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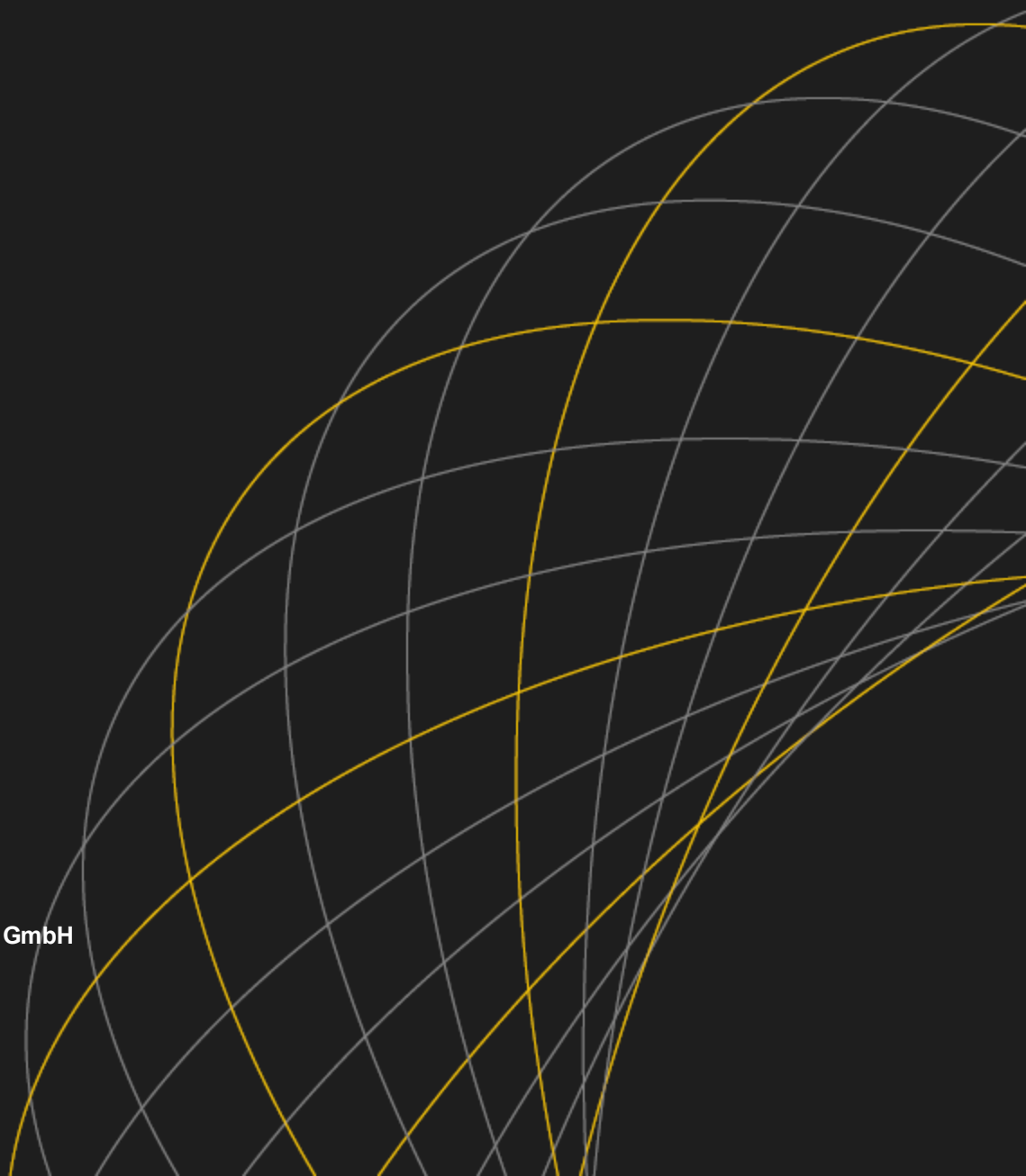
Automation Engine

Release Notes



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Contents

1 General Information

The release notes include an up-to-date description of all changes that have been made in the UC4 Automation Engine.

The release notes are listed according to version numbers (such as 3.02). The individual version numbers include all related versions which are distinguished by an appended letter (such as 3.02B).

For each product version, the release notes either include individual documents or the sections "Highlights", "New Functions", "Improvements" and "Corrections". These documents and sections summarize the most important features that have been added and changes that have been made. The Release Notes then list the new functions, improvements and corrections of the individual versions. Before you start using a new version, UC4 recommends reading through all the release notes of the former versions beginning with the version that you have been using so far.

The following symbol is used in the UC4 Documentation:

⚠	Warns you of possible problems associated with the new version and provides advice.

2 UC4 Version Indicators

The technical version names provide information about a UC4 product's current version. It is expressed in three main segments.

2.1 General Information about Versions and Releases

2.1.1 Major Release

This is the main version of the Automation Engine which is indicated by the first segment of the entire version number (such as 10.0.0).

2.1.2 Minor Release

A minor release is released within a main version (indicated by the number in the second segment) and includes major modifications and several critical and non-critical corrections. A minor release always includes new feature (see Release Notes) which can also cause major modifications (such as database modifications). Minor releases are supplied at predetermined dates in intervals of three to six months.

Note that the components AutomationEngine, UserInterface and Initial data of a minor release must always be updated together.

2.1.3 Service Pack (Patch)

Patches are only released in order to correct critical and non-critical errors for which there is no workaround.

2.2 UC4 Versioning as of Version 10

Major Release (main version)	Minor Release	Service Pack (patch)	Pre-Release (optional)	Hotfix (build number)
***xx*.**	***yy*.**	***zz***	**-dev** **-beta**	**+build.*nnn***

Example of a complete version information:

10.2.0-dev+build.23

- Major Release: 10
- Minor Release: 2
- Service Pack: 0
- Pre-Release: -dev (=Developer Build)
- Hotfix: +build.23

Pre-Releases are identified by a hyphen ("-") plus an abbreviation (such as -dev for a developer build or -beta for a beta version. This additional information is inserted between the Service-Pack number and the hotfix number. Pre-Releases are versions that are not intended for productive operation.

2.3 UC4 Versioning before Version 10

Main Version	Hotfix Number
9.00A	**xxx-xxx**

Example of a complete version information:
9.00A123-456

Versions that are not intended for productive operation have individual names (such as beta release).

Version

The number of the current UC4 version.

Hotfix Number

This 6-digit number is composed of:

abb-bcc

- a - the last digit of the year
- bbb - the current day of the year
- cc - the hotfix number of the day

Service Pack

The last but one digit of the hotfix number (xxx-x**x**x) indicates whether a particular component is included in a Service Pack and in which one it is included. Each Service Pack is numbered in a consecutive ascending order:

Main Version	Hotfix Number	Service Pack
8.00A	xxx-x**1**x	Service Pack 1
8.00A	xxx-x**2**x	Service Pack 2
9.00A	xxx-x**2**x	Service Pack 1
9.00A	xxx-x**3**x	Service Pack 2

3 Release Notes Version 10

3.1 Release Notes - AE Version 10

3.1.1 Highlights

[Highlights] [Service Packs][Notes for Update Installation] [What's New][Improvements][Bug Fixes] [Known Issues]

- New Automation Engine versioning
- New script elements for strings, script arrays and data sequences
- New predefined variables for the minimum, maximum, and current runtime of a task
- New object type DASH
- Improved deactivation behavior
- Documentation: Popups for glossary terms
- WebHelp available in new HTML5 format
- Current documentation also available as PDFs
- New print parameter for SAP jobs

3.1.2 Service Packs

[Highlights][Service Packs] [Notes for Update Installation] [What's New][Improvements][Bug Fixes] [Known Issues]

Service Packs include error corrections. It is possible though, that a Service Pack contains minor changes. If so, they are listed in this section.

Service Pack 2

General

UI Plug-in

The Automation Engine plug-in for the Enterprise Control Center is now no longer included with Automation Engine. Reason: From Enterprise Control Center Version 2.1 and higher, all plug-ins (and also the AE UI plug-in) can be found in ECC's WAR file. The configuration instructions and UI plug-in Release Notes have been removed from the documentation and can now be found in the ECC installation documentation.

Documentation

ClearView has been renamed as Process Analytics.

Documentation: File Name Change

The names of the files that are used to access the documentation have changed. The new names are as follows:

- HtmlHelp: help.chm
- WebHelp: help.htm
- Message documentation: Messages.chm/Messages.htm

Renaming of Documentation Chapters

The following chapters have been renamed as follows:

- UC4 Script --> Automation Engine Script
- UC4 Internal --> Internal
- Best Practice --> Best Practices
- UC4 ClearView --> Process Analytics

⚠ As a consequence, the names of the supplied CHM files have also changed in the HtmlHelp documentation. The new names are as follows: AutomationEngineScriptGuide.chm, InsideAutomationEngine.chm, BestPracticesGuide.chm, ProcessAnalytics.chm.

Service Pack 1

This Service Pack contains no changes.

3.1.3 Notes for Update Installation

[Highlights] [Service Packs] [Notes for Update Installation] [What's New] [Improvements] [Bug Fixes] [Known Issues]

⚠ Make sure that your IT environment complies with the system requirements of the Automation Engine version in question before you start the installation process. You will find a PDF list of supported platforms and versions in the Automic Download Center.

⚠ **Important note:** As of Version 10, components that run under Windows require the Microsoft Visual C++ Redistributable Package Version 2010.

⚠ As of Version 10, the agent for OracleApplications will no longer be supplied. Note that the job templates will still be available.

⚠ As of Version 10, file transfers will be processed asynchronously, which improves performance. This improvement has been achieved by changing the default values of the settings FT_ASYNC_QUIT_* in the variable UC_HOSTCHAR_*.
In Version 9, the default values of these settings had the effect that file transfers were processed synchronously. Note that they will still be processed synchronously after an update to Version 10. To change this behavior, you need to specify the required settings in the variable UC_HOSTCHAR_*.

⚠ The AE.WebInterface is no longer supplied or supported as of Version 10. All the related documentation topics have been removed.
For handling the Automation Engine via a web browser, you can now use Enterprise Control Center.

⚠ Oracle versions 9, 10 and 11g1 are no longer supported. For the Automation Engine and the utilities, this means that the library **ucuoci** is only provided for Oracle version 11g2. The upside is that there is no need to rename this during the installation process.

⚠ IBM DB2 versions 9.1 and 9.5 are no longer supported for the AE database and the Database Agent.

⚠ The UNIX agent and the utilities for HP-UX are no longer provided for the PA-risc architecture.

⚠ The UNIX agent is no longer supported for SCO Unixware.

⚠ As of version 10, the INI-file parameters "reorg_mode=", "suppress_output=", "max_rt_number=" and "show_stats=" of the utility AE DB.Unload are meaningless.
The reason is that this utility now uses only the new deletion method.
In the new deletion method it is essential that no REORG files are created during the database reorganization process. This is the same behavior as with the parameter setting suppress_output=1 which always suppresses the generation of REORG files.
So far, you could define the method for deleting data by using the INI-file parameter reorg_mode= ([REORG] section; old method: reorg_mode=0, new method: reorg_mode=1). The old deletion method consumed a lot of memory and could eventually cause performance problems.

⚠ The folder structure of the supplied documentation has changed. The folders "uc4" (this includes "htmlhelp") and "unix" are now located in the directory "Guides" . The new folder "Release Notes" includes the Release Notes for Automation Engine and the UI plug-in as PDFs.

⚠ As of v10, MS SQL Server 2005 is no longer supported for the AE database, the utilities, and the Database Agents.

⚠ In the WebHelpSplitter (Java program that can be used to remove guides from the WebHelp), the parameter -delmod has been renamed to -delrel.

⚠ The MBean for SAP ACC is no longer supplied or supported. The related documentation topics have been removed.

⚠ The databases Microsoft Access and SAP MaxDB are no longer supported for the Database Agent.

⚠ The components AutomationEngine, ServiceManager, agents and utilities for Windows and Linux are no longer supported on Itanium processors.

⚠ Workflow tasks that are waiting for their starting time now appear blue in the monitor.

⚠ Java Application Interface: The measurement unit for the method DeactivateCondition.setDelay (n) has been changed from days to minutes. To indicate a delay of one day, you must now specify the value 1440 instead of 1. Keep in mind that you must adjust existing Java codes correspondingly.

⚠ The names of the files that are used to access the documentation have changed. The new names are as follows:

- HtmlHelp: help.chm
- WebHelp: help.htm
- Message documentation: Messages.chm/Messages.htm

ℹ Instead of the former term "Modification Archive", AE now uses "Release Notes" in all languages. This applies to the Automation Engine documentation, the supplied files, and the Automic Download Center.

ℹ The folder "Docu", which is part of the supplied disk image, has been renamed to "Documentation".

ℹ As of Version 10, object variables and PromptSet variables can be used within the bind parameters of SQL SECURE-type and SQLI SECURE-type VARA objects.

New Functions

[Highlights] [Service Packs] [Notes for Update Installation] [What's New] [Improvements] [Bug Fixes] [Known Issues]

General

New Automation Engine versioning

As of Version 10, a Automation Engine version number is composed of the following characters:
x.y.z-pre+build.*nnn*

- x = Major Release (main version)
- y = Minor Release (minor version)
- z = Service Pack (patch)
- *-pre* = pre-release (optional).
  Possible values: -dev (developer build) or -beta (beta version)
- *nnn* = the number of the build

Example of a complete version number:
10.2.1-dev+build.234

For more detailed information, refer to the chapter Automation Engine Version Indicators.

Executable Objects Now Include the New Option "Active"

The new option **Active**, which is available in the **Header** tab of executable objects, lets you make tasks inactive through their object definition. When the option **Active** is not set, a task's execution will be skipped and it obtains the new status ENDED_INACTIVE_OBJECT (return code1925).

A new query is available in the UserInterface (Inactive Workflow Tasks). You can turn this on or off in the settings. This query appears when you try to insert an object into a workflow despite it having been made inactive in its object definition (= the option **Active** in the **Header** tab is not set).

A subsequent change of the **Active** option does not affect active long-running tasks (such as Schedule objects, RemoteTaskManagers, and groups).

Allowing Specific Characters within the Alias Names of Workflow Tasks

You can now use the new setting ALIAS_SPECIAL_CHARACTERS in the variable UC_CLIENT_SETTINGS to allow the use of specific characters in the alias names of workflow tasks. Characters that are usually not allowed (such as "-") can now be used in alias names.

New Predefined Variables

- &$MRT# - The object's maximum runtime in seconds.
- &$RUNTIME# - The task's current runtime in seconds.
- &$SRT# - The object's minimum runtime in seconds.

New Object Type: Dashboard

The new **Dashboard** object can exclusively be used with the product Enterprise Control Center (ECC), which is a web interface that allows you to access various products. The Dashboard object does not provide functions for the Automation Engine and only includes a Header tab and a Documentation tab.

To use dashboards in ECC, simply create them in the Automation Engine and assign the relevant rights.

New Functions

- :CLEAR -Resets a script array to its initial values.
- ARRAY_2_STRING -Converts a script array to a string.
- DEACTIVATE_UC_OBJECT - Deactivates any task that has already finished.
- GET_CONNECTION - Reads information from DB-type Connection objects.
- PREP_PROCESS_DOCU - Provides the contents of a Documentation tab as an internal list (data sequence) for further processing.
- PREP_PROCESS_PROMPTSET - Reads the definitions of PromptSet objects and provides them as an internal list (data sequence) for further processing.
- STR_ENDS_WITH - Checks whether a string ends with a specific other string.
- STR_ISLOWER - Checks whether the characters in a specific string are lowercase letters.
- STR_ISUPPER - Checks whether the characters in a specific string are uppercase letters.
- STR_STARTS_WITH -Checks whether a string starts with a specific other string.
- WRITE_PROCESS - Writes the contents of a data sequence to a file.

UserInterface

Activity Window: Filter for Remote Status

With the new Filter option, you can reduce the contents of the Activity Window to a specified remote status. This applies to SAP jobs, database jobs, RA jobs, and the SAP RemoteTaskManager.

Output Scan Tab: New "Status Text" Column

The Output Scan tab (available in jobs, file transfers, and the RemoteTaskManager) now includes the new column **Status Text**. Here, you can enter any value that will be used as the task's remote status when the filter definition applies.

PromptSet Objects: New Property "Custom field"

All elements of PromptSet objects now include the new property **Custom field**. You can enter any text of your choice in this text field; it will not affect any of the functionality.

You can even read this text by using the new script element PREP_PROCESS_PROMPTSET.

Selective Statistics: New "Remote Context" Tab

With the new "Remote Context" tab, you can filter the statistics for RA attributes and specific parameters of the SAP Solution Manager. For more information, see the tab's documentation.

RA - Connection Objects: Traffic-Light Symbols Signal Connection Status

When you open RA Connection objects, the system now verifies whether a corresponding agent is active and whether a connection is possible. The new traffic-light symbol now shows the connection status in the specific CONN-object tab.

SAP Agent

New Script Elements R3_IMPORT_CALENDAR and R3_IMPORT_JOBS

You can now use the new SAP functions R3_IMPORT_CALENDAR and R3_IMPORT_JOBSto transfer jobs and calendars from a SAP system to AE.

R3_IMPORT_JOBSimports all jobs from SAP that have been selected via the script element R3_GET_JOBS. In addition to SAP Job objects, you can also create Workflow objects and Login objects.

R3_IMPORT_CALENDARtransfers the days of a specific SAP factory calendar or holiday calendar to a Calendar object.

Script Element R3_GET_JOB_SPOOL: New XLS Format for Output File

The parameter FORMAT= in the SAP script element R3_GET_JOB_SPOOL now includes the new option "DAT". Use this to save the output file (FILE=) in XLS format (table).

SAP Forms: Long Names of Output Files Displayed

The Forms tab for SAP jobs now shows the long name of the selected output device (parameter DEST[INATION]=) and is available in R3_ACTIVATE_REPORT, for example. The long name is displayed to the right of the text field, provided that the Forms are connected to the SAP system.

This is an additional view in the Forms. You can still use the output device's short name as a parameter value.

R3_ACTIVATE_JOBS - New Parameter NO_DATE

The parameter NO_DATE is now available in the SAP script elements R3_ACTIVATE_JOBS and R3_ACTIVATE_INTERCEPTED_JOBS (to date only available in R3_GET_JOBS). You can thus start jobs without specifying a start time.

R3_COPY_VARIANT - New Parameter PROTECTED

Use the new parameter PROTECTED= in the script element R3_COPY_VARIANT to set or keep the protected flags of copied variants.

SAP BW: New Variable for the Number of Automatic Restarts of Process Chains

In SAP jobs with BW chains, the agent now creates the script variable &@restart_count# for each child process. This script variable stores the number of automatic child process restarts that have been made. You can also use the variable &@sap_bw_max_restart_count#, which includes the maximum number of restarts. This variable and its value appear in the Detail Window of the tasks.

R3_MODIFY_VARIANT - New Parameter MERGE=

The new optional parameter MERGE= is now available in the SAP script element R3_MODIFY_VARIANT. Use this to determine whether non-defined variant parameters should be kept (YES) or reset to a blank value (NO). By default, this script element does not change non-defined fields (same behavior as in previous versions).

⚠ This parameter is available as of SAP Note 1702115.

R3_ACTIVATE_REPORT and R3_SET_PRINT_DEFAULTS: New Print Parameters

The following new optional print parameter are available in R3_ACTIVATE_REPORT and R3_SET_PRINT_DEFAULTS:

- **SUPPRESS_SHADING=** Suppresses colors and shades.
- **WITH_STRUCTURE=** Includes structured information.
- **DEFAULT_SPOOL_SIZE=** Limits line width to 255 characters.
- **PRINTER_MAIL_ADDRESS=** The address of an email printer.
- **SPOOL_PAGE_FROM=** The page from which to start printing.
- **SPOOL_PAGE_TO=** The page until which to print.

The UC4 Interface is no longer required for the following parameters:

- **TEXTONLY=**
- **FRAMES=**

⚠ Note that the above parameters can only be used with a specific SAP version or higher. SAP Note 1678864 provides further details about this.

BW_ACTIVATE_INFOPACKAGES: New Parameter LOG=

With this new optional parameter, you can print the log messages of InfoPackages to the job report. For compatibility reasons, the default setting for these messages is that they are not logged.

BW_GET_INFOPACKAGES: New Parameter JOB_STATUS=

The new optional parameter JOB_STATUS= can be used to select jobs that have been started by InfoPackages according to their status.

ApplicationInterface

ExecuteObject - New Method "putPromptBuffer"

The new method putPromptBuffer allows you to set PromptSet variables for the started object. For an example, see the related topic in the ApplicationInterface.

Improvements

[Highlights] [Service Packs] [Notes for Update Installation] [What's New] [Improvements] [Bug Fixes] [Known Issues]

General

Changed Deactivation Behavior

The following changes and improvements have been made:

- Workflows that include active tasks cannot be deactivated. The same rule applies for the tasks of all sub-workflows.
- Tasks that have been started by a workflow can only be deactivated by deactivating the top workflow (for which the above rule applies).

The deactivation process will fail if one of the above rules is not fulfilled.

The new command "Deactivate (forced)" is now available for finished workflows. This deactivation mode has the effect that the finished workflow will be deactivated even if it runs within a parent workflow (whose status is ignored). Note that the sub-workflow must not include active tasks.
The command "Deactivate (forced)" suppresses the defined options for automatic deactivation of subordinate tasks. The regular "Deactivate" command always checks these options, and tasks that include the definition "Deactivate - Never" will not be deactivated.

The commands "Deactivate" and "Deactivate (forced)" always deactivate workflows including their subordinate tasks.

Time-delayed automatic deactivation is now specified in minutes (previously in days). Values in the database are converted automatically during update.

Tasks can now also be deactivated via script. The new script element DEACTIVATE_UC_OBJECT is available for this purpose.

Preventing Multiple Restarts

Tasks can only be restarted once their previous restart has finished. You cannot restart tasks while there is still an active restart instance.

Workflow tasks: Preconditions and the Value *OWN for Agents

Previously, an error occurred when the conditions of the Preconditions tab were being processed if:

- the value *OWN was set in the condition for an agent (=using the task's agent),
- the workflow task was generated at runtime, and
- the task ran in an AgentGroup.

This has been changed; the condition no longer fails but uses the AgentGroup's first active agent.

Restarting Tasks with SYNC Object Conditions

The Sync object will no longer be checked in restarted tasks that include SYNC object conditions when no abend action has been defined in the **Sync** tab. The Sync object will be checked as usual when one or several abend actions were defined before the task was restarted.

Login object - Selecting the RA Solution

In Login objects, the column "Type" now lists the names of all loaded RA Solutions. The value "CIT" is no longer available.

In the login entries of RA agents, you can now select the relevant RA Solution as the type.

⚠ Note that "CIT"-type login entries will not automatically be adjusted when you update your system.

Extended Functionality

ACTIVATE_UC_OBJECT - To define a maximum runtime for the started object. The task will abort and/or a new task will start when the specified time is exceeded.

UserInterface

Activity Window: Grouping several restarts of the same task

For the sake of a clearer overview, all the restarts of a task will now be grouped together in the Activity Window. The last task restart represents the main node. When you expand this, you will see all the task's previous restart runs (provided that they have not yet been deactivated).

Task grouping is only available in the hierarchical view of the Activity Window.

SAP Forms: Script Element Names Now Displayed in Selection Menu

The Forms tabs of SAP jobs now additionally display the name of the SAP element (in brackets) in the selection menu.

SAP Forms: Check-Box and Radio-Button Parameters Remain Unchanged

Editing script elements via the Forms tab no longer affects check-box or radio-button parameters that were not changed. Previously, these parameters were automatically replaced by a valid default value when the Forms modifications were saved.

You can now set variables for all these parameters via script; these will be kept even when the modified Forms are saved.

SAP Forms: Defined Script Elements Numbered and Displayed in a User-Friendly Format

Defined script elements are now listed in numbered form in the left part of the SAP Forms tab according to their order in the script.
A short description of the function is now displayed instead of the name of the script element.
Example for R3_MODIFY_VARIANT: Protect variant "STANDARD".

Improved Order of Job Report Options

In previous versions, the Job Report options **Generate on error only** and **Is generated by script** (to be found on the platform-dependent tab of Job objects) appeared to be linked to the **File** option. This has been corrected to a more user-friendly order, as these settings affect the file as well as the database report.

Detail window: Links in Variable Values

You can now open links (texts starting with http://) provided within the values of listed object variables. When you click on the link, it will open in the default browser. This is the same procedure as for links that are provided in the Documentation tabs.

Agents

SAP

R3_ACTIVATE_REPORT: The print parameters TEXTONLY and FRAMES are now also available in the standard interface.

Script element R3_ACTIVATE_REPORT: The print parameters TEXTONLY and FRAMES are now also available in the XBP Interface (previously only in the UC4 Interface).

BW Process Chains: Last Start Time Available in Reports

The PLOG reports of SAP jobs include the start date and the start time of process chains and now also their last start time.

Documentation

WebHelp in new HTML5 format

The WebHelp is now based on HTML5 and has a new, improved AE-style design and a user-friendly interface.

The left WebHelp area now shows the content tree and a **Glossary** area, which includes all the glossary terms as well as their definitions. The search field is now provided in the header line (previously in the left area).

Documentation as PDFs

You can now choose between Automation Engine documentation in HtmlHelp format, in WebHelp format, and as PDFs. Note that as of now, the PDFs provided in the Automic Download Center will always be up-to-date.

The supplied documentation folders are "htmlhelp", "webhelp", and "pdf".

WebHelpSplitter

The WebHelpSplitter can now also remove the following guides from the Automation Engine documentation:

- Process Analytics
- Inside AE
- KnowledgeBase

You can now also use the WebHelpSplitter for the French WebHelps.

Bug Fixes

[Highlights] [Service Packs] [Notes for Update Installation] [What's New] [Improvements] [Bug Fixes] [Known Issues]

For detailed and up-to-date information, see the *Patch Descriptions* section in the Automic Download Center.

Known Issues

[Highlights] [Service Packs] [Notes for Update Installation] [What's New] [Improvements] [Bug Fixes] [Known Issues]

This section contains information about the known bugs that have not yet been resolved and, in many cases, also descriptions of workarounds for them.

For detailed and up-to-date information, see the *Known Bugs & Workarounds* section in the Automic Download Center.

4 Modifications in Version 9.00

4.1 Release Notes Version 9.00A

4.1.1 Highlights

[Highlights] [Service Packs] [Notes for Update Installation] [What's New] [Improvements] [Bug Fixes] [Known Issues]

- New object type: QUEUE
- Optimized FileTransfer procedure
- New Workflow design
- Usage of negative numbers and floating-point numbers in UC4 Script
- New object type: PRPT
- Definition of conditions and statements for Workflow tasks
- Values of Variable objects are dynamically retrieved
- New features: CONVERT and :DEFINE
- System and attribute values can be used in other object attributes and in scripts.
- Arrays are available in UC4 Script
- Alias for Workflow tasks and objects that are activated once
- New script element: MODIFY_SYSTEM
- Usage of Variable objects in object attributes
- Accessing agent files via the UserInterface (registered job output)
- Extended Activity Window
- Quick Search in windows, objects and Workflows
- Quick Access function for quick access to objects
- Extended features: ACTIVATE_UC_OBJECT, RESTART_UC_OBJECT and MODIFY_UC_OBJECT
- Host type can be selected in Selective Statistics and Activity Window selection

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4.1.2 Service Packs

[Highlights][Service Packs] [Notes for Update Installation] [What's New] [Improvements] [Bug Fixes] [Known Issues]

A Service Pack is released within a UC4 version and includes modifications and several corrections (critical and non-critical ones). Service Packs are supplied at predetermined dates in intervals of three to six months.

⚠ Note that the Service Packs 1 to 4 include major enhancements and therefore, database modifications. Note that the components AutomationEngine, Utilities, UserInterface and Initial data of these Service Packs must always be updated together.
You must always copy the complete DB directory before you start to update the database (initial data).
If you use tablespaces that are not UC4 standard (in Oracle databases), you must also adjust the **step_*xxx*.sql** SQL files accordingly. These files are provided in the following DB directory: **DB\oracle\9.00A**.

⚠ Note that the agents of the ServicePacks 1 to 4 can only run with an Automation Engine of the same or a later ServicePack level.

⚠ Service Pack 1 to 4: For importing XMLfiles and loading Transport Cases, the affected UC4 system must have the same ServicePack version as the source or a later one. Any attempt to load an XML import file from an SP2 UC4 system to an SP1 UC4 system results in an error.

When installing a new Service Pack, make sure that you use the current Online Documentation. If your version is not up to date it can happen that an incorrect document opens when you open the help in the UserInterface via the F1 key. This can also happen if you install the Online Documentation with a hotfix but use an older version of the UserInterface.

Hotfixes are released to correct errors for which there is no workaround.

The complete hotfix number provides information about the relevant ServicePack. For more details refer to the documentVersion Indicator for UC4.

Service Pack 8

Service Pack 8 does neither include new features nor modifications.

Service Pack 7

New Features

UNIX agent: PAM supported

In addition to Solaris agents, authentication via PAM (Pluggable Authentication Modules) is now also supported in Linux and AIX agents.

Service Pack 6

New Features

RA - Connection objects: Traffic-light symbols signal the connection status

When you open RA Connection objects, the system now verifies whether a corresponding agent is active and that a connection is possible. The new traffic-light symbol now shows the connection status in the specific CONN-object tab.

Selective statistics: New "Remote Context" tab

You can now use the new "Remote Context" tab in order to filter the statistics for RA attributes and certain parameters of the SAP Solution Manager. For more information, see the tab's documentation.

Service Pack 5

A change in the Automation Engine has the effect that objects that include prompts can only be processed asynchronously (implements IResponseHandler for asynchronous calls) via the Java Application Interface (uc4.jar) This means that the Automation Engine will only respond to an ExecuteObject request when all prompts have been filled with values. Please refer to the supplied example.zip file for an example code (ExecuteWithPrompt.java).

⚠ In the script element GET_LOGIN, UC4 has implemented a security function that verifies that the login information derives from a backend system. Otherwise, an error will occur. The login information of agents cannot and must not be read using this script element.

New Features

SAP agent: Adjustable encoding for the output files of SAP elements

You can now determine an encoding (such as UTF-8) for the output files of all SAP elements that create an output file (parameter FILE=). You use the new optional parameter ENCODING= for this purpose. When you do not specify this parameter, the system will by default use ISO-8859-1 for the encoding (as in previous versions)

The parameter ENCODING= can also be created in the UserInterface by using the Forms tab. An input assistent is available and lists the supported encodings.

All SAP elements are affected that have the parameter FILE=. These are:

- BW_GET_CHAINS
- R3_GET_APPLICATIONLOG
- R3_GET_INTERCEPTION
- R3_GET_JOB_SPOOL
- R3_GET_JOBS
- R3_GET_MONITOR
- R3_GET_SESSIONS
- R3_GET_SYSTEMLOG

Service Pack 4

⚠ Service Pack 4 includes database modifications.

⚠ The classes "CallOperator", "ExecutorList" and "ExecutorListItem" have been removed from the UC4 Java Application Interface. These classes have been flagged as deprecated starting with version 8.00A and a corresponding note that these classes should no longer be used has been added to the javadoc. The classes "Notification", "AgentList" and "AgentListItem" are now available and provide the same functions.

⚠ Note for using the utilities with Java Version 1.7 which is supported as of Service Pack 4:
To start the graphical interface of the utilities with Java 1.7, you must use the Java call of the new supplied INI files as otherwise, the program will crash. Adjust the existing INI files as shown in the following example for the utility UC4.DB Load:

Java call for Java 1.6:
cmd="javaw" -Xmx512m -jar -cp .;.\UC4LookAndFeel.jar ucybdbLd.jar

Java call for Java 1.7:
cmd="javaw" -Xmx512m -cp .;.\UC4LookAndFeel.jar -jar ucybdbLd.jar

New Features

New script elements

- :CONST- It creates a script variable as a constant with a specific value.
- :SWITCH... :CASE... :ENDSWITCH - It checks whether the value of a variable complies with specific values and depending on the result, it processes various statements.
- GET_LOGIN - Reads information from Login objects.
- LOAD_PROCESS - It loads a specific data sequence.
- RERUN_UC_OBJECT- Continues a certain Workflow.
- SAVE_PROCESS- It stores a specific data sequence.

VARA object - New types: SQL SECURE and SQLI SECURE

Basically, the new variable sources SQL SECURE and SQLI SECURE have the same functions as SQL / SQLI with the difference being that you can always use variables (predefined variables or placeholders of VARA objects) within the SQL statements. They are not affected by the setting VAR_SECURITY_LEVEL in the UC_SYSTEM_SETTINGS. There is no security risk for the database that might be caused by an SQL injection.

⚠ Note that for using SQL SECURE Variable objects, you need a Database Agent of version v9 SP3 or later.

Overwriting the attributes of RA Jobs during the activation process and on Workflow level.

The **RA** tab of RA jobs now includes the new option "Request task parameters". Activating this option means that a PromptSet dialog will appear when you activate the Job. You use it to set or overrule the specific RA attributes / parameters.

The new **Solution** tabthat is now available in the properties of Workflow tasks of RA Jobs is similar to the Job's specific RA tab. You use it to change the RA attributes on Workflow level.

The options **Task Prompts** in the properties of Workflow tasks have been moved from the **Variable & Prompts** tab to the**General** tab. This has been done because the options do not only affect the PromptSets but also the parameter dialog of RA Jobs.

Extended rollback functions

You can now roll back Workflows including their subordinate tasks. In a rollback, the Workflow's tasks will be processed from the end to the beginning.

The following new commands are available in the context menu of the Workflow monitor:

- **Rollback to this Task**: This rolls back the selected task and its successors.
- **Rerun:** This can only be used for a complete Workflow. It runs all Workflow tasks for which the rollback process has been completed or which are waiting for the rollback process.

New states:

- Waiting for rollback (1655)
- ENDED_WF_ROLLBACKED (1905)
- FAULT_ROLLBACK (1830)
- AgentGroup Rollback (1652)
- Workflow Rollback (1653)

The new value RERUN is available in the predefined variable &$RUNMODE#.

The fulfillment of external dependencies when removing a blocking condition.

You can now define external Workflow dependencies in a way that they are automatically fulfilled when their blocking condition is removed. This is obviously only relevant for external dependencies whose related task is within a Workflow or blocks within it.

The properties of external dependencies now provide two new options for the expected status:

- ANY_OK_OR_UNBLOCKED - The external task ends without an error or it is no longer blocked.
- ENDED_OK_OR_UNBLOCKED - The external task ends with ENDED_OK (return code 0) or it is no longer blocked.

Extended Login object

Login tab: The column "Platform" has been renamed to "Name" and "Host Type" to "Type"

In the "Name" column, you can now enter and store any value. In the new UC4 Variable UC_LOGIN_TYPES, you can define types of Login objects that will be listed with the agent platforms in the "Type" column.

The new script element GET_LOGIN has been implemented and the script element MODIFY_OBJECT has been extended.

You can now use these extensions in order to define Login information not only for agents but also for backend systems.

New option for FileTransfers: "Transfer complete folder structure"

So far, empty folders have not been transferred in partially qualified FileTransfers. You can now change this behavior by setting the new option "Transfer complete folder structure" (**FileTransfer** tab). For compatibility reasons, this setting is not active by default.

You can also use the newattributeFT_TRANSFER_FOLDERS with GET_ATT or PUT_ATT to activate this setting.

Service Pack 3

⚠ *Workflows* are referred to as *ProcessFlows* prior to UC4 v9 SP 3.

⚠ Service Pack 3 includes database modifications.

New Features

New Workflow types: IF and FOREACH

Service Pack 3 provides two new Workflows types: IF and FOREACH Workflows. The default Workflow type is "Standard".

You can define the Workflow type when you create the object. The Template window now also includes all three Workflow types: Standard, IF and ForEach.

To define Workflows of type IF and FOREACH, you can use the new **Logic** tab which replaces the former **Workflow** tab.

- IF Workflows: These Workflows have exactly two serial branches to which you can add tasks. Depending on the user-defined condition(s), either the one or the other branch is processed.
- ForEach Workflows: These Workflows represent a loop. For each line of a VARA object or the entry of an array, a task chain is processed once.

The properties of IF and ForEach Workflow tasks are the same as the properties of Standard Workflow tasks.

The **Preconditions** and **Postconditions** tabs in the properties of Workflow tasks now include the PUBLISH VALUE statement.

The following newpredefined variables have been implemented:

- &$LOOP_COUNT#
- &$LOOP_INDEX#
- &$RETURNCODE#
- &$STATUS#

Rollback

For objects, you can now define backup or rollback actions in the new **Rollback** tab which is available in all executable objects that can be part of a Workflow.

There are two different types of backup/rollback:

- **Custom backup/rollback**
  Here you specify an executable object for backup and rollback actions.
- **File backup/rollback**
  This action is only available for Unix/Windows Jobs and FileTransfers.
  You must specify a directory or certain files for the backup and rollback action.

A backup is made when you activate an object, a rollback only when you explicitly make a Rollback. For a more detailed description, see Rollback.

The following new features are available:

- The new ROLLBACK action in the **Postconditions** tab (in the properties of Workflow tasks). It runs the task in rollback mode.
- A new agent variable (for Windows and UNIX agents): UC_EX_PATH_BACK
- Activity Window: The new **Rollback** button in the toolbar
- Context menu of the Workflow monitor and the Activity Window: New **Rollback** command

New states:

- ENDED_ROLLBACKED (1904)
- ENDED_ROLLBACK_EMPTY (1913)
- FAULT_CUSTOM_BACKUP (1825)
- FAULT_CUSTOM_ROLLBACK (1827)
- FAULT_FILE_BACKUP (1826)
- FAULT_FILE_ROLLBACK (1828)
- FAULT_HOSTGROUP_ROLLBACK (1829)
- Custom backup (1557)
- Custom rollback (1650)
- File backup (1558)
- File rollback (1651)

New predefined variable:

- &$RUNMODE#

Deployment

You can run Deployment processes that are defined in the UC4 Release Manager (separate product) by using Workflows of the UC4 Automation Platform. Doing so requires the Workflows to be defined in the new **Deployment** tab.

The **General** tab which is available in the properties of Workflow tasks now includes the new option **Run per patch**.

You can also define Deployment Workflows using the UC4 Enterprise Control Center's new "Process Assembly" perspective.

Note that the **Deployment** tab and the option "Run per patch" are only displayed if the client's Deployment function is activated in the new setting DEPLOYMENT_CLIENT (UC_CLIENT_SETTINGS).

New script elements

- :PUBLISH- Defines script variables and arrays as object variables.
- CREATE_PROCESS - Creates a new data sequence
- GET_PROCESS_INFO - Retrieves information of a data sequence
- GET_PUBLISHED_VALUE- Retrieves the value of a certain tasks object or PromptSet variable.
- PUT_PROCESS_LINE - Adds a line to a certain data sequence
- ROLLBACK_UC_OBJECT - Executes the rollback of a specific task
- STR_PAD- Extends a string to a certain length.
- STR_SPLIT - Splits a string to several parts using a separator.

Net areas in UC4

The CPs of a UC4 system can now be located in different net areas. This way, you can manipulate the CP selection of components such as agents.

You can use the new parameter NetArea= ([TCP/IP] section) in the Automation Engine's INI filefor this purpose. TheSystem Overview of the Server processesnow includes the new column **Net area**.

UC4.DB Change: Modifying RA attributes

You can now use the utility UC4.DB Change in order to change the specific attributes of RA Jobs.

In the script file, you must specify the attribute that should be changed as follows: "CVALUE:*attribute name*"

SAP Solution Manager Integration

The Solution Manager in SAP can now be used to retrieve information from a UC4 system and to perform certain actions.

Extended SAP agent functions are now available. In the SAP Connection objects, you can now configure the settings of the SMSE interface.

SAP CallAPI

The SAP Java Connector version 3.0 is now supported.

⚠ Note that as of ServicePack 3, the SAP CallAPI does not support any other Java Connector version.

Extended function of the script element GET_UC_SETTING

The script element GET_UC_SETTING can now also retrieve values from Queue objects. To do so, you can use the new parameter Option.

Ring-trace functionality for OS agents

The agent for BS2000, OS/400, UNIX, VMS, Windows and z/OS has the new tracing flag "Memory (INI-file - Section TRACE - Parameter memory=), which activates the so-called Ring Trace.

When the Ring-Trace function is activated (1 - 9), the agent trace is put in memory and written in a file when required. This results in the performance of the Automation Engine and the size of the trace file to decrease.

Note that traces are only set in close cooperation with Support.

Service Pack 2

Workflow - Properties - **Pre-/ Postconditions** tab: As opposed to Service Pack 1, the action EXECUTE OBJECT always passes the variables of the Workflow task on to the started object.

PromptSet objects: The text-field option **Show as password** now actually encrypts the specified value. Passwords that are entered via prompts are no longer shown in clear text in reports, for example.
In former versions, this setting had only a visual effect (only in the PromptSet dialog, the characters were displayed as *).

Attention: Service Pack 2 also includes database modifications.

The options for a Workflow task's prompts (Workflow - Properties - **Variables & Prompts** tab) are now grayed out if no PromptSet objects are assigned to the object.
In Service-Pack 1, you could activate these two options although doing so had no impact.

The setting SQLVAR_SECURITY_LEVEL in the UC4 Variable UC_SYSTEM_SETTINGS is now called VAR_SECURITY_LEVEL. For compatibility reasons, the old name is still supported.
Reason: This setting does not only affect Variable objects of type SQL/SQLI but also those of type BACKEND (new as of SP2).

Dynamic PromptSet dialogs
Service Pack 1 required a default value to be defined for PromptSet elements whose value should be inserted in an attribute (such as Host and Login in an SQL variable) of a dynamic PromptSet element's reference variable. This is no longer required in Service Pack 2.

ForSAP agents, the System Overview now displays the SAP Basis version of the SAP system (**SW Version** column) and a new message that includes the SAP Basis version is written to the agent's log file.

The XML-based reports of SAP jobs are now also available as XML files in the external job Output.

In SAP Connection objects, the default value for the maximum number of simultaneous connectionshas been changed from 10 to an unlimited number. See also SAP note 314530.

New Features

Enterprise Control Center

A new UC4 product is now available, the Enterprise Control Center (ECC). The ECC is a web application that provides an easy and clear access procedure for various UC4 applications.

You can use the ECC in order to start particular UC4 objects and monitor and influence their execution. The Process Automation and the Process Monitoring perspectives (part of the ECC) are required for this purpose. The installation and configuration documentation is provided in the Administration Guide.

VARA object - New source BACKEND

As of Service Pack 2, the new variable typeBACKEND is available. It can be used to provide the result of an OS command as variable values in the form of user-defined columns.

The new Userprivilege "Create and modify Backend variables" is now available and can be used to create or edit VARA objects of the source BACKEND.

The UC4 VariableUC_SYSTEM_SETTINGSnow includes the additional setting BACKENDVAR_MAX_ROWS. It can be used to limit the lines that Backend variables return to a particular number. The new settingVAR_TIMEOUT in the UC4 VariableUC_HOSTCHAR_DEFAULTcan be used to define a maximum time for the execution of commands.

Predefined BACKEND Variable objectsare supplied in client 0 (UC_RB_TEMPLATES folder).

Run Book Templates

Service Pack 2 also provides numerous predefined objects. They are referred to as Run Book Templates and supplied as a Transport Case in the DB directory.

These templates are Windows or UNIX Jobs that execute particular actions such as deleting a file or starting a service.

The UC4 Documentation includes a list of Run Book Templates. A detailed description of the particular function and the parameters are stored in the **Documentation** tab of the supplied objects.

SAP agent

SAP Java Connector version 3.0 is now supported.

As of Service Pack 2 only the version 3.0 of the SAP Java Connector is supported. This version is now required for the SAP agent.

SAP Process Chains

- New script element BW_SET_CONSTRAINT.
- Child processes of process chains can now be restarted.
  They can either be restarted manually by using the Activity Window or automatically. You can define the criteria for an automatic restart by using the new script element BW_SET_CONSTRAINT.
- The job can now remain active in order to be able to restart a process chain if it has included errors or has been canceled.
  For this purpose, the option SUSPEND has been added to the parameter ERROR= of the script elements BW_ACTIVATE_CHAIN and BW_RESTART_CHAIN.
- Erroneous or skipped child processes of process chains can be displayed.
  The parameter REPLICATE= of the script elements BW_ACTIVATE_CHAIN and BW_RESTART_CHAIN has been extended for this purpose.
- You can now decide not to assume the reports of child processes to the job report.
  BW_ACTIVATE_CHAIN / BW_RESTART_CHAIN: new parameter COLLECTLOGS=
- Spool lists can explicitly be requested.
  The new parameter GET_SPOOL= is now available in the script elements BW_ACTIVATE_CHAIN, BW_RESTART_CHAIN, R3_ACTIVATE_REPORT, R3_ACITVATE_JOBS and R3_ACTIVATE_INTERCEPTED_JOBS.
  The spool list is stored to the directory that can now be defined in the SAP agent's INI file by using the new parameter download_dir= (section [GLOBAL]) as a text file.
- Spool lists that have been requested using the function R3_GET_JOB_SPOOL or the parameter GET_SPOOL (see script element above) are automatically registered as external job output.
- Synchronous execution of process chains.
  BW_ACTIVATE_CHAIN: new parameter SYNCHRONOUS=.
- The exact states of the child processes are now displayed in the Activity Window's *Remote status* column.
- The Activity Window combines process chains and their child processes within an SAP job as separate nodes.

The **SAP Forms** tab has also been extended for these new functions.

Searching for RA Values

The Search can now also consider the specific fields of RA objects (Jobs, Connections).

Service Pack 1

Note that Service Pack 1 includes database modifications.

New Features/Modifications

Prompts - New Features

- Dynamic PromptSet elements
- PromptSets of Workflow tasks can also be shown.

Text fields with the property "Value required" in the PromptSet input dialog are no longer highlighted in yellow when you have not specified any value.

UC4.DB Load - Modification The dialog that displays if an SQL error occurs while the initial data is loaded now includes a new Repeat button. Calling this button has the effect that the SQL commands are re-executed starting at the position at which the error has occurred. The process continues if the problem does not occur anymore.
Using Prompts and Object Variables in Cockpits The **Variables & Prompts** tab is now also available for the object type CPIT.

4.1.3 Notes for Update Installation

[Highlights] [Service Packs] [Notes for Update Installation] [What's New] [Improvements] [Bug Fixes] [Known Issues

⚠ Please verify that your environment complies with the system requirements of the relevant UC4 version before you start the installation process. You will find a list of supported platforms and version as PDF in theUC4 Knowledge Base.

⚠ **Important note for updating to version 9.00A**

The **Result** tab of Workflow tasks has been replaced by the**Postconditions**tab.

When you update your database or load the Transport Case, the system is automatically converted to the new version. This means that the conditions and actions of the **Post Process** tab are set in a way that its functionality is similar to the **Result** tab of version 8.00A or earlier.

