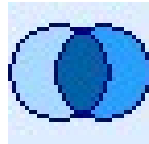
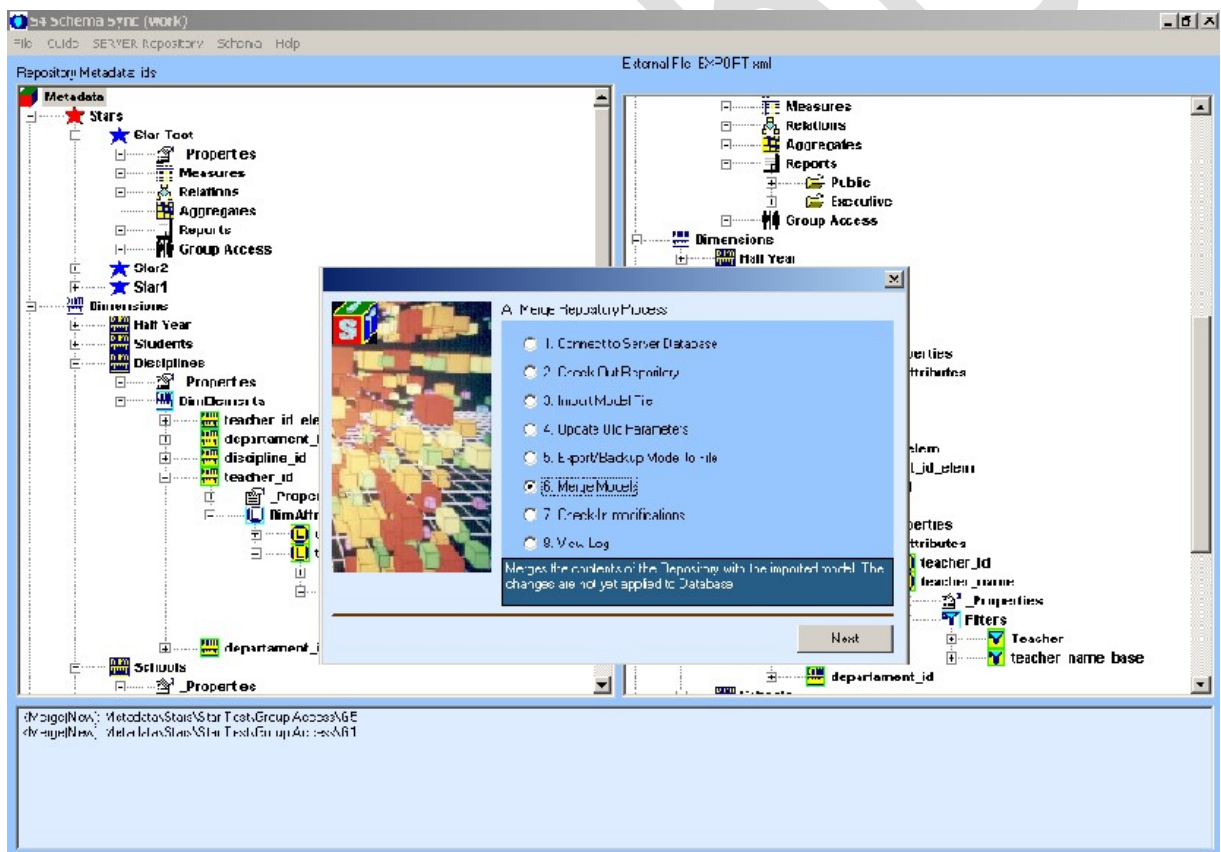


BIS Schema Merger



User Manual





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Introduction

The Schema Merger is a tool that allows an easier BIS-Metadata distribution. It implements an incremental approach in the metadata model distribution. When maintenance changes from development to production are applied, there's no need to load always a new model.

The Schema Merger tool does not replace the usage of the other S4 tools: BIS-Administrator; BIS-Designer in the tasks of creation and modification of Metadata objects.

The Schema Merger can be also used as a tool to:

- 1) Backup the Public BIS-Metadata to a XML file.
- 2) Load the initial BIS-Metadata.
- 3) Update and Upgrade an existent BIS-Metadata.

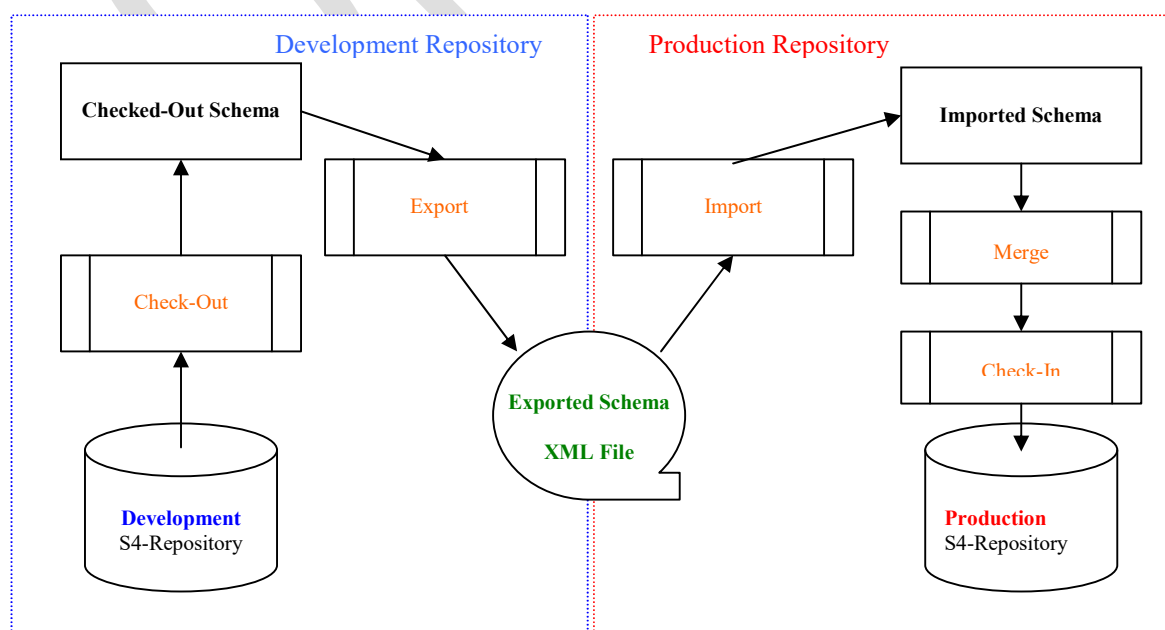
To use the Schema Merger, the other BIS tools and repository should be upgraded to version 2.50.

