

uniFLOW sysHUB 2022.1

// Release Notes

28-Apr-2022



1 Introduction

This document contains the release notes for the latest uniFLOW sysHUB release, giving you an overview of all changes and additions made available with this release:

- uniFLOW sysHUB 2021.2 - Release Notes

ITS-No

For each of the release notes, the column *ITS-No* contains a specific ITS issue number. When referring to a release note, please always include the relevant number shown in the column *ITS-No*. The release notes are listed according to the issue type.

2 uniFLOW sysHUB 2022.1 - Release Notes

This chapter provides you with an overview of all changes and additions made available with the latest uniFLOW sysHUB release. The release notes are ordered according to the issue type.

ITS-No	Issue Type	Component	Summary	Release Note
COSDEV-5231	New Feature	Web-Client	UI for <i>ExecuteQuery</i> shall be easier to edit/modify	The Workflow Designer in the Web-Client now allows inserting deleting, and moving of named parameters for the process <i>ExecuteQuery</i> .
COSDEV-5225	New Feature	Input Channels	WMQInput: connect to Queue via JNDI Bindings for JMS managed objects	For the JMS reader type, WMQInput now supports direct JNDI connections from a WMQ binding file.
COSDEV-5023	New Feature	Processes	Create a process for updating a pset value - FollowUp	New process <i>UpdatePSET</i> to update the values and structure of a parameterset.
COSDEV-4902	New Feature	Server	<i>JobServiceNativeLayer</i> : enable more scaleable getNextJob() only	During performance tests, we encountered a bottleneck with the SQL server-based procedure (if enabled) for getNextJob() which allows a maximum of ~150 parallel calls per second. In grids with many JobProcessors, this can result in long idle times for JobProcessors.

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				Enable the <i>JobServiceNativeLayer</i> via the Profiles form to reach a better job supply for the JobProcessors.
COSDEV-4896	New Feature	Web-Client	Web-Client: Automatic logout after a defined inactive time	Users are now automatically logged out after a period of inactivity .
COSDEV-4881	New Feature	REST-API	REST-API: /v3/workflows/execute /alias/{aliasName} support rfc7807 conform errors	The REST endpoint /v3/workflows/execute/alias/{aliasName} supports RFC7807 conform problem messages.
COSDEV-4668	New Feature	Processes	New decisions <i>IsMap</i> , <i>IsObject</i> , <i>IsArray</i>	Three new decisions <i>IsMapInDictionary</i> , <i>IsArrayInDictionary</i> and <i>IsObjectInDictionary</i> were added.
COSDEV-4660	New Feature	Processes	New process: <i>SetObjectMultipleProperty</i>	A new process that encapsulates the setting of multiple attributes of an object in the runtime dictionary was introduced.
COSDEV-4599	New Feature	Processes	Process: Add several entries to an existing map	The new process <i>CreateOrUpdateOrderedMap</i> adds entries to an existing map. If the map does not exist yet, a new one with the given name will be created. This process can therefore be used as a replacement or an extension of the <i>CreateOrderedMap</i> process.
COSDEV-4522	New Feature	Processes	Create a process for updating a pset value	New process <i>SetPSETValues</i> to change values of a parameterset. The maturity level is currently set to <i>Development</i> , as this process is still under development.
COSDEV-4126	New Feature	Processes	SAP: <i>ParameterListToJSON</i>	New process <i>ParameterListToJSON</i> for transferring an SAP parameter list into its JSON representation.

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COSDEV-4009	New Feature		SFTP: Check if remote file or directory exists	Added the new decision <i>SFTPCheckExists</i> to verify the existence of a file or directory on an SFTP server.
COSDEV-3680	New Feature		Extend Math Libraries to handle Float values	New function <i>calcs</i> to calculate decimal values like 3.14.
COSDEV-3088	New Feature		Behavior of <i>DeleteJobsDaily</i> in case of an error	It is now possible to make customers postpone actions while deleting a directory in case of errors or no errors.
COSDEV-3080	New Feature	Processes	Function to get any object status as text	New function <i>convertState</i> retrieves the status of table "jobs" and "filestatus" as plain text.
COSDEV-2575	New Feature	Processes	Generating CSV out of array/map structure	With the newly supported template engines, CSV files can be created with data structures from the workflow runtime.
COSDEV-2215	New Feature	Server	Support of list, array, ... as input parameter for a function	Array support is now possible inside function calls.
COSDEV-5339	Improve ment	Processes	Disable chunked Multipart transfer per option for process <i>HTTPSendMultiPartFile</i>	New parameter <i>chunked</i> added for the process <i>SendMultiPartFile</i> to enable or disable chunked data transfer.
COSDEV-5338	Improve ment	Native Client	License Warning pop-up with Native Client	Show license expiration warning only if the license expires in less than 100 days.
COSDEV-5289	Improve ment	cElement, Misc, Processes	Add frequently used functions.	New functions <i>leftPad</i> , <i>rightPad</i> , <i>nextInt</i> , and <i>urlEncode</i> added.
COSDEV-5376	Epic	Adapter	IPP Adapter: restrict access to devices via roles setting	Access and viewing of IPP Adapter devices can be restricted by setting the required access roles of a device in the configuration.
COSDEV-5340	Epic	Adapter	IPP Adapter: support raw output via port 9100 and lpr printing	Added support for raw printing via lpr and raw socket printing (unidirectional). use <i>lpr://</i>