Object imports of previous versions (XML) must be converted manually. Do so by starting the utility UC4.DB Load and select the ConvertResult.txt file which is available in the folder IMAGE:\DB\GENERAL\9.00A.

⚡ The action CANCEL PROCESS FLOW (cancels the Workflow) differs from the Cancel Workflow option in the **Result** tab:

- CANCEL PROCESS FLOW - Cancels the Workflow immediately. All subordinate tasks that are not yet active switch to the status ENDED_JP_CANCEL. Whether active tasks continue depends on the parameter "Sub-ordinate tasks" (value: including or excluding). They obtain the status ENDED_CANCEL.
- Cancel Workflow - Only the tasks of the branch that includes the relevant task are canceled (status: ENDED_NOT_OK). Parallel branches (if existing) are not affected. The Workflow only switches to the status ENDED_NOT_OK if all branches have reached the End object.

⚠ Attention: Active Workflows are not converted. After updating to version 9.00A, the **Postconditions** tab of these Workflows in the Activity Window is empty and the Result properties of the previous version are no longer available. UC4 recommends ending all Workflows before starting the update process.

⚡ The **Result** tab no longer exists. This includes that you cannot modify it anymore by using the script element MODIFY_TASK. Adjust your scripts if necessary. Be informed that neither the new **Preconditions** tab nor the new **Postconditions** tab can be modified by using the script element MODIFY_TASK.

- Script variables and object variables that are named &X and / or &XC must not be used in Workflow tasks which include conditions / actions in their properties (**Preconditions** and**Postconditions**tab). This rule applies to all Workflow tasks of previous UC4 versions that include Result properties (Result tab). UC4 recommends renaming all existing script and object variables with this name or a runtime error will occur when the Workflow starts.

Run the following SQL statements on the UC4 Database in order to list all objects with the specified object variables that are part of a Workflow:

```
select OH_Name as ObjectName, OV_VName as ObjectVariable from OH,OV where OH_Idnr =
OV_OH_Idnr and OH_DeleteFlag = 0 and (OV_VName = '&X' or OV_VName = '&XC' or OV_
VName = '&XC_' or OV_VName like '%&XC%') and OH_Name in (select JPP_Object from JPP)
```

The following SQL statement supplies the PSET and :RSET scripting lines of all objects that set the variables &X and &XC (MS SQL Server):

```
select * from OT where
lower(OT_Content) like ':%rset%&x[ =]%'
or lower(OT_Content) like ':%rset%&x'
or lower(OT_Content) like ':%rset%&xc[ =]%'
or lower(OT_Content) like ':%rset%&xc'
or lower(OT_Content) like ':%rset%&xc+_' escape '+'
or lower(OT_Content) like ':%rset%&xc+_[ =]%' escape '+'
or lower(OT_Content) like ':%pset%&x[ =]%'
or lower(OT_Content) like ':%pset%&x'
or lower(OT_Content) like ':%pset%&xc[ =]%'
or lower(OT_Content) like ':%pset%&xc'
or lower(OT_Content) like ':%pset%&xc+_' escape '+'
or lower(OT_Content) like ':%pset%&xc+_[ =]%' escape '+'
```

Oracle and DB2 databases: The following SQL command lists the affected :PSET and :RSET lines:

```
select * from OT where lower(OT_Content) like ':%rset%&x%' or lower(OT_Content) like
':%pset%&x%'
```

Agent

- The agent for GCOS8 has not been developed further and corresponds to the level of version 8.00A.
- The agent for J2EE/JMX (9.00A) only supports the version CE (Composition Edition) 7.1 of the SAP Netweaver Application Server. Refer to the adjusted Installation Guide.
- The parameter WorkDirMatch= in the UNIX agent's (9.00A) INI file is no longer considered.
- Strongly compressed files can no longer be transferred. In FileTransfer objects, compression can now be activated (normal compression) and deactivated. Therefore, the setting ft_ compress_strong= is no longer available in the OS agent configuration files as of version 9.00A.
- The agent files for all UNIX platforms are supplied in lowercase letters. Therefore, you must adjust the file name of the job messenger the INI files of older versions: [VARIABLES] UC_EX_JOB_MD = ucxj???m
- ⚠ When you use Java agents (SAP, RA, JMX, SQL) of version 8.00A, they must at least be of version 8.00A030-500. Otherwise, the Form tabs will not work.
- ⚠ The Email connection of agents is only available via SMTP. MAPI2 is no longer supported for Windows agents.

⚠ The z/OS Event monitor can no longer be started in combination with the z/OS agent. The agent's INI file section CONSOLE has been removed. The Event monitor can only be started as an individual Started Task.

⚠ The C-Loader is no longer available for starting the Java agents (SAP, JMX, Rapid Automation and Database) under Windows. Agents under Windows can only be started via the JAR file. Keep this also in mind when using the ServiceManager.

⚠ The flow trace of FileTransfers has been changed. More information is now output and the output itself has also been changed. Make sure to adjust all scripts which read data from FileTransfer report (PREP_PROCESS_REPORT).

⚠ In FileTransfers as of v9, the agent writes the report because it handles the complete FileTransfer. The timestamps that are included in the FileTransfer's report are agent times (until v8, they represented Server times).

The report of partially and fully qualified FileTransfers is now structured as follows:

```
<Timestamp> - U0011124 File search started with filter '*.txt' ...
<Timestamp> - U0011125 'c:\temp\src\a.txt' <Timestamp> - U0011125 'c:\temp\src\b.txt'
<Timestamp> - U0011125 'c:\temp\src\c.txt'
<Timestamp> - U0011126 File search completed, '3' files selected.
<Timestamp> - U0011133 OK '15' Bytes, '0' Records for file 'c:\temp\src\a.txt'->'c:\Temp\dst\a.txt'
transferred. Duration '00:00:00'.
<Timestamp> - U0011133 OK '15' Bytes, '0' Records for file 'c:\temp\src\b.txt'->'c:\Temp\dst\b.txt'
transferred. Duration '00:00:00'.
<Timestamp> - U0011133 OK '15' Bytes, '0' Records for file 'c:\temp\src\c.txt'->'c:\Temp\dst\c.txt'
transferred. Duration '00:00:00'.
<Timestamp> - U0011408 FileTransfer '76836123' completed.
```

⚠ The MBean for VMWare (JMX agent) is no longer available. Use the RA agent for VMWare instead.

⚠ As of version 9.00A, the CrystalReports MBean for Business Objects is no longer supplied. Use the RA agent with the solution for Business Objects instead.

⚠ The UNIX agent's INI-file parameter FT_Owner= has no effect if the new FileTransfer protocol is used (source and target agent are of version 9 or later). The User who is specified in the Login object is used in this case.

⚠ The UNIX agent automatically sets its real user (UserID) to "root" (0) after it has started. In doing so, the agent can change to another user for FileTransfer actions or when files should be deleted, for example.
To ensure that the ServiceManager can end the UNIX agent, you must start it with root privileges and set the sbit for its owner. For more detailed information refer to the ServiceManager Installation Guide.

⚠ OS/400 agent: The default value of the INI-file parameter CheckLogon= has changed from "0" to "1".

ℹ In the new FileTransfer protocol, theOS/400 agent uses the OS commands DRTPF and ADDPFM for transferring files. This includes that you can specify CRTPF parameters in the file attributes of FileTransfers. The advantage is that you can draw the conclusion that an unspecified error that occurs during a FileTransfer could be an error that occurs when these commands are being processed. In this case, you will find more information in the related job log.

The file systems IFS (OS/400), OSS (NSK) and USS (z/OS) are now supported for FileTransfers. These file systems support the creation of temporary files. The required behavior can be specified in the agents' INI files using the parameters ft_temp_file_ifs=, ft_temp_file_oss= and ft_temp_file_uss=.

In addition to Windows and UNIX agents, you can now also use Java agents (SAP, RA, JMX, SQL) in order to send mails. Note that you must only configure the AutomationEngine (instead of each agent). The E-mail connection of these agents is always active.

The following diagnostic documentation is now created when a Windows or SNMP agent crashes:
crash_*.log - This file includes a detailed description of the error and the current status of the OS (register, OS version, application version etc.)
crash_*.mdmp - A forced dump that is generated by the OS. It includes the current process memory.

Usually, the Windows agent writes these files in its Temp directory. Under certain circumstances (the INI file is not yet fully initialized) it can happen that these files are stored in the folder in which the agent's program files are stored. The SNMP agent writes these files in the directory %WINDIR%\System32 or in its Temp folder.

Objects

The Group settings "Execution" in the **Attributes** tab are no longer available due to the functions of the new Queue object.

During the updating process, all Group objects that were used as queues in the previous version are converted to Queue objects of the same name. The queuing functionality remains.

Note that because of this modification, the scripting lines that add objects to a queue do not work anymore (:PUT_ATT START_TYPE = *queue*).
You can use the following SQL statements to list all scripting lines that assign objects to a Group:

```
SELECT OH_Client, OH_Idnr, OH_Name, OT_Type, OT_Lnr linenumber, OT_Content line FROM
OT,OH WHERE OT_OH_Idnr=OH_Idnr and OT_Content LIKE ':%PUT_ATT% START_
TYPE%=%'
UNION
SELECT OH_Client, OH_Idnr, OH_Name, OT_Type, OT_Lnr linenumber, OT_Content line FROM
OT,OH WHERE OT_OH_Idnr=OH_Idnr and OT_Content LIKE ':%PUT_ATT% GROUP=%'
UNION
SELECT OH_Client, OH_Idnr, OH_Name, OT_Type, OT_Lnr linenumber, OT_Content line FROM
OT,OH WHERE OT_OH_Idnr=OH_Idnr and OT_Content LIKE ':%PUT_ATT% GROUP %=%'
UNION
SELECT OH_Client, OH_Idnr, OH_Name, OT_Type, OT_Lnr linenumber, OT_Content line FROM
OT,OH WHERE OT_OH_Idnr=OH_Idnr and OT_Content LIKE ':%PUT_ATT% S=%'
UNION
SELECT OH_Client, OH_Idnr, OH_Name, OT_Type, OT_Lnr linenumber, OT_Content line FROM
OT,OH WHERE OT_OH_Idnr=OH_Idnr and OT_Content LIKE ':%PUT_ATT% S %=%'
```

Queue Groups and all their tasks that are still available in the Activity Window automatically abort during the updating process with the status FAULT_OTHER. UC4 recommends ending all queues before starting the update.

The values of object variables in the Variables & Prompts tab are always retrieved from the object definition if a restart is made. Previous UC4 versions retrieved the values from the task that had the reference -RunID.

- Reports can only be sent using Notifications objects if the user has the relevant authorizations: The "P" authorization for the corresponding object type (such as JOBS) and EXTREP (for external job output files).
- An update to version 9.00A automatically sets the Client Queue in all objects in which a Group has been specified as a Queue (setting: Execution - Automatically).
- The "start type" field has been changed to "Group". For compatibility reasons, the attribute "START_TYPE" is still available but UC4 recommends using the new "GROUP".
- The QueueManager object has been renamed to RemoteTaskManager. The object symbol has also been changed. The new Queue object now shows the former symbol of the RemoteTaskManager.
- The "Event History" menu item has been renamed to "ABAP Event History" in the SAP Console Event setting "Data source".
- The **Values** tab of executable objects has been extended. It is now possible to select PromptSet objects whose input prompt is displayed during the activation process. The corresponding tab has been renamed to Variables & Prompts and displays with a new symbol.
- The **Checkpoint** tab that is available in the properties of Workflows has been renamed to General.
- Notification object: The "Attach reports from" field in the**Notification** tab includes the new option "Source". You can use it in order to determine whether the database's default reports, the output files or both should be sent.
- Note that the CLIENT_QUEUE object in <No Folder> is automatically created when a new client is created. It cannot be deleted.
- In order to access external job outputs, users require the new EXTREP right. After an update, users of previous UC4 versions who have all rights for all objects (table - * in all columns) are also authorized to use the external job output function.
- The "validity keyword" column in Variable objects has been renamed to "key".

Script

- As of version 9.00A, you can no longer use a CallAPI to restart a stopped client (script element: TOGGLE_SYSTEM_STATUS). Explanation: CallAPIs also need an active Queue(new object) in order to start. Because all Queue objects are also stopped if a client is stopped, this procedure is not possible.
- The script element :STOP in combination with the stop mode "MSG" can only be used for the error numbers 50-59.If you execute it using a different number, the script aborts and an error message is output that informs about the fact that the error number is not valid.
- The script function GET_STATISTIC_DETAILnow returns an empty string ("") if the statistical record could not be found. Previous versions returned a runtime error in such a case.
- Static Variable objects now include 5 value columns. For the script element:PUT_VAR, this means that values that include one or several commas and should be written in one column must always be enclosed in single-quote or double-quote characters. Otherwise, the values are written in several value columns.

In versions 8.00A or earlier, the following scripting line "test1,test2,test3,test4,test5" was written to the value column. As of version 9.00A, this line has the effect that the value "test1" is written to value column 1, and "test2" to column 2, etc. The behavior has also changed.

```
:PUT_VAR VARA1, "KEY1", test1,test2,test3,test4,test5
```

If necessary, adjust your scripts. If the value "test1,test2,test3,test4,test5" should be written to the value column 1, use the script element :PUT_VAR as follows:

```
:PUT_VAR VARA1, "KEY1", "test1,test2,test3,test4,test5"
```

- The script function:SEND_MAILnow only uses the AutomationEngine'sEmail connection. Ensure that the files that should be sent as attachments are stored at a location the AutomationEngine can access. In Jobs, you can also register files as job outputs and send them as email using a Notification object.
- Using the script elementGET_PROCESS_LINE in order to access the entries of a Variable object (PREP_PROCESS_VAR) without specifying a column number returns the value of all columns (Key / Result column included), separated by §§§ characters. An empty column now includes a blank between the separators. Each value has an actual length as opposed to previous UC4 versions, when the validity keyword was always returned with a fixed length of 200 characters and the rest had been filled with blanks.
- As of version 9, you must use inverted commas in order to specify a value that includes several variables in the script element :PUT_VAR. In older versions, you could use the following line, for example:

```
:PUT_VAR VARA.TEST, 'Key', &month#_&year#
```

Now you must enclose the value in single or double quotes or you will not be able to store the script:

```
:PUT_VAR VARA.TEST, 'Key', '&month#_&year#'
```

- When values are read from a static VARA object by using the script element GET_VAR, the system will now replace the character sequence "&&" by "&". For this reason, you must double the even number of "&" characters that are used in a row in order to ensure that a correct value can be read. Individual "&" characters are not changed.
  For example:

Value in the VARA object	Value after GET_VAR
&TEST#	&TEST#
&&TEST&&	&TEST&
TEST&&&	TEST&&
&&&&TEST&&&&	&&TEST&&

- The script elements CINT and CSTR are no longer supported for the new data types of script variables. Use the new function CONVERT instead. There is still compatibility with the scripts of previous versions.
- For compatibility reasons, the script elements SYS_ACT_JPNAME, SYS_ACT_JPNR, SYS_ACT_JOBNAME and SYS_ACT_JOBNR are still supported. They are no longer listed in the ScriptEditor's auto-completion function and the UC4 Documentation because there are other script elements which provide the same functionality.
- UC4 now supports the use of floating-point numbers and negative numbers in scripts. Therefore, scripts that use numbers and arithmetic operations in version 9.00A can supply results that differ from the results of previous versions. UC4 recommends adjusting your scripts accordingly. The following table shows several assignments and the results that are output in the activation protocol:

Value assignment	Result version 8.00A or below	Result as of version 9.00A
:set &a# = 56	0000000000000056	0000000000000056
:set &a# = -21	-21	-0000000000000021
:set &a# = -25.2	-25	-0000000000000025.2000000000000000
:set &a# = +53	Error	0000000000000053
:set &a# = +49.1	Error	+0000000000000049.1000000000000000
:set &a# = "+21.30"	+21.30	+21.30
:set &a# = 1,123	0000000000000001	1,123

Note for script variables that should store a negative value: Before assigning a value (:SET), you must create them with a data type that can store negative numbers ("signed" or "float"). You can declare variables to a specific data type by using the script statement:DEFINE.

Note for variables that have been created without a specific data type: A runtime error will occur when you assign a negative value. When you assign a positive floating-point number, this number will be stored without the decimal places.

Version 8 and earlier ones: The script element GET_STATISTIC_DETAIL also retrieves the number of binary file lines (depending on how often CRLF occurred) in combination with the detail RECORDS). New as of version 9: Because this is only useful for text files, the value "0" will always be returned for binary files.

Initial Data

Particular Calendar keywords have been removed from the Holiday Calendars of individual countries because they were not correct. A list of all affected holidays is provided in the section Improvements - General.

The TimeZone object TZ.MST (Mountain Standard Time) is now supplied by default. Ensure that objects of the same name that already exist in client 0 must be deleted before an update is made. Otherwise, loading the initial data results in an error.

Database

To update a DB2 database to version 9.00A, you required the EXECUTE right for SYSPROC.ADMIN_CMD.

DB2 - Databases on z/OS are no longer supported.

The Access database UC97.mdb which includes the UC4 Database's structural description is no longer supplied. The structure is still available in HTML format.

AutomationEngine

The E-mail connection must only be configured for the AutomationEngine. The section [MAIL] in the INI files of Windows and UNIX agents has been removed. The mail function of agents is only used if external job output files (attach reports) are sent using Notification objects. Agents of previous versions act as usual and the INI-file section [MAIL] is still available.

The 16th digit of the setting SERVER_OPTIONS (A = using of the old Server activation) in the Uc4 Variable UC_SYSTEM_SETTINGS is no longer supported. Set it to "N" if necessary.

UserInterface

⚠ The classical Workflow view is no longer available. The default view has been improved.

⚠ The Mail column in the "Agents" menu item in the System Overview has been replaced by the new "Services" column. It includes either the value MAIL (E-mail connection is active), SQL (Database Agent is used to resolve SQL variables) or no entry at all. Windows, Unix and Java agents (SAP, JMX, RA and SQL) of version 9.00A are always displayed with an active E-mail connection.

⚠ The term "JCL variant" has been renamed in the UserInterface. The new term is "platform".

ℹ The "Express" command in the Activity Window's context menu has been renamed to "Ignore Agent Resource".

Documentation

⚠ The requirements for the UC4 Automation Platform are now also available online in the UC4 Knowledge Base.

Changed Terminology

ℹ OS/390 has been renamed to z/OS in the UC4 Documentation and the message library because the platform OS/390 is no longer supported.

ℹ The term "UC4 Server" has been replaced by "UC4 Automation Engine".

4.1.4 What's New

[Highlights] [Service Packs] [Notes for Update Installation] [What's New] [Improvements] [Bug Fixes] [Known Issues]

General Information
New object type "Queue" (QUEUE) Queue objects can be used to combine several executable objects which should be started with a particular priority and a particular maximum number of tasks which can run parallel (max. slots). These settings can also be changed for a particular period of time (exceptions). All objects start within a Queue. A Queue object can be selected in the **Attributes** tab of executable objects. The object is automatically executed in the Client Queue if no other Queue object has been selected. Queue objects take over the main functions of Groups (JOBG). Groups are only used as containers for tasks.

New object type "PRPT" (PromptSet)
PromptSet objects are user-defined prompts which can be used to query values during an object's activation. Variables (similar to object variables) provide the values to the started object and can also be changed. PromptSet objects are assigned via the **Variables & Prompts** tab which is available in almost all executable objects. The input dialog is defined in the**Designer** tab of PromptSet objects: via drag and drop, you can select and arrange the various graphical control elements (e.g., text fields, checkboxes, date and time fields, etc.). Subsequently, you can specify a particular behavior for the control elements (allowed values, default values, etc.) in the properties.

It is possible to override the default values of PromptSet elements for executable objects and Workflow and Schedule tasks using the Variables & Prompts tab. The Values tab has been extended and the new**Variables & Prompts** tab is available in the task properties of Workflows and Schedules.

Dynamic retrieval of Variable-object values
The Variable object has been extended. It is now possible to retrieve values from a particular data source when the Variable object is directly accessed. The available data sources are an external database, the UC4 Database, other Variable objects or the directory of the agent computer. In this case, the Variable is referred to as a "dynamic variable".

You can still enter values in Variable objects manually or by using script (= static variable). The data source determines whether a Variable is dynamic or static. The source is determined when the Variable object is created and cannot be changed subsequently. The**Variable** tabeither includes a value table (static variables) or the settings for the dynamic retrieval of values.

The **Attributes** tab now includes several settings (output format, min. / max. value, etc.).

During the transports and imports of Variable objects of previous versions (source = static), these are automatically converted to the new data types.

Conditions for Workflow tasks
You can now define conditions which will be checked before and/or after the execution of Workflow tasks. Use the new**Preconditions** and **Postconditions** tabs which are available in the task properties for this purpose. If conditions apply, the corresponding statements are processed (e.g., an object starts if a task ends with a particular status). Else links can also be created and you can even change how often a block is checked ("Once", "Always", "Deactivate").

Using system values and object attributes in scripts and other attributes
Several values canbe defined at runtime via pre-defined variablesin attributes and in scripts. These values can depend on the system (e.g., system time, UC4 system name) or other attributes of the same object (e.g., host). The UserInterface now provides a new dialog in which you can select these values. Call the corresponding windows via the **Variables...** button which is available in the toolbar of objects.

Usage of Variable objects in object attributes
Variable objects can directly be specified in object attributes using a particular placeholder. This placeholder will be replaced at the object's runtime with the value provided in the Variable's first line and column. For further information refer to the document Using Variable objects.

New data types of Variable objects
The data types "Time" and "Date" are new. All other data types have been renamed:

Old	New
Character var. length - AUTOTRIM	Text
Number ranging from 0 to 2147483647	Number
Time stamp 16 Byte	Timestamp

Starting agents and Server processes via the UserInterface or the script element MODIFY_SYSTEM
You can start agents or server processes via a service in the ServiceManager via the context menu in the System Overview (UserInterface) or with the new script function MODIFY_SYSTEM.

Doing so requires specific settings for the connection to the ServiceManager to be adjusted. This is done either automatically using the command "Refresh Service Manager Scan" in the System Overview or manually in the Agent or Server object (Attributes tab). An automatic search for suitable ServiceManager services is made when the Server processes start for the first time.

Registering Job files
You can now use the newOutput taboor the script element:REGISTER_OUTPUTFILE in order to specify files that can be opened via the UserInterface after they have been processed. These files are external Job-output files that are stored and available on the agent computer. Job files can so be accessed quickly and easily. In addition to the default reports (such as Job report, JCL, and script), these files are also listed in the newDirectory tab which is available in the report dialog.

This functionality is supported for Windows, UNIX, SAP, RA, JMX and Database Jobs.

The Notification object has been extended: A source must be determined in the**Notification** tab, "Attach report" option. This setting is only relevant if Job reports should be attached and if it must be specified whether the database's or the agent's Job output, or both should be sent.

The Filter objectnow includes the new filter category "External Job output". It can be used to search external Job output files also for Job executions (Output Scan tab).

Alias
You can now assign an alias for Workflow tasks in the properties -> General tab (in previous UC4 versions referred to as Checkpoint tab). This alias is used instead of the object name in the Workflow monitor, the Activity Window and the Statistics. The object name is always available in the Detail Window. This function can also be used for external dependencies.

You can also use an alias for tasks that are activated once or recurrently (see: Execution with Options) or activate it by using the script element ACTIVATE_UC_OBJECT.

UserInterface

General Information

Improved navigation in the UserInterface

- The "Quick Access" function can be used for a quick object search within a client and direct access to them.
- Use the Quick Search in windows which list the objects. This function is only available for the following areas: UC4 Explorer, Statistics, Activity Window, Forecast, Auto-Forecast, Search and System Overview.
  It is a text search which displays search results in the form of a list and highlights the matching objects.
- Fields in the tabs of objects provide a Quick Search function and a Quick Access function via the context menu.
- Quick Search in Workflows. The new function "Connect to" (context menu of the Line Tool) can be used to connect Workflow tasks via Quick Search.

New column "Platform"
The Activity Window, the UC4 Explorer and the Statistics include the new column: "Platform" which displays the platform-specific symbols of jobs, RemoteTaskManager, events, agent groups, file transfers and agents.

Automation Engine

General Information

Using floating-point numbers and negative numbers in UC4 Script

- Variables can now be created with a specific data type which signalizes that a Variable is a string, a positive or negative integer or a floating-point number. Thus, four different data types are available.
- The new script statement :DEFINE can be used to declare a variable to a particular data type.
- The new data types can also be used for arithmetic operations.
- The script element :SET can be used to solve an arithmetic expression.
- The new script function CONVERT facilitates the conversion of data types.

Script arrays
Variables can now be created asarrays. In doing so, a Variable can store several different values. Three new script elements serve this purpose ->:FILL, FIND and LENGTH.

Storing and displaying the last Server messages of work processes
The setting MQA_COUNT_BACK in the UC4 Variable UC_SYSTEM_SETTINGS can be used to determine the number of Server messages of work processes which should be buffered for further analyses. They can then be called via the System Overview (Automation Engine).

A log-file change of work processes automatically changes the log files of all work processes.

New Functionality

:DEFINE - Declares a script variable with a particular data type.
:FILL - Stores several values in a script array.
:PUT_PROMPT_BUFFER -Same function as :PUT_READ_BUFFER
:PUT_VAR_COL - Stores a value to a particular column of a static Variable object.
:REGISTER_OUTPUTFILE- Registers a file as an external Job output.
CONVERT - Converts the data type of a value.
FIND - Searches a script array and returns the corresponding index.
GET_ATT_PLAIN - Supplies the value of a task's attributes during its generation. Variables are not resolved.
LENGTH - Retrieves the size of a script array.
MODIFY_SYSTEM - Executes ServiceManager actions or Queue modifications.
SYS_ACT_RESTART_COUNT- Returns the number of restarted Workflows which have been executed using the script statement RESTART TASK (Postconditions).

Extended Functionality

:PUT_READ_BUFFER- Variables that are located in the ReadBuffer override the PromptSet variables of objects that have been started with ACTIVATE_UC_OBJECT.
:PUT_VAR - Several values can be written to several columns of a static Variable object at once.
ACTIVATE_UC_OBJECT- The task can now be started by using new parameters in a particular Queue object and with an alias.A further parameter determines whether the PromptSet input dialog should be displayed.
CREATE_OBJECT - Creating static variables with the new data types (time and date) is possible. Data types are now specified differently, the former spelling is still supported.
GET_PROCESS_LINE - Access to the extended column number of Variable objects.
GET_STATISTIC_DETAIL - New detail "RUNID". The script no longer aborts if a statistical record cannot be found. The error can be handled using :ON_ERROR.
GET_VAR - Specification of a column number that can be used to access the Variable.
MODIFY_OBJECT- Modification of the data type of static variables, which includes the new data types date and time. Data types are now specified differently, the former spelling is still supported.
MODIFY_TASK - The alias of Workflow tasks that have been added using the corresponding script element can be changed.
MODIFY_UC_OBJECT - The attribute "SET_EXPRESS" can also be used for Queue objects.
PREP_PROCESS_VAR - The value filter can now be used for a particular column of the Variable object.
RESTART_UC_OBJECT - Specifying a Queue object for the task to be started is possible with an additional parameter

Agents

Database

Ingres databases are supported
The agent now also supports Ingres databases.

SAP

Java Schedule Events are supported
Console Events in UC4 can react to Events of the SAP Java Scheduler. The Console-Event object has been extended: The new item "Java Event History" has been added to the menu "Data source". "Event History" has been renamed to "ABAP Event History".
The new Variable object UC_SAP_JXBP_EVENTTYPES which is supplied in client 0 stores the possible Event types of the Java Scheduler. The values of this variable are listed for the Event-type selection in the Console Event.

New JCL parameters
The script elements R3_ACTIVATE_REPORT, R3_ACTIVATE_JOBS and R3_GET_JOB_LOG have been extended for the optional parameters BEG_LOGINES and END_LOGLINES. These parameters can be used to include a particular number of SAP job-log lines in the UC4 Job report.

z/OS

User is checked in jobs that use the setting "Type - JCL incl. z/OS job card"
The parameter userid_type and the section (USERID) in thez/OS agent's INI file are now checked even if the setting "Type" - JCL incl. z/OS job card" has been specified in the Job object (z/OS tab). In other words, even if the Job card and the JCL are retrieved from z/OS, no other OS users are allowed to start the UC4 Job than those that have been specified in the agent's INI file.

Extended file attributes for FileTransfers
More file attributes are now available for the destination of FileTransfers. These attributes must be specified in a new format(ALLOCATE command). The old format is still supported. As in all platforms, you can also keep the original z/OS attributes (option "Keep original file attributes" in the FileTransfer object). Original attributes cannot be overridden.

USS (Unix System Services) supported
The file system USS is now supported for FileTransfers. Temporary files can be created depending on the setting that has been defined in the's INI-fileparametertemp_file_uss.

Documentation

General Information

New design for the UC4 Documentation
The colors used in titles, table backgrounds and lines and the font for the UC4 Documentation have been adjusted to the general UC4 design.

4.1.5 Improvements

[Highlights] [Service Packs] [Notes for Update Installation] [What's New] [Improvements] [Bug Fixes] [Known Issues]

General Information

Optimized FileTransfer procedure
UC4 now transfers files in a more efficient and secure manner. The agents now take over tasks, thereby reducing the Automation Engine's workload.

- Increased speed and transmission security
- New option for partially qualified FileTransfers: Abort at first error (FileTransfer tab)
- Sending Agent now solves the complete FileTransfer order.
- Each FileTransfer has its own connection.
- File attributes are now supported (NSK, z/OS, OS/400, Windows, BS2000).
- FileTransfers are handled in threads (OS/400, Unix, Windows, z/OS) or processes (NSK).
- Original attributes can be passed on to the target file.
- Extended wildcard usage (several variable placeholders can be used for the destination).
- Agents create the target directories, if not exists (independent of the option **Include sub-directories**)
- Unicode files are supported.
- The limitation of 31k for the record length has been removed.
- No file size limit (in early UC4 Versions: around 2GB per file)
- File names can be up to 512 bytes long
- UNIX: FileTransfers run under the user specified in the Login object
- Synchronous / Asynchronous transmission can be set in the UC_HOSTCHAR_DEFAULT (settings: FT_ASYNC_QUIT*)
- Nagle algorithm for FileTransfers can be disabled in the Agent's INI file (parameter: tcp_nodelay=)

The old FileTransfer protocol (up to version 8.00A) will be used for compatibility reasons if at least one of the participating agents is of version 8.00A or before.

Selecting an RA Solution in an AgentGroup
In AgentGroups, you can now also specify the Solution name provided that the platform "DIT" (RA) has been selected. In doing so, AgentGroups can only include RA agents of a particular Solution which provides for clear assignments.

Holiday Calendars have been revised
The Calendar objects that are supplied in the system client have been improved. Some Calendar keywords have been corrected and additional ones have been added. Invalid holidays have been removed. The following keywords and Calendar objects are affected:

- **CORPUS_CHRISTI**
  UC_HOLIDAYS.F, UC_HOLIDAYS.HK, UC_HOLIDAYS.I, UC_HOLIDAYS.IRE, UC_HOLIDAYS.L, UC_HOLIDAYS.LV, UC_HOLIDAYS.M, UC_HOLIDAYS.MAL, UC_HOLIDAYS.MEX, UC_HOLIDAYS.NL, UC_HOLIDAYS.SGP, UC_HOLIDAYS.SLO, UC_HOLIDAYS.TUR
- **ASCENSION_DAY**
  UC_HOLIDAY.HK, UC_HOLIDAYS.I, UC_HOLIDAYS.IRE, UC_HOLIDAYS.LV, UC_HOLIDAYS.M, UC_HOLIDAYS.MAL, UC_HOLIDAYS.MEX, UC_HOLIDAYS.P, UC_HOLIDAYS.PL, UC_HOLIDAYS.SGP, UC_HOLIDAYS.SLO, UC_HOLIDAYS.TUR
- **WHIT_MONDAY**
  UC_HOLIDAY.HK, UC_HOLIDAYS.I, UC_HOLIDAYS.IRE, UC_HOLIDAYS.LV, UC_HOLIDAYS.M, UC_HOLIDAYS.MAL, UC_HOLIDAYS.MEX, UC_HOLIDAYS.PL, UC_HOLIDAYS.SGP, UC_HOLIDAYS.SLO, UC_HOLIDAYS.TUR
- **EASTER_SUNDAY, EASTER_MONDAY, EASTER**
  UC_HOLIDAYS.MAL, UC_HOLIDAYS.MEX, UC_HOLIDAYS.SGP, UC_HOLIDAYS.TUR
- **GOOD_FRIDAY**
  UC_HOLIDAYS.MAL, UC_HOLIDAYS.PL, UC_HOLIDAYS.SLO, UC_HOLIDAYS.TUR
- **LABOR_DAY**
  UC_HOLIDAYS.NL
- **CHINESE NEW YEAR (3RD DAY)**
  UC_HOLIDAYS.SGP
- **FIRST DAY OF FASTING, CHRISTMAS**
  UC_HOLIDAYS.TUR

The following keywords of the Calendar UC_HOLIDAYS.CAN have been renamed:

- **FAMILY DAY - PROVINCIAL ALBERTA** to **FAMILY_DAY**
- **DISCOVERY DAY (YUKON)** to **DISCOVERY_DAY_YT**

UserInterface

General Information
New look and feel A new interface design (default design) is now also available for the look and feel of UC4 version 8.00A (classic design).
New Workflow design A new Workflow view is available. The edges of the task boxes are rounded. The connection lines are curved and make it easier to see the tasks that are connected.
Extended Activity Window • Host-type selection is possible • Usage of negative filters (option "NOT") in the activity selection.

Extended Selective Statistics
Statistical records can be selected according to host types.

Extensions in object naming and storing.

- The dialog window in which the object name can be entered ("New object", "Rename") now includes the additional text field "Title".
- Title assignment for folders (object type FOLD). As in all other objects, this title is displayed in the UC4 Explorer's column "Title".
- Integration of the function "Save as" which can be used to store objects in any folder with a different name (similar to the function "Duplicate"). This function is available through the toolbar of objects.

Several columns in Variable objects
The number of columns in static Variable objects which store values has been changed. Five different values can now be stored per key.

Improved navigation in reports that include several blocks
In the report dialog, you can now directly access the individual pages (blocks) of large reports. Doing so is possible because block numbers are displayed.

Agents

OS/400

Commands
The supplied SAVF file now includes programs and commands that can be used to start or end the Agent in a quick and easy way. The message library can newly be generated by using commands from an IFS path. For further information about the new commands, see KnowledgeBase.

SAP

Improved transfer of spool lists
The following improvements have been made in combination with the XBP interface version 3.0 1.1:

Spool lists are transferred block by block. The block size can be changed in the Connection object (new field "Block size in KB for Spool lists" in the RFC tab - Interfaces - BC-XBP). Doing so increases the performance of the data transfer.

R3_GET_JOB_SPOOL:

- The parameters FORMAT (not PDF), SPOOLNR and PAGES can now also be used with the standard interface.
- FORMAT has been extended for the values PDF, BIN and RAW.
- The spool list can now even be retrieved if the Jobs have already been deleted (setting: "Delete job in CCMS after completion" in the UC4 Job object) and NAME and JOBCOUNT have not been specified.

Documentation

SAP - JCL

Simplified functional differences between UC4 and standard interface
JCL elements including the parameters of the standard interface can also be used with the UC4 Interface. In this context, the table in the UC4 Documentation chapter "KnowledgeBase" - UC4 and Target Systems - UC4 and SAP - Technical Connection - Functional Differenceshas been simplified. Only script elements are checked whose functions or parameters require the UC4 Interface. The descriptions of the affected R3 script elements (such as R3_ACTIVATE_JOBS) have also been improved.

4.1.6 Bug Fixes

[Highlights] [Service Packs] [Notes for Update Installation] [What's New] [Improvements] [Bug Fixes] [Known Issues]

For detailed and up-to-date information, see the *Patch Descriptions* section in the Automic Download Center.

4.1.7 Known Issues

[Highlights] [Service Packs] [Notes for Update Installation] [What's New] [Improvements][Bug Fixes] [Known Issues]

This section contains information about the known bugs that have not yet been resolved and, in many cases, also descriptions of workarounds for them.

For detailed and up-to-date information, see the *Known Bugs & Workarounds* section in the Automic Download Center.

4.2 Release Notes

The following are the Release Notes of the UC4 Automation Platform UI plug-in for the ECC.

4.2.1 UC4 Automation Engine v9

Service Pack 7

This Service Pack does neither include new functions nor modifications.

Service Pack 6

This version of the Automation Engine UI plug-in requires the Automation Engine v9 SP6.

New Features / Modifications

Improved prompt handling

In its prompts handling, the Process Automation UI Plug-In now supports input assistants and validates constraints on regular expression.

Prompts that have only a label are displayed correctly.

Various bug fixes.

Process Monitoring perspective

Jobs in waiting or sleeping status are now also displayed.

“Run per patch” is now available only where it makes sense to use this function.

Service Pack 5

Note that for using this version of the UI plug-in, the Automation Engine must also be of version v9 SP5. Otherwise, tasks with prompts may hang with the status "Waiting for user input" or the connection between the ECC and the AE can be lost.

New Features / Modifications

Process Monitoring and **Process Assembly** perspectives: Tooltip texts for workflow tasks.

Tooltip texts are now available for the task boxes in the Workflow Editor (**Process Assembly**) and the Workflow Monitor (**Process Monitoring**). They provide information about related tasks. Hover the mouse pointer over a task box, wait a moment and the tooltip text will appear.

The tooltip texts now show the alias and/or the title and object name. They also include the information whether the rollback function is active and whether pre- or postconditions have been stored.

Process Assembly perspective: The object selection menu in the Workflow Editor has been changed.

The **Explorer** and **Search** areas in the object selection menu of workflows have been combined in the **Explorer** area. The search field is no longer available in a separate area but instead, it is now shown directly above the folder list in the **Explorer**. When you start searching, a result list now appears instead of the Explorer. The Explorer appears again as soon as you remove the search term.

Relevant for users of the product *UC4 Deployment Manager*:
The **Deployment** area in the object selection menu has been renamed to **Components**, and the **Logic** area (which lists the predefined Actions References) to **Functions**.

When the client of the user who has logged on is a deployment client, the **Explorer** area points to the folder <root>/UC4.GENERAL and the **Functions** area points to the path <root>/RUNBOOKS.

Process Monitoring perspective: New commands are available in the activities list and in the Workflow Monitor

- Ignore preconditions (only Workflow Monitor)
- Ignore Sync conditions
- Ignore Queue limit
- Set inactive (only Workflow Monitor)
- Run Workflow task (only Workflow Monitor)
- Suspend / Suspend (recursively)
- Go immediately / Run (recursively)

The following commands have been renamed:

- "Edit" to "Show definition" (only Workflow Monitor)
- "Open report" to "View full Report"

All perspectives: Improved start and restart behavior

The start and restart behavior of Service Catalog objects has been improved and now provides feedback to the user about the status and clearly structures user input via prompts.

Process Assembly perspective: Editing and reading mode

Workflows can now explicitly be opened in reading mode. This means that no write access is required and that there is no need to lock the object for other users.

The new **Edit** button can be used for this purpose, it is displayed right next to the **Definition** menu item (ECC Main Pane - menu bar).

Process Assembly perspective: IF and FOREACH Workflow objects can be directly created and inserted.

You can use a context menu in the Workflow Editor to directly create and insert IF, FOREACH and standard Workflows without expanding the object selection menu or the Navigator Pane.

Process Assembly perspective: Automated generation of object names

A suitable object name is now automatically generated when you create a new object within a workflow and insert ARA Component Workflows. No suffix needs to be appended anymore. If required, the name can be adjusted manually.

Process Assembly perspective: Indicators for Pre- and Postconditions

The Workflow Editor boxes now provide the information whether one or several conditions have been defined for the task (properties: Pre-/Postconditions). It is no longer necessary to open the definition for this purpose. The left edge of the task box appears in dark gray when at least one condition is stored in the Preconditions, and when a condition is stored in the Postconditions, the right edge appears in dark gray.

Process Assembly perspective: Additional operations in the Navigator's **Explorer** area

The following additional operations are now available in the Explorer area: Move, duplicate and rename.

Process Assembly perspective: Icons and improved presentation of actions (previously also referred to as *runbooks*).

Actions which are available in the **Functions** area of the object selection menu are now displayed with an individual content-related icon. Also, the readability of long object names and titles has been improved. Actions are useful for defining Deployment Workflows (*UC4 Deployment Manager*).

Service Pack 4

New Features / Modifications
Process Monitoring perspective: The new function **Workflow Monitor** is now available. You can use the activity list of the **Process Monitoring** perspective in order to call the monitor of Workflows. It lists the Workflow tasks and shows general information and details about their runs.
Process Assembly perspective: The new function **Conditions** is now available. The new areas **Preconditions** and **Postconditions** are now available in the Workflow Editor in the properties of Workflow tasks. Here you can define conditions and actions that will either be processed before (**Preconditions**) or after (**Postconditions**) the task has run. These conditions and actions are structured as blocks and can also be nested. Depending on the definitions, they can manipulate or delay the task's execution.
Renaming of the **Process Automation** perspective to **Service Catalog.**
Service Catalog perspective: A new functional area is available in the Navigator Pane. It is called **Catalog.** The Catalog includes the combined Favorites folders and objects of all user groups to which your user belongs.
Service Catalog perspective: **Favorites** area in the Navigator Pane. Folders that are part of the user's Favorites are now also displayed. You can select these folders and list their contents (such as objects and subfolders).
Process Assembly perspective: Dialogs **New Workflow** / **New Folder** You can now select the **Folder** in which the new Workflow or Folder should be created in a column browser.
Service Catalog and **Process Assembly** perspectives: Adding and removing Favorites You can now use the context-menu commands **Add to Favorites** and **Remove Favorite** in the Navigator Pane in order to add or remove your personal Favorites. The command **Add to Favorites** is available in the Navigator areas **Catalog** (Service Catalog), **Search** and **Explorer** (Process Assembly). **Remove Favorite** is available in the **Favorites** area (Service Catalog, Process Assembly).

Service Pack 3

New Features / Modifications
New perspective **Process Assembly** Here you can define Workflows and add, link, move and remove Workflow tasks as well as modify important properties.

Service Pack 2 HF5

First release of the Process Automation plug-in. This plug-in includes the following two perspectives:

Features

Process Automation perspective
Here you can start tasks from a Favorites list, monitor processing and pull up the related statistics and reports.

Process Monitoring perspective
Here you can view all the activities of a UC4 client as well as monitor and modify active tasks.

4.2.2 Bug Fixes

For detailed and up-to-date information, see the *Patch Descriptions* section on the Automic Download Center.

4.2.3 Known Issues

This section contains information about the known bugs that have not yet been resolved and, in many cases, also descriptions of workarounds for them.

For detailed and up-to-date information, see the *Known Bugs & Workarounds* section on the Automic Download Center.

5 Release Notes Version 8.00A

5.1 Highlights

[Highlights] [New Functions] [Improvements]

- New terminology
- Native 64-bit support for core components
- Partitioning with ILM
- MS SQL Server 2008 supported as UC4 Database
- Increased usability of UserInterface
- Script editor
- Advanced Security
- Server roles improve performance
- Modifications in active ProcessFlows
- Extended Notification object
- Rapid Automation
- New object type "Connection" (CONN)
- New Event type "Database Event"
- Extended FileSystem Event
- Extended Email connection
- Searching reports and files using the new Filter object
- Automatic assignment of agent rights
- Post Process for FileTransfers
- New SAP agent implementation
- Support of Java Scheduler Jobs in SAP
- New report types for SAP jobs
- Access to the SAP Criteria Manager
- Access to SAP's monitor architecture nodes
- Registering the SAP agent to the System Landscape Directory
- New report type agent log for SAP jobs
- Status of SAP jobs now displayed in Detail Window
- New functions: R3_ACTIVATE_CM_PROFILE, R3_DEACTIVATE_CM_PROFILE, R3_GET_APPLICATION_RC, R3_SET_SELECT_OPTION
- Improvements for the UC4 SNMP subagent
- Reaction to the return codes of executable objects
- Extensions for the UC4.ApplicationInterface
- New WebHelp for the UC4 Documentation
- Navigation bar on all Online help pages
- Table of contents in all Online help manuals
- Setting up the stand-alone agent for IBM WebSphere
- New function: MODIFY_TASK
- Extended function: GET_FILESYSTEM, SYS_HOST_ALIVE and SYS_INFO
- External job monitor for the OS/390 agent

5.1.1 Notes for the Update Installation

The  symbol characterizes new functions which require manual adjustment.

⚠ **Important note for updating the UC4 Database to version 8.00A**

The upgrading process to the new data model of version 8.00A includes that the table structures for reports (RH and RT) are adjusted. This applies to all supported databases.
The available tablespace must be at least of the same size as the database. For example, the database size is 40GB, hence the required available space is 40GB. Ensure that there is also sufficient space for the RedoLog area.
Note that the conversion process may take some time depending on the database size.

Reorganize your data (including reports) before you start the updating process because doing so reduces the time that is involved.

UC4 recommends testing the conversion of the production database in a test environment in order to obtain reference values concerning runtimes and disk space.

Select from the following options:

- Update the database without converting reports
- Convert the reports during the updating process.
  Note that this procedure takes some time depending on the amount of data that is involved and that your system is offline during this time.
- Convert the reports after the update installation - only possible for MS SQL Server and Oracle.

UC4 recommends contacting your database administrator for more information about the database-specific points of the update installation.

- UC4 Server, UC4 SNMP Subagent and utilities are now only available for 64-bit platforms.
- The utilities and the UserInterface require at least Java 1.6 and the Java-based agents (JMX, Database, SAP) require at least Java 1.5.
- The utility UC4.DB Load now checks whether all Server processes share the same UC4 system name (such as UC4PROD#WP001). If not, the loading process is canceled. Thus, the UC4 Database can only be updated to the new version if all Server processes share the same UC4 system name. Log on to system client 0000 and search for Server objects. Delete all Server objects whose names do not start with the UC4 system name.
- The database user for Oracle requires additional rights. For more details about these rights, see Database Rights for UC4.
- There is a new terminology which has impacts on the following UC4 components:
  - DialogClient - UserInterface
  - UC4.WebGUI - WebInterface
  - Executor - agent

Two script elements have been renamed:

- :REPLACE_JP_STRUCTURE - :REPLACE_STRUCTURE
- PREP_PROCESS_HOSTGROUP - PREP_PROCESS_AGENTGROUP

The previous spelling can still be used but UC4 recommends adjusting your scripts.

The new terminology also affects the UC4.ApplicationInterface. The class and method names containing the previous terms have been marked "deprecated". Adjust your Java programs according to the new terminology.