The main concepts used in the Manual are:

- 1) **Development S4-Repository** – The Repository where the BIS-Metadata is created and maintained, mainly with BIS-Designer. The repository is a set of tables, whose names begin with "s4_" and "cs_".
- 2) **Production S4-Repository** – The Repository accessed by the users
- 3) **Checked-Out Schema** – The tree visual model corresponding to the S4-Repository, either Development or Production.
- 4) **Exported Schema** -- A XML representation of a Schema.
- 5) **Imported Schema** -- The tree visual model corresponding to an imported XML Schema file.
- 6) **Merged Schema** -- The tree visual model corresponding to the merge of the Production and Development Repositories.

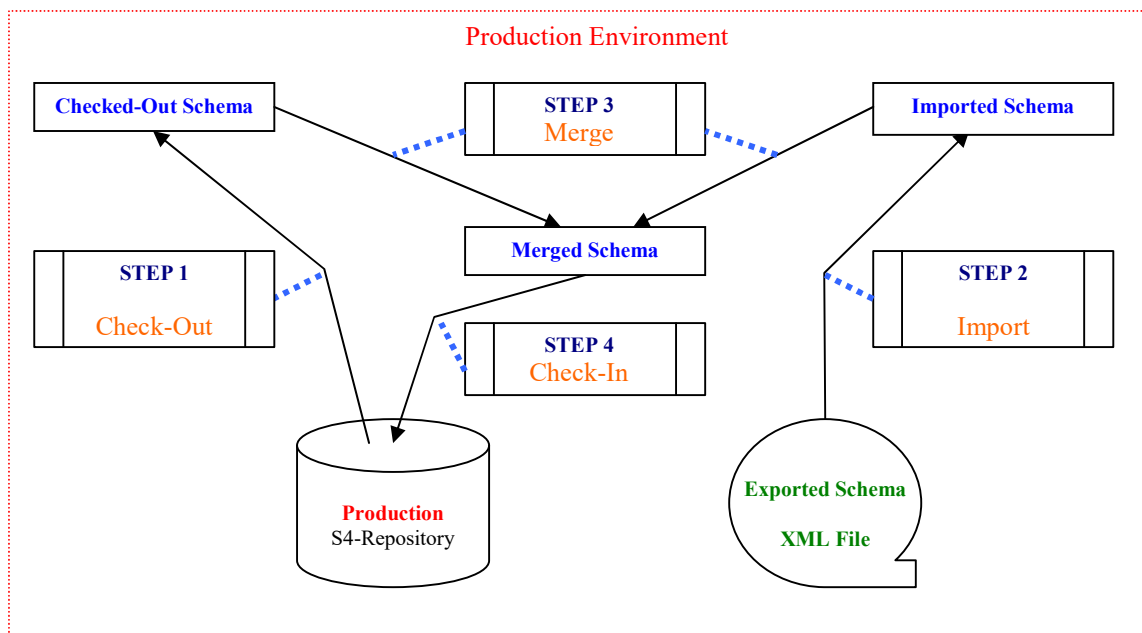
Note: Since users and personal objects are private for each client, they are not checked-out and then are not exported/imported. This applies to the following objects: Users and their Authorization Schema; Personal Reports, Private Parameters and Settings.

The Schema Merger workflow is the following:





The Flow chart of the Merge Process



The merge process is made by 4 fundamental steps:

