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What is it?

vNode (Virtual Nodes On Demand) is provides Xen instances of machines for development, integration, testing and certification

- [Public website](#)
- [CERN's vNode portal](#) - for deploying / terminating machines (limited access)
- [VNode Quick Start -- HOWTO for CERN portal users](#) (limited access)
- [Installation notes](#)
- [List of available OS images](#) (limited access)
- [vNode programming interface](#)
- [vNode CLI -- command line interface](#)
- [Toubleshooting](#)
- [vNode TODO](#)
- [Virtualization solutions comparison - Evaluation of other v12n solutions](#)

(Note: Some of pages linked above contain internal information - available only for members of SA3).

The source code is available in CERN's Subversion repository:

- [WebSVN](#)
- [trac interface](#)
- [Savannah](#)

Please note, that the vNode *service* described here is only accessible for SA3 users within the CERN firewall, while the *software* is available for public download.

Issues with CERN instance

Please submit a savannah bug [↗](#) in case of having issues / requests.

Documentation (work in progress)

Admin procedures:

how to add/remove/suspend a user

Add or remove user DNs in `/etc/httpd/conf/httpd.passwd` (server)

Where the logs are

- `[vnode installation path]/logs/vnode-server.log`
- `[vnode installation path]/logs/vnode-node.log`

`[vnode installation path]` is usually `/usr/local/vnode`.

how to clean up after a dom0 outage (planned or unplanned)

If all services were configured correctly xen will take care of the shutdown and the start of all the domains when a outage happens. Xen will look in `/etc/xen/auto/` directory for the domains to start/shutdown. If the daemons are not configured correctly then the admin has to start `xend`, `xendomains` and make sure `libvirtd` is stopped.

What routine housekeeping is needed

Make sure the `/etc/xen/auto/` only contain active domains, remove any non-existent domains, also check there aren't any zombie LVMs (both root and swap). The services `yum-autoupdate`, `xendomains`, `xend` have to be configured to start automatically and `libvirtd` must be off or this will create network problems. Also in the server there is a crontab to update the certificates and restart the `httpd`.

Saving Guest state across Dom0 reboots

When you need to reboot the dom0 machines (say a kernel update), it is possible to save the running guests on each dom0 to restore them after reboot. NB. By default vnode guests reboot on dom0 restart (due to config file in `/etc/xen/auto` which can be worked around by the following scriptlets:

- ```
for i in `xm list | grep cern.ch | awk '{print $1}'` ; do echo $i ; xm save $i $i && mv /etc/xen/auto/vnode_${i}.cfg . ; done
```
- reboot dom0
- on reboot, once xen has started (`xm list` returns OK):
- ```
for i in `ls *.cern.ch` ; do echo $i ; xm restore $i && mv vnode_${i}.cfg /etc/xen/auto/ ; done
```
- once they're all confirmed OK, remove the saved files (`rm -f *.cern.ch`)

Image creation

what scripts are available

`libfsimage` `cvs -d :pserver:anonymous@isscvcs.cern.ch:/local/repos/xenvirt/ co libfsimage`

<https://twiki.cern.ch/twiki/bin/view/EGEE/VNodeImagesCERN>

where to build images

lxfsrd0502.cern.ch ; Ask Louis for access.

how to replicate out

There is no easy way to do this, the admin has to make sure that the same set of images is in all of the dom0s.

Troubleshooting

How does it integrate with nagios / lemon / other (monitoring)

Just install and configure your monitoring system like you would do in case of any other system. This is valid for both dom0/domU.

Network

How the hostname/ip/mac is allocated (which bits are hardcoded and passed from what to what)

static hostname, with IP begin discovered by doing DNS lookup.

How vNode updates the with the correct information (ie vtb-generic-001 is on physical host XXXXX)

It doesn't. It is all static (that is why some virtual hostnames can only be deployed on some physical machines).

Legacy Links

- How to use the CTB virtual testbed
- VGrid [↗](#)

This topic: EGEE > VNode

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