



LANSA Composer 5.0

LANSA Composer 5.0 now available with lots of new features!

LANSA Composer version 5.0 introduces many new features and enhancements. The highlights are described in this newsletter.

1. Licensing

IMPORTANT NOTE

Due to changes in the licensing implementation, all LANSA Composer customers upgrading from LANSA Composer version 4.0 must request and obtain new LANSA Composer server licenses before upgrading to LANSA Composer version 5.0. Prior to upgrading to Version 5.0, you should send your CPU details to LANSA Licensing for new Version 5.0 licenses.

2. Installation

LANSA Composer Client

The LANSA Composer Windows client installer now offers the option of installing the LANSA Web Administrator program. (LANSA Web Administrator can be used, if necessary, to change the LANSA for the Web configuration on the LANSA Composer server.)

Altova MapForce version 2014 release 2 (2014R2) is provided on the media. It is strongly recommended that MapForce is upgraded to this level on all LANSA Composer clients.

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LANSA Composer Server on IBM i

The LANSa Composer installation on IBM i servers now supports installation into independent auxiliary storage pools (IASP), if required.

LANSA Composer Server on Windows

The Windows server installation of LANSa Composer has been completely revised. It is now uses "standard" Windows installer/MSI technology, which will make future patches and upgrades simpler and more flexible. It also appears as a separate item in the Control Panel Programs and Features and can be uninstalled in the usual way.

Only a single copy of the LANSa Composer server may be installed on a Windows server.

LANSA Composer's database tables are now installed using a new and constant database schema/collection/owner (LC_DTA), meaning that in future versions, the post-installation task to "cleanup" the previous collection will no longer be necessary (it is necessary for this version, however).

More of the post-installation tasks are now automated - in particular the installation of LANSa Composer's data directory and files. On the Windows server, the first client to connect will no longer need to complete the Server Initialization wizard.

LANSA Runtime Version Information

LANSA Composer version 5.0 is built with LANSa version 13SP1 at EPC level 131100 and requires a run-time environment at least at that level. In addition it requires LANSa Integrator at EPC level 131300. This is of concern only to existing users who have installed LANSa Composer in an existing LANSa system. The upgrade of standard LANSa Composer installations (in their own LANSa run-time system) will upgrade all the necessary components.

3. New SQL Database Activities

This version of LANSA Composer introduces a new suite of twelve activities for performing SQL operations on a database identified by a LANSA Composer database configuration. The databases can be on any network addressable server. So, for example, LANSA Composer on an IBM i server could address an MS SQL Server database on a Windows server, or vice-versa..

Typically in LANSA Composer, most database activity is accomplished through the use of Transformation Maps. However, these new activities provide another option for performing limited database query and update operations on an SQL database. In addition, they provide a means of invoking SQL stored procedures in the target database.

The SQL database activities are not intended for high-throughput, high-volume database operations. Rather they provide a simple means to complete a business process integration solution that may not otherwise have been possible, with some simple, low-volume database access and/or maintenance.

The new SQL database activities comprise:

- Activities to establish or disconnect an SQL database connection:

SQL_CONNECT	Connect to database using SQL
SQL_DISCONNECT	Disconnect from database using SQL

- Activities to query the database:

SQL_QUERY	Query database using SQL
SQL_QUERYTOCSV	Query database using SQL to output CSV file

- Activities to perform insert, update and delete operations in the database:

SQL_UPDATE	Update database using SQL
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- Activities to execute an SQL stored procedure in the database:

SQL_CALL	Execute an SQL stored procedure
SQL_CALLQRYCSV	Query database using an SQL stored procedure to CSV
SQL_CALLQUERY	Query database using an SQL stored procedure

- Activities to implement transaction control relating to any database insert, update or delete operations you have performed:

SQL_COMMIT	Commit a database transaction using SQL
SQL_ROLLBACK	Rollback a database transaction using SQL

- Activities to set parameter values for an SQL operation:

SQL_PARAMS	Set parameter values for SQL operation
SQL_PARAMSCSV	Set parameter values for SQL operation from CSV

4. Other New and Enhanced Activities

In addition to the new SQL Database Activities, this version of LANSA Composer is supplied with a range of other new and revised Activities that deliver new and powerful capabilities.

New Activities

The following new Activities are added in this version of LANSA Composer:

- The new **BASE64_ENCODE** and **BASE64_DECODE** activities will base64 encode or decode the contents of a specified file and write the encoded or decoded content to another file. Base64 encoding is commonly used when there is a need to encode binary data that needs to be stored and transferred over media or transports that are designed to deal with textual data. This is to ensure that the data remains intact without modification during transport. Base64 encoding is commonly used in a number of applications including email via MIME, and storing complex data in XML.
- The new **COUNTLIST** activity counts the entries in a variable list used in a Processing Sequence. Previously it would have been necessary to iterate the list entries with a LOOP directive in order to count the entries.
- The new **DTAQ_CLEAR**, **DTAQ_RECEIVE** and **DTAQ_SEND** activities provide support for sending and receiving data to and from IBM i data queues and to emulated data queues on Windows servers.
- The new **FOR_EACH_OBJECT** activity iterates for each object in an IBM i server library that matches a specified object name and/or object type. The activity is only supported on IBM i servers.
- The new **HASH_FILE** activity generates a hash value of the contents of the specified file according to a known algorithm. The hash value is a fixed-length (according to the chosen algorithm), non-reversible representation of the contents of the file. Such hash values have many uses in information security, including as a means of detecting (accidental or intentional) changes to or corruption of the source data.
- The new **JSM_RECLAIM** activity reclaims LANSA Integrator JSM resources by initiating garbage collection in the JSM's Java Virtual Machine instance. In some particular instances, a delay in garbage collection can lead to functional issues in subsequent processing when certain resources, such as files, might remain locked awaiting garbage collection of Java objects that reference them. The JSM_RECLAIM activity may help to avoid issues of this nature.
- The new **QUERY_CCSID** activity returns the IBM i CCSID for a specified file. The activity is only supported on IBM i servers.
- The new **WATCH_DTAQ**, **WATCH_MSGQ** and **WATCH_DIRECTORY** iterator activities provide a means of iteratively watching a data queue, message queue or a file system directory for new items (and/or changed or deleted items in the case of WATCH_DIRECTORY) for further processing. The WATCH_MSGQ activity is only supported on IBM i servers.