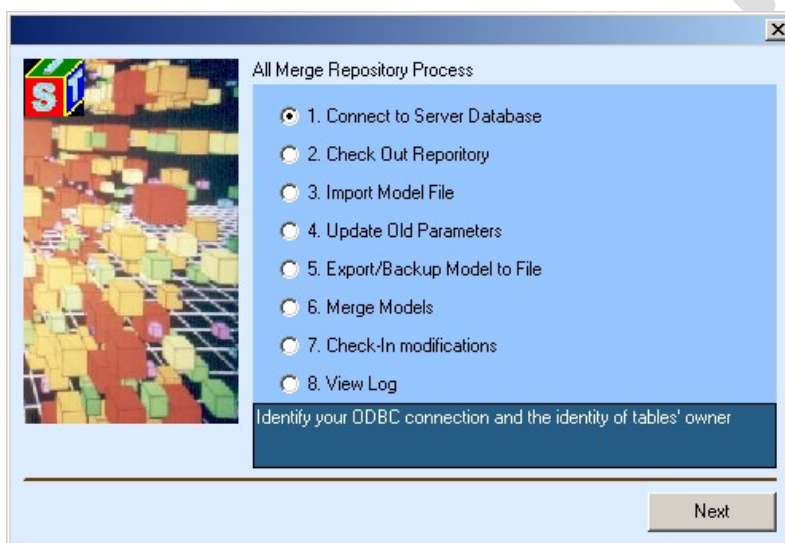
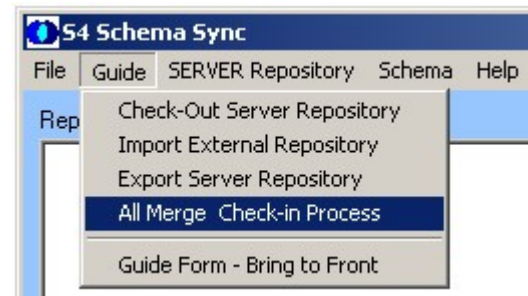
- 1) **Checkout** → The S4-Repository is extracted and logically represented as a logical Tree in the left pane of the application window. This step locks the repository.
- 2) **Import** → The import step loads an external XML file, containing an exported representation of a new Schema. This is the tree in the right pane of the application window.
- 3) **Merge** → It is the step that applies to the Checked-Out Schema the changes contained in the Imported Schema. The result is a new schema, called Merged Schema, which is represented in the left pane of the application window.
- 4) **Check-In** → This is the final step, that applies the required changes to the Production Repository and unlocks the repository.



Guided Tasks

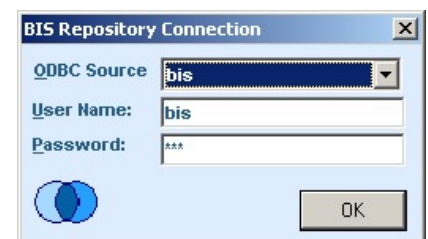
In order to help the user to accomplish some major tasks there are available several guided steps. Use the [Guide Menu](#) to access the guided options.

As an example, the most complete guided option, drives you from the DB repository connection, through the merge step up to the final check-in of the repository modifications. This is done by the [All Merge Check-in Process](#) option.

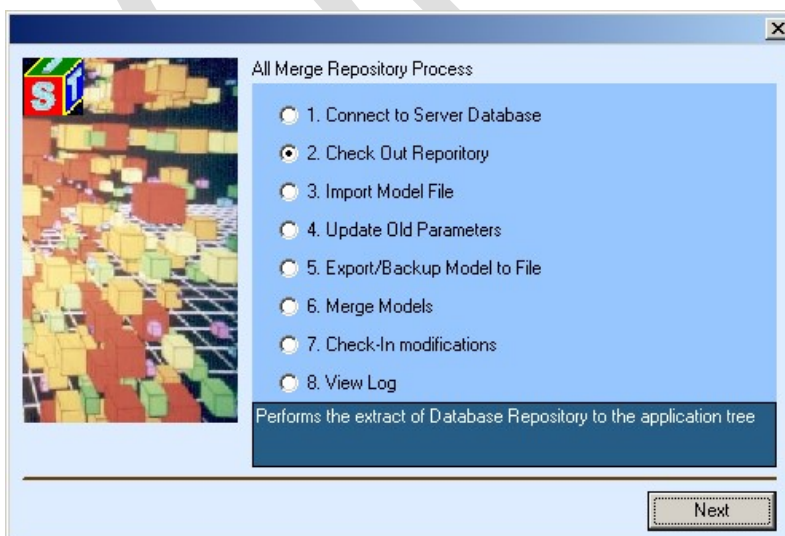


Pressing the Next button, in the guide screen, it executes the current step and moves the flow of the process up to the next step.

In this example, after having pressed Next button in the first step ([Connect to Server Database](#)) you are presented to the login form.



Then after having finished the login activity, the [Guide Menu](#) moves to the second step ([Check Out Repository](#)).



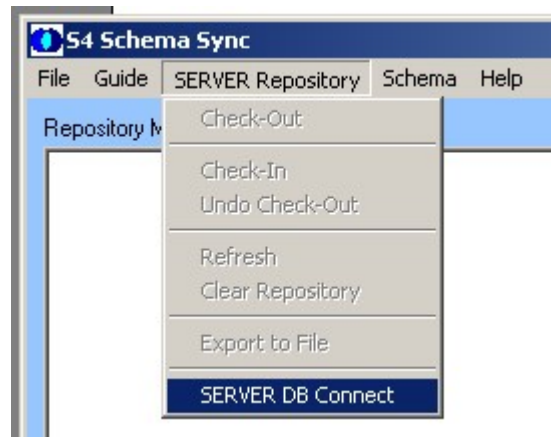
This way you are guided through the required steps to accomplish the task.

If you prefer it is possible to execute all these operations directly from the application menu bar.



Start and Connect to the Repository

Press main menu **SERVER Repository** and then choose **SERVER DB Connect**



Fill the fields in the Login form:

BIS Repository Connection

QDBC Source

User Name:

Password:

The user, must have **Administrator** permissions in the BIS repository tables, like the default Administrator BIS.

