Introduction

This document analyzes the specific challenges when managing user workstations at educational organizations and the benefits obtained by adopting and implementing a desktop virtualization platform with UDS Enterprise.

Education, a complex environment

The educational environment is a complex environment on IT level, possibly more than many other critical business platforms.

An educational campus (high schools, universities, business schools, etc) needs to deploy hundreds of applications and user workstations to provide service to the teachers, the students and its own administrative staff.

Furthermore, there must be multi-disciplinary classrooms where different courses are taught, with completely different software that needs to be ready in a very short period of time.

Many of the tools used in Education are Open Source, which generally means that they will require the deployment of user workstations with Linux OS in its different versions.

Likewise, there are tons of different platforms that the user must access for their learning activities (laboratories, office environments, specific software for different courses, etc).

With the high rotation of different users through the same workstation and the use of different workstations by a single user, it is very complicated to guarantee the stability and operation of different systems.

Another characteristic of this type of environments is the heterogeneity of the authentication systems adopted by the different organizations.

Facing challenges with UDS Enterprise

Thanks to UDS Enterprise and its differentiating features, it is possible to face all of these challenges in an effective, simple and cost-effective way:

Native Windows and Linux desktops support. [1]

Multi-hypervisor. UDS Enterprise is capable of managing and deploying, from a single console, VDI platforms or IP services on different hypervisors simultaneously[1]

[1] *With these two functionalities, any educational organization can use different platforms for deploying virtual desktops, with students and teachers accessing the different educational tools available in the university campus and guaranteeing access to PCs in the administrative environment of all the staff. The use of different hypervisors allows optimization of hardware, administrative and economic resources.*
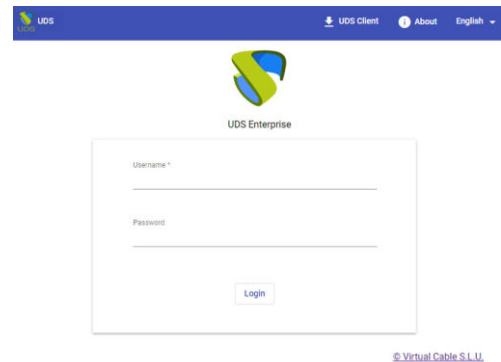
Multi-authenticator. UDS Enterprise allows you to assign virtual desktops to users and user groups from various sources at the same time and with a practically unlimited number of configurations [2]

Creation of users, groups and meta-groups. The metagroups are used to allow users who belong to several groups with the same name within the organization to connect to virtual desktops [2]

Authentication system based on connection device. UDS Enterprise enables the assignment of virtual desktops to specific connection devices depending on their IP address, providing the system with great flexibility [2]

[2] These three UDS Enterprise characteristics allow us to define different criteria for assigning virtual desktops, for example:

- By connecting classroom
- By course
- By user type (faculty, students, administrative staff)
- By educational organization. It is possible for an educational organization to allow students from other organizations to access virtual desktops without registering the student in its authentication system

Multi-protocol. UDS Enterprise permits connection to virtual desktops or resources with static IP (physical or virtual) by using different connection protocols and with the possibility of enabling them simultaneously. [3]

[3] *The support of multiple protocols, depending on the characteristics of the assigned virtual desktop (applications, target remote device and the characteristics of the connection network), will allow to specify which connection protocol you will use, allowing you to choose between licensed and non-licensed, with the consequent cost savings, consumption of resources, consumption of bandwidth, etc.*

WAN Security Access SSL. UDS Enterprise makes secure connections to virtual desktops via tunneler, without requiring a heavy client, third-party products or product modules with additional costs. [4]

User access from any web browser and OS without requiring client software, through connection plugins. The access may be made using RDP via HTML5. [4]

[4] *These UDS Enterprise characteristics guarantee connection to the deployed desktops from any device and virtually any location.*

Unlimited configuration possibilities. UDS Enterprise incorporates an additional module management system and the definition of configuration variables on two levels:

- Definition of configuration variables at system level [5]
- Definition of independent module configuration variables [5]

Possibility of tool customization via personalized development in a simple, quick and effective way. [5]

Easy integration with third-party software. [5]

[5] *Thanks to these functionalities, UDS Enterprise can be easily integrated with different educational platforms, which will allow us to:*

- *Integrate with LMS (Learning Management System) platforms*
- *UDS Enterprise currently integrates with Moodle, the most used Open Source learning platform in the world, through the PC Virtual Plugin*
- *Integration with OpenGnsys, an Open Source software for classroom management*
- *Integrate with different connection devices*
- *Plan the deployment of virtual desktops according to classrooms, temporary courses, etc*
- *Reservation of virtual desktops*

Case studies

Emilia Quereda Escoriza, Head of the Teaching Support Area - Information and Communication Technologies Service (ICT), University of Almería:
"Thanks to UDS Enterprise our students can access remotely the computers in the IT rooms where the licensed software is installed."

Victoriano Fco. Giralt García, ICT Director of the University of Málaga:
"Moodle is the first LMS platform with access to VDI, vApp and remote devices thanks to the UDS Enterprise Virtual PC Plugin."

Miguel Rueda, Computing and Communications Service Area Director at the University of Sevilla:
"We were looking for new, sustainable DaaS models with an Open Source base that could easily be integrated into our digital ecosystem."

Manuel de la Villa Cordero, IT and Communications Manager:
"UDS Enterprise ensures a secure connection, encrypting all the information that travels from the student's device to the physical computer located at the University."

Julio Álvarez, Head of Systems of the Technical Unit of Computer Support of the UAM:
"We wanted to deploy Linux desktops and UDS Enterprise was the only VDI solution that allowed it."

Antonio Serna, Responsible for Open Access Classrooms (ALAS) of the University of Murcia:
"With UDS Enterprise, deploying a classroom is much simpler and more homogeneous for IT, it can manage hundreds of machines from a central point."

Abelardo Belaustegui, Coordinator of Systems and Central Infrastructures of the Computing Area of the University of Cádiz:
"VDI is a revolutionary concept and UDS Enterprise brings drastic simplicity and savings of resources."

Iban Maruri, Head of the Systems Department of Lea Artibai Ikastetxea:
"We are saving costs and reducing IT work; now IT workers have an easy and simple VDI tool."

Support and professional services

Virtual Cable sells UDS Enterprise through a subscription model based on number of users, including product support and updates.

Additionally, Virtual Cable offers professional services to install and configure UDS Enterprise

For further information visit www.udsenterprise.com or email us at info@udsenterprise.com