Neil Ticktin

Neil not only plays host for all MacTech events, but aids the session chairs for all MacTech events (over 100 events since 2010). Neil has been the Editor-in-Chief and Publisher of MacTech Magazine since 1992. With both a technical and business background, Neil has authored hundreds of articles including most of MacTech's well known benchmarking articles on productivity applications, virtualization, and performance products.

Linux Servers: Admin them in a more “Mac-like” way.

What are we going to cover?

- OS X Server: Where you want to use it
- When and why Linux?
- If you go Linux…
  - Keep it simple
  - Keep it secure
  - Keep it monitored

OS X vs. Linux

- OS X:
  - It's what we know and love
  - It works well enough, unless
    - you need easy redundancy
    - you need real server software
    - you need "real" server level support
    - you need up to date open source packages
    - you don't want stuff to break with simple OS updates
- Caching Server and Time Machine

OS X vs. Linux (cont)

- Linux
  - Many reasons
  - If you want to be, you can be on your own
  - You can pay for real, server level, support
  - But are a TON of free resources
  - Don’t ignore security

Linux OSes

- Different Distributions
  - Arch Linux
  - CentOS
  - Debian
  - Fedora
  - Gentoo
  - openSUSE
  - Slackware
  - Ubuntu

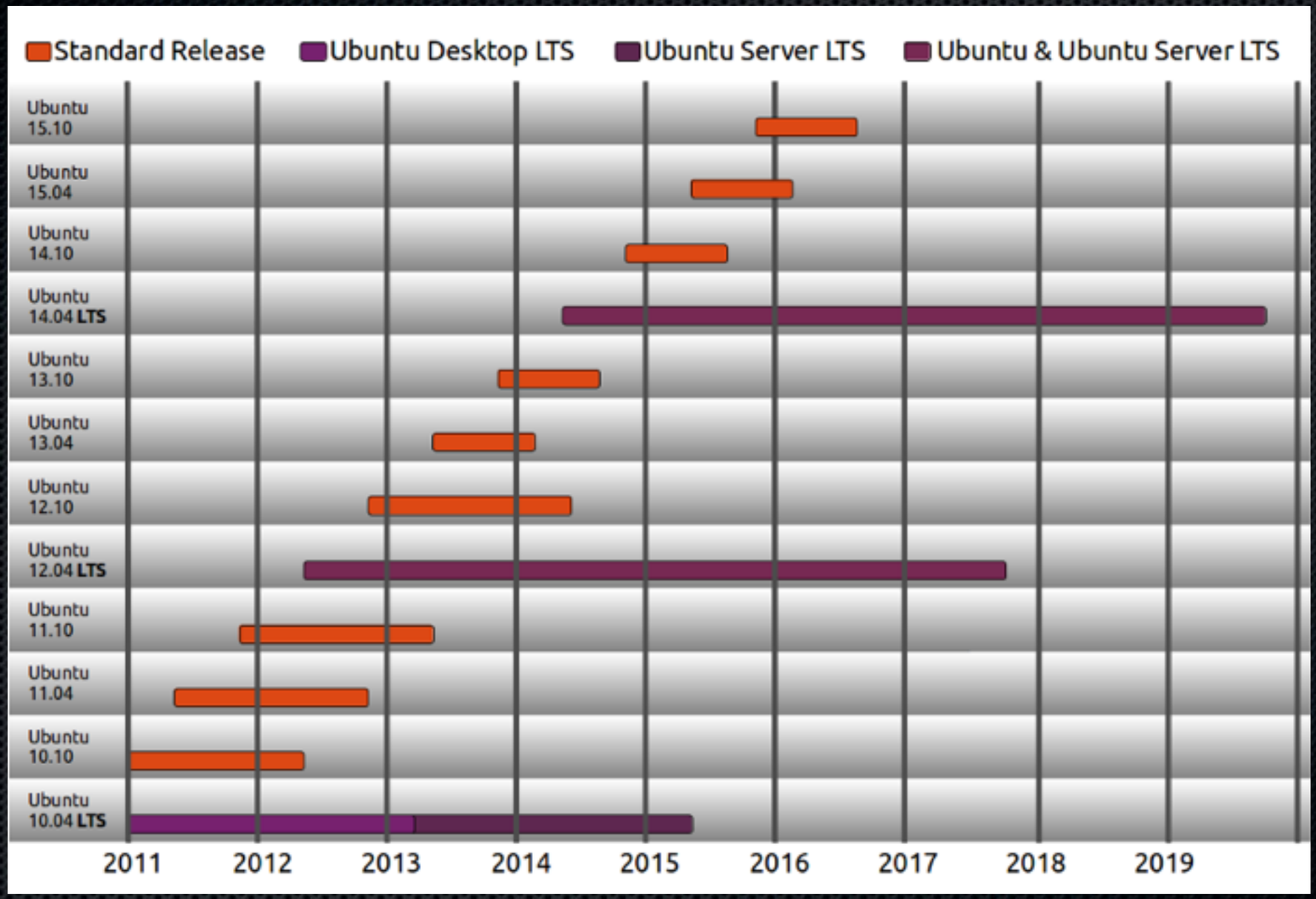
Linux OSes

- Choosing a distribution
  - Look at what you will do
  - What's supported and vibrant
  - What's compatible with your software choices
  - Pick the distro based on what you are doing, or one to standardize on.

Ubuntu LTS

- What's Ubuntu Long Term Solution (LTS)?
  - Every two years
  - Five year support
  - 14.04 LTS Supported until 2020 (16 until 2022)
  - Focus on hardening functionality of existing features, not new features (generally)

Ubuntu LTS



Note: LTS v16 is now out

Providers

- In-house:
  - Why?
  - Don't.
- Traditional providers
  - HostGator, DreamHost, BlueHost, GoDaddy, 1&1
- Linode, Digital Ocean, VPSie, VULTR, and others
- Specialized Providers
  - Drupal: Acquia, Pantheon, etc…
  - WordPress: WordPress.org, Pantheon, etc…

Real World Setup

- Examples for our process
- Tools selected important
- Compatibility
- Order of install:
  - Longview often first
  - Server management panel must be already installed, nor any web service

We're going to pick one.

Why we chose Linode

- Competitive pricing
- Better support
- Longview
- Interface easier to understand
- Backups that made more sense

Let's Build a Linode

- Add a linode (choosing size and data center)
- Deploy an Image
  - Ubuntu 14.04 LTS (or 16)
- Choose size for swap disk and main disk
  - Generally, use max size of 512MB for swap
  - Can do multiple disks
  - May want to reserve for later
- Settings > Linode Label (enter new name and save)

Linode Manager

4macsadmin | my profile | log out

Linodes | NodeBalancers | Longview | DNS Manager | Account | Support | Documentation | Community

Linodes » **Add a Linode**

Select your plan

Linode 1024	Linode 2048	Linode 4096	Linode 8192
24GB DISK	48GB DISK	96GB DISK	192GB DISK
1 CPU Core	2 CPU Cores	4 CPU Cores	6 CPU Cores
2TB XFER	3TB XFER	4TB XFER	8TB XFER
.015/hr to $10/mo	.03/hr to $20/mo	.06/hr to $40/mo	.12/hr to $80/mo

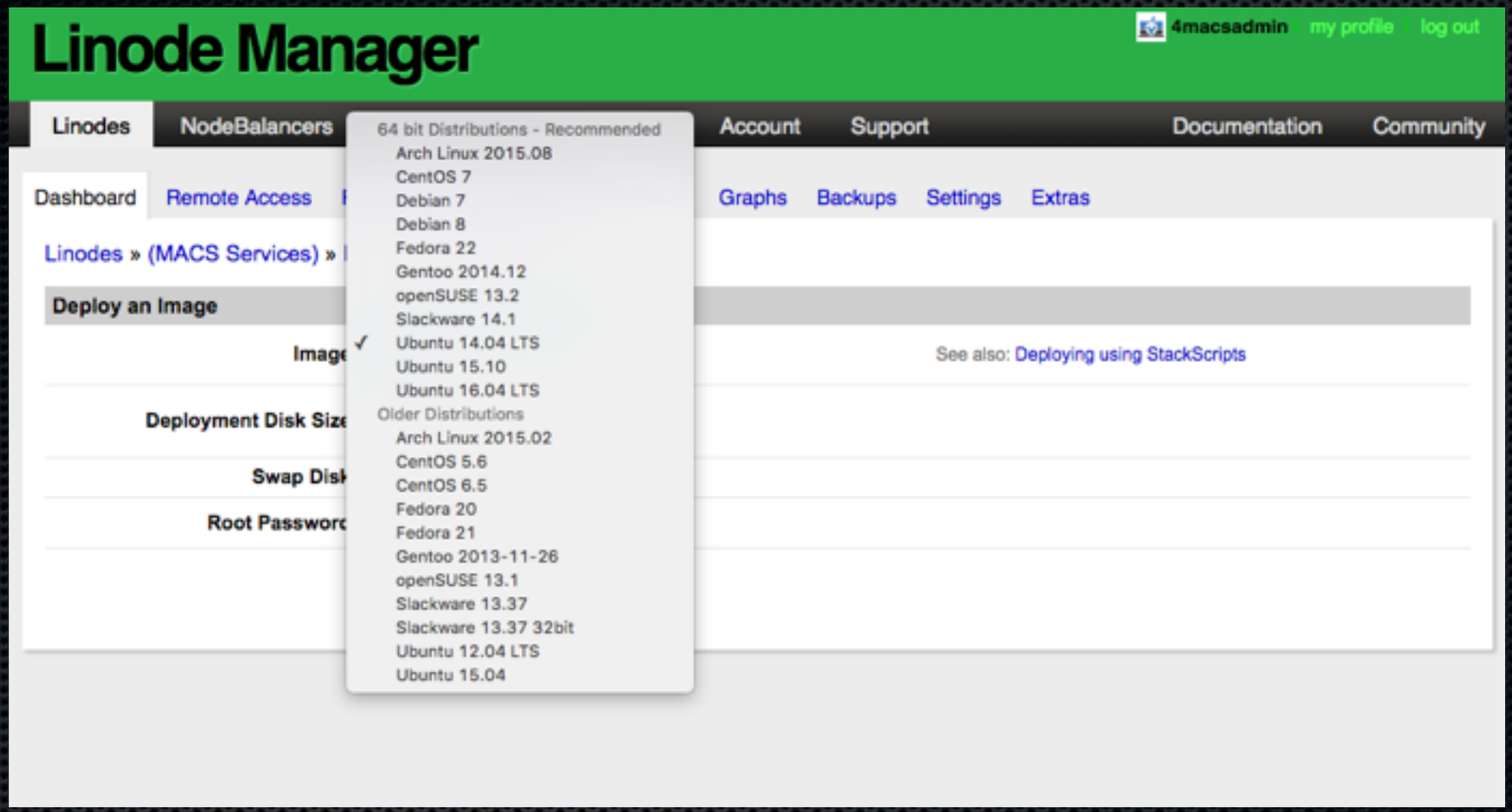
Linode 16384	Linode 32768	Linode 49152	Linode 65536
384GB DISK	768GB DISK	1152GB DISK	1536GB DISK
8 CPU Cores	12 CPU Cores	16 CPU Cores	20 CPU Cores
16TB XFER	20TB XFER	20TB XFER	20TB XFER
.24/hr to $160/mo	.48/hr to $320/mo	.72/hr to $480/mo	.96/hr to $640/mo

Linode 98304
1920GB DISK
20 CPU Cores
20TB XFER
1.44/hr to $960/mo

Location

- ✓ Newark, NJ
- Fremont, CA
- Atlanta, GA
- Dallas, TX
- London, UK
- Tokyo, JP
- Singapore, SG
- Frankfurt, DE

Add this Linode!