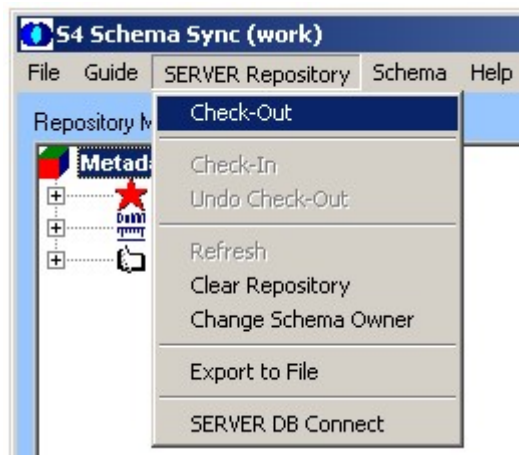
After a successful connection the user gets the following message:



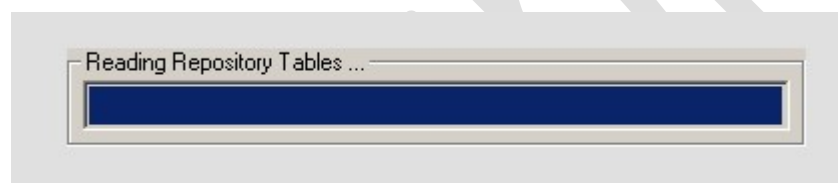


Check out the Repository

To checkout an existent repository, after being connected to the SERVER DB, choose the menu options **SERVER Repository / Check-Out**



The progress bar shows the evolution of the extract process.

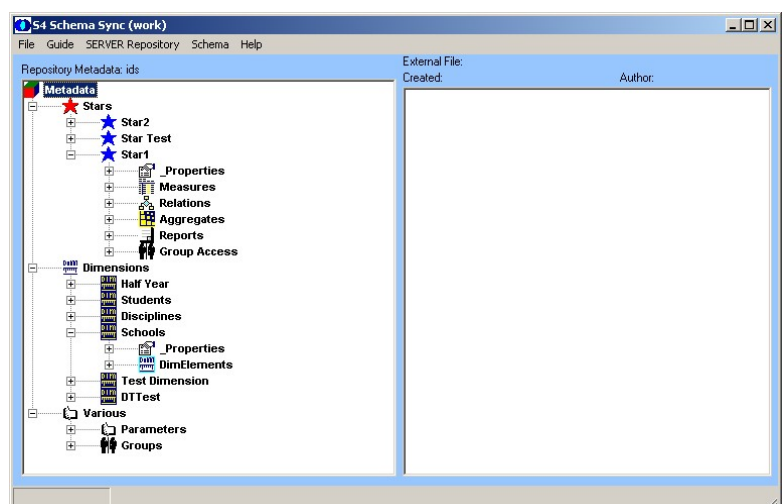


The following Message Box informs that the extract finished successfully.



After a Successful Check Out, the **Repository is locked**. This means that **other BIS-Tools can't access the repository**, until a **Check-In, Undo Check-Out or Exit** operation is done.

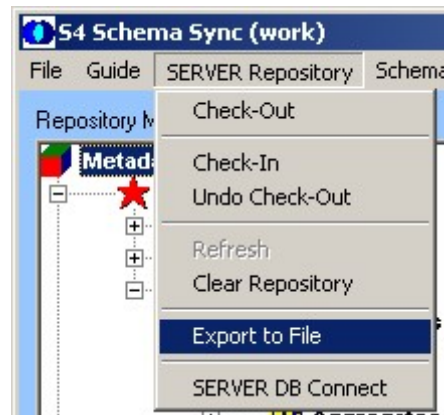
You can now expand the Tree View of the BIS Repository metadata and navigate through the Metadata.



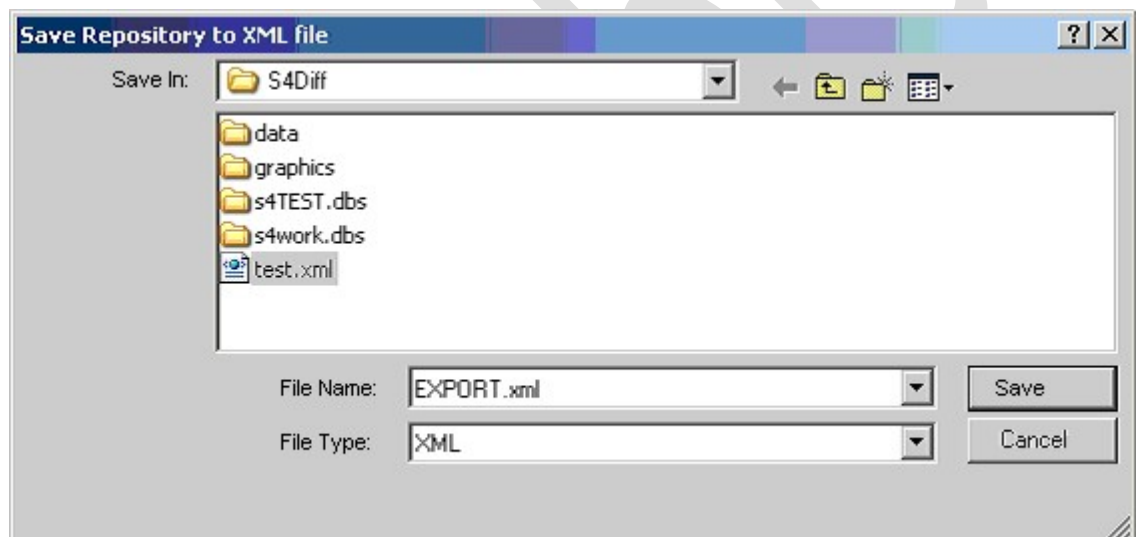


Export the Repository

To export a Repository to a portable external XML format choose the following menu path, after a checkout operation: SERVER Repository / Export to File.