- The new **WAIT_FILESREADY** activity is intended for use in processing sequences that identify and process newly-discovered files. For example, a processing sequence that uses the new **WATCH_DIRECTORY** activity may need to use this activity. It provides file cache services designed to allow LANSa Composer solutions to control the processing of newly-discovered files to avoid contention issues with applications that may, for example, still be writing to a file when it is "discovered" by the LANSa Composer solution.
- The new **XML_QUERY** activity permits a LANSa Composer solution to selectively interrogate values contained in an XML document using XML Path Language (XPath) expressions. The activity is intended for selective interrogation of a limited number of particular values from the XML document, perhaps to determine how to further process the XML document as a whole.
- The new **XML_VALIDATE** activity validates an XML document file. At the minimum, the activity will verify that the XML document is well-formed. If the XML document contains or references a DTD or an XML schema and the DTD or schema can be accessed, then the document content will be validated against the DTD or schema.

Revised Activities

Several previously supplied Activities have been revised to add functionality and/or to support other new and revised functionality in this version of LANSa Composer:

- The **COPY_FILE**, **MOVE_FILE**, **RENAME_FILE** and **DELETE_FILE** activities have been revised to provide more diagnostic information in the event of failure on IBM i servers.
- The **COPY_FILE** activity provides a new AUT parameter that specifies the method used to assign authority information to copied objects on IBM i servers.
- The **DIRECTORY_LIST** activity provides new CONTENT and MAXDEPTH parameters that allow it to list either sub-directories or files contained in the specified directory, and, optionally, to include the contents of child or descendant directories.
- The FTP configurations and the supplied FTP activities, such as **FTP_INBOUND** have been enhanced to provide support both for SSH compression and for SFTP public key authentication.
- The SMTP and POP3 configurations and the supplied email activities such as **MAIL_SEND** and **MAIL_RECEIVE** have been enhanced to provide support for explicit SSL/TLS.
- A new BACKIMAGEPATH and related parameters for the **SPLF_TO_PDF** activity permits a background image to be specified for inclusion in the generated PDF file. The SPLF_TO_PDF activity is only supported on IBM i servers.

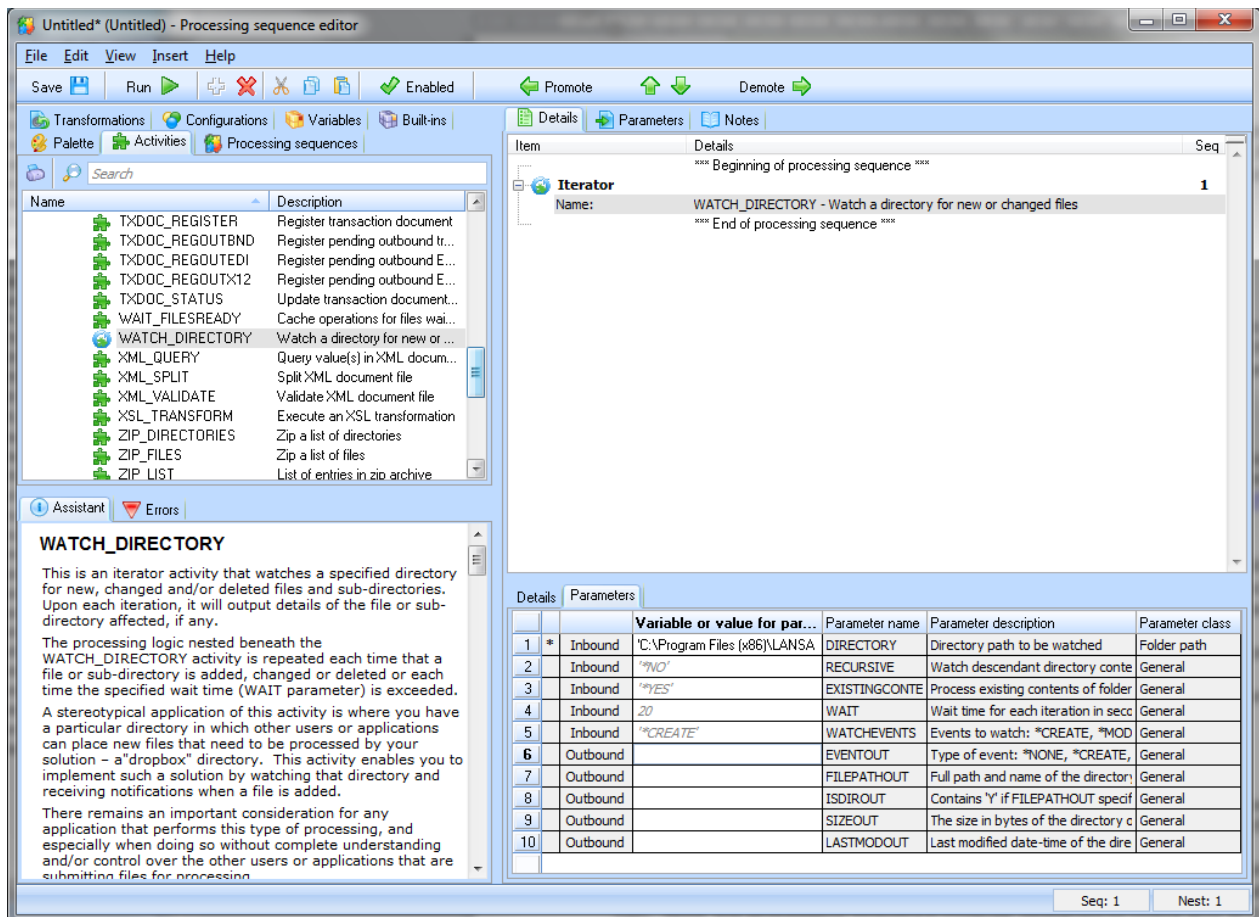
- A new DOCCCSID parameter for the **SPLF_TO_TEXT** activity permits the solution to specify the IBM i CCSID with which the output text document is created. The SPLF_TO_TEXT activity is only supported on IBM i servers.
- The **SYSTEM_COMMAND** activity has been revised to provide more diagnostic information including captured joblog messages in the event the command execution is unsuccessful on IBM i servers.

5. Extended Duration Processing Sequences

A number of new features and enhancements are designed to further facilitate creation and management of extended duration Processing Sequences – for example, Processing Sequences that are intended to run indefinitely, perhaps monitoring a file system directory, data queue or message queue for new items to process.

These changes include:

- New activities mentioned previously: **WATCH_DTAQ**, **WATCH_MSGQ**, **WATCH_DIRECTORY** and **WAIT_FILESREADY**.

