

Toasters, and What's Cooking.



Virtual Machine as VistA tool

Overview of available platforms.

What we've done with them,

...and what might be done.





toolchest

coLinux

qemu

VMware

VirtualBox

kvm

Xen



VMware

Big dog



Web interface

Reconfigure when upgrade Linux

Multi-file virtual drives.

Inventory

- j1z-lenovo-x60t
 - EWD Virtual Appliance Ve
 - Generic_Jeos_Gutsy
 - M/DB Virtual Appliance V
 - OLPC XO 8.2-767 (bf)
 - openvistaHoward
 - openvistaUbuntu
 - PittsburghVMware
 - septemberopenvista
 - Ubuntu JeOS 8.04.1
 - UbuntuJuly
 - Unknown (Inaccessible)
 - XP

EWD Virtual Appliance Version 6.0 (FOSS)

Summary Console Tasks Events Permissions

Performance

Processors 1 X 0.976 GHz
 0 GHz

Memory 512 MB
 0 MB

Notes

Ubuntu 7.10 jeOS +
GT.M 5.3-000 + EWD 755 + m_apache 2.0.46

Status

Power State Powered Off

Guest OS Ubuntu Linux (32-bit)

VMware Tools Tools Not Installed

Virtual Hardware Version Version 4
[Upgrade Virtual Machine](#)

DNS Name Not Available

Target	Status	Triggered At	Triggered by	Completed At

VirtualBox



More difficult to configure network for server.

Reference

“Seamless” mode

OpenSource, (Sun => Oracle)

Can mount VMware “discs”

Toolkits differ

VISTA Sign-on

WorldVista EHR /VOE 1.0

Access is monitored and restricted.
No unauthorized access will be permitted.

IMPORTANT FOR ALL PROVIDERS:

All drugs that the provider may need must be entered into the database BEFORE THE PROVIDER PRESCRIBES THEM from WorldVista EHR. THE DRUG FILE INCLUDED HAS NOT BEEN PREVIOUSLY RELEASED. IT IS ALWAYS IMPERATIVE THAT ANY AND ALL DRUG ORDERS AND PRESCRIPTIONS BE CAREFULLY REVIEWED BY THE PRESCRIBING PHYSICIAN AND DISPENSING PHARMACIST TO INSURE ACCURACY. IF PROBLEMS ARE FOUND, PLEASE REPORT THEM HERE

INFO@WORLDVISTA.ORG
OR

<http://trac.opensourcevista.net/worldvistaehr>

Please see this link for information about entering new drugs and drug doseages:



Access Code:

