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A short guide to the installation of CVW under Linux

About the author:

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Abstract:

CVW (Collaborative Virtual Workspaces) is one of the finest open source tools available for the development of virtual education. This article describes the process of installation and running in Suse Linux Professional 8.0.

Further development on the original Cvw is not taking place at this moment but the software is currently beeing translated to Spanish and is of course used in the courses at Universidad Santiago de Cali in Colombia. As of the writing of this article there are about 600 users of Cvw at the university.

Translated to English by:
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What is CVW?

CVW (cvw.sourceforge.net) is a collaboration software environment written mainly in Java, that provides a "virtual building" where teams can communicate, collaborate, and share information, regardless of their geographic location. With CVW the interactive possibilities of the net can be used in virtual spaces where the people gathers to learn, interact, discuss, share information, using a series of friendly tools. CVW has been developed by the Mitre Corporation and is completely Open Source.

Why we choose CVW?

The GIEV group at Universidad Santiago de Cali in Colombia, has been working for several years in researching new platforms and virtual environments that allow an easy integration with the existent education methods. After several testing of commercial software we began to look for in Open Source development and discovered CVW. It has all the main elements that we were looking for, so we decided to try.

CVW is not easy to install, as we soon discovered. In the next lines I'll describe the process to put running this wonderful platform on Suse 8.0.

We used an IBM Netvista machine to use as server for this software. The machine has a Pentium 4 at 2.0Ghz, 256MB Ram and 40G Harddrive, connected to the University network. The Suse installation went clean, only the video give me some trouble (an integrated Intel 845), but with a kernel compilation the video was soon running well (1024x768 at 24 bits).

Step by step

The first step is to download the software from the project website:

We need to get the following applications:

- CVW server
- CVW document server
- CVW client

There is also the CVW Federated server available which applies only to a cluster of CVW servers.

First install the CVW server. We untarred the file in /opt/CVWserver and created an user to run it. The script to run the server is

```
./cvw.boot start
```

And to end the execution:

```
./cvw.boot stop
```

The software recommended to create an user, we created the user cvw and gave it the rights on the directory. When you look at the script file (cvw.boot) you must enter some data like the installation directory and, the most important, the TCP port where CVW will check for client connections. By default the assigned port is 8888. You only have to add it in the /etc/services script. The only thing that you must change when installing under Linux is the line that fixes the maximum number of clients, by default is unlimited, but in Linux this will cause the service to crash.

When you connect with a browser you will be greeted with the following message:

```
<!--YourMOO-->
<!--
Welcome to the Collaborative Virtual Workspace.
This is version 4.0.2 of the CVW core.
If you are not using a CVW client ...
type: connect username password
to connect as an existing user
type: quit
to disconnect
-->
I don't understand that. Valid commands at this point are
Help, COnnect, or Quit
```

This means that our server is ready to serve any client. The second step (and the most painful) is to install the document server.

Untar it in /opt/cvwdocserver and look at the README file. Now it is time to make your first decision.

The CVW docserv uses Mysql as database and Tomcat (an Apache Java utility) to handle all documents stored in the virtual workspace. The tar.gz file includes a jakarta/tomcat directory and a complete mysql installation (3.23.27-beta)

We don't like beta versions and Suse had a newer jakarta and mysql versions that were running fairly well, so we decided to adjust it to the docserv requirements. With mysql there were no problems, we only move the database file to my existent installation (/var/lib/mysql). The real problem came with the Tomcat configuration. Trying to adapt the existent jakarta to the configuration of CVW's tomcat was a headache, because the commands were located in different parts, so at least we decided to run the included Jakarta/Tomcat.

But you must change several thing in order to get a running application: we left the jakarta/tomcat directory under my docserv tree (/opt/cvwdocserv). In your apache configuration file (/etc/httpd/httpd.conf) you must add a line pointing it:

```
Include /opt/cvwdocserver/jakarta/tomcat/conf/tomcat-apache.conf
```

Now to the tomcat-apache.conf file. You have to give the exact address of the jserv module in apache

```
LoadModule jserv_module libexec/mod_jserv.so
```

