

# A Customer Success Story

## *Revolutionary Real-Time Solution for CVS Allows Leading Outsourcing Firm's Development Teams in India and the US to Work as One*

### Major Fortune 500 Companies and Technology Vendors Rely on Expertus' IT Outsourcing Services

Expertus is an IT outsourcing firm that offers on-site project management, technology infrastructure management, application management, systems integration, ERP implementation, and software development services to companies such as Procter and Gamble, Caterpillar, Cisco, EMC, ADP, Broadcom and many others. These demanding customers have high expectations, and project delivery must be achieved on time and on budget in order for Expertus to be successful.

Expertus has a total of 100 developers at two centers in Mountain View, California and Chennai, India that provide support for the development services it offers.

### Expertus' Challenge and Opportunity

CVS is used as the Source Configuration Management (SCM) system that provides version control and acts as a repository for all of the work done by developers at each site. The problem was that CVS and the other multi-site SCM solutions available in the marketplace that are supposed to support globally distributed development didn't allow Expertus to realize the full benefits and cost-savings that they should have achieved after off shoring some of their development effort to India. The key reason for this was that unlike WANdisco, other multi-site SCM solutions don't provide any real-time mechanisms for synchronizing developers' work across globally distributed locations. Expertus, like most organizations that go offshore, dealt with this shortcoming by introducing software development procedures that called for a large number of branches in their source code tree, and then merging all of the work from the development sites later, usually when they were trying to create a build of a new executable. These procedural changes introduced costly delays into the development cycle and created additional risks for every development project that Expertus undertook.

In practice, because Expertus' distributed development teams were essentially working in isolation from each other, and effectively working from out of sync copies of CVS source code repositories, the following problems were common:

- Errors weren't discovered until later in the development cycle when it was time to merge all of the code from the two sites to complete a build of an executable and QA it.
- If a build failed, either the Indian or US developers could sit idle for a day or more waiting for the other team to fix the problem.
- Developers in Mountain View would code and test a critical bug fix, only to have it unfixed by a developer in India and vice versa.
- Both the US and Indian development teams would be working on the same module using different versions of source code files at the same time and end up clobbering each other's work.

Expertus estimated that the rewrites required to successfully integrate work from the two sites could easily add 30-50% more time to the development cycle, depending upon the size of the build they were trying to complete.

Often, because of the twelve hour time difference between the two sites and the difficulties this presented in terms of contacting developers at the other site, unilateral decisions would be made by one side or the other, further compounding problems.

Expertus thought that they'd have to continue to struggle with all of this. Then they learned about WANdisco.



#### Profile

Expertus provides IT outsourcing services to major Fortune 500 companies and technology vendors. Over 100 software developers are located at two sites in California and India.

#### Locations

Mountain View, USA  
Chennai, India

#### Employees

150

#### Objectives

- » Eliminate errors and delays caused by VS repositories in India and the US being out of sync.
- » Distribute work based on where talent is located, rather than on the basis of time zone constraints.
- » Minimize or eliminate the impact of network or server failures at development sites.
- » Leverage existing CVS skills, so that staff doesn't have to be retrained.

#### Solution

- » WANdisco immediately replicates changes made at one site to all of the others in real-time. Developers effectively work from the same CVS repository, regardless of location.
- » Error prone source code branches and file merges that extended the development cycle by 30-50% were completely eliminated.
- » Stable, tested builds that took over two weeks to complete now take one to two days.
- » WANdisco's self-healing capabilities meant that development work was never lost, and developers at a site experiencing network or server problems could keep on working.
- » WANdisco complements CVS, so very little training was required for implementation.

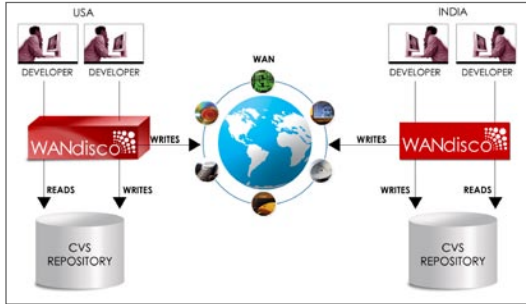
*Before WANdisco, we would partition our projects along time zones. Problems often weren't discovered until we got into QA. Stable, tested builds would typically take about two weeks to complete. In one particular instance we had to rewrite significant pieces of code and restart the whole testing cycle. We lost nearly four weeks.*

*Now with WANdisco, it's a matter of wherever we have the right talent, we can have them work together irrespective of time zone boundaries. Because of this, we've been able to eliminate all of the error-prone branches and file-merging we had before. Now, we typically complete builds in one to two days!*

*As we expand we are considering using the WANdisco solution at our London office as well.*

- Ravi Narayanan, Vice President, Expertus, Inc.

