

## Merging different replicative databases

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### The Case

Your company is developing a software product working with a database. You have a number of people involved in the product development. A replication of the database was given to each one of them and they bring changes into their database replications in the process of the development. Upon the completion of the development processes you have to merge all the differences in the Master database.

You cannot count on the fact that each of the developers will write down and save the SQL scripts of the managed changes in an accurate and clear way. Moreover, these changes might sometimes conflict with each other.

You may forbid the developers to bring any changes into their database replications, and commit the task to the DBA. But this might significantly increase the development time.

### Main goals to be achieved

- alignment of the development processes, and as a consequence – development time reduction.
- accuracy and unambiguity of the fixation of changes in database replications;
- efficiency and simplicity of the procedures of merging changes in databases.

### Our solution is

Use Cross-Database Studio 6.0 in order to compare and synchronize Master database and replicative database:

1. Master database is compared with the replicative database in order to get a detailed report about the found differences in table structures, primary keys, indexes, foreign keys, store procedures, data (the list of the objects of comparison is defined by perforce)
2. The received reports are analyzed and synchronization (merging) is accomplished on their basis.
3. Operations described in p.p.1; p.p.2 are carried out serially with all replicative databases. As a consequence, upon the completion of this serial merging, Master database will contain all the changes made to the replicative databases.
4. Reverse synchronization is accomplished serially from Master database to each of the replicative databases if necessary. As a result all the databases (Master & replications) completely correspond with each other

### Advantage of our solution

- the changes made in the replicative R&D environment database are not fixated manually, which enables a significant cut of the development time and elimination of human error;
- merging of the changes is carried out at regular intervals.
- The automatic process of searching differences and synchronization ensures the conformance of the databases.