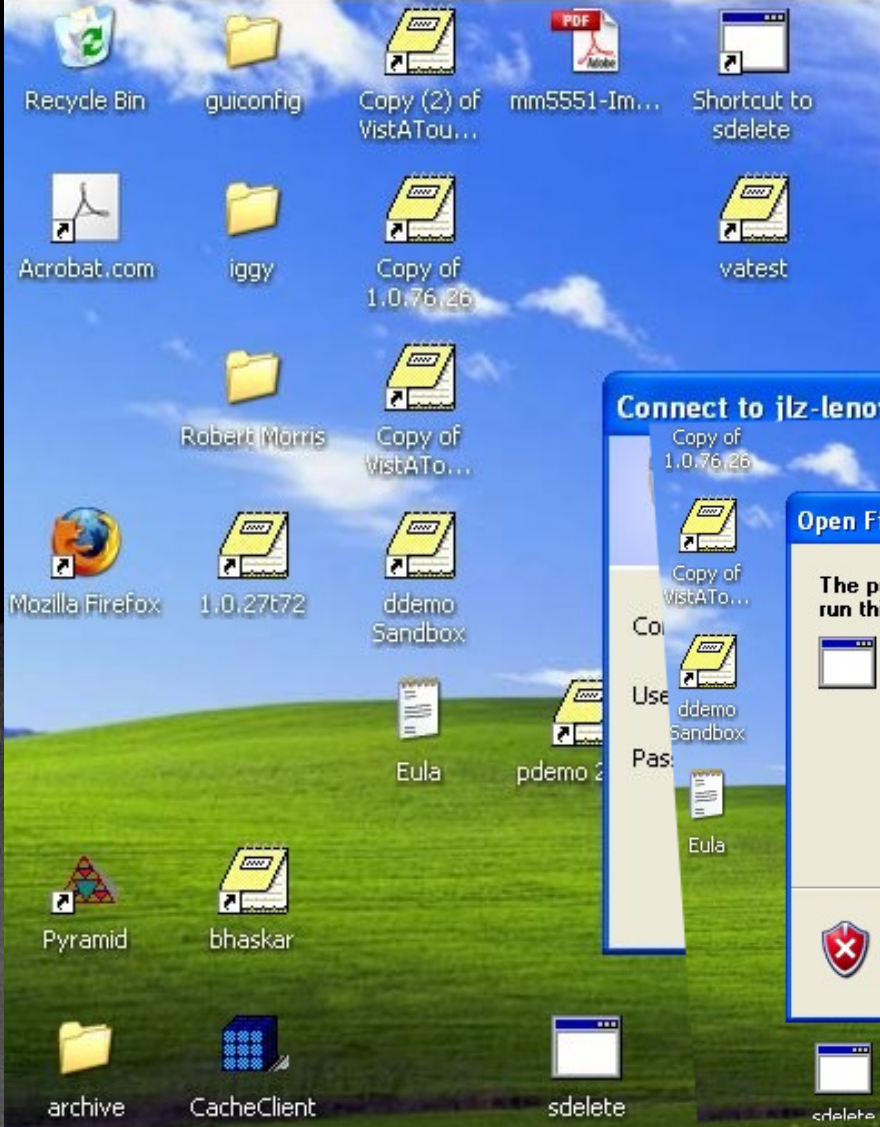
OK

Verify Code:

Cancel

Change Verify Code

Server: jlz-lenovo-x60t Volume: EHR UCI: EHR Port: 0



Connect to jlz-lenovo-x60t




Open File - Security Warning

The publisher could not be verified. Are you sure you want to run this software?

Name: CPR5ChartWVEHR-VOE1.0.exe
Publisher: **Unknown Publisher**
Type: Application
From: \\Jlz-lenovo-x60t\max\vistatour_voe\cprs

Run Cancel

 This file does not have a valid digital signature that verifies its publisher. You should only run software from publishers you trust. [How can I decide what software to run?](#)

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OK

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Change Verify Code

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OR
<http://trac.opensourcevista.net/worldvistaehr>

Please see this link for information about entering new drugs and drug doseages:
<http://worldvista.org/World VistA EHR/license-and-readme/ReadMe%20-%20Wor>

 Access Code: OK
Verify Code: Cancel
 Change Verify Code

Server: voe4slice | Volume: EHR | UCI: EHR | Port: 0

- family history
- NESinai
- Casey
- bag_3cl

- xorg.conf
- section 11.doc
- ATIVA_01

qemu



Open Source

Straightforward configuration, command line.

qemu Versatility, network



built-in user mode (default)