Also you must indicate the correct address of your tomcat installation and the port to listen (my choice was 8007, after several trials):

```
ApJServDefaultPort 8007
AddType test/jsp .jsp
AddHandler jserv-servlet .jsp
Alias /examples /opt/cvwdocserver/jakarta/tomcat/webapps/examples
<Directory "/opt/cvwdocserver/jakarta/tomcat/webapps/examples">
Options Indexes FollowSymLinks
</Directory>
ApJServMount /examples/servlet /examples
<Location /examples/WEB-INF/ >
AllowOverride None
deny from all
</Location>
Alias /test /opt/cvwdocserver/jakarta/tomcat/webapps/test
<Directory "/opt/cvwdocserver/jakarta/tomcat/webapps/test">
Options Indexes FollowSymLinks
</Directory>
ApJServMount /examples/servlet /examples
<Location /examples/WEB-INF/ >
AllowOverride None
deny from all
</Location>
Alias /test /opt/cvwdocserver/jakarta/tomcat/webapps/test
<Directory "/opt/cvwdocserver/jakarta/tomcat/webapps/test">
Options Indexes FollowSymLinks
</Directory>
ApJServMount /test/servlet /test
<Location /test/WEB-INF/ >
AllowOverride None
deny from all
</Location>
ApJServMount /servlet /ROOT
```

Once this is done, you must change the docserver script, cvwds.boot that use the same arguments as cvw.boot (start | stop). We only changed the local directories for the docserver and the database and commented the line that shuts down the mysql server (because we have our own databases running).

Also you must check that the .jar files inside the webapps/app directory must be there and not in subdirectories.

If you are lucky you are almost done.

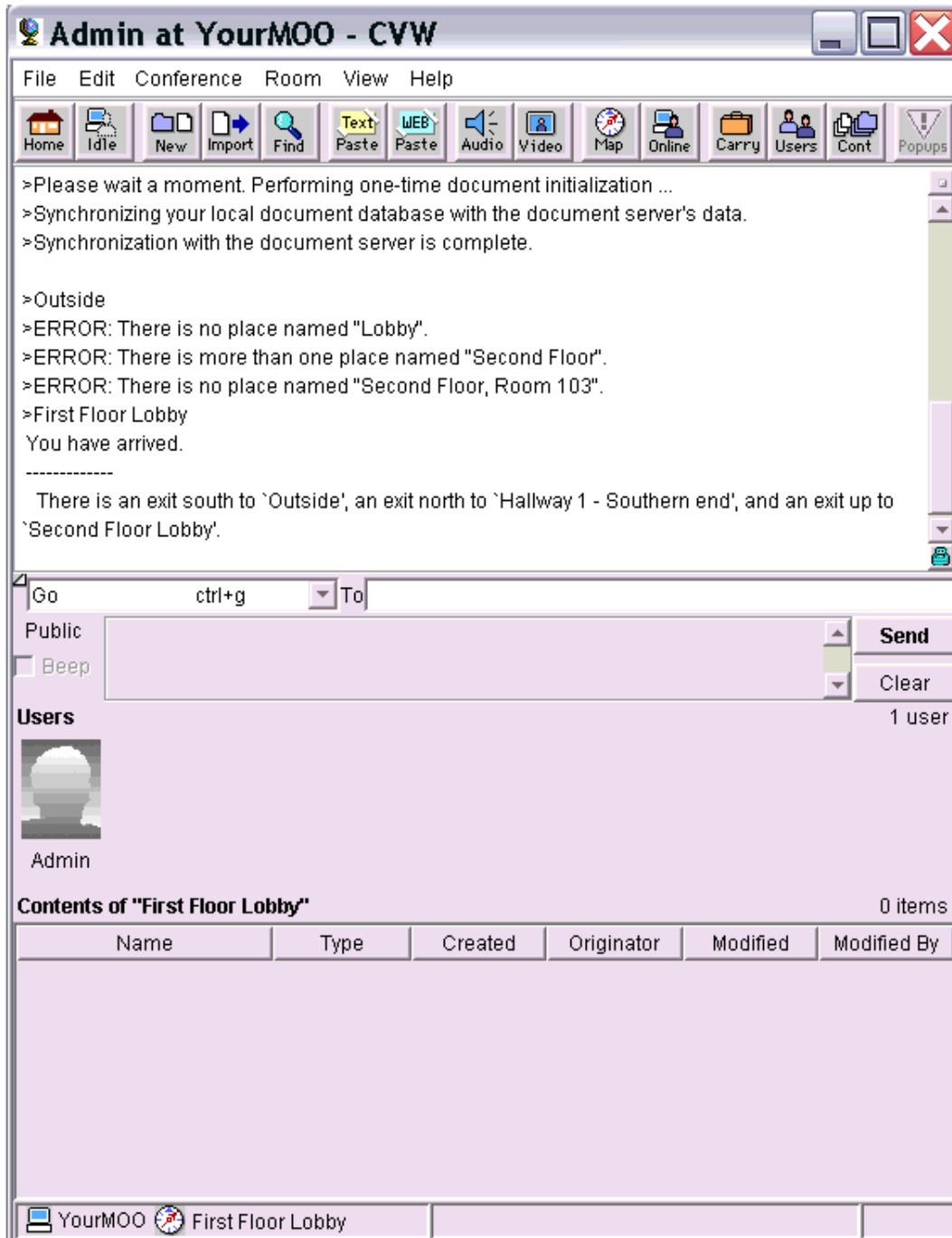
The final step is to untar the client file. We did it under /opt/CVWclient/. The script with all the needed data is called server.cvw, in my case the lines that we modified were the following:

```
# Property file for CVW
#
cvw.server.host=cvw
cvw.server.port=8888
cvw.server.name=cvw
cvw.docserver.host=cvw
cvw.docserver.port=8080
cvw.docserver.url=/app/docservlet
cvw.version=4.0
cvw.debug=true

#####
# User Images
#####
#this url must end with a /
cvw.userimages.url=http://localhost/cvw/user-images/
```