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				or <i>raw://</i> instead of <i>ipp://</i> to use raw printing for a device.
COSDEV-5278	Epic	Processes, Server	PDL data handling: conversion	<p>New licensed process library for Page Description Language conversion added.</p> <p>The process <i>PDLConvert</i> converts between Postscript, PCL5e/c, PCL-XL, PDF and XPS.</p> <p>The process <i>PDLPagesCount</i> just outputs the number of pages of a PDL file.</p> <p>Note that this library requires a license. For parallel conversions, each conversion task requires its own license.</p>
COSDEV-5277	Epic	Adapter	IPP Adapter: Extend IPP Attribute usage	New Device options can be used with IPPDirectPrint and IPPSubmit: Choose between collated and uncollated document copies, print a range of pages, select color mode, and use a single finishing option.
COSDEV-5276	Epic	Adapter, Server	IPP Adapter: Spool-Out Automation	An IPP device can be enabled for Spool-Out automation, which changes the Spool-Out function to <i>Off</i> once the device is going offline.
COSDEV-5275	Epic	Adapter, Web-Client	IPP Adapter: Job and Printer redirection	Redirection routes incoming Jobs for a device to the redirected device. The function is available via the Device Monitoring view and the context menu <i>Redirect Device</i> .
COSDEV-5184	Epic	Native Client, Web-Client	Reorganize Help-System regarding security issues and movement of Confluence to the cloud	The help system has been reorganized so that the native and the Web-Client now use the new local help server by default and fall back to the online help in case of unavailability of the local

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				server.
COSDEV-5105	Epic		JSON: Entire Support	New processes to support working with JSON documents.
COSDEV-4971	Epic	Web-Client	Web-Client: Export package - New action <i>Synchronise</i>	The existing action <i>Replace</i> now has the added functionality to add all existing children of an entry at export-time to the package. Therefore it has been also renamed <i>Synchronise</i> .
COSDEV-4946	Epic	Web-Client	Web-Client: Show content of Package ppk file	The Package Management Views for exporting and importing Packages offer now the possibility to see the content of ppk.
COSDEV-4853	Epic	Processes	Extend <i>LDAPSearchEx</i> process with <i>SearchScope</i> parameter	The Parameter <i>scope</i> was added to the <i>LDAPSearchEx</i> process to specify the LDAP search scope individually. Parameter <i>SUBTREE</i> searches the complete tree.
COSDEV-4745	Epic	Server	OAuth2/Token based authentication for mail	Updated Whitepaper and documented a sample Workflow to get an OAuth2 token and send email via Office365 utilizing the token-based authentication.
COSDEV-4683	Epic		Fix Security Findings :: sysHUB 2022.1	Fixed security issues identified during the regular security review process.
COSDEV-4647	Epic	Web-Client	Web-Client: Workflow Designer : Implementation basic layout	Added Workflow Designer Web Preview.
COSDEV-4618	Epic	Server	PostgreSQL support	PostgreSQL Database support added to the setup.
COSDEV-4482	Epic	Processes	ProcessTemplateFileExt to generate variable output via template engine	Added processes to support the Pebble -and Thymeleaf template engines.
COSDEV-4155	Epic	Web-Client	Web-Client:	A customizable view is

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			SnapshotView - Changing of JobAttributes	available to change, e.g., JobAttributes. It works similar to the Native Client implementation.
COSDEV-4086	Epic	Server	Jobs in status 'Timed hold' should get status 'Ready' if the timestamp is set	The process <i>JobStatusTimed</i> provides a new parameter to set the start date of the job.
COSDEV-3437	Epic	Web-Client	Web-Client: Feature <i>LoadBalancer</i> Monitoring	A Monitoring view for the feature <i>LoadBalancer</i> has been added to the Web-Client.
COSDEV-5455	Task	Processes	Profile needed for PDL extension	PDL Process Extension needs a central PDLInstance service which is enabled via the PDL profile setting.
COSDEV-5382	Task	Adapter	Redirection persistence	When enabled via the IPPAdapter setting <i>Persist functional device settings..</i> , which is enabled by default, the change during operation of spool-in/out, active/inactive and device redirection will be stored in the config and restored after reboot.
COSDEV-5378	Task		Web-Client: add filter possibility in the Devices Monitoring view	Device Monitoring view can be filtered and sorted by table columns and temporary filters.
COSDEV-5377	Task	Web-Client	Web-Client: adapt new IPP Adapter settings	The new settings <i>Location, Spool-Out Automation</i> and <i>Access-Roles for an IPP Device</i> can be configured via the Web-Client.
COSDEV-5373	Task	Server	DB changes for jobticket storage	<i>Jobs and File-Status</i> table got new column holding custom data for later usage by the IPP Adapter and custom applications.
COSDEV-5309	Task		WF_10: Provide function and/or process to calculate the jobdir	New sysHUB function <i>getJobDir</i> added.
COSDEV-5140	Task	Server	mssql server: update jdbc driver	MSSQL-Driver updated to 9.4.1
COSDEV-5106	Task		WF1 Process to create	New process to set up

