

CaLa vCE (virtual campus environment) Extended description

1. Server

- OpenSource (Apache - Tomcat): The vCE user interface runs on a webapplication server supported by a worldwide used apache- and tomcatserver.
- Novell eDirectory: Useradministration and distribution of policies are realized by using a platform independent directory service - LDAP acts as the connector.
- Dynamical User Interface: vCE can be started by any known webbrowser.
- Supported Server Platforms: Novell Netware from version 6.0 on, Novell Linux Open Enterpriseserver 1 + 2

2. Client

- On each workstation a vCE - client will be installed. This client runs operations, adjusted by the teacher or administrator, like internetaccess, enabling printers, lock and unlock desktop and keyboard, CD/DVD - device, diskdrive and remote - control - operations.

3. Aministration

- During installation objects will be automatically applied in eDirectory. Denomination of objects, such as schoolcenters, classes, projects, courses, etc., is arbitrary.
- Intelligent import of users: Lists of classes of the school administration can be imported. User - accounts and passwords with corresponding rights will be automatically distributed. Each pupil obtains a personal home account, devided in a fileaccount with read and write rights and an account for master copies with read rights. Additionally an email - account with an own adress can be generated. At the turn of the year graduates will be deactivated or cancelled, the shifting in the next class automatically performed and new pupils added to the system. Personal home accounts still persists.
- Class folders are automatically generated and related pupils given appropriate rights.
- To add pupils later by teachers and administrators is easily possible.
- Registration of pupils on their own: Pupils can register themselves as well by completing a form , this registration will be activated by teachers or administrators.
- Teachers and administrators are empowered to control which pupil is using which workstation.
- Courses/projects: Pupils from different classes can be alloted to one or more courses/projects by a teacher, who wants to work with them.
- All user specific settings, such as the password, can be directly administrated in vCE. No further tool is necessary.

4. Reservationsystem

- In order to work with a certain class or a course/project a teacher needs a reservation. Time of reservation mostly is adjusted to the schedule. At the outset of planing schedules the reservation, even of courses or projects, can

be fixed for the whole school year, but can be easily changed as well. During reservation a teacher can define which applications and services can be used by pupils. After the reservation ran out all settings will be reset to the predefined standard configuration. Thus an accumulation of rights and an overlapping with other teachers are avoided. An existing reservation can easily be taken over by another teacher in case of illness. The reservation can be extended three times for five minutes as well, without blocking the whole next lesson.

5. File management

- Data packet: In order to distribute data packets to single pupils or to whole classes the teacher has to create in vCE a data packet. A data packet can contain single files or whole folders. Via drag & drop the data packet can be easily fit with components by the started file manager (Windows - Explorer) of any source. The compiled data packet will be saved in an own folder on the server. While distribution the data packet will be shifted into the master copies account of single pupils or the class/course/project exchange account. The results are saved, after being collected, in a subordinate folder called "results". Each data packet can be distributed as often as you want.

6. Testbed

- In vCE you have the possibility to perform a test with selected pupils or the whole class. For each test an own test folder will be started on the server. The testperiod depends on duration of reservation. While creating a new test each pupil obtains an own test account (login: test_username). The password will be individual or global assessed. Within the test each pupil gets a new home account in such a way as to disable them to access their normal home account, other resources or devices. While starting the test pupils are automatically logged out and their standard user accounts will be disabled. After expiration of the test pupils will be logged in in their standard user account, which possesses validity again. During the test all features can be used as well, like distributing data packets, assign applications and enable/disable devices. Settings will be reset after the test as mentioned before. No access by pupils is possible after the test to recall test data. Every data packet of the test will be saved until you delete test data by hand, in order to avoid loss of test results.

7. Application administration

- The complete application administration is realized by ZENworks for desktops. Applications can be locally installed or installation can be started from server. Available applications will be directly implemented by ZENworks into eDirectory.
- Assign applications: Teachers can assign applications, administrated by ZENworks, via vCE single pupils or whole classes. The on each client installed ZENworks - agent provides, that every pupil can start now the assigned applications in his Novell Application Launcher (Part of ZENworks - agent).
- Software distribution: Assignment of applications can be combined with a complete installation of software. Thus it is possible to install programs

absolutely unattended by users on a client. This installation takes only one-time place and will be protocolled. Henceforward this program is available for all workstations.

8. Printer administration

- Printer administration is realized by Novell iPrint. Each printer will be saved as an own object in eDirectory. The on each workstation installed iPrint - client facilitates the assignment of different printers to pupils, whereas the complete drivers will be installed while assigning. Teachers can control or cancel over vCE printing tasks or disable the print function.

9. Internet access

- Internet access is controlled by the vCE - client. Thereby a local proxy - service, installed on each client, is switched on or off.

10. Workstation administration

- By means of ZENworks all clients are imported to eDirectory. All policies are configured in ZENworks - administration. Via vCE these policy - packages can be assigned to the clients.
- A global logout of pupils and/or reboot of workstations is wholly realized by vCE.
- New installation or autorecovery of workstations is integrated in vCE by using ZENworks imaging. Thus teachers have the ability to install single clients or whole classrooms by themselves. They can use up to five different images, which the administrator makes available. All images are saved on the server. If a new installation of a client has been completed the ZENworks - agent provides the workstation to retrieve the original client name.
- Combined surroundings, normal fat clients with terminal - clients, are possible.
- For each workstation a protocol of users will be compiled including time of login and logout.
- Seating plan: Each workstation will be graphically shown in a seating plan. The room layout is arbitrarily. Teachers can see which pupil uses which client in this plan.