

DBShare: the database access management solution

Digital audio systems – radio exchange and production centres – have now reached impressive proportions in the amount of data they handle and transfer. Broadcasters increasingly demand greater reliability of access to the data they broadcast. The answer to this is to install DBShare on each database server. This new service is designed to *centralise* and *secure* all access to databases by Netia applications.

Centralised access

DBShare centralises all connections. However many workstations are connected to a server, it is the sole interlocutor between the applications and the database(s). It improves the open connection situation by automatically closing idle ones to optimise server traffic.

Securing data by redundancy

When they are used, client applications are in constant communication with DBShare which feeds two identical databases synchronously. Each query (user action) is simultaneously executed on a main database and a backup one. If the main database fails, the service switches to the backup. The switch is transparent for all applications (production, scheduling or broadcast).

Not only does DBShare write the queries to both databases, it can also send them to other DBShares. Remote DBShares reads the queries in the same way as if they came from a standard application.

To provide even further security, DBShare can itself be twinned. The switch from one DBShare to another is equally transparent and automatic. Both services exchange data relating to connected applications, thereby greatly reducing the risk of system failure.

Automatic restoration of failed databases

When an incident arises, such as loss of connection with one of the databases, DBShare automatically switches to the other and archives all the queries made during and after the incident so it can execute them when the connection is re-established. The database is fully restored, both databases are once more synchronous and no data is lost.

Database aggregation: metabases.

It is easy to create metabases and obtain end-to-end architecture as in the following example:

News production group

Music production group

Broadcast group

Each group corresponds to one or more Radio-Assist workstations, each of them connected to a main/backup database pair using two DBShares (redundancy is maximum here as both the databases and DBShare are twinned). The contents of the broadcast group database is the sum of the other production databases.

This chaining of several DBShares gives rise to the metabase. The metabase is the broadcaster's global database and, in spite of its enormous size, it is easily accessible due to its subdivisions created by the presence of DBShare.

As one DBShare can communicate with others, digital audio systems will find they can bear the weight of a complex architecture lightly. This is just what is needed for multicasting by themed channels where database management can be a substantial matter.

Dynamic application licences

The number of licences can be set in DBShare. It specifies the number of applications which can connect simultaneously to DBShare. The number of licences to buy no longer relates to a potential number but to the actual number of users. This system means considerable savings for the buyer and relieves the administrator of the concept of one licence per workstation.

An “Applications connected” tab displays in real time all the applications connected, plus the data relating to them (computer name, connection time, etc.). There is also a statistics calculation function (number of messages, type of query, number of connections).

With DBShare, the NETIA R&D department has added a new dimension to the conventional digital audio system. This is a tool for the future, allowing systems to evolve fully, and especially towards new database structures.