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 it's at
- Why Linux?
- Keep it simple
- Keep it secure
- Keep it monitored

Linux OSes

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

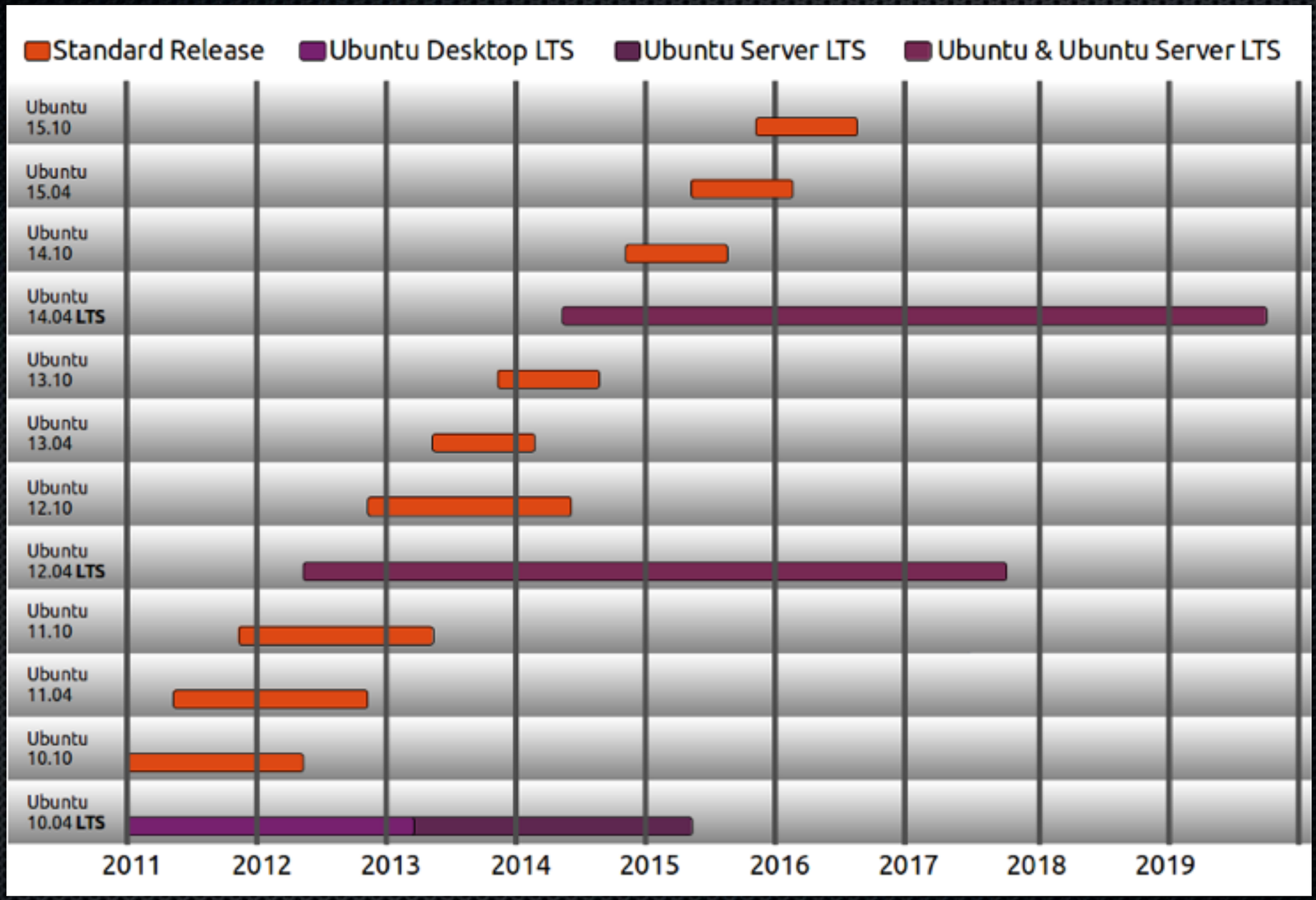
Linux OSes

- Choosing a distribution
- Look at what you will do
- What's supported and vibrant
- What's compatible with your software choices