The cvw.docserver.url is key... we don't know why the original points to another direction and you discover after several trials that this is the **MOST IMPORTANT** line to get access to your docserver.

At this moment you are ready to enter the first time to your CVW server. For your first login you will enter as "Admin" with no password.



Now you can change your password under "File" and use the Admin Tool under "View".

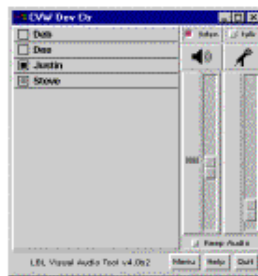
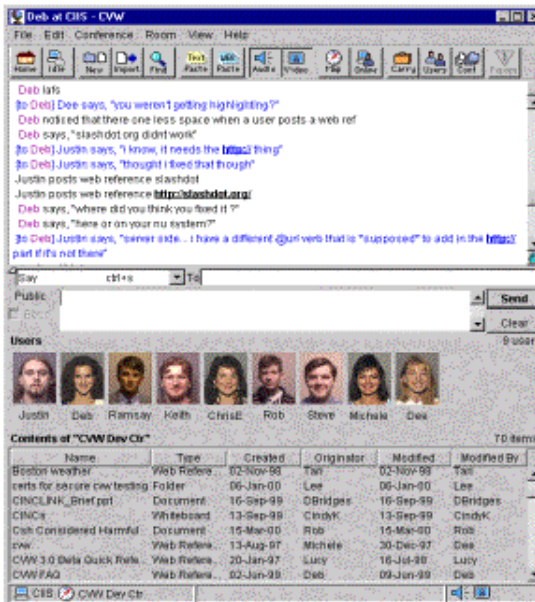
As the menu shows, there's a lot of tools available and that make this application a reference in virtual education.