Then choose the name for the XML file and press SAVE.



A successful export is communicated through a Message Box



Now you have in the file system an ASCII file in XML format, which is possible to copy to another machine in order to be restored.

Sample part of the XML file generated:

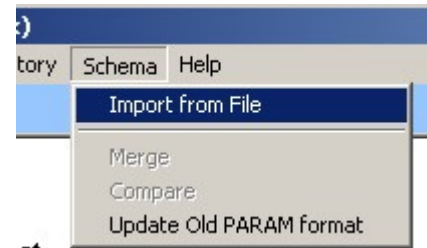
```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<ONNUBIS-Schema Version="2.50" Generated="2004-09-24 01:32" Author="ONNUBIS"
Type="Metadata" Nodes="668">
  <Node Type="21" Name="Stars" Prop="cs_factos" Children="2">
    <Node Type="20" Name="e1" Prop="fact_name" Children="5">
```

....

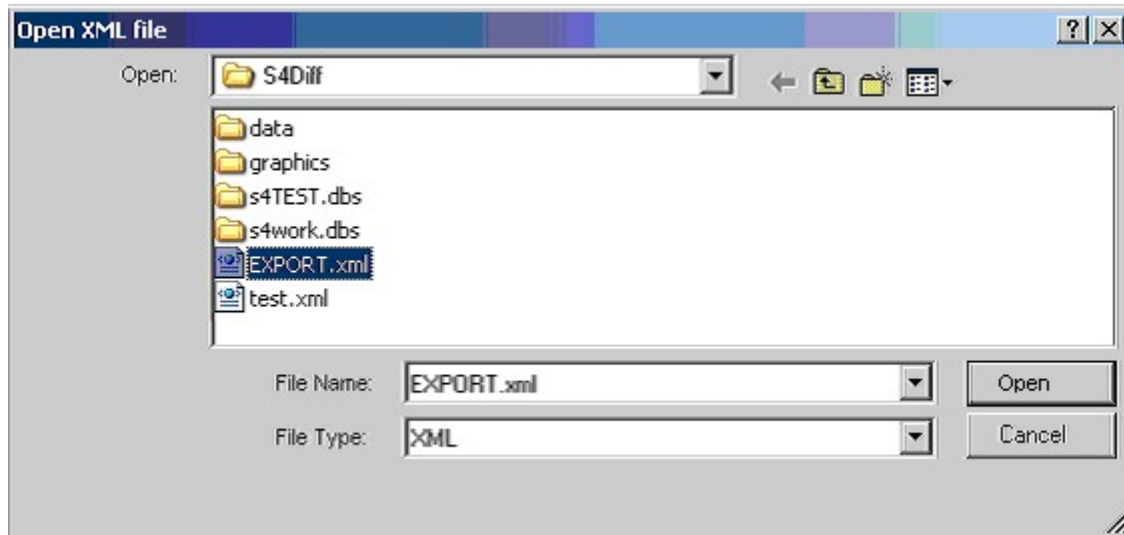


Import a New Repository

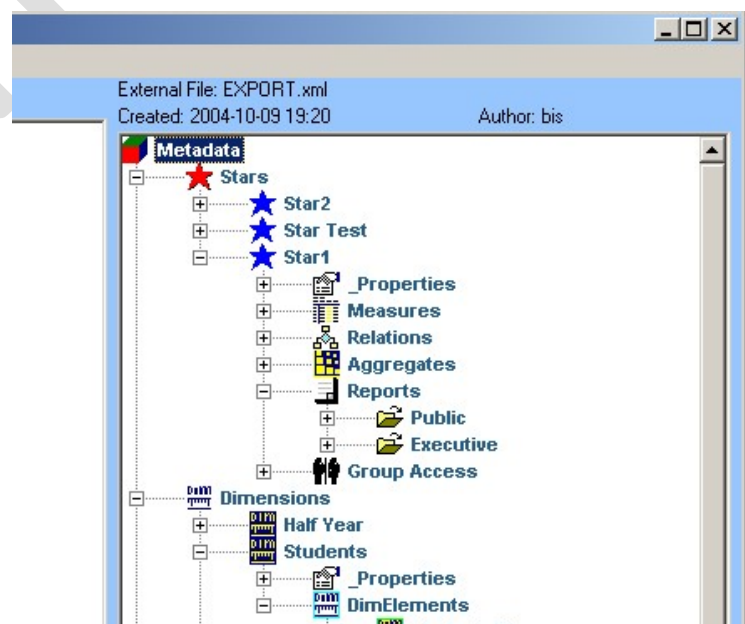
Initially you need to import a XML repository file previously exported. To do so, choose the menu Schema / Import from File.



Then choose the file we want to import:



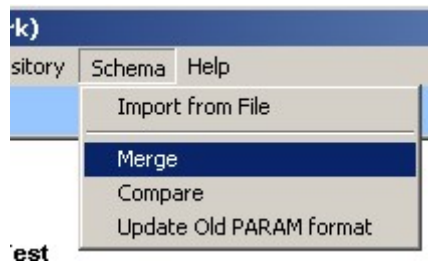
After a successful import, you can see the Metadata Tree in the right part of the Tool Screen. Date and time are also visible when the repository is imported as well as the author of the export.