Ubuntu LTS

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

Ubuntu LTS


Standard Release
Ubuntu Desktop LTS
Ubuntu Server LTS
Ubuntu & Ubuntu Server LTS
Ubuntu 15.10
Ubuntu 15.04
Ubuntu 14.10
Ubuntu 14.04 LTS
Ubuntu 13.10
Ubuntu 13.04
Ubuntu 12.10
Ubuntu 12.04 LTS
Ubuntu 11.10
Ubuntu 11.04
Ubuntu 10.10
Ubuntu 10.04 LTS
2011
2012
2013
2014
2015
2016
2017
2018
2019

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

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
- 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: 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: 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

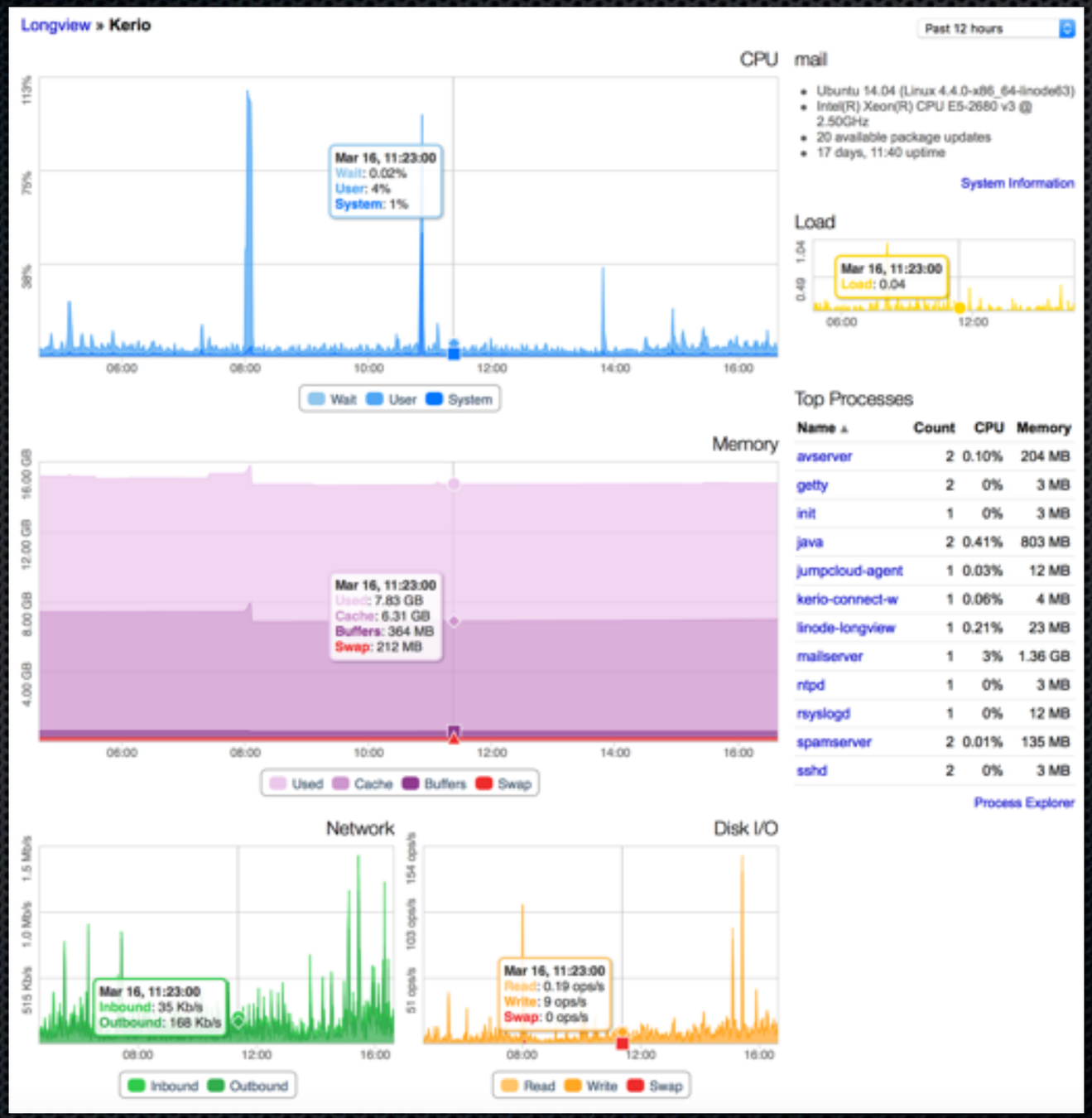
- Set the time zone for the server with this command:
  - dpkg-reconfigure tzdata
  - follow the on screen messages
    - select your region, and time zone

