



www.drlm.org

Smart GNU/Linux Disaster Recovery
management with ReaR & DRLM



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DRLM Chief Architect & Core Developer



**Open Source Backup
CONFERENCE**

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About me

Didac Oliveira



Co-Owner & Co-Founder at Brain Updaters, S.L.L.

Co-Founder & Maintainer at DRLM Project

Other OpenSource contributions:

- **Relax-and-Recover (ReaR)**
www.relax-and-recover.org
- **Config-to-HTML (cfg2html v6.x)**
www.cfg2html.com



DRLM Team

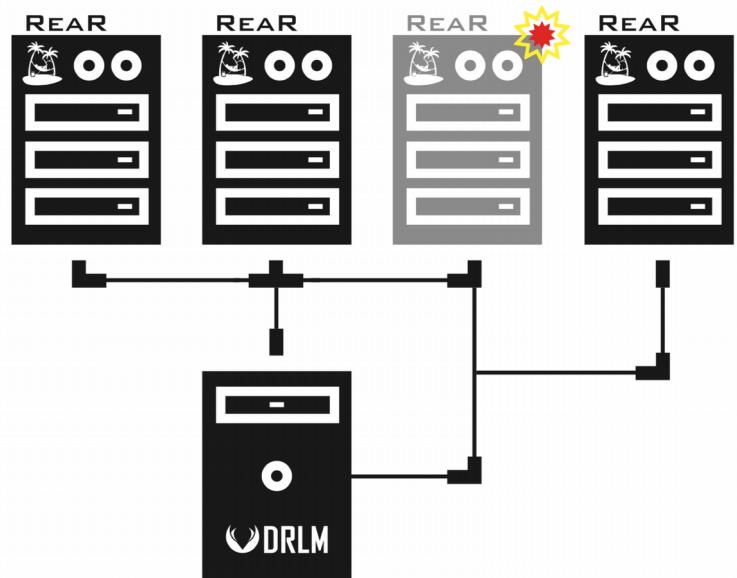
Project founders & maintainers



Didac Oliveira

Pau Roura

Ruben Carbonell



- Introduction
- What is DRLM?
- DRLM features
- DRLM roadmap
- How to contribute
- Brief Demo

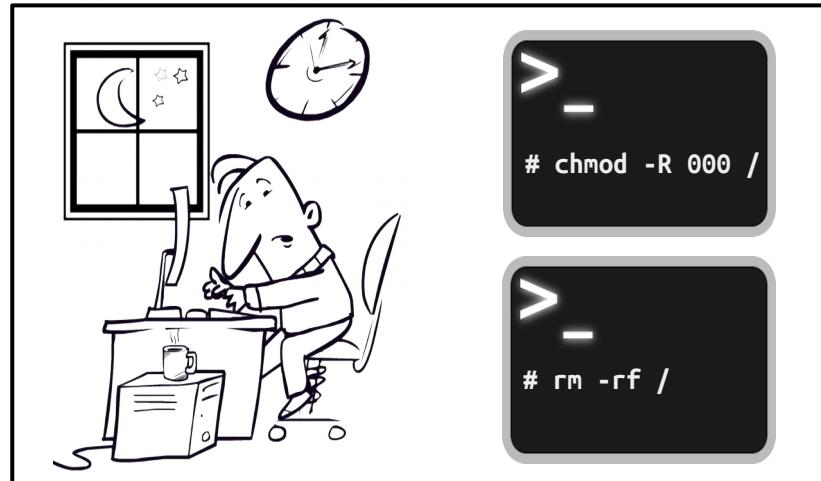


Introduction

Types of disaster



```
[ 97.134322] Code: 00 00 00 00 00 00 00 00 00 00 ac c  
00 00 00 00 00 00 00 00 00 00 00 00 f7 74 70 c0 f7 40 10 80 f7 40 10 80 f  
c0 f7 74 70 c0 f7 40 10 80 f7 40 10 80 f  
[ 97.149858] EIP: [<f780000f>] 0xf78000  
[ 97.152388] ---[ end trace ca143223eef  
[ 97.153402] Kernel panic - not syncing
```