Linode Manager
4macsadmin | my profile | log out
Linodes
NodeBalancers
Account
Support
Documentation
Community
Dashboard
Remote Access
Graphs
Backups
Settings
Extras
Linodes » (MACS Services) »
Deploy an Image
Image
Deployment Disk Size
Swap Disk
Root Password
See also: Deploying using StackScripts
64 bit Distributions - Recommended
Arch Linux 2015.08
CentOS 7
Debian 7
Debian 8
Fedora 22
Gentoo 2014.12
openSUSE 13.2
Slackware 14.1
✓ Ubuntu 14.04 LTS
Ubuntu 15.10
Ubuntu 16.04 LTS
Older Distributions
Arch Linux 2015.02
CentOS 5.6
CentOS 6.5
Fedora 20
Fedora 21
Gentoo 2013-11-26
openSUSE 13.1
Slackware 13.37
Slackware 13.37 32bit
Ubuntu 12.04 LTS
Ubuntu 15.04

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Dashboard | Remote Access | Rebuild | Rescue | Resize | Clone | Graphs | Backups | Settings

Linodes » (MACS Services) » **linode1818909**

Dashboard

Select	Configuration Profiles	Options
●	My Ubuntu 16.04 LTS Profile (Latest 64 bit (4.5.0-x86_64-linode65))	Edit | Remove

Boot

Rebuild | Deploy an Image | Create a new Configuration Profile

Disks

Ubuntu 16.04 LTS Disk (24320 MB, ext3) — Edit | Remove

256MB Swap Image (256 MB, swap) — Edit | Remove

Create a new Disk

Host Job Queue (more)

Success	**Create Filesystem** - 256MB Swap Image Entered: 32 seconds ago - Took: 0 seconds	
Success	**Disk Create From Distribution** - Ubuntu 16.04 LTS Entered: 33 seconds ago - Took: 8 seconds	Setting password for root... done
Success	**Linode Initial Configuration** Entered: 4 minutes 58 seconds ago - Took: 0 seconds	

Graphs

Server Status

Your Linode is currently

Powered Off

Network

- Transfer/mo: 2000 GB
- Incoming: 0 bytes
- Outgoing: 0 bytes
- Total: 0 bytes

You have used 0% of your monthly transfer

Storage

- Total: 24576 MB
- Used: 24576 MB
- Free: 0 MB

You have allocated 100% towards disk images

Backups

No - **Enable**

Host

newark1083	**load**
KVM	low

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Linodes » (MACS Services) » linode1818909 » **Rebuild**

Rebuilding will **destroy all data**, wipe your Linode clean, and start fresh.

Deploy an Image

Image Ubuntu 14.04 LTS
Choosing a 64 bit distro is recommended.

See also: Deploying using StackScripts

Deployment Disk Size 4macss MB
750 MB min 24320 MB max

Swap Disk 256 MB

Root Password ••••••••••••••••

Rebuild

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Linodes » (MACS Services) » linode1818909 » **Settings**

Settings

Display Settings

Linode Label	linode1818909	Rename your Linode
Display Group	MACS Services	Group Linodes together on the Linodes tab using Display Groups!

Save Changes

Shutdown Watchdog

Description Lassie is a Shutdown Watchdog that monitors your Linode and will reboot it if it powers off unexpectedly. It works by issuing a boot job when your Linode powers off without a shutdown job being responsible.

To prevent a loop, Lassie will give up if there have been more than 5 boot jobs issued within 15 minutes.

Lassie is currently Enabled

Save Changes

Email Alert Thresholds

Description When an alert threshold is reached, an email is sent to all linode.com users that have the "access" privilege to this Linode.

Thresholds are compared to values once per hour, 15 minutes after the hour.

CPU Usage	Enabled ☑ | 90 %		Average CPU usage over 2 hours exceeding this value triggers this alert.
Disk IO Rate	Enabled ☑ | 1000 IO Ops/sec		Average Disk IO ops/sec over 2 hours exceeding this value triggers this alert.
Incoming Traffic	Enabled ☑ | 10 Mbit/s		Average incoming traffic over a 2 hour period exceeding this value triggers this alert.
Outbound Traffic	Enabled ☑ | 10 Mbit/s		Average outbound traffic over a 2 hour period exceeding this value triggers this alert.
Transfer Quota	Enabled ☑ | 80 %		Percentage of network transfer quota used being greater than this value will trigger this alert.

Save Changes

Linode: IP and DNS

- Remote Access tab, and you'll see your server's IP address listed
- Add the IP to your DNS
- Set the reverse DNS
  - Remote Access » Reverse DNS
- Boot the Linode

Linode Manager

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Linodes » (MACS Services) » linode1818909 » **Remote Access**

Network Access

Public Network

SSH Access	**ssh root@198.74.60.120**	Getting Started Guide
Public IPs	198.74.60.120 / 24 (li557-120.members.linode.com) 2600:3c03::f03c:91ff:fe55:62fc / 64 IP Add | ~~IP Remove~~ | IP Failover | IP Swap | Reverse DNS	Static Networking Guide IPv6 Networking Guide
Default Gateways	198.74.60.1 fe80::1	
DNS Resolvers	66.228.42.5 96.126.106.5 50.116.53.5 50.116.58.5 50.116.61.5 50.116.62.5 66.175.211.5 97.107.133.4 207.192.69.4 207.192.69.5 2600:3c03::5 2600:3c03::6 2600:3c03::7 2600:3c03::8 2600:3c03::9 2600:3c03::b 2600:3c03::c	

Private/LAN Network

Private IPs	None - Add a Private IP
Link-Local IP	fe80::f03c:91ff:fe55:62fc/64

Console Access

Lish via Ajaxterm	Launch Lish Ajax Console »	
Lish via SSH	ssh -t 4macsadmin@lish-newark.linode.com linode1818909	Lish listens on ports 22, 443, and 2200 (Lish Guide & Fingerprints)
Glish	Launch Graphical Web Console »	Equivalent to plugging a monitor and keyboard into your server. (Using Glish)

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Linodes » (MACS Services) » linode1818909 » **Rescue**

Rescue Mode

Boots your Linode into Rescue Mode. Access it via the console.

/dev/sda Ubuntu 16.04 LTS Disk

/dev/sdb 256MB Swap Image

/dev/sdh Finnix Media

Reboot into Rescue Mode

Reset Root Password

Filesystem Ubuntu 16.04 LTS Disk — Linode must be shut down

New Password

Reset Root Password

Linode Manager

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Linodes » (MACS Services) » linode1818909 » **Resize**

Resize

Choose your new plan

- ~~Linode 1024~~ (current plan)
- Linode 2048
- Linode 4096
- Linode 8192
- Linode 16384
- Linode 32768
- Linode 49152
- Linode 65536
- Linode 98304

Resize this Linode Now!

How it works

1. Linode is shut down and migrated
You will experience downtime while your Linode is migrated. We estimate **18 minutes** to migrate your Linode, but that may vary based on host and network load.

2. Billing
Your account will be immediately charged (or credited) a prorated amount based upon the difference in cost and the number of days remaining in your billing cycle.

3. Enjoyment
After the migration completes, you can take advantage of the new resources by resizing your disks.

Linode Manager

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Linodes » (MACS Services) » linode1818909 » **Clone**

Configuration Profiles

Select	Configuration Profiles	Kernel	Disks Attached
☐	My Ubuntu 16.04 LTS Profile	Latest 64 bit (4.5.0-x86_64-linode65)	2

Select

Disks

Select	Disks	Type	Size
☐	Ubuntu 16.04 LTS Disk	ext3	24320 MB
☐	256MB Swap Image	swap	256 MB

Select

Linode Manager

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Linodes » (MACS Services) » screenconnect » **Backups**

Backups

Schedule

Backup Window (GMT-5) 0200 - 0400

Weekly Backup Sunday

Save Changes

Automatic Backups

Daily Backup From today
Restore to...

Weekly Backup From yesterday
Restore to...

Weekly Backup From 8 days ago
Restore to...

Manual Snapshot

Snapshot backup before upgrade
From 416 days ago
Restore to...

My New Snapshot Label | Take a New Snapshot Now

Backup History

Type	Started	Finished	Duration	Status	Message
auto	2016-04-25 02:31:58	2016-04-25 02:34:03	2 minutes, 5 seconds	successful	
auto	2016-04-24 02:31:21	2016-04-24 02:33:30	2 minutes, 9 seconds	successful	
auto	2016-04-23 02:31:14	2016-04-23 02:33:23	2 minutes, 9 seconds	successful	
auto	2016-04-22 02:31:13	2016-04-22 02:33:22	2 minutes, 9 seconds	successful	
auto	2016-04-21 02:31:31	2016-04-21 02:33:39	2 minutes, 8 seconds	successful	
auto	2016-04-20 02:32:19	2016-04-20 02:34:27	2 minutes, 8 seconds	successful	
auto	2016-04-19 02:31:58	2016-04-19 02:34:06	2 minutes, 8 seconds	successful	
auto	2016-04-18 02:31:30	2016-04-18 02:33:39	2 minutes, 9 seconds	successful	
auto	2016-04-17 02:31:38	2016-04-17 02:33:41	2 minutes, 3 seconds	successful	
auto	2016-04-16 02:32:31	2016-04-16 02:34:39	2 minutes, 8 seconds	successful	

Cancel Backups

Linode: Hostname

- ssh to server
  - Click on the Remote Access tab
- Set the hostname:
  - Replace *hostname* with a fqdn of your choice.
  - echo "*hostname*" > /etc/hostname
  - hostname -F /etc/hostname

Linode: Time Zone

- Set the time zone for the server with this command:
  - dpkg-reconfigure tzdata
  - follow the on screen messages
    - select your region, and time zone

Linode Manager

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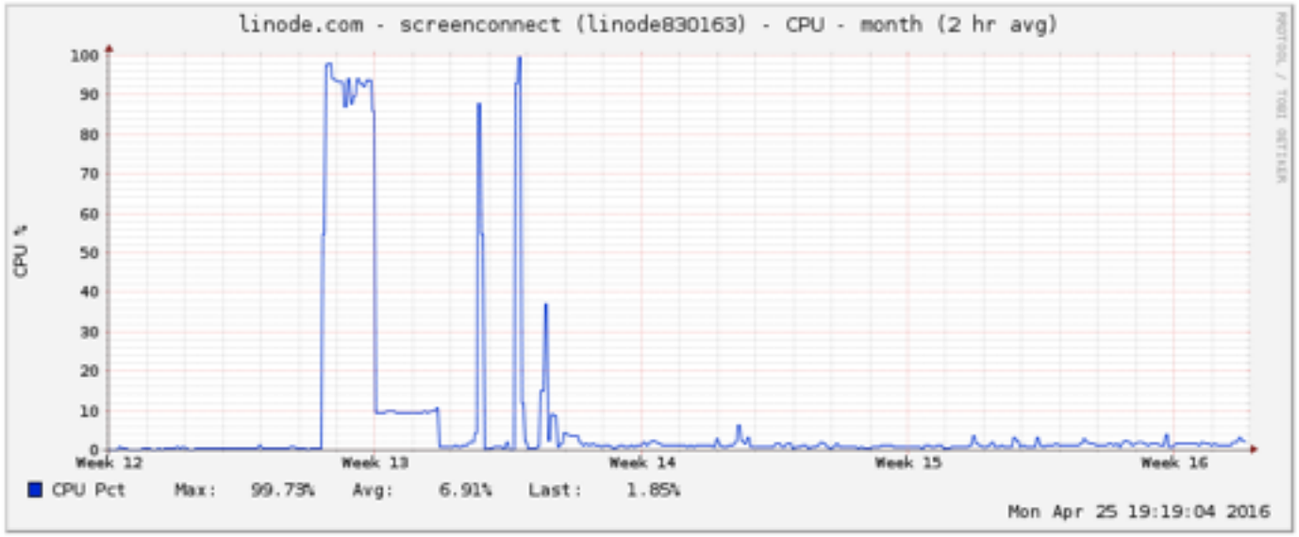
Dashboard | Remote Access | Rebuild | Rescue | Resize | Clone | Graphs | Backups | Settings | Extras

