Relax-and-Recover (ReaR) Automated Testing

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What is ReaR?

- A modular bare-metal disaster recovery tool for GNU/Linux written in bash with a GPLv3 license

- Integrates fluently with many other backup tools (Open Source and commercial ones)

- Is able to do cloning (v2v, p2v, v2p, p2p)

- Is able to work with complex system setups

- Scales along with large environments

- DR image can boot from ISO, PXE, USB, RAM

- ReaR is due to a wide range of options difficult to test

- Different Linux flavors are using similar tools with some minor differences :-(

- Too much to be able to test everything before a new release, and sometimes it is even not possible just because we do not have the hardware

- Is and will stay a challenge for the future...

Automated ReaR Testing

- Finding a right balance between CI Testing and Automated ReaR Testing

- Via OpenSuse Build Services we build daily a fresh ReaR package (for free)

- We have some excellent ReaR developers who do lots of coding (for free)

- Support via GitHub issues

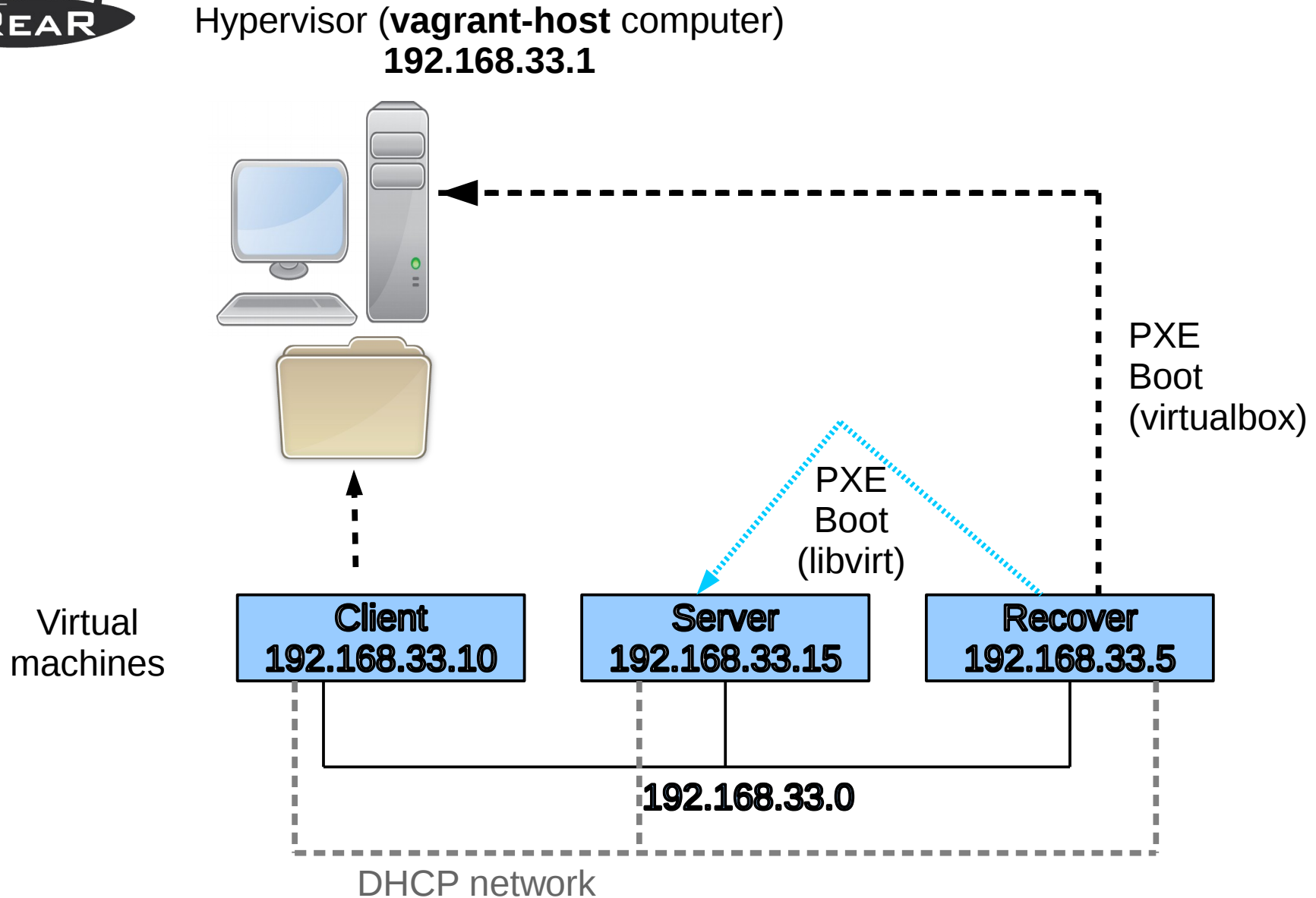 - Free support

  - Commercial support

Automated ReaR Testing

- For customers with a support contract we provide "Automated ReaR Testing"