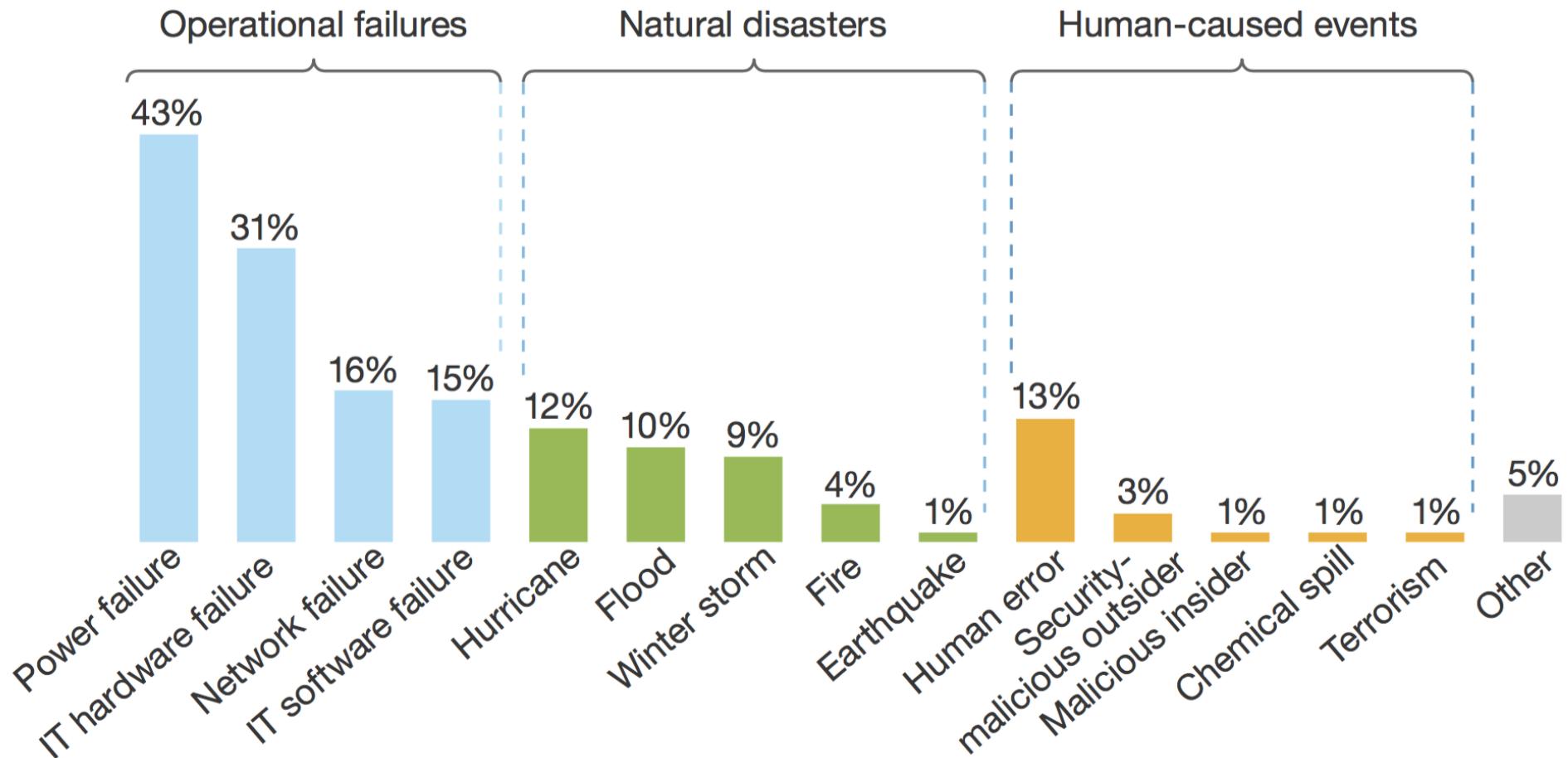




Introduction

Principal causes of service downtime

2



**The State Of Business Technology Resiliency, Q2 2014 (FORRESTER)



Operating System



RTO vs RPO



Restore pre-requisites:

- HW (Phys-Virt)
- Network



SysAdmin

Application Data



RPO vs RTO



Restore pre-requisites:

- Configured OS
- Installed backup agent



Backup Admin



Introduction

DRLM project history

4



- 2013 AUG:** DRLM Project was born
- 2013 DEC:** First DRLM stable version (1.0.0)
- 2014 DEC:** DRLM full integration with ReaR
- 2015 JAN:** DRLM project websites released (www.drlm.org & docs.drlm.org)
- 2016 JUL:** DRLM version 2.0.0 released
- 2017 MAY:** DRLM version 2.1.3 released
- 2017 SEP:** DRLM version 2.2.0 released



What is DRLM?