Linodes » (MACS Services) » screenconnect » **Graphs**

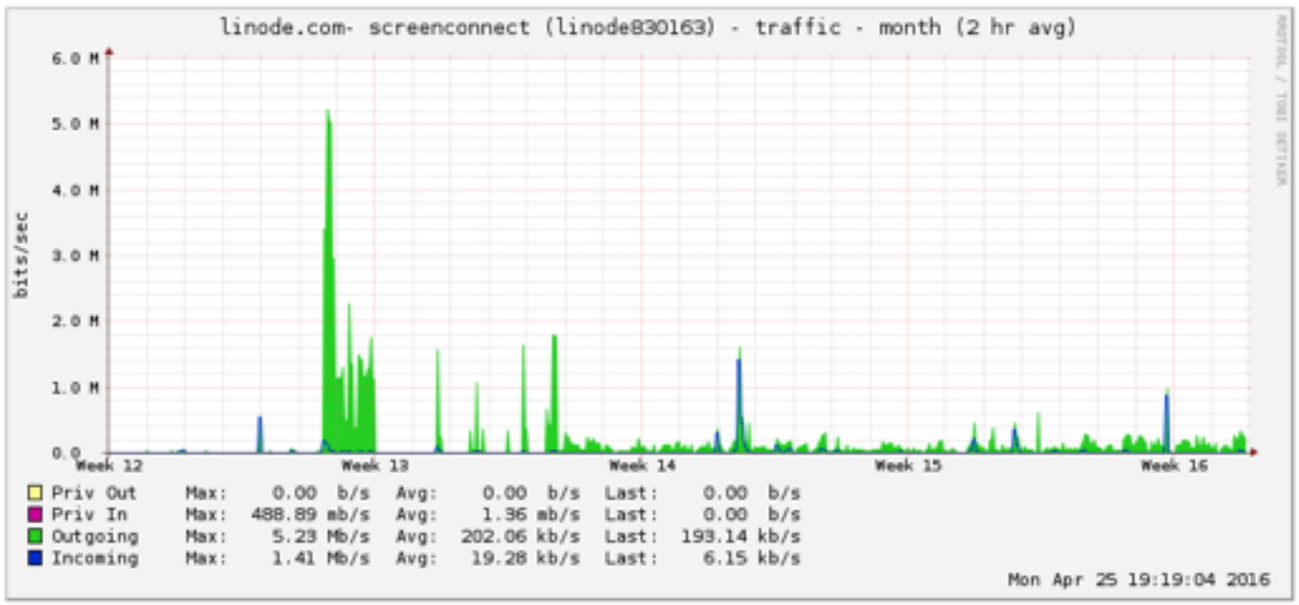
2015 MAY | 2015 JUN | 2015 JUL | 2015 AUG | 2015 SEP | 2015 OCT | 2015 NOV | 2015 DEC | 2016 JAN | 2016 FEB | 2016 MAR | LAST 30D | LAST 24H

Last 30 Days

CPU



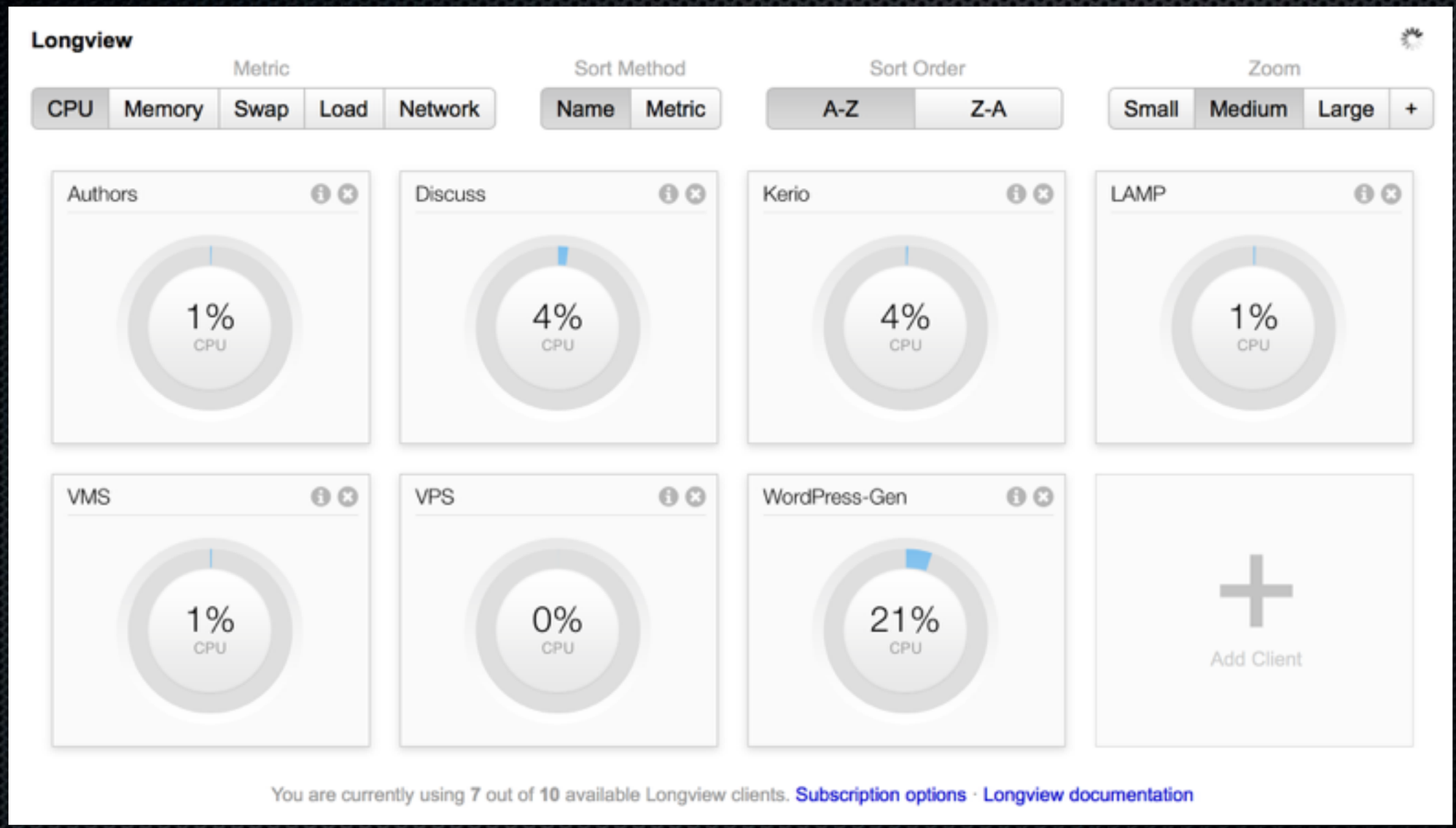
Network



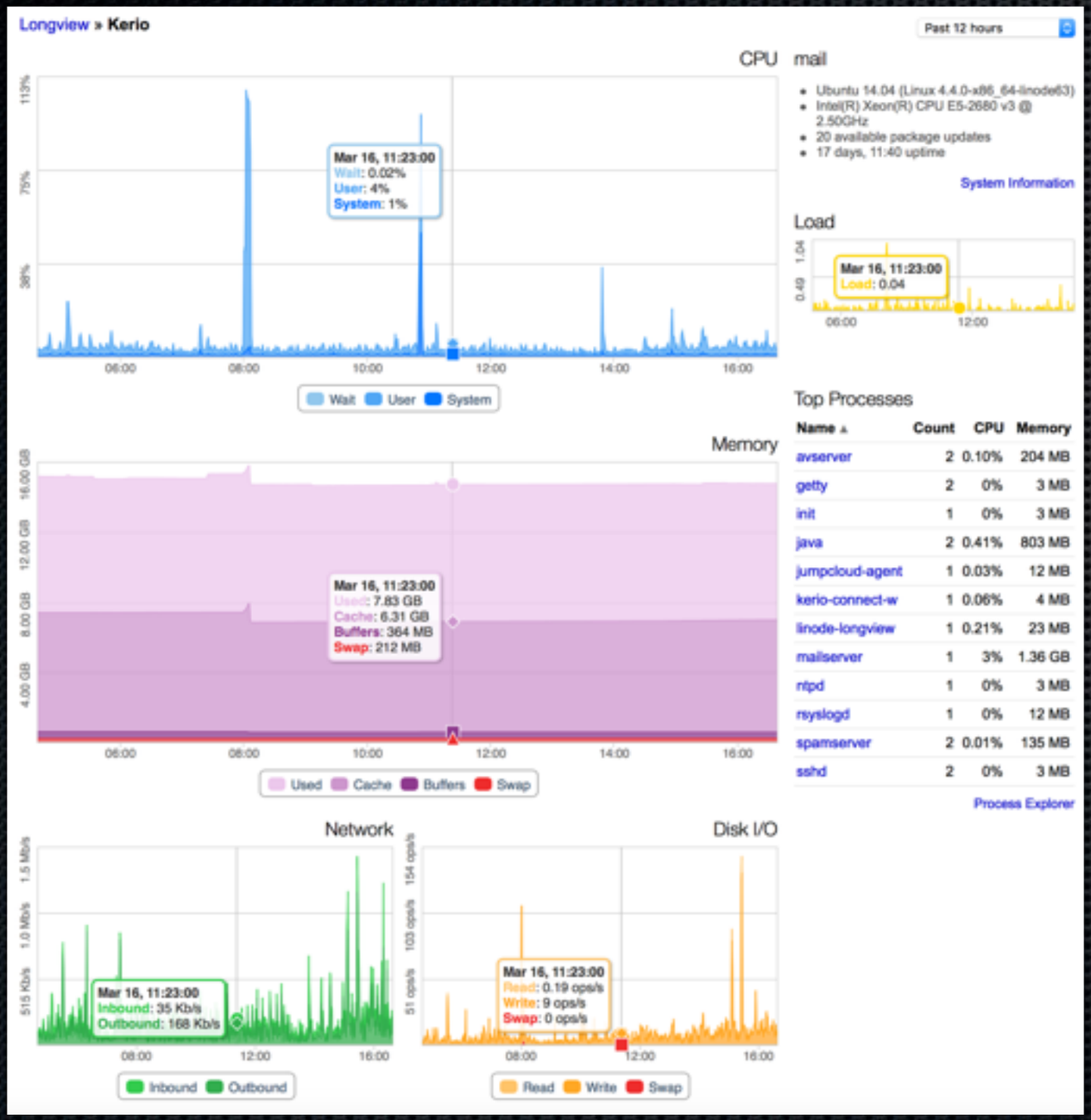
Linode: Monitoring

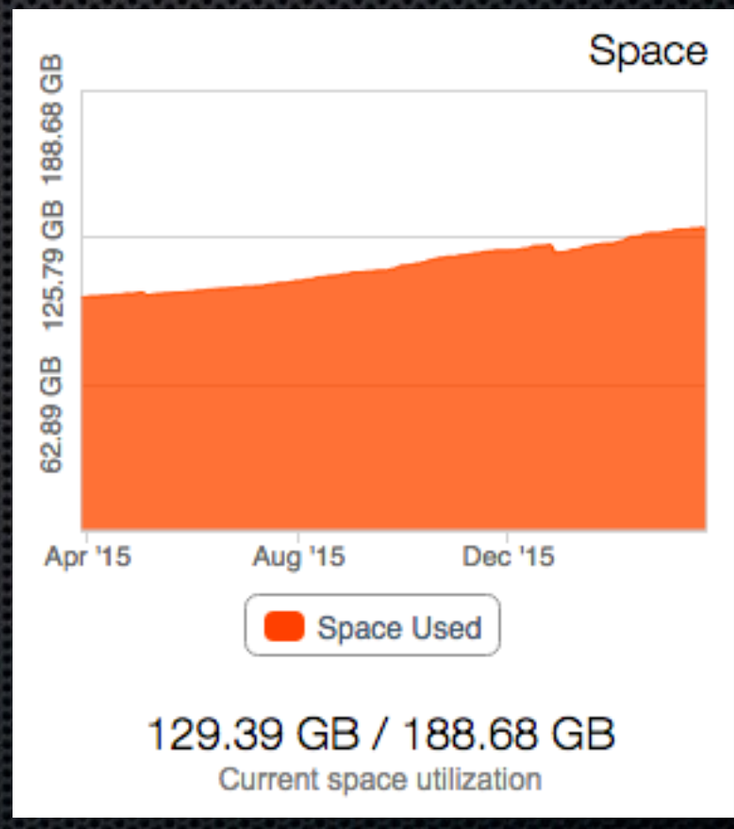
- Longview
  - Press the “+” to add a client
  - Copy command to install Longview via the curl
  - Rename your Longview
    - the “i” icon for the new Longview
- Watchman Monitoring (to come)
- Enable Backups:
  - Costs 20% of the cost of your Linode