The following UC4 Variables are also affected:

UC_SYSTEM_SETTINGS:

- EXECUTOR_LOG_CHANGE_PER_MINUTE - AGENT_LOG_CHANGE_PER_MINUTE
- HOSTGROUP_CHECK_INTERVAL -AGENTGROUP_CHECK_INTERVAL

UC_CLIENT_SETTINGS:

- MAX_DIALOG_CLIENTS - MAX_USER_INTERFACES
- CALE_WARN_CALL_OPERATOR -CALE_WARN_NOTIFICATION

These four validity keywords are automatically renamed when the UC4 Database is updated.

- Updating a DB2 database (UNIX or Windows) to version 8.00A or higher requires that the UC4 Database has already been adjusted to the new schema. This schema is available as of version 6.00A804-301. Without schema modification, updating the UC4 Database will fail. Further information about schema modifications is provided in the hotfix installation guide.

- Two of the files supplied for the UC4 Server and the utilities for UNIX are used for the connection to Oracle:

  - ucuoci for Oracle version 10
  - ucuoci.11g for Oracle version 11

  The system always uses the file

  - The UC4 Server always use the file ucuoci. No adjustment is required if you use Oracle version 10. Using Oracle version 11 requires the file ucuoci to be deleted and ucuoci.11g to be renamed to ucuoc:
    - AIX: Rename **ucuoci.11g.a** to **ucuoci.a**
    - HP-UX: Rename **ucuoci.11g.sl** to **ucuoci.sl**
    - Linux, Solaris and zLinux: Rename **ucuoci.11g.so** to **ucuoci.so**

  These additional steps are now described in the installation guides for the UC4 Server and the utilities for UNIX.

- The UC4 Variable UC_HOSTCHAR_DEFAULT includes the validity keywords ANONYMOUS_FT and ANONYMOUS_JOB. The default value of both has been set to "N".

- For performance reasons, the script statement :PRINT now writes its outputs only to the activation log and no longer to the UC4 Server's report and log file. Should you still wish to keep additional logging, set the 14th digit in the SERVER_OPTIONS of the UC4 Variable UC_SYSTEM_SETTINGS to value "P".

- The UC4 Server no longer logs non-successful Sync checks. Additional logging is kept if the 10th digit in the SERVER_OPTIONS of the UC4 Variable UC_SYSTEM_SETTINGS is set to value "A".

- The UC4.ApplicationInterface has been extended for the class "ReloadNextTurnaround". It replaces the method setReloadNextTurnaround of the class "Schedule". Adjust your Java programs accordingly. Further details about this new class is provided in the Javadoc.

- For SAP agents, the script functionSYS_HOST_ALIVEdoes not retrieve information about an SAP system's availability anymore. It only provides information that an SAP agent is active or not. Use the new parameter in SYS_HOST_ALIVE to retrieve information about the system's availability.

- The type of SAP jobs can no longer be specified in the Job object's "SAP" tab. Instead, it can be selected in the template window when creating a newSAP job.

- The connection to the SAP system in the Forms tab is now established via the SAP agent. User name, password and client are taken from the Connection object for "ABAP Basis". It is no

longer possible for users to log on to any SAP system or client via a login mask in the Forms tab. Also, the Forms tab can only be used in offline mode if you select an SAP agent of version 6.00A in the SAP job.

So far, Server and agent have written messages to the activation report (ACT) of SAP jobs. This has been changed, the new report type agent log (PLOG) is now available for messages logged by the agent. Adjust your scripts as shown below for reading the activation report of SAP jobs :

:SET &HND# = PREP_PROCESS_REPORT(,,ACT)

An SAP agent can establish several connections to one or even several SAP systems. If the connection which is required for the job start is not available, the job obtains the status "Active" (previously "Waiting for host"). In remote status, the Detail Window shows "Waiting for remote system". This is an incompatible modification which affects runtime monitoring because the job now immediately obtains the status "Active".

It is no longer possible to store the SAP agent's connection parameters to the SAP system in the file SAPRFC.INI. They are now stored in the new Connection objects.

One column of the table XRO which is used for theOpen Interface to Output Management systems has been removed. "XRO_RH_Idnr" for the internal report number is no longer available. You can now access a particular report by using the corresponding task's RunID (XRO_AH_Idnr) and the report type (XRO_RType). It is required to adjust the UC4.DB Archive call because the start parameter -R no longer assigns the report number but the task's RunID.

Note that using an Oracle database in combination with an Oracle INSTANT client is only possible with particular client versions for different platforms. The platforms including the corresponding INSTANT client version numbers are available in the installation documentation - Requirements - Checklist.

In version 8.00A, the names of some names of some supplied files have been changed to lower-case letters. In version 6.00A, these were written in upper-case letters. Affected are the executable utility files (Windows/UNIX) and the INI files of the following components:

- Utilities (UNIX/Windows)
- Agent for SAP (UNIX/Windows)
- Agent for Oracle Applications (UNIX)
- Agent for PeopleSoft (UNIX)
- CallAPI (UNIX)

The CallAPI for SAP is based on Java. It is no longer possible to store the RFC connection parameters in the file SAPFRC.INI. Use the RFC Server's configuration file UCXSAPC.INI instead.

As of version 8.00A, the SAP agent preferably uses the XBP interface. The following problems occur:

- The report lists the N type before the N number. If required, adjust the script element PREP_PROCESS_REPORT accordingly.
- SAP Console Events and the script element R3_GET_EVENTcan only react if the corresponding triggered SAP Events are available in the Event History. Adjust the criteria profiles of the SAP Events accordingly.

As of Service Pack 6, the SAP agent and the SAP CallAPI only support the SAP Java Connector version 3.x.

Note for using the utilities with Java Version 1.7 which is supported as of Service Pack 6:
To start the graphical interface of the utilities with Java 1.7, you must use the Java call of the

⚠ new supplied INI files as otherwise, the program will crash. Adjust the existing INI files as shown in the following example for the utility UC4.DB Load:

Java call for Java 1.6:
cmd="javaw" -Xmx512m -jar -cp .;.\UC4LookAndFeel.jar ucybdbLd.jar

Java call for Java 1.7:
cmd="javaw" -Xmx512m -cp .;.\UC4LookAndFeel.jar -jar ucybdbLd.jar

⚠ Several minor ProcessIFlow and database errors have been corrected in version 8 and additional checks have been implemented. As a result thereof, it can occur that ProcessFlos that so far started without any problems will now abort with the following error:
U0007047 Workflow activation error: '&01'. The object-type '&02' of object '&03' does not fit to the type '&04' saved within the Workflow.

In this case, UC4 recommends running the following SQL statement directly in the UC4 Database:

```
select jp.oh_client, jp.oh_name, jpp_otype, jpp_object, obj.oh_otype, obj.oh_name from oh jp, jpp, oh obj
where jp.oh_idnr = jpp_oh_idnr
and jp.oh_client = obj.oh_client
and jpp_object = obj.oh_name
and jpp_otype <> obj.oh_otype
and jpp_otype not in ('<START>', '<END>', '<XTRNL>')
and jp.oh_deleteflag = 0;
```

Any result that this statement returns signals that the database includes one or several ProcessFlows that were not correctly stored in the previous UC4 version. To correct this error, set the "jpp_otype" column of each returned line to the value of the "oh_type" column.

⚠ To change to the modification mode of active ProcessFlow, the components UC4 Server, UserInterface and the initial data must be of version 8.00A103-901 or later OR they must all be of an earlier version.

⚠ You can use a UserInterface of version 8.00A in combination with a UC4 Server of version 6.00A. Note that you cannot modify active ProcessFlows in this case.

⚠ The Executors for MPE and the Unix platforms IRIX, NCR and SINIX are no longer supported. However, you can use the Executors of these operating systems of UC4 version 6.00A in your 8.00A UC4 system. The latest 6.00A hotfix version is required for the corresponding Executor.

⚠ DB2 requires tablespaces with 8 and 32KB, and one with 16KB.

⚠ The script statement :PUT_ATT now rejects blanks in the attributes FT_SRC_FILE (source file in FileTransfers) and FT_DST_FILE (destination file in FileTransfers). Script lines as shown below abort the task at runtime:

:PUT_ATT FT_SRC_FILE = ""

:PUT_ATT FT_DST_FILE = " "

Search the scripts in your objects and either specify a valid file or delete the script line as otherwise, tasks can abort.

⚠ The attribute EVENT_SUB_TYPE of FileSystem objects has been renamed to EVENT_CHECK_METHOD1. The old name is still supported but UC4 stronlgy recommends adjusting your scripts.

⚠ The Access database UC97.mdb which contains the structural description of the UC4 Database has been converted to Access version 2003. Its new name is UC2003.mdb and it is available under IMAGE:\DB_STRUCTURE\ACCESS.

⚠ Modified script statements:ADD_ATT and :REMOVE_ATT - the parameter OPERATOR has been renamed to RECIPIENT. For compatibility reasons, "OPERATOR" is still valid.

⚠ The new 8.00A SAP agent requires at least one Connection object instead of the ERP_LOGIN. Refer to the new and adjusted installation steps. As the agent object already exists, you can immediately select the required Connection objects.

⚠ The parameter verify= in the INI file of SAP agents is no longer supported. Instead, use the parameter VERIFY= in the functionR3_MODIFY_VARIANTto specify whether variant modification should be checked.

⚠ UC4.Connect for SAP Monitoring functionalityis now provided in the SAP agent.

⚠ Multiline values must not be used are not allowed for the parameter VALUE in the JCL element JMX_COMPOSITE_ADD.

⚠ As of version 8.00A 119-211, the executable files of the BS2000 agent are supplied in the x.xxx.UCX2?.LIB library. The file that is used to start the BS2000 CallAPI is provided in the existing x.xxx.UCXBB2?C.LIB library as of this hotfix level.

Infinitive loops can even better be identified as of version 8.00A: Infinite repetitions of the subordinate tasks of activated objects are now also checked. A (subordinate) task that activates itself is considered an infinite loop.

Encryption and authentication mechanisms have been extended. While updating the UC4 Database, the utility UC4.DB Load displays a mask in which an authentication method must be selected. UC4 strongly recommends reading the document that describes how to useAdvanced Securitybefore starting the updating process.

An extension in the UC4 Server requires the primary work process plus two work processes before it is possible to activate additional dialog processes. Thus, the minimum value for the setting WP_MIN_NUMBER in the UC4 Variable UC_SYSTEM_SETTINGS has been increased to "2".

The UC4 SNMP subagent is no longer supplied in combination with the UC4 Server. Its files are now stored in the extra folder "Snmp".

Some folders on the delivery directory have been renamed:

- server - automationengine
- oa - oracleapplications
- ps - peoplesoft
- tandem - nsk
- smgr - servicemanager
- smgrdia - servicemanagerdialog

The command for resetting an open flag is now found in the object properties instead of the UC4 Explorer's context menu. The properties window shows the button "Reset" which can be used to reset an open flag if a user has opened an object for editing purposes.

List or Hierarchical View selections can now be made directly in the Activity Window instead of the Activity Window options.

The privilege "Edit SAP Interception table" -which is assigned in User and UserGroups- is now called "SAP Criteria Manager".

R3_CREATE_VARIANTwithout specifying the parameter TEXT= has the effect that the Variant name is used as short text.

As of hotfix 8.00A918-104, the checkpoint for the activation date of a ProcessFlow'sexternal dependency option "Only valid, when activated with the same logical date." has been set back. The date will only be checked when the ProcessFlow task which waits for the external dependency is allowed to start.

Users require the authorization "S" for the relevant objects in order to execute the script element GET_STATISTIC_DETAIL.

5.2 New Functions

[Highlights] [New Functions] [Improvements]

General	
New terminology Some UC4 terms have renamed. The following list shows the old and new terms: • DialogClient - UserInterface • UC4.WebGUI - WebInterface • Executor - Agent • HostGroup - AgentGroup • JobPlan - ProcessFlow • CallOperator - Notification • RUN# - RunID	
Native 64-bit support for core components Starting with this UC4 version, the UC4 Server, UC4 SNMP Subagent and utilities are supplied for 64-bit platforms.	
Advanced Security This version includes extended functions regarding data encryption and authentication. The encryption methods "AES-128", "AES-192" and "AES-256" (default) are available now in order to secure the communication between UC4 components. In addition, you can also set an authentication type for your agents. These extended configuration settings plus the authorization system protect your UC4 system from unauthorized accesses. ⚠ Changing the authentication method subsequently involves a lot of effort. UC4 strongly recommends determining the required method once while installing the UC4 Server.	
Rapid Automation The term "Rapid Automation" refers to ageneric technology which is able to include and process various automation solutions in UC4. The solutions are realized through RA Solutions. RA agents make the functions of a RA Solution accessible.	

New Event type "Database Event"
The Event object has been extended, a new type is now available. It can be used to compare values of the following sources:

- SQL query
- Statistical value
- Variable object

Extended FileSystem Event
The Event type"FileSystem" includes many new options:

- Check for file size
- Check for file modification during the last n hours:minutes:seconds
- Check for constant file size during the last n hours:minutes:seconds
- Inclusion or exclusion of sub-directories
- Reading of file name, file size and timestamp with GET_EVENT_INFO

Extended Email connection
Up to now, the Email connection has only been implemented in Windows and UNIX agents. Now, the UC4 Server also has an Email connection which can be used to send emails via Notification objects and in combination with the script function SEND_MAIL.

Searching reports and files using the new Filter object
A Filter object can be used to define the criteria to be applied for searching reports of tasks and/or files. It is available in the following object types:

- FileTransfer
- Job
- QueueManager

Each of these object types includes an Output Scan tab in which one or several Filter objects can be created and the reaction to the filtering result.

All actions specified in the Output Scan tab are taken before PostProcess is processed.

Reaction to the return codes of executable objects
The **Runtime** tab of all executable objects now contains an additional option which can be used to specify an object tobe started if the task does not end with a return coderanging within the area of ENDED_OK.

Extended Notification object
1) The recipient can now specify User and UserGroup objects and email addresses.

2) In addition to "Alert", "Message" and "Request", the new type "Email" can be selected. It facilitates the sending of emails without a Notification monitor to be displayed. This new types requires the Email connection to be installed in the UC4 Server.

3) The maximum number of characters for Notifications has been increased from 1024 to 8000.

4) The new **.** tabincludes the notification settings. The Recipient tabcontains the persons to which the message should be sent. For the sake of clarity, all other possible settings have been moved to the Attributes tab.

New object type "Connection" (CONN)
The new object type "Connection" contains the connection parameters for RA Solutions andSAP agents.

5.2.1 Database

General	
MS SQL Server 2008 supported as UC4 Database Refer to the corresponding configuration notes.	
Partitioning with ILM Partitioningmeans that the data shown below is stored to specific areas: • Statistical records • Reports • Messages • Data for the Revision Report • Data for the Open Interface to Output Management systems Partitions simplify the maintenance procedure because data records of a particular period are stored at the same location and can so be archived and reorganized together. Partitioning with ILM is supported for the MS SQL Server and Oracle. You can still maintain your UC4 Database by using the utilities.	

5.2.2 Server

General	
Server roles improve performance Performance-intensive processing such as storing log messages to the database or resource calculations are combined in Server roles. The System Overview section "Server" shows whether and which Server roles a work process has.	
Modifications in active ProcessFlows Even more ways to modify active ProcessFlows are now available. Tasks can be added, new lines be drawn and properties such as the earliest start time be changed. Modifications are possible in the monitor or via the new script functionMODIFY_TASK.	
PostProcess for FileTransfers After file transfers, you can now execute PostProcess via the object "FileTransfer".	
New Functionality	
MODIFY_TASK -Modifies active ProcessFlows.	
Extended Functionality	
GET_FILESYSTEM - Extension A new parameter can be used to include or exclude sub-directories.	
SYS_HOST_ALIVE - Supplies the information whether SAP agents are active and the SAP system is available.	
SYS_INFO - Retrieves data about message queues .	

5.2.3 UserInterface

General

Increased UserInterface usability
The following new features are now available in order to facilitate easy and comfortable handling:

- Each window now contains its own toolbar offering the opportunity of direct access to the most important commands. You can now determine in the UserInterface's settings whether a text should be displayed in the toolbar's pushbuttons.
- The font size for captions shown in the UserInterface can be specified. The options "Small" (used so far), "Medium" and "Large" are available.
- The structure of input fields has been revised and by doing so, the search function has become very easy to handle.
- When an object opens, its object-specific tabs are displayed. The new standard is that only tabs which contain a value are displayed for the purpose of clarity. Non-displayed tabs become accessible by clicking the button [+].
- The template window from which the object type for new objects can be selected is now organized in a tree structure. Different job types (such as UNIX, SAP, or OS/390) are shown in one common node.
- Creating a new folder is now possible via the popup-menu command "New" -> Folder. Selecting it from the object types in the template window is still possible.
- In all List Views (such as UC4 Explorer or Search), you can now skip to a column entry by typing the corresponding initial letter.
- A small arrow symbol next to the column name in List View indicates whether a column is sorted in ascending or descending order.
- New shortcuts:
  - ALT + M opens the monitor of the superordinate object
  - CTRL + E opens an object for editing
  - CTRL + I opens the Detail Window
  - CTRL + M opens the monitor
  - CTRL + N opens the template window which can be used to create new objects
  - CTRL + R opens the report
  - CTRL + T opens the Statistics of the superordinate task

Script editor
The new script editorprovides numerous functions which make it even more easy to create scripts:

- Script-element names are automatically completed
- Parameters are displayed
- All occurring script variables or script elements are highlighted
- Contents of Include objects are displayed
- Include objects can be edited directly in the script
- Line prefixes, indentations and closing statements of constructions (such as :ENDIF) can automatically be inserted
- The relevant description of the script element provided in the UC4 Documentation can be shown

5.2.4 Agents

All Agents

Automatic assignment of agent rights
For security reasons, it is required to determine the clients in which an agent can be used and which rights the individual agent possesses. Rights can be assigned directly in the **Authorizations** tab of the individual Agent objects. Doing so is very time-consuming when numerous agents are in use as this procedure is required for each agent. The new object Agent/Client Assignment solves this issue. It enters the adequate rights in the Agent objects based on filter settings.

Database

Support for Informix databases.

J2EE/JMX

Setting up the stand-alone agent for IBM WebSphere (SOAP Connector)
TheJ2EE/JMX agent can now also be installed stand alone if you use IBM WebSphere. This installation type is applicable if the agent addresses several IBM WebSphere Servers whose MBeans should be used. The agent is installed in an IBM WebSphere cell and connects to the MBean Server of the Deployment Manager (DMGR) which controls the individual IBM WebSphere application servers.

MBean for Business Objects
Official support for Crystal Reports XI R3.

OS/390

External Job Monitor for the OS/390 agent
The external job monitor can be used to identify jobs under OS/390 which have not been started by UC4. With the Event monitor and the agent, it is then possible to trigger an Event object in the UC4 system.

OS/400

Restoring a Job Status using the Job Messenger
You can now use the Job-Messenger output to retrieve the status of Jobs that have been executed while the agent was inactive. More details are described in the document Agent - Combining UC4 and OS/400.

PeopleSoft

The UC4 agent has been for PeopleSoft version 8.50.

SAP

New SAP-agent implementation

The SAP agent has been optimized and extended in order to be able to support SAP functions even better. The connection data to the SAP system is no longer stored in the INI file but can be specified in the new object type "Connection". The SAP agent is now a Java program (previously a C program).

Support of Java Scheduler Jobs in SAP

UC4 provides the following opportunities to handle jobs in the SAP Java Scheduler:

- Start jobs using parameters
- Cancel jobs
- Assume logs to the job report
- Monitor jobs via filter using the QueueManager

For using Java Scheduler jobs, the SAP agent requires SAP version 7.1.

New report types for SAP jobs

Further reports are available if XBP 3.0 is used:

- Application logs
- Spool directory
- Step lists
- Statistics

The additional reports include data in the form of XMLs which offers two advantages. Firstly, you can determine the content and the graphical display via stylesheets. Secondly, you can easily read the individual values using the XML script elements.

Access to the SAP Criteria Manager

TheSAP Criteria Manager can be used to define conditions for the Event History, Event History Reorg and Job Interception in profiles. It is possible to access theCriteria Managerdirectly in the SAP job.

Functions:

- Creating and deleting profiles
- Activating and deactivating profiles
- Adding, modifying and removing conditions

Access to SAP's monitor architecture nodes

The SAP agent can access the monitor structure in the CCMS. Script elements can be used to create and modify attributes or delete nodes:

- R3_DELETE_NODE - Deletes a node
- R3_SET_LOG_ATTR - Sets a log attribute
- R3_SET_PERF_ATTR - Sets a performance attribute
- R3_SET_STATUS_ATTR - Sets a status attribute
- R3_SET_TEXT_ATTR - Sets a text attribute

The Forms tab of SAP jobs can be used to access nodes. A separate browser displays the monitor "All Monitoring Contexts" of the monitor set "SAP CCMS Technical Expert Monitors". The node colors correspond to the current alarm status.

Registering the SAP agent to the system Landscape Directory

SAP'sSystem Landscape Directory (SLD)supplies an overview of installed software components. You can configure the SAP agent in a way that it registers to the SLD whenever it starts.

New report type agent log for SAP jobs The SAP agent now has its own report type agent log (PLOG) which can be activated in the SAP-Job object. The activation report is only used for UC4-Server messages.
Status of SAP jobs displayed in Detail Window The entry "Remote status" in the Detail Windowdisplays a job's current status in the SAP system. It is not shown if no SAP status is available.
New Functionality
R3_ACTIVATE_CM_PROFILE - Activates a profile in the SAP Criteria Manager.
R3_DEACTIVATE_CM_PROFILE - Deactivates a profile in the SAP Criteria Manager.
R3_GET_APPLICATION_RC - Checks the application return code of one or several job steps.
R3_SET_FREE_SELECTION - Defines a free selection.
R3_SET_SELECT_OPTION - Defines a selection criterion.

5.2.5 Documentation

General
New WebHelp for the UC4 Documentation The new WebHelp that UC4 supplies with this UC4 version provides the following additional functions: • Setting of bookmarks. • Search results in documents are highlighted in color. • Storage of search results. Individual manuals can also be removed. More details about this new WebHelp function is provided in the UC4 Documentation, see installation guide.
Table of contents in all Online help guidess The TOC displays main and sub chapters with a book icon. Clicking on one of these icons opens a page which lists the links to all documents of the particular chapter. This facilitates quick navigation in the complex UC4 Documentation.
Navigation bar in all Online help pages All pages in the Online help now contain a navigation bar which shows three types of links: • A link that refers to the direct superordinate chapter page. • A link that refers to the page that comes before the open one. • A link that refers to the page that follows the open one. This navigation bar makes it easy to scroll through the pages. You always know where you are within the UC4 Documentation. This is especially helpful if you have searched a page via the Search function.

5.2.6 UC4 SNMP Subagent

General

Improvements for the UC4 SNMP Subagent

- SNMP V2 and V3 protocol supported.
- 64-bit support.
- Linux platforms SuSE and Redhat supported .
- Improved performance.
- Communication between UC4 SNMP Subagent and UC4 Server via TCP/IP.

Read more details about the UC4 SNMP Subagent in the KnowledgeBase chapter "UC4 and Network management".

5.2.7 Integration

UC4.ApplicationInterface

New class - GetObjectProperties

Supplies the following information about an object:

- Object type
- Folder
- Title
- First archive key
- Second archive key
- User who created the object
- Date and time of object creation
- User who has last modified the object
- Date and time of the last modification
- Number of modifications
- User who has opened the object
- Date and time when the object has been opened

You can also use this class to check whether an object exists.

New classes - GetReplaceList and ReplaceObject

Facilitates the replacement of object uses (such as Notifications).

The replacement procedure is made block by block with the advantage being that the verifications serve as the basis for further processing (such as additional replacements), to have progressing displayed, react to errors and prevent memory problems. The delivery directory contains an example that explains how to use these two new classes.

New class - SetHostAuthorizations

Sets authorizations in Agent objects.

This class can be used to replace authorizations for Agent objects directly without having to open and store the object.

New class - ObjectStatistics

Supplies the statistical overview of an object.

This class is available in addition to the existing class GenericStatistics.

UC4.Internal Webservice	
The UC4.Internal Webservice is now also available for SAP Netweaver.	

SAP Financial Closing Cockpit Integration	
Through the integration of UC4 in the SAP Closing Cockpit it has become possible to activate UC4 objects via tasks. Doing so also requires the UC4.Internal Webservice and specific SAP transports.	

5.3 Improvements

[Highlights] [New Functions] [Improvements]

5.3.1 Database

General	
Structural description of the UC4 Database in HTML format The description about the UC4 Database's individual tables and columns is provided in the form of HTML files (IMAGE:\DB_STRUCTURE\HTML).	

5.3.2 Server

General	
Selecting the LDAP connection's authentication method The authentication method for the LDAP Server can now be configured. Use the setting AUTHENTICATION_METHODin the UC4 Variable UC_LDAP_EXAMPLE to specify whether the LDAP connection should use the realm data or the domain name. With this configuration and depending on the LDAP Server, you can specify the suitable method. By default, the LDAP connection still uses both methods if one fails.	
Setting for storing the Server logging in the UC4 Database The new setting LOG_TO_DATABASE in the UC4 Variable UC_SYSTEM_SETTINGS can now be used to determine whether the UC4 Server's log-file messages should be stored in the UC4 Database. The default value "Y" has the effect that log-file messages are stored in the Server object's report. Value "N" means that log-file logging is sufficient. Doing so improves the performance of your UC4 system.	
Setting for message-queue reorganization (only Oracle databases) The UC4 Variable UC_SYSTEM_SETTINGS now contains two new settings which can be used to check the UC4 Server's message queues regularly and have them reorganized if required. The new validity keywords are MQ_CHECK_TIME and MQ_BLOCK_COUNT.	
Extension of Server options The setting SERVER_OPTIONSin the UC4 Variable UC_SYSTEM_SETTINGS has been extended: 10th digit - Setting for the complexity of Sync reports 11th digit - Extended output of time-critical database accesses in the log file 13th digit - Access to Server messages in Oracle databases 14th digit - Additional output of the script statement :PRINT to the UC4 Server logging	

5.3.3 UserInterface

General	
Improved popup-menu structure New UserInterface functions are provided with each version. The popup-menu content has been grouped in order to provide a clear overview ensuring that each command can easily be found.	
New sorting of object types in search function The most important object types are now listed first and no longer shown in alphabetical order. This guarantees immediate access to them. The list starts with all executable object types which are ordered by importance, and is completed with all other object types.	
New column "End time" in Activity Window In addition to the start time, the Activity Window now also shows the time of task ending.	
Additional UserInterface improvements • A newly-created object now automatically opens as soon as it has been assigned a name. • The attempt to open an object which is already open automatically brings this object to the fore. • Newly-created but still not calculated Calendar keywords are displayed in red italics.	
New column "Last logoff" in System Overview The area "Agent"in the System Overview shows the date and time whenthe agent logged off the UC4 system the last time.	

5.3.4 Agent

All Agents	
Setting for storing the agent's log files in the UC4 Database. The new setting LOG_TO_DATABASE in the UC4 Variable UC_HOSTCHAR_DEFAULT can be used to determine whether the agent sends the messages it writes to the log file also to the UC4 Server. The default value "Y" has the effect that the log messages are stored in the Agent object's report. Using value "N" means that log-file logging is sufficient. Doing so improves the performance of your UC4 system.	

SAP	
Extended selection dialogs in the Form tab The Form tab provides dialogs which can be used to search and select output devices using wildcard characters.	
XBP interface for R3_DELETE_VARIANT The functions R3_COPY_VARIANTand R3_DELETE_VARIANT are also available for SAP's standard interface.	

5.3.5 Documentation

General

Recommendations for the configuration of Oracle databases
UC4 has listed all parameters that are required for installing an Oracle database and documented the recommended values using UC4.

Clear structure of update installation
The chapter "Update Installation" now includes a separate document with historical notes. It lists all the notes the are important for updating your database.

The relevantdatabase rightsfor UC4 are also available in a separate document. These rights are required for new, hotfix and update installations.

5.3.6 Utilities

General

Performance improvement for Oracle databases
The session parameters for the database connection now include the new entry commit_ write='BATCH,NOWAIT' which serves to improve performance. By default, it is activated (INI-file section [ODBC].

For example:

```
SQLDRIVERCONNECT=ODBCVAR=NNJNIORO,DSN=UC4;UID=uc4;PWD=--
1037B2E22BF022EBE2;
SP=NLS_LANGUAGE=AMERICAN,NLS_
TERRITORY=AMERICA,CODESET=WE8ISO8859P15,commit_
write='BATCH,NOWAIT'
```

6 Release Notes Version 6.00A

6.1 Highlights

[Highlights] [New Functions] [Improvements]

- UC4.Executor for Databases released
- UC4.Executor for PeopleTools Version 8.47 and 8.48 released
- UC4.Executor for Oracle Applications on SuSE Linux for version 8.x and Redhat Linux 4 (x86 Intel platform) released
- UC4.Executor for SAP on AIX 64-Bit released
- UC4.Connect for HP OpenView NNM for version 7.x (Windows and HP-UX version 11.11) released
- UC4 Smart Plug-In for HP OpenView Operations version 8.2 released
- DB2 version 8.1 (OS/390) is now supported
- SAP Interface XBP 3.0 supported
- Business Objects XI R2 (Crystal Reports) supported
- SAP Adaptive Computing Controller supported
- UC4.Plug-in for Java IDEs released
- Certification of the UC4.Executor for J2EE/JMX for J2EE-DEP 7.0
- UC4.ApplicationInterface
- UC4.Installer for the quick installation of basic components
- HostGroups which combine Executors of the same platform
- LDAP connection for the user authentication with Microsoft Active Directory
- Definition of user-password criteria
- Periodical tasks with intervals of less than a day
- Resource concept for Jobs and FileTransfers
- New graphical JobPlan view
- Comments for tasks
- Task evaluations
- New variable type for passing on values to child tasks
- Graphical display of object links
- Extended external JobPlan dependencies
- Combination of report, log and trace files
- Cold start and system stop using the ServiceManager dialog
- Extended protection for the UC4 Server
- Increased performance when using Sync objects
- Monitoring of SAP Events
- Monitoring SAP XI communication channels
- Automated handling of prompts in the UC4.Executor for NSK
- PAM authentication for the Executor on UNIX (Sun Solaris, SPARC)
- Event monitor for OS/390 Executor
- Extended automatic FileSystem Event for OS/390
- Extended support for message classes in OS/390
- New job-end recognition for OS/390 jobs
- UC4.Executor for GCOS8 now supports new file formats
- Monitoring of GCOS8-Executor's job messenger
- Documentation broadened by a glossary
- New chapter "Best Practice"
- Extended Documentation chapter "UC4 and SAP"

- New chapter "Application Integration" and improved structure in table of contents
- New functions OA_ADD_LAYOUT, OA_ADD_NOTIFICATION, OA_ADD_PRINTER
- New function R3_CREATE_VARIANT
- New functions GET_MSG_TYPE, GET_OBJECT_TYPE

6.1.1 Notes for the Update Installation

The symbol characterizes new functions which require manual adjustment.

As of 6.00A, the Microsoft Visual C++ 2005 Redistributable Package is required to install the **UC4 programs on Windows.** The DialogClient is the only exception. We supply a current version of this package which must be installed on all Windows computer on which UC4 programs run.

All specifications concerning passwords start with "PWD" in the UC4 Variable UC_CLIENT_SETTINGS. The validity keywords **MAX_PASSWORD_AGE** and **MAX_LOGON_ATTEMPTS** are renamed to PWD_AGE_MAX and PWD_ATTEMPTS_MAX when the UC4 Database is updated.

As of this UC4 version, a new graphical view is provided for JobPlans. It is activated by default but the classical view can still be set in the DialogClient. A new database field has been introduced due to this new view. If you keep the old INI file for updating the utility **UC4.DB Archive**, insert the entry AH_Ert manually in the section [AH_BODY]. Otherwise, the data fields are not included in the archiving process.

```
[AH_BODY]
AH_Ert=1
```

Individual user's column alignments are lost when updating the **UC4.WebGUI**. They are reset to the specified default alignment.

Contact us to obtain a new license for **UC4.RestartPlus** version 1.2 which is now available. You can also update the OS/390 Executor even beforehand because these are two individual processes.

The values for PUT_ATT, attribute FT_ERASE_SRC_FILEin **FileTransfer objects** have been extended. Only value "J" had been allowed so far. Now, "Y" can also be used. The value "J" can still be used for compatibility reasons.

The section [SAP_R/3] in the **SAP Executor's** INI file has been renamed to [SAP_BASIS]. The SAP Executor on Windows automatically adjusts the name. On UNIX, this section is duplicated and inserted in the INI file with its new name. UC4 recommends deleting the section [SAP_R/3] after updating and starting the Executor as its values are no longer read.

UC4.Connect for HP OpenView NNM requires HP OpenView NNM Version 7.x.

All UC4´components which run on HP UX require at least **HP-UX version 11.11**.

According to SAP note 413708, RFC is compatible. Nevertheless, binary incompatibility has been detected between versions 6.20 and 6.40. Thus, the RFC runtime libraries of SAP basis 6.40 or later are required.

SAP NetWeaver contains interfaces for various components. The component used in the **SAP Executor** so far was specified with the INI-file parameter SAP_Component=. This parameter has been removed as the all UC4-supported functions are implemented in the Executor. Now, this functions can be enabled or disabled using the parameter enabled= in the relevant section of the

particular component. In doing so, the Executor can support several components at the same time depending on the license.

In order to keep configuration efforts low, the parameter enabled= is automatically inserted in the relevant sections and set with the parameter SAP_Component= when the SAP Executor is updated. The parameter SAP_Component= is then no longer read. The SAP Executor on Windows automatically removes it from the INI file, on UNIX it must be removed manually.

For platform reasons, the **SAP Executor** requires Java (JRE version 1.4.2 or later) on HP UX as of UC4 version 6.00A. It is irrelevant in this connection which interface is used.

Starting with **SAP RFC 6.40** passwords are no longer converted to upper-case letters. Therefore the spelling of the password in the Login object ERP_LOGIN is relevant now. If you use for instance lower case letters within your login object for representation of your password, the RFC login will fail due to the missing conversion to upper case. Therefore it is neccesary for you to check your ERP_LOGIN object.

Note that UC4 supplies SAP Executors on UNIX with RFC libraries version 6.40. The libraries are not reloaded as hitherto, but are bound to the programm i.e. RFC has not to be installed during the setup. This is facilitated by the installation. Furthermore the RFC libraries are upward compatible compared to the SAP versions. This means that the Executor has not to be exchanged if you upgrade your SAP system.

Note that the performance of the script functions **SYS_ACTIVE_COUNT** and **SYS_STATE_JOBS_IN_GROUP** has been improved. This is beneficial for the database MS SQL Server and DB2. Performance improvement is especially noticeable if many of the indicated script functions are called in succession. Tasks are now counted by uncommitted read which means that tasks that were not yet committed in the UC4 Database are also counted.

An incompatible modification was made in the Host attribute WIN_TYP for Windows jobs. Now the value EXTCOMPROC is to be used instead of WINBATCH. When required, the function GET_ATT must be adjusted in scripts. This modification also affects the script files of the utility UC4.DB Change.

Old and new syntax example:

:IF GET_ATT(WIN_TYP) = "WINBATCH"

:IF GET_ATT(WIN_TYP) = "EXTCOMPROC"

Filter behavior in the script function PREP_PROCESS_VAR has been changed slightly.

Former behavior:

"*" - supplied all entries
" " - also supplied all entries

The latter filter specification was wrong. It has been corrected.

New behavior:

"*" - supplies all entries
" " - supplies all empty entries

UC4 recommends checking your scripts for details which must be adjusted.

The **System Schedule** (UC_SYSTEM_SCHEDULE) no longer exists. Tasks which should be processed once at a particular point in time are now directly displayed in the Activity Window. After

updating to version 6.00A, existing System Schedules remain in the Activity Window until all tasks have been processed. Afterwards, they are automatically removed. For the time being, pushbutton and menu commands referring to the System Schedule remain in the DialogClient.

This modification only affects the display of non-recurring tasks. The basic functionality remains the same with one exception: it is not possible to define runtime supervision for non-recurring tasks.

The reason behind this incompatible modification is that we implemented a new function for periodical tasks. Our target was a consistent and structured representation of non-recurring and periodical tasks.

 Improvements for FileTransfers cause two incompatible changes.

1. By default, Executors now assign definitive file names only after a FileTransfer has successfully ended. If it is important for your processing that the file obtains its definitive name at the beginning of the FileTransfer, set the Executor's INI-file parameter ft_temp_file= to value "no".
2. Windows and UNIX Executors regularly set restart points while the file is being transferred. If a FileTransfer should repeat, it continues at the last point. This function is NOT available if the following occurs:

   The Server is version 6.00A and the FileTransfer uses two Executors of which one or both have an older UC4 version. No restart points are set in this case. The restart function is available when the Server and the two Executors have UC4 version 6.00A.

 The default value for the **XML encoding**has been changed from "WINDOWS-1252" to "ISO-8859-15". If the UC4 VariableUC_SYSTEM_SETTINGSdoes not contains a value for the validity keyword "XML_ENCODING", the modified XML encoding affects the storage and display of characters. UC4 strongly recommends specifying the appropriate XML encoding for your environment before updating your UC4 system.

 A specification option with the validity keyword SERVER_OPTIONS has been removed from the UC4 Variable UC_SYSTEM_SETTINGS. It was the 11th digit. This option being set meant that the script function GET_VAR did not lock Variable objects while they were read. This setting is now activated by default because its activation minimizes the occurrence of deadlocks. It can no longer be deactivated as in version 5.00A.

 Up to now, users required the right to "Modify at runtime" for Servers or Executors to activate or deactivate traces in the System Overview. For safety reasons, a **new privilege for trace usage** "Create diagnostic information" has been implemented. When updating the UC4 Database, user rights are checked. Users automatically obtain the new privilege if they have a modification right for Servers and Executors. Manual modification is not required if a user has both rights. If a user has only one of the two rights, the privilege must be set manually. Existing prohibitions are ignored.

 The functionality for the maximum number of tasks which can run parallel on one Executor has significantly been extended. Detailed information about the new resource concept is available in the section about new function. When updating the UC4 Database, the following adjustments are made:

- The validity keyword MAX_TASK_PARALLEL in the UC4 Variable **UC_HOSTCHAR_*** has been renamed to WORKLOAD_MAX_JOB. The updating process automatically searches all UC4 Variable whose names start with UC_HOSTCHAR and adjusts them.
- Another name was changed in the script function GET_UC_SETTING. The setting "MAX_PARALLEL" is renamed to "WORKLOAD_MAX_JOB" when the UC4 Database is updated.

- The setting "MAX_PARALLEL" in the script statement :SET_UC_SETTING has been renamed to "WORKLOAD_MAX". For compatibility reasons, the former spelling is still supported. Scripts are not adjusted during the update.
- The maximum value for WORKLOAD_MAX_JOB has been reduced from "999999999" to "100000". Higher values are automatically changed to "-1" which means that there is no Executor limitation.

The functionality of a maximum number of tasks running parallel is still available after the updating process as it is a special case in the resource concept.

Up to now, the Executor has always been retrieved from the object when a task was **restarted**. Now, this information is read from the statistics so that the task runs on the computer on which the original execution was started. Changing the object or using the new HostGroup functionality has no impact on the Executor selection

All **statistical records** older than one year will now be reorganized by default. This prevents old data records being stored in the UC4 Database. The period can be changed using the INI-file parameter auto_reorg= of the utility UC4.DB Reorg.

[REORG]
auto_reorg=

Maximum age of data records in days. Default value: 365 days

All data records which are older than specified here will be reorganized. Specifications made in the utility do not override the specifications made here.

Example: auto_reorg = 183

All data records are reorganized if value "0" has been specified.

The **UC4.ApplicationInterface** has new functions which have been implemented in version 6.00A. Thus, we highly recommend rebuilding your projects.

All but one extensions are compatible. The interface "NotificationListener" of the package "com.uc4.communication" contains a new method:

void activationMessages (int runNumber, UC4ObjectName task, TranslatedMessage[] messages)

It opens if there is an activation report for the relevant task. Extend your project for this new method.

The script statement :STOP MSG writes messages to the activation log but does no longer open a new window for the text.

So far, the name of the UC4 system could be used as Executor name. For reasons of clarity, this is no longer possible.

Since version 5.00A, ORACLE uses data of type BLOB and CLOB instead of LONG RAW and LONG VARCHAR as fields of type LONG cannot be reorganized online. Data types are not converted automatically. When **upgrading from version 5.00A to 6.00A**, this is no longer optional, the fields must be converted to LOB before the migration process starts.

- The UC4 Server must not be active when executing lob_rt.sql as otherwise, data could be lost.
- The available tablespace must be dimensioned in a way that the content of table RT fits to the database twice because it is copied to a temporary table.
- The area for the redo logs must also be sufficient.

FileTransfers in which source filed cannot be deleted now end with the status ENDED_NOT_OK. The old behavior can still be applied for the case that the new behavior causes problems. Specify the old behavior in the UC4 Variable UC_SYSTEM_SETTINGS and set the 4th digit in SERVER_OPTIONS to 'F'.

As of this version, object links are displayed with a small arrow which is included in the object's icon. Previously, all object links had the same status and functionality. Therefore, it was not necessary to distinguish one from the other. During the updating process, the oldest folder link is searched for and all other ones are displayed in the form of a link to it. This provides a better overview and has no functional impacts.

Forecast names created by the AutoForecast include the RUN#. The name format is: *Prefix_object name_RUN#:date*

Sync processing has slightly changed in order to improve performance:

Task ends are administered by work processes. Used Syncs are now released exclusively by the primary work process. This allocation of tasks which starts with version 6.00A causes that it can occasionally take a few seconds that a Sync is released after the task has ended. In this case, the report entry has a later time stamp than the task end. Such delays occur when the primary work process is very busy or is processing a lot of Syncs.

The test programs for the Windows Executor have changed. 16-bit versions are no longer supplied. Instead, 64-bit test programs are now also available.

Some names of supplied files and folders have been adjusted in order to ensure consistent terminology on the individual platforms.

The parameter IEFU83= in the OS/390 Event Monitor's INI file is no longer read because the active Exits are now automatically retrieved.

6.2 New Functions

[Highlights] [New Functions] [Improvements]

General

HostGroups for combining Executors
It is now possible to specify aHostGroupinstead of one Executor in all objects which should be processed on a particular computer. This is a new UC4 object type. HostGroups combine Executors in order to avoid that several objects must be created when a task is processed on several hosts.

HostGroups can also handle the execution of tasks through specified modes. On the one hand, HostGroups execute tasks on all Executors and on the other hand, they also realize workload distribution as they start tasks on particular Executors.

The following modes are available:

- Randomly selected Executor
- The first active Executor in the table
- The Executor listed next in the table
- The Executor with the lowest workload
- On all active Executors
- On all active and inactive Executors

A simulation shows the Executors belonging to the HostGroup and the Executor on which the new task will run.

New virtual Executor Variable:

UC_EX_HOST_ROLE - Executor role

Any name which can be used as a filter in HostGroups. Several role names must be separated with the character ";". This parameter is limited to 256 characters.

New Script function:

PREP_PROCESS_HOSTGROUP - Prepares the processing of a data sequence (Executors of a HostGroup object).

New variable type for passing on values to child tasks
Almost all executable objects now include the new tab "Values". It can be used to specify variable which should be used in the Process tabs. No additional step is required to read theseobject variables, they are directly available as script variables in all Process tabs of objects.

Object variables can be passed on to child tasks. For example, tasks in Schedules can use the object variables of their Schedule. This simplifies maintenance as it is no longer necessary to store the values in the individual objects.

Periodical tasks with intervals of less than a day
Tasks which should run several times a day in a specified interval can now directly be scheduled in the Activity Window. Each task contains aperiod container which controls executions. The interval specifications include Calendar objects and time frames etc. Thus, periodical tasks can be scheduled in your processing as necessary.

Resource concept for Jobs and FileTransfers
UC4 now provides aresource conceptin order to be able to consider host workloads in processing. It can be used to weight Jobs and FileTransfers differently. Executors have a particular resource pool. You can define for each job and FileTransfer how many resources should be consumed during their execution. The Executor starts a task if it has sufficient resources to execute it. A task obtains status "Waiting for resource" if there are not sufficient resources. It is executed as soon as the required resources are available.

LDAP connection for user authentication with Microsoft Active Directory UC4 provides a client which serves to authenticate login data using LDAP via the Microsoft Active Directory. When logging on, users are not authenticated in the UC4 system but in the Active Directory if the LDAP connection has been activated in the User object. UC4 distinguishes local and LDAP users. Detailed information about setting up this function in your UC4 system is provided in the document that describes the LDAP connection.	
Comments concerning tasks It is now possible to store comments referring to tasks via the Activity Window, statistics and monitors. These comments are stored using an individual window per task. Each comment includes a history regarding date and user name. Use this new function to store information about modifications made at runtime or other peculiarities occurring during the execution of a task. Reactions to CallOperator notifications can also be stored. The following script elements are available in order to handle comments in an automated way: :ADD_COMMENT - adds a comment to a task PREP_PROCESS_COMMENTS - prepares the processing of a data sequence (comments of a task).	
Extended JobPlan dependencies An additional setting in the properties of external dependencies is provided as an alternative to the satisfaction lead time. This setting checks if an external task has been activated on the same logical date as the JobPlan. Checked are executions which have already ended and ones which are still active. The external dependency is considered if the logical dates match. If no, it obtains the status ENDED_INACTIVE.	
UC4.Installer for the quick installation of basic components Use the UC4.Installer for installing your UC4 system. It is available under Windows and can be used to install the UC4 Server, utilities, ServiceManager and the UC4 Documentation and copy the files for SAP and Windows Executors on your local computer. It can also be used to load initial data and licenses to the UC4 Database. The UC4.Installer can optionally be used, manual installation is also possible for all described installation steps. Requirement: Java JRE Version 1.4 and 1.5	

6.2.1 Database

General	
DB2 version 8.1 (OS/390) is now supported Contact UC4 Support before installing this version of DB2!	

6.2.2 Server

General	
Extended protection for the UC4 Server Internal messages which are invalid because of their contents and cannot be processed by a Server process are now separated by default. They are listed in thequarantinearea of the System Overview. Diagnostic records which can be sent to the UC4 Support are created if such a message has been identified. This function protects your UC4 system because the invalid messages do not affect the Server processes.	

Improved performance when using Sync objects
Syncs are now exclusively released by the primary work process. Processing speed can be improved by three to five times.

Assuming activities of a different user
A new function makes it possible to assume tasks which were started by a different user to a Schedule etc. This task is then processed with the user of the Schedule. The corresponding command "Assume activity" is found in the Activity Window's context menu. A privilege of the same name is required - otherwise, this command is not displayed.

The system checks whether the tasks that should be assumed have an execution right for the relevant object. If so, the task including all child tasks in active or waiting condition are assumed. The user is not changed if tasks have already ended.