GNU/Linux Disaster Recovery

5



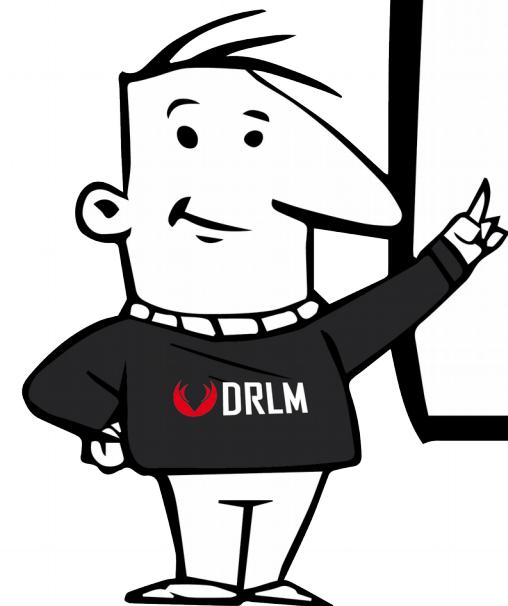
See appendix A for more detailed info.



What is DRLM?

Brief description of ReaR

ReaR is the best standalone Disaster Recovery tool for GNU/Linux.
It is able to recover a single system in few minutes from scratch.





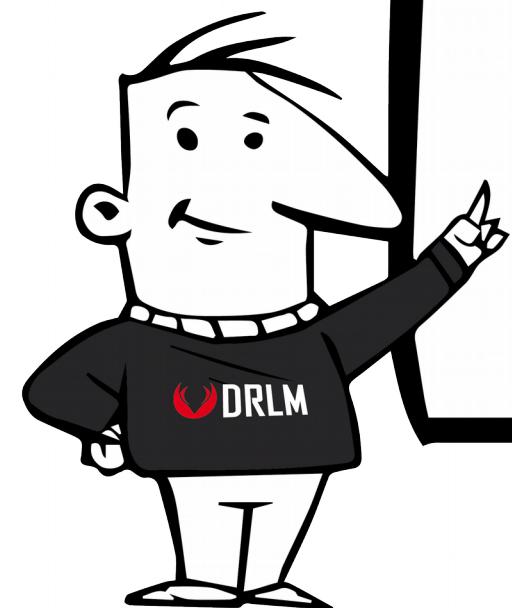
What is DRLM?