Linode's Longview



Linode's Longview





Control Panels

- Why?
  - Base server config
  - Services Configuration
  - Scripted Installers
  - User Access
  - Database Configuration
  - Security
- Industry Standards:
  - cPanel, Plesk, InterWorx, zPanel, ISPConfig

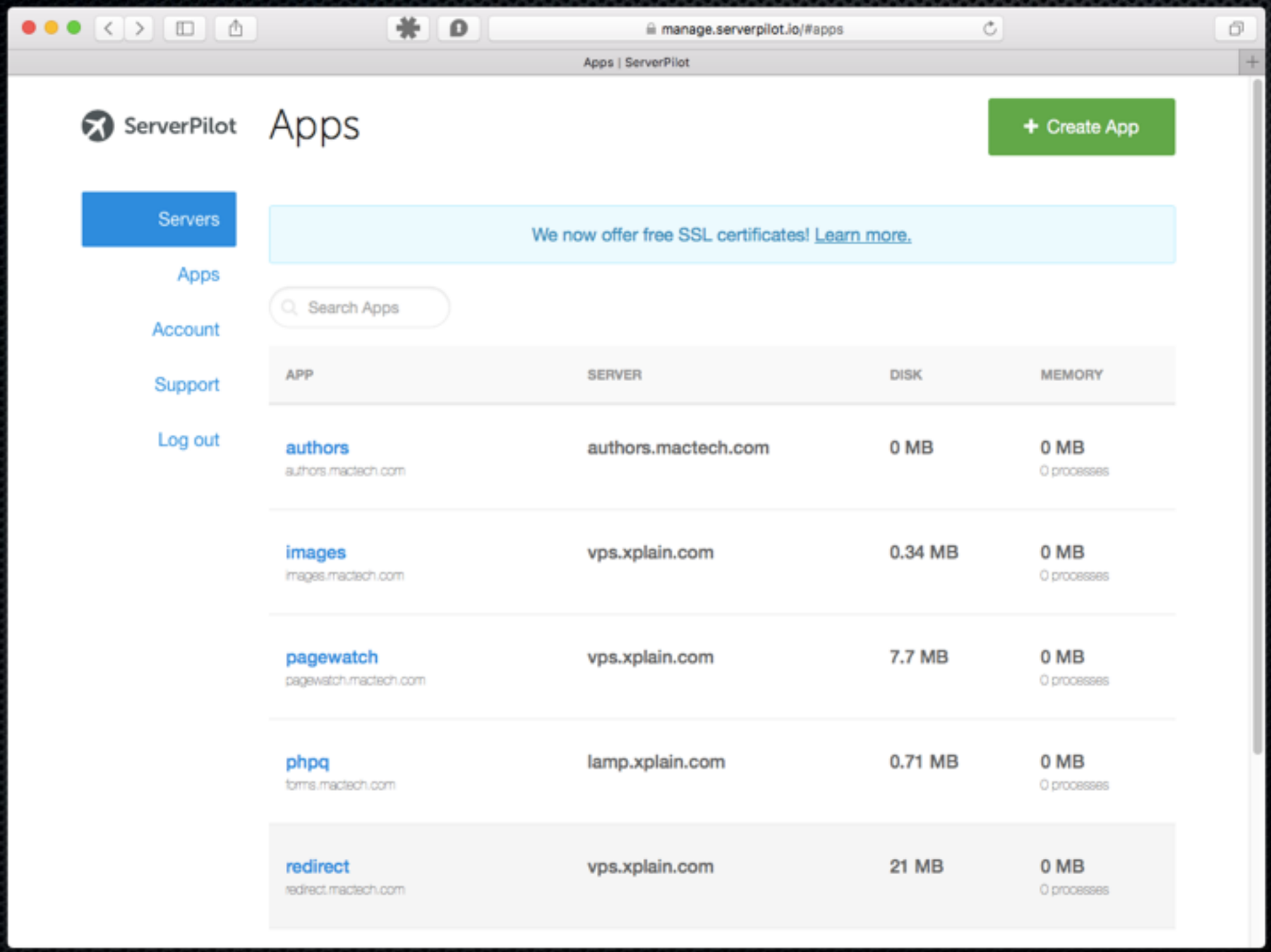
Control Panels

- Light, fast, and secure with modern interface
- New Breed, multi-servers
  - ServerPilot.io
  - webmin / virtualmin / sermon
  - Sentora http://sentora.org
  - virtualizor
- Single Servers
  - Webuzo
  - VestaCP

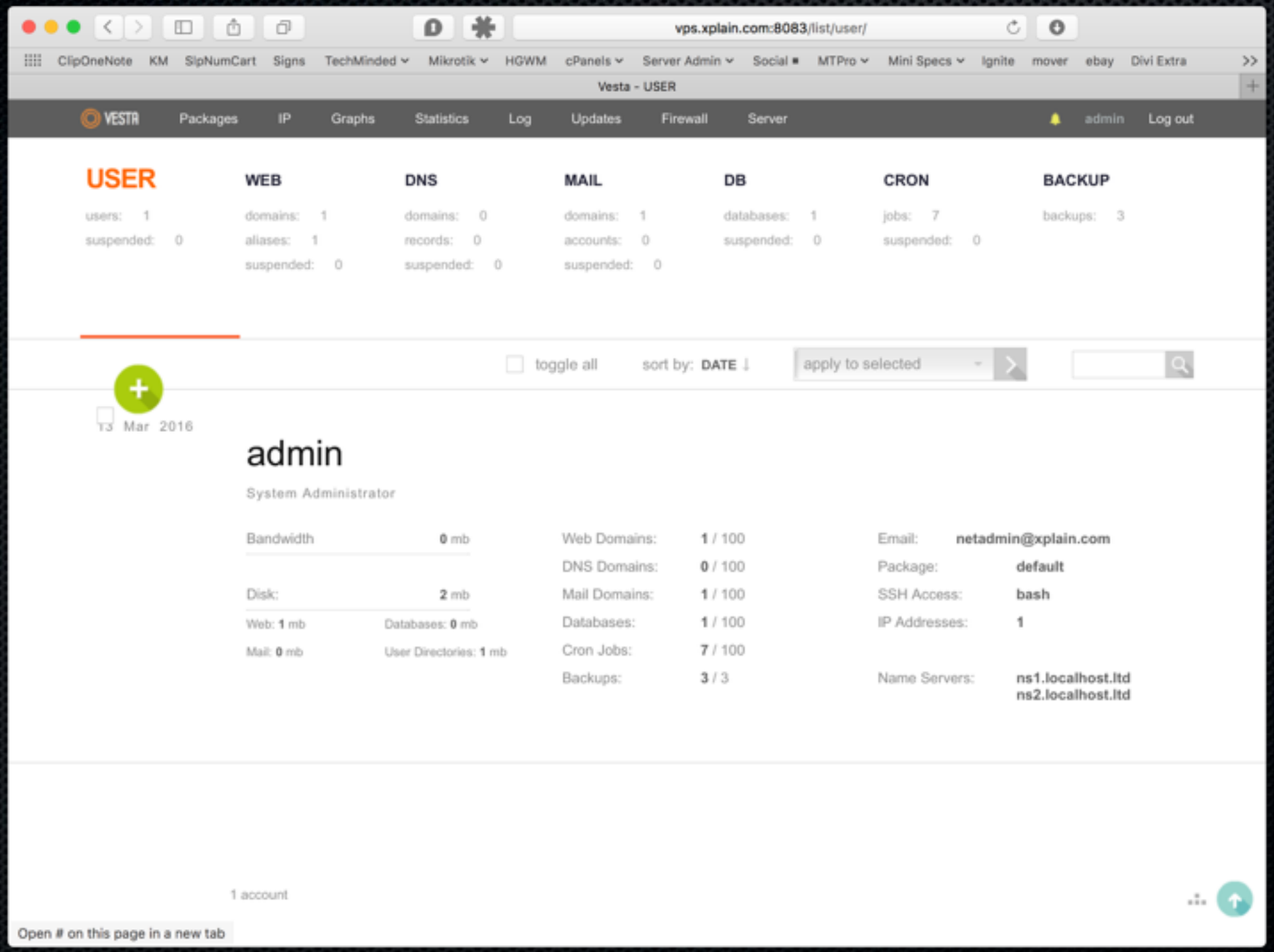
Types of Services

- Nginx Web Server
- Apache Web Server (as backend)
- Bind DNS Server
- Exim or other mail server
- Antivirus Antispam
- Dovecot POP3/IMAP Server or others
- MySQL Database Server
- FTP Server
- Firewall and automatic banning
- … and others