Linode: 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

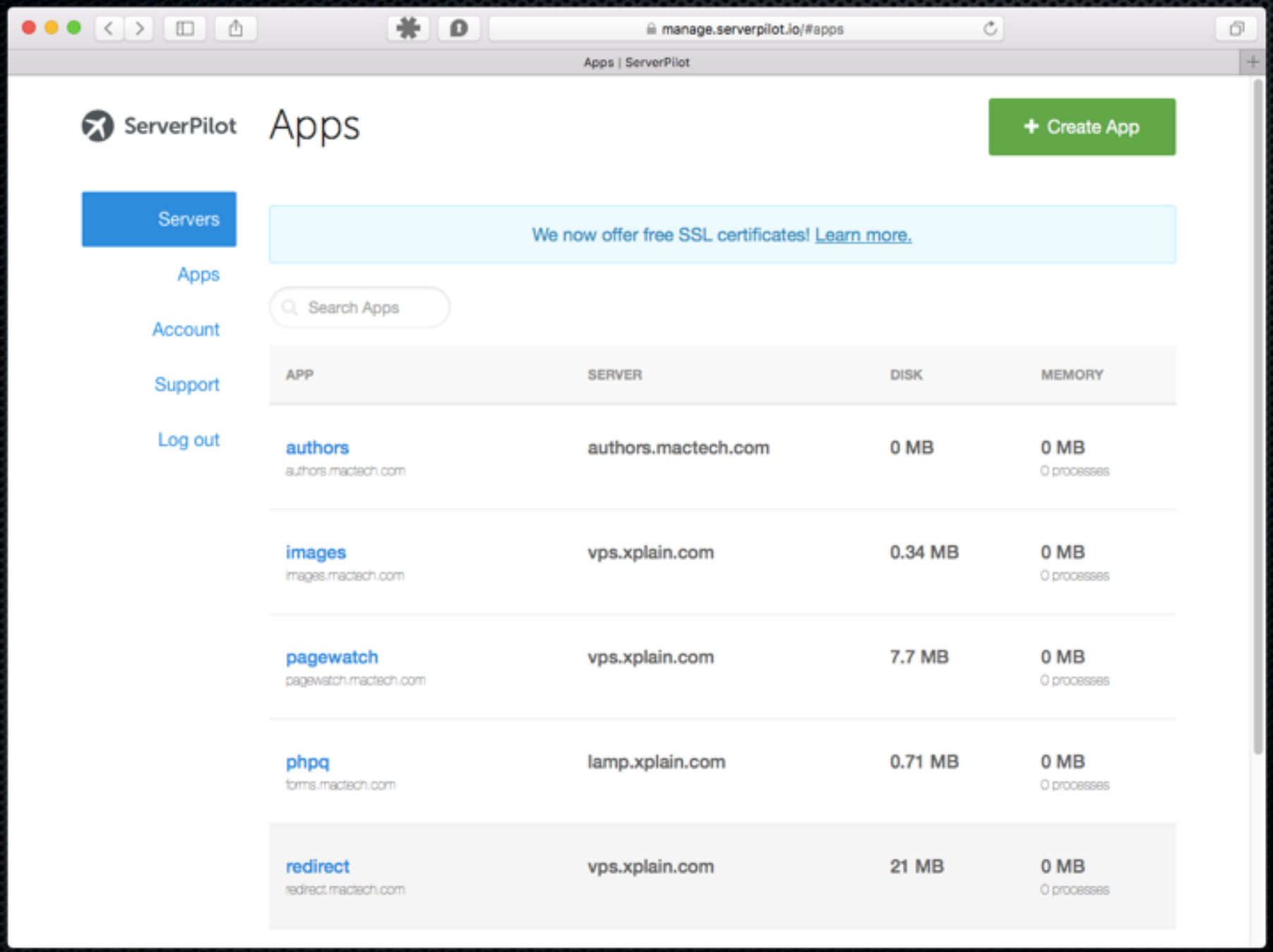
Control Panels

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