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			and maintain complex dictionary structures	and maintain complex dictionary structures was introduced.
COSDEV-4772	Task		WF 2: Show job attribute startdate in Web-Clients job table	The start date field is now shown inside the snapshot view.
COSDEV-5489	Change	Setup	Remove server's folder <i>zugferd</i>	The obsolete <i>zugferd</i> folder in sysHUBs root folder was removed.
COSDEV-5365	Change	Native Client, Web-Client	Remove <i>HelpServer</i> profile.	Profile <i>HelpServer</i> removed from Config-Tree
COSDEV-5307	Change	Processes	Process <i>ElementToProperties</i> always trims a value	A new optional parameter, <i>noTrim</i> , has been added to the process.
COSDEV-5257	Change		Enable sysHUB functions as pebble extension	Enables sysHUB functions as an extension in pebble templates.
COSDEV-5254	Change	Server	Optimize some jar dependencies	Obsolete jar files were removed from ext folder: x86.jar, draw2d.jar, xalan.jar, eclipse-core.jar, eclipse-help.jar
COSDEV-5237	Change	Adapter	IPP Adapter: provide purge command via console	With the option 'purge' for the 'd' console command, an IPP Adapter logical printer queue can be cleared. Managed sysHUB Jobs and Tracked Files will be set to <i>purged</i> , and the sysHUB Job will be set to error.
COSDEV-5207	Change	Server	Additional security for BasicAuthentication in WEB-API	Security enhancement for BasicAuthentication. AuthProvider in Header call is required and must not be 'cosmos'.
COSDEV-5190	Change	Server	User authentication sequence improvement	The user authentication process has been improved for LDAP users and now takes the user type into account.
COSDEV-5134	Change	Web-Client	Web-Client: Extend load package selection from everywhere	View Import Package: Browsing and importing a package from everywhere is now

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				possible with the permission <i>PERM_PLUGIN_SERVERE_XPLORER</i> .
COSDEV-5132	Change	WebUI	WebUI: Login activity should be written to user log table	WebUI logs now login activities to the user log.
COSDEV-5053	Change	Processes	Proc : : ObjectToMap : : Support null values	Introduced the new global boolean switch System/Settings/evalEnableNullResults. If set to true, the variable resolution will return <i>null</i> as a value. If set to false, or if not set, the variable resolution will return an empty string as a value as before.
COSDEV-5051	Change	Server	Rename HSQL-Database name and pre configure it 2022 conform	Name from HSQL database switched from <i>cosmos</i> to <i>db</i> .
COSDEV-5049	Change		SAPIInput: adjust jobs text status in <i>OMS_START_JOB</i>	The text status is only changed if an error message exists.
COSDEV-4992	Change	Processes	HTTPExecuteMethod - response should be set independent from HTTP status	The HTTP response will be independent of the HTTP status written to the dictionary now. Additionally, also variable HTTPSTATUS is written to the out-dictionary.
COSDEV-4989	Change	Server	Replace <i>SimpleNamingContextBuilder</i> in <i>cosmos-db</i>	Replaced the deprecated library for lookup naming context with an implementation that allows only internal sysHUB JNDI connections for security reasons.
COSDEV-4980	Change	Web-Client	Web-Client: Extend local package selection from the server	Loading packages from the server or local file system is now secured by two new Permissions. See corresponding help page for more details: https://ntware.atlassian.net/wiki/spaces/SYSHUB/2022/pages/1127710767/Import+Manager#ImportManager-LoadingPackage

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				https://ntware.atlassian.net/wiki/spaces/SYS/HUB2022/pages/11277107677/Import+Manager#ImportManager-LoadingPackage
COSDEV-4923	Change	Web-Client	Web-Client : HttpInput2 Page , selecting check box Response to Send should disable the Response Text box	As the properties <i>Response</i> and <i>Headers</i> depend on the checkbox Response to send , they will be inactive if the check box is ticked.
COSDEV-4887	Change	Server	Update external reactor libraries	Reactor libraries updated
COSDEV-4882	Change	Processes	Parent/Child Job interlock	The process <i>DirectJobCall</i> allows calling any other job via the internal Job Processor method. The call is executed synchronously, and the calling part still has control. This improves working with parent/child jobs and their communication.
COSDEV-4879	Change	Processes	<i>HTTPSendMultiPartFile</i> : enable customized content-type	Enable customisation of content-type <i>Multipart</i> .
COSDEV-4871	Change	Server	Loggers console command: add trace level	We added the option <i>T</i> to the CLL command to allow a logger to the TRACE level.
COSDEV-4868	Change	Processes	<i>RemoveDictionaryEntry</i> only removes the root object	It is now possible to remove nested elements, eg, out/key1. The nested elements must be maps.
COSDEV-4862	Change		Modify the builds to the new version numbering	With version uniFLOW sysHUB 2022.1.0, some renaming was applied: <ul style="list-style-type: none"> • config/Cosmos.xml -> config/Server.xml • config/Cosmos.properties -> config/Server.properties Starter files changed to prefix <i>sysHUB</i>
COSDEV-4859	Change	REST-API	REST-API: make maximum payload size	The maximum allowed body size has a default

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			configurable	value of 100 MB. The size can be modified by changing the value of the property <i>MAXBODY_LENGTH</i> in the file <i>cosmos-webapi\WEB-INF\web.xml</i> .
COSDEV-4756	Change	Server	Licensing: Ignore case when checking host ID	Host ID of the base feature is used in the upper case when validated against the network interfaces.
COSDEV-4747	Change	Processes	Change at Logging AntProcess in case log level LOW	The log level of the process is reduced to the necessary information for low and medium.
COSDEV-4677	Change	Server	More LDAP/S functionality to handle customer request	Multiple logon groups for LDAP can now be specified, separated by commas. With the LDAP-TU provider and the configuration switch <i>ldap.tu.populateNestedGroupsAD=true</i> in the <i>cosmos.properties</i> file, it is now also possible to determine user groups for logon to which the user is not assigned directly, but via a group hierarchy. This function is available with Microsoft Active Directory only.
COSDEV-4669	Change	Processes	Extend process <i>MapToJobattributes</i> to multidimensional objects	The process <i>MapToJobattributes</i> now supports nested maps.
COSDEV-4585	Change	Native Client, Server, Web-Client	Implement mechanism to enable disabled admin accounts.	CUI-Tool now has an option to enable a disabled admin user. This can be important if a hacker disables the admin account while making a lot of login attempts.
COSDEV-4501	Change	Server	Upgrade hsqldb driver jar	HSQldb database driver updated to version 2.6.0
COSDEV-4458	Change	Processes	Support parallel	Parallel processing with