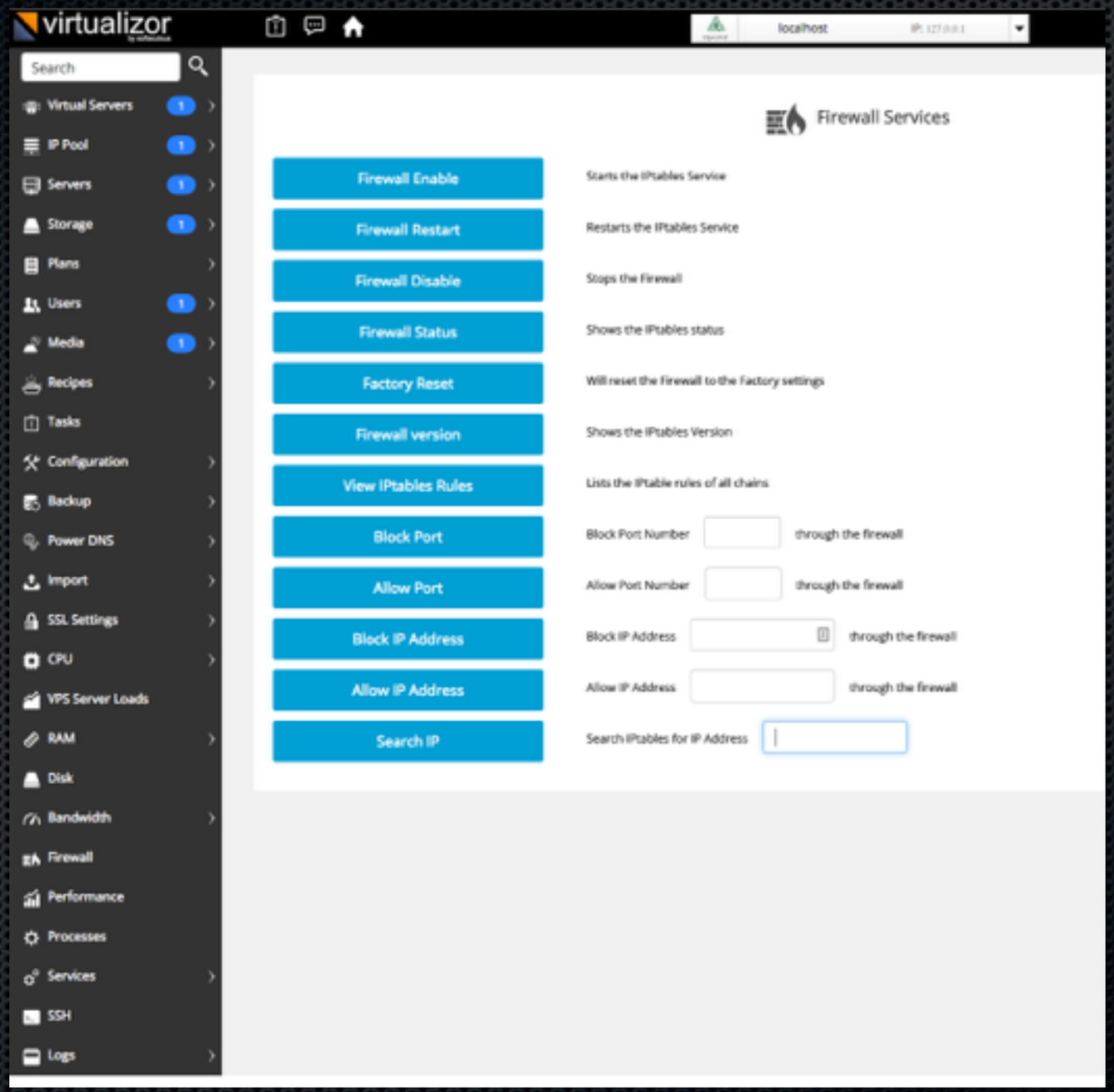
ServerPilot.io



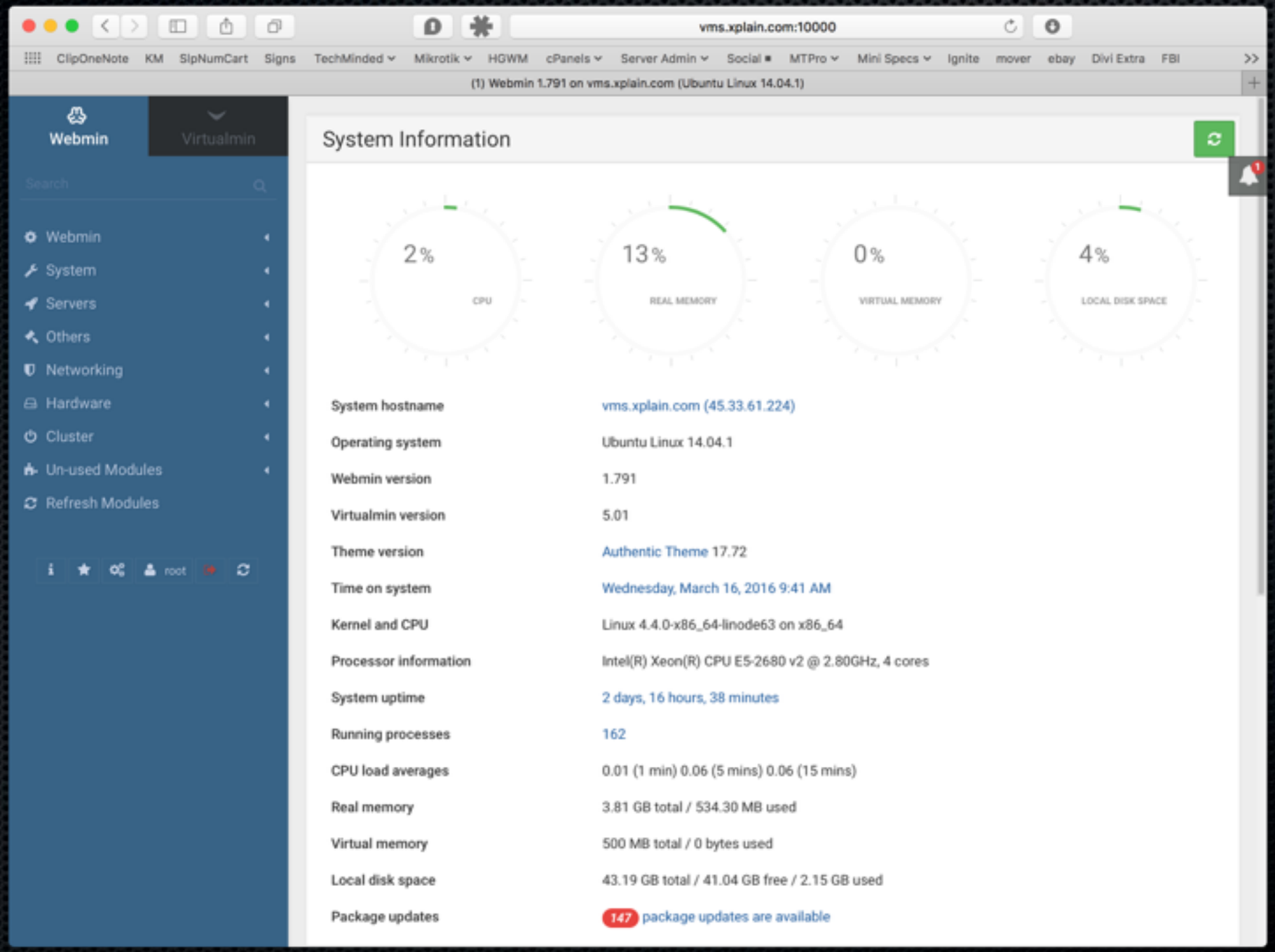
VestaCP


vps.xplain.com:8083/list/user/
ClipOneNote KM SlpNumCart Signs TechMinded Mikrotik HGWM cPanels Server Admin Social MTPro Mini Specs Ignite mover ebay Divi Extra
Vesta - USER
VESTA Packages IP Graphs Statistics Log Updates Firewall Server admin Log out
USER
users: 1
suspended: 0
WEB
domains: 1
aliases: 1
suspended: 0
DNS
domains: 0
records: 0
suspended: 0
MAIL
domains: 1
accounts: 0
suspended: 0
DB
databases: 1
suspended: 0
CRON
jobs: 7
suspended: 0
BACKUP
backups: 3
toggle all
sort by: DATE
apply to selected
13 Mar 2016
admin
System Administrator
Bandwidth 0 mb
Disk: 2 mb
Web: 1 mb
Databases: 0 mb
Mail: 0 mb
User Directories: 1 mb
Web Domains: 1 / 100
DNS Domains: 0 / 100
Mail Domains: 1 / 100
Databases: 1 / 100
Cron Jobs: 7 / 100
Backups: 3 / 3
Email: netadmin@xplain.com
Package: default
SSH Access: bash
IP Addresses: 1
Name Servers: ns1.localhost.ltd
ns2.localhost.ltd
1 account
Open # on this page in a new tab

virtualizor



webmin


vms.xplain.com:10000
ClipOneNote KM SlpNumCart Signs TechMinded Mikrotik HGWM cPanels Server Admin Social MTPro Mini Specs Ignite mover ebay Divi Extra FBI
(1) Webmin 1.791 on vms.xplain.com (Ubuntu Linux 14.04.1)
Webmin
Virtualmin
Search
Webmin
System
Servers
Others
Networking
Hardware
Cluster
Un-used Modules
Refresh Modules
root
System Information
2%
CPU
13%
REAL MEMORY
0%
VIRTUAL MEMORY
4%
LOCAL DISK SPACE
System hostname
vms.xplain.com (45.33.61.224)
Operating system
Ubuntu Linux 14.04.1
Webmin version
1.791
Virtualmin version
5.01
Theme version
Authentic Theme 17.72
Time on system
Wednesday, March 16, 2016 9:41 AM
Kernel and CPU
Linux 4.4.0-x86_64-linode63 on x86_64
Processor information
Intel(R) Xeon(R) CPU E5-2680 v2 @ 2.80GHz, 4 cores
System uptime
2 days, 16 hours, 38 minutes
Running processes
162
CPU load averages
0.01 (1 min) 0.06 (5 mins) 0.06 (15 mins)
Real memory
3.81 GB total / 534.30 MB used
Virtual memory
500 MB total / 0 bytes used
Local disk space
43.19 GB total / 41.04 GB free / 2.15 GB used
Package updates
147 package updates are available

webmin fun

- For Webmin, don't forget…
  - Set time zone, and time server:
  - Webmin > Hardware > System Time
- Fix permissions, and validate
  - Virtualmin > Limits and Validations > Validate Virtual Servers
  - May want to set up schedule for regular validation
- webmin vs. virtualmin vs. cloudmin vs. usermin

Or choose none…

- Remember…
  - Ask yourself why?
- And if none, you need to remember
  - Updates and Security Patches
  - Prevent password and root login
  - Firewall
  - Monitoring

Auto-Updates

- sudo apt-get install unattended-upgrades
- sudo dpkg-reconfigure -p low unattended-upgrades

Check the Schedule

```
mactech@someserver:~$ cat /etc/apt/apt.conf.d/10periodic
 APT::Periodic::Update-Package-Lists “1";
 APT::Periodic::Download-Upgradeable-Packages “0";
 APT::Periodic::AutocleanInterval “0";
```

```
mactech@someserver:~$ cat /etc/apt/apt.conf.d/20auto-upgrades
 APT::Periodic::Update-Package-Lists "1";
 APT::Periodic::Unattended-Upgrade “1”;
```

Note: The 1 means it will update every day. 7 is weekly

Forcing Updates

- Find available updates, and force an upgrade now:

```
sudo apt-get update
sudo apt-get dist-upgrade
```

- Testing it?
  - list available updates

```
sudo apt-get -u upgrade
```

  - simulate update process

```
sudo apt-get -s upgrade
```

- Brute Force Testing
  - `sudo reboot now`
  - you should not see updates now

Firewall

Configure the firewall

Typical ports you may want to open:

```
sudo ufw allow ssh
sudo ufw allow 80/tcp
sudo ufw allow 443/tcp
sudo ufw allow 25/tcp
sudo ufw show added
sudo ufw enable
```