⚠ Note that the execution right is only checked in the top task. Ensure that you have all required rights and contact your UC4 administrator if you are not sure.

Defining criteria for user passwords
New options are provided which can be specified in the client settings and determine the criteria to be considered when specifying passwords. These include:

- Minimum and maximum length
- Upper and lower case letters
- Numbers
- Special characters
- Password history
- Prohibition of user name in passwords

Specify the validity keywords starting on "PWD" in the UC4 Variable UC_CLIENT_SETTINGS.

New Functionality

GET_MSG_TYPE - Retrieves the type of a message number

GET_OBJECT_TYPE - Supplies a task's object type

Extended Functionality

GET_ATT - Extension
New attributes are now provided to read the content of the "Header" tab:

- DATE_CREATED - created on
- DATE_MODIFIED - modified on
- LAST_DATE - last used on
- LAST_USER - last used by
- MODIFY_COUNT - modification counter
- OBJECT_TITLE - title
- USAGE_COUNT - usage counter
- USER_CREATED - created by
- USER_MODIFIED - modified by

PREP_PROCESS_FILE - Extension
It is now also possible to define tabulators as column separators.

REMOVE_OBJECT - Extension
So far, only objects of type Calendar, Login and Variable could be deleted. This function now facilitates the deletion of other object types such as jobs.

6.2.3 DialogClient

General
New graphical JobPlan view Even complex JobPlans appear well-structured with this new representation of tasks. This view is provided in addition to the existing classical view. In the new graphical view, the boxes show the symbols corresponding to the task's object type. Properties such as the earliest start time are shown in a tooltip window. A further advantage is that the progress of the individual tasks is also displayed. Based on the expected runtime, the JobPlan monitor visualizes the progress with a colored bar. You can change between the new and old system at any time.
Graphical display of object links In order to provide a better overview,object links are displayed with a small arrow in the icon. This feature is especially helpful when searching or deleting objects.

6.2.4 Executors

Database
UC4.Executor for Databases released The new Executorestablishes a connection to databases. It is able to execute typical SQL statements (e.g. SELECT or UPDATE), database-specific commands and stored procedures in a database. The Job object contains an editor which makes it easy to formulate statements. Additionally, it displays the database tables and their columns. Requirements: Java JRE version 1.4.2 and 1.5* JDBC driver which corresponds at least to the database version Supported databases: • Oracle Version 9.2*, 10.1* and 10.2* • MS SQL Server 2000 and 2005 • DB2 Version 8.1, 8.2 and 9 • MySQL Version 5 • MaxDB Version 7.5 and 7.6 • MS Access • Sybase ASE Version 15.0

GCOS8
UC4.Executor for GCOS8 now supports new file formats The FileTransfer for GCOS8 has been extended for the following UFAS file formats: • GFRC file format • UFF sequential file format • UFF relative file format • UFF indexed file format

Monitoring of GCOS8 Executor's job messenger
Use this extension to react toabnormal ends of job messengers. This function requires the Header and Trailer Include objects to be slightly adjusted. You can make your own definitions for the type of reaction to an abnormal job messenger end.

J2EE/JMX

Business Objects XI R2 (Crystal Reports) supported
UC4 supports the generation of automated reports. UC4 supplies the MBean "CrystalReports" which provides this function and can be called with the UC4.Executor for J2EE/JMX.

Available functions:

- Assignment of parameters to the report
- Storing report outputs as file (Crystal report, Excel, Word, PDF, RTF, Text file)
- Sending report outputs to Email receiver

MBean requires Java JRE Version 1.5.

SAP Adaptive Computing Controller supported
UC4 can establish a connection to SAP ACC and supports the handling of services. We supply theMBean "ACC"which provides this function. It can be called using the UC4.Executor for J2EE/JMX and is certified (AC-CCI 1.0 - Adaptive Computing Controller Command Interface).

Available functions:

- Starting a service
- Stopping a service
- Moving a service

The MBean requires Java JRE Version 1.5 and JMX 1.2.

Certification of the UC4.Executor for J2EE/JMX for J2EE-DEP 7.0
Current JMX Executor certifications:
J2EE-DEP 6.40 - J2EE Application Installation/Deployment 6.40
New:
J2EE-DEP 7.0 - J2EE Application Deployment on SAP NetWeaver Applications Server 2004s

NSK

Automated handling of prompts
It is now possible to react to prompts which occur during the execution of NSK jobs in an automated way. Use the new script functions in order to define predetermined inputs to particular prompts. Manual intervention can be avoided. This function is supported for NonStop Executor environments and TACL.

Oracle Applications

UC4.Executor for Oracle Applications on SuSE Linux for version 8.x and Redhat Linux 4 (x86 Intel platform) released

New Functionalities

OA_ADD_LAYOUT - adds a layout to a request
OA_ADD_NOTIFICATION - adds a message to a request
OA_ADD_PRINTER - adds an additional printer to a request

Using OA_ADD_LAYOUT requires at least Oracle Applications version 11.5.10.2.

OS/390

Extended automatic FileSystem Event for OS/390
New filter criteria are available which can be used to make monitoring dependent on file name or on the job which closed the file. The Event is only triggered if the specified filters apply. You can select names and job return codes. You can also wait for the job end and make the Event dependent on its end. You can also define an object which should be processed instead of !Process when the Event is triggered.

Event monitor for OS/390 Executor
OS/390 Executor Events of type "Console" facilitate the monitoring of Console outputs. The Event is immediately triggered if all conditions specified in the **Console** tab are met. This requires the Event monitor to be installed and started, which is possible by two methods. By default, the Event monitor is started and stopped with the Executor. Also, the Event monitor can be operated in the form of a Started Task. In this case, an extra INI file is required. The Event monitor only connects to the Console of its own LPAR, and can access the SMF of its LPAR with no extra resources being blocked.

Extended support of message classes in OS/390
With old and new message-class functions, the Executor is able to:

- write the job output to the message class specified in the Job object
- include JES statistics (JESMSGLG, JESJCL and JESYSMSG) in the job log in addition to the job output
- read and add message classes to the job log
- redirect the job log to message classes
- release the job log for printing and deleting.

Settings can be defined in the form of default values in the Executor's INI file and in the Job object. The latter ones are preferably used and overdrive the values specified in the INI file. All settings can also be dynamically configured in the script via job attributes.

New job end recognition for OS/390 jobs

The OS/390 Executor can now also use theSystem Management Facility (SMF) for recognizing job ends. A great advantage is that the job is assessed on the basis of the return codes supplied by the job steps. You can specify in theJob object whether the Executor should consider the highest or the latest return code for the job end.

Job-end monitoring via SMF can be specified in the Event Monitor'sINI file

```
(CONSOLE)
SMFJob=1
```

and in the Executor's INI file where the variable UC_EX_JOB_MD must be adjusted:

```
(VARIABLES)
UC_EX_JOB_MD=UC4START
```

PeopleSoft

UC4.Executor for PeopleTools Versions 8.47, 8.48 and 8.50 released

SAP

UC4.Executor for SAP on AIX 64 bit released

Monitoring SAP XI communication channels

UC4 now also supports the SAP NetWeaver component XI. Controlling the XI communication channels is the first functionality which we release.

- Starting communication channels
- Stopping communication channels
- Querying information about communication channels

Event objects of type "Console" can monitor the communication channels. An Event is triggered whenever the status changes.

Enter the HTTP-Port of the XI RuntimeWorkbench and set the parameter enabled= to "1"in the Executor's INI-file parameter IntegrationEngine= in order to use the XI interface.

```
[SAP_XI]
enabled=1
IntegrationEngine=Servername:Port
```

This new function is supported on all the SAP Executor's platforms except for Linux and zLinux.

SAP Interface XBP 3.0 supported
Several functions of the prospective interface XBP 3.0 are already available but not released yet. UC4 uses the interfaces for new functionalites (event history).

Adjust the parameter Version= in the Executor's INI file in order to make use of the XBP Interface 3.0.

[XBP]
Version=3.0

We want to point out that SAP will release the interface not until december 2007 according to current plans. Incompatible changes are therefore possible!

Monitoring SAP Events
There is a new functionality for the Event object of type "Console". It can now also be used to monitor SAP Events. A filter is available which serves to specify the SAP Events to be traced. If a specified Event occurs, the statements defined in the "!Process" tab are executed. In doing so, subsequent processing can be initiated.

The script function GET_EVENT_INFO provides detailed information about the SAP Event which occurred.

The existing functions R3_GET_EVENT and R3_RAISE_EVENT are still available.

New Functionality

R3_CREATE_VARIANT - Creates a new variant.

XBP 2.0 or later (SAP Release 4.6+) is required.

UNIX

PAM authentication for the UC4.Executor on UNIX (Sun Solaris, SPARC)
Login data for Jobs and FileTransfers which is stored in Login objects can now also be checked using Pluggable Authentication Modules (PAM). This new function is available on Sun Solaris and requires the adjustment of two parameters in the Executor's INI file:

[MISC]
authentification=PAM
[PAM]
Libname=libpam.so

Without PAM login data is still authenticated via system calls.

6.2.5 Documentation

General

Documentation broadened by a glossary
A glossary is now part of the UC4 Documentation. This collection contains and explains the most frequently used UC4-specific terms.

Extended chapter "UC4 and SAP"
The chapter "UC4 and SAP" in the Knowledge Base has been extended. It now lists all ways of using UC4 in an SAP system. Scroll through this chapter to get detailed information about the many areas which UC4 can control and monitor.

New chapter "Application Integration" and improved structure in table of contents
The UC4 Documentation keeps on growing. In order to keep a clear structure, existing documents need to be restructured and new documents be included. Therefore, the Table of Contents has been changed as follows:

- The new manual "Application Integration" is available. It contains descriptions of UC4 components which can be used to monitor and control processing in UC4 from external applications. The chapters "CallAPI", "Integration in Frameworks" and "Password Exits" were moved to this new manual. This chapter can be removed from the UC4 Documentation if needed.
- All texts describing configuration are now provided in a separate chapter in the Administrator Manual. It contains descriptions of the UC4 Variables, configuration files and performance specifications.

The basic structure of the UC4 Documentation remains the same, new content has been structured in a way that contents can be found quickly and easily.

New chapter "Best Practice"
This chapter contains guidelines for using UC4. So far, it contains the following documents and will be expanded step by step:

- Dos & Don'ts when using UC4
- Controlled Computer Restart
- Test and Production System
- Passing on and using values
- Updating a UC4 system - Basics
- Updating a UC4 system - Details

New CallAPI description
There is now a chapter which clearly describes how CallAPIs are best dealt with. Whether the CallAPI is called via a utility or from your own program, this chapter provides all the relevant information. The documentation about CallAPIs has been restructured, therefore the installation guide is now found in the Administrator Manual. The complete chapter about CallAPIs is available in the new Manual "Application Integration".

Chapter database extended
The new document Technical Maintenance of the UC4 Database explains how to keep your UC4 system well-tuned. Also, we provide links to all database-relevant pages in a separate document.

6.2.6 Utilities

UC4.DB Reporting Tool

Task evaluations
The new utilityUC4.DB Reporting Tool now facilitates the creation of evaluations in your UC4 system. Its focus lies on object definitions and the execution of tasks. Numerous filter criteria can be set in order to determine contents and complexity of your evaluations. For example, you can list all jobs which ran in a particular period of time or were created by a particular user. Evaluations always refer to one client.

UC4.LogMix

Integration of log and trace files into one file
The new utilityUC4.LogMix supports the generation of one single file from several log and trace files. The individual file entries are newly arranged in order to create a chronological order. The utility UC4.DB Archive has been extended and can now be used to unload the UC4-Database reports into files.

6.2.7 ServiceManager

General

Cold starts and system stop using the ServiceManager Dialog
The extendedServiceManager Dialog can be used to define different start methods for the Server processes such as stopping a client after the booting process and cold starts. Both methods can be defined in a start method either in combination or separately. It is not necessary to edit the UC4 Server's INI file because the specifications of the ServiceManager overrule these definitions.

Open your ServiceManager Dialog and add the additional start method in the settings of your Server processes.

6.2.8 Integration

UC4.ApplicationInterface

New interface to the UC4 system
TheUC4.ApplicationInterfacenow provides external access to processing in the UC4 system. The supplied JAR file contains numerous classes which can be integrated in your Java programs. You can create objects in an automated way, edit existing objects or start tasks. Also, the new interface provides access to the System Overview and information about clients, Executors and Server processes can be obtained. Java classes can also be used to read reports and other statistical data and monitor activities.

UC4.Plug-in for Java IDEs

SAP NetWeaver Developer Studio Version 2.0* released

UC4 Smart Plug-In for HP OpenView Operations

UC4 Smart Plug-In for HP OpenView Operations version 8.2 released
Required are:

For UNIX:

- HP-UX version 11.11
- Solaris 8

For Windows:

- Windows 2003

UC4 Servers can be monitored on the following platforms:

- HP-UX version 11.11
- Linux version 2.4*
- Windows 2003
- AIX Version 5.2

UC4.Connect for HP OpenView NNM

UC4.Connect for HP OpenView NNM for version 7.x (Windows and HP-UX Version 11.11) released

6.3 Improvements

[Highlights] [New Functions] [Improvements]

General

Improved workload balancing
Executor always connect to the UC4 system's communication process which shows the lowest workload. One new feature is that Executors are informed about newly started communication processes even after connection establishment. By doing so, they can switch their connection if a reconnection takes place. This approach ensures that the workload is distributed among all active communication processes (workload balancing).

New icons which represent restarted task
Restarts and their original executions are now better recognized:

- Repeated executions
- Restarts
- Latest restart of an execution

Up until now, restarts were displayed with an "R".

Only subordinate tasks which were aborted can be restarted.

6.3.1 Server

General

Immediate start of tasks in waiting condition The Activity Window's context menu contains a new command "Express". It immediately starts tasks which are in a waiting condition "Waiting for resource". This action can also be taken with the script functionMODIFY_UC_OBJECT.	
Changing attributes without using :PUT_ATT Some attributes can be set directly without calling :PUT_ATT. Enter a script variable in the relevant object's **Attributes** tab. This script variable is replaced by the value defined in the Process or PreProcess tab or in the form of an object variable before the object is processed. The documents describing the attributes which support this type of setting values now include the information "via script variable" in the column "Accesses".	
Extended functionality	
RESTART_UC_OBJECT - Additional flag The new flag "ONLY_ABENDED" can be used to repeat subordinate tasks which were aborted.	

6.3.2 DialogClient

General	
Specification of font type and size You can select the font type and size to be used for scripts, reports and activation logs in the settings of the DialogClient. Font type "Courier New", size 14 is the default setting. The font size can also be modified using the CTRL key in combination with the scroll wheel. This also applies for the Message Window or for views of JobPlans and their monitors which can be maximized or minimized.	
Tabs for desktops Up until now, the bottom bar of a DialogClient displayed a box per workspace. This view has been changed into tabs in order to provide a better overview. These tabs contain the name of the particular UC4 system and the client if connection desktops are concerned. User-defined desktops are displayed with an individually determined description and color.	
Better overview for object creation It is possible to limit the content of the selection dialog which is displayed while creating objects. In doing so, each user can select from the particular object types which he is allowed to create. By default, the dialog includes all object types. Specify the value "N" in the validity keyword TEMPLATE_SHOW_ALL in the UC4 VariableUC_CLIENT_SETTINGSif you intend to use this new function.	
System Overview includes new column for Executors TheExecutor listcontains a new column "authorizations" which informs about the rights which were assigned to that particular Executor.	
New command for opening the UC4 Explorer The context menu in the DialogClient's windows (such as Activity Window or search) contains the new command "Explorer". It opens a UC4 Explorer which displays the folder in which the highlighted object is found.	
New column in the Activity Window The new column "Runtime" shows the time span which has past since the task was started.	

Opened flag improved
Up to now, the "opened flag" was set when the object was opened and removed when it was closed. It shows the user who is editing the object. If the DialogClient lost connection to the UC4 system, the "opened flag" remained open and users could reopen their opened objects only via the privilege "Reset opened flag". This behavior has been changed and the "opened flag" is now automatically reset so that users can gain access to their objects.

Highlighted lines in list view
Every second line of Windows and Dialogs containing list view is now displayed with a blue background. By doing so, this gives the list a more apparent structure.

Archive keys for User objects
Archive keys can be stored in the **Header** tab. Two new columns are provided which show them and facilitate sorting.

Archive keys for Executor objects
Archive keys can be stored in the **Header** tab. They are displayed in the UC4 Explorer.

New start parameter -V
Use the start parameter -V and the DialogClient returns the UC4 version including hotfix number.

6.3.3 Executor

All OS Executors

Final file name is assigned when the FileTransfer has successfully ended
Up until now, OS Executors assigned a final file name as soon as the FileTransfer had been started. This has been changed with the implementation of an extension and the FileTransfer can be executed with a temporary file name. This name is composed of the letter "T" and the RUN# which is expressed in an alphabetic string. The file obtains its final name only when the file has successfully been transferred. Special configurations can be defined in the Executor's INI-file parameter as shown below:

```
[GLOBAL]
ft_temp_file=yes
```

A huge advantage of using temporary files is that subsequent processing is simplified because the file only obtains its final name after the successful transfer.

All Executors which run on UNIX and Windows

New start parameter -V
Use the start parameter -V and the Executors supply the UC4 version and hotfix number.

J2EE/JMX

Various improvements and extensions

- The MBean browser can be used to access MBeans using its "Forms" tab. It now displays a maximum of 300 entries. The headline in the browser window shows the total number of available MBeans. If there are more than 300, you can limit the view using filters.
- The function JMX_QUERY_NAMES provides the additional parameter MAXROWS= which can be used to limit the number of returned MBeans. The Executor does not limit the result if this parameter is undefined.
- The Executor generates an additional log file in SAP format. It is automatically stored in subfolder "log" of the Executor's installation directory. Further processing is easily possible using SAP Tools.

NSK

Naming Executors during installation has been simplified
By default, the system name of the NonStop Server without "\" is now used as the Executor name:

UC4-EXECUTOR-NAME=%NODENAME%

It is also possible to extend the Executor name using pre- or post-fixes. Example:

UC4-EXECUTOR-NAME=UC4%NODENAME%EXE

PeopleSoft

Extended functionality

PS_MODIFY_RUNCONTROL - new parameters
The new parameters KEYNAME(n)= and KEYVALUE(n)= can be used to modify the values of child records.

SAP

Additional options for spool-list receivers
Additional options are provided in the Job object and in the function R3_SEND_SPOOL_REQUEST. They can be used to manage printing privileges and receipts.

This function requires the following SAP Support Packages:

- for 4.6C: SAPKB46C52
- for 6.20: SAPKB62059
- for 6.40: SAPKB64017
- for 7.00: SAPKB70008

VMS

New start parameter /VER
The Executor supplies the UC4 version including the hotfix number if the start parameter /VER or /VER=*file name* is used.

6.3.4 Documentation

General
Detail Window contents A separate document now describes all entries that are available in the Detail window. They are listed in alphabetical order so that contents can easily be searched for.
Required parameters highlighted All parameters which must be adjusted to your system environment are now highlighted **in red** in the descriptions of the configuration files (e.g. INI files). This makes the installation process much easier.

6.3.5 Utilities

General
New start parameter -V Use the start parameter -V and the Executors supply the UC4 version and hotfix number.

Archive Browser
Search function in data area Contents of statistics, messages and reports can now directly searched in the Archive Browser.

6.3.6 ServiceManager

General
Clear-structured SMD file TheSMD file'sreadability has been increased, variables can now be used in DEFINE statements.

7 Release Notes Version 5.00A

7.1 Highlights

[Highlights] [New Functions] [Improvements]

- UC4.Executor for J2EE/JMX released
- UC4.Executor for Linux (SLES Version 9) on Itanium released
- UC4.Executor for NSK (H-Series) on Itanium released
- UC4.ServiceManager for Linux (SLES Version 9) on Itanium released
- UC4 Smart Plug-In for HP OpenView Operations on UNIX released
- New "QueueManager" object
- External JobPlan dependencies
- Dynamic Calendar
- Revision report for object modifications
- Open Interface to Output Management Systems
- Performance optimization
- System Schedule
- Multi-desktop mode
- Hierarchical Activity Window
- FileTransfer compression
- Password Exit
- Generation Data Groups now supported in the UC4.Executor for OS/390
- Monitoring files to be closed in the UC4.Executor for OS/390
- Integration in SAP Enterprise Portal (iViews)
- Viewing objects via the UC4.WebGUI
- Extended ways of handling child processes
- Spool list recipients of SAP jobs
- New functions R3_CREATE_OUTPUT_REQUEST, R3_GET_SPOOLREQUESTS, R3_SEND_SPOOL_REQUEST
- Extended function R3_GET_JOB_SPOOL
- SAP calendar conditions can be transferred
- Using PeopleSoft processes with Bind Variables
- GCOS8 CallAPI can be called from own programs
- OSS and NetBatch supported in the UC4.Executor for NSK
- JCL Exit for OS/390 Jobs
- New introductory chapter "Getting Started"
- Administrator Manual and Release Notes can now be removed from the UC4 Documentation
- Extended search functionalities in the UC4 Documentation (HTML help)
- Extended modifications possible in active Schedules
- User-friendly selection field for date specifications
- Objects highlighted in search for usage results
- Objects can now be edited from anywhere in the DialogClient
- Statistics window settings can now be stored
- New functionality GET_EVENT_INFO
- New functionality GET_STATISTIC_DETAIL
- New functionality for MODIFY_UC_OBJECT

7.1.1 Notes for the Update Installation

The symbol characterizes new functionalities which need to be adjusted manually.

License verification was corrected because so far, more UC4 components could be used than licenses were purchased. Please check if the number of UC4 components you use corresponds to the number of licenses purchased. The concerned components can no longer be started when licenses are missing.

ORACLE version 9.2 or later is required in order to use ORACLE as the UC4 Database. Note that the ORACLE-client version must correspond to the ORACLE version in use.

The **UC4 Database** is now controlled more closely! Please keep the following details in mind in order to avoid unexpected problems. Pay special attention when working with **Oracle** that the database-client settings correspond to the database settings. Details on how to check and specify the particular settings of an ORACLE database for UC4 are provided in the corresponding documentation.

UC4 components on **Solaris (Intel)** are only supported for **Version 5.8** and later ones.

As of version 5.00A, **ORACLE** uses data of type BLOB and CLOB instead of LONG RAW and LONG VARCHAR as fields of type LONG cannot be reorganized online. Data types are converted automatically but if reports should be converted as well, the file UC_UD.TXT must be adjusted. More information is available in the documentation aboutupdating databases.

Adhere to the important instructions for the updating process from **DB2 to OS/390.** Further details are found in the documentation about updating databases.

Note that modifications to database contents result in an inconsistent database! Do not process SQL statements in the UC4 Database.

File search in FileTransfers and FileSystem Events with wildcards were changed. They are no longer compatible with **UNIX Executors**. This update installation requires the value "no" to be specified in the new parameter WorkDirMatch= in the INI file. Read the description for this parameter and adjust it if it affects your processes negatively.

File search in FileTransfers and FileSystem Events with wildcards were changed. They are no longer compatible with **UNIX Executors**. So far, the search did not include sub-directories. In the update installation, the new parameter WorkDirMatch= is set in theINI file so that sub-directories are now included. UC4 recommends changing this parameter if the Executor affects your system performance negatively.

A modification concerning the Event object was made in the authorization system. So far, right "M" was required in order to cancel or to end an Event. Now the authorization "M" is required to end it and "C" to cancel it.

The earliest date for the calculation of Calendar data is 01.01.1970.

The Headers of jobs -which are found in the HEADER folder of system client 0000, have been extended. Hence, an additional Include object can be used whose script statements are then processed before the Pre Process. The following extract of a Windows-Job Header serves as an example:

```
:INC HEADER.WINDOWS.USER.PRE ,nofound=ignore
:INC_SCRIPT(1)
:INC HEADER.WINDOWS.USER.HEAD ,nofound=ignore
```

If the Include HEADER.MVS.USER.HEAD for **OS/390-Jobs** has been used so far, rename it to HEADER.MVS.USER.PRE if the script statements should be processed before the Pre Process.

- Attention when updating **MPE Executors**: The group name has been changed from "UC4GRP" to "UC4GLOBL". Adjust the file EXSTART or create the new group "UC4GLOBL".
- The file names for **NSK Jobs** and their reports have been slightly changed. The ending "TXT." is no longer used.

So far:

- Job file: <UC_EX_PATH_TEMP>**TXT.J**<RUN#>
- Job-report file: <UC_EX_PATH_JOBREPORT>**TXT.O**<RUN#>

Now:

- Job file: <UC_EX_PATH_TEMP>**J**<RUN#>
- Job-report file: <UC_EX_PATH_JOBREPORT>**O**<RUN#>

- An extra statistical record is available for each period of a Schedule. This includes a new RUN# which is assigned with each period turnaround. In doing so, the Job, which has become active because of the period turnaround, obtains a different RUN# in the post process. The RUN# of the job-activating Schedule can be assigned to the post process using the script statement :RSET.
- So far, if "???.txt" had been used as a wildcard FileTransfer under Windows, files such as a.txt could also be found. This has been corrected and "?" now stands for one character. This, however, is an incompatible change.
- Groups started twice previously ended with the status FAULT_OTHER (1820)- no end with the status FAULT_ALREADY_RUNNING (1822).
- In versions 3.00A and later, it is no longer possible to read Calendars with SYS_ACT_PARENT_NAME() in CallOperators that are called with CALE_WARN_CALL_OPERATOR. Use :READ &UC_CAUSE_NAME,, instead.
- The activator of an escalating CallOperator can be retrieved in the script with :READ &UC_CAUSE_NR,,. Please keep in mind that the parameter "ACT" must be assigned now if SYS_ACT_PARENT_NR is used instead.

Example:
:SET &RUNNR# = SYS_ACT_PARENT_NR(ACT)

The RUN# is no longer retrieved when the parameter "PRC" or empty parentheses () are used. More detailed information about the parameters "ACT" and "PRC" are found in the document that describes the superordinate task.

- The script element MODIFY_OBJECT has been changed due to the new Calendar objects that are provided. The new parameter *Calendar keyword* has been added. Adjust the syntax in your scripts with the search for usage.

So far:

- **MODIFY_OBJECT** *(object name, [title] [,[date format:]date1] [,[date format:]date2]])*

Now:

- **MODIFY_OBJECT** *(object name, [title], [Calendar keyword] [,[date format:]date1] [,[date format:]date2]])*

Calendar objects from previous versions can be imported into UC4:global 5.00A using the UC4 transport case. After the transport you must open and save the transported objects in the UC4.DialogClient to provide the keywords with dates.

The behavior of groups in JobPlans has been adjusted. Processing continues if a JobPlan execution reaches a group and there are no tasks to be started with. Up to now, the group waited if value "0" had been specified as the maximum number of parallel running tasks.

Starting with this version, Event objects are displayed with a new symbol:

The search for use starts immediately when it is called via the context menu of the UC4 Explorer. By default it includes all folders and Process tabs.

Object templates of system client 0000 can no longer be renamed. This includes UC4 variables, standard code tables, standard time zones and object templates.

The language of SAP jobs is indicated with two digits. GET_ATT used with SAP_LANG supplies DE or EN. For compatibility reasons, two digits can be used with :PUT_ATT as well as the notation with one digit that has been in use so far.

The following two parameters were renamed in the INI file of the Windows Executor: wbtexe= to ECPEXE= and wbtext= to ECPEXT=. For reasons of compatibility, the existing names can still be used.

7.1.2 Components to be installed

UC4 Database ✓	UC4 Server ✓	DialogClient ✓	Utilities ✓

7.2 New Functions

[Highlights] [New Functions] [Improvements]

General	
New "QueueManager" object The QueueManager facilitates the monitoring and controlling of non-UC4 operations. These can be PeopleSoft processes and SAP jobs. Filter criteria serve to determine the non-UC4 operations that should be assumed to UC4. They are displayed as the QueueManager's children in the Activity Window. The QueueManager can start, intercept and cancel operations and can access their statistics and reports.	
External JobPlan dependencies Dependencies to tasks that are not part of the JobPlan can now be defined without Sync objects. These external dependencies are displayed in JobPlans in the form of dashed boxes. The expected end status, reaction to other states and calendar conditions can be specified in the properties of these external dependencies.	
Dynamic Calendar The Calendar object has been extended. Several types of Calendar keywords are now available which facilitate the easy assignment of days. Calendar objects do no longer depend on validity areas, hence maintenance work is reduced to a minimum. Holiday Calendars are supplied which can be used in your tasks.	

System Schedule The System Schedule can be used to execute objects once at a particular point in time. Click *Execute...* for a particular object in the context menu of the UC4 Explorer in order to determine a start time. The object is then assigned to the System Schedule and can be seen in the Activity Window as a task.
Extended modifications possible in active Schedules The Schedule monitor can now also be used to add new tasks on a temporary basis. Additionally, tasks and property changes made directly in the Schedule object can be activated at the next period turnaround. Restarting the Schedule is not necessary such cases.

7.2.1 Database

General
Optimized database accesses Deadlock situations could occur due to the database behavior of SQL Server, DB2 and Oracle. By improving internal processing, the occurrence of these situations was significantly reduced.

7.2.2 Server

General
Performance improvement Performance improvement can be achieved by optimizing the database accesses and internal messages.
External password check A password exit is called with every UC4 user logon. It checks whether or not the indicated Login information is valid.
New Functionalities
GET_EVENT_INFO - Reads message data of an occurred File System Event.
GET_STATISTIC_DETAIL - Retrieves details from a statistical record of an executable object.
MODIFY_UC_OBJECT - Additional new function Additional parameters make it possible for tasks to now be modified in active JobPlans. Tasks can so be started immediately, earliest start times be set or removed and dependencies to direct predecessor be deleted. The modifications are valid for that particular execution.
LOG_DUMP, TRACE, TRACE_DUMP - Output values of an indicated memory range to files. These useful script functions serve diagnostic purposes and as all trace settings, they must only be used in close cooperation with the support team.

7.2.3 DialogClient

General

Multi-desktop mode
The desktop, the working environment of the DialogClient, is used to create objects and monitor their execution. The number of windows used can be numerous, depending on the various functions that are available. The multi-desktop mode can be used to keep a clear overview. An individual working environment is created for each connection. Additionally, new desktops can also be created. The advantage is that the window of different connections can be displayed in one working environment.
Each user can activate the multi-desktop mode in the settings of the DialogClient.

Hierarchical Activity Window
The Activity Window can now be displayed in two ways:

- List view
- Hierarchical view

The hierarchical view groups tasks which have a common main task (parent) - such as JobPlans or groups. In doing so, information is available in a more structured form and the server load is reduced.
Users can define their preferred view in the settings of the Activity Window.

Objects can now be edited from anywhere in the DialogClient
The menu item "Edit" has already been available in many windows. Nevertheless, this function has been extended and is now available almost anywhere. Just right-click on an object name that is written in a text box or a table (e.g. in the Sync tab) and it opens.Object uses can also be searched for.

Objects highlighted in search for usage results
The search function for findingobject usageshas been extended. If an object is opened from within the search result, the object that has been searched for is highlighted with a colored frame. This feature helps to find particular objects easier especially in JobPlans that contain numerous tasks.

Statistics window settings can now be stored
The size, position and order of columns shown in the statistics window can now be stored. Adjust it according to your requirements and call the command *Save window settings now* from the menu *Options.* The specified settings then apply to any statistics window you open.

User-friendly selection field for date specifications
An extra selection field is now available in all positions of the DialogClient where a date must be indicated. The graphical user interface allows the date to be specified easily.

Extended selection of commands in the Activity Window
Various commands can be selected in the JobPlan monitor which allow interference in the processing of tasks. The most important ones can now also be selected directly in the Activity Window.

7.2.4 Executors

BS2000, OS/390, UNIX, VMS, Windows

FileTransfer compression
Compression is now possible for FileTransfers using the platforms mentioned above. A particular one can be selected in the FileTransfer object or stored as default values in the Executor's host settings.
Detailed information about compression types and configuration is found in the document that describes theexecution of FileTransfers.

J2EE/JMX

UC4.Executor for J2EE/JMX released
Requirements:
Java version 1.4 and later
JMX version 1.1 and later
JMX Remote API version 1.0 (optional) and later
UC4 Version 3.02D and later

Application Server:

- Tomcat Version 5 and later
- SAP NetWeaver '04
- BEA Weblogic Version 8.1 (Service Pack 2) and Version 9
- IBM WebSphere Version 6

UNIX

UC4.Executor for NSK (H-Series) on Itanium released

OSS and NetBatch supported
The NSK Executorhas been extended so that Jobs can now be processed with OSS and NetBatch.

OS/390

Monitoring files to be closed
The Event object now contains an additional configuration which can be used to monitor files that are closed. Select the option **Automatically** in the **Event** tab. The file description can either contain the full name or the wildcard characters "*" and "?".
This function can be used when the parameter smfwrite=1 (section CONSOLE) is set in the Executor's INI file.

Generation Data Groups now supported
Generation Data Groups (GDG) can now be used in FileSystem Event objects and in the script element GET_FILESYSTEM. Some specific settings need to be made; they are described in the documentGDG support.

JCL Exit for OS/390 Jobs
JCL-ExitModule is now available for the execution of OS/390 Jobs. It can be used for subsequent JCL modifications in the OS/390 system.

PeopleSoft

Using PeopleSoft processes with Bind Variables
The new functionPS_SET_BINDVARreplaces a value of a Bind Variable. Hence PeopleSoft processes using this variable can also be executed. Replacement is either made using a pre-determined value or via a Run Control ID.
The particular specifications required for this function are in the PeopleTools database. Detailed information is available in the installation manual(Windows or UNIX).

SAP	
Extended ways of handling child processes SAP jobs can contain one or several sub jobs (e.g. in process chains). Upon specification, UC4 displays these child processes. They are displayed in the Activity Window and have their own statistical records and reports. The specific **Child Post Process** tab is available for SAP jobs. It is processed when an individual child process ends.	
Spool list recipients of SAP jobs Specifications for spool list recipients can now be made when creating SAP jobs.	
Transfer of SAP calendar conditions An ABAP program of the UC4 interface can now be used toexport factory calendars in XML files. These can then be transferred to the UC4 system.	
New Functionalities	
R3_CREATE_OUTPUT_REQUEST - Creates a new output request for an existing spool request	
R3_GET_SPOOLREQUESTS - Selects spool requests with pre-defined filters	
R3_SEND_SPOOL_REQUEST - Sends an existing spool request	
Extended Functionality	
R3_GET_JOB_SPOOL - New parameter The four new parameters for indicating the spool-request number, output format, pages and filters support the reading of spool lists.	

UNIX	
UC4.Executor for Linux (SLES Version 9) on Itanium released	

7.2.5 Documentation

General	
New introductory chapter "Getting Started" The User Manual now contains a new chapter "Getting Started". It introduces UC4 beginners to the basics of UC4:global through comprehensible explanations and examples.	
Administrator Manual and Modification Archivecannow be removed from the UC4 Documentation The Administrator Manual and Release Notes can now be removed from the HTML help and the WebHelp. You can now decide whether the entire UC4 Documentation, a version without the Administrator Manual and/or the Modification Archive should be available for users. Detailed instructions about removing these parts of the UC4 Documentation are found in the installation instructions of the UC4 Documentation.	
Extended search The search result output was extended. The column "location" now contains the document title as well as the main chapter of which it is part (such as User Manual, UC4 Script,or Sample Collection).	

Description of XML files of objects
The chapter Inside UC4 now comprehensively describes the XML files required for object imports and exports. The individual elements and attributes including their allowed values are explained in detail. The documents also include links to the corresponding tabs.

7.2.6 Utilities

Archive Program

Open Interface to Output Management Systems
Execution and report data of jobs and file transfers can now be exported to files. Report contents and information such as object names, return codes and starting times are then available. The utility UC4.DB Archive facilitates this data to be exported. It can also be directly accessed via the database table.
The logging of report data can be activated by setting the validity keyword XRO_REPORTS in the variable UC_CLIENT_SETTINGS to "Y". Data can then be unloaded any time with the archive program.

Revision Program

Revision report for object modifications
This function allows the creation of reports which log modifications and adaptations made to objects. Hence all changes can completely be traced. The following areas are monitored:

- Task starts
- Modifications at runtime
- Task abortions
- Imported objects
- Deleted objects
- Modifications to objects
- Unauthorized accesses of any kind

The revision program UCYBDBRR.EXE is available for exporting this data to reports. Logging can be activated in the individual clients by setting the validity keyword OBJECT_AUDIT in the UC4 Variable UC_CLIENT_SETTINGS to "Y". The data can then be unloaded with the revision program at any time.

7.2.7 ServiceManager

UNIX

UC4.ServiceManager for Linux (SLES Version 9) on Itanium released

7.2.8 CallAPI

GCOS8

GCOS8 CallAPI can be called from own programs
The CallAPI for GCOS8 can be called from the utility and from own programs. Example files are provide on the delivery directory.

7.2.9 WebGUI

General	
Viewing objects Objects of type FileTransfer, Job, JobPlan, Include and Script can now be opened and their settings be viewed in the WebGUI. Modifying these objects is not possible.	

7.2.10 Integration

SAP Enterprise Portal	
Integration in SAP Enterprise Portal (iViews) Tasks can now be started and monitored using the SAP Enterprise Portal. UC4:global provides the current status via the iView technology. The requirements are: • SAP Enterprise Portal 6.0	

UC4 Smart Plug-In for HP OpenView Operations	
The UC4 Smart Plug-In was released for HP OpenView Operations on UNIX Read more about the requirements in the installation checklist.	

7.3 Improvements

[Highlights] [New Functions] [Improvements]

7.3.1 Database

General	
Specifying code-page settings Code-page settings must comply with database settings. Configuration settings can be stored in the INI files of the UC4 Servers and utilities and apply for the particular session. Use the new parameter SP= in SQLDRIVERCONNECT= which is found in the section [ODBC].	

7.3.2 Server

General	
Mode of the primary work process can be specified The primary work process serves to process special messages. A new parameter is now available in the INI file which controls whether it should also serve as regular work process. Set the parameter PrimaryMode= (Section [GLOBAL]) in the file UCSRV.INI to "1" if the primary work process should only process own messages in order to reduce the workload.	

Transporting Users and User groups now possible Details are described in the document UC4 Transport Case.	
Deactivating Include objects in Headers and Trailers A new setting can now be used to deactivate user-defined Include objects which are not used in Headers and Trailers of Jobs. Performance can also be increased as database accesses are avoided. Use the validity keyword DISABLE_USER_HEADER in the UC4 VariableUC_SYSTEM_SETTINGS for this configuration.	
New command in the context menu "Cancel (recursive)" This command cancels a task including all sub-ordinate tasks as well as tasks that are currently running. This is available in JobPlans, Schedules and Groups.	
Binding ports to a particular IP address The port numbers of Server processes can now be allotted to a particular IP address. You can either add this IP address to the port in the INI FILE ucsrv.ini or use the new parameter bindaddr=.	
Extended Functionality	
ACTIVATE_UC_OBJECT - additional parameters With the new parameters "start time" and "time zone", objects can be processed on a particular date.	
CANCEL_UC_OBJECT - extension The new keyword ALL can now be assigned with the parameter "Extension". Tasks (including running ones) can so be canceled in JobPlans, Schedules and Groups.	
SYS_ACTIVE_COUNT - additional parameters and extension. The new parameter "Host" can be used to check whether tasks running on the indicated host are already active. It is also possible to retrieve the number of active Jobs with the parameter "Status".	
:ATTACH_SYNC - extension Sync objects of system client 0000 can now also be specified.	
:SEND_MSG - Extension This script statement can now be used in combination with :ON_ERROR, thereby reacting to a non-existing user.	

7.3.3 DialogClient

General	
XML encoding can be specified New parameters are available in the UC4 Variable UC_SYSTEM_SETTINGS which enable the specification of character encodings that should be used in the UC4 system. Additionally, you can check whether or not imported XML files have the same encoding. Enter the required values in UC_SYSTEM_SETTINGSusing the validity keywords XML_ ENCODING and XML_ENCODING_CHECK.	

Display of unread messages Administrator and security messages are usually not displayed unless a User with authorization to obtain them has logged on to the UC4 system. A new function is now available which serves to collect these messages so that they can be displayed when an authorized User logs on. You can activate that unread messages should be collected in the UC4 VariableUC_SYSTEM_SETTINGSusing the validity keywords UNREAD_MESSAGES and UNREAD_MESSAGES_BUFFER.	
Improved CallOperator notification It can be specified in the settings of the DialogClient whether the CallOperator monitor should open automatically when a message arrives. Also the DialogClient is now maximized so that notification is visualized to a higher extent.	
Linking lines in JobPlans improved The lines connecting individual tasks in JobPlans are now displayed in the form of arrows. Now they clearly indicate the order in which tasks are processed.	
Extended search command An extensive context menu lists the results of the Search function. The new command "Explorer" is very useful because it opens the UC4 Explorer in exactly the same folder in which the object that was searched for is available.	
Menu item for duplicating folders So far, folders could be duplicated using the SHIFT key. Now an extra menu item is available for doing so.	
Earliest start time displayed The Detail Window of JobPlans now displays the earliest starting time if it was specified in the START box.	
Start time for tasks in Schedules The point of time defined for the Schedule's periodic turnaround is automatically suggested as start time.	
Duplicated lines in Forms The "Forms" tab in PeopleSoft- and SAP jobs now contains a new button for duplicating lines which allows the ease of creating scripts.	
Exclusion of Script usage When deleting or renaming an object, you can have a list showing the usage of this object in other objects be displayed. A new validity keyword is now available in client settings which can be used to include or exclude object used in scripts. Enter the validity keywordSEARCH_SCRIPT_FOR_USAGE in the UC4 Variable UC_CLIENT_SETTINGS and assign a value ("Y" or "N").	
Limitation of displayed objects The number of objects to be displayed in the Recycle Bin and Version Management can now be specified. The current date serves as the basis, i.e. the last *n* objects are displayed. Enter the validity keywords TRASHBIN_SHOW_MAX and VERSIONS_SHOW_MAX in the UC4 Variable UC_SYSTEM_SETTINGS and assign the required values.	
Selectable time format Now users can specify their own preferred format of time display(Time format / Calendar tab). By default, the computer's time format is used.	

Screenshot function You can want to screenshot particular DialogClient windows. Do so using the command "*Screenshot*" which is available in the menu *Options* in the DialogClient.	
Display of license category The System Overview displays the license category of each Executor.	
Calculation of next start time It is now possible to calculate the next start time for tasks in the Schedule monitor using the corresponding command in the context menu. This is especially useful for changing Calendar conditions.	

7.3.4 Executor

General	
Binding ports to a particular IP address The port numbers of Executors can now be allotted to a particular IP address. You can either add this IP address to the port in the INI file or use the new parameter bindaddr=. This function is not yet available for GCOS8.	

MPE	
Improved login verification With the newly added parameter login_check=, you can define whether or not the passwords of Login objects for Jobs and FileTransfers should be checked.	

SAP	
Extended Functionality	
BCA_ACTIVATE_PROCESS - Job-class assignment The process priority can be specified via the job class which is defined in the "SAP" tab of the particular Job.	
R3_ACTIVATE_SESSIONS and R3_GET_SESSIONS - additional parameter The selection of batch input maps can be sorted using the new parameter "ORDER_BY".	
R3_ACTIVATE_REPORT - additional parameter Texting and framing can be handled with the new parameters "TEXTONLY" and "FRAMES". Requirements for using these parameters (see also SAP note 777337): • SAP Basis Release 6.20 with support package SAPKB62045 • SAP Basis Release 6.40 with support package SAPKB64010	

Windows

Storing the home directory to increase performance
A new parameter is now available in the INI file which can be used to determine that the home directory of the Login user should be stored for a particular period of time. The default value is 10 minutes. You can also specify that the home directory should not be stored.
Adjust the parameter HomeDirCache= in the INI file of the Windows Executor according to your **requirements**.

7.3.5 Documentation

General
Using the UC4 Documentation A new document is now available providing information on ways of using UC4 Documentation so that specific information can be found easier.
Main chapter UC4 Script The contents of the UC4 Script chapter, previously located in the User Manual, are now available in a main chapter and can be accessed directly.
New introductory chapter to UC4 Script A new and comprehensive introductory chapter serves to give more detail about UC4's script language.
Revised documentation of script statements More details and screenshots are provided to explain UC4 script statements. An extra table explaining possible return codes has been added in order to make handling script functions even easier.
Improved chapter about the authorization system The documentation about the authorization system has been extended. Now it provides a comprehensive survey about the assignment of rights in UC4 and corresponding peculiarities.

7.3.6 Utilities

Loading program
Transporting to and from system client 0000 Objects can now be loaded to and from system client 0000. Be careful in the former because overwriting system objects such as UC4 Variables can affect other clients as well. The loading program therefore displays a warning message before it starts the loading process.

UC4.DB Change
Changing folder names The new attribute FOLDER_NAME can be used to change folder names.

Migration Tool

Database check provides additional information
The report created when checking the 2.6x database now also contains the contents of all clients' UC4 Variables.

7.3.7 WebGUI

General

Alternative communication processes
New parameters in the configuration fileweb.xml indicate that two additional communication processes can be specified. These are used when the first communication process is inactive.
Adjust the parameters Server name2 and Port2 or also Server name3 and Port3 to your system environment to make use of this function.

7.3.8 CallAPI

OS/390

CodeTable selection
You can define the CodeTable that should be used in theINI file of the OS/390 CallAPI. Enter the name of the CodeTable object in the section [GLOBAL] using the parameter codetable=.

8 Release Notes Version 3.02

8.1 Highlights

Version 3.02A

- Executor for PeopleSoft Version 8.4* released
- Executor for OS/400 released
- New System Overview
- UC4 Explorer with three new functions
- Structured Documentation with supporting Script elements
- Version Control for objects
- New and extended Script elements
- New variable UC_EX_ERP_CONNECT in the system client
- Output of detail text of SAP messages

Version 3.02B

- UC4.NonStopServer
- New type of Server process "Dialog Process" (DWP) available
- Auto Forecast for displaying tasks that will run
- New design for Detail Windows
- Magnetic windows in the DialogClient
- Drag & Drop supported in the Search dialog and context menu extended
- Versions Management directly in the object including a restore function
- Tasks and task chains can now be copied from one JobPlan or Schedule to another
- New chapter "Inside UC4" and "Example Collection" included in the documentation
- The utilities have been improved and can now be used platform-independently.
- Accessing the UC4 system through the Internet with UC4.WebGUI
- New tool supporting the migration process
- Oracle version 10g is now supported
- UC4 Executor for GCOS 8 SR 5.2 released
- UC4 Executor for SAP on Linux and z/Linux released
- UC4 Executor for MPE 6.5 including CallAPI released (HP3000)
- UC4 Executor for PeopleSoft for People Tools version 8.44 and 8.45 released
- UC4 Executor for PeopleSoft on AIX 5.1 released
- UC4.Executor for Siebel 7.5 on Windows (2003, 2000 and XP) released
- UC4.Executor for HP-UX 11i (Itanium) released
- UC4.Executor for Windows 2003 (Itanium, I64) released
- New UC4.PlusModule for Tivoli
- UC4.Connect for HP OpenView Operations, version 7.1 and later
- UC4.Connect for SAP Monitoring via XMW interface
- Extension of system client 0000
- New message-comparing program
- Naming and sorting of Login objects can be specified (update)
- New report type SLOG for SAP Jobs
- Email connection through SMTP for Windows and UNIX Executors
- New functionality R3_GET_VARIANT_CONTENTS
- New functionalities CALE_LOOK_AHEAD, CHANGE_LOGGING, FORECAST_OBJECT, FORECAST_TASK and STR_SUBSTITUTE_VAR

8.2 New Functions

The  symbol characterizes new functionalities which need to be adjusted manually in the particular INI files when updating your UC4 version.

