

# Case Study



“ NCache allowed us to reduce the load on our database servers and prevent them from becoming a scalability bottleneck. We needed a long term solution that would move us away from just throwing more database servers at the problem. By using NCache as part of our custom session object, we noticed a 30 percent optimization in the database resource usage. ”

**Kal Dhinsa**  
Infrastructure Manager  
Virgin HealthMiles

**Virgin**  
**HEALTHMILES**

NCache lets Virgin HealthMiles scale their website traffic without requiring more database servers



#### Country or Region:

United States

#### Industry:

Technology-Based Health Programs

#### Customer Profile:

Virgin HealthMiles, a member of Sir Richard Branson's famed Virgin Group, provides programs and technologies that engage an employers' workforce in good health. With a range of solutions and program integration capabilities for a range of needs, the company helps employers drive higher awareness and engagement, and better insight into and impact of all their employee health investments.

Virgin HealthMiles' Pay-for-Prevention™ programs are based on physical activity and healthy lifestyle change. The company leads the market in getting an average of 50 percent of an employer's workforce to participate – that's more than 3 times the industry average. Today, over 130 industry leaders representing more than 700,000 employees across the U.S. have selected Virgin HealthMiles' award-winning programs for their employees.

With the company's HealthMiles program, members get the motivation and tools they need to get active and stay healthy. HealthMiles members tap into a vast assortment of tools such as activity tracking devices, biometric measurement stations, and personalized user-friendly online portals to engage in the program, track their progress against goals, learn about and create new challenges and opportunities to earn HealthMiles, and keep up with their social groups – all while forming healthy habits in the process.

The bottom line: Virgin HealthMiles' website and its database incurs voluminous transactions. Kal Dhinsa, Infrastructure Manager at Virgin HealthMiles, said, "Over the past three years, we incurred a steep incline in the level of traffic. Since 2007, daily website visits and data transactions grew by 200%."

## THE CHALLENGE

Virgin HealthMiles uses ASP.NET Web servers, middle tier application servers, and database servers to support its website. With the increasing amount of traffic coming to its website, the database servers were consistently being hit the hardest, according to Dhinsa. Interestingly while this traffic was creating a tremendous load on the database servers, a great portion of the data being accessed from the database was mostly identical for multiple visitors. Dhinsa explained, "For example, users access data about the challenges they have in progress and company-based information, among other pieces of data. They access this data over and over, and multiple users are accessing the same common data."

"During peak traffic hours, our site gets thousands of visitors per hour. With many users taking part in the same challenges or being part of the same employer group, the database is often running the same query and returning the same data over and over. At the number of users grew, we could see that this could be a potential bottleneck." Consequently, he added, "We wanted to ensure we scaled the platform to accommodate the forecasted growth and we needed a solution that would reduce the resource requirements on the database servers. In a clustered environment, we were fortunate to manage this initially by adding another database server to the cluster. But that wasn't efficient and definitely not financially sustainable. So we started exploring the option of distributed caching technology."

## The NCache Solution

Virgin HealthMiles found NCache by Alachisoft to be the ideal solution for administering the challenges of rising traffic, as faced by many firms recently. Many company websites face the same scalability bottleneck issues when their ASP.NET applications are managing staggering loads of data requests. Many applications run in load balanced server farms and handle thousands of transactions per second and hundreds of thousands of concurrent users because their overall architecture is very scalable except for one weak link. And, this weak link is the database that is not scalable. As the saying goes, "the strength of any chain is only as strong as its weakest link." Therefore, data access can easily become a major bottleneck toward scalability.

Dhinsa said, "Member traffic continued growing at a steady clip and we noticed our database servers were being affected the most. That led us to NCache to reduce the load on the database servers without having to keep throwing more database servers at preventing bottlenecks. We now use NCache to temporarily store all the common data that's used over and over again. With this, a considerably large number of trips to the database are saved, which eliminates previous database retrieval and prevents traffic buildup bottlenecks." He added that "Virgin HealthMiles doesn't use ASP.NET Session State object, but we're instead tracking user sessions through our own custom session object." While they don't use NCache for

### Alachisoft Product:

NCache

### Customer Needs Met:

- Out of process caching
- Eliminated database bottlenecks
- Distributed and synchronized caching
- Dynamically add or remove cache servers at run time
- Ability to keep data in a separate process

session storage, per se, they have their custom session object implemented in the application. Part of the custom session object is stored in NCache for a certain amount of time with the cache validity for up to a minute. After which it expires and invalidates itself and then refreshes again from the database.

## About Alachisoft:

Alachisoft, a California based company provides NCache and StorageEdge. NCache is an in-memory distributed data cache that lets you cache application data and ASP.NET Session State to boost your application performance and scalability. StorageEdge speeds up SharePoint by externalizing BLOBs and caching BLOB and list data.

Visit our website at [www.alachisoft.com](http://www.alachisoft.com) or send email at [sales@alachisoft.com](mailto:sales@alachisoft.com).

You can download a free 60 days fully working trial of NCache from here: [www.alachisoft.com/ncache](http://www.alachisoft.com/ncache)

### Alachisoft

2410 Camino Ramon, Suite 175  
San Ramon, CA 94583

Phone: (800) 253 8195  
Intl: +1 (925) 236 3830  
UK: +44 20 7993 8327  
Fax: +1 (925) 886 8361

Sales Email:

[sales@alachisoft.com](mailto:sales@alachisoft.com)

Technical Support:

[support@alachisoft.com](mailto:support@alachisoft.com)