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			processing in <i>AFP2Accountingxml</i>	the process <i>afp2accountingxml</i> is possible now.
COSDEV-3202	Change	Native Client, Server, Web-Client	Extend Server-Explorer with more logging information and access privileges	Logging user activities inside JobExplorer (ServerExplorer). <i>Download, Rename, Copy, Delete</i> and <i>Move</i> are logged in Userlog.
COSDEV-1778	Change	Processes, SAP	Provide HTTPS URL to visualize within SAP	The optional <i>protocol</i> parameter has been added to the <i>CreateStampedFileURL</i> process to support https as well.
COSDEV-1481	Change	Server	Use <i>commons-lang3</i> instead of <i>commons-lang</i>	Library <i>commons-lang</i> was replaced with library <i>commons-lang3</i> . If customers used functions inside this now-obsolete library, they must either change this manually or move the obsolete library <i>commons-lang</i> from the <i>deprecated</i> folder to the <i>ext</i> folder. <ul style="list-style-type: none"> • Old namespace: org.apache.commons.lang • New namespace: org.apache.commons.lang3
COSDEV-1041	Change	Web-Client	Deployment of resources to all grid nodes	If you import a ppk-file via the Web-Client, then the other node(s) of the grid will be automatically triggered to import only the resource files of the imported package. There is no need to do this manually anymore.
COSDEV-5375	Defect (QA)		Template Engine: Add jars to <i>ext/license.properties</i>	Added link to licenses of the template engines <i>pebble</i> and <i>thymeleaf</i> .
COSDEV-5345	Defect (QA)	Adapter	Strange messages in <i>server.log</i>	Logging disabled for <i>jmdns</i> log messages.
COSDEV-5317	Defect (QA)	WebUI	Outdated content in <i>webui</i>	Replaced old presentation with <i>sysHUB</i> presentation for some WebUI samples.

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COSDEV-5291	Defect (QA)	REST-API	REST-API: POST <i>/webapi/v3/userlogs</i> creates an incorrect user log.	REST endpoints <i>webapi/v3/userlogs</i> : Use integer values for attributes <i>logLevel</i> , <i>objectFunction</i> , and <i>logCategory</i> when transferring data from UserLog objects.
COSDEV-5261	Defect (QA)	REST-API	Rest-API: <i>Orderby</i> clause for message column (LOB) not working on hsqldb and oracle	Sorting of the attribute messages was removed from the Syslog view. The REST-API for Syslog and Userlog does not support ordering by message for the databases Oracle and HSQL.
COSDEV-5246	Defect (QA)	Web-Client	Web-Client : Export package - unable to save packages after moving and editing properties	The save state of packages that are moved while changing properties is now displayed correctly.
COSDEV-5242	Defect (QA)	REST-API	API change in REST-API: error in case of unauthenticated access	Web-API response changed in case of error if using XML-MediaType. The root element is changed from <i>WebApiException</i> to <i>WebException</i>
COSDEV-5223	Defect (QA)	Server	<i>data/transaction/localdb/runHsqldb_Gui.bat</i> points to wrong jar name <i>hsqldb-2.4.1.jar</i>	Fixed batch file to start HSQLDB-Manager. The file now points to the correct HSQL-DB version.
COSDEV-5165	Defect (QA)		Add Resource menu allows duplicate entry in web-client	Adding duplicate resource files to a Package is now prevented.
COSDEV-5163	Defect (QA)		Export package view: Updating the browser's language setting does not refresh the translation of the Export package view	Changing the browser's language setting now refreshes all property names of the Export package view correctly.
COSDEV-5112	Defect (QA)	Web-Client	Web-Client - User View , unable to create new permission set.	Creating a new permissionset now works as expected.
COSDEV-5045	Defect (QA)	Web-Client	SQLTool is no longer usable after having a null result set	New queries are now displayed even after a query with no result.
COSDEV-5041	Defect (QA)	Web-Client	Web-Client: Problem renaming file in Server	In the Server Explorer, menu actions Rename

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			Explorer	and <i>Delete</i> now work as expected.
COSDEV-5039	Defect (QA)	Web-Client	Web-Client: In <i>Import Package</i> view, the <i>Server Explorer</i> context menu does not work correctly.	The <i>Server Explorer</i> context menu was removed.
COSDEV-5037	Defect (QA)	Setup	SQL scripts for installation rely on case-insensitive setting of the database	Tables jobidlist and jobidquerylist are now created per node during runtime.
COSDEV-5030	Defect (QA)	Web-Client	Web-Client : In <i>Parameter Set</i> view , Password entry is encrypted again while moving elements.	Passwords are not encrypted after copying or moving them anymore.
COSDEV-5028	Defect (QA)	Setup	Some small cosmetic issues in installer	Text was updated to be more helpful to the user.
COSDEV-5022	Defect (QA)	Web-Client	Web-Client: <i>Parameter Set</i> view - Drag and drop into an empty sub-folder is failing	Moving an entry to a group with the same parent group now works as expected.
COSDEV-5021	Defect (QA)	Setup	Service installation problem	Console installation now working with Linux OS. Furthermore, auto-installation is also working. The uninstaller on Linux must be executed with <i>su</i> privileges.
COSDEV-5020	Defect (QA)	Setup	Problem with console install and hsqldb	Console installation is now possible with HSQL-DB
COSDEV-5011	Defect (QA)	Web-Client	Web-Client: <i>Parameter Set</i> view and <i>Expert Configuration</i> - cosmetic issues, properties page is empty after deleting an entry	Added deterministic behaviour for selected entry after deleting an entry.
COSDEV-4964	Defect (QA)	Native Client, Server, Web-Client	userlog/syslog broken	Both log views now offer buttons for clearing, sorting, and filtering. All failed login attempts via the Web-Client are logged now.
COSDEV-4958	Defect (QA)	Web-Client	Strange behavior in user management	Selecting all user roles now works as expected.
COSDEV-4955	Defect	Input	WMQ form on native	The missing entries for a