Database

[Database] [UC4 Server] [DialogClient] [Executors] [Utilities] [WebGUI] [External Integration]

Oracle
Oracle version 10g is now supported

UC4 Server

[Database] [UC4 Server] [DialogClient] [Executors] [Utilities] [WebGUI] [External Integration]

General	
Version 3.02A	
New script elements	
:SHUTDOWN - Ends a UC4 system	
:TERMINATE - Ends an Executor, a work-, or communication process	
ALPHA2RUNNR – Converts a string (letters) to a RUN#	
CINT - Converts a string to a number	
CSTR - Converts a number to a string	
EXPORT - Exports objects to an XML file	
IMPORT - Imports objects from an XML file	
RESTART_UC_OBJECT - Repeats the execution of a task	
RUNNR2ALPHA - Converts the RUN# to a string (letters)	
SYS_SERVER_ALIVE - Checks if a certain server process is active	
Script elements for Structured Documentation To enable access to structured documentations, Script elements have been implemented. The structured documentation can be opened with XML_OPEN_DOCU and read with several Script functions. It can be closed with :XML_CLOSE_DOCU.	
:XML_CLOSE_DOCU - Closes structured documentation	
XML_BEAUTIFY - Beautifies the display of an element's structure	
XML_GET_ATTRIBUTE - Supplies the value of an attribute	
XML_GET_CHILD_COUNT - Counts the sub-elements of an element	
XML_GET_FIRST_CHILD - Identifies the first sub-element of an element	
XML_GET_NEXTSIBLING - Identifies the succeeding element	
XML_GET_NODE_NAME - Supplies the name of an element	
XML_GET_NODE_TEXT - Supplies the text of an element	

XML_OPEN_DOCU - Opens structured documentation for processing	
XML_PRINTINTOFILE - Writes the structure of an element in an XML file	
XML_SELECT_NODE - Identifies any element	
Version 3.02B	
New Server process type "Dialog Process" (DWP). This type of Server process is exclusively responsible for the handling of DialogClient messages, therefore improving the UC4 system's overall performance. From the technical point of view, Dialog processes function in the same way that work processes function. Switching from WP to DWP and vice versa is possible in the System Overview or with the script element SET_UC_SETTING. The number of Dialog processes can be handled in the UC4 Variable UC_SYSTEM_SETTINGS with the validity keyword WP_MIN_NUMBER.	
UC4.NonStopServer Reliability can be increased by changing some of the Server processes to NonStop processes. The computer on which the NonStop processes have been installed takes on processing when the computer with the active Server processes stops. Technically, NonStop processes function in the same way that work processes function. An extra license is required.	
New Functionalities	
AUTOFORECAST - Calculates forecast data for future activities	
CALE_LOOK_AHEAD - Retrieves the next date on the basis of Calendar conditions	
CHANGE_LOGGING - Causes the log file of Server processes and Executors to be changed The log file can also be changed manually in the System Overview	
FORECAST_OBJECT - Creates a forecast for the specified object	
FORECAST_TASK - Creates a forecast for the specified task	
STR_SUBSTITUTE_VAR - Replaces script variables with their values. It can be used independently and in combination with GET_PROCESS_LINE.	

DialogClient

[Database] [UC4 Server] [DialogClient] [Executors] [Utilities] [WebGUI] [External Integration]

General	
Version 3.02A	

New System Overview
The new design of the System Overview now offers various ways of administering the UC4 system. The SystemOverview contains several categories such as Servers, Executors or Users, including detailed information about them. Among other things, the following information is available:

- Display of the workload
- A list of all active and inactive Server processes, Executors and users
- Access to their statistics and reports
- Messages to users and administrators as well as security messages
- Overview of the database in use
- A list of licenses

Additionally, administrative access is possible for:

- Closing and activating Server processes
- Halting and deleting Executors
- Canceling user sessions
- Setting trace options for Server processes and Executors during system operation
- Changing values to the Server's input buffer

UC4 Explorer with three new functions
In the UC4 Explorer, the following functions are now available "Duplicate to...", "Link to..." and "Move to...". They can be called with the context menu.

"Duplicate to..." creates a duplicate of the highlighted objects in the selected destination folder.
"Link to..." creates a link to the highlighted objects in the selected destination folder.
"Move to..." moves the highlighted objects to the selected destination folder.

Structured Documentation for objects
Documentation tabs can be displayed in a structured form. This makes it possible to keep a task's data and values and read them with specific Script elements. Structured documentation is defined in the variable UC_OBJECT_DOCU with a preceding "@".

Version Control for objects
For the better understanding of changes to objects, it is possible to activate a so-called version control in the client settings. If objects are changed afterwards, a duplicate is automatically created and transferred to the folder VERSION_CONTROL.

Call of external programs
With this new functionality, it is possible to transfer object codes to external programs. You can enter the program names in the variable UC_SENDTO. They are shown as an entry of the context menu in the UC4 Explorer.

Version 3.02B

Extension of system client 0000
The system client 0000 now offers additional monitoring functions such as searching for records in the selective statistics. The Activity Window displays the activities of all clients. For easier handling, the column "User" does now additionally contain the client number. With all these new functionalities, UC4 systems are even more comfortable to handle.

Auto Forecast
With the new functionality "Auto Forecast", tasks that will run within a specified period time can be displayed. An extra window is available for the calculation and display of forecast data for which Schedules and Events supply the necessary data. The results provide a comprehensive overview on future activities.

Documentation tabs differently arranged
So far, all **Documentation** tabs defined in the UC4 Variable UC_OBJECT_DOCU were displayed next to the standard tabs. From now on, they are part of an extra **Documentation** tab and can be selected from the lower left part of the window. Additionally and regardless thereof do imported objects have their own **Documentation** tabs.

Custom naming conventions for objects
With the new UC4 Variable "UC_OBJECT_COUNTER" it is possible to specify a counter per object type whose reading is appended to the suggested object names. This number then replaces the default value "NEW.n".

Executors

[Database] [UC4 Server] [DialogClient] [Executors] [Utilities] [WebGUI] [External Integration]

All Executors for Enterprise Business Solutions

Version 3.02A

New Variable UC_EX_ERP_CONNECT
The new Variable UC_EX_ERP_CONNECT was added to the system client 0000. It contains the name of the Executor and the appropriate connection string to the Enterprise Business Solution, retrieved by the Executor.

GCOS 8

Version 3.02B

UC4.Executor for GCOS 8 SR 5.2 released

MPE/ix

Version 3.02B

UC4.Executor for MPE 6.5 incl. CallAPI released (HP 3000)

NSK

Version 3.02B

New Architecture for the UC4.Executors for NSK
The following functionalities are now available as a result of the NSK Executors new architecture:

- the new job attributes "CPU" and "Virtual Terminal"
- increased performance due to a central Output Collector and reusable TACLs
- improved restart performance
- improved job canceling
- critical error messages are sent to the EMS Console

z/OS

Version 3.02A

REPLY_ID of console messages can now be read in the UC4 Script
The Executor now also supplies reply IDs as a response to console messages expecting replies. They can then also be read in the UC4 Script of an event of "Console" type.
Example: :SET &REPLYID = GET_CONSOLE(REPLY_ID)

OS/400

Version 3.02A

Executor for OS/400 released

PeopleSoft

Version 3.02A

Executor for PeopleSoft version 8.4* released
The PeopleSoft Executor can now be used for version 8.4*. The new resulting UC4 interfaces "UC4_PROCESSREQUEST" and "UC4_INTERFACE_SERVICE" are supported by the library ucxjpsx6.dll.

Version 3.02B

UC4.Executor for PeopleSoft for PeopleTools version 8.44 and 8.45 released

UC4.Executor for PeopleSoft on AIX 5.1 released

SAP Basis

Version 3.02A

Output of the detail text of SAP messages
Long texts of SAP messages are now output in the following places:
1) In the activation log (message number and class of the BAPI-RETURN structure), if the message type is E or A
2) In the Executor log (for calls not registered in the activation log)

Version 3.02B

UC4.Executor for SAP on z/Linux released
UC4 Executor for SAP on Linux released
New report type SLOG for SAP Jobs It is now possible to display a **Report** tab containing current SAP system log messages for aborted SAP Jobs. Number and interception period can be specified through parameters in the INI file of the SAP Executor.
Managing connections in the Forms tab A new menu is available in the **Forms** tab just right-click on the traffic-lights symbol. This tab contains entries for establishing and ending connections to the SAP system. Further commands offer the opportunity of switching between offline or online mode, or changing to another connection if more than one is available.
New Functionality
R3_GET_VARIANT_CONTENTS - Shows the content of a variant.

Siebel
Version 3.02B
UC4.Executor for Siebel 7.5 on Windows (2003, 2000 and XP) released.

UNIX
Version 3.02B
UC4.Executor for HP-UX 11i (Itanium) released
SMTP email connection for UNIX Executors UNIX Executors can now also use the Email connection using SMTP.

Open VMS
Version 3.02B
Using file attributes The file attributes "alq", "deq", "mbc", "mbf" and "fop" can now be used for file transfers. With the parameter ACCESS=, they can also be specified as default setting for the Executor.

Windows
Version 3.02B
UC4.Executor for Windows 2003 (Itanium, I64) released
SMTP email connection for Windows Executors The MAPI2 interface and SMTP are now available for the email connection.

Using Windows Job objects
The Windows Job object combines all the processes of a Window job, thus providing the following advantages:

- CPU-time measuring includes all sub-processes,
- the Windows job only ends when all sub-processes have ended,
- when the Windows job is canceled, all sub-processes are also canceled

You can specify in the job or the Executor (as default value) whether a Windows Job object should be used.

Utilities

General

Version 3.02B

The utilities have been improved and can now be used platform-independently.
All important utilitieshave been implemented platform-independently in Java and are now also available for UNIX. The program names and names of the INI files have been changed slightly. Now they also include the parameters for the Java Loaders which were so far included in the configuration files.

- UC4.DB Archive
- UC4.DB Change
- UC4.DB Client Copy
- UC4.DB Load
- UC4.DB Reorg
- UC4.DB Unload

Migration Tool

Version 3.02B

Program simplifying the update process
A new utility is now available for updating from a 2.6x or 2.6x version to UC4:global. It includes numerous functionalities, thereby providing several work steps that would otherwise be very time consuming and complex in their realization. The individual steps are made available in extra tabs, thereby facilitating the individual conversion of your UC4 system.

Naming and sorting of Login objects can be specified
All login data necessary for Jobs, Events and FileTransfers for logon to operating systems and applications are stored in UC4:global's so-called Login objects. During the migration process, login data is retrieved from the password container of version 2.6x and transferred to the newly created Login objects. In the new section [MIGRATION] in the INI file, you can specify how the Login objects should be created (e.g. for each platform, and for each platform and Executor name).

Unloading Program

Version 3.02B

UC4.DB Unload redesigned
Additional batch parameters are now available for the unloading program, which enable even easier handling.

Comparing Program

Version 3.02B

New message-comparing program
The comparing program UCCOMPMSL.EXE analyzes the differences between messages of two different UC4 versions. The program compares the message libraries of both UC4 versions and prints a list of all changed, deleted and new messages, sorted by languages.

WebGUI

[Database] [UC4 Server] [DialogClient] [Executors] [Utilities] [WebGUI] [External Integration]

General

Version 3.02B

Accessing the UC4 system via the Internet with UC4.WebGUI
With the UC4.WebGUI, the UC4 system can be monitored and controlled with any Web browser. Remote users can perform quick analyses when problems occur and take the necessary steps.
With the three tabs, it is easily possible to access the sections "Explorer", "Activities" (including messages) and "System Overview". This service is available in the languages German, English and French. The look & feel of the UC4.WebGUI is similar to the UC4.DialogClient, thereby allowing for quick and simple handling.
The Auto-Forecast functionality can also be used in the UC4.WebGUI.

Requirements:
Application Server: Tomcat 4
J2EE Server: IBM WebSphere 5.1, Oracle WebLogic 8.1 or SAP NetWeaver '04
Web browser: Microsoft Internet Explorer version 6.0 (or later) or Netscape version 7.1 (or later)
UC4:global version 3.02B or later (when using Tomcat, version 3.02A Patch 16 or later)

External Integration

[Database] [UC4 Server] [DialogClient] [Executors] [Utilities] [WebGUI] [External Integration]

UC4 Smart Plug-In for HP OpenView Operations

Version 3.02B

UC4.Smart Plug-In for HP OpenView Operations released for version 7.1 and later

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UC4.Connect for SAP Monitoring
Version 3.02B
UC4.Connect for SAP Monitoring can now also be used via the XMW interface

UC4.PlusModule for Tivoli
Version 3.02B
New UC4.PlusModule for Tivoli Requirements: IBM Tivoli Monitoring 5.1.1 Tivoli Management Framework 4.1 (Fixpack 6) Tivoli Enterprise Console 3.9

8.3 Improvements

The  symbol characterizes new functionalities which need to be adjusted manually in the particular INI files when updating your UC4 version.

UC4 Server

[UC4 Server] [DialogClient] [Executors] [Service Programs] [Service Manager] [Documentation]

General	
Version 3.02A	
Improvement of the Sync processing Previously, when Sync conditions were checked, repeated deadlocks occurred in the database, which reduced the overall performance. Now, this processing is only carried out by the primary server process. Almost no deadlocks occur anymore, which results in significantly improved performance.	
Forced change of password In the **User** tab of the User object, it is now possible to activate the option **Password had to change for next logon** without having previously set a value in the variable UC_CLIENT_SETTINGS with "MAX_PASSWORD_AGE".	
Extended Script Elements	
:DISCONNECT - Disconnects the connection to Executors With this Script statement, you can disconnect connections of one user or all users of a user group to the UC4 system. Additionally, it is now possible to disconnect connections to Executors.	
PREP_PROCESS_VAR - Two new parameters to filter entries In addition to the variable name, you can now also specify filters for the validity key and content.	
Version 3.02B	

Variable limitation of search results System settings were extended for the two new entries "GENERIC_SEARCH_LIMIT" and "GENERIC_STATISTICS_LIMIT" (see UC4 Variable UC_SYSTEM_SETTINGS). You can specify a maximum number of search results to be displayed in the UC4 Explorer and the selective statistics. This influences performance positively. The default value is 5000.	
Maximum number of lines increased for PREP_PROCESS* By default, data of the script elements PREP_PROCESS* is supplied in lines. It can, however, also be structured in columns. Now up to 22 columns can be defined instead of 10 with the parameter LENGTH_TAB.	
No limitation of the maximum number of tasks per Executor Themaximum number of tasksthat can be executed simultaneously can be defined for each Executor with a value ranging from "0" to "999999999". You can also specify that the number of tasks is not monitored. The script elements :SET_UC_SETTING and GET_UC_SETTING both use the value "UNLIMITED" in these cases.	
Sync check after a cold start After a cold start of the Server processes, all tasks that are in the condition "Waiting for Sync" are checked and then continued.	
New start parameters for the UC4 SNMP subagent for UNIX (Linux). The following parameters can be set: -x ... Starting the agent with agentx support The following parameters can be used if the subagent is started without the parameter -x: -**i** file ... Path of the subagent's configuration file -**s** file ... Snmptrap command of the ucd-snmp package	
Extended Functionality	
CREATE_OBJECT, MODIFY_OBJECT and REMOVE_OBJECT In addition to the objects Variable and Calendar, Login objects can now also be handled with these script functions.	

DialogClient

[UC4 Server] [DialogClient] [Executors] [Utilities] [Service Manager] [Documentation]

General	
Version 3.02A	
Warnings in the Message Window colored blue The Message Window displays all important information of the UC4 system. General information is displayed in black. Error messages are highlighted in red due to their significance to the system. Additionally, warnings are now highlighted in blue.	
Priority change of active tasks The Activity Window has been extended for the function "Modify UC4 priority". It can be called through the context menu of active tasks. A window opens in which the task's UC4 priority can be changed.	

Earliest starting point displayed in the details If an "Earliest start" time is entered in the **Earliest** tab of an object in a JobPlan, this time is displayed in the JobPlan and in the details.	
Extension of the Detail Window for additional Sync information In the Detail Window of objects, additional information to the Sync object in use is displayed. In addition to name and current state, date, including the time of the last change and the action set (Start, Abend and End), are displayed.	
New functions for the editing of JobPlans When positioning objects in a JobPlan, they are arranged on an invisible screen. Now it is possible to add or remove lines and columns to or from this screen. The appropriate commands can be called through the popup menu in the JobPlan graphics.	
Call of the last monitor of a JobPlan in Schedule Monitor In the Schedule Monitor, the monitors of individual JobPlans are also available (if they exist). If no monitor is found for a particular JobPlan, as it is in a waiting condition for the starting point or is inactive, the last monitor can be opened after a request.	
Display of system status The system status is now displayed with a traffic-light symbol. This can easily be found next to the UC4 logo in the right upper corner of the DialogClient.	
Performance Improvement With the new entry <componentpool> in the uc4config.xml, you can specify whether components of the DialogClient (e.g. tabs of objects) should be held in the Cache. Performance can be increased with this.	
Version 3.02B	
Restructured Version Control The name Version Control was changed to Version Management. Copies of objects that are created by using theVersion Managementare now found in a separate system folder (such as the Transport Case). In order to keep a clear overview, the duplicated versions are additionally listed in the newly-created Version management tab that is available for all objects. The utility UC4.DB Reorg has also been adjusted for facilitating the complete reorganization of the object copies. A privilege is required in order to access Version Management.	
UC4 version and patch level displayed The menu item *About UC4:global* was added to the DialogClient menu. It includes information about the UC4 version and patch level. Indicate both of them when contacting the support team.	
Search result section can now be changed A bar splitting the window of the "Search" function facilitates enlarging or diminishing the result section.	
Number of forecast windows reduced You can highlight several objects and create forecasts for all of them. Up to now, an individual forecast window was opened for each object. From now on, there will be exactly one window containing the necessary information for all forecasts (the same applies to tasks).	

Attribute tabs now available for generated JCL
A JCL is available when a job has been generated. You can access it through the context menu of the Activity Window. The **JCL** dialog has been re-structured and contains two additional tabs now, one showing the attributes of the Job object, the other the attributes of the host.

Using Sync objects of system client 0000
In addition to selecting Sync objects in the executable objects of the own client, you can also select those of system client 0000.

Extension of the functionality "Send To"
In order to allow for easier distinction, the UC4 Variable "UC_SENDTO_ACT" is now available for objects in addition to "UC_SENDTO" for tasks. This includes that different entries can be defined for the context menus of the UC4 Explorer and the Activity Window. Furthermore, external programs and executable objects of the client can be specified.

Setting for storing JobPlans
In JobPlans, particular tasks are connected with the line tool in order to define predecessors, successors and dependencies. Up to now, a JobPlan could always be stored regardless if a task has been assigned a predecessor and successor, or not. Now the system checks which settings were made and depending on the setting made in the Variable UC_CLIENT_SETTINGS, entry JOBP_SAVE_INCOMPLETE, the JobPlan then will either be stored after a request, stored without request or not stored at all.

Fewer tasks in the Activity Window
The UC4 Variable UC_SYSTEM_SETTINGS contains systemwide settings. The entryGENERIC_ACTIVITIES_LIMIT can be used to specify the maximum number of tasks to be displayed in the Activity Window. This improves performance when the activities are refreshed in short intervals.

Refresh interval for viewing tasks can be specified
You can now specify an interval in which the Activity Window and Monitor view are refreshed in the client settings. The advantage is that messages are sent in groups and not for each particular message. The parameter for this setting EH_KICK_INTERVAL.

Object deletion with prior request
When deleting an object, the system automatically checks back if it is used in other objects. If many objects are deleted at the same time, this process can take a little longer. With the new key DELETE_CHECKBCK_LIMIT in the UC4 Variable UC_SYSTEM_SETTINGS, you can now define a maximum number of objects - if this number is exceeded, a dialog is displayed from which you can select whether the particular object's usage in other objects is to be checked back or not.

Additional column called "CP" in the System Overview
You can now see in the "User" category of the System Overview via which communication process a particular user is connected to the UC4 system.

A warning appears when objects are renamed
When an object is renamed, the system checks if it is used in scripts. If so, a warning message is displayed.

Selecting specific users in the Activity Window selection
In the Activity-Window selection, you can also search for tasks started by particular users. Do so by indicating a user name or setting a filter with the wildcard characters "?" and "*". In addition to these options, a combination field (combo box) containing all the client's users is now available, from which you can select a particular user.

New function for selecting objects in Schedules and JobPlans
So far, objects could be stored in Schedules and JobPlans by dragging them to the tab with the drag-and-drop function. Alternately, you can now select objects by calling a small UC4-Explorer window with the command "Add task" in the context menu.

New font for Scripts
In the Process tab, which is available for all executable objects, the font was changed from "Courier New" to "Lucida Sans Typewriter". If this font is not installed on your computer, the fonts "Lucida Console" or "Monospaced" are used instead.

Filter is now displayed in the Statistics overview
As already implemented in the Activity Window, the selected filter is now being displayed in the status line of the Statistics Window.

Copying task sequences across JobPlans
It is possible to copy one or several tasks of JobPlans and insert them in other JobPlans. The properties that have been defined for the individual tasks remain unchanged.

Modifying the runtime in Schedules
Changing the runtime supervision of tasks in Schedules is now possible any time provided that they are not active.

A warning appears when deleting used objects
If an object should be deleted, which is used by other objects (e.g. a task in a JobPlan); a warning message calling attention to this fact is displayed.

Additional warning for write-protected objects
When opening an object that is write-protected due to a setting made in the authorization system, a warning message appears.

Magnetic Windows
In the **General** tab, themagnetic scopeof the DialogClient's windows can be defined. By default, this function is deactivated. In case of activation, however, you can also define the magnetic area in pixels (default value 17, max. 99 pixel). If a window is dragged or dropped within this magnetic area it is aligned to the nearest screen edge or window.

Copying tasks within Schedules
Tasks can now be copied and inserted within Schedules

Extension of the selective statistics
Instead of a task's run number (RUN#), a 7-character alphabetic string of the report name can also be used for accessing the statistics of the execution.

Display of the Server time
In the System Overview, the table in the category "Server" has been extended. It now also contains a column showing the Server time of the Server process.

New start parameter for the DialogClient
With theparameter-I, it is now possible to specify the path of the configuration file (uc4config.xml) to be used in the INI file of the DialogClient. In doing so, all users can create their own uc4config.xml with the preferred settings. Additionally, a path for the configuration file login_dat.xml can be specified with the parameter -O.

Additional column Connections in the System Overview
The category "Servers" now also shows the number of connections (users and Executors) to each communication process.

Number of used DialogClient licenses
The category "Licenses" of the System Overview now also displays all DialogClient licenses that are used.

New design for the Detail Window
Detailed information about objects is now listed in groups which allows for keeping a clear overview although the number of attributes is increasing. If the object includes a Sync, an extra tab within the Detail Window provides the corresponding Sync information. Additionally, the Detail Window is now also available in Forecasts and Auto Forecasts.

Extended System Overview
The category "Client" is no longer only displayed in the System Overview of system client 0000 but also in the overview of the clients "1" - "9999". This category includes information about the individual clients.

More detailed print output of the JobPlan
When printing a JobPlan, the diagram now also includes the names of the tasks and the Executors, and the times.

Executors

[UC4 Server] [DialogClient] [Executors] [Service Programs] [Service Manager] [Documentation]

All Executors for Enterprise Business Solutions

Version 3.02B

Modifiable name for the default Login object ERP_LOGIN.
The name of the Login object which contains the login information for Enterprise Business Solutions and the Email connection of the UNIX Executor, can be specified in the Executors' host characteristics (UC4 Variable UC_HOSTCHAR_*) with the key APPLICATION_LOGIN. The standard name is still "ERP_LOGIN".

Optimized status check
In order to improve status checks for jobs, a new section called [STATUS_CHECK] containing the parameter time= was included in the INI file of the Executor. With the value set in here (in seconds), an individual interval can be defined for status checks. The interval used so far could not be changed and was therefore not always the best solution (e.g. for jobs with a short runtime).

Block-by-block transfer of messages
It can be specified with the INI-file parameter WRITE= if messages should be transferred in blocks (e.g. report lines). The sending interval for these blocks can be defined with the parameter WRITE_TIME=.

z/OS

Version 3.02B

Log file change
Log files can now be assigned to MVS Sysout classes. Their names then show the format LOGnnnn (e.g. LOG0001). Hence, the log file can be changed. Use theINI-fileparameter logpurgeclass= to assign the classes.

PeopleSoft

Version 3.02B

Additional settings in the Form tab
The settings of the DialogClient have been extended for the new tab **ERP Forms**. It provides options such as selecting a Login object for auto-logon to PeopleSoft or offline mode as default setting for opening a Job.

SAP

Version 3.02B

Extended configuration options for RFC connections
RFC connections can now be used even more efficiently due to three entries that were added to the INI file. They accept the following settings:

open_ex - function to open the RFC connection (RfcOpen; RfcOpenEx)
connections - type of the RFC connection (per client/user/language; per Job; only one connection at a time)
conn_keep - keeps the RFC connection (when not used; remains open for being used by other Jobs)

Functionality R3_COPY_VARIANT extended
The functionality of R3_COPY_VARIANT was extended for the parameter MODE= which identifies the processing mode. If a blank is used with this parameter, the variant is copied by duplicating table entries (default setting). Value "C" copies the variant by creating a new one through SAP-internal interfaces. Note that variants exceeding the 45-character value for parameters will not be copied. UC4 recommends using this mode only in exceptional cases.
The second new parameter is OVERWRITE=YES/NO. It serves to specify the further procedure when the target variant already exists.

Additional settings in the Form tab
The **ERP Forms** tab was added to the settings of the DialogClient. You can specify options such as a Login object for the auto-logon to the SAP system or offline mode by default when a job is opened.

New privilege for SAP Jobs
The new privilege "Edit SAP Intercept Table" can be used in the **Form** tabof SAP Jobs.

Parameter for establishing a connection.
In the configuration file of the SAP CallAPI you can specify an interval in seconds after which the system tries to connect to the SAP system by using the parameter SAP_RECONNECT_INTERVAL.

Extended Functionalities

R3_GET_SESSIONS- The new optional parameter NOFOUND provides the opportunity of reaction if no batch-input sessions can be found.

UNIX

Version 3.02B

Improved login verification
With the newly added parameter login_check=, you can define whether or not the passwords of Login objects for Jobs and FileTransfers should be checked.

Open VMS

Version 3.02B

The logical name can now be defined
So far, the logical name was composed of: UC4_*UC4 System name_Executor name_* Executor. If one VMS computer used two Executors of the same name (update) that were assigned to UC4 systems , problems were possible. Now, a logical name can be defined for each Executor with the parameter uc4_logical.

Utilities

All Utilities

Version 3.02B

Start parameters are displayed in the log file
A log file now additionally shows the parameters used for starting the utility.

Archive Browser

Version 3.02B

Searching for data records across clients
With the Archive Browser you can view archived data records of a particular client or a particular archiving run with filter criteria. Now you can also search across clients by specifying the main archive folder.

Archiving Program

Version 3.02B

Limiting dates and times now possible
Various formats are available to output dates and times. Now you can limit the number of allowed formats. If a non-predefined value is entered, a corresponding message is displayed. Specify allowed formats in the INI file of the archiving program with the parameter DateTimeFormat=.

Client Copy

Version 3.02A

Increased security with deletion of clients To avoid the unauthorized deletion of a client, it is now necessary to log in to this client before you start the deletion process. A login window is automatically called. The client can only be irrevocably deleted after a successful login procedure.
Version 3.02B
4-digit client numbers required for logon This utility displays clients that have a four-digit client number assigned. You cannot log on to other clients for creating objects and processing tasks, or copying and deleting clients. For clients still bearing the default names (e.g. CLIENT.NEW.1) a warning appears in the log file. Additionally, start parameters are now available for starting this utility in batch mode.

Loading Program

Version 3.02A
Output of file name for database loading now also in log file The file selected or attached to the parameter -X in batch mode by the user for the loading process is now also registered in the log file of the loading program. Example: U0021596 File read: 'C:\UC4\db\general\3.01C\UC_UPD.TXT'

Unloading Program

Version 3.02B
New database parameter in the INI file The INI file now contains the new entry CommitCount= , which you can use to specify the number of data records after which database commit is performed. When 0" is used, a commit is made after each record.
Extended functional range With theunloading program,all objects of a client or of the whole UC4 system can be directly unloaded and do not have to be moved to the Transport Case before. Additionally, archiving and reorganization flags can be reset in this utility.

Check Program

Version 3.02A
The test result has been extended for various statistics The utility UCYBDBCHK.EXE checks the existing databases before UC4:global is implemented. The test result is written to a HTML file. Now, this file also contains various statistics such as e.g. the number of objects per client, per object type and client, the number of reports per client and the number of statistical records per client or host type.

General

Version 3.02B

Delayed services are shown in the log file
In the properties of each individual service you can enter an interval for delaying its start. This information (service and time) is now also written to the log file with message number U0022035.

Documentation

[UC4 Server] [DialogClient] [Executors] [Utilities] [Service Manager] [Documentation]

Extended and improved Information

Version 3.02B

New chapter "Inside UC4"
The UC4 Documentation now includes the new chapter "Inside UC4". It includes background information about the following topics:

- Multi-Server Operation
- Executing Objects
- UC4 Priority
- Cache Usage
- JobPlan Logic
- Schedule Logic
- Using TimeZones in UC4
- Logical Date
- Runtime

New chapter "Sample Collection"
This chapter providesexamples for the various ways of using script elements. Each example is explained in detail and includes screenshots showing the results.

Improved script manual
The following improvements were made in the documents describing the script elements:

- Each script element now contains a list of links to similar functions and statements.
- In the syntax description, the obligatory parameters are displayed in colors
- The script examples are shown in the same colors as in the DialogClient

Improved table of contents
Some chapters of the UC4 Documentation (above all in the Administrator Manual) were renamed and restructured, and information can be accessed as quickly and easily as possible. The basic structure, however, remained unchanged so that existing users can use the documentation as always.

Extended migration chapter
The newly-added Migration Guide provides information about the migration process and all the appendant tasks.

Extra chapter for the utilities
More detailed description is now available for theutilities in a separate chapter in the Administrator Manual.

More information about the supported databases
Additional notes in the installation guide and performance references facilitate the use of UC4 with the following databases: DB2, MS SQL Server and Oracle

Detailed description about database maintenance
The utilities UC4.DB Archive, UC4.DB Reorg and UC4.DB Unload are used to maintain the UC4 Database. Detailed information on the usage of these service programs including an example explaining how to automate this procedure.

Using the Transport Case
Description on the efficient use of theTransport Case is now also provided in a separate document.

Description about the UC4 Variables
The list of UC4 Variables was extended and allows for the individual configuration of your UC4 system.

Extended configuration files
The documentation for the configuration files of the UC4 components (*.INI and *.XML) was completed.

8.4 Corrections

UC4 Server

[UC4 Server] [DialogClient] [Executors] [Service Programs] [External Integration]

General
Version 3.02A
Deactivation of JobPlan, despite correct settings in the Attributes tab In the **Result** tab in the JobPlan, it is possible to react to the end status of a task. If "Halt" was selected for the first task as a reaction to a non-reached status, the JobPlan didn't remain available in the Activity Window. This always occurred when the succeeding task was started immediately and regardless of whether "After the program has error-free ended" was selected in the JobPlan for automatic deactivation. S# 24307
Numeric entries not possible in :READ due to a wrong default value In :READ statements, it is also possible to limit the user entry to numbers of a certain number range. If the minimum value was >0 and if no default value was set, it was not possible to make entries. Now, the minimum value is taken as default value. Example: :READ &VALUE,'3-5','Number',,N S# 28246
Forecast calculation incorrect for a periodic turnaround later than 00:00 The Forecast assumed a wrong starting date for the calendar check of schedules when the periodic turnaround was later than 00:00. The same held for JobPlans with starting point on the next day. If an object of the JobPlan had a condition specified in the **Earliest** tab, it was not considered. S# 28571
Version 3.02B

Object name could contain invalid characters (CREATE_OBJECT).
The script element CREATE_OBJECT creates Calendars and Variables. Invalid characters were accepted up to now, for object names. This has been changed and now a warning message with a list of all allowed characters is displayed when invalid characters are used.
S# 31965

Script element PREP_PROCESS_FILENAME could not be fully used in the Event object
The script element PREP_PROCESS_FILENAME can also be used in the script of an Event object. If, however, the optional parameter was used for the Login object, an error message was displayed.
S# 31687

Incorrect calculation of maximum runtime for tasks in Schedules
It is possible to make settings for monitoring the runtime of tasks in Schedules. With the corresponding maximum runtime (MRT), UC4 can monitor a task and react when the limit is exceeded. This value was not correctly calculated.
S# 32621

Job report was not deleted although the corresponding option was selected
When executing Jobs, you can specify if the job report is to be stored or deleted (host-specific tab). It happened from time to time that these reports could not be deleted although the corresponding option had been activated. Mostly this occurred when a file name was generated incompletely.
S# 31887

UTC was used instead of the specified time zone
When processing the script element :SET_CONDITION, which defines starting conditions for JobPlans, UTC (Coordinated Universal Time) was used, thereby setting the wrong starting time. Now the time zone of the task (if available) or of the user or client is used.
S# 32728, S# 30305

With the script function GET_WIN_EVENT, the date and time of an Event can be determined with the keyword TIMESTAMP. UTC used to be returned by mistake instead of the client's time zone.
S# 36286

The version management can now also be activated in the client settings. So far, the objects that were duplicated in this process did not show the time stamp of the client's time zone as intended.
S# 32093

Local time was used instead of UTC when objects were imported with the loading program. As a result, the displayed time differed from the actual creation time.
S# 37014

Wrong return code of script element SYS_ACT_JP in post- script
The script element SYS_ACT_JP checks if the object was activated from a JobPlan. If it was used in a job's script and pre-script tab, a proper return code was supplied. A wrong value was supplied if it was used in a post-script tab as the task activating it (e.g. JobPlan, Schedule ...) was transferred incorrectly.
S# 30227

Immediate start of manually blocked tasks did not work
In the JobPlan Monitor, you can immediately start tasks that are waiting for execution. This, however, did not work when a manual breakpoint was set in this task.
S# 35472

Change of start time for forecasts in active Schedules
The periodic change newly initializing the Schedule is now used to create forecasts for active Schedules. So far, the activation time was used. Furthermore, the specified starting time is used for the individual tasks instead of the current time.
S# 30960, S# 31344

Several corrections in the :READ input check
With the script element :READ you can specify formats for inputs (e.g. numeric characters). The input check has been optimized.
S# 31163, S# 31166, S# 33589

Canceling while in the status "Waiting for manual release"
Scripts and groups can now also be canceled when they are in the status "Waiting for manual release".
S# 34853

Runtime supervision of JobPlans and Schedules was not overridden
It is possible to specify an individual runtime supervision for tasks in JobPlans and Schedules. It overrides the settings specified in the object itself. This individual runtime supervision is now activated when the task is being restarted. The minimum runtime, however, will only be checked if no restart point was set.
S# 36206

Value of AUTO_DEACT_DELAY could not be assigned with the script variable :PUTT_ATT.
When setting the attribute AUTO_DEACT_DELAY with the script element :PUT_ATT, no script variable could be used so far.
Example :PUT_ATT AUTO_DEACT_DELAY=&x
S# 36365

Crash of UC4 Server when shutting down
When shutting down from UNIX (Sun Solaris), no Loscon (lost connection; TCP/IP) is sent. This causes the work processes to wait for a ping response without result. None of them take over the role of the primary work process. This malfunction has been corrected with a Timeout function.
S# 38323

Deactivation of sub-file transfers
When deactivating an active file transfer with wildcard characters, all the file transfers assigned to it are also deactivated.
S# 38205

Wrong time displayed
The client settings can also be used for activating the version management. So far, the duplicated object versions did not show the time stamp of the client's time zone. This missing time conversion also affected the messages displayed in the System Overview.
S# 32093, S#38763

File transfers were not aborted
For file transfers, it can be specified that the source file should be removed. If they cannot be deleted successfully, they are now canceled.
S# 38599

Error with SYS_ACT_USERID
Using the script element SYS_ACT_USERID in the **Post-Process** tabsometimes caused error messages.
S# 39094

Abortion of nested PROCESS loops
TERM_PROCESS ended all loops in nested loops which were formed with PROCESS in order to have data sequences processed line by line.
S# 34954

SYS_SERVER_ALIVE falsely displays work processes as inactive
When the script element SYS_SERVER_ALIVE was used for a Linux server, this occasionally resulted in active work processes being reported as inactive in the return codes.
S# 39240

DialogClient

[UC4 Server] [DialogClient] [Executors] [Utilities] [External Integration]

General

Version 3.02B

The search function could not find certain entries
With the search function in the UC4 Explorer, you can filter all objects containing Executors. All tasks using them were shown. The result, however, did not include Login objects. The search for users and Calendar keywords has also been extended.
S# 32786, S# 36104

No further information when DialogClient crashes during start
If the configuration file UC4CONFIG.XML had no valid content (e.g. section <connections> is missing), the DialogClient could not be started. As no log or trace file was created, the reason for this error was not obvious. Now a message appears to inform about the reason.
S# 31738

Optimized export functionality
Time required for exports increased with the number of objects included. Now, the XML parser was optimized in order to keep export times as short as possible.

Conversion of alphabetic characters during imports was missing
As no lower-case letters are allowed in object names, they will automatically be converted to upper-case letters.
S# 31972

Incorrect display of German Umlauts after exports
The contents of the Activity Window, the Statistics Window and others can be exported to files. The generated CSV file, however, did not show Umlauts correctly. This mainly affected the documentation tab when objects were imported or exported.
S# 32552

Script of PeopleSoft Jobs was deleted when Java Object Adapter was missing.
The ERP forms for PeopleSoft required the availability of the file psjoa.jar. An error affecting the content of the Process tab occurred if this file was not available. Now, Offline mode is used when there is no Java Object Adapter.

Place holder for the Executor when importing Console Events
If it is found during the import process of a Console Event that the Executor does not exist in the UC4 system anymore, the text box of the Console tab shows a place holder instead (e.g. <WIN>).

Entries in the menu "Send To" were not client-specific
If connections to several clients were established in one DialogClient, the menu "Sent To" always contained the entries of the connection that had been established first. This malfunction has been removed and now this menu can be specified client-specifically in the appropriate UC4 Variable.
S# 38135

Executors

[UC4 Server] [DialogClient] [Executors] [Service Programs] [External Integration]

All Executors on Windows Platform

Version 3.02A

Error in path specification of GET_FILESYSTEM
Path specification in the Script element GET_FILESYSTEM is now possible with or without an attached "\".
S# 28744

Job files of ended jobs deleted immediately
Up to now, the Executor signaled a job end to the server and waited for a reply to delete the job file afterwards. If, however, this Executor was deactivated in the meantime, it remained in the working directory. Now, the job file is immediately deleted when the job is ended.
S# 28069

Same Executors for file transfers excluded
For FileTransfers, it was possible to enter the same Executor in the source and destination host. Now, a message appears and prevents this constellation.
S# 28321

All Executors for Enterprise Business Solutions

Version 3.02A

Erroneous transfer of messages
If errors occurred during Script execution, the Executor sent defect messages. This happened when the transfer was additionally encoded.

BS2000

Version 3.02B

Incomplete logging for missing work processes
It sometimes happened that not the whole logging was stored in the UC4 database. This occurred when the Executor sent its logging although there were no active work processes available in the UC4 system. Now, the Executor does only send the logging after having received a corresponding message.
S# 31625

NSK

Version 3.02B

Sporadic Executor crash
The Executor tried to delete the report file when the job log had been transferred to the UC4 Server. The Executor sporadically abended when this was not possible.
S# 38313

PeopleSoft

Version 3.02A

Status "Waiting for host" if there is no connection to PeopleSoft
Jobs get the status "Waiting for host" if there is no connection to PeopleSoft.
Interfaces: all, PeopleSoft release: 8.0+
S# 30832

Wrong login information leads to abortion of a UC4 Job.
A job is aborted if it uses the wrong login information.
Interfaces: Java, PeopleSoft release: 8.0+
S# 30832

SAP Basis

Version 3.02A

Logs of process chains now with correct information
The Script element BW_ACTIVATE_CHAIN also saves the logs of process chains in the activation report. The connected parameters PROCESSLOGS, JOBLOGS and LONGTEXT now supply the correct information.

Correct status handling of process chains
The states of process chains are now handled adequately (R - ended erroneously, F - finished, S - skipped).

Deleting queued-job files
Queued-job files are now deleted when they have no entries.

Extension of return code for the Script element BW_ACTIVATE_CHAIN
The following return codes have been defined to make it easier to distinguish the status of a process chain in UC4:

SAP return code 'R' -> UC4 return code 4 (ENDED_NOT_OK)
SAP return code 'X' -> UC4 return code 8 (ENDED_NOT_OK)
SAP return code 'S' -> UC4 return code 12 (ENDED_NOT_OK)
SAP return codes 'G' and 'F' -> UC4 return code 0 (ENDED_OK), as before
S# 29365

Version 3.02B

Connection data was not written in the UC4 Variable (forms).
The SAP Executor for Sun Solaris did not insert the retrieved connection data to the SAP system in the UC4 Variable UC_EX_ERP_CONNECT. This was corrected and manual maintenance is no longer needed.
S# 31403

UNIX

Version 3.02A

Specified report length not considered
Previously, the entry "MAX_REPORT_SIZE" in the variable UC_HOSTCHAR_XXXX was not considered correctly and therefore, the whole report was transferred. This error has been removed. If the report is longer than the specified value, it will be truncated. The last block of the report, including an additional note, is always transferred.

Version 3.02B

Executor crashed when the job was canceled in the Activity Window (command setting)
Canceling a UNIX job in the Activity Window caused the Executor to crash. This, however, only happened when the type "command" was activated in the host tab. The reason was that the process ID of the group was missing.
S# 33289

Erroneous restart ability of Executors for HP-UX
If an Executor is ended during ongoing job processes, these can be continued as soon as the Executor has been restarted and the job status can be retrieved from the UC4 Server. This functionality was erroneous in Executors for HP-UX, as the job ended with the status "ENDED_LOST".
S# 31089

Incorrect transfer of file attributes
You can specify file attributes for file transfers in the tab of the same name (e.g. IN=none). This setting, however, could not be used as the file-attribute field was interpreted wrongly.
S# 32434

With PREP_PROCESS_FILE, files were not completely read
With the script element PREP_PROCESS_FILE, file contents can be read line by line. If, however, the terminating characters (CRLF or CR) were missing in the last line, it remained unconsidered.
S# 38503

Missing character in file transfers with the Solaris Executor
An error occurred when data was transferred as the first character was replaced by an empty space. This error occurred regardless of the specified CodeTable.
S# 39637

Authorization check in UNIX was too strict
File transfers were aborted with the message "Access denied" as the authorization check for Group IDs was not made correctly. The error occurred when the file was assigned to a group, and the user - a group member - wanted to transfer the file.
S# 39293

Open VMS

Version 3.02B

Crash of the Executor for Open VMS
A system function returned a value referring to a wrong internal address. This could cause the Executor to crash.
S# 33869

Windows

Version 3.02A

Error when monitoring Windows events
With an event of the event type "Console", it is possible to monitor the event display of Windows.Previously, if there were several Windows events in sequence, this resulted in errors.

Transfer of host name to job messenger
As a parameter, the job messenger can now also receive a host name instead of an IP address.

Version 3.02B

Job report was not stored in a file
If can be specified in the Host-Attributes tab of Windows Jobs that the job report should be stored as a file if an error occurs. This setting, however, did not work unless "Database" was also specified in this tab.
S# 37558

Utilities

[UC4 Server] [DialogClient] [Executors] [Utilities] [External Integration]

Loading Program

Version 3.02A

Runtime error in case of missing output directory
If the parameter transform_path= has not been indicated in the section [GLOBAL] of the INI file, the utility tried to write the log files into the directory C:\TEMP. If this directory did not exist, a runtime error occurred. Now, log files are stored in the directory which contains the loading program.
S# 30483

Deactivating option of Jobs and FileTransfers when converting to 3.0
When converting a transport case from 2.6 to 3.0, the option "Deactivate automatically when finished" is set to "Always". This includes that all tasks react in the same way as in version 2.6 in which this option does not exist.
S# 30540

Version 3.02B

Invalid Login objects were used for transport-case conversion
When the transport case was converted from version 2.6x to UC4:global, Login objects from the version-control folder (VERSION_CONTROL) or the recycle bin were sometimes used in the objects.
S# 33344

Wrong validity key "DOKU" caused errors when links were converted
In version 2.6x, the UC4 Variable UC_OBJECT_DOCU contained the validity key "DOKU", which is accepted for the migration process. Links converted to UC4:global are then spelled "DOCU", as is valid in UC4:global and were therefore not displayed.
S# 31450

Link documentation was converted incorrectly
In 2.6x, you could add link documentation to objects in form of extra tabs containing links to files. When a root directory was specified, path specifications were not correctly converted in the migration process. They were written in two lines instead of being written one after the other in one line.
S# 31452

Runtime error occurred when invalid script lines were converted
Runtime errors could occur during database conversion if the script contained an invalid line or continuation lines.
S# 32097

Wrong implementation of scheduled tasks
When transferring the Transport Case from a 2.6x system to UC4:global, it happened occasionally that inactive tasks of Schedules were set active.
S# 39151

External Integration

[UC4 Server] [DialogClient] [Executors] [Utilities] [External Integration]

UC4.KnowledgeModule for BMC Patrol

Version 3.02B

Several alerts although status remained unchanged
When changes are made in blocked Jobs; the MIB table is always completely recreated. It occurred occasionally that the table was read during this recreation time and some Jobs marked blocked in Patrol agent could not be found anymore. Although still being blocked they were considered not blocked, which caused several alerts. A counter has therefore been specified in the "Tuning menu" of system objects. It determines the number of query poll cycles resulting in no output about the blocked Job. Only when the job remains in the same status *n* times, an alert will be created. This setting, however, is only useful when a very low value has been specified for the polling intervals.