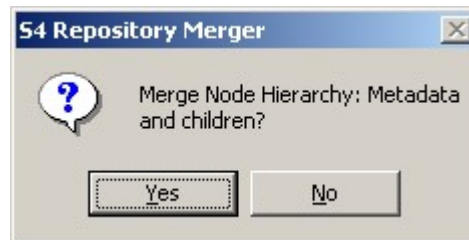


Merge the Schemas

Then you can do the Merge operation, using the menu **Schema/Merge**



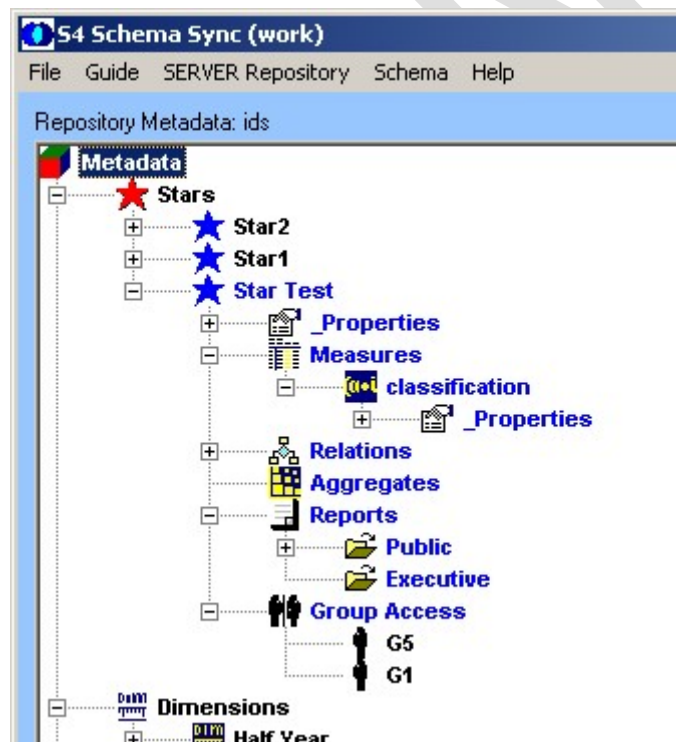
You will be asked to confirm the start of the Merge process.



After a successful Merge, if the SERVER repository is empty, the left and right Trees of the tool should contain the same trees. If there is already a SERVER repository, than the left tree is an INTERSECTION between both SERVER and EXTERNAL repositories.



The picture bellow shows in **blue** a new star that was added by the merge process.





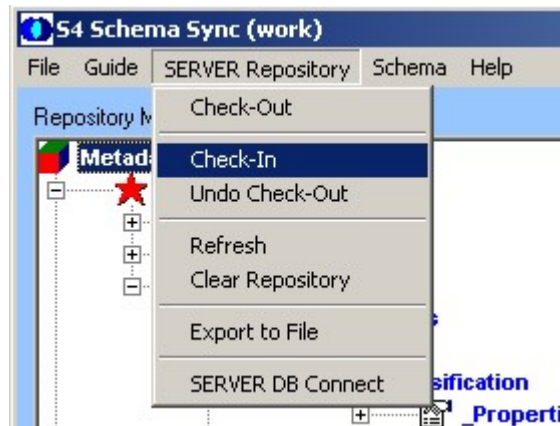
Check-In the Repository

Check-In is an operation, which applies a modification of the Schema Merge to the Database Repository.

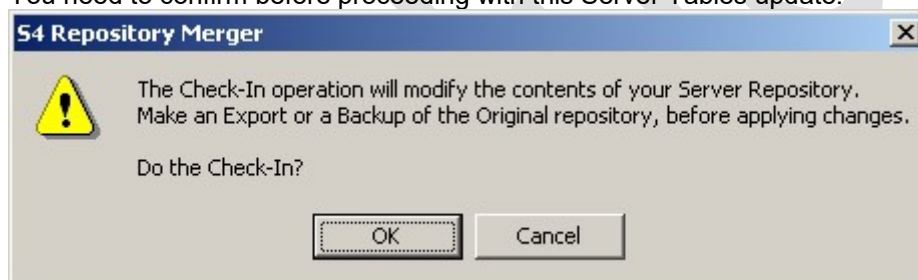
Recommendation: Before doing a check-in, it is recommended to make a backup or export of the original repository. Then make the merge and then Check-In.

To apply the changes to the repository run the menu Option:

SERVER Repository / Check-In



This operation will modify the contents of the repository tables, located in the Server Database. You need to confirm before proceeding with this Server Tables update.



You should receive the following message, after a successful Repository Check-In.



If New Stars are added or the repository is cleaned, then by using the BIS-Administrator you should associate the users with the newly created groups.

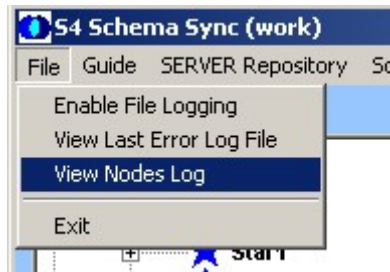
The objects are imported with the group accesses defined in the XML export file. If you want to modify the users' access to some objects, you should use the BIS-Administrator tool.