tap

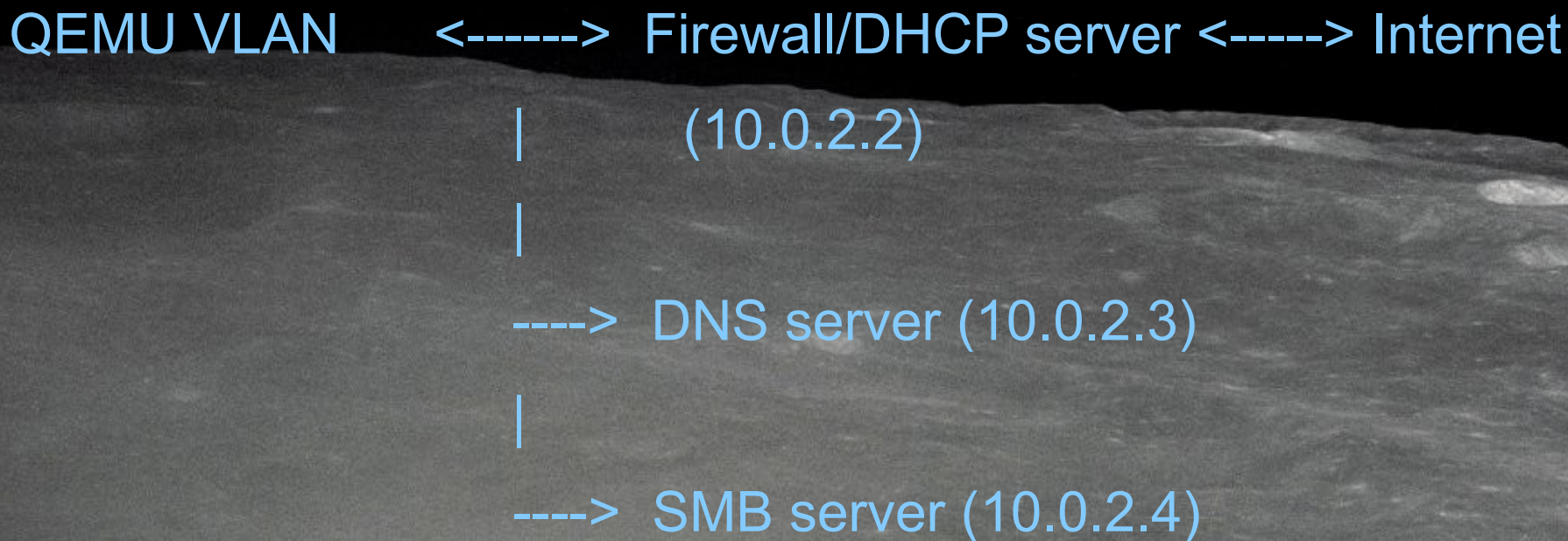
Samba

others

qemu Versatility, network



Default:



qemu network variations



-net nic[,vlan=n][,macaddr=addr][,model=type][,name=name]

-net channel,port:dev

-net tap[,vlan=n][,name=name][,fd=h][,ifname=name][,script=file][,downscript=dfile]

-net socket[,vlan=n][,name=name][,fd=h][,listen=[host]:port][,connect=host:port]

-net socket[,vlan=n][,name=name][,fd=h][,mcast=maddr:port]

-net vde[,vlan=n][,name=name][,sock=socketpath][,port=n][,group=groupname][,mode=octalmode]

-net none

-tftp dir

-bootp file

-smb dir

-redir [tcp|udp]:host-port:[guest-host]:guest-port

qemu network variations



-net nic[,vlan=n][,macaddr=addr][,model=type][,name=name]

-net channel,port:dev

-net tap [,vlan=n][,name=name][,fd=h][,ifname=name][,script=file][,downscript=dfile]

-net socket[,vlan=n][,name=name][,fd=h][,listen=[host]:port][,connect=host:port]

-net socket[,vlan=n][,name=name][,fd=h][,mcast=maddr:port]

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-net none

-tftp dir

-bootp file

-smb dir

-redir [tcp|udp]:host-port:[guest-host]:guest-port

qemu network variations



```
-net nic[,vlan=n][,macaddr=addr][,model=type][,name=name]
```

```
-net channel,port:dev
```

```
-net tap[,vlan=n][,name=name][,fd=h][,ifname=name][,script=file][,downscript=dfile]
```

```
-net socket[,vlan=n][,name=name][,fd=h][,listen=[host]:port][,connect=host:port]
```

```
-net socket[,vlan=n][,name=name][,fd=h][,mcast=maddr:port]
```

```
-net vde[,vlan=n][,name=name][,sock=socketpath][,port=n][,group=groupname][,mode=octalmode]
```

```
-redir [tcp|udp]:host-port:[guest-host]:guest-port
```

```
-redir tcp:2222::22
```


qemu network variations



- net nic[,vlan=n][,macaddr=addr][,model=type][,name=name]
- net channel,port:dev
- net tap[,vlan=n][,name=name][,fd=h][,ifname=name][,script=file][,downscript=dfile]
- net socket[,vlan=n][,name=name][,fd=h][,listen=[host]:port][,connect=host:port]
- net socket[,vlan=n][,name=name][,fd=h][,mcast=maddr:port]
- net vde[,vlan=n][,name=name][,sock=socketpath][,port=n][,group=groupname][,mode=octalmode]
- net none
- tftp dir
- bootp file
- smb dir
- redir [tcp|udp]:host-port:[guest-host]:guest-port

