

# Runtime 5

## Release Notes of the xUML Runtime since Version 5.1.63

Runtime Version	Note
<a href="#">5.1.92.0</a>	With this RUNTIME version, the persistent state database schema changed to version 14. The database content will be converted, once a service uses the new persistent state database. You cannot go back to an older RUNTIME version after you have started a service. All composite services which use a shared persistent state database must upgrade the RUNTIME at the same time.
<a href="#">5.1.91.0</a>	The RUNTIME upgrades the asynchronous trace database at first start. Although the new schema is fully backwards-compatible, we do not recommend switching back to an older RUNTIME and then back again to the new one. This might result in a corrupted database, that requires manual intervention to be fixed.
<a href="#">5.1.90.0</a>	With this RUNTIME version, the persistent state database schema changed to version 13. The database content will be converted, once a service uses the new persistent state database. You cannot go back to an older RUNTIME version after you have started a service. All composite services which use a shared persistent state database must upgrade the RUNTIME at the same time.

### xUML Runtime versions greater than 5.1.92.3

Starting with xUML Runtime version [2013.1](#) we provide the same Runtime for Bridge version 5.1 and version 6.0. Please refer to [E2E Runtime Release Notes](#) for details on these Runtime releases.

### Runtime 5.1.92.3 (31.07.2013)

Bug	Description
RUN-1588	Hash-Map Table not created out of JSON String
RUN-1604	Error message during service startup in embedded server
RUN-1605	Step over/into at end of service or transition does not proceed at next action
RUN-1606	Service starts successfully but cannot be accessed
New Feature	Description
RUN-1603	String method "transliterate"

### Runtime 5.1.92.2 (10.07.2013)

Bug	Description
RUN-1583	Hanging persistent state object and service crash due to huge asynchronous trace

### Runtime 5.1.92.1 (05.07.2013)

Bug	Description
RUN-1584	Unexpected error: SOAP Error SOAPADSM 17 - UserName is empty, then server crash

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- [E2E Runtime Release Notes](#)

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  - [Runtime 5.1.77.0 \(28.11.2012\)](#)
  - [Runtime 5.1.76.0 \(14.11.2012\)](#)

Improvement	Description
RUN-1587	Hash-Map key should support all base types as key

## Runtime 5.1.92.0 (26.06.2013)

### Incompatible Persistent State Database Schema

With this RUNTIME version, the persistent state database schema changed to version 14. The database content will be converted, once a service uses the new persistent state database. You cannot go back to an older RUNTIME version after you have started a service. All composite services which use a shared persistent state database must upgrade the RUNTIME at the same time.

Bug	Description
RUN-1592	Creating persistent state transition with absolute timeout greater 2038-12-31 fails (only MySQL)
RUN-1594	Service crash calling parseLocalDateTimeExpression with empty string
RUN-1595	Web Service cannot read binary file
Improvement	Description
RUN-1568	Resolve indexes to names in error messages.
RUN-1394	Persistent State: Cluster Fail-over (reconnect retry)
RUN-1593	Display persistent state objects which are in the initial state

- Runtime 5.1.75.1 (07.11.2012)
- Runtime 5.1.75.0 (26.10.2012)
- Runtime 5.1.74 (16.10.2012)
- Runtime 5.1.73 (20.09.2012)
- Runtime 5.1.72 (08.08.2012)
- Runtime 5.1.70.2 (19.06.2012)
- Runtime 5.1.69 (15.05.2012)
- Runtime 5.1.68 (14.05.2012)
- Runtime 5.1.67 (10.05.2012)
- Runtime 5.1.66 (08.05.2012)
- Runtime 5.1.65 (04.05.2012)
- Runtime 5.1.64 (26.03.2012)
- [Release Notes of the xUML Runtime up to Version 5.1.63](#)

## Runtime 5.1.91.1 (06.06.2013)

Feature	Description
RUN-1582	Runtime: Support mySQL for persistent state
Bug	Description
	Runtime: SQL adapter: MySQL: Support multiple SQL queries in one transaction SQLAPI option "HandleResult" is set to "store". Without the option, you will get the error: 2014 Commands out of sync; you can't run this command now. More information on: <a href="http://sqlapi.com/ServerSpecific/MySQL.html">http://sqlapi.com/ServerSpecific/MySQL.html</a>

## Runtime 5.1.91.0 (21.05.2013)

### Asynchronous Trace DB schema

The RUNTIME upgrades the asynchronous trace database at first start. Although the new schema is fully backwards-compatible, we do not recommend switching back to an older RUNTIME and then back again to the new one. This might result in a corrupted database, that requires manual intervention to be fixed.