Disable Access

- Disable password access for root

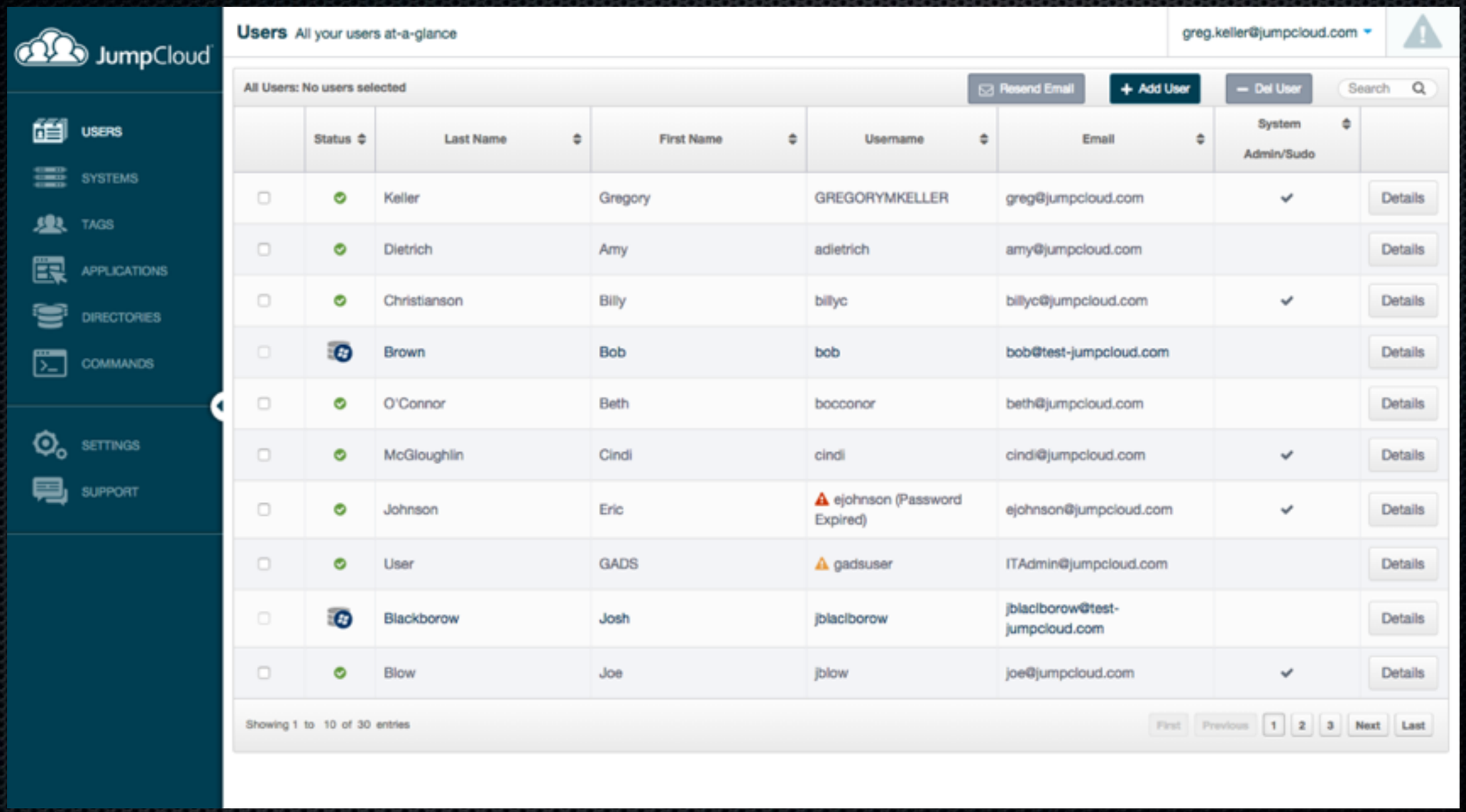
```
sudo passwd -l root
```

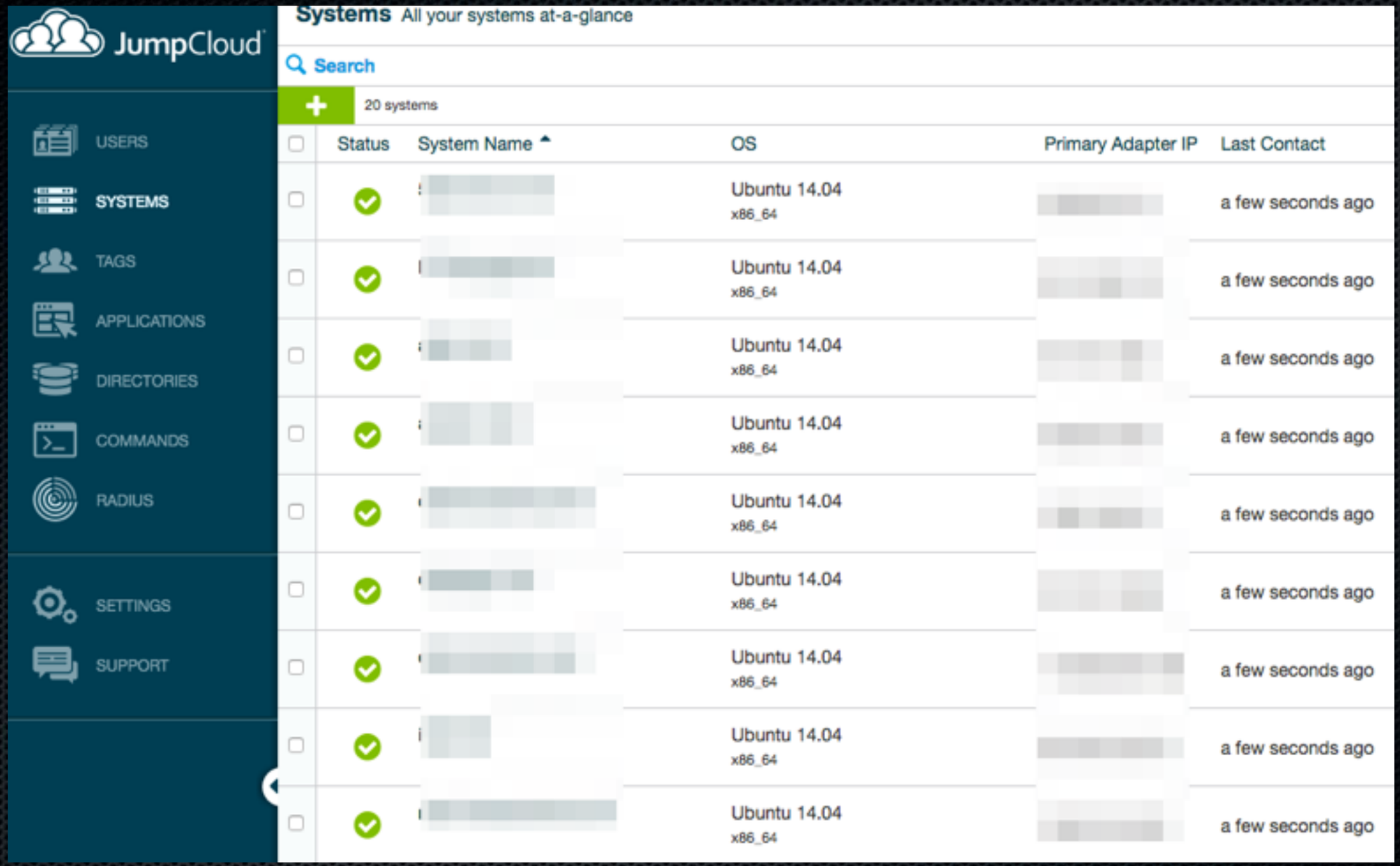
- But there's an easier way.

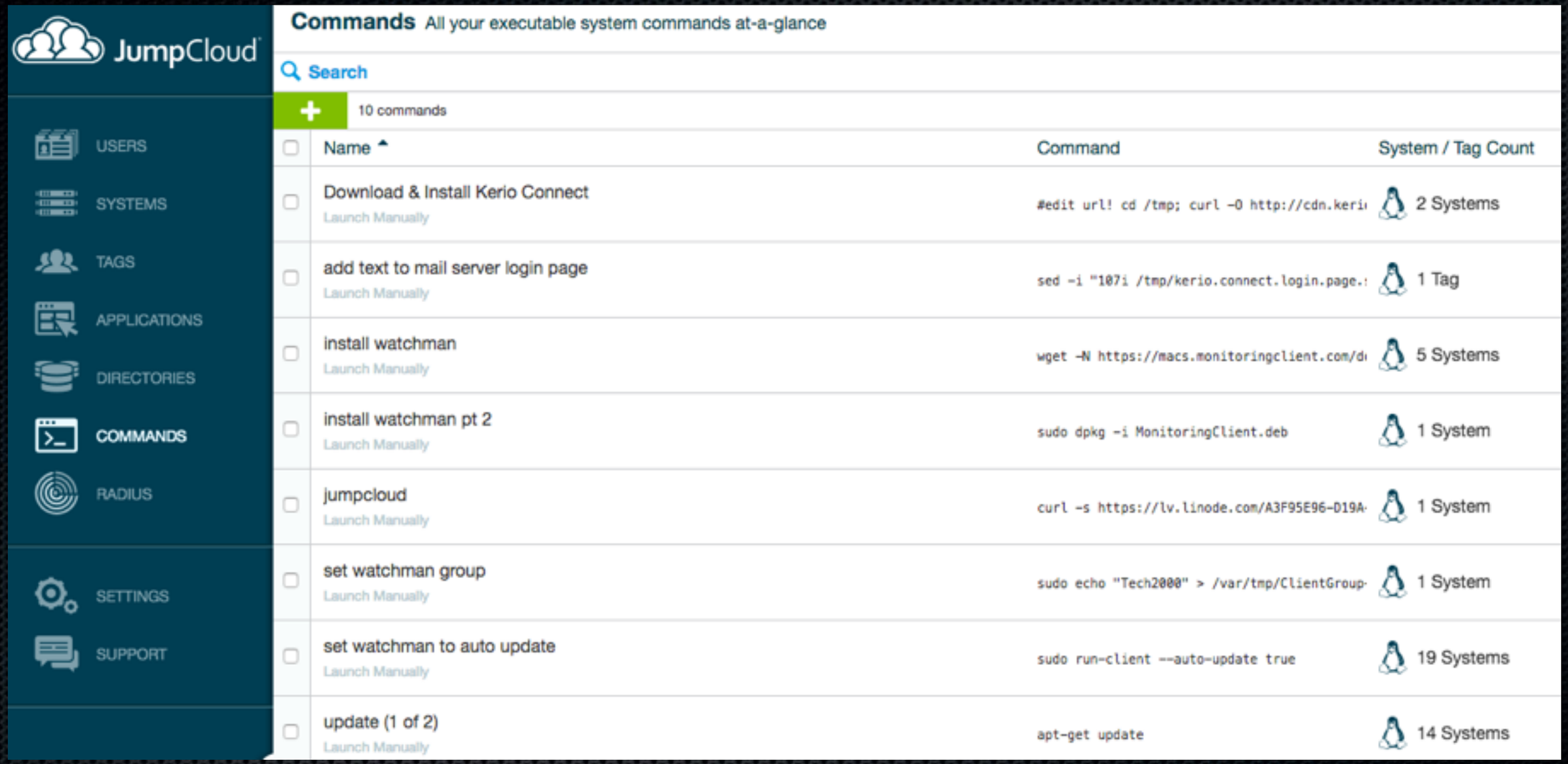
Managing Users

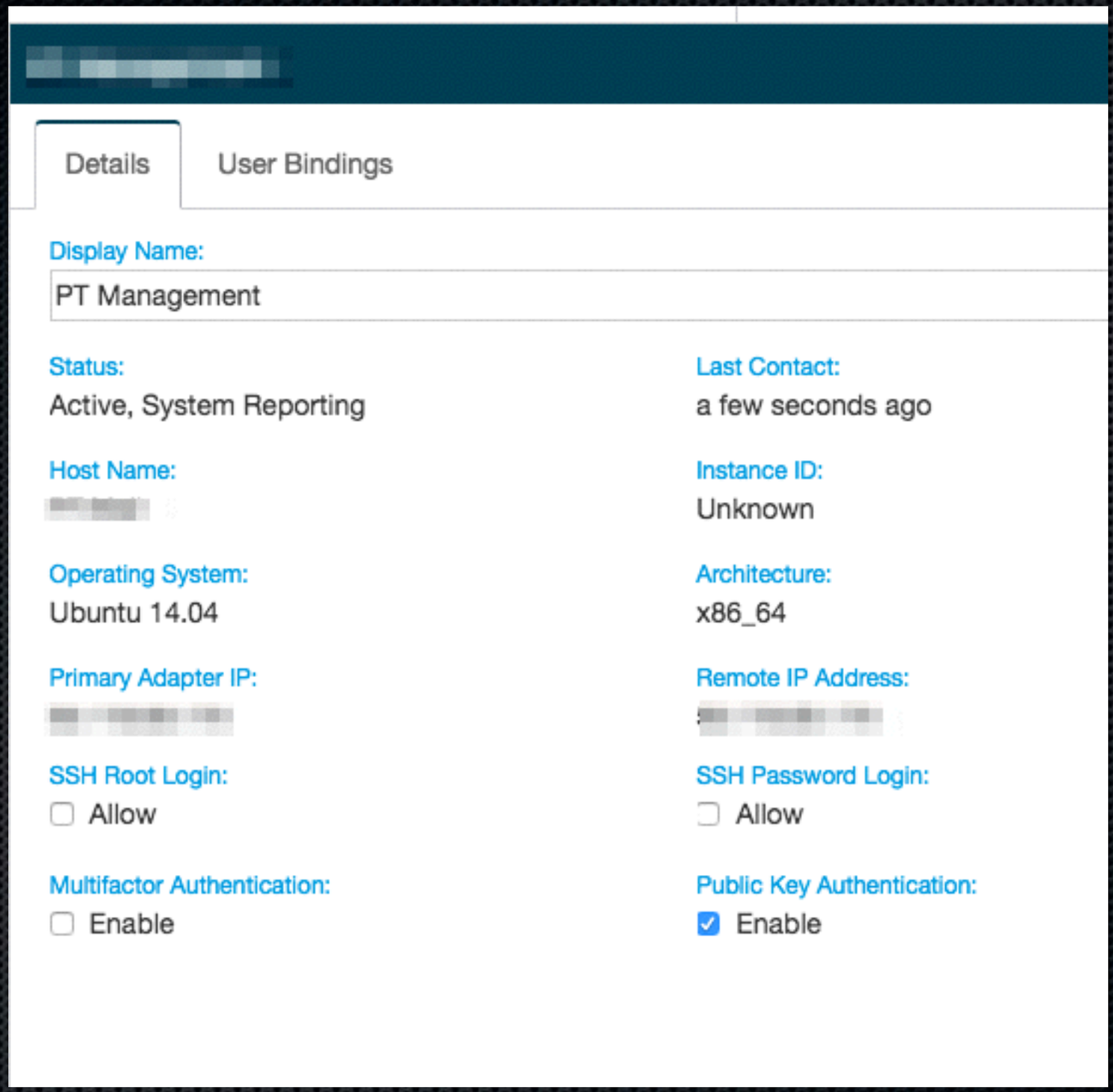
- JumpCloud
  - https://console.jumpcloud.com/#/systems
  - get your Linux install curl command and execute it at the command line for the ssh session you have to the server
  - add a tag to the system so you can manage it
  - make sure to assign yourself (and anyone else) and the server
- Other solutions as well