qemu Versatility, partitions



use a virtual partition

-hdb /path/to/some.qcow(2) ...or some.img

an actual drive

-hdb /dev/sdc

a virtual fat disc

-hdb fat:/some_directory

qemu Limitations



Maximum of 4 partitions

-hdc can be /dev/cdrom

GUI

qemu Wrappers



Qemu Launcher

Quemulator 0.5

(Windows)

toolchest

coLinux

qemu

VMware

VirtualBox

kvm

Xen



speaking of faith

28.6 GB Media

```
QEMU
Booting 'Ubuntu 8.10, kernel 2.6.27-14-server'
root (hd0,0)
Filesystem type is jfs, partition type 0x83
kernel /boot/vmlinuz-2.6.27-14-server root=/dev/s
laptic quiet splash quiet
[Linux-bzImage, setup=0x3000, size=0x22e5d01
initrd /boot/initrd.img-2.6.27-14-server
[Linux-initrd @ 0x7b10000, 0x4cf005 bytes]
[ 6.939327] pci 0000:00:01.0: PIIX3: Enabling F
Loading, please wait...
* Setting preliminary keymap...
* Preparing restricted drivers...
* Setting the system clock
* Starting basic networking...
* Starting kernel event manager...
* Loading hardware drivers...
```

Adobe Reader 8

1241845005075.
desktop

/et
Thi
val
xorg.conf

section 11.doc

ATIVA_01

SlipstreamUSA
2009 Mar 25 2of2

Qemu Launcher

Configurations Launcher settings About

Configuration name: Default settings

Configuration notes: These defaults can be modified and used as

Disks and memory Linux boot Network Hardware Emulator

Snapshot mode
 Use CD-ROM

Boot disk: Hard disk 0

Floppy A:

Floppy B:

CD-ROM: /dev/cdrom

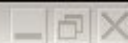
Hard disk 0: /media/max/virtual/WVEHRVOE

Hard disk 1:

Hard disk 2:

Hard disk 3:

RAM (MB): 128

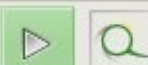


File Settings System Help



/media/max/virtual/WVEHRVOE10Release6-08Toaster4SliceMSCFM1034/WVEHRVOE10Release6-08T

Managed



Machines images and devices

My Machines Default bootimage folder Physical Drives Running jobs

Icon	System
	Name: macon_win98_II Bootimage: /media/max/virtual/win98_macon_II
	Name: toaster4slice Bootimage: /media/max/virtual/WVEHRVOE10Release6-08Toaster4SliceMSCFM1034/WVEHRVOE10Release6-08Toaster4SliceMSCFM1034.qcow2

hide settings

auto show auto hide

Stored Settings for Current selected image

Main Hardware Network Qemu Stored files Extended s

Qemu options

- Start paused
- Snapshot mode
- no acpi
- no reboot

kqemu options

- don't use kqemu
- use kqemu (default)
- use kqemu with full virtualization

Qemu run command

Show qemu command line

Qemu command line for this machine

```
qemu -hdb /media/max/virtual/
WVEHRVOE10Release6-08Toaster4SliceMSCFM1034/var_opt_slices.qcow2 -
M pc -m 256 -kernel-kqemu -redir tcp:2222::22 -redir tcp:10000::10000 -
redir tcp:10100::10100 -hdd /dev/sdc -hda /media/max/virtual/
WVEHRVOE10Release6-08Toaster4SliceMSCFM1034/
WVEHRVOE10Release6-08Toaster4SliceMSCFM1034.qcow2 -localtime -
boot c|
```

OK

additional custom qemu options -redir tcp:2222::22 -redir tcp:10000::10000 -redir tcp:10100::10100 -hdd /dev/sdc

Save

Apply to or restore from saved settings for this emu-image

Cancel

Mon Jun 8
07:42

JohnLeo Zimmer



My Computer



MSM 4.0



My Documents



Network
Neighborhood



Recycle Bin

MSM 4.0 - DOS4G

9 x 15

MSM-PC/PLUS, Version 4.0.14
 Copyright (C) 1984-1993, Micronetics Design Corporation

License...: Serial# 1012330, 8 Users
 Supplier...: M SYSTEMS PLUS
 End-User...: DR. JOHN ZIMMER
 Options...: NET, GUI

Enter startup configuration <SISTA>

Start



MSM 4.0 - DOS...