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	(QA)	Channels	client broken	correct working form have been added to the WMQ ppk-file in the impexp-folder.
COSDEV-4897	Defect (QA)	Web-Client	Web-Client: Changing the language setting makes cElements invisible	Switching the language setting of the Web-Client now works as expected.
COSDEV-4860	Defect (QA)	Web-Client	The SQL tool fails for queries with leading blank space	The SQL tool now works correctly when submitting queries with leading spaces.
COSDEV-4779	Defect (QA)	Server	Update java-script files delivered with sysHUB	Internal methods <i>getJob</i> and <i>updateJob</i> (former <i>GetJob</i> and <i>UpdateJob</i>) are now updated under <i>sysHUB\scripts\ (DLAttributesToOCT.js, LoadJobObject.js)</i> , too.
COSDEV-4770	Defect (QA)	Server	Job Processor in Notify mode not waken up by incoming new jobs.	Job Processor instances in waiting mode are now waking up correctly.
COSDEV-4750	Defect (QA)	Server	Built-in <i>Dictionary</i> variable {hostname} does not have the same behavior in COSMOS 2.9.1 and sysHUB 20.21	The server now returns only the hostname (not the FQDN) implemented for COSMOS versions 2.9 and earlier.
COSDEV-4746	Defect (QA)	Server	Diagnostics broken in logging implementation of <i>WorkflowProcessor.java</i>	Logging stack traces in error cases is now entirely enabled in the <i>WorkflowProcessor</i> .
COSDEV-4685	Defect (QA)	Processes, Server	License handling for pdfformmerge	PDFFormMerge has a new namespace: <i>com.oce.cosmos.pdf</i> . Customers using this process should modify it in the <i>Workflow-Designer</i> . The functionality of this process is defined by Canon NL.
COSDEV-4678	Defect (QA)	REST-API	Unable to process REST-API services for Job Attribute	Changing JobAttribute values via the REST-API now works as expected.
COSDEV-4588	Defect (QA)	Web-Client	Hotfolder and other channels: queue configuration problem in GUI.	Several views have been optimized regarding the visibility of action buttons and the minimal size of resizable

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				elements.
COSDEV-4484	Defect (QA)	REST-API	REST-API: Workflow execution throws ConcurrentModificationException	A fail-safe iterator is now used to enable multi-threaded access to the runtime dictionary when running a workflow via the REST-endpoint <i>POST /cosmos-webapi/v3/workflows/execute</i> .
COSDEV-4441	Defect (QA)	Setup	Bundling of licensed jdbc drivers - possible copyright violation	Oracle, SAP-HANA JDBC-Driver removed from the installer due to license restrictions. Users must now download these drivers themselves. The driver is free, but only for end-users. Integrated authentication DLL files for SQL-Server must also be downloaded separately.
COSDEV-4422	Defect (QA)	Web-Client	Web-Client : Expert config view, Drag and drop for long distance is not working	Fixed an issue that the destination group was wrong after dropping an entry if the vertical scroll bar of the tree was visible.
COSDEV-4043	Defect (QA)	Processes	Regression in the process <i>pdf2accountingxml</i>	The <i>process pdf2accountingxml</i> now processes pages correctly again.
COSDEV-5504	Security		Security: Upgrade Spring Framework to 5.3.19	Spring framework is upgraded to spring-framework-version 5.3.19.
COSDEV-5479	Security	Server	Allow only defined webapps and disallow WAR packages in webapps folder.	Web apps are only accepted if they are known to the system. By default, these web apps are available: cosmos-auth, cosmos-gitserver, cosmos-web, cosmos-webapi, cosmos-webauth, cosmos-webclient, cosmos-webui, eposng, stampPreview, sys-help Users who want to use their own web apps need to add them to config:

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				<i>System/Webapps.</i>
COSDEV-5453	Security	Misc, Security	BETA-2022.1: OWASP dependency checker shows 301 vulnerabilities	All vulnerable libraries on the server side are updated. Only libraries with a severity <7 are allowed.
COSDEV-5446	Security		#SH-25 - [WebClient] Account Lockout Bypass	X-Forwarded-For Header check removed because of failed login attempt check.
COSDEV-5445	Security		#SH-20 - [WebClient] Unauthenticated user could revoke any valid token	Added more secured authentication for password update handling.
COSDEV-5443	Security		#SH-23 - [WebClient] XXE Injection in Package Manager Import	XXE-Attack Security Problem through DTE injections solved. Packages and Restore.
COSDEV-5369	Security	Security	Jetty vulnerable to temporary directory hijacking and 2 more	Updated Jetty version from 9.4.19 to 9.4.45.
COSDEV-5243	Security		Remote License Server: log4j2 remote code execution	Fixed by providing the latest log4j2 libraries and by disabling JNDI lookups via a setting in the global config file.
COSDEV-5241	Security	Security, Server	CVE-2021-45046 Apache Log4j2 Thread Context Message Pattern and Context Lookup Pattern vulnerable to a denial of service attack.	Fixed by updating log4j2 to version 2.16.0.
COSDEV-5234	Security	Security, Server	Cosmos log4j2 remote code execution	Fixed by providing the latest log4j2 libraries and by disabling JNDI lookups via a setting in the global config file.
COSDEV-5174	Security	Security, Server	Unauthenticated Java deserialization possible	Disallowed data deserialization without a login.
COSDEV-5172	Security	Server	Code execution possible due to unprotected Java deserialization	Java deserialization is controlled by filtering disallowed classes in the deserialization process.
COSDEV-5073	Security	Web-Client	SQL injection	Use Named Queries that prevent SQL injections.
COSDEV-5072	Security	Web-Client	Session token in URL	No session token in console URL any longer.