JumpCloud


JumpCloud
USERS
SYSTEMS
TAGS
APPLICATIONS
DIRECTORIES
COMMANDS
SETTINGS
SUPPORT
Users All your users at-a-glance
greg.keller@jumpcloud.com
All Users: No users selected
Resend Email
+ Add User
– Del User
Search
Status
Last Name
First Name
Username
Email
System Admin/Sudo
Keller Gregory GREGORYMKELLER greg@jumpcloud.com Details
Dietrich Amy adietrich amy@jumpcloud.com Details
Christianson Billy billyc billyc@jumpcloud.com Details
Brown Bob bob bob@test-jumpcloud.com Details
O'Connor Beth bocconor beth@jumpcloud.com Details
McGloughlin Cindi cindi cindi@jumpcloud.com Details
Johnson Eric ejohnson (Password Expired) ejohnson@jumpcloud.com Details
User GADS gadsuser ITAdmin@jumpcloud.com Details
Blackborow Josh jblaclborow jblaclborow@test-jumpcloud.com Details
Blow Joe jblow joe@jumpcloud.com Details
Showing 1 to 10 of 30 entries
First Previous 1 2 3 Next Last


JumpCloud
Systems All your systems at-a-glance
Search
20 systems
USERS
SYSTEMS
TAGS
APPLICATIONS
DIRECTORIES
COMMANDS
RADIUS
SETTINGS
SUPPORT
Status
System Name
OS
Primary Adapter IP
Last Contact
Ubuntu 14.04
x86_64
a few seconds ago


JumpCloud
USERS
SYSTEMS
TAGS
APPLICATIONS
DIRECTORIES
COMMANDS
RADIUS
SETTINGS
SUPPORT
Commands All your executable system commands at-a-glance
Search
10 commands
Name
Command
System / Tag Count
Download & Install Kerio Connect
Launch Manually
#edit url! cd /tmp; curl -O http://cdn.keri
2 Systems
add text to mail server login page
Launch Manually
sed -i "107i /tmp/kerio.connect.login.page.
1 Tag
install watchman
Launch Manually
wget -N https://macs.monitoringclient.com/d
5 Systems
install watchman pt 2
Launch Manually
sudo dpkg -i MonitoringClient.deb
1 System
jumpcloud
Launch Manually
curl -s https://lv.linode.com/A3F95E96-D19A
1 System
set watchman group
Launch Manually
sudo echo "Tech2000" > /var/tmp/ClientGroup
1 System
set watchman to auto update
Launch Manually
sudo run-client --auto-update true
19 Systems
update (1 of 2)
Launch Manually
apt-get update
14 Systems


Details
User Bindings
Display Name:
PT Management
Status:
Active, System Reporting
Last Contact:
a few seconds ago
Host Name:
Instance ID:
Unknown
Operating System:
Ubuntu 14.04
Architecture:
x86_64
Primary Adapter IP:
Remote IP Address:
SSH Root Login:
Allow
SSH Password Login:
Allow
Multifactor Authentication:
Enable
Public Key Authentication:
Enable

Integrated Monitoring

- Go to your watchman setup:
- define the group
- install on (two commands) watchman client

```
run-client --auto-update true
sudo run-client -F
```

Computer Overview

Actions

All Clear | 0 Muted Plugins | 2 Expirations

Copy Specs

Last User: xadmin
Computer Name:
Group:
Serial Number: No Serial Found

INTEGRATIONS

Monkey Box: View in MonkeyBox

TECH SPECS

Operating System: Ubuntu 14.04.4 LTS
Serial Number: No Serial Found
Installed RAM: 3.9 GB
Processor: Intel(R) Xeon(R) CPU E5-2680 v2 @ 2.80GHz 2800 (4 core 1 processor)
System MAC: F2:3C:91:89:F0:B7
Flash Version: Unknown

REPORTING

Last Report: 2016-04-25 7:18 PM
Agent Version: 3.0.218
Uptime: 133 days 15 hours 58 minutes
First Report: 2014-11-30 10:42 AM
Watchman ID: 20141130-L27J-GXKGWA

Plugin Results | Notes (0) | History | Edit

Last Reboot 2016-04-25 7:18 PM
Last System Boot Time: 2015-12-14 at 02:19 (Monday)
? Actions

Local IP Address 2016-04-25 7:18 PM
Primary IP: on eth0
? Actions

Monitoring Agent 2016-04-25 7:18 PM
Monitoring Client version 3.0.218
The internal check of the client software reports no issues.
? Actions

Network Errors 2016-04-25 7:18 PM
[2016-04-25] lo: 0 Send Errors, 0 Receive Errors; eth0: 0 Send Errors, 0 Receive Errors
? Actions

RAM Errors 2016-04-25 7:18 PM
Memory: 3998MiB total, 1979MiB used, 2019MiB free
Swap: 255MiB total, 254MiB used, 1MiB free
? Actions

Report Failed Logins 2016-04-25 7:18 PM
No new failed logins to report
? Actions

Report Kerio Status 2016-04-25 7:18 PM
License:
License Expires: 31 Jan 2017
Subscription Expires: 31 Jan 2017
Licensed Users: 10000 (43 Local Used)
Company: Mid-Atlantic Computer Solutions
E-Mail: woneal@4macsolutions.com

Key Directory, path, size:
Mailstore, /opt/kerio/mailserver/store, 89.16GB
Backups, /var/backup, does not exist.
Archives, /opt/kerio/mailserver/store/archive, 0.00GB
Logs, /opt/kerio/mailserver/store/logs/, 0.63GB
FullTextSearch, /opt/kerio/mailserver/store/fulltext, 1.97GB

Domains - Users (Total Storage, Public Folders):
adasafrica.com - 5 (15.25GB, 0.00GB)
? Actions

PCI and SSL

- PCI Security: https://www.virtualmin.com/documentation/security/pci
- Check your vulnerabilities and SSL installation with tools.
  - https://www.digicert.com/help/
  - https://www.sslshopper.com/ssl-checker.html

Mitigating Poodle / SSL 3.0 Issue

- Apache, VirtualMin, Usermin
  - See full description and steps at:

https://www.digicert.com/ssl-support/apache-disabling-ssl-v3.htm

https://www.virtualmin.com/node/34811

Tools and Utilities

- ncdu: "GUI" for file browsing

```
ncdu install
apt-get install ncdu
apt-get install yum
apt-get install yum-utils
yum-config-manager –enable
```

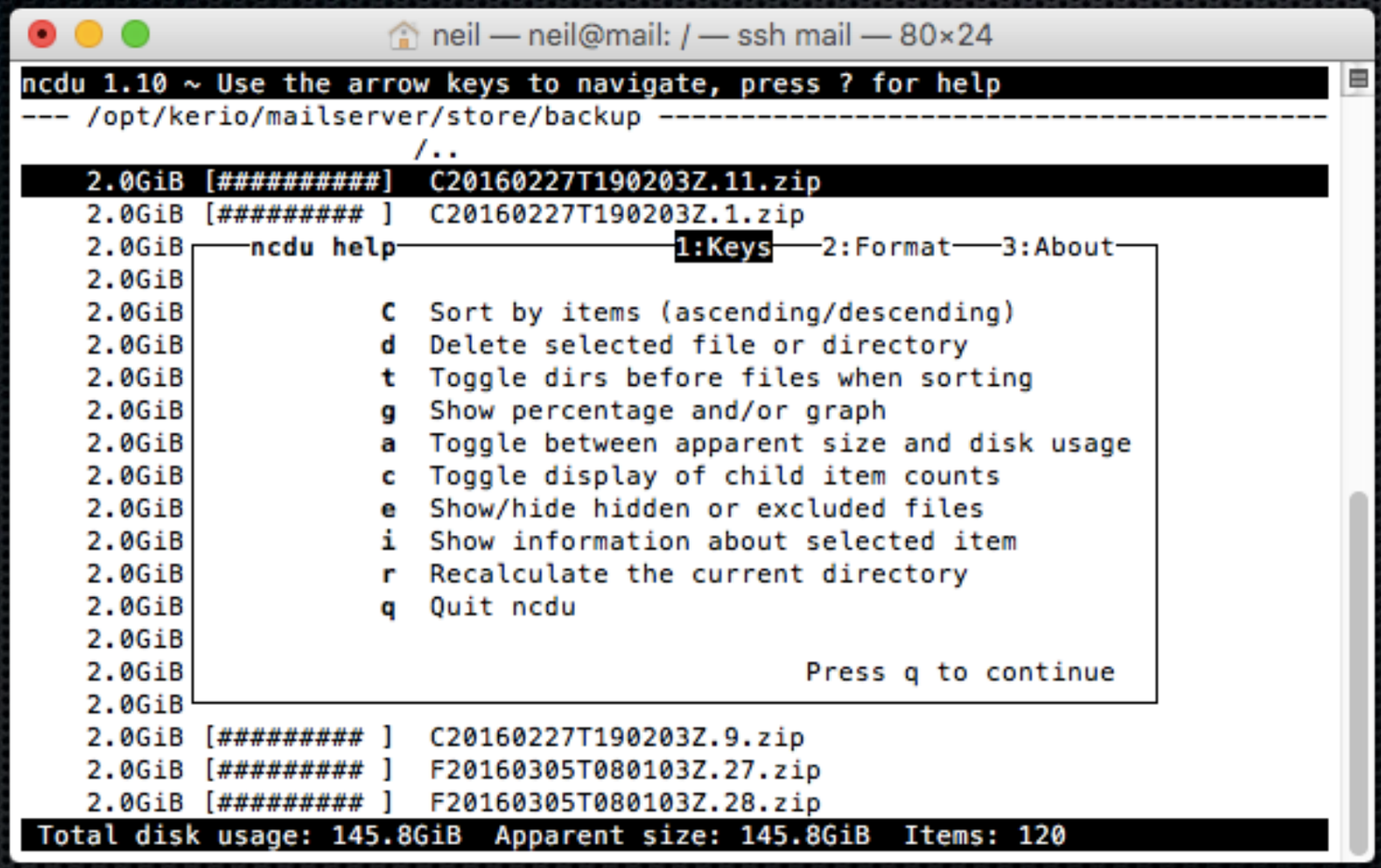
- mtr: "GUI" to help with packet trace and loss

```
apt-get install mtr
```