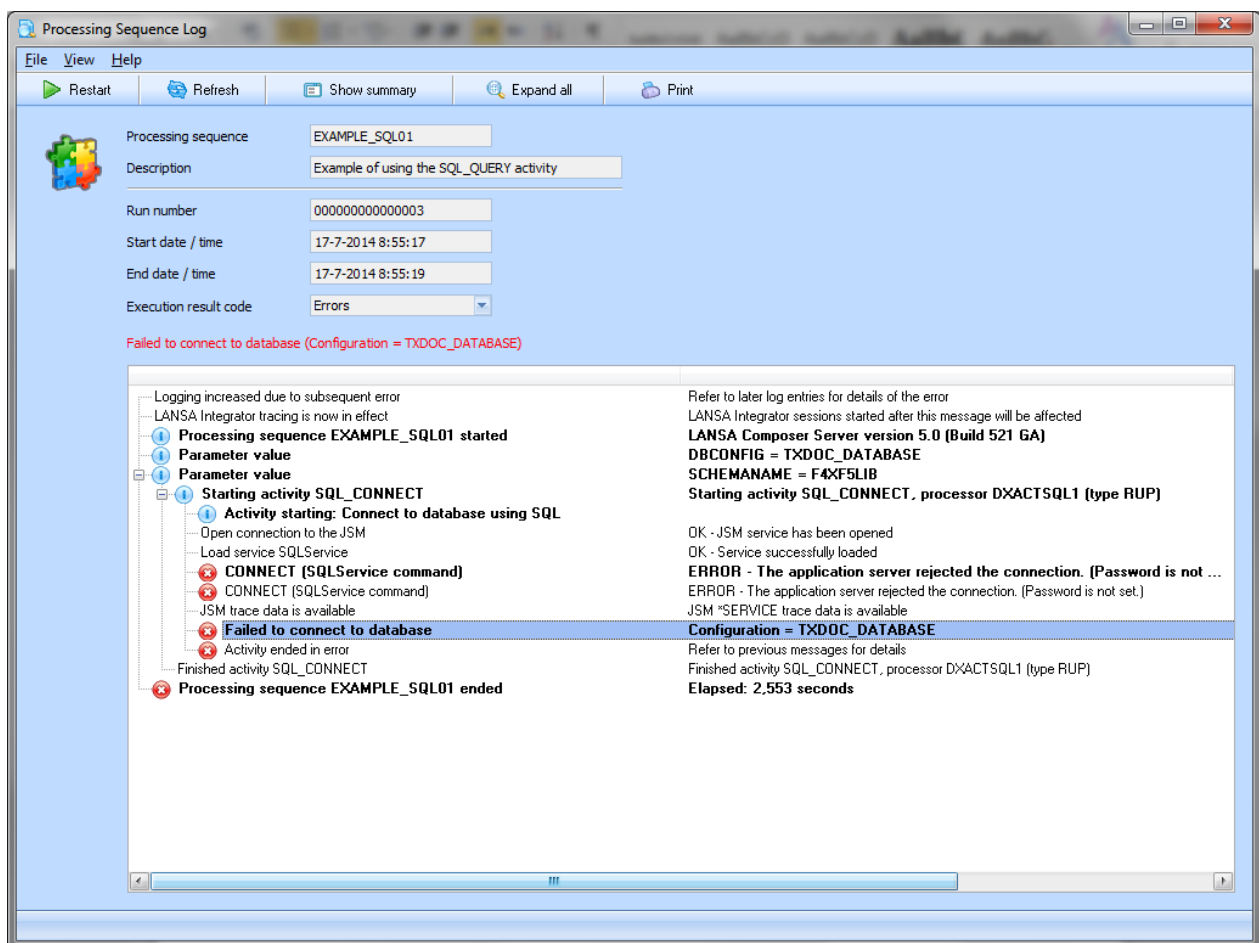


- A new example Processing Sequence, EXAMPLE_WATCH01, provides an example of a process using the new WATCH_DIRECTORY and WAIT_FILESREADY activities. It demonstrates some suggested design techniques for extended duration Processing Sequences.
- New documentation in the LANSACOM Composer Guide provides tips and suggestions for designing extended duration Processing Sequences in LANSACOM Composer. It can be found under the heading *Considerations for Extended Duration Processing Sequences*.

- Large processing sequence logs will usually load faster and more reliably. LANSa Composer reduces the initial loaded log size by "collapsing" detail associated with COMPLETED iterations for LOOP, WHILE/UNTIL directives and iterator activities, the premise being:
 - that a long-running process will almost invariable involve iteration in some form, and;
 - that the users interest when viewing the log will most often be on the latest or last iterations

Collapsed items will still be capable of being expanded, on demand.

- Associated with the previous item, the *Processing Sequence Log* window has been enhanced to have a better organized, consistent and simpler user interface.

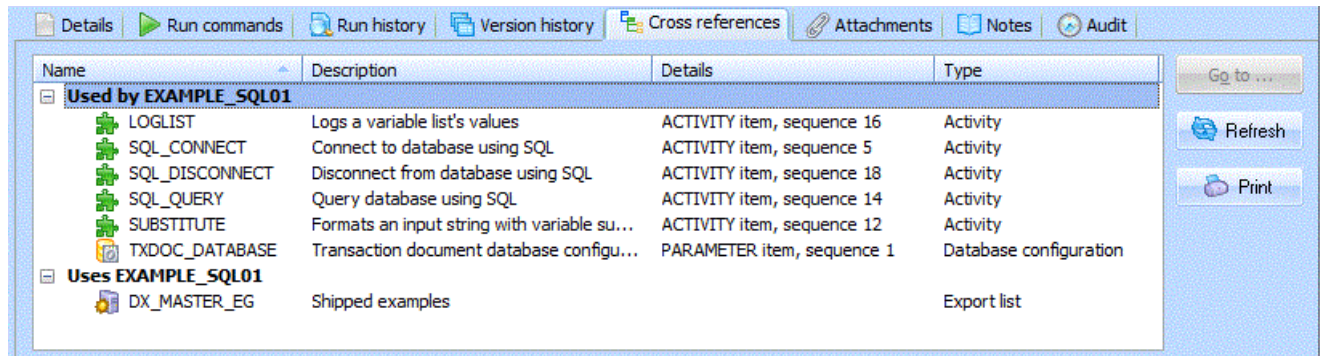


- The *Processing Sequence Log* window more clearly identifies a processing sequence run that is active and now allows "controlled end" to be initiated for the run. Note the processing sequence must be designed to check and act on the value of the new *SHUTDOWN built-in variable for such requests to be effective.
- When *Print* is selected in the *Processing Sequence Log* window, LANSa Composer will print the log as displayed – that is with detail log messages shown or not and with items collapsed or expanded as they presently are in the Processing Sequence Log window.