Bug	Description
RUN-1577	Runtime: Type mismatch for testcase does not lead to error
RUN-1581	Runtime: Wrong order of persistent state transition in asynchronous trace
Improvement	Description
RUN-1572	Runtime: Offer JavaScript adapter for Solaris

## Runtime 5.1.90.1 (14.05.2013)

Crash	Description
RUN-1575	Runtime: Service containing JavaScript adapter crashes Runtime on shutdown

## Runtime 5.1.90.0 (30.04.2013)

### Incompatible Persistent State Database Schema

With this RUNTIME version, the persistent state database schema changed to version 13. The database content will be converted, once a service uses the new persistent state database. You cannot go back to an older RUNTIME version after you have started a service. All composite services which use a shared persistent state database must upgrade the RUNTIME at the same time.

Bug	Description
RUN-988	Runtime: history state in a fork/join context does not work
Improvement	Description
RUN-1567	Runtime: FlatFile adapter: trace input or output file name
New Feature	Description
RUN-1306	Runtime: Allow canceling a hanging SOAP/URL adapter call
RUN-1544	Runtime: Add request ID (session ID) to bridgeserver.log

## Runtime 5.1.89.0 (29.04.2013)

Bug	Description
RUN-1569	Runtime: Incorrect file names in composed MIME messages (introduced 5.1.77.0)

## Runtime 5.1.88.2 (18.04.2013)

Bug	Description
RUN-1565	Runtime: Connection error with URL adapter (https) because of OpenSSL bug
New Feature	Description
RUN-1548	Runtime: add date-time format option %o for timezone +HH:MM

## Runtime 5.1.88.1 (15.04.2013)

Bug	Description
RUN-1414	Runtime: Performance problem logger with high load
RUN-1555	Runtime: Dynamic URL Adapter Call: Backend not showin in IO_Entry trx log
RUN-1561	Runtime: Crash when persistent state decision has no matching branch
Improvement	Description
RUN-1552	Runtime: Reduce amount of trace information when using inspection lists

## Runtime 5.1.88.0 (28.03.2013)

New Feature	Description
RUN-1356	Runtime: Introduce state-element for branches for asynchronous trace
RUN-1540	Runtime: Support JS API to implement a nodejs compliant require function

## Runtime 5.1.87.0 (18.03.2013)

Bug	Description
RUN-1535	Runtime: Crash if calling FileSystem adapter read-line and close the file explicit
RUN-1554	Runtime: FlatFile Composer: cannot compose file containing chinese chars using utf-8 encoding
RUN-1556	User Interface: UI: Client Side Table Pagination: DateTime value in columns breaks sort

## Runtime 5.1.86.0 (14.03.2013)

Bug	Description
RUN-1549	User Interface: Unnecessary assertion if no table row has been selected
RUN-1457	Runtime: JavaScript adapter: fix Array and Blob handling in records
RUN-1526	Runtime: Format dateTimes in SOAP responses according tagged values dateFormatString and timezone for SOAP frontend (now it works for doc/literal encoding as well)
Improvement	Description
RUN-1524	Runtime: Support microseconds for currentDateTime()
New Feature	Description
RUN-1534	Runtime: Search for PS objects applying wildcards to the search keys

## Runtime 5.1.85.2 (04.03.2013)

Bug	Description
RUN-1527	Fix trace of dynamic and stored procedure SQL adapter
RUN-1532	getObjectHandles with filtering string attributes failed (introduced 5.1.74)
New Feature	Description
RUN-1457	JavaScript adapter (e2eLoadScript callback, SearchPath)
RUN-1526	Format dateTimes in SOAP responses according tagged values dateFormatString and timezone for SOAP frontend
RUN-1528	Support list of types in SOAP, rpc-style

## Runtime 5.1.84.0 (18.02.2013)

Bug	Description
RUN-1521	Runtime shouldn't consider zero-length quote character in FlatFile Adapter
RUN-1522	Runtime error when parsing an xml
RUN-1523	Composed server SOAP response does not match the WSDL file anymore

## Runtime 5.1.83.0 (06.02.2013)

This is only a Linux 64 build.