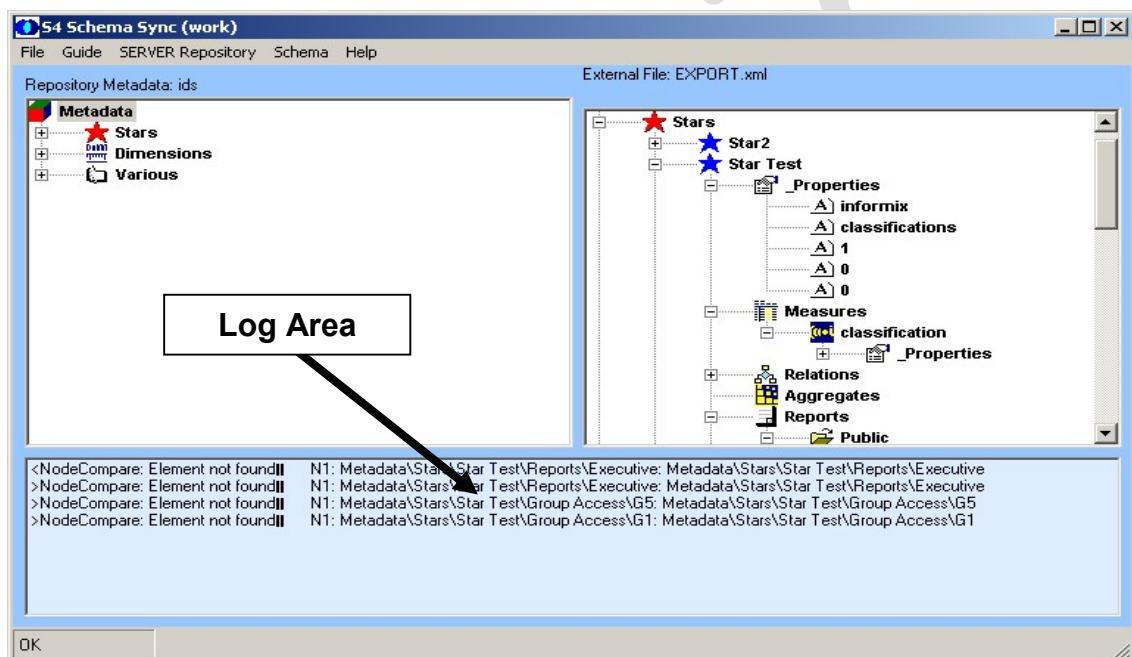
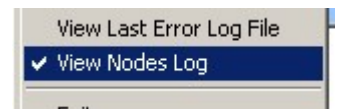
LOG activity

The operations of Merge, Compare and Check-In are recorded in logs. There are two types of logs: Internal and External.

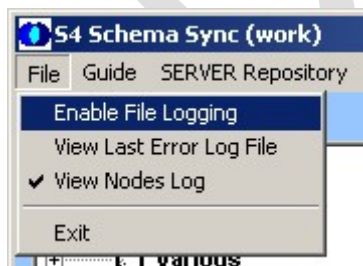
1. The Internal log is visible in the bottom of the application. You can make it visible by pressing in the menu **File / View Nodes Log**.



The menu gets checked and the log space is visible on the bottom of the application.

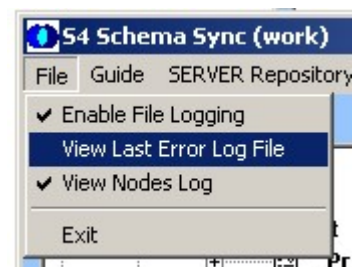


2. The External Log can be inactive or active depending on the menu **File / Enable File Logging**.



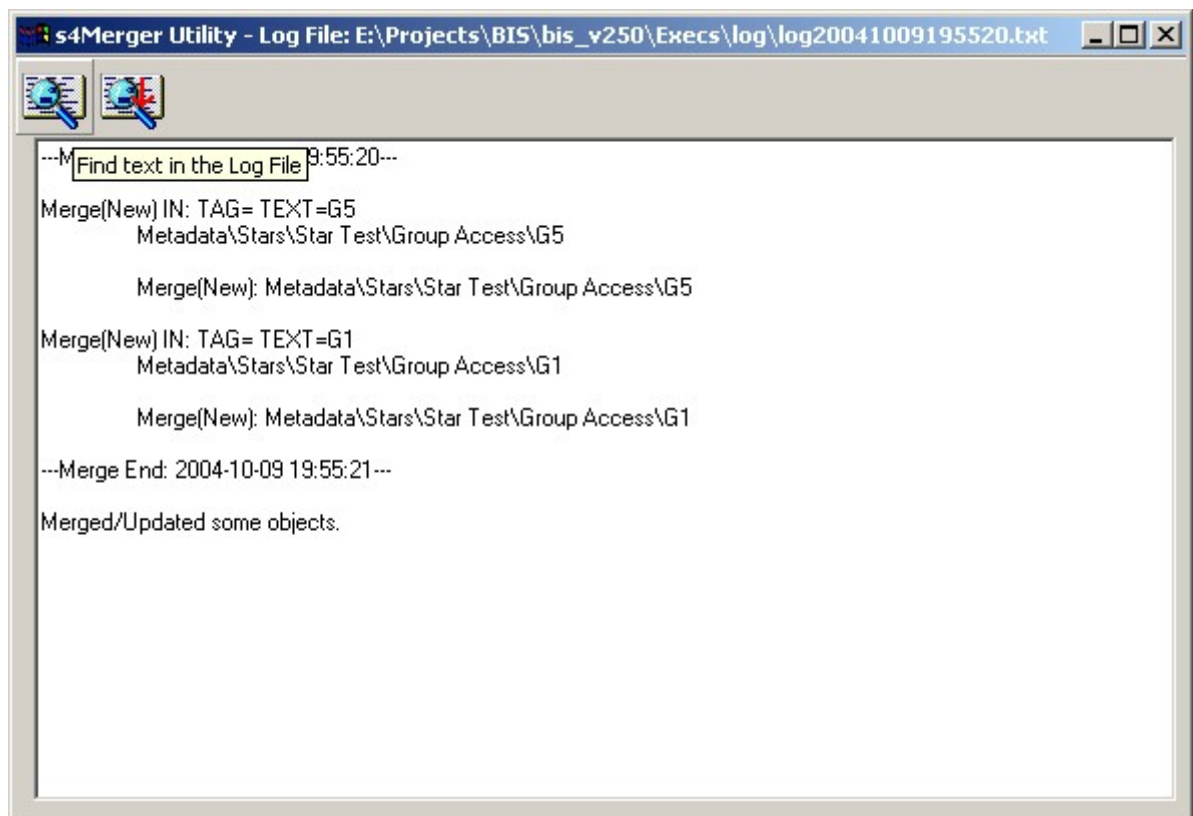
By activating, the external (file) logging, the activities are recorded in files located in a log folder, just bellow the current application folder.