8.5 Release Notes Version 3.02A

8.5.1 Highlights

[Highlights] [New Functions] [Improvements] [Corrections]

- Executor for PeopleSoft Version 8.4* released
- Executor for OS/400 released
- New System Overview
- UC4 Explorer with three new functions
- Structured Documentation with supporting Script elements
- Version Control for objects
- New and extended Script elements
- New variable UC_EX_ERP_CONNECT in the system client
- Output of detail text of SAP messages

Notes for the Update Installation

When updating to version 3.02A, some deletions are made in the database. As for large databases, this can take several hours, the particular lines are commented in the UC_UPD.TXT. The comments can be erased or the commands can be directly executed in the database. Get further information in Update Installation - Change database.

Due to changes in the database structure, the settings of the DialogClient are reset to default values when you update to 3.02A and must be redefined in the menu *Options* with the command *Settings*.

Components to be installed

UC4 Database ✓	UC4 Server ✓	DialogClient ✓	Utilities ✓

8.5.2 New Functions

[Highlights] [New Functions] [Improvements] [Corrections]

UC4 Server

General	
New script elements	
:SHUTDOWN - Ends a UC4 system	
:TERMINATE - Ends an Executor, a work-, or communication process	
ALPHA2RUNNR – Converts a string (letters) to a RUN#	
CINT - Converts a string to a number	
CSTR - Converts a number to a string	
EXPORT - Exports objects to an XML file	
IMPORT - Imports objects from an XML file	
RESTART_UC_OBJECT - Repeats the execution of a task	
RUNNR2ALPHA - Converts the RUN# to a string (letters)	
SYS_SERVER_ALIVE - Checks if a certain server process is active	
Script elements for Structured Documentation To enable access to structured documentations, Script elements have been implemented. The structured documentation can be opened with XML_OPEN_DOCU and read with several Script functions. It can be closed with :XML_CLOSE_DOCU.	
:XML_CLOSE_DOCU - Closes structured documentation	
XML_BEAUTIFY - Beautifies the display of an element's structure	
XML_GET_ATTRIBUTE - Supplies the value of an attribute	
XML_GET_CHILD_COUNT - Counts the sub-elements of an element	
XML_GET_FIRST_CHILD - Identifies the first sub-element of an element	
XML_GET_NEXTSIBLING - Identifies the succeeding element	
XML_GET_NODE_NAME - Supplies the name of an element	

XML_GET_NODE_TEXT - Supplies the text of an element	
XML_OPEN_DOCU - Opens structured documentation for processing	
XML_PRINTINTOFILE - Writes the structure of an element in an XML file	
XML_SELECT_NODE - Identifies any element	

DialogClient

General	
New System Overview The new design of the System Overview now offers various ways of administering the UC4 system. The system overview contains several categories such as Servers, Executors or Users, including detailed information about them. Among other things, the following information is available: • Display of the workload • A list of all active and inactive Server processes, Executors and users • Access to their statistics and reports • Messages to users and administrators as well as security messages • Overview of the database in use • A list of licenses Additionally, administrative access is possible for: • Closing and activating Server processes • Halting and deleting Executors • Canceling user sessions • Setting trace options for Server processes and Executors during system operation • Changing values to the Server's input buffer	
UC4 Explorer with three new functions In the UC4 Explorer, the following functions are now available "Duplicate to...", "Link to..." and "Move to...". They can be called with the context menu. "Duplicate to..." creates a duplicate of the highlighted objects in the selected destination folder. "Link to..." creates a link to the highlighted objects in the selected destination folder. "Move to..." moves the highlighted objects to the selected destination folder.	
Structured Documentation for objects Documentation tabs can be displayed in a structured form. This makes it possible to keep a task's data and values and read them with specific Script elements. Structured documentation is defined in the variable UC_OBJECT_DOCU with a preceding "@".	
Version Control for objects For the better understanding of changes to objects, it is possible to activate a so-called version control in the client settings. If objects are changed afterwards, a duplicate is automatically created and transferred to the folder VERSION_CONTROL.	
Call of external programs With this new functionality, it is possible to transfer object codes to external programs. You can enter the program names in the variable UC_SENDTO. They are shown as an entry of the context menu in the UC4 Explorer.	

Executors

All Executors for Enterprise Business Solutions

New Variable UC_EX_ERP_CONNECT
The new Variable UC_EX_ERP_CONNECT was added to the system client 0000. It contains the name of the Executor and the appropriate connection string to the Enterprise Business Solution, retrieved by the Executor.

OS/390

REPLY_ID of console messages can now be read in the UC4 Script
The Executor now also supplies reply IDs as a response to console messages expecting replies. They can then also be read in the UC4 Script of an event of "Console" type.
Example: :SET &REPLYID = GET_CONSOLE(REPLY_ID)

OS/400

Executor for OS/400 released

PeopleSoft

Executor for PeopleSoft version 8.4* released
The PeopleSoft Executor can now be used for version 8.4*. The new resulting SBB interfaces "UC4_PROCESSREQUEST" and "UC4_INTERFACE_SERVICE" are supported by the library ucxjpsx6.dll.

SAP Basis

Output of the detail text of SAP messages
Long texts of SAP messages are now output in the following places:
1) In the activation log (message number and class of the BAPI-RETURN structure), if the message type is E or A
2) In the Executor log (for calls not registered in the activation log)

8.5.3 Improvements

[Highlights] [New Functions] [Improvements] [Corrections]

UC4 Server

General

Improvement of the Sync processing Previously, when Sync conditions were checked, repeated deadlocks occurred in the database, which reduced the overall performance. Now, processing lies in the sole responsibility of the primary server process. Almost no deadlocks occur anymore, which results in significantly improved performance.	
Forced change of password In the **User** tab of the User object, it is now possible to activate the option "Password had to change for next logon" without having previously set a value in the variable UC_CLIENT_SETTINGS with "MAX_PASSWORD_AGE".	
Extended script elements	
:DISCONNECT - Disconnects the connection to Executors With this Script statement, you can disconnect connections of one user or all users of a user group to the UC4 system. Additionally, it is now possible to disconnect connections to Executors.	
PREP_PROCESS_VAR - Two new parameters to filter entries In addition to the variable name, you can now also specify filters for the validity key and content.	

DialogClient

General	
Warnings in the Message Window colored blue The Message Window displays all important information of the UC4 system. General information is displayed in black. Error messages are highlighted in red due to their significance to the system. Additionally, warnings are now highlighted in blue.	
Priority change of active tasks The Activity Window has been extended for the function "Modify UC4 priority". It can be called through the context menu of active tasks. A window opens in which the task's UC4 priority can be changed.	
Earliest starting point displayed in the details If an "Earliest start" time is entered in the "Earliest" tab of an object in a JobPlan, this time is displayed in the JobPlan and in the details.	
Extension of the Detail Window for additional Sync information In the Detail Window of objects, additional information to the Sync object in use is displayed. In addition to name and current state, date, including the time of the last change and the action set (Start, Abend and End), are displayed.	
New functions for the editing of JobPlans When positioning objects in a JobPlan, they are arranged on an invisible screen. Now it is possible to add or remove lines and columns to or from this screen. The appropriate commands can be called through the popup menu in the JobPlan graphics.	
Call of the last monitor of a JobPlan in Schedule Monitor In the Schedule Monitor, the monitors of individual JobPlans are also available (if they exist). If no monitor is found for a particular JobPlan, as it is in a waiting condition for the starting point or is inactive, the last monitor can be opened after a request.	

Display of System Status
The system status is now displayed with a traffic-light symbol. This can easily be found next to the UC4 logo in the right upper corner of the DialogClient.

Performance Improvement
With the new entry <componentpool> in the uc4config.xml, you can specify whether components of the DialogClient (e.g. tabs of objects) should be held in the Cache. Performance can be increased with this.

Utilities

Client Copy

Increased security with deletion of clients
To avoid the unauthorized deletion of a client, it is now necessary to log in to this client before you start the deletion process. A login window is automatically called. The client can only be irrevocably deleted after a successful login procedure.

Loading Program

Output of file name for database loading now also in log file
The file selected or attached to the parameter -X in batch mode by the user for the loading process is now also registered in the log file of the loading program.
Example: U0021596 File read: 'C:\UC4\db\general\3.01C\UC_UPD.TXT'

Check Program

The test result has been extended for various statistics
The utility UCYBDBCHK.EXE checks the existing databases before UC4:global is implemented. The test result is written to a HTML file. Now, this file also contains various statistics such as e.g. the number of objects per client, per object type and client, the number of reports per client and the number of statistical records per client or host type.

8.5.4 Corrections

[Highlights] [New Functions] [Improvements] [Corrections]

UC4 Server

General

Deactivation of JobPlan, despite correct settings in the Attributes tab
In the **Result** tab in the JobPlan, it is possible to react to the end status of a task. If "Halt" was selected for the first task as a reaction to a non-reached status, the JobPlan didn't remain available in the Activity Window. This always occurred when the succeeding task was started immediately and regardless of whether "After the program has error-free ended" was selected in the JobPlan for automatic deactivation.
S# 24307

Numeric entries not possible in :READ due to a wrong default value
In :READ statements, it is also possible to limit the user entry to numbers of a certain number range. If the minimum value was >0 and if no default value was set, it was not possible to make entries. Now, the minimum value is taken as default value.
Example: :READ &VALUE,'3-5','Number',,N
S# 28246

Forecast calculation incorrect for a periodic turnaround later than 00:00
The Forecast assumed a wrong starting date for the calendar check of schedules when the periodic turnaround was later than 00:00. The same held for JobPlans with starting point on the next day. If an object of the JobPlan had a condition specified in the **Earliest** tab, it was not considered.
S# 28571

Executors

All Executors on Windows Platform

Error in path specification of GET_FILESYSTEM
Path specification in the Script element GET_FILESYSTEM is now possible with or without an attached "\".
S# 28744

Job files of ended jobs deleted immediately
Up to now, the Executor signaled a job end to the server and waited for a reply to delete the job file afterwards. If, however, this Executor was deactivated in the meantime, it remained in the working directory. Now, the job file is immediately deleted when the job is ended.
S# 28069

Same Executors for file transfers excluded
For file transfers, it was possible to enter the same Executor in the source and destination host. Now, a message appears and prevents this constellation.
S# 28321

All Executors for Enterprise Business Solutions

Erroneous transfer of messages
If errors occurred during Script execution, the Executor sent defect messages. This happened when the transfer was additionally encoded.

PeopleSoft

Status "Waiting for host" if there is no connection to PeopleSoft
Jobs get the status "Waiting for host" if there is no connection to PeopleSoft.
Interfaces: all, PeopleSoft release: 8.0+
S# 30832

Wrong login information leads to abortion of a UC4 Job.
A job is aborted if it uses the wrong login information.
Interfaces: Java, PeopleSoft release: 8.0+
S# 30832

SAP Basis

Logs of process chains now with correct information
The Script element BW_ACTIVATE_CHAIN also saves the logs of process chains in the activation report. The connected parameters PROCESSLOGS, JOBLOGS and LONGTEXT now supply the correct information.

Correct status handling of process chains
The states of process chains are now handled adequately (R - ended erroneously, F - finished, S - skipped).

Deleting queued-job files
Queued-job files are now deleted when they have no entries.

Extension of return code for the Script element BW_ACTIVATE_CHAIN
The following return codes have been defined to make it easier to distinguish the status of a process chain in UC4:

SAP return code 'R' -> UC4 return code 4 (ENDED_NOT_OK)
SAP return code 'X' -> UC4 return code 8 (ENDED_NOT_OK)
SAP return code 'S' -> UC4 return code 12 (ENDED_NOT_OK)
SAP return codes 'G' and 'F' -> UC4 return code 0 (ENDED_OK), as before
S# 29365

UNIX

Specified report length not considered
Previously, the entry "MAX_REPORT_SIZE" in the variable UC_HOSTCHAR_XXXX was not considered correctly and therefore, the whole report was transferred. This error has been removed. If the report is longer than the specified value, it will be truncated. The last block of the report, including an additional note, is always transferred.

Windows

Error when monitoring Windows events
With an event of the event type "Console", it is possible to monitor the event display of Windows.Previously, if there were several Windows events in sequence, this resulted in errors.

Transfer of host name to Job Messenger
As a parameter, the Job Messenger can now also receive a host name instead of an IP address.

Utilities

Loading Program

Runtime error in case of missing output directory
If the parameter transform_path= has not been indicated in the section [GLOBAL] of the INI file, the utility tried to write the log files into the directory C:\TEMP. If this directory did not exist, a runtime error occurred. Now, log files are stored in the directory which contains the loading program.
S# 30483

Deactivating option of Jobs and FileTransfers when converting to 3.0
When converting a transport case from 2.6 to 3.0, the option "Deactivate automatically when finished" is set to "Always". This includes that all tasks react in the same way as in version 2.6 in which this option does not exist.
S# 30540

Release date of version 3.02A: 10/24/2003

8.6 Release Notes Version 3.02B

8.6.1 Highlights

[Highlights] [New Functions] [Improvements] [Corrections]

- UC4.NonStopServer
- New type of Server process "Dialog Process" (DWP) available
- Auto Forecast for displaying tasks that will run
- New design for Detail Windows
- Magnetic windows in the DialogClient
- Drag & Drop supported in the Search dialog and context menu extended
- Versions Management directly in the object including a restore function
- Tasks and task chains can now be copied from one JobPlan or Schedule to another
- New chapter "Inside UC4" and "Example Collection" included in the documentation
- The utilities have been improved and can now be used platform-independently.
- Accessing the UC4 system through the Internet with UC4.WebGUI
- New tool supporting the migration process
- Oracle version 10g is now supported
- UC4 Executor for GCOS 8 SR 5.2 released
- UC4 Executor for SAP on Linux and z/Linux released
- UC4 Executor for MPE 6.5 including CallAPI released (HP3000)
- UC4 Executor for PeopleSoft for People Tools version 8.44 and 8.45 released
- UC4 Executor for PeopleSoft on AIX 5.1 released
- UC4.Executor for Siebel 7.5 on Windows (2003, 2000 and XP) released
- UC4.Executor for HP-UX 11i (Itanium) released
- UC4.Executor for Windows 2003 (Itanium, I64) released
- New UC4.PlusModule for Tivoli
- UC4.Connect for HP OpenView Operations, version 7.1 and higher
- UC4.Connect for SAP Monitoring via XMW interface
- Extension of system client 0000
- New message-comparing program
- Naming and sorting of Login objects can be specified (update)
- New report type SLOG for SAP Jobs
- Email connection through SMTP for Windows and UNIX Executors
- New functionality R3_GET_VARIANT_CONTENTS
- New functionalities CALE_LOOK_AHEAD, CHANGE_LOGGING, FORECAST_OBJECT, FORECAST_TASK and STR_SUBSTITUTE_VAR

Notes for the Update Installation

The symbol characterizes new functionalities which need to be adjusted manually in the particular INI files.

Updating **DB2/OS390**: The default tablespaces have been modified in **3.02B**. When changing the database, the new and modified tables already address the new tablespaces. UC4 recommends providing these new table spaces before changing. Do so using the script "create_tablespace.sql". Note that by default, the buffer pools BP2 - BP9 are then referred to (examples are found in the file 'alter_bufferpool.txt').
If the old tablespaces should be kept, the script ..\db\db2os390\3.02B\chngdb.sql must be adapted.

Updating **DB2/OS390**: This is an important note for users who have already changed from a UC4 version 2.6x to 3.02A and now want to update to 3.02B. The names of the LOB Table spaces have changed. Hence, 5 lines in the file chngdb.sql need to be adapted manually. They contain the command: **DROP TABLESPACE UC4DB.Name**; The following list show the old and new names.

LMQMEM -> LMQMEM01
LMQWP -> LMQWP01
LMQLS -> LMQLS01
LMQCP001 -> LMQCP101
LMQCP002 -> LMQCP201

Example:
DROP TABLESPACE UC4DB.LMQMEM;must be changed to
DROP TABLESPACE UC4DB.LMQMEM01;

The TimeZone objects TZ.CST, TZ.EST, TZ.GMT and TZ.PST that were supplied by default, included a wrong specification for changing to the standard time. If you have copied templates to your own clients, please adjust them accordingly!

When updating to version 3.02B, the maximum number of tasks running on a host is set from "999999999" to the value "UNLIMITED". Get more detailed information about Executor settings from the System Overview.

So far, the utilities UC4.DB Archive, UC4.DB Client Copy and UC4.DB Reorg had INI files and additionally, specific configuration files with start parameters. These start parameters are now included in the INI files. Hence, the INI files always need to be adapted when the utilities are updated (see also Update installation of the utilities).

The JAR-file names for the utilities have been changed. Hence, batch calls need to be adjusted. The following options are available: you can either adjust the name of the JAR files or use the new console batch mode (file name for batch request ends on *.EXE). UC4 recommends using the second option as it can be used without Java and reduces memory consumption.
Note that for the utilities UC4.DB ClientCopy, UC4.DB Archive and UC4.DB Reorg, an authorization check (Single Logon) is performed. The user who logs on to the operating system therefore requires a User object in the target client of the batch processing. Example: User Smith in the UC4 domain requires the User object SMITH/UC4 in the target client of the UC4 system (see also Start Parameters).

The name of the message library is now written in lower case letters. As its location is specified in the INI files of many UC4 components (e.g. UC4 Server, Executors,&) with the parameter helplib=, it must be adjusted there (helplib=ucx.msl).

Note the following incompatibility when accessing R/3 monitors using the script element GET_PROCESS_LINE. The name of the Monitoring Context can now also be read. As this name is

the very first column, all scripts accessing individual columns with strings - thereby using fixed positions (e.g. :SET &column = STR_CUT(&line, 20, 10)) - must be adjusted.

The new privilege "Edit SAP Intercept table" has been included. It is used in the **Form** tab of SAP Jobs.

A privilege is now also required for accessing the Version Management functionality.

Components to be installed

UC4 Database ✓	UC4 Server ✓	DialogClient ✓	Utilities ✓

8.6.2 New Functions

[Highlights] [New Functions] [Improvements] [Corrections]

UC4 Server

General	
New Server process type "Dialog Process" (DWP). This type of Server process is exclusively responsible for the handling of DialogClient messages, therefore improving the UC4 system's overall performance. From the technical point of view, Dialog processes function in the same way as work processes. Switching from WP to DWP and vice versa is possible in the System Overview or with the script element SET_UC_SETTING. The number of Dialog processes can be handled in the UC4 Variable UC_SYSTEM_SETTINGS with the validity keyword WP_MIN_NUMBER.	
UC4.NonStopServer Reliability can be increased by changing some of the Server processes to NonStop processes. The computer on which the NonStop processes have been installed takes on processing when the computer with the active Server processes stops. Technically, NonStop processes function the same way as work processes. An extra license is required.	
New Functionalities	
AUTOFORECAST - Calculates forecast data for future activities.	
CALE_LOOK_AHEAD - Retrieves the next date on the basis of Calendar conditions.	
CHANGE_LOGGING - Causes the log file of Server processes and Executors to be changed. The log file can also be changed manually in the System Overview.	
FORECAST_OBJECT - Creates a forecast for the specified object.	
FORECAST_TASK - Creates a forecast for the specified task.	
STR_SUBSTITUTE_VAR - Replaces script variables with their values. It can be used independently and in combination with GET_PROCESS_LINE.	

Database

Oracle

Oracle version 10g is now supported.

DialogClient

General

Extension of system client 0000
The system client 0000 now offers additional monitoring functions such as searching for records in the selective statistics. The Activity Window displays the activities of all clients. For easier handling, the column "User" does now additionally contain the client number. With all these new functionalities, UC4 systems are even more comfortable to handle.

Auto Forecast
With the new functionality "Auto Forecast", tasks that will run within a specified period time can be displayed. An extra window is available for the calculation and display of forecast data for which Schedules and Events supply the necessary data. The results provide a comprehensive overview on future activities.

Documentation tabs differently arranged
So far, all Documentation tabs defined in the UC4 Variable UC_OBJECT_DOCU were displayed next to the standard tabs. From now on, they are part of an extra "Documentation" tab and can be selected from the lower left part of the window. Additionally and regardless thereof do imported objects have their own documentation tabs.

Custom naming conventions for objects
With the new UC4 Variable "UC_OBJECT_COUNTER" it is possible to specify a counter per object type whose reading is appended to the suggested object names. This number then replaces the default value "NEW.n".

Executors

GCOS 8

UC4.Executor for GCOS 8 SR 5.2 released

MPE/ix

UC4.Executor for MPE 6.5 incl. CallAPI released (HP 3000)

NSK

New Architecture for the UC4.Executors for NSK
The following functionalities are now available as a result of the NSK Executors new architecture:

- the new job attributes "CPU" and "Virtual Terminal"
- increased performance due to a central Output Collector and reusable TACLs
- improved restart performance
- improved job canceling
- critical error messages are sent to the EMS Console

PeopleSoft

UC4.Executor for PeopleSoft for PeopleTools version 8.44 and 8.45 released

UC4.Executor for PeopleSoft on AIX 5.1 released

SAP

UC4.Executor for SAP on z/Linux released

UC4.Executor for SAP on Linux released

New report type SLOG for SAP Jobs
It is now possible to display a report tab containing current SAP system log messages for aborted SAP Jobs. Number and interception period can be specified through parameters in the INI file of the SAP Executor.

Managing connections in the Forms tab
A new menu is available in the **Forms** tab just right-click on the traffic-lights symbol. This tab contains entries for establishing and ending connections to the SAP system. Further commands offer the opportunity of switching between offline or online mode, or changing to another connection if more than one is available.

New Functionality

R3_GET_VARIANT_CONTENTS - Shows the content of a variant.

Siebel

UC4.Executor for Siebel 7.5 on Windows (2003, 2000 and XP) released.

UNIX

UC4.Executor for HP-UX 11i (Itanium) released

SMTP email connection for UNIX Executors
UNIX Executors can now also use the Email connection using SMTP.

Open VMS

Using file attributes
The file attributes "alq", "deq", "mbc", "mbf" and "fop" can now be used for file transfers. With the parameter ACCESS=, they can also be specified as default setting for the Executor.

Windows

UC4.Executor for Windows 2003 (Itanium, I64) released

SMTP email connection for Windows Executors
The MAPI2 interface and SMTP are now available for the email connection.

Using Windows Job objects
The Windows Job object combines all the processes of a Window job, thus providing the following advantages:

- CPU-time measuring includes all sub-processes,
- the Windows job only ends when all sub-processes have ended,
- when the Windows job is canceled, all sub-processes are also canceled

You can specify in the Job or the Executor (as default value) whether a Windows Job object should be used.

Utilities

General

The utilities have been improved and can now be used platform-independently.
All important utilitieshave been implemented platform-independently in Java and are now also available for UNIX. The program names and names of the INI files have been changed slightly. Now they also include the parameters for the Java Loaders which were so far included in the configuration files.

- UC4.DB Archive
- UC4.DB Change
- UC4.DB Client Copy
- UC4.DB Load
- UC4.DB Reorg
- UC4.DB Unload

Migration Tool

Program simplifying the update process
A new utility is now available for updating from a 2.6x or 2.6x version to UC4:global. It includes numerous functionalities, thereby providing several work steps that would otherwise be very time consuming and complex in their realization. The individual steps are made available in extra tabs, thereby facilitating the individual conversion of your UC4 system.

Naming and sorting of Login objects can be specified
All login data necessary for Jobs, Events and FileTransfers for logon to operating systems and applications are stored in UC4:global's so-called Login objects. During the migration process, login data is retrieved from the password container of version 2.6x and transferred to the newly created Login objects. In the new section [MIGRATION] in the INI file, you can specify how the Login objects should be created (e.g. for each platform, and for each platform and Executor name).

Unloading Program

UC4.DB Unload redesigned
Additional batch parameters are now available for the unloading program, which enable even easier handling.

Comparing Program

New message-comparing program
The comparing program UCCOMPMSL.EXE analyzes the differences between messages of two different UC4 versions. The program compares the message libraries of both UC4 versions and prints a list of all changed, deleted and new messages, sorted by languages.

WebGUI

General

Accessing the UC4 system via the Internet with UC4.WebGUI
With the UC4.WebGUI, the UC4 system can be monitored and controlled with any Web browser. Remote users can perform quick analyses when problems occur and take the necessary steps.
With the three tabs, it is easily possible to access the sections "Explorer", "Activities" (including messages) and "System Overview". This service is available in the languages German, English and French. The look & feel of the UC4.WebGUI is similar to the UC4.DialogClient, thereby allowing for quick and simple handling.
The Auto-Forecast functionality can also be used in the UC4.WebGUI.

Requirements:
Application Server: Tomcat 4
J2EE Server: IBM WebSphere 5.1, BEA WebLogic 8.1 or SAP NetWeaver '04
Web browser: Microsoft Internet Explorer version 6.0 (or later) or Netscape version 7.1 (or later)
UC4:global version 3.02B or later (when using Tomcat, version 3.02A Patch 16 or later)

External Integration

UC4.Smart Plug-In for HP OpenView Operations

UC4.Smart Plug-In for HP OpenView Operations released for version 7.1 and higher

UC4.Connect for SAP Monitoring
UC4.Connect for SAP Monitoring can now also be used via the XMW interface

UC4.PlusModule for Tivoli
New UC4.PlusModule for Tivoli Requirements: IBM Tivoli Monitoring 5.1.1 Tivoli Management Framework 4.1 (Fixpack 6) Tivoli Enterprise Console 3.9

8.6.3 Improvements

[Highlights] [New Functions] [Improvements] [Corrections]

UC4 Server

General	
Variable limitation of search results System settings were extended for the two new entries "GENERIC_SEARCH_LIMIT" and "GENERIC_STATISTICS_LIMIT" (see UC4 Variable UC_SYSTEM_SETTINGS). You can specify a maximum number of search results to be displayed in the UC4 Explorer and the selective statistics. This influences performance positively. The default value is 5000.	
Maximum number of lines increased for PREP_PROCESS* By default, data of the script elements PREP_PROCESS* is supplied in lines. It can, however, also be structured in columns. Now up to 22 columns can be defined instead of 10 with the parameter LENGTH_TAB.	
No limitation of the maximum number of tasks per Executor Themaximum number of tasksthat can be executed simultaneously can be defined for each Executor with a value ranging from "0" to "999999999". You can also specify that the number of tasks is not monitored. The script elements :SET_UC_SETTING and GET_UC_SETTING both use the value "UNLIMITED" in these cases.	
Sync check after a cold start After a cold start of the Server processes, all tasks that are in the condition "Waiting for Sync" are checked and then continued.	
New start parameters for the UC4 SNMP subagent for UNIX (Linux). The following parameters can be set: -x ... Starting the agent with agentx support The following parameters can be used if the subagent starts without the parameter -x: -**i** file ... Path of the subagent's configuration file -**s** file ... Snmptrap command of the ucd-snmp package	
Extended Functionality	

CREATE_OBJECT, MODIFY_OBJECT and REMOVE_OBJECT In addition to the objects Variable and Calendar, Login objects can now also be handled with these script functions.	

DialogClient

General	
Restructured Version Control The name Version Control was changed to Version Management. Copies of objects that are created by using the Version Management are now found in a separate system folder (such as the Transport Case). In order to keep a clear overview, the duplicated versions are additionally listed in the newly-created Version Management tab that is available for all objects. The utility UC4.DB Reorg has also been adjusted for facilitating the complete reorganization of the object copies. A privilege is required in order to access Version Management.	
UC4 version and patch level displayed The menu item *About UC4:global* was added to the DialogClient menu. It includes information about the UC4 version and patch level. Indicate both of them when contacting the support team.	
Search result section can now be changed A bar splitting the window of the "Search" function facilitates enlarging or diminishing the result section.	
Number of Forecast windows reduced You can highlight several objects and create forecasts for all of them. Up to now, an individual forecast window was opened for each object. From now on, there will be exactly one window containing the necessary information for all forecasts (the same applies to tasks).	
Attribute tabs now available for generated JCL A JCL is available when a job has been generated. You can access it through the context menu of the Activity Window. The JCL dialog has been re-structured and contains two additional tabs now, one showing the attributes of the Job object, the other the attributes of the host.	
Using Sync objects of system client 0000 In addition to selecting Sync objects in the activate-able objects of the own client, you can also select those of system client 0000.	
Extension of the functionality "Send To" In order to allow for easier distinction, the UC4 Variable "UC_SENDTO_ACT" is now available for objects in addition to "UC_SENDTO" for tasks. This includes that different entries can be defined for the popup menus of the UC4 Explorer and the Activity Window. Furthermore, external programs and executable objects of the client can be specified.	
Setting for storing JobPlans In JobPlans, particular tasks are connected with the line tool in order to define predecessors, successors and dependencies. Up to now, a JobPlan could always be stored regardless if a task has been assigned a predecessor and successor, or not. Now the system checks which settings were made and depending on the setting made in the Variable UC_CLIENT_SETTINGS, entry JOBP_SAVE_INCOMPLETE, the JobPlan then will either be stored after a request, stored without request or not stored at all.	

Fewer tasks in the Activity Window The UC4 Variable UC_SYSTEM_SETTINGS contains systemwide settings. The entry GENERIC_ACTIVITIES_LIMIT can be used to specify the maximum number of tasks to be displayed in the Activity Window. This improves performance when the activities are refreshed in short intervals.	
Refresh interval for viewing tasks can be specified You can now specify an interval in which the Activity Window and monitor view are refreshed in the client settings. The advantage is that messages are sent in groups and not for each particular message. The parameter for this settingEH_KICK_INTERVAL.	
Object deletion with prior request When deleting an object, the system automatically checks back if it is used in other objects. If many objects are deleted at the same time, this process can take a little longer. With the new validity keyword DELETE_CHECKBCK_LIMIT in the UC4 Variable UC_SYSTEM_SETTINGS, you can now define a maximum number of objects - if this number is exceeded, a dialog is displayed from which you can select whether the particular object's usage in other objects is to be checked back or not.	
Additional column called "CP" in the System Overview You can now see in the "User" category of the System Overview via which communication process a particular user is connected to the UC4 system.	
A warning appears when objects are renamed When an object is renamed, the system checks if it is used in scripts. If so, a warning message is displayed.	
Selecting specific users in the Activity Window selection In the Activity-Window selection, you can also search for tasks started by particular users. Do so by indicating a user name or setting a filter with the wildcard characters "?" and "*". In addition to these options, a combination field (combo box) containing all the client's users is now available, from which you can select a particular user.	
New function for selecting objects in Schedules and JobPlans So far, objects could be stored in Schedules and JobPlans by dragging them to the tab with the drag-and-drop function. Alternately, you can now select objects by calling a small UC4-Explorer window with the command "Add task" in the context menu.	
New font for Scripts In the Process tab, which is available for all executable objects, the font was changed from "Courier New" to "Lucida Sans Typewriter". If this font is not installed on your computer, the fonts "Lucida Console" or "Monospaced" are used instead.	
Filter is now displayed in the Statistics Window As already implemented in the Activity Window, the selected filter is now being displayed in the status line of the Statistics Window.	
Copying task sequences across JobPlans It is possible to copy one or several tasks of JobPlans and insert them in other JobPlans. The properties that have been defined for the individual tasks remain unchanged.	
Modifying the runtime in Schedules Changing the runtime monitoring of tasks in Schedules is now possible any time provided that they are not active.	
A warning appears when deleting used objects If an object should be deleted, which is used by other objects (e.g. a task in a JobPlan); a warning message calling attention to this fact is displayed.	

Additional warning for write-protected objects When opening an object that is write-protected due to a setting made in the authorization system, a warning message appears.	
Magnetic Windows In the **General** tab, themagnetic scopeof the DialogClient's windows can be defined. By default, this function is deactivated. In case of activation, however, you can also define the magnetic area in pixels (default value 17, max. 99 pixel). If a window is dragged or dropped within this magnetic area it is aligned to the nearest screen edge or window.	
Copying tasks within Schedules Tasks can now be copied and inserted within Schedules	
Extension of the selective statistics Instead of a task's run number (RUN#), a 7-character alphabetic string of the report name can also be used for accessing the statistics of the execution.	
Display of the Server time In the System Overview, the table in the category "Server" has been extended. It now also contains a column showing the Server time of the Server process.	
New start parameter for the DialogClient With the parameter -I, it is now possible to specify the path of the configuration file (uc4config.xml) to be used in the INI file of the DialogClient. In doing so, all users can create their own uc4config.xml with the preferred settings. Additionally, a path for the configuration file login_dat.xml can be specified with the parameter -O.	
Additional column "Connections" in the System Overview The category "Servers" now also shows the number of connections (users and Executors) to each communication process.	
Number of used DialogClient licenses The category "Licenses" of the System Overview now also displays all DialogClient licenses that are used.	
New design for the Detail Window Detailed information about objects is now listed in groups which allows for keeping a clear overview although the number of attributes is increasing. If the object includes a Sync, an extra tab within the Detail Window provides the corresponding Sync information. Additionally, the Detail Window is now also available in Forecasts and Auto Forecasts.	
Extended System Overview The category "Client" is no longer only displayed in the System Overview of system client 0000 but also in the overview of the clients "1" - "9999". This category includes information about the individual clients.	
More detailed print output of the JobPlan When printing a JobPlan, the diagram now also includes the names of the tasks and the Executors, and the times.	

Executors

All Executors for Enterprise Business Solutions

Modifiable name for the default Login object ERP_LOGIN.
The name of the Login object which contains the login information for Enterprise Business Solutions and the Email connection of the UNIX Executor, can be specified in the Executors' host characteristics (UC4 Variable UC_HOSTCHAR_*) with the validity keyword APPLICATION_LOGIN. The standard name is still "ERP_LOGIN".

Optimized status check
In order to improve status checks for jobs, a new section called [STATUS_CHECK] containing the parameter time= was included in the INI file of the Executor. With the value set in here (in seconds), an individual interval can be defined for status checks. The interval used so far could not be changed and was therefore not always the best solution (e.g. for jobs with a short runtime).

Block-by-block transfer of messages
It can be specified with the INI-file parameter WRITE= if messages should be transferred in blocks (e.g. report lines). The sending interval for these blocks can be defined with the parameter WRITE_TIME=.

OS/390

Log file change
Log files can now be assigned to MVS Sysout classes. Their names then show the format LOGnnnn (e.g. LOG0001). Hence, the log file can be changed. Use the INI-file parameter logpurgeclass= to assign the classes.

PeopleSoft

Additional settings in the "Form" tab
The settings of the DialogClient have been extended for the new tab "ERP Forms". It provides options such as selecting a Login object for auto-logon to PeopleSoft or offline mode as default setting for opening a Job.

SAP

Extended configuration options for RFC connections
RFC connections can now be used even more efficiently due to three entries that were added to the INI file. They accept the following settings:

open_ex - function to open the RFC connection (RfcOpen; RfcOpenEx)
connections - type of the RFC connection (per client/user/language; per Job; only one connection at a time)
conn_keep - keeps the RFC connection (when not used; remains open for being used by other Jobs)

Functionality R3_COPY_VARIANT extended
The functionality of R3_COPY_VARIANT was extended for the parameter MODE= which identifies the processing mode. If a blank is used with this parameter, the variant is copied by duplicating table entries (default setting). Value "C" copies the variant by creating a new one through SAP-internal interfaces. Note that variants exceeding the 45-character value for parameters will not be copied. UC4 recommends using this mode only in exceptional cases.
The second new parameter is OVERWRITE=YES/NO. It serves to specify the further procedure when the target variant already exists.

Additional settings in the "Form" tab
The "ERP Forms" tab was added to the settings of the DialogClient. You can specify options such as a Login object for the auto-logon to the SAP system or offline mode by default when a job is opened.

New privilege for SAP Jobs
The new privilege "Edit SAP Intercept Table" can be used in the **Form** tabof SAP Jobs.

Parameter for establishing a connection.
In the configuration file of the SAP CallAPI you can specify an interval in seconds after which the system tries to connect to the SAP system by using the parameter SAP_ RECONNECT_INTERVAL.

Extended Functionalities

R3_GET_SESSIONS - The new optional parameter NOFOUND provides the opportunity of reaction if no batch-input sessions can be found.

UNIX

Improved login verification
With the newly added parameter login_check=, you can define whether or not the passwords of Login objects for Jobs and FileTransfers should be checked.

Open VMS

The logical name can now be defined
So far, the logical name was composed of: UC4_*UC4 System name_Executor name*_ Executor. If one VMS computer used two Executors of the same name (update) that were assigned to UC4 systems , problems were possible. Now, a logical name can be defined for each Executor with the parameter uc4_logical.

Utilities

All utilities

Start parameters are displayed in the log file
A log file now additionally shows the parameters used for starting the utility.

Archive Browser

Searching for data records across clients
With the Archive Browser you can view archived data records of a particular client or a particular archiving run with filter criteria. Now you can also search across clients by specifying the main archive folder.

Archiving Program

Limiting dates and times now possible
Various formats are available to output dates and times. Now you can limit the number of permitted formats. If a non-predefined value is entered, a corresponding message is displayed. Specify permitted formats in the INI file of the archiving program with the parameter DateTimeFormat=.

Client Copy

4-digit client numbers required for logon
This utility displays clients that have a four-digit client number assigned. You cannot log on to other clients for creating objects and processing tasks, or copying and deleting clients. For clients still bearing the default names (e.g. CLIENT.NEW.1) a warning appears in the log file. Additionally, start parameters are now available for starting this utility in batch mode.

Unloading Program

New database parameter in the INI file
The INI file now contains the new entry CommitCount= , which you can use to specify the number of data records after which database commit is performed. When 0" is used, a commit is made after each record.

Extended functional range
With the unloading program, all objects of a client or of the whole UC4 system can be directly unloaded and do not have to be moved to the Transport Case before. Additionally, archiving and reorganization flags can be reset in this utility.

ServiceManager

General

Delayed services are shown in the log file
In the properties of each individual service you can enter an interval for delaying its start. This information (service and time) is now also written to the log file with message number U0022035.

Documentation

Extended and improved information

New chapter "Inside UC4"
The UC4 Documentation now includes the new chapter "Inside UC4". It includes background information about the following topics:

- Multi-Server Operation
- Executing objects
- UC4 Priority
- Cache Usage
- JobPlan Logic
- Schedule Logic
- Using TimeZones in UC4
- Logical Date
- Runtime

New chapter "Sample Collection"
This chapter providesexamples for the various ways of using script elements. Each example is explained in detail and includes screenshots showing the results.

Improved script manual
The following improvements were made in the documents describing the script elements:

- Each script element now contains a list of links to similar functions and statements.
- In the syntax description, the obligatory parameters are displayed in colors
- The script examples are shown in the same colors as in the DialogClient

Improved table of contents
Some chapters of the UC4 Documentation (above all in the Administrator Manual) were renamed and restructured, and information can be accessed as quickly and easily as possible. The basic structure, however, remained unchanged so that existing users can use the documentation as always.

Extended migration chapter
The newly-added Migration Guide provides information about the migration process and all the corresponding tasks.

Extra chapter for the utilities
More detailed description is now available for the utilities in a separate chapter in the Administrator Manual.

More information about the supported databases
Additional notes in the installation guide and performance references facilitate the use of UC4 with the following databases: DB2, MS SQL Server and Oracle

Detailed description about database maintenance
The utilities UC4.DB Archive, UC4.DB Reorg and UC4.DB Unload are used to maintain the UC4 Database. Detailed information on the usage of these service programs including an example explaining how to automate this procedure.

Using the Transport Case
Description on the efficient use of the Transport Case is now also provided in a separate document.

Description about the UC4 Variables
The list of UC4 Variables was extended and allows for the individual configuration of your UC4 system.

Extended configuration files
The documentation for the configuration files of the UC4 components (*.INI and *.XML) was completed.

8.6.4 Corrections

[Highlights] [New Functions] [Improvements] [Corrections]

UC4 Server

General

Object name could contain invalid characters (CREATE_OBJECT).
The script element CREATE_OBJECT creates Calendars and Variables. Invalid characters were accepted up to now, for object names. This has been changed and now a warning message with a list of all allowed characters is displayed when invalid characters are used.
S# 31965

Script element PREP_PROCESS_FILENAME could not be fully used in the Event object
The script element PREP_PROCESS_FILENAME can also be used in the script of an Event object. If, however, the optional parameter was used for the Login object, an error message was displayed.
S# 31687

Incorrect calculation of maximum runtime for tasks in Schedules
It is possible to make settings for monitoring the runtime of tasks in Schedules. With the corresponding maximum runtime (MRT), UC4 can monitor a task and react when the limit is exceeded. This value was not correctly calculated.
S# 32621

Job report was not deleted although the corresponding option was selected
When executing Jobs, you can specify if the job report is to be stored or deleted (host-specific tab). It happened from time to time that these reports could not be deleted although the corresponding option had been activated. Mostly this occurred when a file name was generated incompletely.
S# 31887

UTC was used instead of the specified time zone
When processing the script element :SET_CONDITION, which defines starting conditions for JobPlans, UTC (Coordinated Universal Time) was used, thereby setting the wrong starting time. Now the time zone of the task (if available) or of the user or client is used.
S# 32728, S# 30305

With the script function GET_WIN_EVENT, the date and time of an Event can be determined with the keyword TIMESTAMP. UTC used to be returned by mistake instead of the client's time zone.
S# 36286

The version management can now also be activated in the client settings. So far, the objects that were duplicated in this process did not show the time stamp of the client's time zone as intended.
S# 32093

Local time was used instead of UTC when objects were imported with the loading program. As a result, the displayed time differed from the actual creation time.
S# 37014

Wrong return code of script element SYS_ACT_JP in post- script
The script element SYS_ACT_JP checks if the object was activated from a JobPlan. If it was used in a job's script and pre-script tab, a proper return code was supplied. A wrong value was supplied if it was used in a post-script tab as the task activating it (e.g. JobPlan, Schedule ...) was transferred incorrectly.
S# 30227

Immediate start of manually blocked tasks did not work
In the JobPlan monitor, you can immediately start tasks that are waiting for execution. This, however, did not work when a manual breakpoint was set in this task.
S# 35472

Change of start time for Forecasts in active Schedules
The periodic change newly initializing the Schedule is now used to create forecasts for active Schedules. So far, the activation time was used. Furthermore, the specified starting time is used for the individual tasks instead of the current time.
S# 30960, S# 31344

Several corrections in the :READ input check
With the script element :READ you can specify formats for inputs (e.g. numeric characters). The input check has been optimized.
S# 31163, S# 31166, S# 33589

Canceling while in the status "Waiting for manual release"
Scripts and groups can now also be canceled when they are in the status "Waiting for manual release".
S# 34853

Runtime supervision of JobPlans and Schedules was not overridden
It is possible to specify an individual runtime supervision for tasks in JobPlans and Schedules. It overrides the settings specified in the object itself. This individual runtime supervision is now activated when the task is being restarted. The minimum runtime, however, will only be checked if no restart point was set.
S# 36206

Value of AUTO_DEACT_DELAY could not be assigned with the script variable :PUTT_ATT.
When setting the attribute AUTO_DEACT_DELAY with the script element :PUT_ATT, no script variable could be used so far.
Example :PUT_ATT AUTO_DEACT_DELAY=&x
S# 36365

Crash of UC4 Server when shutting down
When shutting down from UNIX (Sun Solaris), no Loscon (lost connection; TCP/IP) is sent. This causes the work processes to wait for a ping response without result. None of them take over the role of the primary work process. This malfunction has been corrected with a Timeout function.
S# 38323

Deactivation of sub-file transfers
When deactivating an active file transfer with wildcard characters, all the file transfers assigned to it are also deactivated.
S# 38205

Wrong time displayed
The client settings can also be used for activating the version management. So far, the duplicated object versions did not show the time stamp of the client's time zone. This missing time conversion also affected the messages displayed in the System Overview.
S# 32093, S#38763

File transfers were not aborted
For file transfers, it can be specified that the source file should be removed. If they cannot be deleted successfully, they are now canceled.
S# 38599

Error with SYS_ACT_USERID
Using the script element SYS_ACT_USERID in the **Post-Process** tabsometimes caused error messages.
S# 39094

Abortion of nested PROCESS loops
TERM_PROCESS ended all loops in nested loops which were formed with PROCESS in order to have data sequences processed line by line.
S# 34954

SYS_SERVER_ALIVE falsely displays work processes as inactive
When the script element SYS_SERVER_ALIVE was used for a Linux server, this occasionally resulted in active work processes being reported as inactive in the return codes.
S# 39240

DialogClient

General

The search function could not find certain entries
With the search function in the UC4 Explorer, you can filter all objects containing Executors. All tasks using them were shown. The result, however, did not include Login objects. The search for users and Calendar keywords has also been extended.
S# 32786, S# 36104

No further information when DialogClient crashes during start
If the configuration file UC4CONFIG.XML had no valid content (e.g. section <connections> is missing), the DialogClient could not be started. As no log or trace file was created, the reason for this error was not obvious. Now a message appears to inform about the reason.
S# 31738

Optimized export functionality
Time required for exports increased with the number of objects included. Now, the XML parser was optimized in order to keep export times as short as possible.

Conversion of alphabetic characters during imports was missing
As no lower-case letters are allowed in object names, they will automatically be converted to upper-case letters.
S# 31972

Incorrect display of German Umlauts after exports
The contents of the Activity Window, the Statistics Window and others can be exported to files. The generated CSV file, however, did not show Umlauts correctly. This mainly affected the documentation tab when objects were imported or exported.
S# 32552

Script of PeopleSoft Jobs was deleted when Java Object Adapter was missing.
The ERP forms for PeopleSoft required the availability of the file psjoa.jar. An error affecting the content of the Process tab occurred if this file was not available. Now, Offline mode is used when there is no Java Object Adapter.

Place holder for the Executor when importing Console Events
If it is found during the import process of a Console Event that the Executor does not exist in the UC4 system anymore, the text box of the Console tab shows a place holder instead (e.g. <WIN>).