- Currently only for <u>CentOS 7</u> Linux distribution

- We start the process and it automatically does

  - DR image creation

  - Backup of system

  - PXE boot the recover system with DR image made

  - Restore backup

  - Reboot the recover system

Test Configuration

Hypervisor (**vagrant-host** computer)
192.168.33.1

PXE
Boot
(virtualbox)

PXE
Boot
(libvirt)

Virtual
machines

Client 192.168.33.10	Server 192.168.33.15	Recover 192.168.33.5

192.168.33.0

DHCP network

Set up vagrant environment

- Host system must be GNU/Linux based

- A hypervisor like KVM, or VirtualBox

- Install "vagrant" from your distro, or from
  https://www.vagrantup.com/downloads.html

- KVM with libvirt needs the vagrant-libvirt plugin
  vagrant plugin install vagrant-libvirt

- Install "git" software to clone the Vagrantfile and
  scripts

Install the automated ReaR Testing software

- Is OpenSource and licensed under GPLv3

- New code is written only for customers with a valid ReaR Support contracts

- git clone git@github.com:gdha/rear-automated-testing.git

- Go into directory "rear-automated-testing"

- Type "./rear-automated-test.sh -h" to see info

- Uses "*vagrant*" to drive the creation of the VMs
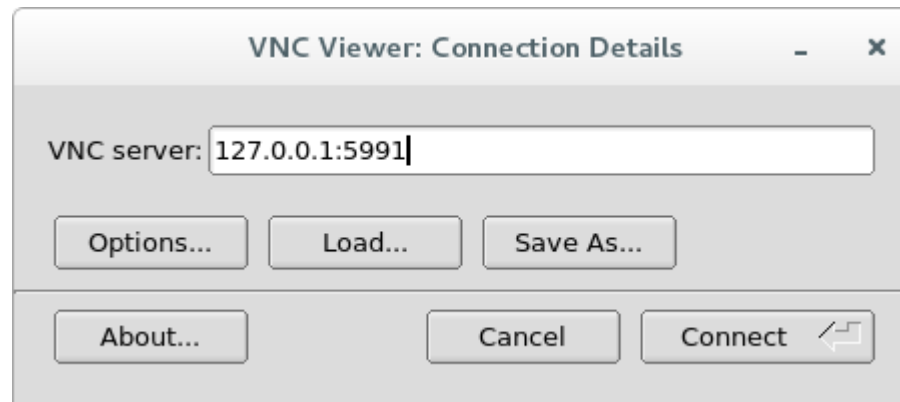
- Account vagrant/vagrant (and root/vagrant)

Login via vagrant or ssh

- Login via vagrant:
    - sudo vagrant ssh client
    - sudo vagrant ssh server
- Another way to login is via ssh:
    - ssh root@192.168.33.10 (client root pw is vagrant)
    - ssh root@192.168.33.15 (server root pw is vagrant)

Login via vncviewer

- If you install "tigervnc" you can use vncviewer

- Use address 127.0.0.1 (localhost)

- Port 5991 for "client"

- Port 5992 for "server"

- Port 5993 for "recover"

VNC Viewer: Connection Details   –   ✕

VNC server: 127.0.0.1:5991

Options...   Load...   Save As...

About...   Cancel   Connect

Try it yourself?

- https://github.com/gdha/rear-automated-testing

```
$ sudo ./rear-automated-test.sh -p libvirt


+------------------------------------------------------+
|        Relax-and-Recover Automated Testing script    |
|                     version 1.0                      |
+------------------------------------------------------+

Author: Gratien D'haese
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Current distro directory is centos7
Copy the Vagrantfile.libvirt to Vagrantfile
Bringing up the vagrant VMs client and server
Bringing machine 'client' up with 'libvirt' provider...
Bringing machine 'server' up with 'libvirt' provider...
==> server: Starting domain.
==> client: Starting domain.
```

Automated ReaR Testing

- Automated ReaR Testing speeds up

    - Validation processes

    - Bug hunting

    - Testing with beakerlib (option -t)

    - Trusworthy of "unstable" ReaR repository

    - Acceptance of ReaR within corporations and Open Source vendors

- Drawback - only available for <u>CentOS 7</u> Linux distribution (situation January 2017)

- We accept pull requests and sponsoring

Need more of this?

We can foresee in a customized workshop
on consultancy basis, or set-up in-house full
automated ReaR testing for customers with a
valid support contract

See http://www.it3.be/rear-support

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