor fixes

1. **Edit user (AD) script action:** When a property is specified is an text with no length, the property value is shown as <empty text>. In previous versions, nothing was shown for the empty value. (1117)
2. **Menu option - Add action to script:** The menu option can be used for mass and form projects. (1141)
3. **Menu option - File, Save:** The shortcut key combination Ctrl+S can be used to save projects. (1141)
4. **Get User (AD) script action:** When a user account is specified using a domain name, OU-name and common name (full name), a warning is now displayed if the user account cannot be found and no (empty) OU-name is specified. (1141)
5. **Format variable value script action:** The names of the formatting functions are updated. (1141)





6. **Mass projects - column variable:** When a variable is associated with a column, the name of the variable can now be selected from the list with variable names when specifying script action properties. In previous versions, these variables could be specified but were not shown on the list with variable names. (1141)
7. **Form projects - script message:** When submitting a local form from the UMRA Console application, the script message was shown twice. The problem has been resolved. (1141)
8. **Form projects:** When the form project properties (format, fonts, options and security) are updated, the project is now marked as changed. (1141)
9. **Form project:** The calculation of the length of a form is now more accurate. This results in better vertical scroll bar settings in a form. (1141)
10. **Form project:** The mouse scroll-wheel is now supported in a form. (1141)
11. **Form project:** When changing the table type of a form network table, the columns are now updated.(1141)
12. **UMRA Console:** When the application is closed and a project has not been saved, you can now cancel the application close operation. (1141)
13. **UMRA Console:** When the error settings or label of a script action is specified, the project is now marked as changed. (1141)
14. **UMRA Console:** When dragging and dropping a script action on the same position now nothing happens (as expected). In previous versions, the actions was incorrectly moved to the last position in the script. (1141)

#### Cosmetic fixes

1. **Form projects:** When form projects are opened to be designed, the column width is automatically updated. (1141)
2. **Form projects:** When editing form fields and the Cancel button is pressed, the window no longer indicates that something is changed. (1141)
3. **Tooltips:** The What's This tooltips for form projects are now correct. (1141)
4. **Tooltips:** The tooltips shown in various tree windows are hidden when the mouse is moved in the tooltip area. (1141)
5. **Create directory script action:** The action now logs test only when the script action is executed in test mode. In previous versions, the test only phrase was not shown for this action. (1141)
6. **Create user (AD) script action:** The action now logs test only more explicitly when the script action is executed in test mode. (1141)
7. **All actions - Properties:** When selecting a variable as the new value for a property, the name of the variable is now immediately inserted as the property value if the property value is empty. In previous versions, you always needed to press the Insert button. (1141)
8. **Menu:** In rare occasions, the menu text shown could be updated incorrectly in previous versions. The problem has been fixed. (1141)
9. **Icons:** The icons for the script actions to delete a share and execute a command line are updated. (1141)





## Build 1065, September 17, 2004

### New features

1. **Terminal Services Support:** The new version supports the configuration and specification of Terminal Services settings for new and existing user accounts. (1033)
2. **Name generation:** A new function has been added to add characters at the end of a name to lengthen the name. (1065)
3. **Add account to local group script action:** A new action has been added to add user and global group account to local groups of domains, member servers and workstations. See [Script Action: Add account to local group](#) for more information. (1065)
4. **Create user (AD) script action:** The property **Computer account** has been added to allow the creation of workstation - computer accounts. See [Script Action: Create User \(AD\)](#) and [Script Action: Create User \(no AD\)](#) for more information. (1065)
5. **Create directory script action:** The option to setup permissions of shares and the maximum number of connections for shares has been added. See [Script Action: Create Directory](#) for more information. (1065)
6. **Create directory script action:** The option to set the owner of a directory has been added. The owner is specified by using the **Security** property of [Script Action: Create Directory](#). (1065)
7. **Set User Group Memberships (AD) script action:** Property **Group names (Pre-W2K name)** has been added to allow the specification of multiple groups using variables. See [Script Action: Set User Group Memberships \(AD\)](#) for more information. (1065)
8. **Setup user global group memberships script action:** By using the new option Error if already member you can configure the application not to generate an error when adding a user to a global group and the account is already a member. (1065)
9. **General:** To facilitate the specification of groups and other properties, you can now assign multiple values to a single variable. (1065)
10. **General:** The input data of all projects can now be exported and printed. (1065)

### Critical fixes

No critical fixes were found or reported

### Major fixes

1. **Active Directory:** The comma (,) character can now be used in the name of user accounts. (1033)
2. **Name generation:** When no name generation algorithm is specified, the application no longer uses the last 'configured' algorithm. This feature is particularly used when the user name is directly specified in the import file when creating user accounts. (1033)
3. **Name generation:** The names generated by the name generation algorithms can now be used in subsequent actions of the same script. Example: If you create a user account using a name generation algorithm you might want the algorithm to generate a separate name for





an Exchange mailbox for the same user account. This name can now be stored in another variable that can be used in the action that creates the Exchange mailbox. (1033)

4. **Name generation:** The function **Add if empty** now correctly does not add the specified character if the name is not empty. (1065)
5. **Script execution:** The Security Identifier (SID) can now be exported in text format. (1065)

#### Minor fixes

1. When a read-only project is started from the User Management Resource Administrator wizard, the project is now correctly shown in the projects bar (1033).
2. The on-line help is shown always when F1 is pressed. In previous versions, the on-line help was not activated when F1 was pressed and some windows were active (1033).
3. The help text of some of the sample projects has been updated (1033).
4. The information shown for the action Execute command line is no longer shown with the error icon. (1065)



## Build 1030, July 1, 2004

This is the first build of User Management Resource Administrator version 6.0.





## About Tools4ever

Tools4ever is a Dutch software company. We develop innovative and standardized Identity as a Service (IDaaS) solutions. Today's IDaaS solutions are complex, which is why we have dedicated ourselves to developing and delivering IDaaS solutions that are easy to implement and manage. From 2013 to 2020, we invested as much as possible to achieve this objective. HelloID is built from scratch using state-of-the-art software techniques. The first release of HelloID was received with great enthusiasm in early 2020. HelloID is a beautiful product that makes our users happy. We feel obliged to provide excellent service for a fair remuneration, and to continue to invest in the further development of HelloID.







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