

## Siebel 2000 Integration with Quest Software's SharePlex® for Oracle



SharePlex® for Oracle is a revolutionary, log-based replication product that enables users to replicate large volumes of database activity over networks with very little overhead.

SharePlex uses redo logs as a source of change information from a primary Siebel database. This enables SharePlex to capture every modification to selected objects immediately, as soon as they are written to the Oracle log, even before the transaction is committed. SharePlex replicates only the changes, so it minimizes its network bandwidth needs. Sending a small, steady stream of data to the target systems, SharePlex is able to replicate business volumes of changes without spikes in the network's performance.

SharePlex supports replication between dissimilar platforms, OS and Oracle versions. On the target system, standard SQL transactions are composed from the condensed, replicated changes, and then the transactions are applied via standard SQL to the target instance.

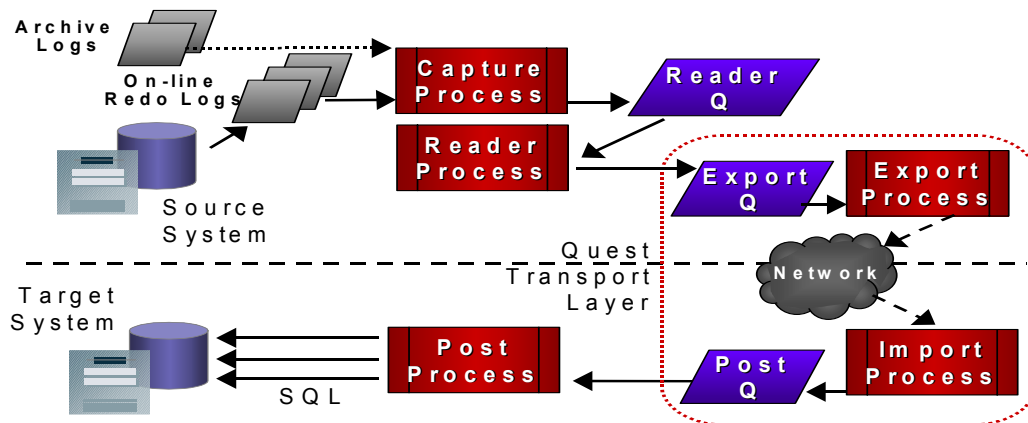
SharePlex is comprised of a set of daemons that run outside the Oracle database that do the propagation of data from one system to the other. Since these processes sit outside of the database, we are able to perform replication with no overhead to the Siebel production database and very little overhead on the production database server.

### BENEFITS

- Replicates changes to a production Siebel-Oracle database to serve as a reporting instance. If only a handful of tables are used for reporting, there is no need to replicate the entire database
- Ability to create a near real-time copy of the production Siebel database for high availability purposes
- Assists in migration of the Siebel database from one UNIX platform to another and/or from one database version to another

### FEATURES

- Ability to replicate with minimal impact on the production Siebel environment
- Replicates with speed and accuracy from one production Siebel database instance to its target instance(s)
- Allows replication of tables with long columns, referential integrity enables, tables without a primary key and sequences
- Having a fully accessible target instance that can be used for reporting or instantaneous fail over
- Fault tolerant, with issues such as network or database outages



## ARCHITECTURE

SharePlex has multiple processes on the source and target server that enable replication. SharePlex's Capture process monitors the redo logs for changes to the tables and sequences you've selected for replication. When it sees a transaction for a qualifying object, it puts it into the SharePlex pipeline.

The Reader process takes the transaction from the Capture process, and packages it. Based on the configuration of the replication environment the Reader process address the transaction to be ready for transport across the network. The Export process receives data from the Reader process and sends the data over TCP/IP to the Import process on the target instance.

The Import process acknowledges receipt of the data, and then sends the data onto the Post process. Between each of these services is handshaking to receive and acknowledge transactions. This is critical to maintain the data stream and to insure that no packets are lost.

When we ship the data from the source to the target instance, we send the pre-image of the data from the source as well as information about the change. The Post process performs two main functions. First, it compares the pre-image we shipped across to the local data, as a perpetual check to make sure the target instance is in sync. The Post process then constructs a SQL statement from the data it received from the source system, and then applies that

statement via the standard SQL engine to the fully open and accessible target instance.

The three queue files in the architecture are memory mapped queue files. Ordinarily, we ship the data from one service to the next via memory, allowing us to replicate very fast. However, at all times, that data is on disk either on the source system or the target system, until it has been committed to the target instance. So, although we're using memory for speed, the data is not in jeopardy should a system or the network fail. If outages occur at the network or the target database we can write the data to disk without affecting the production instance's performance.

You can monitor the status of replication in one of three ways:

- The command line control interface
- Enable automatic alerting from 24x7 monitoring daemons
- Utilize the Graphical User Interface that displays real time replication statistics

## AVAILABILITY

SharePlex for Oracle runs on systems with HP-UX, AIX, Solaris, Alpha/UNIX, and Windows NT/2000 operating systems.

Quest Software can be reached at 800-306-9329, or on the web at <http://www.quest.com>