CASE STUDY

cognence inc
Improving Software Economics

IBM Rational ClearCase Multi-Site Development Optimization

Snapshots of Multi-Site Solution

- **Discovered multi-site system had been broken for more than a month**
- **Set up branching to support concurrent development on separate releases**
- **Implemented ClearCase Scheduler for automatic failure notification**
- **Backups implemented at each site**

*"Recommendations for improvement are only useful if they're achievable. **cognence** very quickly assessed our situation, identified issues and helped us to prioritize them. They took a step-by-step approach, solving one problem at a time– which is the only successful method. Not only did **cognence** have a thorough understanding of Rational ClearCase, they understood that we needed solutions that would work in the real world of business, and they provided those. I've been absolutely happy with their performance."*

Frank
Engineering Manager

Situation: A high tech company's engineers in Colorado and Bangalore, India were working concurrently on a software development effort. The client had implemented Rational's ClearCase software in a multi-site capacity so that engineers could synchronize their work, but there were no ClearCase experienced managers in-house and no one had been tasked with monitoring the system. An assessment led by **cognence** discovered that the multi-site system had been broken for more than a month. Error messages were being routed to a "bit bucket," and nobody was being notified of the problem.

Challenge: Without multi-site capabilities, the client was unable to synchronize development work between the U.S. and India. The **cognence** assessment also identified additional problems:

- Journal files produced within the ClearCase system were the client's secondary line of backup. Since the system was broken, their planned recovery process was compromised.
- Scripts were only set up to support development on the main branch, there was no allowance for work on future versions and developers were approaching a standstill. Branching needed to be implemented to allow development efforts on future releases.

Solution: First, **cognence** replicated the database so as not to overflow the journal files with the packets required to fix synchronization problems and then re-synced the systems. Branching was set up in order to support concurrent development on separate releases. To avoid future downtime, **cognence** implemented ClearCase Scheduler, which notifies an administrator when a data line is down or a packet has not transmitted, allowing them to fix the problem immediately. Backups were then verified at each site. Best yet, **cognence** was able to perform this work without disrupting any ongoing development efforts.

*"**cognence** quickly assessed the situation, helped us to prioritize the issues and what to go after first, then put together a schedule. We not only had to fix our technical problems but we had to monitor them to make sure that this didn't happen in the future."* - Frank, Engineering Manager

Results: The client's developers can now work concurrently on separate software versions by using branching capabilities and work is synchronized between Colorado and Bangalore several times a day. Notification features in ClearCase Scheduler now email administrators as soon as a problem arises and they assure that journal files are being recorded so they're available for recovery in the case of data loss.

*"**cognence** not only fixed our problem but they put into place a monitoring system so that we will know of future issues as soon as they arise. The syncing can be monitored from here or from Bangalore. **cognence's** assessment helped us realize the need for an in-house software configuration manager so that we can make sure these problems don't happen again."* - Frank, Engineering Manager

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