syncsort

Active-Active Replication
with MIMIX Availability

Virtually Eliminates Downtime and Balances Workloads

Customers and staff expect—or even demand—continuous application availability, without exception. In the past, IT couldn't guarantee that. When tape was the sole backup medium, recovery from a downtime event could take days. When organizations started using real-time replication to maintain recovery servers, recovery was faster, but still not instantaneous. Recovery servers could be offline, or at best, passive. As a result, it was required to restart systems or applications to resume business operations. Depending upon the technology, that could take anywhere from minutes to hours.

In contrast, the Active-Active Replication feature of MIMIX® Availability™ can eliminate almost all downtime. It replicates data between two or more active servers, all of which can run production workloads simultaneously.

Consequently, with Active-Active Replication, "recovery" is never necessary to restore business operations—whether a server crashes or needs to be taken offline for maintenance. Instead, you can redirect users to another active server, which is fully in sync with the downed server, by simply switching IP addresses. Furthermore, with two or more servers functioning as active production servers, you can make better use of resources by balancing workloads.

Key Benefits

Provides Near-Zero Recovery Time

- Replicates data in near real time between active production servers
- Replicates across any distance to protect server availability during regional events
- Allows business operations to be restored by simply switching IP addresses
- Delivers switch times measured in seconds to virtually eliminate operational downtime
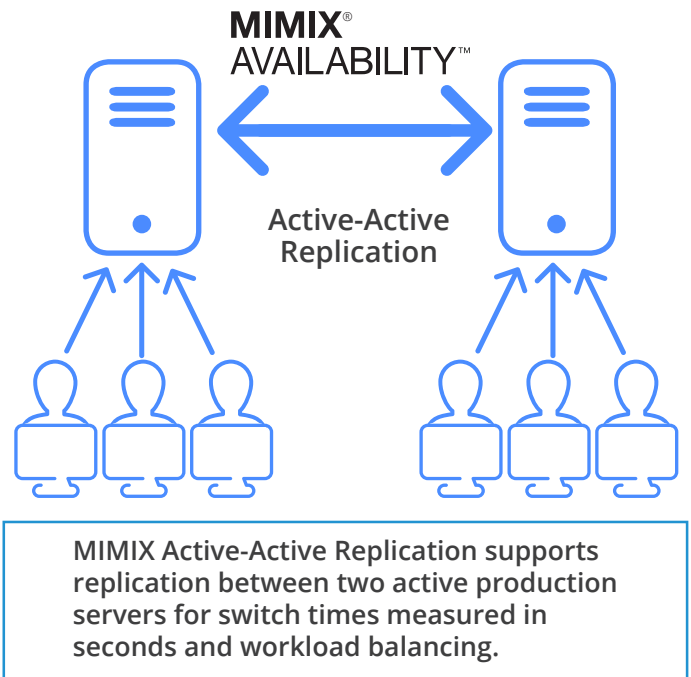
Optimizes Server Productivity

- Balances workloads between servers for more efficient use of resources
- Shares workloads between servers to improve application performance
- Allows processing to be performed near users who are geographically dispersed, improving response times
- Optionally, replicates between three or more active servers with MIMIX® Global™ to further share workloads and maximize HA protection

How It Works

The Active-Active feature of MIMIX Availability facilitates replication between two or more active production servers by accessing the database using keyed replication rather than traditional positional replication. Simply put, instead of using row numbers to update or delete replicated data in a target table, keyed replication uses the row's unique key. That unique key is comprised of one or more fields in the table that uniquely identify each record. The use of keyed replication ensures that the data on all active servers is identical, even if the row numbers differ due to concurrent distributed insertions and deletions.

Though rare, collisions—which happen when the data in a row is updated simultaneously in multiple locations—can occasionally occur in an active-active topology. To avoid potential data corruption, MIMIX Availability offers robust collision detection and resolution mechanisms (e.g. ignoring a deletion if another server has already deleted the record, or merging changes for non-overlapping fields). Professional services are available to assist with optimizing an application to reduce the likelihood of collisions, outline the order of MIMIX® collision resolution methods to be used at collision points, and define any custom exit programs required to resolve collisions in your unique application.

MIMIX®
AVAILABILITY™

Active-Active Replication

MIMIX Active-Active Replication supports replication between two active production servers for switch times measured in seconds and workload balancing.

System Requirements

- Supports replication between storage types and OS versions
- Supports replication between on-premises and cloud-hosted servers
- MIMIX Global is available as an add-on for replication between three or more servers
- Verify MIMIX Availability licensing options with your Syncsort representative

Active-Active Replication with MIMIX Availability

syncsort