

SwitchApplication

The products **DBShadow**[®] and **FSShadow**[®] offer a comprehensive protection for databases and file systems. The software solution **SwitchApplication** offers additionally automated switchover capabilities for the entire application environment. These three products are part of the solution **BusinessShadow**[®].

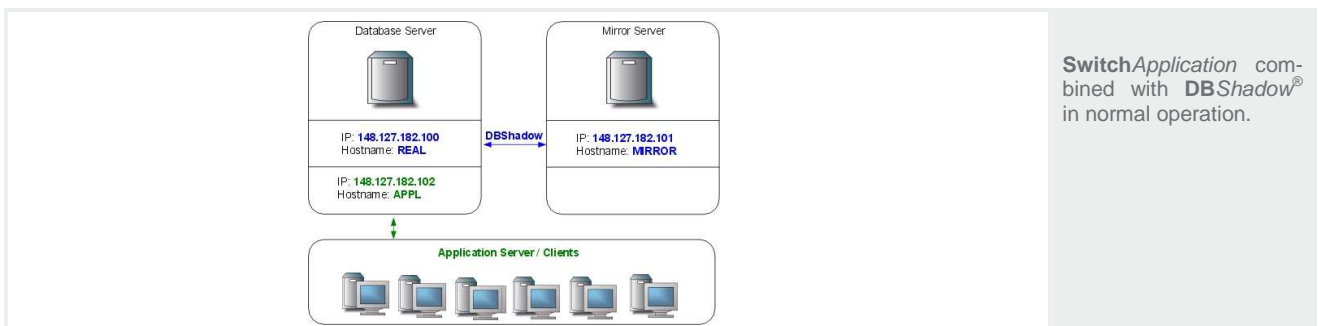
Basic Handling of IP-Addresses/Hostnames by Applications

Applications running on Windows or UNIX operating systems usually identify the network location of their database server by using a specific IP-address or hostname. The whole communication between application and database server is now handled with these IP-addresses, host- and/or NetBIOS-names. Due to the network limitations applications do not always find their new database server automatically after a switchover. If an automatic switch is desired, dedicated mechanisms - like the product **SwitchApplication** - should be in place to handle IP- witches.

The typical manual procedure of switching over to another database server includes the manipulation of the application itself (e.g. SAP[®] R/3 profiles). Such a non-automated switchover process can lead to several manual interventions. This often extends the production downtime and entails additional risks of human errors. These manual interventions can be drastically minimized by using **SwitchApplication**.

Functional Principle of SwitchApplication

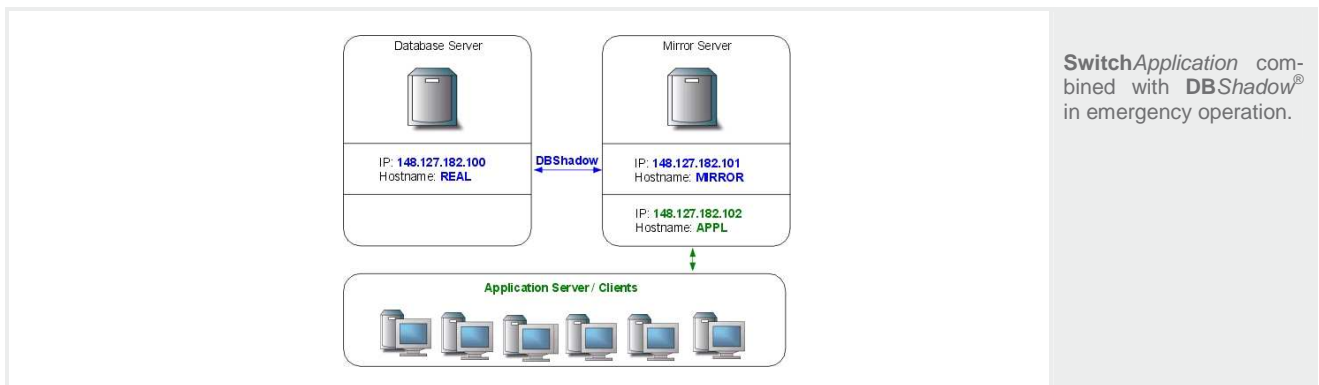
SwitchApplication is based on the principle of virtual IP-addresses and hostnames. The productive database server receives an additional virtual IP-address and hostname assigned. The application communicates now with its database server using this IP-address/hostname.



In case of a switchover or switchback between the production system and the mirror system, the virtual IP-address/hostname moves from the production to the mirror system. A restart of any participating server is not required (also not for switching NetBIOS names in Windows environments). The host-entries of the application (application server or application clients) remain the same after the switchover, even though a productive database environment is now active on a different system.

Combining SwitchApplication with DBShadow® and FSShadow®

In any situation, **DBShadow®** and **FSShadow®** continue to operate with the actual IP-addresses/hostnames of the production and mirror systems. If the automatic switchover procedure of **DBShadow®** or **FSShadow®** is initiated by the administrator, the database and file system will be switched to the mirror system in the first step. After this, the IP-address/hostname will be removed from the crashed database server, if it is still available. The next step is to assign this virtual IP-address/hostname to the mirror system. The last step is to restart the application either automatically or manually. Switching back to normal operation is handled identically.



SwitchApplication Customer Values

- Valuable functional enhancement to existing **DBShadow®** and **FSShadow®** installations.
- Reduction of the time required for switching between production and mirror systems.
- Simplification of future switchover tests entails additional emergency testing options.
- Additionally controlled automated and defined procedures minimize the risk of user errors.
- Using Windows, NetBIOS-names will be added/removed without system rebooting.

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