Improvement	Description
–	Linux 64 now runs on RedHat 5.5 or newer

## Runtime 5.1.82.4 (05.02.2013)

Bug	Description
RUN-1475	Runtime: Service with JMS remains in status startup upon error connecting to external state db

## Runtime 5.1.82.2 (31.01.2013)

Bug	Description
RUN-1510	Runtime: Missing SOAP response if service is stopped
RUN-1513	Runtime: Incoming SOAP calls are sometimes serialized
RUN-1514	Runtime: SOAP-Adapter does not support simple derived types
Improvement	Description
RUN-1509	Runtime: Query of current sessions should also work during shutdown
New Feature	Description
RUN-1408	Runtime: Print SOAP/XML date time values using local value plus timezone
RUN-1503	Runtime: Support SOAP 1.2 envelope, header, and body
RUN-1511	Runtime: Allow mocking subsequent calls to the same component

## Runtime 5.1.82.1 (23.01.2013)

Bug	Description
RUN-1507	User Interface: Could not load the date widget translations for 'en-CH'

## Runtime 5.1.82.0 (17.01.2013)

Bug	Description
RUN-1488	Runtime: Persistent state is slow if multiple signals are queued for one object
RUN-1490	Runtime: Introduce explicit flag to switch pooling on or off
RUN-1505	Runtime: SOAP with attachments is rejected by the server

## Runtime 5.1.81.1 (11.01.2013)

Crash Fix	Description
RUN-1399	Runtime crash with sftp URL adapter
RUN-1482	Service crashes using zipAdapter (if file array contains NULL values)
Bug	Description
RUN-1494	getMapEntries() and removeMapValue() raise exceptions when map is created using "create" and not initialized (introduced 5.1.78.0)
RUN-1495	User Interface: Empty Date/Integer/Float object results in Runtime error (UI request object) <b>Important Note:</b> Non-existing values are now NULL. This is also includes Strings which were just empty up to now. <b>This might lead to Runtime errors if String operations are used that don't allow NULL values.</b>
RUN-1502	User Interface: Strings being NULL are no longer sent from the UI to the SOAP service
RUN-1481	JSON Parser/Composer: long numbers result in overflows (negativ numbers)
Improvement	Description
RUN-1469	User Interface: If paging service IO has not been properly set up we get now an exception. However, this should result in a comprehensible error message.

## Runtime 5.1.80.0 (18.12.2012)

Bug	Description
RUN-1480	Runtime: Service with classToXML(prolog) does not start (introduced 5.1.75)

## Runtime 5.1.79.0 (13.12.2012)

Crash Fix	Description
RUN-1183	Runtime: Crash with https SOAP/URL adapter
RUN-1399	Runtime: Crash with sftp/ftps URL adapter
Improvement	Description
RUN-1473	Runtime: Improve error message if a SOAP request could not be dispatched
New Feature	Description
RUN-1471	Runtime: Cursor as output of stored procedure

## Runtime 5.1.78.0 (05.12.2012)

Bug	Description
RUN-1363	Runtime: Maps are not serialized correctly
RUN-1467	Runtime: persistent state: crash if transition to first state fails
Improvement	Description
RUN-1328	Runtime: New operation parseLocalDateTimeExpression()
New Feature	Description

RUN-1394	Runtime: Persistent State: Cluster Failover
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## Runtime 5.1.77.0 (28.11.2012)