Brief description of DRLM

7



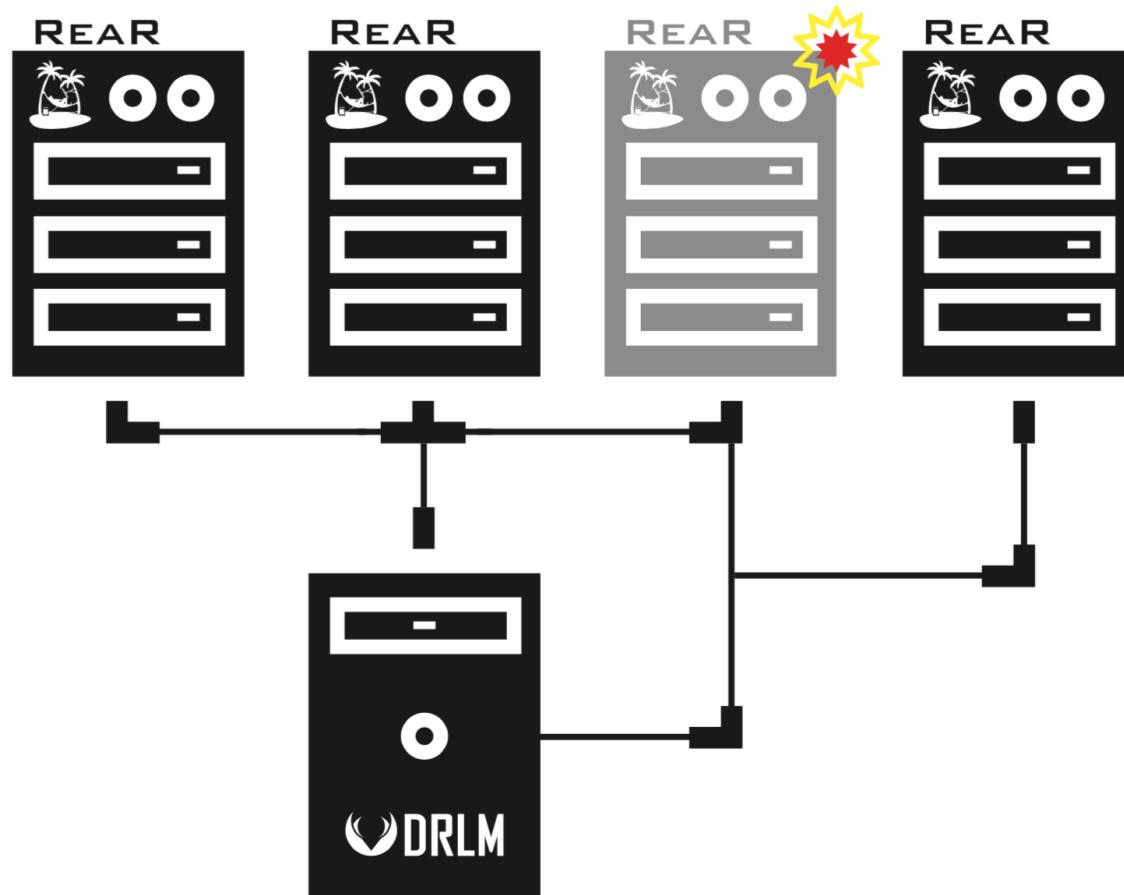
DRLM is a central systems management tool for small to large GNU/Linux implementations using ReaR.
An easy-to-use software for Disaster Recovery, System Migrations and OS Deployments for GNU/Linux.





What is DRLM?