6. Cross References

A new Cross references command tab provides comprehensive cross reference information for most definition types in LANSA Composer, including:

- Activities
- Transformation Maps
- Processing sequences
- All types of transport and database Configurations



Name	Description	Details	Type
Used by EXAMPLE_SQL01			
LOGLIST	Logs a variable list's values	ACTIVITY item, sequence 16	Activity
SQL_CONNECT	Connect to database using SQL	ACTIVITY item, sequence 5	Activity
SQL_DISCONNECT	Disconnect from database using SQL	ACTIVITY item, sequence 18	Activity
SQL_QUERY	Query database using SQL	ACTIVITY item, sequence 14	Activity
SUBSTITUTE	Formats an input string with variable su...	ACTIVITY item, sequence 12	Activity
TXDOC_DATABASE	Transaction document database configu...	PARAMETER item, sequence 1	Database configuration
Uses EXAMPLE_SQL01			
DX_MASTER_EG	Shipped examples		Export list

Using the cross reference information provided by LANSA Composer, you can quickly identify:

- Other definitions that the subject definition uses or refers to. For example, for a Processing Sequence, this would include Activities, Transformation Maps and configurations that are used in the Processing Sequence.
- Other definitions that use or refer to the subject definition. For example, for an FTP configuration, this would include Trading Partners and Processing Sequences that use the FTP configuration.

The cross reference information includes the much-requested references to configurations, providing the references are to a specific, fixed configuration. (References to configurations and other definitions using variables or built-in variables are resolved at run-time and cannot be cross-referenced.)

This new support provides a new level of impact analysis capability while maintaining your business process integration (BPI) solutions. In addition, it facilitates deployment of those solutions, for example, from a design environment to production.

(The Cross references tab applies to most definition types and it replaces the Where Used tab that was previously available for Activities and Transformation maps only.)

7. Deployment

This version of LANSA Composer provides persistent and more detailed and informative logging for export and import tasks.

The logs for each export and import task are retained in the LANSA Composer database and can be retrieved and viewed at any time through the LANSA Composer client software by clicking the History tab.

Run number	Start date/time	End date / time	Status
0000000000000038	2013-08-13 4:22:33 PM	2013-08-13 4:22:39 PM	OK
0000000000000037	2013-08-13 1:04:22 PM	2013-08-13 1:04:22 PM	OK
0000000000000036	2013-08-13 1:01:01 PM	2013-08-13 1:01:02 PM	OK
0000000000000035	2013-08-13 12:57:15 PM	2013-08-13 12:57:17 PM	OK
0000000000000034	2013-08-06 9:34:21 AM	2013-08-06 9:34:27 AM	OK
0000000000000033	2013-07-03 4:12:53 PM	2013-07-03 4:12:54 PM	OK
0000000000000032	2013-07-02 8:06:14 AM	2013-07-02 8:06:17 AM	OK

From the History tab, you can also print an Export Manifest that lists all exported items along with their last-changed dates, times and users.

Export list: DX_MASTER_EG
 Description: Shipped examples
 Run number: 0000000000000075
 Start date / time: 2013-08-22 12:35:42
 End date / time: 2013-08-22 12:36:10
 Execution result code: OK

Name	Description	Last changed
Database configurations		
EXAMPLEDB_MSSQL	Example SQL Server database configuration	2012-09-17 20:41:01 by user QOTHPDOWN
EXAMPLEDB_ACCES	Example Microsoft Access database configuration	2012-09-17 20:43:55 by user QOTHPDOWN
EXAMPLEDB_ORACL	Example Oracle database configuration	2012-09-17 20:41:01 by user QOTHPDOWN
EXAMPLEDB_ODBC	Example database config using jdbc:odbc driver	2012-09-17 20:41:01 by user QOTHPDOWN
EXAMPLEDB_400	Example IBM i database configuration	2012-09-17 20:41:01 by user QOTHPDOWN
LANSA system configurations		
EXAMPLE_LANSA	Example LANSA system configuration	2012-09-17 20:41:01 by user QOTHPDOWN
FTP configurations		
EXAMPLE_FTPIN	Example FTP inbound configuration	2012-09-17 20:41:01 by user QOTHPDOWN
EXAMPLE_FTPOUT	Example FTP outbound configuration	2012-09-17 20:41:02 by user QOTHPDOWN
HTTP configurations		
EXAMPLE_HTTPIN	Example HTTP Inbound configuration	2012-09-17 20:41:02 by user QOTHPDOWN
EXAMPLE_HTTPOUT	Example HTTP Outbound configuration	2012-09-17 20:41:02 by user QOTHPDOWN
Messaging configurations		
EXAMPLE_MSG	Example messaging configuration	2012-09-17 20:41:02 by user QOTHPDOWN

In addition, a number of other new and revised features enhance the reliability and usability of the existing LANSa Composer export and import capability.

They include:

- Export and import of System Properties is now supported, including the option to preserve existing system property values on the importing system, if applicable
- Import provides the option to preserve the existing security credentials (user names and passwords) when importing configurations that already exist on the importing system.
- Import now updates the last-changed dates, times and user information for the imported definitions on the importing system to match the values with which the definitions were exported. This enables the information to be compared with a manifest or with the definitions on a source LANSa Composer system.

8. Audit Trail

LANSA Composer now maintains an audit trail of significant, usually modifying events to most definitions, including Activities, Transformation Maps, Processing Sequences and all types of configurations. This enables you to trace when changes were made to definitions and by whom.

Events that are recorded include:

- Create, change, delete
- Opened for editing
- Saved (Processing Sequences)
- Prepared (Transformation Maps)
- Archived version restored, deleted or purged (Processing sequences and Transformation Maps)
- Exported, Imported

Information that is recorded for each event includes:

- The identity of item affected
- Timestamp
- Related log, where applicable (export, import)
- Job name, user and number
- Computer name

Note that the audit records do NOT record what actually changed in the item definition, only that the event occurred.

The existing **Audit** command tab for each of the definition types has been substantially revised to display the audit trail events for the selected item (instead of just the last changed date, time and user information that was shown before):

Audit event	Timestamp	Log	User name	Computer name
Exported	2013-08-22 12:35:57 ...	0000000000000075	QOTHPRDOWN	LANSAPC007
Opened for editing	2013-08-22 8:55:03 AM		QOTHPRDOWN	LANSAPC007
Exported	2013-08-20 2:14:10 PM	0000000000000074	QOTHPRDOWN	LANSAPC007
Exported	2013-08-13 4:13:35 PM	0000000000000072	QOTHPRDOWN	LANSAPC007
Opened for editing	2013-07-08 11:09:46 ...		QOTHPRDOWN	LANSAPC007
Opened for editing	2013-07-08 11:08:39 ...		QOTHPRDOWN	LANSAPC007
Opened for editing	2013-07-08 11:07:09 ...		QOTHPRDOWN	LANSAPC007
Exported	2013-07-08 10:07:26 ...	0000000000000066	QOTHPRDOWN	LANSAPC007
Saved after editing	2013-07-08 10:01:33 ...		QOTHPRDOWN	LANSAPC007
Opened for editing	2013-07-08 10:01:06 ...		QOTHPRDOWN	LANSAPC007
Saved after editing	2013-07-08 9:08:52 AM		QOTHPRDOWN	LANSAPC007
Opened for editing	2013-07-08 9:07:20 AM		QOTHPRDOWN	LANSAPC007
Saved after editing	2013-07-05 3:40:52 PM		QOTHPRDOWN	LANSAPC007
Opened for editing	2013-07-05 3:38:35 PM		QOTHPRDOWN	LANSAPC007
Saved after editing	2013-07-05 3:35:09 PM		QOTHPRDOWN	LANSAPC007
Saved after editing	2013-07-05 3:33:53 PM		QOTHPRDOWN	LANSAPC007
Opened for editing	2013-07-05 3:13:00 PM		QOTHPRDOWN	LANSAPC007
Saved after editing	2013-07-05 3:12:36 PM		QOTHPRDOWN	LANSAPC007
Opened for editing	2013-07-05 2:53:15 PM		QOTHPRDOWN	LANSAPC007
Changed (Details)	2013-07-05 2:52:32 PM		QOTHPRDOWN	LANSAPC007
Created as copy of EXAMP...	2013-07-05 2:52:17 PM		QOTHPRDOWN	LANSAPC007