To view the contents of the last external log file press the menu **File / View Last Error Log File**.





You will have access to a form, which displays the log contents and you will have the capability to search and copy its contents.

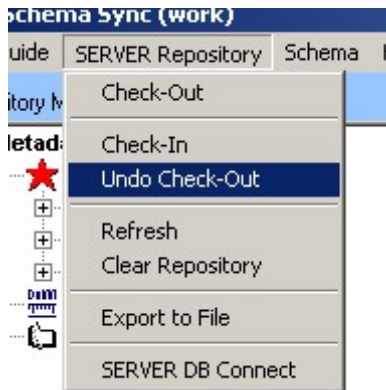




Various

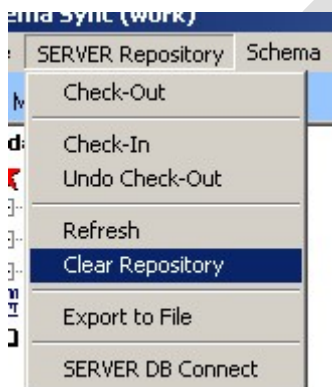
Undo Check-Out

If you want to stay connected in the Schema Merger, but you want to release the repository lock than press **Server Repository/Undo Checkout**.



Clear Repository

If you want to clean the repository in order to load a completely new repository than use the menu option **Server Repository/Clear Repository**.



Exclude Reports/Folders from Merge

It is possible to exclude individual reports or folder trees from the merge process. So this way the administrator can import only the desired reports. By default all report objects are enabled to merge. To exclude a report or Folder, including all bellow folders and reports, just click the **right mouse button** on the desired object and choose the **Exclude Node from Merge** option.



An Excluded from merge node is identified by a forbidden icon and the text color is changed to orange..





To enable an excluded node to the merge process, just click the **right mouse button** on the desired object and choose the **Enable Node's Merge** option

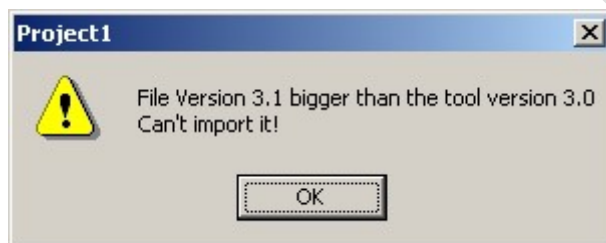


Imported File information

On the top of the Import Schema tree is possible to identify important properties of the Schema file: File name; version of the schema, Date Time of the file creation; Author of the export.



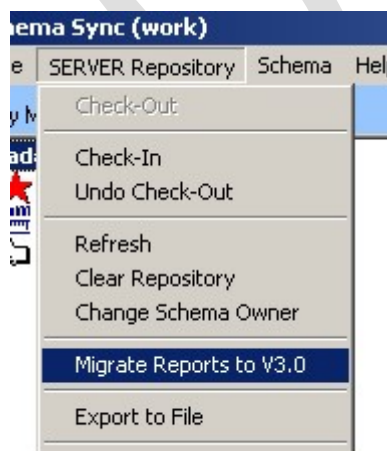
Starting from version 3.0 the Schema Merger tool validates if the user is trying to import a schema that has a version bigger than the current one. Importing a schema newer than the current one is not allowed.



Migrate reports to v3.0

Due to core changes in the BIS architecture, in order to allow the reports created with BIS navigator before version 3.0, it is necessary to migrate them to the version 3.0 format. The migration is possible to accomplish with 3 distinct tools: s4SchemaMerger; BIS Administrator; BIS Initialization tool.

Note: If you import in BIS v3.0 reports from an older schema, than you **must** run the **Migrate Reports to v3.0** option.

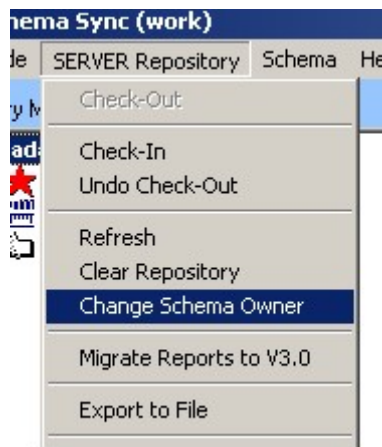




Change Schema Owner

Due to the support to several database makers, introduced in BIS v3.0, it is fundamental to have the correct owner of the data tables (dimension and fact tables) accessed by BIS tools.

Through this Change Schema Owner option it is possible to replace the current owner by a new one. It also allows to update with the correct owner a schema imported with an unexistent or uncorrect owner.





Notes:

OnNubis