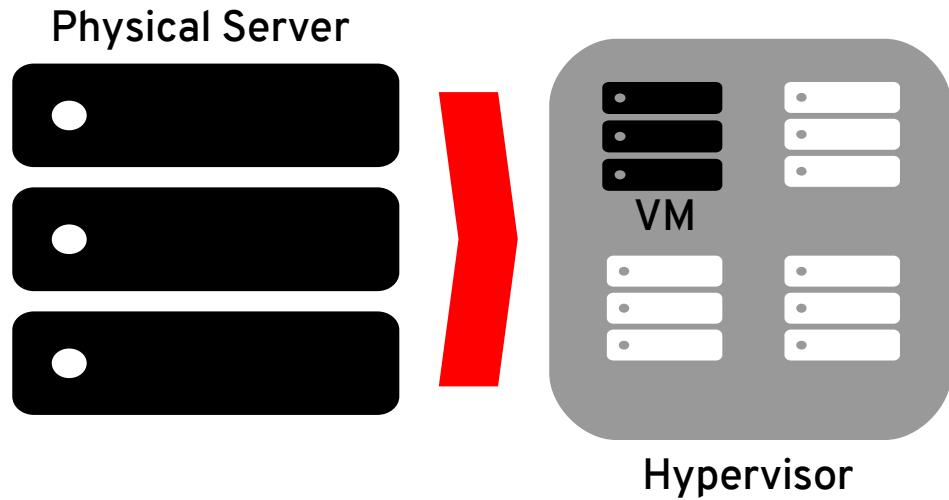
GNU/Linux Disaster Recovery





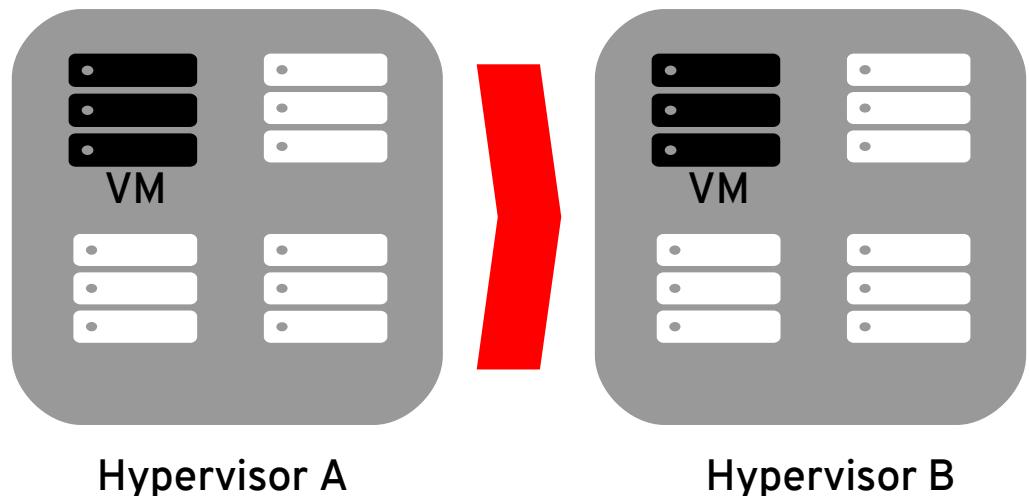
What is DRLM?

GNU/Linux Migration tool



P2V
(Physical to Virtual)

V2V
(Virtual to Virtual)

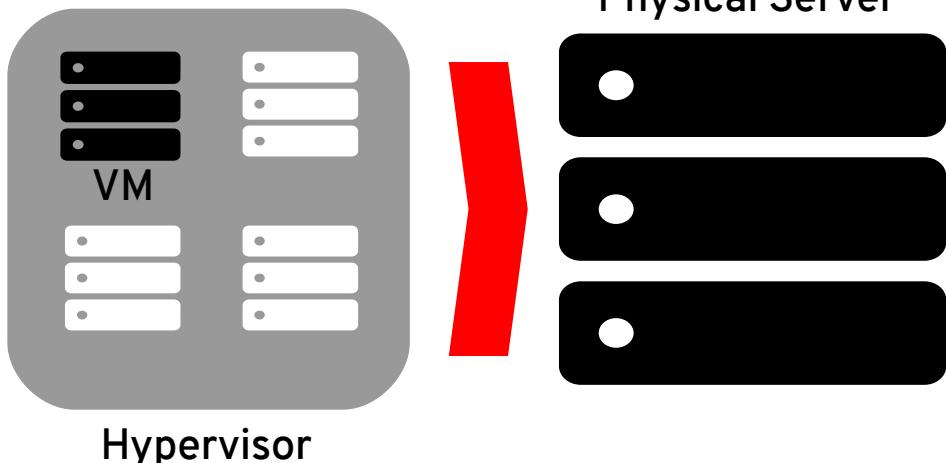
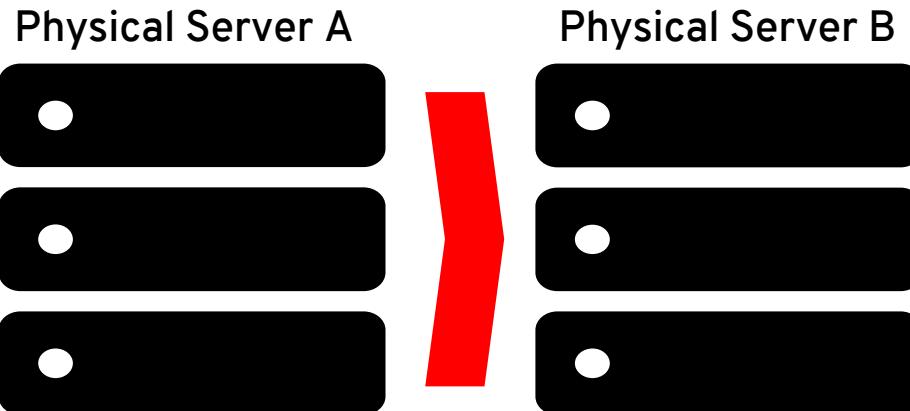




What is DRLM?