In addition, there is also a new Audit trail option appearing in the Navigator, under Administration and Housekeeping, that permits interrogation and viewing of the audit records across all definitions and types by various criteria:

Audit trail : Details

By definition type | By audit event | By date | By user | By computer

Audit event	Timestamp	Name	Description	Log	User name
Today					
Archived version res...	2013-08-22 1:16:00 PM	MY_SQL01	Example of using the SQL_...		QOTHPRDOWN
Archived version res...	2013-08-22 1:15:54 PM	MY_SQL01	Example of using the SQL_...		QOTHPRDOWN
Changed (Details)	2013-08-22 1:15:39 PM	MY_SQL01	Example of using the SQL_...		QOTHPRDOWN
Saved after editing	2013-08-22 1:15:25 PM	MY_SQL01	Example of using the SQL_...		QOTHPRDOWN
Opened for editing	2013-08-22 1:15:11 PM	MY_SQL01	Example of using the SQL_...		QOTHPRDOWN
Changed (Attachme...	2013-08-22 1:15:04 PM	MY_SQL01	Example of using the SQL_...		QOTHPRDOWN
Changed (Notes)	2013-08-22 1:14:29 PM	MY_SQL01	Example of using the SQL_...		QOTHPRDOWN
Saved after editing	2013-08-22 1:14:06 PM	MY_SQL01	Example of using the SQL_...		QOTHPRDOWN
Opened for editing	2013-08-22 1:13:51 PM	MY_SQL01	Example of using the SQL_...		QOTHPRDOWN
Created as copy of ...	2013-08-22 1:13:47 PM	MY_SQL01	Example of using the SQL_...		QOTHPRDOWN
Export using export l...	2013-08-22 12:36:10 PM	DX_MASTER_EG	Shipped examples	000000000000075	QOTHPRDOWN
Exported	2013-08-22 12:36:10 PM	EXAMPLE_TP	Example trading partner d...	000000000000075	QOTHPRDOWN
Exported	2013-08-22 12:36:09 PM	EXAMPLE_SMS	Example SMS configuration	000000000000075	QOTHPRDOWN

Refresh Details... Show Log...

9. Events

LANSA Composer's Event Maintenance now permits you to add multiple event notifications for a single event. For example, one event may now both send an email and send a message to an IBM i message queue.

Event maintenance : Details (EXAMPLE_EVENT01-Example user-defined event)

Details | Cross references | Attachments | Notes | Audit

Name: EXAMPLE_EVENT01

Description: Example user-defined event

Status: Active

Click an event notification to show its details below. Use the buttons to add, remove and arrange the notifications for this event.

- ☒ Send an email
- ☒ Send a message to an IBM i message queue
- ☒ Run a specified processing sequence
- ☒ Execute a specified function

Buttons: Save, Refresh, Test..., Add..., Remove, Move up, Move down

In addition, an event can now use any one or more of the following notification methods to provide the notification of the event:

- Send an email
- Send an SMS
- Send a message to an IBM i message queue (IBM i servers only)
- Run a specified processing sequence
- Execute a specified function

(Previously one and only one of email and SMS options could be chosen.)
You can specify more than one instance of each notification method if you wish.

Further enhancements to the event support include:

- You can now specify a list of email addresses for any of the TO, CC or BCC addresses for an email notification.
- A new Test button in the Event Maintenance window now permits you to quickly test the notifications for your event without having to contrive to run a failing processing sequence to do so.

10. Parameter Classes

This version of LANSA Composer implements support for parameter classes for activity, transformation map and processing sequence parameters.

Each parameter can have a class associated with it that can specify what type of information is specified by the parameter.

The available parameter classes include:

- File path
- Folder path
- Trading partner
- Transformation map
- Processing sequence
- Event handler
- Configurations of all types

If none of the above classes apply, then a default class of General is used.

For the most part, you need not be greatly concerned with the parameter classes, because:

- For supplied Activities, the parameter classes are shipped already set appropriately;
- For Transformation Maps, the parameter classes are inferred from the map definition during the Prepare step.

(However, you may wish to set parameter classes appropriately, where applicable, for your own Processing Sequences or for your own custom Activities.)

The important point to note is that this enhancement brings to LANSA Composer several important benefits:

- The use of parameter classes has facilitated more thorough and complete Cross References in LANSA Composer, most notably for configurations.
- The use of parameter classes provides in-place prompting for file and folder paths, configurations and other items, either when editing a Processing Sequence, or when you run an Activity or Processing Sequence through the LANSA Composer client software user-interface.

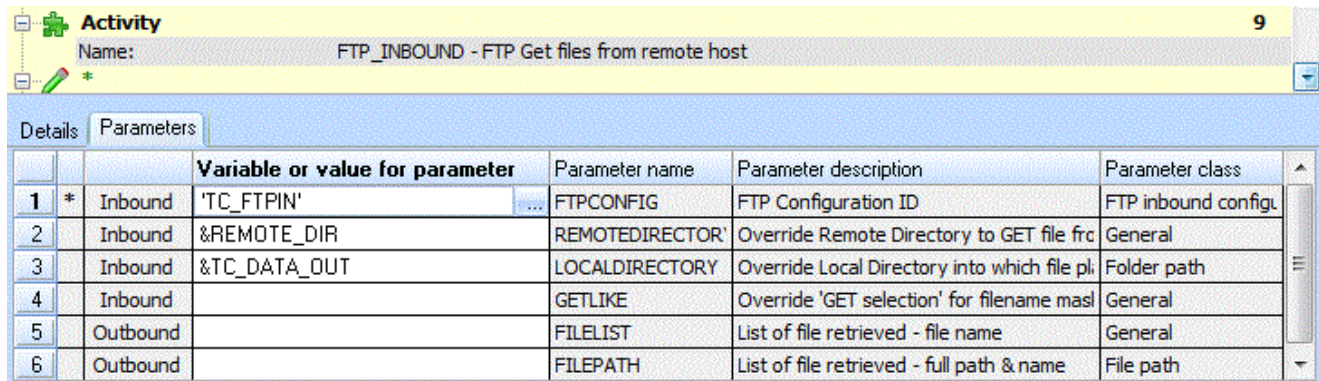
Conversely, you should also note:

- The parameter classes are (deliberately) not used for validation of parameter values. They do not restrict the values that can be entered for a parameter. (So you can still, for example, enter the name of an FTP configuration that you have yet to create.)
- The parameter classes do not impose any additional processing sequence run-time overhead.