10:10 AM

conversions

qemu

Image.

VBox

Native image.vdi

Compatible image.vmdk (not multiple-file vmdk)

VMware



tool interactions



kvm \Leftrightarrow VirtualBox

Must un-install kvm-intel module to run VBox

qemu/kqemu acceleration provides good performance
so I use qemu and not kvm

Qemu also works on processors that do not

K D Bhaskar



FourSlice Toaster

PIP

%GTM-I-FILERENAME, File /var/opt/WorldVistAEHR/VOE10/clinicq/gtm_U5.3-003_i686/g/mumps.mjl is renamed to /var/opt/WorldVistAEHR/VOE10/clinicq/gtm_U5.3-003_i686/g/mumps.mjl_2009157092846

%GTM-I-JNLCREATE, Journal file /var/opt/WorldVistAEHR/VOE10/clinicq/gtm_U5.3-003_i686/g/mumps.mjl created for database file /var/opt/WorldVistAEHR/VOE10/clinicq/gtm_U5.3-003_i686/g/mumps.dat with BEFORE_IMAGES

%GTM-I-JNLSTATE, Journaling state for database file /var/opt/WorldVistAEHR/VOE10/clinicq/gtm_U5.3-003_i686/g/mumps.dat is now ON

ARE YOU SURE YOU WANT TO RESTART TASKMAN? NO// (YES)

Restarting...TaskMan restarted!

%GTM-I-MUJNLSTAT, Initial processing started at Sat Jun 6 10:41:12 2009

%GTM-S-JNLSUCCESS, Show successful

/clinicq/gtm_U5.3-003_i686/g/mumps.dat is now ON

%GT ARE YOU SURE YOU WANT TO RESTART TASKMAN? NO// (YES)

Restarting...TaskMan restarted!

%GTM-I-MUJNLSTAT, Initial processing started at Sat Jun 6 10:41:12 2009

%GTM-S-JNLSUCCESS, Show successful

%GTM-S-JNLSUCCESS, Verify successful

%GTM-S-JNLSUCCESS, Recover successful

%GTM-I-MUJNLSTAT, End processing at Sat Jun 6 10:41:13 2009

%GTM-I-FILERENAME, File /var/opt/WorldVistAEHR/VOE10/clinicq/gtm_U5.3-003_i686/g

/mumps.mjl is renamed to /var/opt/WorldVistAEHR/VOE10/clinicq/gtm_U5.3-003_i686/g

/mumps.mjl_2009157092851

%GTM-I-JNLCREATE, Journal file /var/opt/WorldVistAEHR/VOE10/clinicq/gtm_U5.3-003_i686/g

/mumps.mjl created for database file /var/opt/WorldVistAEHR/VOE10/clinicq

/gtm_U5.3-003_i686/g/mumps.dat with BEFORE_IMAGES

%GTM-I-JNLSTATE, Journaling state for database file /var/opt/WorldVistAEHR/VOE10

/clinicq/gtm_U5.3-003_i686/g/mumps.dat is now ON

[1793.765486] BUG: soft lockup - CPU#0 stuck for 1635s! [mumps:3861]

%GT ARE YOU SURE YOU WANT TO RESTART TASKMAN? NO// (YES)

Restarting...TaskMan restarted!

