

# [competence]

REFERENCE PROJECT

**CREDIT SUISSE**

**-beta**systems

[what]

## Daily backups of user data

Credit Suisse ensures complete daily backups of user data for its decentralized staff of 25,000 situated in Switzerland -- with only one and a half full-time employees specifically dedicated to this task. Yet the technical scenario is even more daunting because the corporation's backup and operational data utilize the same network. To this end, the Swiss banking giant deploys Beta System's intelligent backup and recovery software solution Harbor NSM guaranteeing full backup of all remote data on its more than 700 servers, while putting only minimal strain on human and network resources. Moreover, this solution addresses the second challenge posed by the network, in that Credit Suisse is able to distribute software from corporate headquarters in Zurich to its hundreds of branch offices across Switzerland.



## Centralized Backups with Harbor NSM

With a very broad reach across Switzerland, Credit Suisse operates several hundred branch offices and locations with a staff of more than 25,000. Its Zurich-based home office provides branch offices with comprehensive support for every kind of daily trading activity. This includes comprehensive IT support, with corporate IT providing remote access to all centralized banking-specific and peripheral applications, and enabling regular backups of data generated in the various remote locations.

Furthermore, corporate IT in Zurich also distributes software programs in a timely and focused manner, making available time-sensitive software products such as licensed anti-virus programs, which need to be current at all times. This guarantees that only registered and authorized programs are deployed across the corporate network.

[who]

Credit Suisse Group is a leading global financial services company headquartered in Zurich, Switzerland. The business unit Credit Suisse Financial Services provides private clients and small and medium-sized companies with private banking and financial advisory services, banking products, and pension and insurance solutions from Winterthur. The business unit Credit Suisse First Boston, an investment bank, serves global institutional, corporate, government and individual clients in its role as a financial intermediary. Credit Suisse Group's registered shares (CSGN) are listed in Switzerland, Frankfurt and Tokyo, and in the form of American Depositary Shares (CSR) in New York. The Group employs a staff of approximately 80,000 worldwide. As of June 30, 2002, it reported assets under management of CHF 1,293.2 billion.

## Providing Efficient Backup Structures

Remotely generated data is backed up centrally, in accordance with a security concept enforced across the corporation. Thus, instead of backing up data remotely and having to manage those backups remotely, as previously was the case, Credit Suisse now relies on centralized, host-based backups.

# [how]



Thanks to this highly professional and centralized backup and recovery approach, the Swiss bank was also able to significantly cut costs, in particular its operating expenses. Today, only 1.5 full-time employees are required to coordinate and implement backups for all 700 remote servers, which also includes data restores and distribution of new software versions. This efficient approach was made possible strictly by implementing a centralized backup solution.

One key requirement for implementing the centralized data backup solution was to simultaneously execute backups on a daily basis, even while running regular operations on the same network. Specifically, Credit Suisse needed a solution to ensure complete and reliable backups of every remote NT server during regularly scheduled nightly backups between 7pm and 6am. Conversely, during daytime online hours, data used in mainframe banking applications and respective queries from remote locations were top priority within the network. By implementing Harbor Backup, a high-performance software solution for targeted backups and restores of remote host-based hardware systems, Credit Suisse was able to meet every requirement for low network utilization of all its NT servers.

By separating data from control paths, the software solution reduces network utilization, substantially optimizing performance of the entire system. What's more, after executing an initial and one-time comprehensive backup, the solution is designed to do only incremental backups of the entire network, regardless of the size of the datasets. Any data changes are collated with existing data on the mainframe in so-called consolidation runs, continuously providing fresh data. The entire corporate network is utilized only when daily updates are carried out.

Using this technology, each day Credit Suisse is able to completely and redundantly backup all 700 remote servers, connecting 25,000 clients and running a total of 5 terabytes of data. On average, daily backups include an additional 100 GB of incremental backup data.

[gain]

## Distribution of Software a Key Additional Function

At Credit Suisse, Harbor Backup has risen to the challenge of providing a high-efficient solution for delivering data from remote locations to headquarters. In the following real-world example, when the Melissa virus cropped up, corporate IT managers leveraged this feature to quickly work out a solution to mass distribute the latest anti-virus software.

## Data Restores Just a Phone Call Away

With a trouble ticket submitted by a call center and processed by IT in only a few hours, corporate IT in Zurich has provided the bank's staff of 25,000 with an opportunity to rapidly and easily phone in requests to restore inadvertently deleted, lost or destroyed data. To this end, the required data is retrieved from the backup system, restored in the version required by the user and networked to the original server. Should a server fail completely, however, Credit Suisse boasts additional protection beyond the centralized solution because it is also able to draw on remote backups. This parallel backup method ensures that a current version of server data is always available in the event of an emergency. Using Harbor Backup, corporate IT delivers remote backup data as a starting point for data restores. Depending on the particular version, data changed since the last remote backup can be updated under the auspices of centralized host-based backup system.

The software solution is also capable of providing the principle of "remote to central" functionality -- in the opposite direction. In this regard, Credit Suisse was the first company to test controlling software distribution with the software solution, requiring only one hour to distribute the latest anti-virus software with a system that had been designed purely for backup purposes. During that hour, all 700 servers (from which all connected clients were able to download the software) were equipped with the latest anti-virus version. As such, Credit Suisse managers leveraged the powerful restore function of the central software solution to solve an entirely different problem. Ever since, Credit Suisse has been using the backup and recovery function of this centralized software to distribute customized solutions.

[experience]