To illustrate, the following partial screenshot from the Processing Sequence Editor shows the parameters for the FTP_INBOUND activity in the detailer.

You can see:

- The parameter class for each FTP_INBOUND activity parameter is shown in the column on the right.
- A button for in-place parameter value prompting is visible in the currently active parameter, FTPCONFIG. When clicked, the button will allow the user to choose from a list of existing FTP inbound configurations.



		Variable or value for parameter		Parameter name	Parameter description	Parameter class
1	*	Inbound	'TC_FTPIN' ...	FTPCONFIG	FTP Configuration ID	FTP inbound configu
2		Inbound	&REMOTE_DIR	REMOTEDIRECTOR	Override Remote Directory to GET file fro	General
3		Inbound	&TC_DATA_OUT	LOCALDIRECTORY	Override Local Directory into which file pl	Folder path
4		Inbound		GETLIKE	Override 'GET selection' for filename masl	General
5		Outbound		FILELIST	List of file retrieved - file name	General
6		Outbound		FILEPATH	List of file retrieved - full path & name	File path

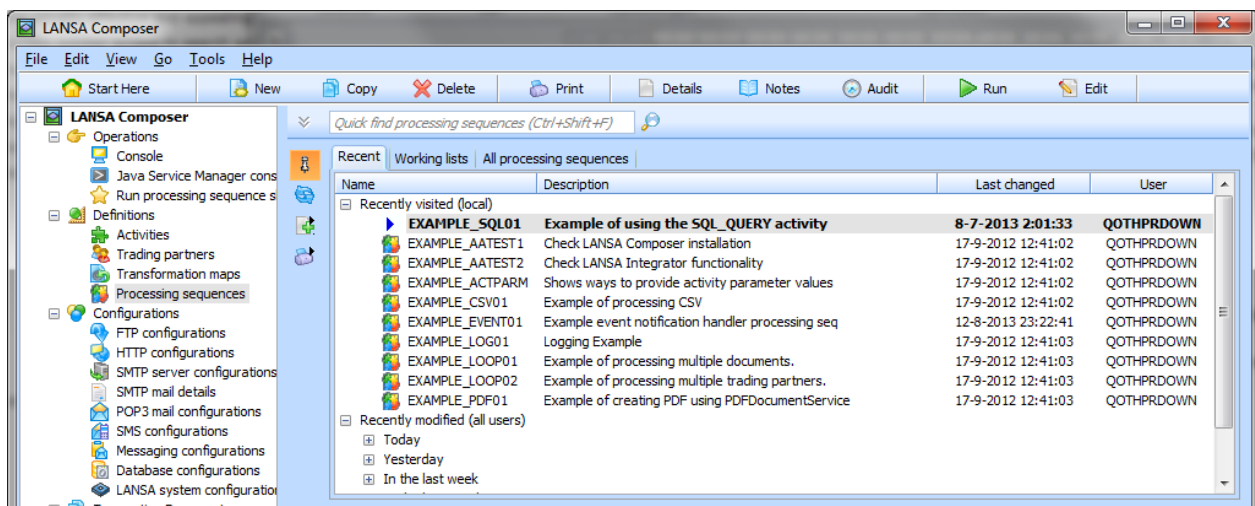
11. LANSACOMPOSER Client User-interface Enhancements

This version of LANSACOMPOSER offers easier, faster and more flexible location and selection of the definitions in LANSACOMPOSER that you wish to work with. At the same time, it can free up space in the LANSACOMPOSER window by allowing you to hide the instance lists when not in use.

To accomplish this, the Filters and Instance lists used in previous versions have been replaced with unified Instance lists that integrate the filter/find features within them.

This provides a more effective user-interface that is:

- More visually effective and appealing;
- Provides quicker access to search and locate items;
- Provides a greater range of means and search criteria to locate items;
- Integrates recently-visited, recently-modified and user-defined working lists;
- Implements much faster searches;
- Supports copy, delete and print on multiple selections;
- Capable of being "unpinned" and scrolled out of the way when not in use to provide more useable screen area for command handlers. In this unpinned state, the Instance list can slide back into view on demand, at the click of a button or with a single shortcut keystroke.



12. Transformation Maps

There are several enhancements to the Transformation Map support in this version of LANSa Composer:

- Parameter Classes are automatically inferred for a Transformation Map during the Prepare step.
- LANSa Composer creates better human-readable Transformation Map parameter descriptions during the Prepare step.
- LANSa Composer is fully compatible with the latest (at time of release) MapForce versions, especially for "catalogued" map information.
- Transformation Map Prepare provides better diagnostic information, including date/time in the Prepare log, logging the server JSM instance path, and access to the IBM i server joblog when run against LANSa Composer server running on IBM i.

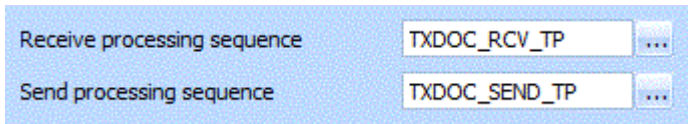
In addition, if you update to the latest version of the mapping tool (Altova MapForce version 2014 release 2), the following new capabilities will be available (relative to MapForce version 2012SP1):

- User-defined component names;
- Extended SQL-Where functionality: ORDER_BY;
- MapForce supports logical files of the IBM i database and shows them as views;
- Support for SELECT statements with parameters
- Timeout settings for web service function calls and database execution
- Support for XML wildcards (xs:any and xs:anyAttribute)
- Support for comments and processing instructions in output XML
- Support for CDATA generation in XML files
- User-defined end-of-line settings for output files (*)
- Greater control over the output of quote marks surrounding values in CSV files
- New function to calculate age based on a birthdate
- New functions for processing and generating sequences
- A new option for keeping useful connections after deleting a component
- Automatic highlighting of mandatory items in target components
- Improved mapping validation and editing help
- Support for Informix 11.7 databases and extended support for other databases

13. Transaction Document Support

LANSA Composer's supplied Transaction Document Processing Framework has been extended to better cover the inbound and outbound transport operations:

- For inbound transport, the supplied "model" processing sequences (*) have been extended to include a call to a new TXDOC_RCV processing sequence for receiving transaction document files. That processing sequence, in turn, is set up to delegate to a processing sequence (modelled as TXDOC_RCV_TP) that is specific to the Trading Partner.
- For outbound transport, the supplied "model" processing sequences (*) have been extended to include a call to a new TXDOC_SEND processing sequence for sending transaction document files. That processing sequence, in turn, is set up to delegate to a processing sequence (modelled as TXDOC_SEND_TP) that is specific to the Trading Partner.
- Trading partner support has been extended to permit the trading partner specific receive and send processing sequences to be specified individually for each trading partner and new trading partner built-in variables are provided for accessing these values.