Bug	Description
RUN-1304	Runtime: Invalid integer attribute in SOAP request doesn't cause exception
RUN-1450	Runtime: persistent state: race condition The bug is introduced since 5.1.72. It is only relevant for external persistent state databases and not for SQLite. If persistent state database pool is not enabled the bug doesn't apply (so 5.1.76.0 is save for SQL Server).
RUN-1452	User Interface: Get rid of JS warning: "Don't use '.nodeValue' for attribute nodes. Use '.value' instead."
RUN-1453	User Interface: Binding to controller attributes does not work anymore with (introduced with RUN-1439)
RUN-1454	Runtime: persistent state deadlock using SQL Server
RUN-1460	Runtime: memory leak converting date-time to string (introduced 5.1.74)
New Feature	Description
RUN-1394	Runtime: Persistent State: Cluster Fail-over
RUN-1408	Runtime: Print SOAP/XML date time values using local value plus timezone
RUN-1432	Runtime: Support SOAP attachments
RUN-1466	Runtime: persistent state: enable database pool only for Oracle

## Runtime 5.1.76.0 (14.11.2012)

Bug	Description
RUN-1231	Asynchronous PS Trace contains missing states
Improvement	Description
RUN-1451	persistent state disable database pool
New Feature	Description
RUN-1040	XML parser supports all ICU encodings

## Runtime 5.1.75.1 (07.11.2012)

Crash Fix	Description
–	Fixed crash when composing MIME message and a header was given as input but the name or value of the header was empty.
Bug	Description
RUN-1397	JMS Message is empty when sent through a signal
RUN-1424	castValue() in simple mapping changes float
RUN-1437	xmlToClass on an xml string considers the encoding in the processing instruction
RUN-1443	Fatal error at service startup: Function castValue is unknown in the repository
RUN-1446	Unexpected error when parsing XML without validation but with schema reference
RUN-1448	JSON: Startup message "Failed to open repository"

Improvement	Description
RUN-1440	Add contentLocation to MIMEPart messages

## Runtime 5.1.75.0 (26.10.2012)

Crash Fix	Description
RUN-1425	Runtime with invalid license crashes
Bug	Description
RUN-1439	UI: Strings longer than 4k are cut when parsing the service response in FF
Improvement	Description
RUN-1427	Introduce sendCorrelationID flag
RUN-1433	UI: Add e2e theme
New Feature	Description
RUN-1387	Correlation ID
RUN-1408	Print SOAP/XML date time values using local value plus timezone
RUN-1429	Persistent state: create events for stalled objects

## Runtime 5.1.74 (16.10.2012)

Crash Fix	Description
RUN-1183	The crash is triggered if we call in one session multiple SOAP/URL adapters with https /ftps (or other protocols which rely on OpenSSL).
RUN-1400	crash using select like with invalid regex
RUN-1392	Runtime crashes with classToXMLFragment and NULL namespace
Bug	
RUN-1426	URL adapter: ftp upload of empty file does not work (introduced 5.1.72)
RUN-1391	append with calculated index to array does not work
RUN-1389	wrong result when converting database integer to string
RUN-1411	Upgrade persistent state service with SQL Server does not work [BESM][12][SQLAPI dbms api error while calling "Execute SQL" on "PSTATE": 207 42S22 Ungültiger Spaltenname 'MAX_OWNER_ID'..]
UI Bug	
RUN-1423	DateTime in controller doesn't work on IE and Firefox 16
RUN-1420	Set paging service explicitly
RUN-1419	Make table theme configurable
RUN-1416	Add parameters for autocomplete (blocks BUIL-3903)
Feature	

RUN-1160	add support for local timezone for SQL adapter
RUN-1408	XMLComposer and SOAP adapter respects timezone setting for DateTime type
–	log warning if persistent state database connection is inactive
–	The session name of the persistent state database pool in transaction log is <i>PSTATE Database Pool</i> and of the SQL adapter database pool is <i>Database Pool</i> .
RUN-1377	Insert trace information from Java adapter
RUN-1335	Persistent state getObjectHandles result can be sorted by object creation time.
RUN-1336	Persistent state getObjectHandles result can be restricted to a maximum number of entries.
<b>Change</b>	
–	libcurl 7.27.0 on all platforms
–	UI: Refactor jQuery UI flag handling
RUN-1352	Renovate the MIME converter
–	Log option setting for SQL commands to bridgeserver.log and not transaction log (introduced 5.1.72.3)