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COSDEV-5069	Security	Web-Client	#SH-15 - [WebClient] Insufficient Session Expiration	Session Timeout added to Web-Client.
COSDEV-5066	Security	Web-Client	#SH-09 - [WebClient] Session not terminated on the server side after password changes.	Web-Client access restriction if the user's password or disabled flag is set by the User Management. Web-Client access restriction if the user changes the password and has other sessions open.
COSDEV-5065	Security	Web-Client	#SH-16 - [WebClient] HTML Injection in Snapshots	Added user name validation and related security check.
COSDEV-5063	Security	Web-Client	#SH-13 - [WebClient] Weak Password Policy	Password policy can be set with DAO-Authentication (sysHUB). Password change dialog added.
COSDEV-5062	Security	Web-Client	#SH-14 - [WebClient] Improper field validation in adapters leads to Denial of Service.	Validation of number fields added. Other fields are already checked and reported as an issue during startup in the syslog.
COSDEV-4938	Security	Web-Client	Improper restriction of excessive authentication attempts	Login attempts by unknown users are checked and blocked by the client if the maximum attempts count is reached.
COSDEV-4714	Security	Web-Client	Everybody can disable a login by 10 failing tries to login at the same day	Login delay added after 3 times of failed logins.
COSDEV-4549	Security	REST-API, WebUI	#SH-06 - [WebClient] (#CM-30)Denial of Service via Account Disabled Policy	Users cannot disable accounts during login procedure anymore.
COSDEV-4542	Security	Server	#CM-41 - SSH Weak Configuration	Disabled undelayed compression algorithms for ssh terminal connections.
COSDEV-4182	Security	Server	COSMOS still allows SHA1 based password in the user database	We have announced in COSMOS 2.7.0 that we will remove support for SHA1 for the passwords. We don't support the

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				SHA1 encrypted passwords anymore in this version because they are insecure. Since COSMOS 2.7.0, sysHUB silently re-encrypted passwords on login to the new format bcrypt10. You can distinguish such old SHA1 based passwords by the first seven characters \$2a\$10\$ (bcrypt10) in the user management perspective or the database.
COSDEV-2995	Security	WebUI	New login page for WebUI because of old OpenUI5 issues.	WEB-UI login page redesigned with pure javascript and HTML5.
COSDEV-691	Security	Server	Clear text Submission: classpublisher does not use a secure connection (cosmos-rcl).	Connection of the class publisher within agents can be done now secured.
COSDEV-5495	Bug	Misc, Processes	PDFCreateMultipleUp only creates A4 page format.	PDFCreateMultipleUp now works as expected.
COSDEV-5480	Bug	Input Channels	Proc :: SAP-PrintKey :: CallFB:: parameter commit has no effect	The sysHUB process <i>CallFB</i> related to SAP processes a commit in a stateful context when the process parameter <i>commit</i> is set to true.
COSDEV-5476	Bug	Processes	PROC HTTP: Cookies not exchanged when mixing HTTPExecuteMethod and HTTPPost	Improved Cookie Handling in the PROC HTTP Package.
COSDEV-5471	Bug	WebUI	WebUI: login with cosmos user not possible anymore.	Aligned cookie path for <i>auth</i> and <i>webui</i> webapps. Redirect always to auth webapp for first login instead of using SSO per default.
COSDEV-5461	Bug	Native Client	ImportManager on native client cannot execute Pre-/Post-Workflow anymore	Pre- and Post-Workflows of a PPK are now executed as expected via the Import Manager.
COSDEV-5459	Bug	Web-Client	WebClient: HttpInput Initial Job status setting	Corrected the values to be used for the <i>Initial Job</i>

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			using wrong values.	<i>status</i> drop down box.
COSDEV-5421	Bug	Web-Client	WebClient: change of stomp port disables messages to the Web-Client	Changed stomp port to the Web-Client.
COSDEV-5355	Bug	Processes	PDFCreateMultipleUp creates no (wrong) N-up conversion	The process PDFCreateMultipleUp works again for cases like putting two A5 onto one A4 page or five A5 onto 3 A4 pages.
COSDEV-5354	Bug	Web-Client	Web-Client: Tree navigation of Server Explorer does not display all folders	Fixed an issue where the Server Explorer did not show all folders on the left tree structure, and double-clicking on a folder on the right table did not work.
COSDEV-5288	Bug	Agent, Server	Agents are not restarting after service restart	Agent reconnection is now initiated after a server restart for legacy systems with incorrect <i>user</i> and <i>pwd</i> field on Agent configuration in the expert field. Restart Catch extended errors after the restart for dummy JNDI context.
COSDEV-5287	Bug	Processes	The decision <i>IsNull</i> always returns <i>false</i> .	The decision now works as expected and returns <i>true</i> for an existing dictionary object with the value <i>null</i> .
COSDEV-5268	Bug	Adapter	IPP Adapter: fix PRISMAsync protocol level errors Part II	The Adapter handles IPP protocol-level issues with some PRISMAsync controllers: <ul style="list-style-type: none"> • Blank spaces in Psync Workflow name return a wrong, unencoded URL including blank spaces. • Some status messages may contain the same attribute in an attribute group.
COSDEV-5265	Bug	Processes	The function <i>nformat</i> " from Mathtools creates	Use <i>BigDecimal</i> in <i>nformat</i> function to prevent data conversion