GNU/Linux Migration tool

P2P
(Physical to Physical)

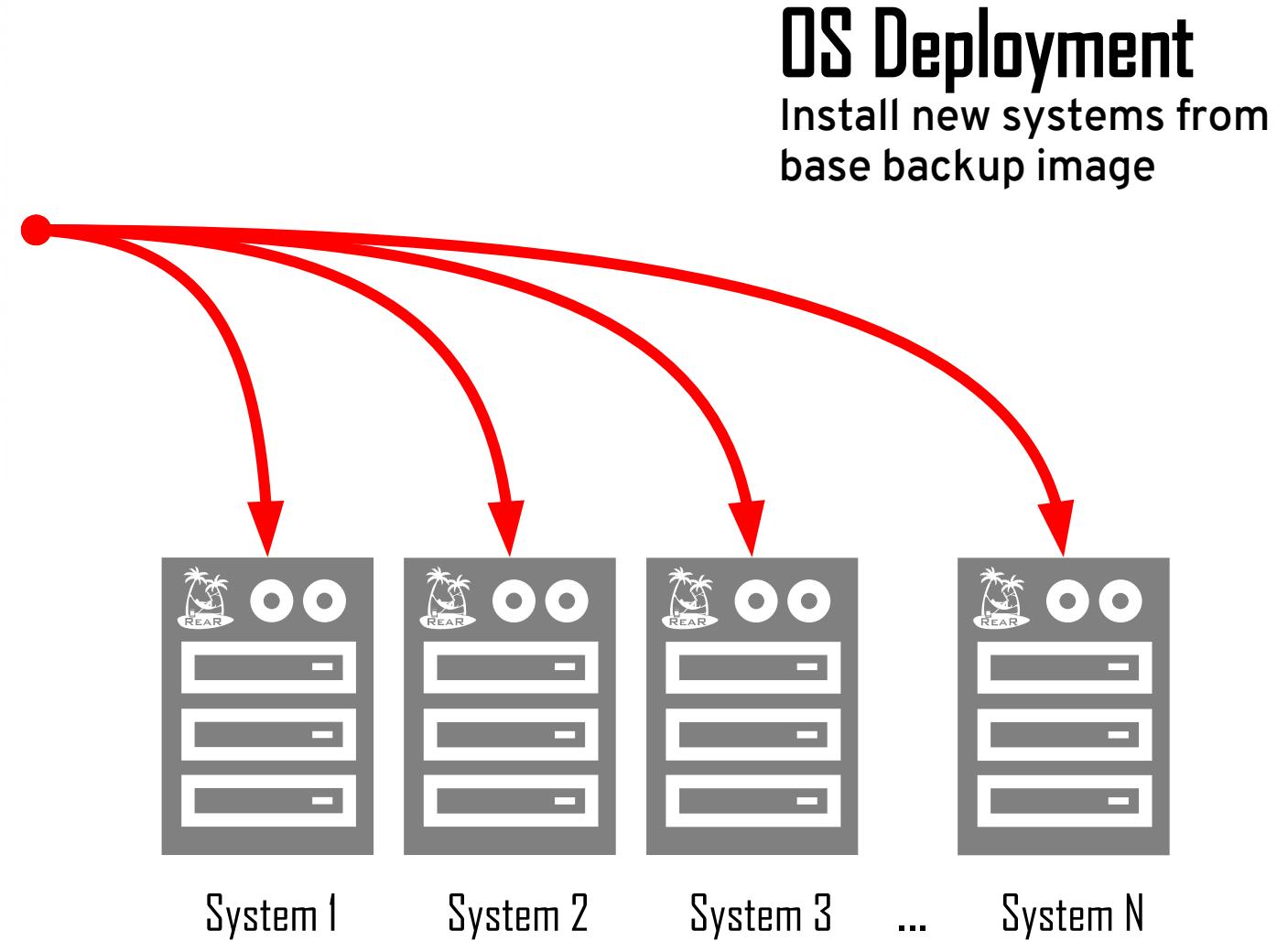


V2P
(Virtual to Physical)



What is DRLM?

GNU/Linux Deployment tool





What is DRLM?