## Runtime 5.1.73 (20.09.2012)

Bug	Description
RUN-1367	crash using SQL adapter with Oracle with LDAP configuration (Linux and Solaris fixed)
RUN-1390	missing exception if Java adapter fails
RUN-1413	UI: Multiple column sort in table widget does not work
RUN-1332	Use more than one getHandles in parallel with SQLServer
RUN-1375	UI: Nested UI JS classes do not work correctly
Feature	Description
RUN-1379	New string function match()
RUN-1353	Support for parsing XOP in general and MTOM/XOP in SOAP AddOn
RUN-1376	Inspection list is now available for asynchronous trace.

## Runtime 5.1.72 (08.08.2012)

### Incompatible Persistent State Database Schema

The persistent state database schema changed to version 12 and the database content will be converted once a service uses the new persistent state database. You cannot go back to an older Runtime version after you have started a service. All composite services which use a shared persistent state database must upgrade the Runtime at the same time.

Bug	Description
10181	wired elapsed time in transaction log
10200	persistent state: 2 and 10 seconds delay
10173	persistent state: handle empty guards correct

–	persistent state: remove Oracle reset errors from bridgeserver log
–	xmlToClass crashed if parsing empty blob
10162	cURL won't hang anymore if feeded with NULL as POST content
10168	Added "Error description" to URLConnector to be able to trace cURL errors.
10171	Included additional messages in bridgeserver.log on SSL verification error
10169	Do not allow to set cURL option that has no name
8658	split does not return last empty element (fixed on all platforms)  Example: set splitArray = split("A ", "\\ ")  After the split the splitArray has <b>two</b> elements A empty string ( <b>this is new</b> )
–	persistent state: crashing if sub machine inside composite SafeConnect crashed (introduced 5.1.71.4).
10133	Added missing "Debug" log level for user-defined log entries
10033	persistent state: handle database loss
10108	Normalizing trx ID field in trx Log
–	persistent state: duplicate processing of events (introduced 5.1.71)
9893	persistent state: cannot create new connection on SQL Server
–	persistent state: replay DB transaction after deadlock
10087	UI: Accessing HTML table elements of not yet set rows leads to JavaScript exceptions
10063	UI: Server side table pagination: new searches and sort actions must reset the pagination
9998	persistent state: optimize deleting events
9916	Stop escaping bridgeserver log but escape transaction log
10068	UI: Server Side Pagination does not work if we have more than one paginated tables
10060	UI: Server side pagination can loop if table service call is synchronous
10058	UI: autocomplete widget works only with a callback function named `autocomplete`
10050	In the Windows packages this fix was missing in the build 5.1.71.2.
10038	V4 service could not start because of changed name in tabfile
10032	Transaction log: EXIT elapsed time under ENTRY elapsed time
10027	Transaction log: component name is wrong if the component is called within an iterator
9998	persistent state: little optimization for SearchHandles
9951	Parameters in broadcasted signals are now correctly saved
–	persistent state: fix crash with dynamic timeout
10050	UI: allow more than one service call for pagination on the same tables
10049	UI: Sort information is lost for server side paging
10048	UI: transitions starting on a modal dialog onto itself reset its contents
–	Fixed small memory leak for SQLite persistent state database
9990	flat file adapter: overridden decimal point in locale not considered
9986	cURL method PUT is overwritten with POST
9988	URLAdapter: Missing HTTP headers when using HTTPS
9964	Wrong line breaks in email headers TO, CC and BCC

9703	Database type is now taken from repository for getHandle and Fetch
9976	persistent state: offline access does not work (introduced 5.1.62)
<b>Feature</b>	<b>Description</b>
10061	Introduce active DB-pooling disconnection
9969	First implementation of constructor functions
9767	One can delete async trace without deleting configuration
9846	Scheduler: Avoid parallel events
9951	Persistent State: broadcasting of signals
9977	persistent state: parallel database access (only for Oracle)
9826	Support SQLite pragma statements
9681	One can now mock an exception.
<b>Change</b>	<b>Description</b>
–	persistent state: rephrase error messages (losing DB connection)
–	make Runtime version string with dots like 5.1.72 or 5.1.72.2
–	persistent state: enable pool for all external database types

