

The world's largest virtual desktop project

Brazilian Ministry of Education

Overview

When the Brazilian government set out to expand computer access in its schools, they had a broad and important set of goals. Based on the knowledge that improved computer access in K-12 schools and post-secondary institutions leads to a more skilled workforce, a narrower “digital divide”, a more diversified economy, and wider participation of all citizens in the knowledge-based economy, the government set a plan in motion. For the long term, to have an entire workforce educated and trained with information and communication technology; and within the next five years, to make computer access a part of everyday life for a growing generation of Brazilian children.

To make these goals feasible, the Brazilian Ministry of Education needed to deploy the most cost-effective desktops possible in their computer labs.

Userful's in-country partner in Brazil, Thin-Networks, and through their extensive reseller network, Positivo, Itaotec, and Daruma proposed a low-cost, high performance Linux desktop solution that allows five students to work at the same time on a single Linux desktop computer -- with the PC-sharing hardware and software costing 60% less than a traditional PC-per-seat solution. Each student has their own monitor, keyboard and mouse with a full desktop experience and access to all the necessary educational applications.



The Challenge

The Brazilian Ministry of Education used strict performance and testing criteria, including a regimen of pilot testing in various rural areas and urban centers, which clearly outlined specialized requirements that would have to be met for success. The Ministry of Education faced many daunting challenges. They needed to:

- Deploy and manage desktops in multiple educational sectors spread across a wide geographic area
- Maximize their IT budget for computers, software, maintenance and support
- Reduce software licensing costs
- Reduce the expense and downtime of battling computer threats such as: viruses, malware and hackers
- Minimize the amount of electricity used
- Reduce e-waste and pollution

“Our goal is to bring information and communication technologies (ICTs) to 45,000 schools by 2010, and they will serve about 60% of 2.7 million students.”

- Ronaldo Mota from MEC

Quick Facts

Low Total Cost of Ownership

Compared to a traditional one PC per seat model, a virtualization solution with Userful and Linux software saved an average of 66% in hardware, electricity and support costs over one year for the Brazilian Ministry of Education.

66%
SAVINGS

Userful
Solution

Traditional
Solution



The Brazilian government saved **147,000,000 KWh** of electricity, which is enough to power **81,000 homes** for a year.

250,000 tons of CO₂ was saved, which is equal to planting **60,000 acres of trees** or taking **41,000 cars** off of the road for one year.



Increased Access to Technology

Userful Multiplatform software creates multiple high performance desktop stations, and other digital displays, from a central computer. Userful Multiplatform not only saves money, it also helps the environment by reducing electricity use and e-waste.

“Thanks to this project we will be able to provide information technology access to almost every single Brazilian student. It’s only the beginning of a cycle for children, teenagers and adults that will be socially integrated from now on.”

- Luiz Claudio Ferreira, ThinNetworks President

In addition to these challenges -- which are faced by all school districts around the world -- the Brazilians faced unique infrastructure challenges. The deployments included remote schools in indigenous villages where infrastructure is minimal, electricity is unreliable, there is little physical space, and roads are impassable by car.

The Solution

Useful, ThinNetworks, and the large system builders Positivo, Itaotec, and Daruma came together to provide a low-cost, high-performance computing solution: one computer powering five independent workstations. Positivo, Itaotec, and Daruma provided the PC’s, and ThinNetworks provided the video cards, audio hubs and the heart of the project -- Useful software.

The Brazilian Ministry of Education chose the free Linux operating system as the platform, calculating the projected long term benefits this choice will bring to the Brazilian economy. With access to thousands of high quality software programs specifically suited to the management and education of K-12, teachers are easily tailoring curricula to individual students from a young age. Students are developing digital skills that will help them with their school work and prepare them for jobs in the future. Because there are no licensing fees or restrictions on open source software, students are also continuing to learn, explore and utilize software programs at home. This has allowed families to be more involved in their children’s education.

On average, schools using Windows in Latin America have reported spending 40% of the value of their computer purchases on software licensing fees. Embracing Linux and open source software frees up this spending so that schools and ministries can provide more students with computer access for the same budget. Virtually every Windows application has a free equivalent for Linux and because of the stable and secure design of Linux, less intervention by IT support staff is required to resolve virus issues and keep the computers running properly. Selecting Linux not only ensures lower deployment costs, but also sows the seeds for a future local ICT economy that isn’t locked-in and dependent on a foreign monopoly.

The Results

35 million students in over 50,000 schools throughout Brazil are now enjoying 523,400 new computer stations, in what has become the largest digital inclusion project in the world. Compared to a traditional PC-per-seat solution, the Brazilian Ministry of Education is saving 60% in up-front costs, 80% in annual power savings, additional savings in ongoing administration and support costs, and five years down the road only 1/5th the number of computers will need to be upgraded. In many of these schools, the substantially reduced infrastructure requirements of Useful software made it possible to deploy these labs without upgrading wiring in the school, achieving even further savings over traditional approaches.

Greatly reducing technical costs has allowed for significant expansion of this project. Hundreds of thousands more desktops are being deployed with Useful in Brazilian schools. The success of this project has shown how even populous and geographically large countries like Brazil can create great and long-lasting positive results from well-orchestrated digital inclusion initiatives. Other countries are following Brazil’s lead and are taking advantage of Useful’s ability to turn one computer into many.



Useful Corporation is a leading desktop virtualization software company that makes it simple and affordable for organizations to implement and centrally manage virtual computers, from desktops to touch screens and beyond, with exceptional performance. Useful is the trusted provider of over 1 million virtual desktops in over 100 countries.

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