Command Line Interface (CLI)

12



Network Operations:
ADD, DELETE, MODIFY & LIST

Client Operations:
ADD, INSTALL, DELETE, MODIFY & LIST

Backup Operations:
RUN, MANAGE, DELETE,
EXPORT, IMPORT & LIST

Job Scheduler Operations:
ADD, DELETE, SCHED & LIST

For more information please visit:
<http://docs.drlm.org>



DRLM features
Automatic error reporting

13



Integration with system monitoring tools:



ZABBIX

Nagios®





DRLM features

Unattended ReAr installation and base config

14



Supported OSes:

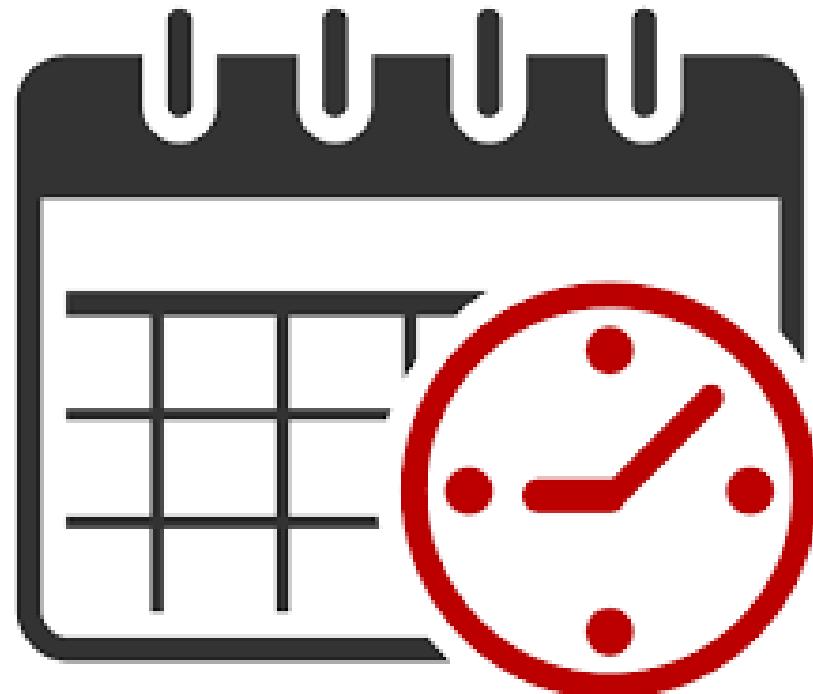




DRLM features

Backup job scheduler

15



- one-shot jobs
- job expire dates
- job repetition:
 - Minutes - Hours
 - Days - Weeks
 - Months - Years



DRLM features

Export & Import

16



Export & import DR images between DRLM servers on different sites and/or locations, made easy.



- **Whole Recovery over the network**
Multiarch Netboot support with GRUB2
- **Fully supported and tested on major Linux distros**
RHEL, CentOS, Debian, SUSE & Ubuntu
- **Easy to Use & Setup**
- **Integrated Debugging/Troubleshooting in DRLM CLI**
- **Fully developed in BASH**
- **Open Source**



DRLM version 2.2.0

What is new?

18



- Improved DRLM RESTful API (more secure & better integration with ReaR) (v2.2.0)
- Live ReaR logs in DRLM server (v2.2.0)
- Bash completion for DRLM CLI (v2.2.0)
- Revised and improved code (v2.2.0)
- Improved documentation at docs.drlm.org (v2.2.0)



- DATT (DRLM Automated Testing Tool)
- Export/Import of clients & networks
- Improve physical DR management & automation over IPMI
- Improve VM DR management & automation integrating libvirt
- DRLM GUI (Central DRLM management over different sites/locations)
- Backup/Restore over HTTPs
- HTTP boot support
- And more ...



How to contribute?

Here are some options ...

20



- Try our latest versions and give us your feedback
- Write code to improve or extend DRLM
- Start discussions for new feature proposals
- Report Issues to improve our code and/or documentation
github.com/brainupdaters/drlm & github.com/brainupdaters/drlm-docs
- Share your experience with DRLM

Visit <http://drlm.org/community/> for more information.



www.drlm.org

Demo time!



www.drlm.org

Questions & Answers



DRLM at Github: github.com/brainupdaters/drlm
DRLM website: drlm.org
DRLM Docs: docs.drlm.org



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