## The WANdisco Solution



WANdisco's Replicator for CVS provided Expertus with a cost-effective, fault-tolerant software configuration management (SCM) solution that could synchronize work from their globally distributed development teams in real-time. With WANdisco, CVS repository replicas from distributed development sites connected over a wide area network (WAN) are functionally identical to a single CVS repository. This means that procedures don't have to change when software development moves offshore, as is often the case with competing SCM solutions.

With WANdisco, all of the cost-savings and productivity improvements that should be achieved from going offshore are actually realized.

### WANdisco's Replicator for CVS:

- Immediately replicates changes made at one site to all of the other development sites on a network. It's functionally equivalent to having everyone working from the same CVS repository, regardless of where they're located.
- Doesn't rely on excessive error-prone source code branching and merging required by competing solutions that don't provide WANdisco's real-time CVS repository synchronization capability.
- Eliminates time lost waiting for builds of large executables to complete.
- Reduces disaster recovery time to zero with self-healing capabilities that prevent developers' work from ever being lost.
- Dramatically reduces network traffic and bandwidth costs.
- Costs much less to implement and administer than any competing SCM solution.
- Allows staff trained in CVS to leverage those skills without any learning curve.

### The Results

With WANdisco's Replicator for CVS, and the real-time CVS repository synchronization that it provides, Expertus has been able to eliminate the excessive branching and file merges that had been the source of so many errors and delays in the past. Expertus no longer has to partition work along time zones, and developers in the US and India no longer work in isolation from each other. Work can be distributed to wherever Expertus has the right talent for the task, and those developers can work together regardless of time zone differences.

The net result of this is that the average amount of time required to complete a stable, tested build of the work done by both the US and Indian development sites over the course of a two to three month period, has gone down from two weeks, to one to two days.

In addition, the other SCM solutions Expertus looked at were much more expensive than WANdisco. They didn't really solve Expertus' problem because they lacked the real-time synchronization capabilities that WANdisco's active/active replication provides.

WANdisco also allowed Expertus to reduce their network bandwidth costs significantly. Before implementing WANdisco with CVS, Expertus was considering adding an additional E-1 line in India at a cost of \$6000 per month. Because of the network optimization offered by WANdisco, they were able to avoid that expense.

Finally, because WANdisco offers a solution that complements CVS, it allowed Expertus' QA and development staff to leverage the CVS skills that they already had. Expertus hasn't lost time retraining existing staff to use a new SCM solution.

### About Expertus

Expertus provides consulting, development, and engineering support to both Fortune 500 companies and technology vendors that need to develop and integrate disparate enterprise systems, both within their organizations and beyond to include their partners and suppliers.

Expertus' development centers around the globe ensure that major projects will be completed in the most cost-effective manner possible. Expertus balances on-site project management with offshore development resources to achieve the optimum levels of top quality and cost effectiveness. Expertus offers a global team of highly seasoned IT professionals through its offices in Silicon Valley, EMEA and the Asia-Pacific region.

### About WANdisco

Since 2001 WANdisco has set out to push the limits of what can be achieved with distributed systems deployed on a Wide Area Network (WAN). The underlying technology fundamentally changes the way distributed nodes, or servers, interact to provide unprecedented levels of reliability, availability and scalability (RAS) enabling the internet to realize its full potential.

WANdisco for CVS is unique in Software Configuration Management (SCM). For the first time a development team can truly be spread-out across the world and still work as one unit, in real-time. With WANdisco's unique active/active replication technology there is no necessity for error-prone source code branching and manual file merging. In addition, the self-healing capabilities offered by WANdisco for CVS ensure high availability and automate disaster recovery without the need for any third party products.

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