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			wrong results	issues.
COSDEV-5255	Bug	REST-API	REST-API: garbled form data when using umlauts	The endpoint <i>/cosmos-webapi/v3/workflows/execute/alias</i> now handles German Umlauts used in parameters and in filenames of form-data correctly.
COSDEV-5248	Bug	Server	Query on file status table too long	The query for the <i>filestatus</i> table in the native Job-Perspective was changed. No fetch is used anymore.
COSDEV-5233	Bug	Processes	Configured part in XML is not deleted	The process <i>DeleteElement</i> can now delete XML elements with a namespace.
COSDEV-5226	Bug	Processes	Functions that work with integers react differently to incorrect inputs	Processes and decisions now work with long values. Two new processes were added: <i>PushLongToDictionary</i> and <i>PushLongToMap</i>
COSDEV-5221	Bug	Server	<i>LoadDBObject</i> throws failure	<i>LoadDBObject</i> process condition to int value changed to a long value.
COSDEV-5211	Bug	Web-Client	Web-Client: Saving changed data is not possible in <i>System Components</i> view.	Saving changed data is now possible.
COSDEV-5196	Bug	Processes, REST-API	XML Parser working with NULL / xsi:nil	Sets the value of a property equal to "nil" if the XML-element has the attribute <i>nil="true"</i> .
COSDEV-5194	Bug	Processes	<i>PDFStampText</i> Process: Font and Color not correct	<i>PDFStampText</i> Process optimized for using different layers
COSDEV-5191	Bug	REST-API	REST-API WorkflowMapping roles restriction wrong rc response	Correct usage of return code <i>403 Forbidden</i> .
COSDEV-5177	Bug	Server	<i>PDFStampText</i> doesn't handle rotation and font color correctly	Rotation is now working, Color schema is now set to real CMYK with max. values to 100.
COSDEV-5167	Bug	REST-API	LDAP workflow execution via Basic Authentication does not call authentication	Fixed a bug that the Workflow execution did not work with an LDAP TU user with Basic

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			manager	Authentication enabled.
COSDEV-5111	Bug	Web-Client	Web-Client: Double-click in Server Explorer sporadically opens wrong folder	Double-clicking now opens the desired folders.
COSDEV-5101	Bug	Processes	Proc: <i>PDFAddAttachment</i> process attaches only the latest XML file to a PDF and discards the former ones	Added the new optional process parameter <i>key</i> that is used to address the attached file PDF internally.
COSDEV-5048	Bug	Processes	Process <i>PDFCheckWhitespace</i> doesn't work as expected.	The process is not working correctly in earlier versions. Some modifications are done and a missing library was added.
COSDEV-5038	Bug		<i>Proc :: ExecuteQuery ::</i> statement is committed although it shouldn't	An example has been added to the description of the <i>ExecuteQuery</i> process to illustrate how to correctly execute an <i>ExecuteUpdate</i> query.
COSDEV-5035	Bug	Processes	Process <i>SearchAndReplace</i> wrongly replaces some characters in UTF-8 mode	Fixed by entirely using the encoding when working with strings internally.
COSDEV-5031	Bug	Web-Client	Web-Client: Expand state for root nodes broken after copying or moving the entry over long distance	Fixed an issue with the wrong expand-state of nodes after moving root nodes if a vertical scroll bar is visible.
COSDEV-5016	Bug	Web-Client	Web-Client: Userlog and Syslog default sorting should be by modifiedtime	Properties are now sorted by date/time (descending).
COSDEV-4996	Bug	Native Client	<i>CreateOrderMap</i> is showing different results	The sort order is kept when displaying the content of an ordered map in the debug view.
COSDEV-4993	Bug	Processes	ProcessMimeMessage ConstraintViolationException II	If the email header line is longer than the JobAttribute value field the server throws an error. Values longer than the JobAttribute value length are now truncated.
COSDEV-4978	Bug	Server	Change DIAG output	The DIAG output location

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			folder to <i>data/dynamic</i>	is moved to the folder <i>data/dynamic/diac</i> .
COSDEV-4977	Bug	Server	DIAG runs into an error in case of DIAG within a job assigned	Fixed an issue if a diag creates files with a selected job that runs into an error.
COSDEV-4969	Bug	Web-Client	Web-Client: SPoC list incomplete and not selectable	ClusterNodes in NamedSystem are shown in Web-Client SystemConfiguration
COSDEV-4961	Bug		Process: <i>RunScheduledWorkflow</i> Startpoint not supported	The process <i>RunScheduledWorkflow</i> correctly now supports the parameter startpoint.
COSDEV-4947	Bug	Native Client, Server	Native Client full access with misconfigured Role	If user rights after logon via native client cannot be read due to misconfiguration, a dialog box with the message <i>Access denied</i> will be displayed.
COSDEV-4940	Bug	Native Client	Password can be changed if user is related to LDAP	The <i>Change Password</i> menu is disabled by users of type LDAP or Windows.
COSDEV-4921	Bug	Input Channels	HotFolder <i>OnFileNotFound</i> always throws NullPointerException	Fixed a NullPointerException exception that could occur when using a Workflow for Queue property "File not found".
COSDEV-4917	Bug	Processes	DynWebServiceClient failure response vs return code	The Process now also writes messages from called Web servicesto the out-dictionary variable <i>return</i> in case of an exception.
COSDEV-4909	Bug	Web-Client	Web-Client SAPInterChannel UI adaptions	Terminology in Native- and Web-Client for the SAP Input Channel was changed to improve usability.
COSDEV-4878	Bug	Web-Client	Web-Client: AuthServer group with not encrypted password	Password values of newly added entries inside a freshly added group are now encrypted.
COSDEV-4858	Bug	Processes	Upload Files via HTTPPost brings error	OutOfMemory error when sending large files via HTTPPost process is fixed.

