



NeTraverse Win4Lin Terminal Server enables Windows Applications on Sun Ray Thin Clients

"It is essential for Siceroo to provide a stable environment for existing educational software on the Sun/Linux platform. NeTraverse provides the ideal solution that makes this a reality."

Ivar Janmaat, CEO, Siceroo

SOLUTION OVERVIEW

Company

Siceroo, a systems integrator in the Netherlands, implements IT solutions for thousands of primary and secondary schools. Their mission is to provide cost effective solutions for educational institutions throughout their country.

Challenge

Schools need access to education applications written for Windows. However, they are limited financially, and by a lack of localized technical staff.

A Citrix Alternative

Siceroo looked at a number of thin client computing solutions including Microsoft based Citrix to solve these problems. However, the flexibility and performance of the Linux based NeTraverse Terminal Server made that solution a clear-cut favorite.

NeTraverse Solution

The reason NeTraverse excels in this situation and others is the fact that the technology is hosted on the robust and infinitely configurable Linux server operating system. Additionally, the ability for technical staff to access the systems remotely allows Siceroo to leverage technical staff. Centrally located staff can support a number of installations from one point. This allows Siceroo to economically service a large number of systems with less overhead.

Zodiac is Siceroo's answer to the schools' needs for a low cost, dependable computing solution. Zodiac is Siceroo's thin client approach to desktop computing, which works well because it not only offers a highly available, scalable, desktop environment but also allows systems to be remotely managed. For primary schools this is a great advantage as system management problems are an important reason for not integrating computing solutions in the daily lessons.

System Architecture

Students in the Netherlands utilize a number of educational applications written for Windows. Zodiac delivers these applications via a thin client-computing model. Windows applications are deployed from a central Linux server that has been enabled to run Windows applications thanks to NeTraverse's Win4Lin Terminal Server. The terminal's that the student's use are Sun Ray thin client terminals that allow students to access their work via a smart card. This smart card let's them pull up their work at any Sun Ray desktop be a workstation or their teachers desk.

NeTraverse Win4Lin Terminal Server is the component that enables these applications at a very reasonable cost, while Sun Ray technology from Sun Microsystems provides multimedia thin client desktops with state of the art features and seamless administration. Siceroo's Zodiac has integrated a winning combination with these products..

Configuration

Ivar Janmaat, President of Siceroo, is responsible for the deployment of these systems in Dutch schools. A typical school's configuration consists of a single Linux server, together with a Sun Ray setup for 15-50 concurrent users. Smartcards are used to maintain Win4Lin desktop state on the Sun Rays, allowing students and teachers to instantly enable sessions on different clients by simply transferring the smartcards. NeTraverse Win4Lin Terminal Server also uses advanced network-based audio to take full advantage of the Sun Rays' multimedia capabilities.

Why NeTraverse was the best solution: Citrix Alternative

Siceroo did not come to the decision to use a Linux solution lightly. They investigated a number of different architectures including a Microsoft Citrix but NeTraverse Terminal

Server was clearly superior because of the following points:

- Good audio/video/animation synchronization.
- Good video performance. WTS showed 2D panorama views in Encarta and 3D CAD/CAM applications. With Citrix this is unusable slow.
- Almost full Windows 95/98 compatibility is important for educational software which is written for Win3.1/95/98 because a lot of this software will not run on Windows NT or 2000 and thus not on a MS Windows Terminal Server.
- Separation between the running windows sessions so that application A can be optimized one-way for and optimize Windows can be configured differently application B. With Citrix this is not possible because all applications share the same windows environment. This means that application A might work on Citrix and application B might work on Citrix but application A and B can not work together on Citrix because they need conflicting environments (.dll versions etc.)
- Easy distribution of software utilizing Linux scripting tools.
- The ability to install plain windows without an application. Schools can then install there own applications. Since this plain windows version is totally separated from the ones we support they are free to do whatever they like with it. With Citrix you cannot allow this. Citrix Metaframe / MS terminal server is a shared environment so they could corrupt our supported applications simply by installing some software.

Summary

The solution has become a model for how schools with very limited resources, a large number of users and shared workstations could deploy affordable computing systems. This solution works well because it's highly available and configurable which would allow it to expand beyond the bounds of an education setting. Call centers, and other large groups of knowledge workers could benefit from this solution. Anywhere a workstation is shared it would be ideal to utilize Sun's smart card authentication to pull user files and configurations from the server. Also, the increased stability of this type of system would yield productivity results and decrease computer downtime.