Market Requirements Document

Feature Name: Cleanup Locks Held By a Failed Thread

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Description of the Problem

If a thread fails while it holds locks then those locks will be held until they are manually cleaned up, either by restarting the process or by running oocleanup. This has caused problems at some end user sites, e.g. Ciena Network's customers. The problem is particularly bad with the Java binding since it doesn't have control over Java thread creation.

Description of the Requested Feature

If a process fails it is possible to cleanup any outstanding transactions automatically. There should be a mechanism for monitoring threads and rolling back any outstanding transactions for a failed thread.

Part of an existing feature or does it require another feature, if so, which one?

Kernel feature.

How is this problem being solved now, and why isn't that acceptable?

Users have to detect the fact that locks are being held by threads that no longer exist and manually rollback the transaction. This often involves stopping and restarting the process that owns the thread(s), since it's hard to associate threads and transactions with our current APIs. This is not acceptable at high availability sites, especially ones with no database administrator.

What languages must support this capability?

• Java, C++ and Smalltalk.

Which platforms must be supported?

• All platforms.

Do any competitors already have this feature?

• Central servers automatically rollback transactions if they lose a connection to a client.

Customers who require this feature

• All

Revenue at risk, or which could be won

• This feature will help protect the reputation of our product.

When is this required?

• Release 10.

Additional Notes

1. We will also need:

- Updated Technical Publications.
- New QA material.
- Additional training material.

2. Windows has an API called "GetExitCodeThread" to determine whether or not a thread is active. There is also an ExitThread function that should be explored. There is probably a way to monitor Unix threads too.