_i6 Ubuntu 8.10 voe4slice tty1

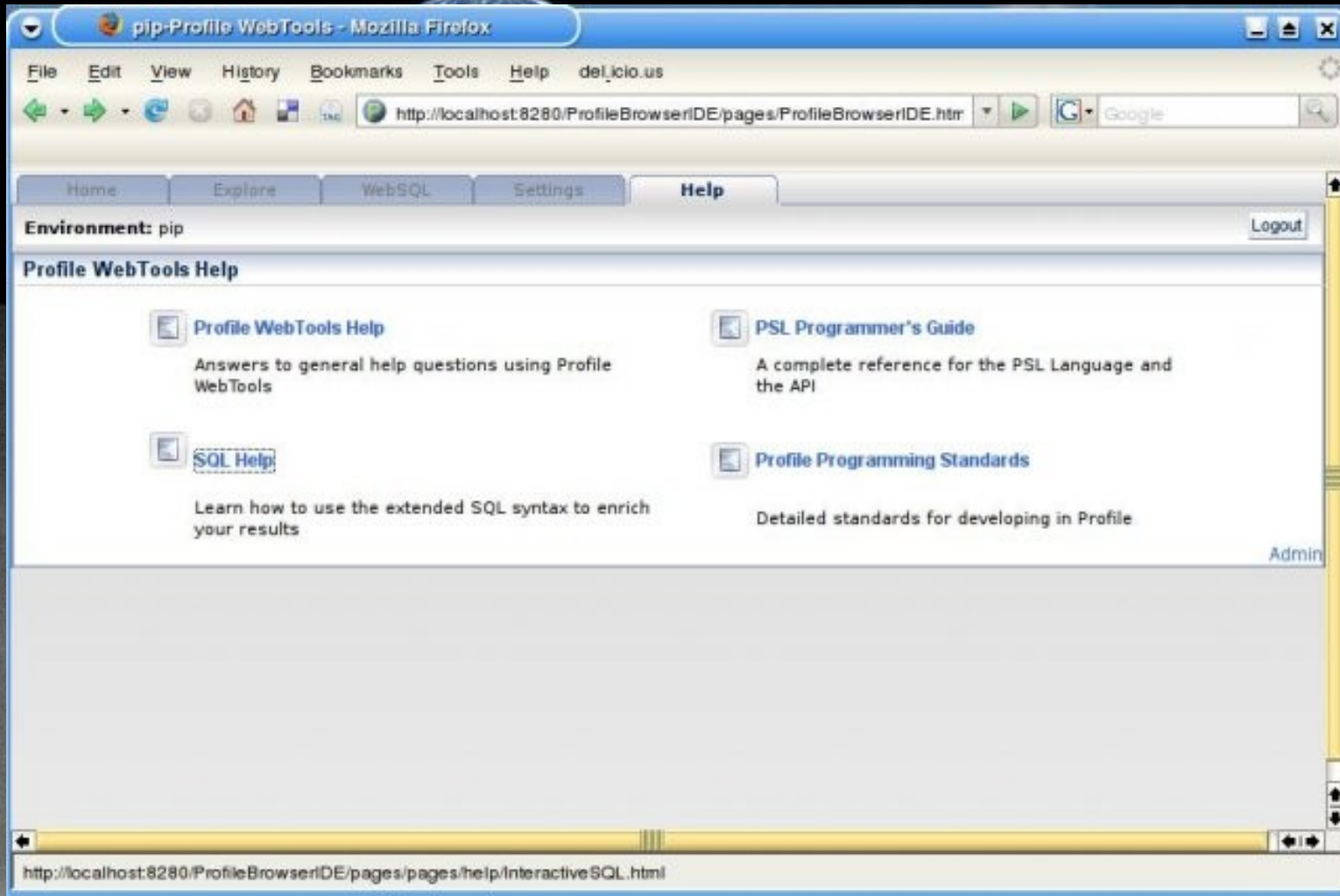
/gtm voe4slice login:

/gtm_U5.3-003_i686/g/mumps.dat with BEFORE_IMAGES

%GTM-I-JNLSTATE, Journaling state for database file /var/opt/WorldVistAEHR/VOE10

/clinicq/gtm_U5.3-003_i686/g/mumps.dat is now ON

pip



Medsphere



Ignacio Valdes



Rob Tweed



EWD

MDB

A photograph showing the Earth rising over the horizon of the Moon. The Earth is a bright blue and white sphere, partially obscured by the dark, cratered surface of the Moon in the foreground. The background is the blackness of space.

What, in the final analysis, is “virtual” ?