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COSDEV-4856	Bug	REST-API	Extend deserialization to arrays and XML-Document	Extended deserialization of Media-Type <i>application/JSON</i> to a dictionary map and array object. Extended deserialization of Media-Type <i>application/XML</i> to a dictionary XML-Document to work with the XML processes.
COSDEV-4849	Bug	Server	JMS Messaging not working well	ActiveMQ-Messaging now works stable. Added new switch <i>wakeUpOnly</i> to JMSJobMonitor to reduce Job message traffic. Adapted messaging settings to handle "memory full" situations.
COSDEV-4841	Bug	Server	Error FileNotFoundException in Process <i>GetMultipleFiles</i>	The process <i>GetMultipleFiles</i> was modified to retrieve only files without directories. The behavior is now identical to previous COSMOS and sysHUB versions (prior to 2.9.1).
COSDEV-4816	Bug	Documentation, Processes	Hanging <i>SendMimeMail</i> process - causing hanging jobprocessors	Added default timeout properties to the internal mail sender component.
COSDEV-4815	Bug	Native Client	Layout Designer stability issues	The FX-Dialog in the native client is now working again. (Note: The FX-Dialog is deprecated as a module.)
COSDEV-4811	Bug		WEB-API: workflowAlias cannot handle empty roles and filetypes	Property <i>allowedFileTypes</i> in WorkflowExecution Alias is not case-sensitive anymore. If empty, no check is done.
COSDEV-4788	Bug	Web-Client	OutOfMemory because of Web-Client Messaging	HeartBeat enabled for WebSocket Connections to ActiveMQ. Memory issues and "too many open connections" situations were resolved.
COSDEV-4744	Bug	Processes	AntProc using JoblogImpl wrong	Provided a job exists, log messages are now correctly assigned to it.

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COSDEV-4735	Bug	Processes	AntProc does not work correctly outside of JobProcessor.	<i>AntProc</i> process now works as expected when called within a workflow started by a 'scheduler job' and, at the same time, the global log level is set to <i>low</i> .
COSDEV-4730	Bug	Web-Client	Attempts to download a non-existent file do not log any error	If a file is not present in the specified location, an error message is displayed.
COSDEV-4713	Bug	Processes	ProcessMimeMessage ConstraintViolationException	Fixed a bug that caused a ConstraintViolationException while adding the Jobattribute <i>Attachments</i> to the job. In this case, now more than one Jobattribute will be added, using a counter like <i>Attachments_0</i> .
COSDEV-4712	Bug	REST-API	sysHUB returns HTTP code 500 after workflow execution for REST call on workflow alias	Fixed a bug that caused a 500 Internal Server Error when returning content in the response body of the executed workflow.
COSDEV-4695	Bug	Processes	<i>LDAPSearch</i> and <i>LDAPSearchEx</i> are throwing exception: Not an instance of DirContext	Fixed a bug that caused an exception in the processes <i>LDAPSearch</i> and <i>LDAPSearchEx</i> .
COSDEV-4679	Bug	Web-Client	Web-Client: No login possible with changed server ports	Login with non-standard server ports is now supported.
COSDEV-4667	Bug	REST-API, Web-Client	Web-Client: Updating entities does not perform a cache reload and notification	If changing an Agent inside the Web-Client, the AgentSemaphore will be deleted.
COSDEV-4657	Bug	WebUI	WebUI: delete job failing	Deleting and restarting jobs in WebUI works again.
COSDEV-3868	Bug	Processes	PDFDecrypt, PDFEncrypt does not close the file ".keystore"	PDFDecrypt, PDFEncrypt does not close the file ".keystore". The proper closing of the used resources is considered.
COSDEV-3768	Bug	REST-API	REST-API: Add TaskExecutor for async support	The endpoints <i>/cosmos-webapi/v3/workflows/execute/alias/{workflow alias}</i> are executed in an asynchronous

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				thread pool.
COSDEV-3746	Bug		Console command cache reload built in help broken	Extended parameter description to improve help text.
COSDEV-3519	Bug	Server	bcprov-jdk15on-1.58.jar vulnerability	Resolved potential vulnerability issues by updating *.jar version to 1.70.
COSDEV-3518	Bug	REST-API	netty-codec-dns-4.1.39.Final.jar and netty-transport-4.1.36.Final.jar vulnerabilities	Resolved potential vulnerability issues by updating *.jar version to 4.1.66.
COSDEV-3517	Bug	REST-API	jackson-databind-2.9.3.jar vulnerabilities	<ul style="list-style-type: none"> • Jackson libraries updated to 2.12.3 • ActiveMQ updated to 5.16.2 • Swagger updated to: 1.6.2
COSDEV-3358	Bug	Processes	File names are cut in process <i>CreateZipFile</i>	File names are no longer truncated.
COSDEV-1700	Bug	Processes	Process <i>CreateZIPFile</i> truncates top-level file and directory names	The process now does not cut off the first character of the file and directory name anymore.
COSDEV-1364	Bug	Server	Field <i>clientuuid</i> in <i>Jobs.java</i> unused	The field <i>clientuuid</i> was removed from the jobtable because it was unused.