CVW Client Interface

Text
Chat

Users
in Room

Shared
Data



Audio
Conferencing



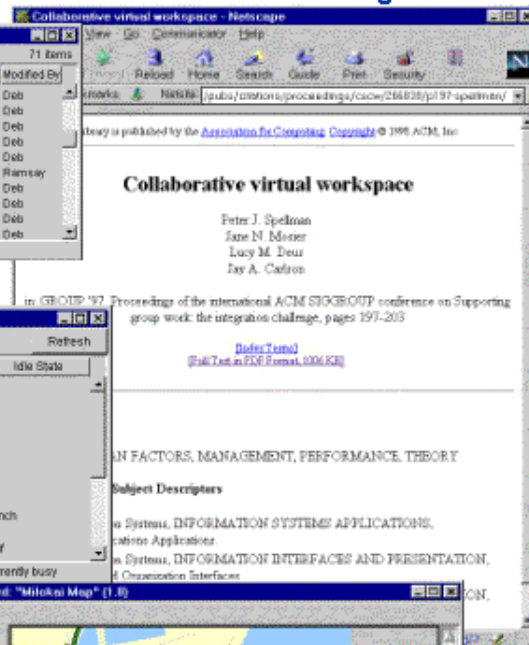
Video
Conferencing

Private Data



Name	Type	Created	Originator	Modified	Modified By
new logo on cwm.mbr...	Whiteboard	13-Dec-99	Deb	13-Dec-99	Deb
new logo2	Whiteboard	14-Dec-99	Deb	14-Dec-99	Deb
CWW Open Source	Web Refe...	07-Apr-99	Deb	07-Apr-99	Deb
CWW Use at MITRE fin...	Document	07-Apr-99	Deb	13-Aug-99	Deb
CWW-Edsinal MITRE	Web Refe...	08-Apr-99	Deb	08-Apr-99	Deb
newfontprefs	Note	04-Apr-00	Ramsay	04-Apr-00	Ramsay
Deb 2nd testing Group	Group	14-Oct-99	Deb	14-Oct-99	Deb
find patch description	Note	21-Apr-99	Deb	21-Apr-99	Deb
doc serv 4.0	Folder	02-Feb-00	Deb	02-Feb-00	Deb
introduction keys on/off	Note	29-Dec-99	Deb	29-Dec-99	Deb

Shared Web Browsing



Collaborative virtual workspace

Peter J. Spellman
Jane N. Mosier
Lucy M. Deur
Jay A. Carlson

Proceedings of the international ACM SIGGROUP conference on Supporting group work: the integration challenge, pages 197-203

[\[Index Terms\]](#)
[\[Full Text in PDF Format, 100Kb\]](#)

IN FACTORS, MANAGEMENT, PERFORMANCE, THEORY

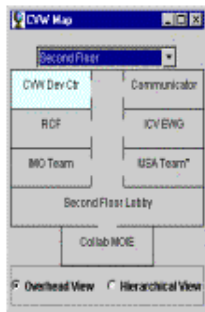
Subject Descriptors
n Systems, INFORMATION SYSTEMS APPLICATIONS, Database Applications
n Systems, INFORMATION INTERFACES AND PRESENTATION, Human-Computer Interfaces

Online Users



Name	User	Location	Idle	Idle State
Crouch, Keith	Keith	CWW Dev Ctr	active	
Ercolei, Deb	Deb	CWW Dev Ctr	active	
Richer, Justin	Justin	CWW Dev Ctr	active	
Bennett, Frank	FrankB	IBS Room	11 mins	
Kay, Ramsay	Ramsay	CWW Dev Ctr	13 mins	
Goepel, Devo	Dee	CWW Dev Ctr	17 mins	
McGillicity, Bill	Jeff	RCF	21 mins	
Eliopoulos, C.	ChrisE	CWW Dev Ctr	45 mins	
Maziarz, Jeremy	Jer	RCF	58 mins	lunch
Leslie, Rob	Rob	CWW Dev Ctr	59 mins	
Pottle, Gaucho	GMP	RCF	1 hr 38 mins	caf

20 User(s) Idle denotes user is currently busy



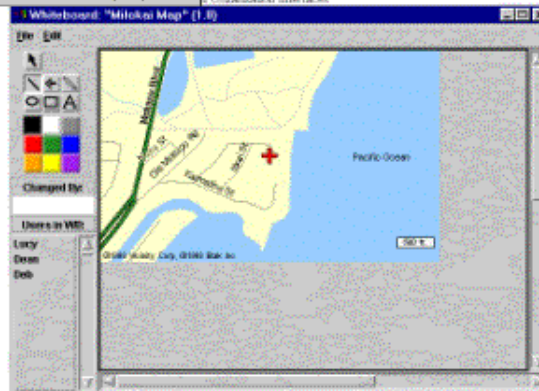
CW Map

Second Floor

CWW Dev Ctr Communicator
RCF ICVEING
IBO Team USA Team
Second Floor Lobby
Collab MOE

Overhead View Hierarchical View

Virtual Building Floor Plan



Whiteboard: "Mitaka Map" (1.0)

Map of a building with a red crosshair and various toolbars.

Shared Whiteboard

This configuration is working now in our server. You can try this utility. If you wish want information: they have a good manual in pdf.

Enjoy.

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