ncdu


neil — neil@mail: / — ssh mail — 80×24
ncdu 1.10 ~ Use the arrow keys to navigate, press ? for help
--- /opt/kerio ----------
/..
321.7GiB [##########] /mailserver
16.0KiB [ ] .DS_Store
Scanning...
Total items: 2279188 size: 123.3GiB
Current item: /opt/kerio/mailserver/sto...il/02 - Q4/#msgs/00000ded.eml
ning...
Press q to abort
Total disk usage: 321.7GiB Apparent size: 315.5GiB Items: 3198720

ncdu


neil — neil@mail: / — ssh mail — 80×24
ncdu 1.10 ~ Use the arrow keys to navigate, press ? for help
--- /opt/kerio/mailserver/store/backup ----------
/..
2.0GiB [##########] C20160227T190203Z.11.zip
2.0GiB [#########] C20160227T190203Z.1.zip
ncdu help 1:Keys 2:Format 3:About
C Sort by items (ascending/descending)
d Delete selected file or directory
t Toggle dirs before files when sorting
g Show percentage and/or graph
a Toggle between apparent size and disk usage
c Toggle display of child item counts
e Show/hide hidden or excluded files
i Show information about selected item
r Recalculate the current directory
q Quit ncdu
Press q to continue
2.0GiB [#########] C20160227T190203Z.9.zip
2.0GiB [#########] F20160305T080103Z.27.zip
2.0GiB [#########] F20160305T080103Z.28.zip
Total disk usage: 145.8GiB Apparent size: 145.8GiB Items: 120

mtr

ssh root@198.74.60.120 — -ssh -l root 198.74.60.120 — 100×35

```
                                My traceroute  [v0.86]
ubuntu (0.0.0.0)                                                Tue Apr 26 17:34:49 2016
Keys:  Help   Display mode   Restart statistics   Order of fields   quit
                                                     Packets               Pings
 Host                                              Loss%   Snt   Last   Avg  Best  Wrst StDev
 1. router2-nac.linode.com                          0.0%   291    0.7   0.6   0.5   1.9   0.1
 2. 173.255.239.2                                   0.0%   291    0.7   0.8   0.6   2.1   0.2
 3. 207.99.109.69                                   0.0%   291    0.8   1.7   0.4  12.8   2.8
 4. 0.e1-1.tbr1.tl9.nac.net                         0.0%   291   10.8   3.7   1.5  12.7   3.4
 5. 0.e1-3.tbr2.tl9.nac.net                         0.0%   291    1.5   2.6   1.4  22.1   2.9
 6. ae-30.r08.nycmny01.us.bb.gin.ntt.net            0.0%   291    3.1   2.2   1.8   5.2   0.4
 7. lag-17.ear2.NewYork1.Level3.net                78.6%  291   54464 52695 51162 55082 866.7
 8. b.resolvers.Level3.net                          0.0%   291    1.5   1.5   1.4   2.0   0.0
```

System Logging

- syslog - or System Logging
  - papertrailapp.com will let you send your log files to them for parsing & storage
  - they will let you set up defined searches and the system will send you emails when something needs your attention

```
Apr 25 19:12:19      106.143 (U7P: ,0418d6027439,v3.2.7.2816) hostapd: ath1: STA 70:48:0f:ae:e7:ac IEEE 802.11: associa
Apr 25 19:12:19      106.143 (U7P: ,0418d6027439,v3.2.7.2816) hostapd: ath1: STA 70:48:0f:ae:e7:ac RADIUS: starting acc
Apr 25 19:12:19      106.143 (U7P: ,0418d6027439,v3.2.7.2816) hostapd: ath1: STA 70:48:0f:ae:e7:ac WPA: pairwise key ha
Apr 25 19:12:30      106.143 (U7P: ,0418d6027439,v3.2.7.2816) syslog: wevent.recv_msg(): EVENT_STA_LEAVE ath1: 2
Apr 25 19:12:30      106.143 (U7P: ,0418d6027439,v3.2.7.2816) hostapd: ath1: STA 70:48:0f:ae:e7:ac IEEE 802.11: sta_sta
Apr 25 19:12:30      106.143 (U7P: ,0418d6027439,v3.2.7.2816) hostapd: ath1: STA 70:48:0f:ae:e7:ac IEEE 802.11: disasso
Apr 25 19:13:35      l logger:  Attempt to deliver to unknown recipient <lmattis@t2000inc.com>, from <uemlmm2_595416893
Apr 25 19:13:36      l logger:  Attempt to deliver to unknown recipient <zafar.ghadar@t2000inc.com>, from <bounce-18682
Apr 25 19:15:05      l logger:  Attempt to deliver to unknown recipient <smalomo@t2000inc.com>, from <www-data@ccb1.lea
Apr 25 19:18:16      acsolutions.com logger:  Connection attempt to service SMTP from IP address 195.22.126.189 rejecte
Apr 25 19:18:30      l logger:  HTTP/CardDav: User demison@t2000inc.com doesn't exist. Attempt from IP address 207.235.
Apr 25 19:18:30      l logger:  HTTP/CardDav: User demison@t2000inc.com doesn't exist. Attempt from IP address 207.235.
Apr 25 19:22:12      106.143 (U7P: ,0418d6027439,v3.2.7.2816) hostapd: ath1: STA 70:48:0f:ae:e7:ac IEEE 802.11: associa
Apr 25 19:22:12      106.143 (U7P: ,0418d6027439,v3.2.7.2816) syslog: wevent.recv_msg(): EVENT_STA_JOIN ath1: 70:48:0f:
Apr 25 19:22:12      106.143 (U7P: ,0418d6027439,v3.2.7.2816) hostapd: ath1: STA 70:48:0f:ae:e7:ac RADIUS: starting acc
Apr 25 19:22:12      106.143 (U7P: ,0418d6027439,v3.2.7.2816) hostapd: ath1: STA 70:48:0f:ae:e7:ac WPA: pairwise key ha
Apr 25 19:22:20      106.143 (U7P: ,0418d6027439,v3.2.7.2816) syslog: wevent.recv_msg(): EVENT_STA_LEAVE ath1: 2
Apr 25 19:22:20      106.143 (U7P: ,0418d6027439,v3.2.7.2816) hostapd: ath1: STA 70:48:0f:ae:e7:ac IEEE 802.11: sta_sta
Apr 25 19:22:20      106.143 (U7P: ,0418d6027439,v3.2.7.2816) hostapd: ath1: STA 70:48:0f:ae:e7:ac IEEE 802.11: disasso
Apr 25 19:22:22      l logger:  Attempt to deliver to unknown recipient <lmattis@t2000inc.com>, from <uemlmm3_683517444
Apr 25 19:27:43      i_Control KerioControl:  IPS: Alert, severity: Blacklist, Rule ID: 1:2520074 ET TOR Known Tor Exit
Apr 25 19:29:28      106.143 (U7P: ,0418d6027439,v3.2.7.2816) syslog: wevent.recv_msg(): EVENT_STA_JOIN ath1: b8:09:8a:
Apr 25 19:29:28      106.143 (U7P: ,0418d6027439,v3.2.7.2816) hostapd: ath1: STA b8:09:8a:ca:3b:2b IEEE 802.11: associa
Apr 25 19:29:28      106.143 (U7P: ,0418d6027439,v3.2.7.2816) hostapd: ath1: STA b8:09:8a:ca:3b:2b RADIUS: starting acc
Apr 25 19:29:28      106.143 (U7P: ,0418d6027439,v3.2.7.2816) hostapd: ath1: STA b8:09:8a:ca:3b:2b WPA: pairwise key ha
Apr 25 19:30:05      l logger:  Attempt to deliver to unknown recipient <smalomo@t2000inc.com>, from <www-data@ccb1.lea
Apr 25 19:30:26      106.143 (U7P: ,0418d6027439,v3.2.7.2816) syslog: wevent.recv_msg(): EVENT_STA_LEAVE ath1: 2
Apr 25 19:30:26      106.143 (U7P: ,0418d6027439,v3.2.7.2816) hostapd: ath1: STA b8:09:8a:ca:3b:2b IEEE 802.11: sta_sta
Apr 25 19:30:26      106.143 (U7P: ,0418d6027439,v3.2.7.2816) hostapd: ath1: STA b8:09:8a:ca:3b:2b IEEE 802.11: disasso
Apr 25 19:32:34      acsolutions.com logger:  Connection attempt to service SMTP from IP address 195.22.126.189 rejecte
Apr 25 19:33:02      l logger:  HTTP/CardDav: Invalid password for user kbroe@t2000inc.com. Attempt from IP address 96.
Apr 25 19:33:02      l logger:  HTTP/CardDav: Invalid password for user kbroe@t2000inc.com. Attempt from IP address 96.
Apr 25 19:37:17      106.143 (U7P: ,0418d6027439,v3.2.7.2816) syslog: wevent.recv_msg(): EVENT_STA_JOIN ath1: 70:48:0f:
Apr 25 19:37:17      106.143 (U7P: ,0418d6027439,v3.2.7.2816) hostapd: ath1: STA 70:48:0f:ae:e7:ac IEEE 802.11: associa
Apr 25 19:37:17      106.143 (U7P: ,0418d6027439,v3.2.7.2816) hostapd: ath1: STA 70:48:0f:ae:e7:ac RADIUS: starting acc
Apr 25 19:37:17      106.143 (U7P: ,0418d6027439,v3.2.7.2816) hostapd: ath1: STA 70:48:0f:ae:e7:ac WPA: pairwise key ha
Apr 25 19:37:43      106.143 (U7P: ,0418d6027439,v3.2.7.2816) syslog: wevent.recv_msg(): EVENT_STA_LEAVE ath1: 2
Apr 25 19:37:43      106.143 (U7P: ,0418d6027439,v3.2.7.2816) hostapd: ath1: STA 70:48:0f:ae:e7:ac IEEE 802.11: sta_sta
Apr 25 19:37:43      106.143 (U7P: ,0418d6027439,v3.2.7.2816) hostapd: ath1: STA 70:48:0f:ae:e7:ac IEEE 802.11: disasso
Apr 25 19:42:33      l logger:  HTTP/WebDav: User rvanalastine@t2000inc.com doesn't exist. Attempt from IP address 68.2
Apr 25 19:42:36      l logger:  HTTP/CardDav: User @ doesn't exist. Attempt from IP address 68.203.29.69.
Apr 25 19:42:39      l logger:  HTTP/CardDav: User rvanalastine@t2000inc.com doesn't exist. Attempt from IP address 68.
Apr 25 19:42:42      l logger:  HTTP/CardDav: User @ doesn't exist. Attempt from IP address 68.203.29.69.
Apr 25 19:42:46      l logger:  HTTP/CalDav: User rvanalastine@t2000inc.com doesn't exist. Attempt from IP address 68.2
Apr 25 19:42:50      i_Control KerioControl:  IPS: Packet drop, severity: Blacklist, Rule ID: 1:2400007 ET DROP Spamhau
  172.98.114.196
Apr 25 19:45:05      l logger:  Attempt to deliver to unknown recipient <smalomo@t2000inc.com>, from <www-data@ccb1.lea
Apr 25 19:46:13      l logger:  Connection attempt to service SMTP from IP address 192.162.101.80 rejected: access from
Apr 25 19:47:05      acsolutions.com logger:  Connection attempt to service SMTP from IP address 195.22.126.189 rejecte
```

Cloud Based Storage

- Storing files in Cloud as primary storage isn't backup
- 3-2-1 still applies, even to the Cloud
  - Have 3 copies of your data
  - Store on 2 different media types
  - Store 1 backup offsite (offsite = cloud in this case)
- Backup client machine that's synced to cloud
- Cloud-based data transfer and backup (briefly)
  - https://mover.io
  - https://www.multcloud.com
  - http://www.cloudsfer.com
  - http://www.otixo.com

Useful Links

- https://www.linode.com
- https://www.digitalocean.com
- https://wiki.ubuntu.com/LTS
- http://serverpilot.io
- https://vestacp.com
- http://www.webmin.com
- http://jumpcloud.com

Questions?

Neil Ticktin
neilt@mactech.com

MACTECH PRO EVENTS