The screenshot shows a configuration interface with two rows. The first row is labeled 'Receive processing sequence' and has a text box containing 'TXDOC_RCV_TP' followed by a three-dot menu button. The second row is labeled 'Send processing sequence' and has a text box containing 'TXDOC_SEND_TP' followed by a three-dot menu button.

Together, these changes make the Transaction Document Processing Framework, as supplied, a better fit for accommodating the varied transports associated with a range of trading partners, and should reduce the need to modify the framework solution for this purpose.

(*) The changes are to the supplied processing sequences. Existing implementations will most usually have copied the supplied processing sequences and modified them to suit the specific implementation. In this case, the existing implementation may need to be revised to take advantage of this new support.

Other changes related to transaction document support include:

- The LANSA Composer Document Manager provides a Resend button for a completed outbound transaction document envelope. When clicked, the completed transaction document file will be sent again to the trading partner by means of executing a Processing Sequence identified by a new system setting. By default, the supplied TXDOC_SEND processing sequence is used, which in turn delegates to the processing sequence specified for the Trading Partner, if any.
- New *txdoc.* built-in variables provide access to transaction document envelope attributes in a Processing Sequence.
- A new application program interface (API) to replicate the functionality of TXDOC_REGISTER and TXDOC_STATUS customer application code.

14. System Settings

Modifications to System Settings include:

- The Server network path system setting has been renamed to Home path.
- A new value introduced for Home path relative to server provides reliable path conversion where necessary between client-relative and server-relative forms.

Home path

Default value (for all clients):

Override value for this client installation:

Home path relative to server:

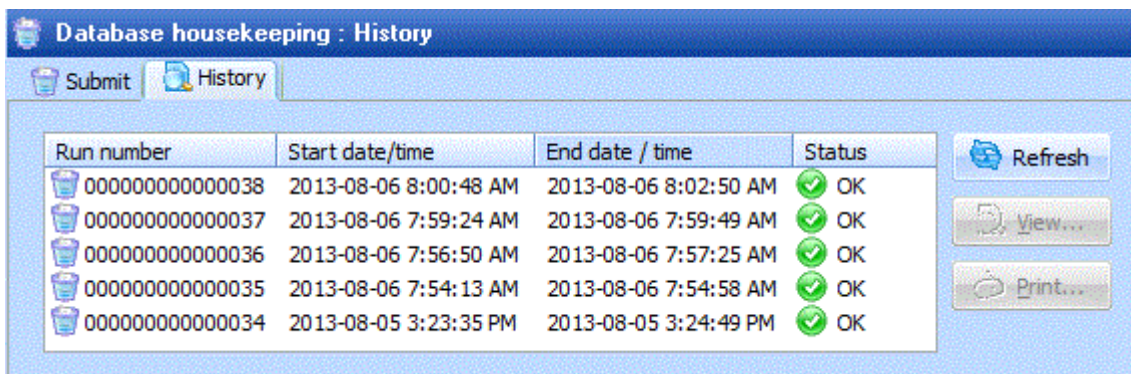
In addition, LANSa Composer now provides an option to print the current system settings. You may be asked to do this in the context of a support call, for example. System Settings now provides a new System information tab that provides information about the LANSa run-time environment in which LANSa Composer is running on your LANSa Composer server, including LANSa listener and JSM port numbers.

System information	
Listener port:	05592
Web instance port:	05593
LANSA Integrator (JSM) port:	05594
LANSA Integrator (JSM) admin port:	05595

15. Database Housekeeping

Changes to Database Housekeeping facilitate the integration of this task into your scheduled operations, extend the housekeeping task with new sub-tasks, and reduce the time taken for the typical housekeeping task to complete:

- A command line interface is now provided for invoking the database housekeeping task on Windows servers. (Equivalent functionality was already available for IBM i servers via the COMPOSER command.)
- A new Save button in the user interface permits the housekeeping options to be saved without having to submit the task. These two changes facilitate the integration of this task into your scheduled operations.
- The database housekeeping task now optionally includes purging database records associated with the new Audit Trail.
- The database housekeeping task now optionally includes clearing the JSM trace and temporary files. These are temporary files that may have been created by the LANSA Integrator JSM (Java Service Manager) in the course of normal operations.
- LANSA Composer now provides persistent and more detailed and informative logging for database housekeeping tasks. The logs for each database housekeeping task are retained in the LANSA Composer database and can be retrieved and viewed at any time through the LANSA Composer client software by clicking the History tab.



