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Distributed Lock Management and Deadlock Detection

A primitive distributed lock system is based upon the following component triad.

1. The **GObjLck** interface (itself derived from the **GObject** interface) provides base functionality for things that can be locked.
2. The **GLockCtx** interface provides a nestable user/thread context within which locks are held. Such a lock context must be supplied as an argument to each method invoking lock services.
3. The **GLock** interface provides a lock which is cognizant of the lock contexts referring to it.

Release, Reference, Read, Write, and Delete, locks are supported with typical multiple-reader/single-writer protocols. Deadlock detection is done by the lock context on a per-thread basis. Deadlocks are to be typically resolved by releasing all locks and trying again 'later'.