Entries in the menu "Send To" were not client-specific
If connections to several clients were established in one DialogClient, the menu "Sent To" always contained the entries of the connection that had been established first. This malfunction has been removed and now this menu can be specified client-specifically in the appropriate UC4 Variable.
S# 38135

Executors

BS2000

Incomplete logging for missing work processes
It sometimes happened that not the whole logging was stored in the UC4 database. This occurred when the Executor sent its logging although there were no active work processes available in the UC4 system. Now, the Executor does only send the logging after having received a corresponding message.
S# 31625

NSK

Sporadic Executor crash
The Executor tried to delete the report file when the job log had been transferred to the UC4 Server. The Executor sporadically abended when this was not possible.
S# 38313

SAP

Connection data was not written in the UC4 Variable (forms).
The SAP Executor for Sun Solaris did not insert the retrieved connection data to the SAP system in the UC4 Variable UC_EX_ERP_CONNECT. This was corrected and manual maintenance is no longer needed.
S# 31403

UNIX

Executor crashed when Job was canceled in the Activity Window (command setting)
Canceling a UNIX job in the Activity Window caused the Executor to crash. This, however, only happened when the type "command" was activated in the host tab. The reason was that the process ID of the group was missing.
S# 33289

Erroneous restart ability of Executors for HP-UX
If an Executor is ended during ongoing job processes, these can be continued as soon as the Executor has been restarted and the Job status can be retrieved from the UC4 Server. This functionality was erroneous in Executors for HP-UX, as the job ended with the status "ENDED_LOST".
S# 31089

Incorrect transfer of file attributes
You can specify file attributes for file transfers in the tab of the same name (e.g. IN=none). This setting, however, could not be used as the file-attribute field was interpreted wrongly.
S# 32434

With PREP_PROCESS_FILE, files were not completely read
With the script element PREP_PROCESS_FILE, file contents can be read line by line. If, however, the terminating characters (CRLF or CR) were missing in the last line, it remained unconsidered.
S# 38503

Missing character in file transfers with the Solaris Executor
An error occurred when data was transferred as the first character was replaced by an empty space. This error occurred regardless of the specified CodeTable.
S# 39637

Authorization check in UNIX was too strict
File transfers were aborted with the message "Access denied" as the authorization check for Group IDs was not made correctly. The error occurred when the file was assigned to a group, and the user - a group member - wanted to transfer the file.
S# 39293

Open VMS

Crash of the Executor for Open VMS
A system function returned a value referring to a wrong internal address. This could cause the Executor to crash.
S# 33869

Windows

Job report was not stored in a file
If can be specified in the Host-Attributes tab of Windows Jobs that the job report should be stored as a file if an error occurs. This setting, however, did not work unless "Database" was also specified in this tab.
S# 37558

Utilities

Loading program

Invalid Login objects were used for transport-case conversion
When the transport case was converted from version 2.6x to UC4:global, Login objects from the version-control folder (VERSION_CONTROL) or the recycle bin were sometimes used in the objects.
S# 33344

Wrong validity key "DOKU" caused errors when links were converted
In version 2.6x, the UC4 Variable UC_OBJECT_DOCU contained the validity key "DOKU", which is accepted for the migration process. Links converted to UC4:global are then spelled "DOCU", as is valid in UC4:global and were therefore not displayed.
S# 31450

Link documentation was converted incorrectly
In 2.6x, you could add link documentation to objects in form of extra tabs containing links to files. When a root directory was specified, path specifications were not correctly converted in the migration process. They were written in two lines instead of being written one after the other in one line.
S# 31452

Runtime error occurred when invalid script lines were converted
Runtime errors could occur during database conversion if the script contained an invalid line or continuation lines.
S# 32097

Wrong implementation of scheduled tasks
When transferring the Transport Case from a 2.6x system to UC4:global, it happened occasionally that inactive tasks of Schedules were set active.
S# 39151

External Integration

UC4.KnowledgeModule for BMC Patrol

Several alerts although status remained unchanged
When changes are made in blocked Jobs; the MIB table is always completely recreated. It occurred occasionally that the table was read during this recreation time and some Jobs marked blocked in Patrol agent could not be found anymore. Although still being blocked they were considered not blocked, which caused several alerts. A counter has therefore been specified in the "Tuning menu" of system objects. It determines the number of query poll cycles resulting in no output about the blocked Job. Only when the job remains in the same status *n* times, an alert will be created. This setting, however, is only useful when a very low value has been specified for the polling intervals.

Release date of version 3.02B: 10/25/2004

8.7 Release Notes Version 3.02B002

Notes for the Update Installation

The  symbol characterizes new functionalities which need to be adjusted manually.

 When using Oracle as the database with UC4:global version 3.02B, **Oracle Version 9i or greater** is required!

 The **UC4 Database** is now controlled more intensively! Please keep the following details in mind in order to avoid unexpected problems. Pay special attention when working with **Oracle** that the database-client settings correspond to the database settings. Details on how to check and specify the particular settings of an ORACLE database for UC4 are provided in the corresponding documentation.

8.7.1 New Functions

[New Functions] [Improvements] [Corrections]

DialogClient

General

Definition of the first calendar week
The client settings have been extended for two new validity keywords:

FIRST_DAY_OF_WEEK - day with which the week should start
Default value: Monday
FIRST_WEEK_METHOD - definition of the week that should be regarded the first calendar week of the new year
Default value: The first week of which at least 4 days are in the new year

Adjust the UC4 Variable UC_CLIENT_SETTINGS if the above mentioned values should be changed. They can also be changed in the settings of the DialogClient, but here they serve mere display purposes in the Calendar and do not influence the script element WEEK_NR.

8.7.2 Improvements

[New Functions] [Improvements] [Corrections]

UC4 Server

General

Clientwide ERT calculation in batch mode possible
The utility UC4.DB Load can also be used to calculate the expected runtime (ERT). Up to now, these calculations were made UC4 systemwide, but can now also be made for individual clients. Do so by adding the client (ESTIMATE_ERT [*client*]) in the last line of the file UC_UPD_ESTIMATE_ERT.TXT.

Example:

```
ESTIMATE_ERT 1000
```

The file UC_UPD_ESTIMATE_ERT.TXT is found in IMAGE:DB\GENERAL\3.02B.

Extended Functionalities

CALE_LOOK_AHEAD - retrieves the next date based on Calendar conditions.
The date supplied by this script function is now shown either in the default format or in the format that has been defined in the first parameter.

IMPORT - imports objects from an XML file.
A new parameter is available which allows the ability to keep existing folder links.

:ON_ERROR - determines the relation to particular errors or messages of script elements.
This script element can now also be used for SYS_SERVER_ALIVE.

:PUT_READ_BUFFER - stores names and contents of script variables in the input buffer.
In addition to assigning script literals, it is now also possible to assign the content of a script variable to another one.

DialogClient

General

Search extended for Variable objects
The Search function in the DialogClient now also includes validity keywords and contents of Variable objects.

Executors

MPE/ix

Optimized communication with the UC4 Server
The communication of the MPE Executor to the UC4 Server has been optimized. Now even more Jobs can be started at a time.

SAP

SAP application server output with R3_SWITCH_OPMODE
The names of the SAP application servers that should be switched are now also included in the activation report.

Utilities

Migration Tool

Particular data of the system client 0000 are migrated
Users, user groups, hosts and the password container of system client 0000 can now also be converted with the Migration Tool. This also includes the creation of the ERP_LOGIN. Enter "0" in both fields in the "New client" tab to have your data converted.

Documentation

Extended and improved information

Handling Executors
A new document is now available which describes the different ways of starting, stopping and monitoring Executors.

8.7.3 Corrections

[New Functions] [Improvements] [Corrections]

UC4 Server

General

Time events in combination with US time zones caused a special error
When defining a condition in the **Calendar** tab, one day was skipped when a US TimeZone was specified.
S#45414

GET_FILESYSTEM included subdirectories
With the option PATH_FILE_COUNT of the script function GET_FILESYSTEM, files of subdirectories were also counted.
S#45560, S#45647

FileTransfers were sporadically canceled
Rarely did it occur that a FileTransfer was canceled with the message that no host could be found in the Login object, although that particular entry existed. This happened with FileTransfers that were processed at the same time and used the following source and target hosts:
JOBF1: HOST1 -> HOST2
JOBF2: HOST2 -> HOST1
S#44458, S#45150

DialogClient

General

Earliest start time in the START box of JobPlans could not be edited
An earliest start time can be defined in the JobPlan properties. In the start box, however, the earliest start time was inactive, so the time could not be changed.
S#45521

Calendar conditions were ignored in particular cases
If an empty line was stored in the Calendar conditions of the JobPlan properties, this could bring about that the task ignored all the specified Calendar conditions.
S#43831

Error in the version control of imported objects
The Export/Import process overwrote the version control object and the last version of the object was wiped out.
S#45146

Executors

NSK

FileTransfers aborted
Transfers of text files were occasionally aborted when the files were larger than 4-6 MB (depending on line lengths).
S#45116

SAP

Error with Jobs including SYNC
Different blocking of reports lead to compulsory traces and missing parts of the activation log.
S#45090

SAP spools were immediately printed with R3_SET_PRINT_DEFAULTS
SAP spools were immediately printed although the opposite had been defined in the corresponding parameters.
S#45138

Sporadic stop of BW Jobs
BW jobs erroneously reported ENDED_LOST when the Executor lost the connection to the SAP system due to network problems if a LOST CONNECTION message had been sent while trying to reestablish the connection.
S#45155

UC4 Jobs on UNIX Executors were not ended
Jobs that had already ended in SAP were still displayed as active in UC4. The corresponding end message was only sent much later.
S#45127, S#45203

UNIX

Huge workload on UC4.Executors for AIX and Solaris
Jobs with a long runtime required much CPU time.
S#45424, S#44983

Termination of the connection to the UC4 Server
The connection check to the UC4 Server was adjusted in order to avoid unnecessary connection terminations.
S#44490

Utilities

Archive Program

User name could not be determined under z/Linux
In batch mode, the user name could not be determined.
S#45206

Migration Tool

Wrong conversion of PREP_PROCESS_FILENAME
After the migration process, a comma was missing in the script function PREP_PROCESS_FILENAME.
S#45705

9 Release Notes Version 3.01

9.1 Highlights

Version 3.00A - 3.01A

- Re-engineering of the UC4 Database
- New Server architecture
- Multi-Server operation
- Flexible scalability of UC4 systems
- Use of TimeZones
- Workload and Performance Management
- Platform-independent DialogClient
- DialogClient with access to several UC4 systems
- DialogClient in new, attractive design
- New objects and objects with an extended range of functions
- New and extended script elements

Version 3.01B

- Modified version policy for UC4:global
- UC4 authorization system is active
- New and extended script elements
- Event from "Console" event type available
- Display and change JCL of a started job
- New functions for editing JobPlans
- USA-style week view in the Calendar
- Optional automatic opening of monitors
- Java Call Interface available

Version 3.01C

- Release of UC4 Server for UNIX (z/Linux)
- Release of Executor for SINIX
- Compression of MQ tables in UC4 Database
- UC4 Server with SNMP support
- Support for Forecast functionality
- Implementation of import and export functionality
- Task result changeable in JobPlan monitor at runtime
- Re-naming of objects and replacing of object usage
- Sync monitor available
- New script elements

9.2 New Functions

UC4 Server

[UC4 Server] [DialogClient] [Executors] [CallAPI] [Utilities]

General

Multi-server operation possible with UC4:global
UC4:global is based upon multi-server operation which has completely changed a UC4 system's structure. Depending on licenses, processing is distributed to any number of communication and work processes and in doing so, multi-processor systems can operate well-balanced. Server processes can run on different systems of the same platform, thereby facilitating trouble-free UC4 operation.

Two or any number of Server processes for one UC4 system
A UC4 system requires at least one communication and one work process. Its efficiency can be adjusted to growing demands by adding any number of communication and work processes. Tasks are handled through queues in the UC4 Database.

TimeZones supported
UC4:global can be used to operate UC4 systems across several TimeZones. Local summer and winter times are taken into account. It is possible to specify a default TimeZone for each client of a UC4 system. Nevertheless, users, tasks, different functions or script elements can also use differing TimeZones. Using several TimeZones is subject to licenses..

Priority for internal client processing
It is possible to specify a priority of internal UC4 processing for each client. For example, the priority of a test client can be ranked below the priority of a production client. Values from 200 to 255 can be specified using CLIENT_PRIORITY in the UC4 Variable UC_CLIENT_SETTINGS. The default priority value is 200.

Priority for all a client's tasks
A priority can be defined for all a client's tasks which are then processed with this priority within UC4. Values between 1 and 255 can be specified using TASK_PRIORITY in the UC4 Variable UC_CLIENT_SETTINGS. Unless otherwise defined, the default priority for all tasks is 200.

Priority for particular tasks of a client
Within UC4, tasks are processed in accordance with their priority. It is possible to increase or decrease the priority of particular tasks.

Maximum number of tasks running simultaneously can be defined
You can define how often a task can be run at the same time.

New script elements

ADD_TIMESTAMP - adds time to a time stamp

CONV_TIMESTAMP - converts date and time for another TimeZone

SUB_TIMESTAMP - subtracts time from a time stamp

SYS_TIMESTAMP_PHYSICAL - delivers real time and date

:ATTACH_SYNC - assigns a Sync object to a task

Version 3.01B

New script elements

:ADD_ATT - adds attributes to an object at runtime
Currently, either users or user groups can be added to the list of responsible operators of a CallOperator.

:DISCONNECT - disconnects a connection to the UC4 system
This currently includes user connections or connections of all user-group users to the UC4 system.

:REMOVE_ATT - removes attributes of an object at runtime
Users or UserGroups can be removed from the list of controlling operators of a CallOperator.

IS_GROUP_MEMBER - checks a user's membership status within a user group

Version 3.01C

Compression of MQ tables in UC4 Database
Data can now be stored in compressed form in the MQWP, MQPWP, MQCP* and MQMEM tables in order to increase performance. This serves to reduce the partially huge amounts of data that is transferred via the net, and the I/O's in the database.

Compression should be activated in the UC4 Server's INI file. Set the 7th digit of the eight-digit command field for controlling database accesses (ODBCVAR) to "R". Changes only become effective after a UC4 Server restart (cold start).

UC4 Server with SNMP support
UC4 Servers for UNIX (AIX, HP-UX, Linux, Solaris and z/Linux) and Windows now fully support SNMP. They provide system values in the MIB (Management Information Base) for monitoring by means of a management system. SNMP traps can additionally be generated for Events occurring in UC4 systems.
See: UC4 and SNMP

New script elements

CREATE_OBJECT – creates an object (Calendar and Variable only)

MODIFY_OBJECT – changes an existing object (only Calendar and Variable)

MOVE_OBJECT – moves an object to a folder

REMOVE_OBJECT – deletes an existing object (only Calendar and Variable)

UNIX

Version 3.01C

UC4 Server for UNIX (z/Linux) released

DialogClient

[UC4 Server] [DialogClient] [Executors] [CallAPI] [Service Programs]

General

DialogClient can be used for different platforms
The DialogClient has been re-programmed. It is now a Java application. Thus, it can be run on all platforms for which a Java VM (virtual machine) is available.

Several UC4 systems can be operated with one DialogClient
Any number of connections to different UC4 systems can be established within a DialogClient. In doing so it is possible to manage and monitor a global net of UC4 systems only with one DialogClient.

New design for the DialogClient
The DialogClient has been redesigned for the new version UC4:global. Regardless of the system platform, you can always work with the same look & feel. Alternately, users can select a platform-specific design (Metal or Windows).

DialogClient without direct database accesses
The DialogClient exclusively communicates with a UC4 Server communication process. No database licenses are required for the DialogClient as the UC4 Database is not directly accessed.

System stability for the connection DialogClient to UC4 system
After the DialogClient has logged on to the UC4 system, the list of available communication processes (port numbers) is transferred to the program. In doing so, an alternative connection can quickly be established if the connection has been lost.

DialogClient uses the most optimal connection to the UC4 system
The connections to all available communication processes are checked when the DialogClient logs on to the UC4 system. The DialogClient uses the connection to the UC4 system which supplies the best performance values. All other connections to communication processes are disconnected. Connections are re-checked if the connection has been lost.

No license check for logon to system client 0000

New objects

User - records user settings for UC4 logon, his/her assignment to user groups, folder assignments and access rights

Up to now, a User Manager has administered users. It has been replaced. Users are now objects which are administered in the DialogClient.
Note: During the migration from UC4 2.6 to 3.0, User objects are created which assume the existing definitions.

User group - merges users in order to assign them identical authorizations

Up to now, a User Manager has administered user groups. It has been replaced. User groups are now objects which are administered in the DialogClient.
Note: During the migration from UC4 2.6 to 3.0, UserGroup objects are created which assume on the existing definitions.

Login - saves login data for hosts

Jobs and FileTransfers use Login objects to log on to operating systems and applications. There are no PasswordContainers anymore.
Note: During the migrationfrom UC4 2.6 to 3.0, the existing login data that has been stored in PasswordContainers, are assumed to the new Login objects.

Client - defines a completely independent environment within a UC4 system

Up to now, a ClientManager has administered clients. It has been replaced. Clients are now objects that are administered in the DialogClient.
Note: During the migration from UC4 2.6 to 3.0, Client objects are created which assume the existing definitions.

TimeZone - records values for local time evaluation.

TimeZones in objects supported
TimeZone objects can be assigned to clients, users and executable objects. The TimeZone assigned to a client represents its default TimeZone. Assigning a TimeZone in a User object means that the DialogClient displays the local time of this TimeZone for this particular user. It is also possible to select and use a TimeZone that differs from local client's one.

Priority for executable objects adjustable
A priority can be assigned for most tabs in their **Attributes** tab. Values from 1 - 255 are allowed with 1 being the highest, 255 the lowest priority. If you select 0 for a task, the priority defined for the local client in the UC4 Variable UC_CLIENT_SETTINGS with TASK_PRIORITY is used. If no default priority has been defined or if the variable does not exist in the local client, priority 200 applies.

Maximum number of tasks running simultaneously can be defined
It is possible to define in the **Attributes** tab, how often tasks can be executed at the same time. Allowed values range from 0 - 99999. 0 is the default value and includes that there is no limitation on the number of tasks running simultaneously.

Script editor with syntax coloring
Processing instructions stored in UC4 Script are analyzed syntactically when being entered and displayed in colors. Script statements, script functions, JCL or comments can therefore be distinguished more easily. Extensive UC4 Scripts appear more clearly structured.

Automatic deactivation of FileTransfers, Jobs and JobPlans
FileTransfers, Jobs and JobPlans can be deactivated automatically after their execution. The **Attributes** tab contains the information whether this task must never be deactivated, deactivated after an error-free execution, deactivated after an error-free restart or always be deactivated.

Jobs and FileTransfers use Login objects
Jobs and FileTransfers now refer to Login objects where the login data for target systems is defined. In Jobs, Login objects are assigned in the **Attributes** tab, in FileTransfers in the **FileTransfer** tab. During migration from UC4 Version 2.6 to 3.0, existing login information is converted to Login objects.

Jobs and FileTransfers can be processed with CodeTables
Jobs and FileTransfers can use explicitly indicated CodeTables. The character-set conversion of JCL , reports and transferred data is based upon these code tables. If no code table has been defined in the Job's **Attributes** tab or the FileTransfer's **FileTransfer** tab, the default CodeTable of the particular Executor is applied.

Alert task for JobPlans and Schedules
You can define a status which is to be met by all sub-ordinate tasks in the **Attributes** tab of JobPlans or Schedules. A determined alarm tasks is started if a subordinate task does not meet this status. The system provides detailed information (UC_CAUSE*) which can be read from the read buffer in the started alert task's script using the script statement :READ.

CallOperator alarm modified
The specified users are informed if a call operator is activated. A blinking symbol in the DialogClient's toolbar draws attention to the message, request or alert. Clicking on this symbol with the mouse button selects the connection to the client in which the CallOperator is active. An extra window is displayed which lists all active CallOperators of this client. Double-click the CallOperator's monitor in order to react to the CallOperator.

Events are created depending on Event types
Event types are specified when creating Event objects. This is done by selecting a template of type "Console" or "FileSystem". Once selected, the Event type cannot be changed anymore.

Jobs are created for a particular target system
The target system (operating system or application) must be determined when creating a job. The selection of a template specifies whether it is a job for MPE, UNIX, WINDOWS, PeopleSoft, SAP etc. The **Host Attributes** tab, where the target system could be changed, does no longer exist. Tabs bear the name of the operating system or application.

Graphical interface for creating and administering SAP jobs
SAP jobs can be created and administered with a graphical interface, the ERP forms. These are displayed in the **Forms** tab. Definitions made in these forms are converted to SAP JCL script elements with all their parameters and stored in UC4 Script.

Stop and go for complete Groups, Schedules and JobPlans
Groups, Schedules and JobPlans including all their subordinate tasks can be stopped and restarted. The commands *Stop (recursive)* and *Go (recursive)* are available in these tasks' context menus.

Asynchronous JobPlan processing possible
JobPlan tasks can be defined without linking them to predecessors and/or successors. In doing so, tasks can start or end asynchronously. For example, if a task has no predecessor, it starts together with the JobPlan (unless other properties have been defined). If a task is not linked to the JobPlan's END box, JopPlan processing does not depend on the end of this particular task which makes a difference if this JobPlan is part of another JobPlan. The superordinate JobPlan continues processing as soon as the sub-JobPlan's processing has reached the END box.

Defining JobPlan tasks as inactive
Tasks within a JobPlan can be defined as being inactive. In doing so, a task can remain in the JobPlan without being executed. It is deactivated in the properties' **Earliest** tab. This definition has the same effect as setting the tasks manually inactive during JobPlan execution. The end status of such a task is "ENDED INACTIVE - task not active: undefined" (1921).

Defining breakpoints in a JobPlan
Breakpoints can be defined within a JobPlan in the task properties' **Earliest** tab. In doing so it is easily possible to stop a JobPlan at a particular point. This definition has the same effect as manually setting a breakpoint during JobPlan execution. When processing has reached this defined task, it obtains the status "Hold - manual stop was set" (1562). Manually delete the breakpoint in order to continue JobPlan execution.

Immediate start of inactive tasks
Tasks which have been set inactive through particular Calendar conditions can now be started immediately.

Navigation Window for JobPlans
A navigation window opens if a JobPlan can no longer completely be displayed in the monitor view during its execution. In doing so, it is possible to view the relevant tasks even in large JobPlans. In the monitor view, the navigation window shows tasks including their particular current statuses.

Version 3.01B

UC4's authorization system is active
The UC4 authorization system controls the authorization status of users to objects an folders. Access to statistical data and object reports is also monitored. Access rights to objects, folders and statistics and reports for all or individual users of a user group can be defined in the **Authorizations** tab. The authorization system also serves to define which system functions can be used by users (e.g. when working with the DialogClient). These can be defined in the **Privileges** tab. Users and user groups can additionally be authorized to access particular objects. The particular specifications are made in the object attributes.

When migrating to UC4:global, the existing authorizations and privileges are adequately converted. Authorizations can be displayed and changed for users and user groups. Users, user groups, Servers and Hosts are objects in UC4:global therefore, accesses must newly be defined through authorizations.

When updating from 3.01A to 3.01B, the existing authorizations and privileges are integrated in the authorization system. Privileges can now be displayed and changed. Every user has access to <No folder> even after the update. The user UC/UC in system client 0000 has all authorizations and privileges. Users who had no authorizations in version 3.01A have limited authorizations after the updating process.

Event of type "Console" available with extended functions
"Console" type Events can now be used. The Windows Event monitoring has been extended. It is also possible to access the directory service log, file replication service log and DNS server log of a Windows server which has been set up as domain controller and/or DNS Server (Domain Name System). "Directory Service", "File Replication Service" or "DNS Server" can be selected from the protocol list in the **Console** tab.

JCL of a job can be displayed and changed
The JCL of a job that is displayed in the activation window can be displayed and changed using the command *Open generated job*. The display of job attributes will be realized in one of the coming versions.

New functions for editing JobPlans
Changes in a JobPlan can now be canceled or repeated for up to 5 steps. The appropriate commands are provided in the *Edit* menu of the DialogClient. These functions can also be called through key combination shortcuts. By moving the mouse, it is possible to draw a frame around several objects and make multiple selections. By clicking with the CTRL key pressed, it is also possible to select several objects. This multiple selection allows e.g. block-by-block moving of objects. Drag and drop of several objects simultaneously into the JobPlan makes object transfer easier.

New week view in the calendar
Until now, the week view was only able to display calendar weeks in a vertical spacing format (stacked downwards). Now, the week view can also be displayed horizontally. Weekdays are arranged in a horizontal spacing format (as in MS Outlook, for example). This view is most often used in the USA. Standard calendar view preference can be set in the **TimeZone/Calendar** tab of the **Settings** dialog. This dialog can be called using the command *Settings* in the DialogClient's *Options* menu. Additionally,Samuel!J holidays can now be italicized in all calendar views.

Automatic monitor opening can be defined
Monitors can be displayed during the runtime of CallOperators, Cockpits, JobPlans and Schedules. For each of these object types, it is possible to define whether the monitor is to be opened following task activation in the **Activities Refresh** tab of the **Settings** dialog. These specifications are called with the *Settings* command in the DialogClient *Options* menu.

Version 3.01C

Support for Forecast Functionality
UC4 can create and display a forecast for executable objects. The aim of this forecast is to obtain the most realistic estimation of runtimes of participating tasks. There is a special window type for viewing the created forecasts. It is called in the menu *View*, command *Forecasts* or by clicking the mouse on the command button in the task bar.

Implementation of import and export functionality
UC4 objects can now be transferred from one UC4 system to another. The UC4 Explorer provides the functions with the commands "Export" and "Import" in the context menu. For imports, it is possible to overwrite an existing object.

Task result changeable in JobPlan Monitor at runtime
The reaction to the selected end status of a task at runtime can be changed in the JobPlan Monitor. In the **Result** tab, the settings for the particular tasks can be adapted. It is called with the command *Attributes* in the context menu of the JobPlan monitor.

Renaming of objects and replacing object usage
When an object is renamed, it is checked whether it has already been used in another object. If so, it is possible to change the object name also in the objects which use the renamed object.

Sync Monitor available
The Sync Monitor shows the current condition of a Sync object and its use by tasks. It offers a complete overview of a selected Sync object. In the upper part of the monitor, the current condition of the Sync is displayed including its value. Information is given on the task which were at last changed by the Sync object. These are the name of the task, its RUN# as well as the date and time of the change.

Executors

[UC4 Server] [DialogClient] [Executors] [CallAPI] [Utilities]

General

System security for the connection Executor to UC4 system
After logging on the Executor to the UC4 system, the list of available communication processes (port numbers) is transferred to the program. This allows alternative connections to be quickly established after a connection loss.

Executor uses the optimal connection to the UC4 system
With the first Executor logon to the UC4 system, connections to all available communication processes are checked. The Executor uses the one connection to the UC4 system which shows the best performance values. All further connections to communication processes are disconnected. This check is repeated after a connection loss.

No internal File Transfer between UC4 Servers and Executors
The UC4 Server (communication process) now sends the JCL of jobs to be executed directly to the Executor. No internal FileTransfer is made anymore. This also means that no statistical data are created by internal FileTransfers anymore.

PeopleSoft

New script element

PS_GRANT_OUTPUT_ACCESS - Authorizes users or roles to access the output of a PeopleSoft process.

Version 3.01B

Component Interface PROCESSREQUEST (Java classes) for PeopleTools 8.1x and 8.4x
UC4:global supports the PeopleTools PROCESSREQUEST Component Interface for PeopleTools Versions 8.1x and 8.4x (program libraries ucxjpsx4.dll and ucxjpsx5.dll). Access to job processing is provided through Java classes. Java classes must be installed and activated in the PeopleSoft Executor's INI file in order to use the PROCESSREQUEST Component Interface via Java classes.

SAP Basis

UC4 supports functions of the new SAP Interface XBP 2.0
Extended functions are available for the relevant script elements through the support of the SAP interface XBP 2.0.

Version 3.01B

UC4 supports further functions of the new SAP XBP 2.0 interface
The support of the SAP XBP 2.0 interface led to the implementation of new Script elements which run and monitor Intercepted Jobs and are able to read and change the filter tables of Intercepted Jobs.
XBP 2.0 is available as an SAP Support Package.
Interface: XBP 2.0, SAP Basis Release: 4.6+

New script elements

R3_ACTIVATE_INTERCEPTED_JOBS - carries out Intercepted Jobs under UC4 control
Interface: XBP 2.0, SAP Basis Release: 4.6+

R3_GET_INTERCEPTION - reads the filter table for Intercepted Jobs and saves it in the activation report or in a file
Interface: XBP 2.0, SAP Basis Release: 4.6+

R3_MODIFY_INTERCEPTION - changes the filter table for Intercepted Jobs
Interface: XBP 2.0, SAP Basis Release: 4.6+

SAP BW

New script elements

BW_ACTIVATE_CHAIN - starts a process chain, monitors processing and saves the logs in the activation report

BW_GET_CHAINS - reads process chains from the BW system. Available process chains are saved in the activation report or in a file

BW_RESTART_CHAIN - continues an interrupted process chain

UNIX

Version 3.01C

Executor for SINIXreleased
SINIX hosts with MIPS processor (RM400) are supported. The operating system SINIX-N version 5.42 or later is required.

Windows

Version 3.01B

Monitoring of additional event viewer reports of a Windows Server
The directory service log, file replication log and DNS server log are additional logs of a Windows Server which has been configured as a domain controller and/or DNS server (Domain Name System). The monitoring of these logs has been implemented into the Windows Executor.

CallAPI

[UC4 Server] [DialogClient] [Executor] [CallAPI] [Utilities]

Java

Version 3.01B

Java CallAPI available
A Java CallAPI is supplied along with UC4:global. This CallAPI enables UC4 calls from within proprietary Java programs, while providing a utility (UCCALL3.JAR) which can be used in an MS DOS box or in a batch file (example: java -jar uccall3.jar script=script.txt) when called in the command line. All parameters allowed for this utility can be displayed with java -jar uccall3.jar.

Utilities

[UC4 Server] [DialogClient] [Executor] [CallAPI] [Utilities]

Archive Program

Version 3.01B

Resetting archive flags
Archived data records are labeled after having been successfully archived. This facilitates the subsequent reorganization in order to delete these data from the UC4 Database. All of a client's activation flags can now be removed by re-calling the utility using the "Reset archive flags" button.

Reorganization Program

Version 3.01B

Resetting archive flags
Archived data records which should be deleted from the UC4 Database are marked with an archive flag during the 1st reorganization phase. In the 2nd reorganization phase, all marked data from the database is copied in REORG files and deleted. All of a client's deletion flags can now be removed by re-calling the utility using the **Reset delete flags** button.

Service Manager
Service Manager Dialog serves UC4 services in UNIX Communication and work processes and Executors which have been defined as daemon in UNIX, can be started and ended from Windows with the Service Manager dialog program.

9.3 Improvements

UC4 Database

[UC4 Database] [UC4 Server] [DialogClient] [Executors] [Utilities]

General
Complete Re-engineering of the UC4 database. The structure of the UC4 Database has been completely revised. Not only the necessary functional extensions, new standards for tables and field names have been improved but there is better performance for database access. As far as possible when migrating from UC4 Version 2.63x to 3.0xx, database contents are converted with the help of utilities.
Version 3.01C
UC4 Priority and TimeZone changeable in Attribute Dialog. The attributes of some executable objects can be set dynamically for the current execution at activation time. In the **Attributes** tab of these objects, the check box "Attribute Dialog" must be selected. It is now also possible to change the UC4 Priority (FileTransfer and Job) and the particular TimeZone applying to a task in "Attribute Dialog".

UC4 Server

[UC4 Database] [UC4 Server] [DialogClient] [Executors] [Utilities]

General
10-digit RUN# of tasks.
4-digit client number.
Improved password encryption. Passwords are now encrypted with a 128-Bit key and stored in the database.
Optimized Executor logon to UC4 Server. Due to optimized Executor logon to the UC4 Server, the UC4 system is available quicker after a restart, even if many Executors are used.
Expanded script elements
SYS_DATE - New parameter for TimeZone. For the evaluation of a date, a time zone that has been set as parameter, is taken into account.
SYS_DATE_PHYSICAL - New parameter for TimeZone. For the evaluation of a current date, a time zone that has been set as parameter, is taken into account.

SYS_TIME - New parameter for TimeZone.
For the evaluation of a time, a time zone that has been set as parameter, is taken into account.

SYS_TIME_PHYSICAL - New parameter for TimeZone.
For the evaluation of a current time, a time zone that has been set as parameter, is taken into account.

MODIFY_UC_OBJECT - New parameter PRIORITY=.
With the new parameter PRIORITY= it is possible to dynamically modify the priority of active tasks. Modifying priorities is possible as long as the task is not finished. Each modification is logged in the task report.

TOGGLE_OBJECTS_STATUS - Additional parameter.
When the keyword ALL is assigned in an additional parameter, the script element also starts or stops the automatic processing of all subordinate tasks.

Additional Parameter for Activator or Processor.
The activation type of a task, whose name, RUN# or object type is to be located, is defined with an additional parameter. Keywords are ACT for activator and PROC for processor (default). A processor is the superordinate task that is responsible for the orderly execution of tasks (Group, JobPlan or Schedule). Activator can be a task or user session.
This concerns the following script elements:

- GET_PARENT_NAME
- GET_PARENT_NR
- GET_PARENT_TYPE
- SYS_ACT_PARENT_NAME
- SYS_ACT_PARENT_NR
- SYS_ACT_PARENT_TYPE

Parameter for Object Type is optional.
The 10-digit RUN# clearly identifies a task. The RUN# is no longer assigned to a certain object type within a number pool. This concerns the following script elements:

- ACTIVATE_UC_OBJECT
- CANCEL_UC_OBJECT
- GET_PARENT_NAME
- GET_PARENT_NR
- GET_PARENT_TYPE
- GET_UC_OBJECT_NR
- GET_UC_OBJECT_STATUS
- MODIFY_UC_OBJECT
- PREP_PROCESS_REPORT
- TOGGLE_OBJECT_STATUS

Version 3.01B

Event with "Start after scheduled time" is also analyzed at UC4 Server start.
It is possible to define for an event whether it is to be executed or not when it is started after the scheduled execution time. This definition in the **Event** tab is now also taken into account when UC4 has been inactive for some time. All events for which execution time has then passed and for which the **Execute** option is activated are executed with UC4 Server start.

Expanded script elements

New attributes for events of the "Console" event type.
Access to additional event viewer logs of the Windows server is supported. The DIRECTORY_SERVICE, DNS_SERVER and FILE_REPLICATION_SERVER event attributes can be read and set with the script elements GET_ATT and :PUT_ATT.

Version 3.01C

Implementation of new licensing.
The licensing method and license structure have been changed. Licenses are now supplied as files and can be loaded in the UC4 Database with the loading program.

With the supply of version 3.01C, customers receive the same licenses as before but in a new format. Licenses used so far can no longer be used. As distinction is made between test and productivity licenses, an extra license is required to test systems.

UNIX

Server Processes on UNIX are based on C.
The runtime modules of the UC4 Server for UNIX have been programmed in C (not in COBOL as they used to be). So a C-runtime environment at UNIX platforms is sufficient for the UC4 Server operation.

DialogClient

[UC4 Database] [UC4 Server] [DialogClient] [Executors] [Utilities]

General

Longer User and Department Names.
For the logon to the DialogClient, a maximum of 200 characters is allowed for the combination user and department.

Passwords can contain a maximum of 32 characters.

Version 3.01B

Line defaults can be defined in the JobPlan.
Defaults can be defined for those lines which link tasks in a JobPlan. The standard line status can be preset in the **JobPlan** tab of the **Settings** dialog. This dialog can be called using the *Settings* command in the *Options* menu of the DialogClient.

Automatic capitalization in scripts of BS2000-, z/OS- and OS/400 Jobs.
It is possible to choose between upper and lower case for UC4 script inputs. A button (arrow pointing downwards) is available in the tool bar of the DialogClient. Inputs for Jobs in BS2000, z/OS and OS/400 target systems are automatically made in the capitalization mode, no matter which mode has been chosen with the caps lock key on the keyboard.

Version 3.01C

Status display of a task modified in Sync monitor.
The Sync Monitor shows the current condition of a Sync object and its use by tasks. Symbols in different colours are used to display states. The status "Waiting for Sync" is now displayed in blue instead of grey.

Task selection for archive keys in the Activity Window.
The Activity-Window selection, which can be called in the *View* menu, command *Activities*, has been extended for archive keys. Archive keys are now also shown in the task details.

Display of return codes in statistics overview.
The return codes ending the processing of executable objects, are now displayed in the statistics overview.

Deleting Executors from system overview.
Executors which are not currently used, can be deleted in the context menu in the system overview. They are moved to the recycle bin and can be restored later. Executor authorizations remain unchanged.

Host Display in the JobPlan graph.
JobPlans are exclusively created and managed graphically. All objects are represented with check boxes in the JobPlan tab. They can be distinguished by their respective object names. So far the object type was displayed here, now the host name is shown for Jobs, FileTransfers and "File system"-type Events.
S# 27668

Display of stop conditions in the JobPlan and schedule monitor.
Monitors show the current states of tasks. In the JobPlan and Schedule monitor view, a red-light symbol is shown as soon as automatic processing has been stopped.

Executors

[UC4 Database] [UC4 Server] [DialogClient] [Executors] [Utilities]

General

Longer Executor Names.
Now, a maximum of 32 characters is allowed for an Executor name.

Block sizes for Report Transfers adjustable.
The block size for the report transfer from the Executor to the UC4 Server can be defined in the variable for host characteristics (UC_HOSTCHAR_xxxx) of the Executors.

PeopleSoft

Version 3.01B

Restart of PeopleSoft Executor implemented.
After a cold start, the Executor can continue to monitor tasks, when it was possible to determine the current task condition together with the UC4 Server.
S# 25974

SAP Basis

Expanded script elements

R3_ACTIVATE_JOBS - Parameter MONITOR= for UC4 interface.
Now, the parameter MONITOR= can also be used with the UC4 interface. The same range of functions as for the XBP interface is available.

R3_ACTIVATE_REPORT - Parameter MONITOR= for UC4 interface.

R3_GET_JOB_SPOOL - New parameter RAW=.
The parameter RAW=, which is only available for the XBP 2.0 interface, delivers the raw spool list (including all formatting characters).

Version 3.01B

Unicode-compatible transport files for SAP version 6.10.
SAP Versions 6.10 and later offer the opportunity to use a database with Unicode. The "Unicode Check" flag must be activated to ensure that non-Unicode-based transports from SAP systems work. For SAP Version 6.10 and later, separate transport files with activated flags have been created.
S# 25644

UC4 supports additional functions of the new SAP XBP 2.0 interface.
R3_MODIFY_VARIANT has been implemented using XBP 2.0.
XBP 2.0 is available as an SAP Support Package.
Interface: XBP 2.0, SAP Basis Release: 4.6+

Expanded script elements

R3_MODIFY_VARIANT - Variant modification now also via the SAP interface XBP 2.0.

SAP BW (Windows)

Version 3.01B

Extended script elements:

BW_GET_CHAINS - New parameter ID= and TEXT=.
Process chains of the BW systems can now be selectively searched through the use of these new parameters. The wildcard character "*" can be used.
Interface: XBP, SAP Basis Release: 4.0+

Utilities

[UC4 Database] [UC4 Server] [DialogClient] [Executor] [Utilities]

Loading Program

Version 3.01B

Creation of Login objects logged during implementation.
During the migration process to UC4:global, Login objects are created which result from existing object data (login information, used hosts, etc.). Now, a list is created which shows from which objects a Login object has been created and with which information. The list is written in a file whose path and file name can be entered in the INI file of the loading program (transfer_path=).

Transport from 2.6 to 3.0 with complete implementation.
Transport cases from UC4 Version 2.6 are converted during the loading process to UC4:global. The same transformations take place as with a migration of the entire database (e.g. when Login objects are created and script elements are adapted).

Version 3.01C

Loading of license information implemented.
So far, license information had to be entered manually. Now, they are directly loaded in the UC4 Database with the loading program.

Change Program

Version 3.01B

Pre Script, Script and Post Script are distinguished from each other.
So far, values have been searched for and replaced in Pre Script, Script and Post Script when the SCRIPT attribute was used. Now, only the "regular" Script is considered for SCRIPT. Selective searching and replacing in Pre Script and Post Script is now possible using PSCRIPT and OSCRIPT .

Check Program

Version 3.01B

Use of SYS_SRRC_ACTIVE checked.
During the migration process to UC4:global, the check program which checks the Version 2.6 database reports the use of the SYS_SRRC_ACTIVE script function. This script element will no longer be supported as there is no SRRC (Status Recording Recovery Control) in UC4:global.

Client-related check of the Version 2.6 database.
With this check program, particular UC4 system clients can now also be checked. To do so, the program is called up with the -C parameter and client number. Analysis for system client 0000 is always an additional task. The file name of the file generated by the check program contains the checked client (e.g.: output_c02_030317_133707.html). If the -C parameter has not been specified, all clients are checked as before.

Version 3.01C

Objects logged with path descriptions.
The check program checks existing databases before they are changed over to UC4:global. The test result is written in a HTML file. An entry is made for each object, whose status is to be logged by the utility. Now, the entry also indicates in which folder the particular object is stored.

Objects created by users in client 0000 are logged.
The HTML file, which is created at database check before changeover to UC4:global, now also contains a list of all objects created by users in the system client 0000.

9.4 Corrections

UC4 Database

[UC4 Database] [UC4 Server] [DialogClient] [Executor] [CallAPI] [Utilities] [External Integration]

General

Version 3.01B

Initial data errors (ATTRDIA.SAP and ATTRDIA.SAPBW).
The system client 0000 Includes for SAP job attribute dialogs contained incorrect host type definitions. This had the effect that it was only possible to execute jobs for SAP Executors but not for SAP BW Executors, and only the SAP Executors were offered for selection in an attribute dialog.
S# 25463

Errors in the initial data 2 (holiday calendar).
In the holiday calendars supplied with the initial data in the system client, some holiday assignments were missing. There was no calendar content at all for Malaysia, Hong Kong, Singapore and Australia.
S# 25778, 25771

UC4 Server

[UC4 Database] [UC4 Server] [DialogClient] [Executor] [CallAPI] [Utility] [External Integration]

General

Version 3.01B

New task start time incorrectly saved in the schedule.
If a task's start time was changed in a schedule, the new start time was not converted into UTC. It was erroneously saved in local time.

No license for event functionality with Executors of license class "V".
The standard event functionality license is recognized as soon as an Executor has been licensed for event functionality. If this Executor was exclusively of license class "V", everything was checked properly for the Executor but no general event functionality license was recognized.
S# 25629

Protected entries in :READ are encoded when saved.
Values queried by the user with the script statement :READ are saved in the activation report for use in restart or post script. Protected entries (format code "D") are now written encoded into the activation report and not in plain text.
S# 24331

User check at CallOperator start.
Users of User groups to be informed by a CallOperator can now be added or removed in UC4 Script. A check is therefore made at CallOperator start to see if there is a user who is to be informed. There won't be any check at CallOperator definition in the DialogClient. The existence of an information message will also be checked at runtime only.

Sporadically, the schedule did not start tasks.
In certain circumstances, restarting a JobPlan caused the JobPlan's status in the Schedule (waiting for start time) to be overwritten by the JobPlan's current status (restart is executed). It was necessary that the JobPlan's restart took place after the periodic turnaround of the Schedule, but before the planned start time of the JobPlan. The overwritten status prevented the planned start of the JobPlan in the current Schedule period.
S# 25377

Version 3.01C

Error in script processing for CallAPI.
The script which is sent by the CallAPI to the UC4 Server for processing, was not read in full length. Therefore, sometimes invalid commands were recognizd. As a result, the script was ended incorrectly.
S# 27871

End of UC4 Server caused by registration via CallAPI.
If the user did not have the necessary privilege to register to UC4 via the CallAPI, the UC4 Server crashed. A storage area was incorrectly initialised.
S# 27680

Modified Attribute for MVS Jobs.
The MVS Account with the adequate Attribute name MVS_ACCOUNT can be change and read with the script elements :PUT_ATT and GET_ATT. For compatibility reasons, the user can still use the old name ACCOUNT.

DialogClient

[UC4 Database] [UC4 Server] [DialogClient] [Executor] [CallAPI] [Utilities] [External Integration]

General

Version 3.01B

Closing the message window not synchronous with menu and tool bar..
After closing the message window through the title bar, the *messages* command from the *view* menu was not deactivated. Also, the message window symbol (pushed when message window is displayed) was not released again in the tool bar.
S#25471

Selective statistics displayed additional tasks with wrong end status.
When the statistics was called for tasks having ended with the ANY_ABEND status, all tasks with ENDED_OK were also selected.
S# 25978

Version 3.01C

No display of reports in the Activity Window.
In the Activity-Window selection, it is possible to select the object types to be displayed in the Activity Window. Reports are included in this list. So far, they have not been displayed in the Activity Window, even if this was selected.

Executor

[UC4 Database] [UC4 Server] [DialogClient] [Executor] [CallAPI] [Utilities] [External Integration]

All Executors on Windows Platform

Version 3.01C

Host information in Executor log.
Host name and TCP/IP Address are printed in the Executor log. The particular message is written after the lines logged by the INI files.
Example: U2000066 Host information: Host name='NB0053', IP Address='192.168.114.99'

End Executor with UC4 Server.
The UC4 Server can end the Exector. Currently, this is only used internally for license checks.

Missing Executor response to server message.
In a FileTransfer with wildcard characters and with the script function PREP_PROCESS_FILE NAME, the Executor sends a message containing a list of file names to the server. When the server negatively acknowledged this message, the Executor did not respond.
S# 27587

Failure at UC4 Registration.
In the INI file of the Executors, you can find the [CP_LIST] section which contains a list of communication processes. The Executor shut down when it failed to connect to the first communication process. Now, the Executor tries to connect to the other communication processes of the list.
S# 27898

Oracle Applications

Version 3.01C

Starting Jobs in Oracle Applications 11i impossible.
Jobs could not be started in Oracle Applications Version 11.5.8. The reason was that the package FND_PROFILE (Function PUT) only existed in version 11.5.5. Instead, FND_ GLOBAL.APPS_INITIALIZE is used now.
S# 27944

z/OS

Version 3.01B

z/OS job name ignored.
The name for an z/OS job, defined in the **z/OS** tab, was ignored. A job name was always generated for the target system without considering potential defaults.
S# 25204

OS/400

Version 3.01C

Executor crash for events of "console" type.
The Executor crashed when an event monitored the console for the message CPF3837. Inserts of "*DTS" and "*CHAR" types with variable lengths were not correctly processed.
S# 25649

PeopleSoft

Version 3.01B

Display of process instance number or of session ID can be selected.
It is now possible to define which process information shall be displayed in the activity window, the detail and in the statistics for a PeopleSoft job. Either the process instance number assigned by PeopleTools or the session ID - the process ID assigned by the operating system for this process - are used. Setting is made with the PID= parameter in the [PS] section of the PeopleSoft Executor's INI file.
S# 25975

SAP Basis

Version 3.01C

Incorrect parallel processing of Batch Input sessions.
When a UC4 job using R3_ACTIVATE_SESSIONS with the parameters SELECT=EVERY was started multiply, the batch input sessions were only processed by one UC4 Job.
Interfaces: all, SAP Basis Release: all
S# 26559

Only English or German message texts in reports.
English or German can be chosen as language in the INI file, where the logging is made. SAP registration is also made in these languages, which had the effect that French (or other) message texts were not included in the report. With the new parameter SAP_language= you can specify if the Executor should register again with the language specified in the Job.
Interfaces: all, SAP Basis Release: all
S# 25226

Truncate fields du to deficient default function module.
When variants were changed, certain field types (e.g. date, time) were truncated, although this was not intended. The reason was the deficient default function module RS_VARIANT_ CONTENTS_RFC, which has been eliminated by SAP.
Interfaces: XBP 2.0, SAP Basis Release: all
XBP 2.0, SAP 4.6B+

SAP BCA

Version 3.01B

Incorrect status of ended process networks.
So far, a process network always ended with the return code 0099. The reason was that UC4 analyzed the return code too early.