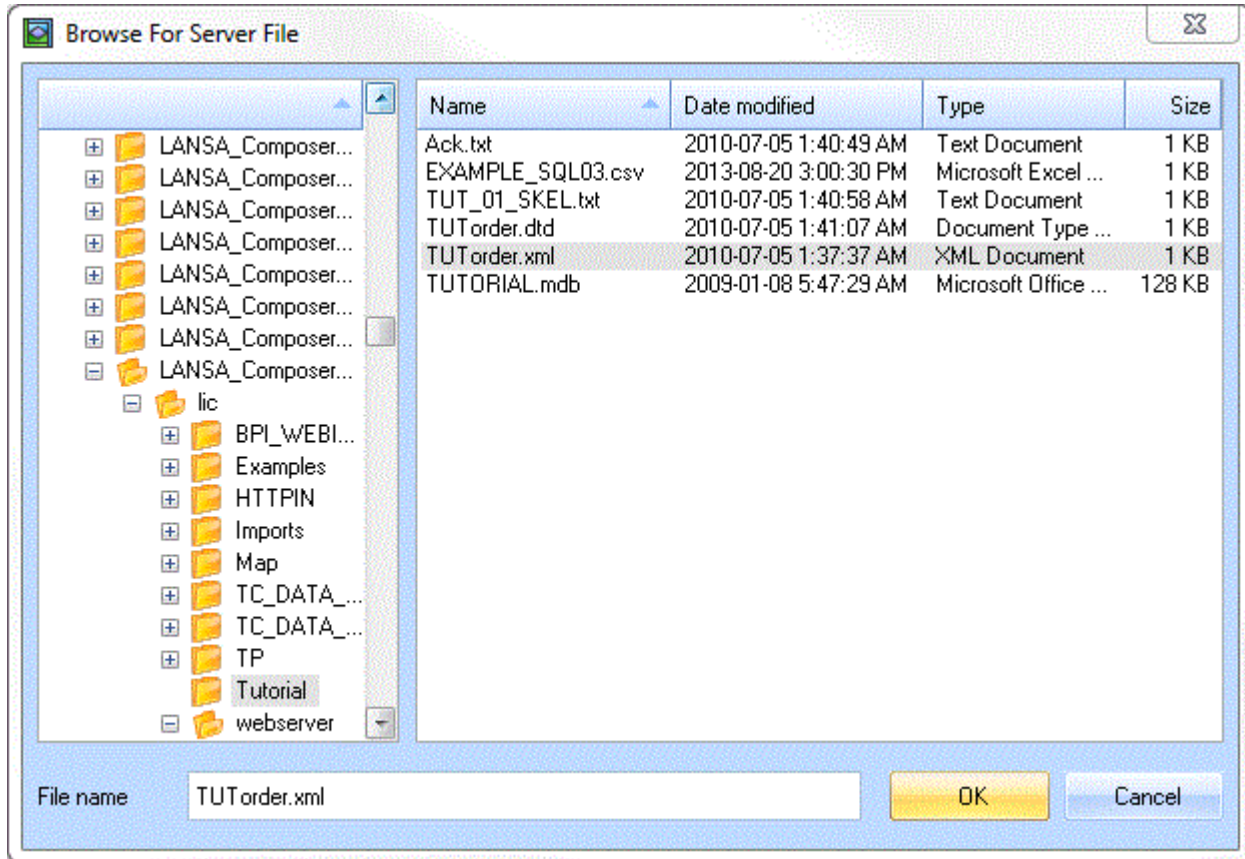
Run number	Start date/time	End date / time	Status
0000000000000038	2013-08-06 8:00:48 AM	2013-08-06 8:02:50 AM	OK
0000000000000037	2013-08-06 7:59:24 AM	2013-08-06 7:59:49 AM	OK
0000000000000036	2013-08-06 7:56:50 AM	2013-08-06 7:57:25 AM	OK
0000000000000035	2013-08-06 7:54:13 AM	2013-08-06 7:54:58 AM	OK
0000000000000034	2013-08-05 3:23:35 PM	2013-08-05 3:24:49 PM	OK

- The database reconcile and reorganize tasks have now been separated in the user interface such that each can be individually selected.
- The database reconcile task is unselected by default. In normal operations, this step should not be necessary and excluding it will significantly reduce the time to complete the database housekeeping job.

Database housekeeping : Submit	
<div>Submit</div> <div>History</div>	
Do you wish to purge the logs?	<input checked="" type="checkbox"/>
Last purged date and time	2013-08-06 8:00:48 AM
Number of days for which you wish to retain records	180
Do you want to keep entries with error status?	No
Do you wish to retain entries with warning status?	No
<hr/>	
Do you wish to purge the version history?	<input checked="" type="checkbox"/>
Last purged date and time	2013-08-06 8:00:48 AM
Number of days for which you wish to retain records	180
<hr/>	
Do you wish to purge the transaction document register?	<input checked="" type="checkbox"/>
Last purged date and time	2013-08-06 8:00:48 AM
Number of days for which you wish to retain records	180
<hr/>	
Do you wish to purge the audit records?	<input checked="" type="checkbox"/>
Last purged date and time	2013-08-06 8:00:49 AM
Number of days for which you wish to retain records	180
<hr/>	
Do you wish to clear the JSM trace and temporary files?	<input checked="" type="checkbox"/>
Last purged date and time	2013-08-06 8:02:48 AM
<hr/>	
Do you wish to reorganize the database tables?	<input checked="" type="checkbox"/>
Last reorganised date and time	2013-08-06 8:02:48 AM
<hr/>	
Do you wish to reconcile the database ?	<input type="checkbox"/>
Last reconciled date and time	2013-08-06 7:56:58 AM
NB: This can be a very time-consuming step that is not necessary in normal circumstances	

16. Browsers for Server Files and Folders

The LANSa Composer client application now allows for much easier and more reliable selection or specification of server-side file and folder selections. This is achieved by implementing new browser windows that permit the user to browse the server file system directly.



The new browsers are used in a number of places in LANSa Composer, including:

- In the Server Initialization wizard and in System Settings;
- In various configurations to select server-side folder and file locations;
- To provide browsing support in connection with new Activity, Transformation Map and Processing Sequence Parameter Classes support where the File path or Folder path parameter classes are used.

17. Other New and Enhanced Features

Amongst other revisions in this version of LANSA Composer are:

- The FTP configurations user interface has been reorganized for better clarity and simplicity.
- The FTP configurations and activities now support connection timeout and response timeout values, specified in milliseconds.
- HTTP Outbound configurations support a range of new values for the Content Type that applies to the file being sent by the HTTP_POST activity. The new values include the special value Automatic that specifies that the activity should determine an appropriate content type according to the file extension of the file being sent. Automatic is now the default value for new HTTP configurations.
- The HTTP_GET and HTTP_POST activities will now retrieve the response content file, if requested, even when an error status is returned by the remote HTTP server. This enables the solution to receive and examine the response content to determine the details of the error, if applicable.
- A new Test button in Database Configurations provides a means to test the database configuration using the currently entered database configuration values (not necessarily saved values) - in a similar fashion to that already provided for FTP and some other configuration types.
- The Processing Sequence Editor now supports drag-and-drop re-ordering of the processing sequence items.
- The Processing Sequence Editor previously had an option to show tree lines that more clearly show the relationship between processing sequence items. This option is now on by default, and the tree lines are also available in the Processing Sequence Log window and in printing support for both the Processing Sequence and the Processing Sequence Log.
- Improvements to processing sequence run-time performance have been achieved by eliminating, reducing or deferring some types of database operations and by other processing changes.
- Several groups of new built-in variables provide access to:
 - pending controlled end request (*SHUTDOWN)
 - transaction document envelope attributes
 - trading partner send and receive processing sequences
 - lists of trading partners by trading partner groups
 - timezone description and UTC offset values

- LANSa Composer now provides a web service (SOAP) interface for running Processing Sequences.
- When connected to an IBM i server, the LANSa Composer client now provides direct access to the IBM i joblog for the associated LANSa server job from the client user interface in several places, including from the Tools menu, from the Transformation Maps Prepare Log window and from the Processing Sequence Log display (when shown in connection with processing sequence runs initiated through the LANSa Composer client).
- On IBM i servers, the COMPOSER REQUEST(ABOUT) command will now list the LANSa listener, HTTP listener and JSM port numbers in use.