## Runtime 5.1.70.2 (19.06.2012)

Bug	Description
10038	V4 service could not start because of changed name in tabfile

## Runtime 5.1.69 (15.05.2012)

### Incompatible Persistent State Database Schema

The persistent state database schema changed to version 11 and the database content will be converted once a service uses the new persistent state database. You cannot go back to an older Runtime version after you have started a service. All composite services which use a shared persistent state database must upgrade the Runtime at the same time. Please update also the Console to version 5.1.30 or later, because in the Console you can manage the ownership of persistent state objects.

Bug	Description
9916	Escaping user strings before logging them.
9093	remove obsolete warning JAVAADLM-18 (introduced 5.1.64004)
9904	Runtime crashes in FlatFile composer if attribute format does not match the data
9932	Runtime crashes in JSON parser
9919	persistent state: linear scaling with number of objects and transitions
–	fix a crash if running "offline" persistent state command
8238	Fixed handling far-future dates (way after 19-01-2038).
<b>Feature</b>	<b>Description</b>
9797	Refactored sending / receiving event actions
–	fix a crash if running "offline" persistent state command
<b>Change</b>	<b>Description</b>
9919	persistent state schema version 11

## Runtime 5.1.68 (14.05.2012)

Bug	Description
–	fix memory leak if you get the exception PSADSM-20
–	fix small memory leak if calling read directory on file system adapter The memory leak occurs if you get the error: Failed opening directory. Missing Filename.

## Runtime 5.1.67 (10.05.2012)

Bug	Description
9929	Fix 9929 was missing in the Windows package.

## Runtime 5.1.66 (08.05.2012)

Bug	Description
9929	UI Auth: No SOAP headers after successful authentication Note: this is the Runtime part of the compiler bug fix 9930

## Runtime 5.1.65 (04.05.2012)

Bug	Description
9903	persistent state: improve performance: PS commit
9881	UI: Integer validation accepts spaces around the number
9883	Linux-64 package: newer version of libs needed
9560	Error handler is now executed on transition guard exception.
9820	Escaping <TransactionID> and exception elements in dump file.
9807	Proper escaping when writing <bridge:TransactionID> element.
9745	Standard date formats (i.e. xsd:Date) are now correctly converted.
9834	Join() now handles empty arrays correctly
9823	Ignoring non-existent MemoryAddOn repository done right (introduced 5.1.63002)
9476	Suppress internal persistent state error
9803	Seconds fraction handled inconsistently
9705	fixed timezone conversion when printing a datetime
Feature	Description
9187	Select from <Array> enhanced with 'NOT =' and 'NOT LIKE'
9093	Added configuration option to set number of parallel JVM operations
7528	Select groups or distinct from <Array> where <Condition>
9734	Select first or last from <Array> where <Condition>
9752	Added status code and HTTP headers to URLAdapter
9225	GET and POST parameter arrays added to HTTP frontend
8913	Timezone for DB

## Runtime 5.1.64 (26.03.2012)

Bug	Description
9786	POP3 adapter does not retrieve some messages
9781	Persistent state using SQLite does not scale
9769	Persistent state: crash reading corrupt signal data
9710	Internal: Guard functions are not tagged
9761	UI AJAX Connection Error throws 2 messages
9695	Empty credentials forwarded to SMTP adapter
Feature	Description
8859	Added callstack to error class
7741	Storing information in a request session
9743	SOAP adapter option: E2E_FORBID_REUSE
Change	Description
–	Archive HP-UX related files and code
–	Removed *.lib files from Windows package

## Release Notes of the xUML Runtime up to Version 5.1.63

See [Release Notes E2E Runtime up to 5.1.63.txt](#) for the release notes of the xUML Runtime up to version 5.1.63.