SAP BW

Version 3.01B

Long text of InfoPackages in the activation report.
Apart from InfoSource and RequestID, the long text will now also be printed in the activation report for started InfoPackages.
S# 25245

UNIX

Version 3.01B

Deadlocks while saving report in case of error.
For a UNIX job, it is possible to define in the **UNIX** tab that the report is only to be saved in the UC4 Database and/or in a file in the target system in case of an error. This option did not work properly.
S# 26005

CallAPI

[UC4 Database] [UC4 Server] [DialogClient] [Executor] [CallAPI] [Service Programs] [External Integration]

z/OS, UNIX and Windows

Version 3.01B

Exit codes of utilities standardized.
The exit codes returned by the CallAPI utilities have been standardized for z/OS, UNIX and Windows.

0 = Normal end of the utility.
4 = Normal end of the utility and output of a warning (error handling with STOP MSG,50,... in the script).
8 = Abortion of the utility (error handling with STOP MSG,>51,... in the script).
12 = Abortion of the utility (error when logging on to UC4 system).
16 = Abortion of the utility (fatal error, e.g. error when connecting to the UC4 Server, script file cannot be opened or read, error in the configuration file).

Utilities

[UC4 Database] [UC4 Server] [DialogClient] [Executor] [CallAPI] [Service Programs] [External Integration]

Loading Program

Version 3.01B

No transport to a client > 0099.
No transport was possible to a client with a client number of higher than 0099.
S# 25334

Conversion problems for registered Executors of Login objects.
During the conversion process, Executors which did not exist in the UC4 database but which were used in objects were replaced by Default Executors (e.g. <NSK> or <WINDOWS>). However, entries in the Login object still referred to the original Executors. Now, in such case the default Executors are also entered into the Login objects.

Conversion problems when creating the Login object ERP_LOGIN.
The Login object ERP_LOGIN in system client 0000 assumes the central login information for SAP and PeopleSoft from the password container to be converted. If the database field for the host was empty, RFCLOGIN and PSACCESS were created with a Default Executor (<R3>, <PS>). Now, the Default-Executor '*' is used instead.
S# 26368

Version 3.01C

Incorrect display of loading process.
When loading the transport case, the status line did not display 100 per cent of the loading progress at the end of processing.
S# 26811, 26679

External Integration

[UC4 Database] [UC4 Server] [DialogClient] [Executor] [CallAPI] [Utilities] [External Integration]

BMC Patrol

Version 3.01C

Adjusting UC4.KnowledgeModule for BMC Patrol.
The tree structure view was adjusted to UC4:global: four-digit client numbers. Executors are components of UC4 systems instead of UC4 Servers. UC4 status database parameters no longer exist. "no Standby server" and "no SDB" are two new commands for UC4 systems. The UC4 command "prompt discovery of Executors" no longer exists.

9.5 Release Notes Version 3.01A

Release date of Version 3.01A: 2/27/2003.

9.6 Release Notes Version 3.01B

9.6.1 Highlights

[Highlights] [New_Functions] [Improvements] [Corrections]

- Modified version policy for UC4:global
- UC4 authorization system is active
- New and extended script elements
- Event from "Console" event type available
- Display and change JCL of a started job
- New functions for editing JobPlans
- USA-style week view in the Calendar
- Optional automatic opening of monitors
- Java Call Interface available

Modified version policy for UC4:global

With version 3.01B a modified version policy for UC4:global comes into force. Slight modifications of the database structure are now possible with all releases.

As before, no data conversions are necessary. Modifications of the database scheme, such as splitting tables in different tablespaces, must followed. Changes of the database structure can require a reinstallation of the utilities and other program components. If this is the case, the release notes provide the required information. Required installations are documented in a special table.

UC4 Database ✓	UC4 Server ✓	DialogClient ✓	Utilities ✓

9.6.2 New Functions

[Highlights] [New Functions] [Improvements] [Corrections]

UC4 Server

General
New script elements
:ADD_ATT - Adds attributes to an object at runtime. Currently, either users or user groups can be added to the list of responsible operators of a CallOperator.
:DISCONNECT - Disconnects a connection to the UC4 system. This currently includes user connections or connections of all user-group users to the UC4 system.
:REMOVE_ATT - Removes attributes of an object at runtime. Users or user groups can be removed from the list of controlling operators of a CallOperator.
IS_GROUP_MEMBER - This function checks a user's membership status within a user group.

DialogClient

The UC4 Authorization System is active.
The Authorization System controls the authorization status of users, and which objects and folders can be accessed by them. Access to statistics and object reports is also controlled. Access rights to objects, folders and statistics/reports for all or individual users within a user group can be defined in the **Authorizations** tab. Another component of the Authorization System is to define which system functions can be used by users, for example when working with the DialogClient. These can be defined in the **Privileges** tab. Users and user groups can additionally be authorized to access particular objects. The particular settings have to be made in the object attributes.

Existing authorizations and privileges are converted accordingly during migration to UC4:global. Authorizations can be displayed and changed for users and user groups. As users, user groups, servers and hosts are objects in UC4:global, accesses must be redefined by way of Authorizations.

When updating from 3.01A to 3.01B, existing authorizations and privileges are integrated into the authorization system. Privileges can now be displayed and changed. Following update, all users also have access to <No folder>. The user UC/UC in system client 0000 has all authorizations and privileges. Users who had no authorizations in version 3.01A have limited authorizations after update.

Event from the "Console" event type available with extended functions.
Events from the "Console" event type can now be used. The monitoring of the Windows event display has been extended. It is also possible to access the directory service log, file replication service log and DNS server log of a Windows server which has been set up as domain controller and/or DNS Server (Domain Name System). "Directory Service", "File Replication Service" or "DNS Server" can be selected from the protocol list in the **Console** tab.

JCL of a job can be displayed and changed.
The JCL of a job that is displayed in the activation window can be displayed and changed using the command *Open generated job*. The display of job attributes will be realized in one of the coming versions.

New functions for editing JobPlans.
Changes in a JobPlan can now be canceled or repeated for up to 5 steps. The appropriate commands are in the *Edit* menu of the DialogClient. These functions can also be called through key combination shortcuts. By moving the mouse, it is possible to draw a frame around several objects and make multiple selections. By clicking with the CTRL key pressed, it is also possible to select several objects. This multiple selection allows e.g. block-by-block moving of objects. Drag and drop of several objects simultaneously into the JobPlan makes object transfer easier.

New week view in the calendar.
Until now, the week view was only able to display calendar weeks in a vertical spacing format (stacked downwards). Now, the week view can also be displayed horizontally. Weekdays are arranged in a horizontal spacing format as in, for example, MS Outlook. This view is most often used in the USA. Standard calendar view preference can be set in the "TimeZone/Calendar" tab of the "Settings" dialog. This dialog can be called up using the *Settings* command from the DialogClient's *Options* menu. For added clarity, holidays can now be italicized in all calendar views.

Automatic monitor opening can be defined.
Monitors can be displayed at runtime for CallOperators, Cockpits, JobPlans and Schedules. For each of these object types, it is possible to define whether the monitor is to be opened following task activation in the "Activities Refresh" tab of the "Settings" dialog. These settings are called with the *Settings* command in the DialogClient *Options* menu.

Executors

PeopleSoft

Component Interface PROCESSREQUEST (Java classes) for PeopleTools 8.1x and 8.4x.
UC4:global supports the PeopleTools PROCESSREQUEST Component Interface for PeopleTools Versions 8.1x and 8.4x. The program libraries ucxjpsx4.dll and ucxjpsx5.dll have been developed for this. Job processing access is gained through Java classes. In order to use the PROCESSREQUEST Component Interface via Java classes, Java classes must be installed and activated in the INI file of the PeopleSoft Executor.

SAP Basis

UC4 supports further functions of the new SAP XBP 2.0 interface.
With the support of the SAP XBP 2.0 interface, new Script elements have been implemented which run and monitor Intercepted Jobs and are able to read and change the filter table for Intercepted Jobs.
XBP 2.0 is available as an SAP Support Package.
Interface: XBP 2.0, SAP Basis Release: 4.6+

New script elements

R3_ACTIVATE_INTERCEPTED_JOBS - Carries out Intercepted Jobs under UC4 control.
Interface: XBP 2.0, SAP Basis Release: 4.6+

R3_GET_INTERCEPTION - Reads the filter table for Intercepted Jobs and saves it in the activation report or in a file.
Interface: XBP 2.0, SAP Basis Release: 4.6+

R3_MODIFY_INTERCEPTION - Changes the filter table for Intercepted Jobs.
Interface: XBP 2.0, SAP Basis Release: 4.6+

Windows

Monitoring of additional event viewer reports of a Windows server.
The directory service log, file replication log and DNS server log are additional logs of a Windows server which has been configured as a domain controller and/or DNS server (Domain Name System). The monitoring of these logs has been implemented into the Windows Executor.

Call Interfaces

Java

Java Call Interface available.
A Java Call Interface is supplied along with UC4:global. This Call Interface allows UC4 calls from within proprietary Java programs, while making available a utility (UCCALL3.JAR) which can be used, for example, in an MS DOS box or in a Batch file (example: java -jar uccall3.jar script=script.txt) when called in the command line. With java -jar uccall3.jar, all parameters permitted for this utility can be displayed.

Utilities

Archive Program

Resetting archive flags.
Archived data records are labeled after they have been successfully archived. This enables the subsequent Reorganization to delete these data from the UC4 Database. All of a client's activation flags can now also be removed by calling the utility again in order to call up this function using the "Reset archive flags" button.

Reorganization Program

Resetting archive flags.
Data records which have been archived and are to be deleted from the UC4 database are marked with an archive flag during the 1st reorganization phase. In the 2nd reorganization phase, all data from the database marked to be deleted are copied in REORG files and deleted. All of a client's deletion flags can now also be removed by calling the utility again in order to call up this function using the "Reset delete flags" button.

9.6.3 Improvements

[Highlights] [New_Functions] [Improvements] [Corrections]

UC4 Server

General

Event with "Start after scheduled time" is also analyzed at UC4 Server start.
It is possible to define for an event whether it is to be executed or not when it starts after the scheduled execution time. This definition in the **Event** tab is now also taken into account when UC4 has been inactive for some time. All events for which execution time has then passed and for which the **Execute** option is activated are executed with UC4 Server start.

Extended script elements

New attributes for events of the "Console" event type.
Access to additional event viewer logs of the Windows server is supported. The DIRECTORY_SERVICE, DNS_SERVER and FILE_REPLICATION_SERVER event attributes can be read and set with the script elements GET_ATT and :PUT_ATT.

DialogClient

Line defaults can be defined in the JobPlan.
Defaults can be defined for those lines which link tasks in a JobPlan. The standard line status can be preset in the "JobPlan" tab of the "Settings" dialog. This dialog can be called using the *Settings* command in the *Options* menu of the DialogClient.

Automatic capitalization in scripts of BS2000-, OS/390- and OS/400 jobs.
It is possible to choose between upper and lower case for UC4 script inputs. A button (arrow pointing downwards) is available in the tool bar of the DialogClient. Inputs for jobs in BS2000, OS/390 and OS/400 target systems are automatically made in the capitalization mode, no matter which mode has been chosen with the caps lock key on the keyboard.

Executors

PeopleSoft

Restart of PeopleSoft Executor implemented.
After a cold start, the Executor can continue to monitor tasks, when it was possible to determine the current task condition together with the UC4 Server.
S# 25974

SAP Basis

Unicode-compatible transport files for SAP version 6.10.
SAP Versions 6.10 and higher offer the opportunity to use a database with Unicode. The "Unicode Check" flag must be activated to ensure that non-Unicode-based transports from SAP systems work. For SAP Version 6.10 and higher, separate transport files with activated flags have been created.
S# 25644

UC4 supports additional functions of the new SAP XBP 2.0 interface.
R3_MODIFY_VARIANT has been implemented using XBP 2.0.
XBP 2.0 is available as an SAP Support Package.
Interface: XBP 2.0, SAP Basis Release: 4.6+

Extended script elements:

R3_MODIFY_VARIANT - Variant modification now also via the SAP interface XBP 2.0.

SAP BW (Windows)

Extended script elements:

BW_GET_CHAINS - New parameter ID= and TEXT=.
Process chains of the BW systems can now be selectively searched through the use of these new parameters. The wildcard character "*" can be used.
Interface: XBP, SAP Basis Release: 4.0+

Utilities

Loading Program

Creation of Login objects logged during implementation.
During the migration process to UC4:global, Login objects are created which result from existing object data (login information, used hosts, etc.). Now, a list is created which shows from which objects a Login object has been created and with which information. The list is written in a file whose path and file name can be entered in the INI file of the loading program (transfer_path=).

Transport from 2.6 to 3.0 with complete implementation.
Transport cases from UC4 Version 2.6 are converted during the loading process to UC4:global. The same transformations take place as with a migration of the entire database (e.g. when Login objects are created and script elements are adapted).

Change Program

Pre Script, Script and Post Script are distinguished from each other.
So far, values have been searched for and replaced in Pre Script, Script and Post Script when the SCRIPT attribute was used. Now, only the "regular" Script is considered for SCRIPT. Selective searching and replacing in Pre Script and Post Script is now possible using PSCRIPT and OSCRIPT .

Check Program

Use of SYS_SRRC_ACTIVE checked.
During the migration process to UC4:global, the check program which checks the Version 2.6 database reports the use of the SYS_SRRC_ACTIVE script function. This script element will no longer be supported as there is no SRRC (Status Recording Recovery Control) in UC4:global.

Client-related check of the Version 2.6 database.
With this check program, particular UC4 system clients can now also be checked. To do so, the program is called up with the -C parameter and client number. Analysis for system client 0000 is always an additional task. The file name of the file generated by the check program contains the checked client (e.g.: output_c02_030317_133707.html). If the -C parameter has not been specified, all clients are checked as before.

9.6.4 Corrections

[Highlights] [New_Functions] [Improvements] [Corrections]

UC4 Database

General

Initial data errors (ATTRDIA.SAP and ATTRDIA.SAPBW).
The system client 0000 Includes for SAP job attribute dialogs contained incorrect host type definitions. This had the effect that it was only possible to execute jobs for SAP Executors but not for SAP BW Executors, and only the SAP Executors were offered for selection in an attribute dialog.
S# 25463

Errors in the initial data 2 (holiday calendar).
In the holiday calendars supplied with the initial data in the system client, some holiday assignments were missing. There was no calendar content at all for Malaysia, Hong Kong, Singapore and Australia.
S# 25778, 25771

UC4 Server

General

New task start time incorrectly saved in the schedule.
If a task's start time was changed in a schedule, the new start time was not converted into UTC. It was erroneously saved in local time.

No license for event functionality with Executors of license class "V".
The standard event functionality license is recognized as soon as an Executor has been licensed for event functionality. If this Executor was exclusively of license class "V", everything was checked properly for the Executor but no general event functionality license was recognized.
S# 25629

Protected entries in :READ are encoded when saved.
Values queried by the user with the script statement :READ are saved in the activation report for use in restart or post script. Protected entries (format code "D") are now written encoded into the activation report and not in plain text. S# 24331

User check at CallOperator start.
Users of user groups to be informed by a CallOperator can now be added or removed in UC4 script. A check is therefore made at CallOperator start to see if there is a user who is to be informed. There won't be any check at CallOperator definition in the DialogClient. The existence of an information message will also be checked at runtime only.

Sporadically, the schedule did not start tasks.
In certain circumstances, restarting a JobPlan caused the JobPlan's status in the Schedule (waiting for start time) to be overwritten by the JobPlan's current status (restart is executed). It was necessary that the JobPlan's restart took place after the periodic turnaround of the Schedule, but before the planned start time of the JobPlan. The overwritten status prevented the planned start of the JobPlan in the current Schedule period.
S# 25377

DialogClient

Closing the Message Window not synchronous with menu and tool bar.
After closing the message window through the title bar, the *messages* command from the *view* menu was not deactivated. Also, the message window symbol (pushed when message window is displayed) was not released again in the tool bar.
S#25471

Selective statistics displayed additional tasks with wrong end status.
When the statistics was called for tasks having ended with the ANY_ABEND status, all tasks with ENDED_OK were also selected.
S# 25978

Executors

OS/390

OS/390 Job name ignored.
The name for an OS/390 job, defined in the "OS/390" tab, was ignored. A job name was always generated for the target system without considering potential defaults.
S# 25204

PeopleSoft

Display of process instance number or of session ID can be selected.
It is now possible to define which process information shall be displayed in the Activity Window, the detail and in the statistics for a PeopleSoft job. Either the process instance number assigned by PeopleTools or the session ID - the process ID assigned by the operating system for this process - are used. Setting is made with the PID= parameter in the [PS] section of the PeopleSoft Executor's INI file.
S# 25975

SAP BCA

Incorrect status of ended process networks.
So far, a process network always ended with the return code 0099. The reason was that UC4 analyzed the return code too early.

SAP BW

Long text of InfoPackages in the activation report.
Apart from InfoSource and RequestID, the long text will now also be printed in the activation report for started InfoPackages.
S# 25245

UNIX

Deadlocks while saving report in case of error.
For a UNIX job, it is possible to define in the "UNIX" tab that the report is only to be saved in the UC4 Database and/or in a file in the target system in case of an error. This option did not work properly.
S# 26005

Call Interfaces

OS/390, UNIX and Windows

Exit codes of utilities standardized.
The exit codes returned by the call interface utilities have been standardized for OS/390, UNIX and Windows.

0 = Normal end of the utility.
4 = Normal end of the utility and output of a warning (error handling with STOP MSG,50,... in the script).
8 = Abortion of the utility (error handling with STOP MSG,>51,... in the script).
12 = Abortion of the utility (error when logging on to UC4 system).
16 = Abortion of the utility (fatal error, e.g. error when connecting to the UC4 Server, script file cannot be opened or read, error in the configuration file).

Utilities

Loading Program
No transport to a client > 0099. No transport was possible to a client with a client number of higher than 0099. S# 25334
Conversion problems for registered Executors of Login objects. During the conversion process, Executors which did not exist in the UC4 database but which were used in objects were replaced by Default Executors (e.g. <NSK> or <WINDOWS>). However, entries in the Login object still referred to the original Executors. Now, in such case the Default Executors are also entered into the Login objects.
Conversion problems when creating the Login object ERP_LOGIN. The Login object ERP_LOGIN in system client 0000 assumes the central login information for SAP and PeopleSoft from the password container to be converted. If the database field for the host was empty, RFCLOGIN and PSACCESS were created with a Default Executor (<R3>, <PS>). Now, the Default-Executor '*' is used instead. S# 26368

Release of version 3.01B: 5/16/2003

9.7 Release Notes Version 3.01C

9.7.1 Highlights

[Highlights] [New Functions] [Improvements] [Corrections]

- Release of UC4 Server for UNIX (z/Linux)
- Release of Executor for SINIX
- Compression of MQ tables in UC4 Database
- UC4 Server with SNMP support
- Support for Forecast functionality
- Implementation of import and export functionality
- Task result changeable in JobPlan monitorat runtime
- Re-naming of objects and replacing of object usage
- Sync monitoravailable
- New script elements

Components to be installed

UC4 Database ✓	UC4 Server ✓	DialogClient ✓	Utilities ✓

9.7.2 New Functions

[Highlights] [New Functions] [Improvements] [Corrections]

UC4 Server

General

Compression of MQ tables in UC4 Database.
Data can now be stored compressed in the MQWP, MQPWP, MQCP* and MQMEM tables in order to increase performance. This is to reduce the sometimes high amounts of data transmitted to the database via net and the I/O's in the database.

Compression should be activated in the INI file of the UC4 Server. In the eight figure command field for the controlling of database accesses (ODBCVAR), the 7th figure should be set to "R". Changes are only active after a restart (cold start) of the UC4 Server.

UC4 Server with SNMP support.
Now, the UC4 Servers for UNIX (AIX, HP-UX, Linux, Solaris and z/Linux) and Windows fully support SNMP. They provide system values in the MIB (Management Information Base) for monitoring with a management system. Additionally, SNMP Traps can be generated by certain UC4 events.
See: UC4 and SNMP

New script elements

CREATE_OBJECT – Creates an object (Calendar and Variable only).

MODIFY_OBJECT – Changes an existing object (only Calendar and Variable).

MOVE_OBJECT – Moves an object to a folder.

REMOVE_OBJECT – Deletes an existing object (only Calendar and Variable).

UNIX

Release of UC4 Server for UNIX (z/Linux).

DialogClient

Support for Forecast functionality.
UC4 can create and display a forecast for activate-able objects. The aim of this forecast is to obtain the most realistic estimation of runtimes of participating tasks. There is a special window type for viewing the created forecasts. This is called in the menu *View*, command *Forecasts* or per mouse click on the command button in the task bar.

Implementation of import and export functionality.
UC4 objects can now be assumed from one UC4 system to another. The UC4 Explorer provides the particular functions with the commands Export and Import in the context menu. For imports, a selection can be made to overwrite an existing object.

Task result changeable in JobPlan monitor at runtime.
The reaction to the selected end status of a task at runtime can be changed in the JobPlan Monitor. In the **Result** tab, the settings for the particular tasks can be adapted. It is called with the command *Attributes* in the context menu of the JobPlan Monitor.

Renaming of objects and replacing object usage.
When an object is renamed, it is checked whether it has already been used in another object. If so, it is possible to change the object name also in the objects which use the renamed object.

Sync monitor available.
The Sync monitor shows the current condition of a Sync object and its use by tasks. It offers a complete overview of a selected Sync object. In the upper part of the monitor, the current condition of the Sync is displayed including its value. Information is given on the task which were at last changed by the Sync object. These are the name of the task, its RUN# as well as the date and time of the change.

Executors

UNIX

Release of Executor for SINIX.
SINIX hosts with MIPS processor (RM400) are supported. The operating system SINIX-N version 5.42 or higher is necessary.

9.7.3 Improvements

[Highlights] [New Functions] [Improvements] [Corrections]

UC4 Database

General

UC4 Priority and TimeZone changeable in Attribute Dialog.
The attributes of some activate-able objects can be set dynamically for the current execution at activation time. In the "Attributes" tab of these objects, the check box "Attribute Dialog" must be selected. It is now also possible to change the UC4 Priority (FileTransfer and Job) and the particular Time Zone applying to a task in "Attribute Dialog".

UC4 Server

General

Implementation of new licensing.
The licensing method and license structure have been changed. Licenses are now supplied as files and can be loaded in the UC4 Database with the loading program.

With the supply of version 3.01C, customers receive the same licenses as before but in a new format. Licenses used so far can no longer be used. As distinction is made between test and productivity licenses, an extra license is required to test systems.

DialogClient

General

Status display of a task modified in Sync monitor.
The Sync monitor shows the current condition of a Sync object and its use by tasks. Symbols in different colours are used to display states. The status "Waiting for Sync" is now displayed in blue instead of grey.

Task selection for archive keys in the Activity Window.
The Activity-Window selection, which can be called in the *View* menu, command *Activities*, has been extended for archive keys. Archive keys are now also shown in the task details.

Display of return codes in statistics overview.
The return codes ending the processing of activate-able objects, are now displayed in the statistics overview.

Deleting Executors from system overview.
Executors which are not currently used, can be deleted in the context menu in the system overview. They are moved to the recycle bin and can be restored later. Executor authorizations remain unchanged.

Host Display in the JobPlan graph.
JobPlans are exclusively created and managed graphically. All objects are represented with check boxes in the JobPlan tab. They can be distinguished by their respective object names. So far the object type was displayed here, now the host name is shown for Jobs, FileTransfers and "File system"-type Events.
S# 27668

Display of stop conditions in the JobPlan and schedule monitor.
Monitors show the current states of tasks. In the JobPlan and Schedule monitor view, a red-light symbol is shown as soon as automatic processing has been stopped.

Utilities

Loading Program

Loading of license information implemented.
So far, license information had to be entered manually. Now, they are directly loaded in the UC4 Database with the loading program.

Check Program

Objects logged with path descriptions.
The check program checks existing databases before they are changed over to UC4:global. The test result is written in a HTML file. An entry is made for each object, whose status is to be logged by the utility. Now, the entry also indicates in which folder the particular object is stored.

Objects created by users in client 0000 are logged.
The HTML file, which is created at database check before changeover to UC4:global, now also contains a list of all objects created by users in the system client 0000.

9.7.4 Corrections

[Highlights] [New Functions] [Improvements] [Corrections]

UC4 Server

General

Error in script processing for call interface.
The script which is sent by the call interface to the UC4 Server for processing, was not read in full length. Therefore, sometimes invalid commands were recognized. As a result, the script was ended incorrectly.
S# 27871

End of UC4 Server caused by registration via call interface.
If the user did not have the necessary privilege to register to UC4 via the call interface, the UC4 Server crashed. A storage area was incorrectly initialised.
S# 27680

Modified Attribute for MVS Jobs.
The MVS Account with the adequate Attribute name MVS_ACCOUNT can be change and read with the script elements :PUT_ATT and GET_ATT. For compatibility reasons, the user can still use the old name ACCOUNT.

DialogClient

No display of reports in the Activity Window.
In the Activity-Window selection, it is possible to select the object types to be displayed in the Activity Window. Reports are included in this list. So far, they have not been displayed in the Activity Window, even if this was selected.

Executors

All Executors on Windows Platform

Host information in Executor log.
Host name and TCP/IP Address are printed in the Executor log. The particular message is written after the lines logged by the INI files.
Example: U2000066 Host information: Host name='NB0053', IP address='192.168.114.99'

End Executor with UC4 Server.
The UC4 Server can end the Executor. Currently, this is only used internally for license checks.

Missing Executor response to server message.
In a FileTransfer with wildcard characters and with the script function PREP_PROCESS_FILE NAME, the Executor sends a message containing a list of file names to the server. When the server negatively acknowledged this message, the Executor did not respond.
S# 27587

Failure at UC4 Registration.
In the INI file of the Executors, you can find the [CP_LIST] section which contains a list of communication processes. The Executor shut down when it failed to connect to the first communication process. Now, the Executor tries to connect to the other communication processes of the list.
S# 27898

Oracle Applications

Starting Jobs in Oracle Applications 11i impossible.
Jobs could not be started in Oracle Applications Version 11.5.8. The reason was that the package FND_PROFILE (Function PUT) only existed in version 11.5.5. Instead, FND_GLOBAL.APPS_INITIALIZE is used now.
S# 27944

OS/400

Executor crash for events of "console" type.
The Executor crashed when an event monitored the console for the message CPF3837. Inserts of "*DTS" and "*CHAR" types with variable lengths were not correctly processed.
S# 25649

SAP Basis

Incorrect parallel processing of Batch Input sessions.
When a UC4 Job using R3_ACTIVATE_SESSIONS with the parameters SELECT=EVERY was started multiply, the batch input sessions were only processed by one UC4 Job.
Interfaces: all, SAP Basis Release: all
S# 26559

Only English or German message texts in reports.
English or German can be chosen as language in the INI file, where the logging is made. SAP registration is also made in these languages, which had the effect that French (or other) message texts were not included in the report. With the new parameter SAP_language= you can specify if the Executor should register again with the language that is specified in the job.
Interfaces: all, SAP Basis Release: all
S# 25226

Truncate fields du to deficient default function module.
When variants were changed, certain field types (e.g. date, time) were truncated, although this was not intended. The reason was the deficient default function module RS_VARIANT_CONTENTS_RFC, which has been eliminated by SAP.
Interfaces: XBP 2.0, SAP Basis Release: all
XBP 2.0, SAP 4.6B+

Utilities

Loading Program

Incorrect display of loading process.
When loading the transport case, the status line did not display 100 per cent of the loading progress at the end of processing.
S# 26811, 26679

External Integration

BMC Patrol

Adjusting UC4.KnowledgeModule for BMC Patrol.
The tree structure view was adjusted to UC4:global: four-digit client numbers. Executors are components of UC4 systems instead of UC4 Servers. UC4 status database parameters no longer exist. "no Standby server" and "no SDB" are two new commands for UC4 systems. The UC4 command "prompt discovery of Executors" no longer exists.

Release of version 3.01C: 7/4/2003

Glossary

This glossary lists all specific technical terms in alphabetical order.

ABCDEFGHIJKLMNOPQRSTUVWXYZ

.1 A

- **Action Definition Editor**
  An Editor for <Actions>
- **Action Service**
  A service which is able to respond (send) information to other systems, in contrast to the <Response Service>, the service is configured using the incoming <event object>
- **Activity Window**
  A UserInterface window that displays all activated tasks.
- **AgentGroup**
  An AgentGroup combines agents of the same platform. The agents that shoulg be included in an AgentGroup are specified by entering the agent name or via filters. A task which runs in an AgentGroup is processed on one or all of the AgentGroup's agents, depending on the specified mode.
- **Auto Forecast**
  It displays tasks that will run in a predetermined period. Comprehensive forecast for all future activities.
- **Automation Engine**
  This component drives a UC4 system and consists of different types of server processes.
- **activation**
  Through activation, tasks obtain a RunID, are displayed in the Activity Window, and are ready for execution (see also 'Start').
- **activation log**
  A report that contains all details about task activation. The details that are included in the log depend on the settings that have been specified (for example, the generated JCL, modified Variables).
- **activity**
  An activity (or task) is an entity, which can be planned, assigned to a user or a team and tracked with respect to their plan and state (started, cancelled, suspended, completed).
- **agent**
  A program that enables the de-centralized execution of processes (e.g. deployments) on target systems (computers or business solutions) or a service that provides connectivity to a target system (e.g. for databases or middleware). A particular UC4 object type.
- **alias**
  This refers to the name of workflow tasks or objects that are activated once or recurring. This name is used instead of the actual object name in the Activity Window, the monitors and the statistics.

.2 B

- **batch mode**
  This refers to the sequential background processing of tasks.

.3 C

- **Calendar**
  It consists of days using Calendar keywords. A particular UC4 object type.
- **Calendar keyword**
  A part of a Calendar object that is used to define days.
- **CallAPI**
  A programming interface that can either be called directly or from a different program. It processes a script in the UC4 system.
- **CallOperator**
  Deprecated Term. Replaced by: Notification
- **Client Queue**
  Queue object which is available inside every client.
- **Cockpit**
  It visualizes the values and states of UC4 or of the monitored and controlled system. A particular UC4 object type.
- **CodeTable**
  It defines a complete set of characters. A particular UC4 object type.
- **calendar condition**
  The criteria for running a task is based on calendar keywords.
- **child / children**
  These are objects that are activated by superordinate tasks (parents).
- **client**
  This is a closed environment for the execution of tasks within a UC4 system. A particular UC4 object type.
- **communication process**
  A communication process is part of the component Automation Engine. It is responsible for connecting the UC4 components.

.4 D

- **Deployment**
  The creation of infrastructure for a specific set of <EventBases> on a <worker>
- **DevOps**
  DevOps is the combination of development and operations in a single role.
- **DialogClient**
  Deprecated Term. Replaced by: UserInterface
- **data sequence**
  An internal listing of Console outputs or lines of Variable objects, etc. The lines of a data

sequence can be accessed by using a PROCESS loop or the script element GET_ PROCESS_LINE. The script elements PREP_PROCESS* generate data sequences.

- **dialog process**
  A part of the Automation Engine component and a special form of work process. Is exclusively responsible for UserInterface messages.
- **dynamic variables**
  A Variable object with the attributes "Source" - "SQL", "SQL internal", "Multi" or "Filelist". Values are directly retrieved from the data source and not stored in the object.

.5 E

- **E-mail connection**
  This is a functionality of Windows and UNIX Agents that is used to send e-mails.
- **Enterprise Control Center**
  A separate UC4 product. Web application that allows access to the functions of various UC4 applications and products in a quick and easy way. Available for download from the UC4 Download Center.
- **Event**
  Action that is triggered if particular conditions apply. A particular UC4 object type.
- **Event ID**
  First RunID of FileSystem and Console Events. Both Event types require communication between the component Automation Engine and Agent. They communicate via the first RunID. Otherwise, Event identification is no longer possible after the first log change.
- **Event Pattern Editor**
  An Editor for <Event Patterns>
- **Event Transformer**
  A <component> which is able to transform raw data to <event objects>
- **Exception Events View**
  View to observe occurred <exception events>
- **Executor**
  Deprecated Term. Replaced by: agent
- **Explorer**
  UserInterface window in which objects can be created, edited and administered.
- **external dependency**
  A task whose end status is considered when a workflow is being processed. The task itself, however, does not run within the framework of this workflow.

.6 F

- **FileTransfer**
  Transfers files from one computer to another. A particular UC4 object type (FileTransfer object).
- **Forecast**
  Estimates a task's runtime on the basis of previous executions.

- **fully qualified FileTransfer**
  File transfers without wildcard characters. One particular file is transferred (as opposed to partially qualified file transfers).

.7 G

- **Generic Socket**
  A <Socket> which both senses (receives) events from its predecessors as well as responds (sends) evens to its successors
- **Graphical Workload Analyzer**
  Deprecated Term. Replaced by: UC4 ClearView
- **Group**
  Integrates tasks so that they can be processed together. A particular UC4 object type.
- **Group Monitor**
  Window that shows the state of tasks assigned to a group object.

.8 H

- **HTML Help**
  Microsoft help format for manuals. These help files have the ending .CHM (see also 'WebHelp').
- **host**
  Computer, target system.
- **host attributes**
  Platform-independent attributes of the Job object.

.9 I

- **Include**
  A script that is often used in several objects. A particular UC4 object type.

.10 J

- **Job**
  Processing on a target system. A particular UC4 object type.

- **Job Control Language**
  Short form of "Job Control Language". It refers to applications that are processing steps executed on computers.
- **JobPlan**
  Deprecated Term. Replaced by: Workflow

.11 K

- **Key column**
  Column in static Variable objects that can be used to access values of a particular line.

.12 L

- **Login**
  Login Objects store account credentials used by agents on target systems. A particular UC4 object type.
- **logical date**
  The logical date is used as a comparison date for checking Calendar conditions.

.13 M

- **Message Window**
  UserInterface window that displays warnings, information and error messages.
- **Modelling Studio**
  An application which allows modeling of <EventBases> and managing the infrastructure of the UC4 Policy Orchestrator and the associated <EventBases>
- **main types**
  Release, Package, Package Dependency, Applications, Applications Versions, Host, Host Role, Component, Activity, Environment, Reservation and Workflow.

.14 N

- **Node Registration View**
  View to manage <nodes> available in Decision
- **Notification**
  Sends messages to individual Users and UserGroups of the UC4 system. A particular UC4 object type.

- **Notification Monitor**
  Window of the Notification that is sent to one or severeal users at runtime.
- **nonstop process**
  Part of the component Automation Engine. Nonstop processes assume processing if the computer with the active server processes fails.

.15 O

- **Orchestration Editor**
  Editor to orchestrate EventBase components such as Maps and Sockets
- **object**
  UC4-controlled activities and processes are structured in the form of objects (see also 'Task').
- **object class**
  There are four classes of objects: executable, active, passive and system objects.
- **object type**
  An individual object is provided for the individual activities: User, UserGroup, Notification, Cockpit, CodeTable, Documentation, Event, Agent, FileTransfer, Group, Include, Job, Workflow, Calendar, Login, Client, RemoteTaskManager, Schedule, Script, Server, Sync, Variable and TimeZone.
- **object variables**
  Placeholder for values that are stored in an object's "Variables & Prompts" tab.

.16 P

- **Predictive Analytics**
  A separate UC4 product. It is a complex graphical analysis tool that produces various interactive graphical representations, called visualizations, of a data set. The visualizations can show both individual data values or aggregations, depending on which functions and features that you use. If the special eventBase for SLA results data is implemented in your company, you can retrieve and view advanced analytics that show you patterns and trends in SLA historical performance. Available for download from the UC4 Download Center.
- **Process Assembly**
  A perspective of the Enterprise Control Center. You use it to create, define and modify workflows.
- **Process Automation**
  The old name of the Service Catalog perspective.
- **Process Monitoring**
  A perspective of the Enterprise Control Center. It lists the activities of all users and provides the opportunity to manipulate them (you can cancel or deactivate them).
- **ProcessFlow**
  Deprecated Term. Replaced by: Workflow
- **PromptSet**
  A user-defined input mask for executable objects. A UC4 object type.

- **PromptSet element**
  Fields/control elements that are used to query User values. They are the content of a PromptSet input mask.
- **PromptSet variable**
  It stores the value of a PromptSet element. Depending on the situation, a value can be user-defined or a default value. PromptSet variables show the same behavior as object variables.
- **package content**
  A package may reference applications, components and related packages.
- **package dependency**
  A package milestone may depend upon another package to have passed a specific milestone.
- **package milestone**
  Since packages define a state machine, they need some sort of timely order. Milestones are used for this.
- **packages**
  Delivery package, a bundle of functionality.
- **parent**
  There are different ways of activating objects. The originator of an activation is referred to as the superordinate task (parent). (See also 'Child', 'Children')
- **partially qualified FileTransfer**
  File transfers that use wildcard characters in order to transfer several files (as opposed to fully qualified file transfers)..
- **period container**
  Controls the execution of periodical tasks.
- **perspective**
  Separate functional area of the Enterprise Control Center's (ECC) web interface. The perspectives Process Automation and Process Monitoring provide functionalities of the UC4 Automation Platform.
- **predefined variables**
  Fixed variables that can be used in the attributes or the script of executable objects. The values refer to the object or the system.
- **primary work process**
  It is responsible for the execution of UC4-internal tasks and work processes.

.17 Q

- **Queue**
  A particular UC4 object type. In AE, a Queue determines the maximum number of concurrent tasks, their priorities and the order in which tasks should be executed. In ARA, queues are containers for workflow executions. Queues are intended to run repeatedly within a planned timeframe. The assigned workflow executions are grouped together and are processed when the current queue run starts.
- **QueueManager**
  Deprecated Term. Replaced by: RemoteTaskManager

.18 R

- **RA Agent**
  A UC4 Agent that can be connected to a particular RA Solution and thus provide this solution's functionalities to a UC4 system. It is the interface between an external system / application / platform and a UC4 system.
- **RA Solution**
  A solution that is based on the Rapid Automation Technology that allows UC4 to access an external system / application / platform. The RA Solution is supplied as a JAR file that must be loaded to the UC4 Database and connected with an RA Agent. The specific RA objects (such as Jobs, Connections, Agent) are available in the UC4 system as soon as the solution has been loaded.
- **Rapid Automation**
  A generic technology that can include various solutions. Is composed of an RA Agent and an RA Solution.
- **Release Notes**
  UC4 Release Notes contain information about highlights, new functions, improvements, and corrections for various versions and releases of the UC4 procuct family.
- **RemoteTaskManager**
  It monitors and controls external Jobs that were not started by UC4. A particular UC4 object type.
- **Response Service**
  A service which is able to respond (send) information back to other systems, in contrast to the Action service, most of its configuration has to be done manually in advance.
- **Rule Editor**
  An editor for <Rules>
- **Rule Space Editor**
  An editor for <Rule Spaces>
- **RunID**
  Short for "run number". It is a number that provides unique information about a task's execution. The RunID can include 7 to 10 digits. It is assigned by the Automation Engine component .
- **real date**
  The date that is used for checking runtime monitoring or time conditions in the properties of workflow tasks is referred to as the real date. It complies with the top workflow's activation time. It is passed on to all subordinate tasks.
- **recurring tasks**
  These tasks are scheduled without using a Schedule object and mostly consist of a period that is less than a day.
- **registered**
  This is the status of a task that runs within a group and is waiting for its start.
- **report**
  A report provides more detailed information about a task's execution or a UC4 component.
- **restart**
  A restart refers to the repetition of an object's execution. This action differs from a new start in some parts.
- **result column**
  The first column of dynamic Variable objects with the sources "SQL", "SQL-internal" and "Multi". The content of this column can be defined with Result format.
- **return code**
  The value that represents the result of tasks and script functions.

- **runtime**
  The duration of a task's execution. It refers to the period between a task's start and end. It does not include its activation period (see also: activation and start).

.19 S

- **Schedule**
  It starts executable objects periodically. A particular UC4 object type.
- **Schedule Monitor**
  Graphical view of the execution of Schedule objects.
- **Scheduler**
  A <component> which is able to send events in regular fashion or at specific points in time
- **Script**
  A script processes statements in UC4's script language. A particular UC4 object type.
- **Service Catalog**
  A perspective of the Enterprise Control Center. It allows users to start the objects in their Favorites folder and generally monitor their execution.
- **ServiceManager**
  A program that facilitates the starts and stops of UC4 components.
- **Sync**
  It synchronizes executable objects based on defined states and actions. A particular UC4 object type.
- **Sync Monitor**
  Window which contains the state of a Sync object and the assigned tasks.
- **System Overview**
  The UserInterface window that contains information about the UC4 system.
- **script variable**
  A placeholder for a value within a script.
- **server process**
  The core of the component Automation Engine. Different types are available: communication, work and dialog processes, as well as nonstop processes.
- **static variables**
  A Variable object with the setting "Source" - "Static": Variable values are entered by a User or with a script and remain stored in the object.
- **statistics**
  This is a list of a task's previous runs.
- **status**
  This represents the condition of a task (such as active, blocked, generating).
- **sub-workflow**
  A workflow that is part of a different workflow.
- **superordinate task**
  There are various ways of activating objects. The originator of the activation is referred to as the superordinate task (parent).

.20 T

- **TimeZone**
  It defines a local time. A particular UC4 object type.
- **task**
  An executable object that is running. Tasks are also referred to as activities.

.21 U

- **UC4 Automation Engine**
  A separate UC4 product that can be used to control, administer and operate a UC4 system. You can define and schedule objects that run processes and activities on different hosts.
- **UC4 Automation Engine**
  A separate UC4 product which includes the individual components that are required to operate a UC4 system (such as the component of the same name -the Automation Engine- which consists of server processes, the UserInterface, the agents, the WebInterface etc.). Available for download from the UC4 Download Center.
- **UC4 Automation Platform**
  Deprecated Term. Replaced by: UC4 Automation Engine
- **UC4 ClearView**
  A separate UC4 product. Graphical analysis tool: Displays the activities, statistical and forecast data per UC4 system client in a bar diagram and can be used to calculate the critical path. Available for download from the UC4 Download Center.
- **UC4 Database**
  A relational database management system (RDMS) that administers all scheduling data from a central point. It contains object definitions, system specifications, statistical data, job reports, etc.
- **UC4 Decision**
  Deprecated Term. Replaced by: UC4 Policy Orchestrator
- **UC4 Insight**
  Deprecated Term. Replaced by: Predictive Analytics
- **UC4 ONE Automation 2013**
  The name of the UC4 product family.
- **UC4 Operations Manager**
  Deprecated Term. Replaced by: UC4 Automation Platform
- **UC4 Policy Orchestrator**
  A separate UC4 product. It is an application for managing events within the UC4 system. This application is the backend for Policy Orchestrator. First, UC4 Policy Orchestrator provides the building blocks for defining the business rules. Then, it monitors the UC4 eventBases for occurrences of the situations that are described in the business rule conditions and exceptions, and then triggers the actions prescribed in the business rules. Available for download from the UC4 Download Center.
- **UC4 Release Manager**
  Deprecated Term. Replaced by: Application Release Automation
- **UC4 Release Orchestrator**
  The UC4 Application Release Automation is split into the two products UC4 Release Orchestrator and UC4 Deployment Manager. The UC4 Release Orchestrator can be used to manage release plans and release content for single or multiple application releases etc.
- **UC4 Script**
  UC4's scripting language.

- **UC4 Server**
  Old term for the component Automation Engine (v8 or lower).
- **UC4 Service Orchestrator**
  A UC4 product. The Service Orchestrator is a perspective of the UC4 Enterprise Control Centers (ECC) and it is used to handle, monitor and analyze the performance of SLAs (Service Level Agreements).
- **UC4 Variables**
  These are Variable objects that include the UC4 system's specifications.
- **UC4 component**
  Refers to UC4 programs such as UserInterfaces, the Automation Engine, Agents, ServiceManagers, utilities etc.
- **UC4 priority**
  Affects the order of task execution within a UC4 system.
- **UC4 system**
  An environment that is managed by UC4 components.
- **UC4.DB Archive**
  The utility UC4.DB Archive can be used to remove the increasing amounts of data from the UC4 Database
- **UC4.DB Change**
  Utility for changing transport case exports.
- **UC4.DB Client Copy**
  Utility for copying and deleting clients
- **UC4.DB Load**
  The utility UC4.DB Load can be used to load data into the UC4 Database.
- **UC4.DB Reorg**
  Data can be reorganized by using the utility UC4.DB Reorg. It marks data records with a deletion flag in accordance with the settings that have been specified.
- **UC4.DB Reporting Tool**
  The utility UC4.DB Reporting Tool can be used to query tasks in your UC4 system.
- **UC4.DB Revision Report**
  Utility unloading modification reports from the UC4 Database. Modification reports include detailed information about object modifications and accesses.
- **UC4.DB Unload**
  Utility for unloading the UC4 Database.
- **UC4.Log Mix**
  The utility UC4.LogMix supports the generation of one common file from several report, log or trace files.
- **Universal Time Coordinated**
  Internally, UC4 uses UTC (Universal Time Coordinated) because UTC is the international time standard and is always precise. Nevertheless, TimeZone objects are available that can be used to show local times in tasks and script elements.
- **User**
  A person who uses a UC4 system. A particular UC4 object type.
- **User Management View**
  View to manage users and <authentication methods>
- **UserGroup**
  A group of users who have a common profile of rights. A particular UC4 object type in the UC4 Automation Engine.User groups are an organizing construct to help you better manage users because you can grant user groups access rights the same way that you grant various access rights to a single user. All users in the user group are automatically given those access rights. This makes managing users not only more efficient but also more secure because working with user groups gives you a better overview of what rights are assigned.

- **UserInterface**
  This is UC4's graphical user interface.
- **utilities**
  Utilities support the execution of administrative tasks in a UC4 system (such as reorganizing and archiving the UC4 Database).

.22 V

- **Variable**
  It stores or retrieves values dynamically at runtime. An individual UC4 object type.
- **Version Management**
  This refers to an object version that is stored when you have modified the object.

.23 W

- **WebHelp**
  One of the help formats that are provided for manuals. You open it with a Web browser (see also 'HTML Help').
- **WebInterface**
  A UC4 user interface that can be called via a Web browser.
- **Workflow**
  It refers to the execution of processes. A particular UC4 object type.
- **wildcard characters**
  These are placeholders for characters when you specify filters. ? stands for exactly one character, * for any number of characters.
- **work process**
  A part of the component Automation Engine. It is responsible for a UC4 system's processes (see also 'Primary work process').
- **workflow monitor**
  Graphical view of a workflow's execution. It shows the workflow structure and the progress of the child tasks.

.24 X

- **XML file**
  A format for imports and exports. An XML file contains object structures.