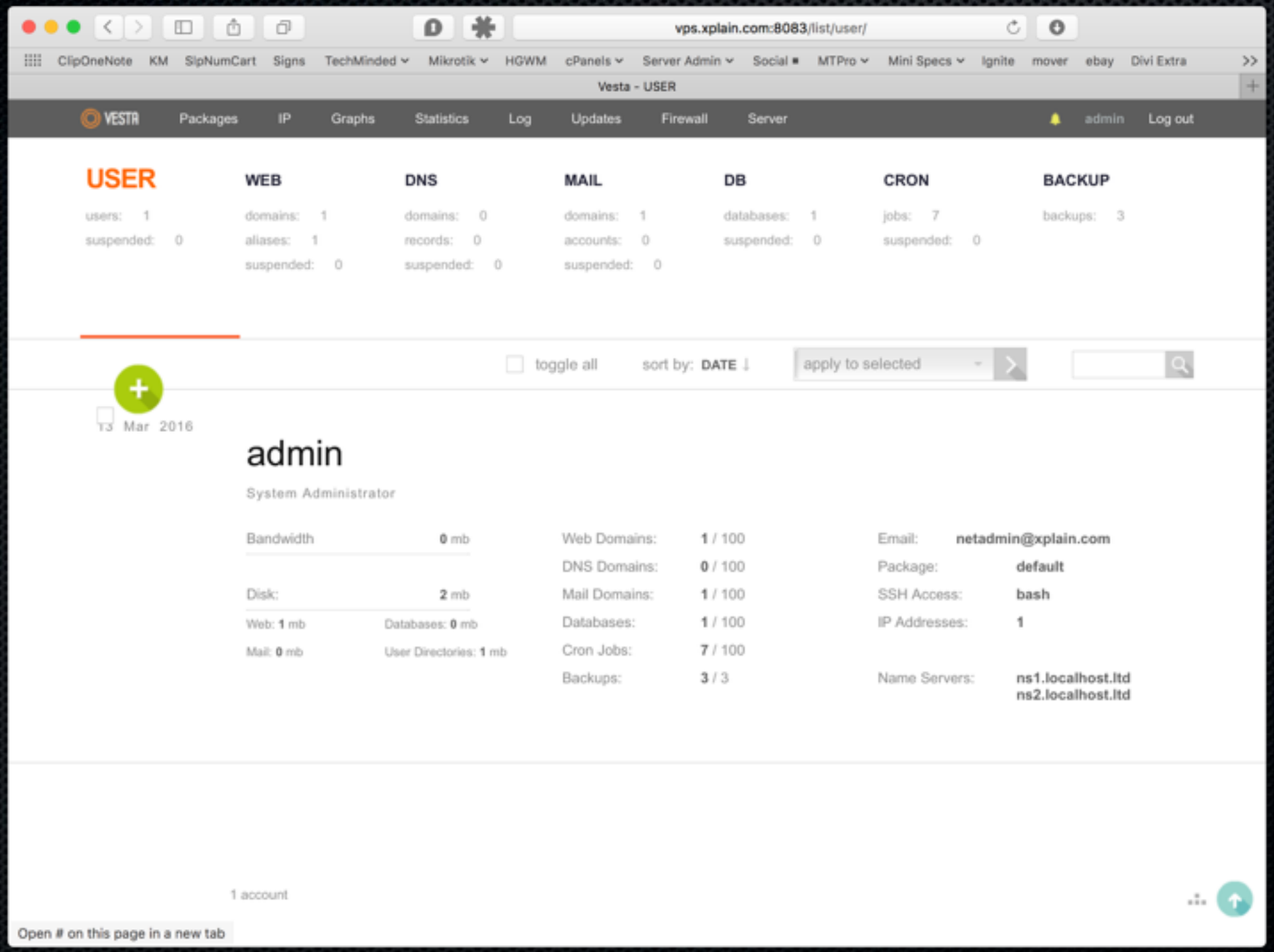
Types of Services

- 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

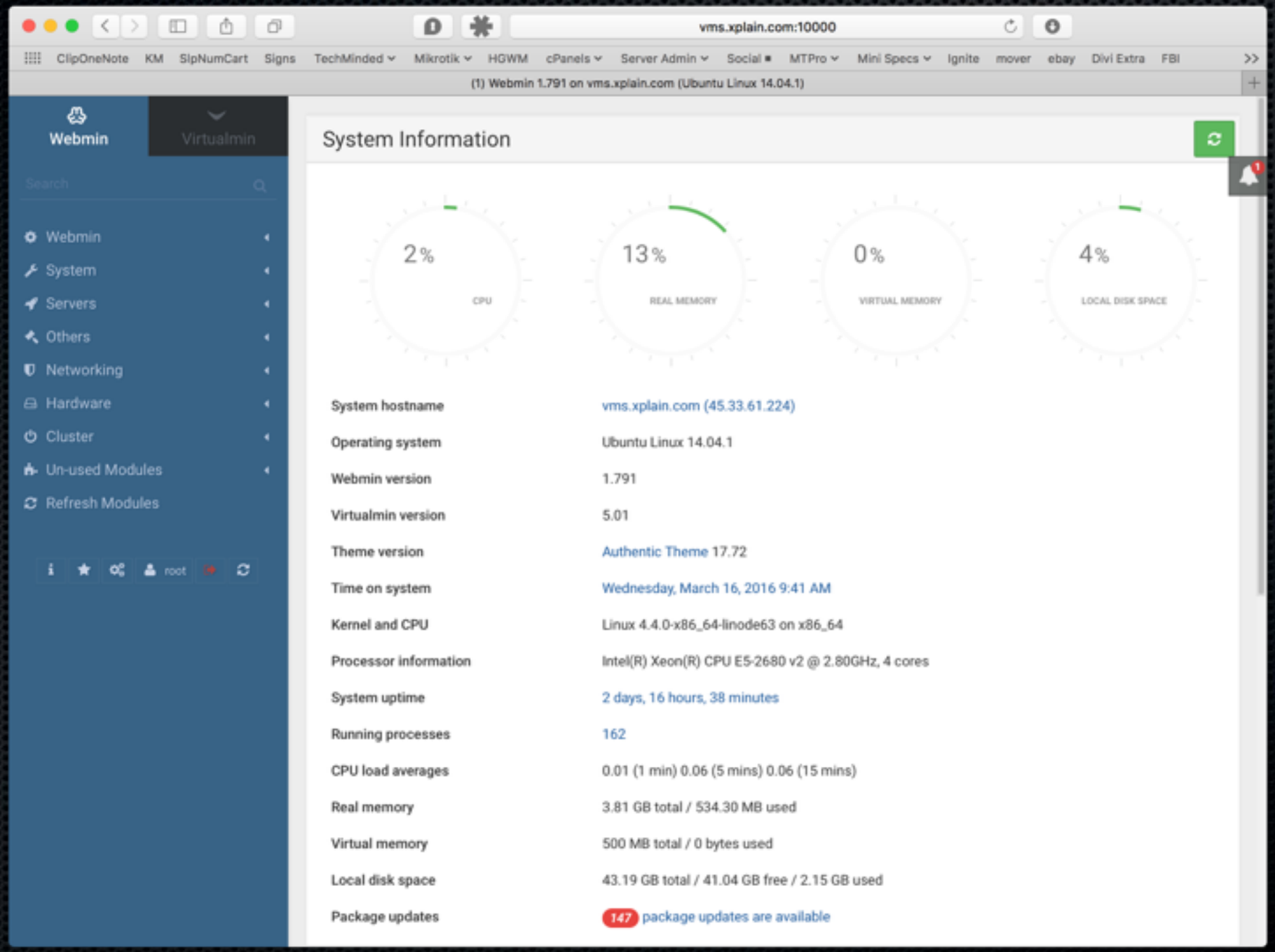
ServerPilot.io



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

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

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

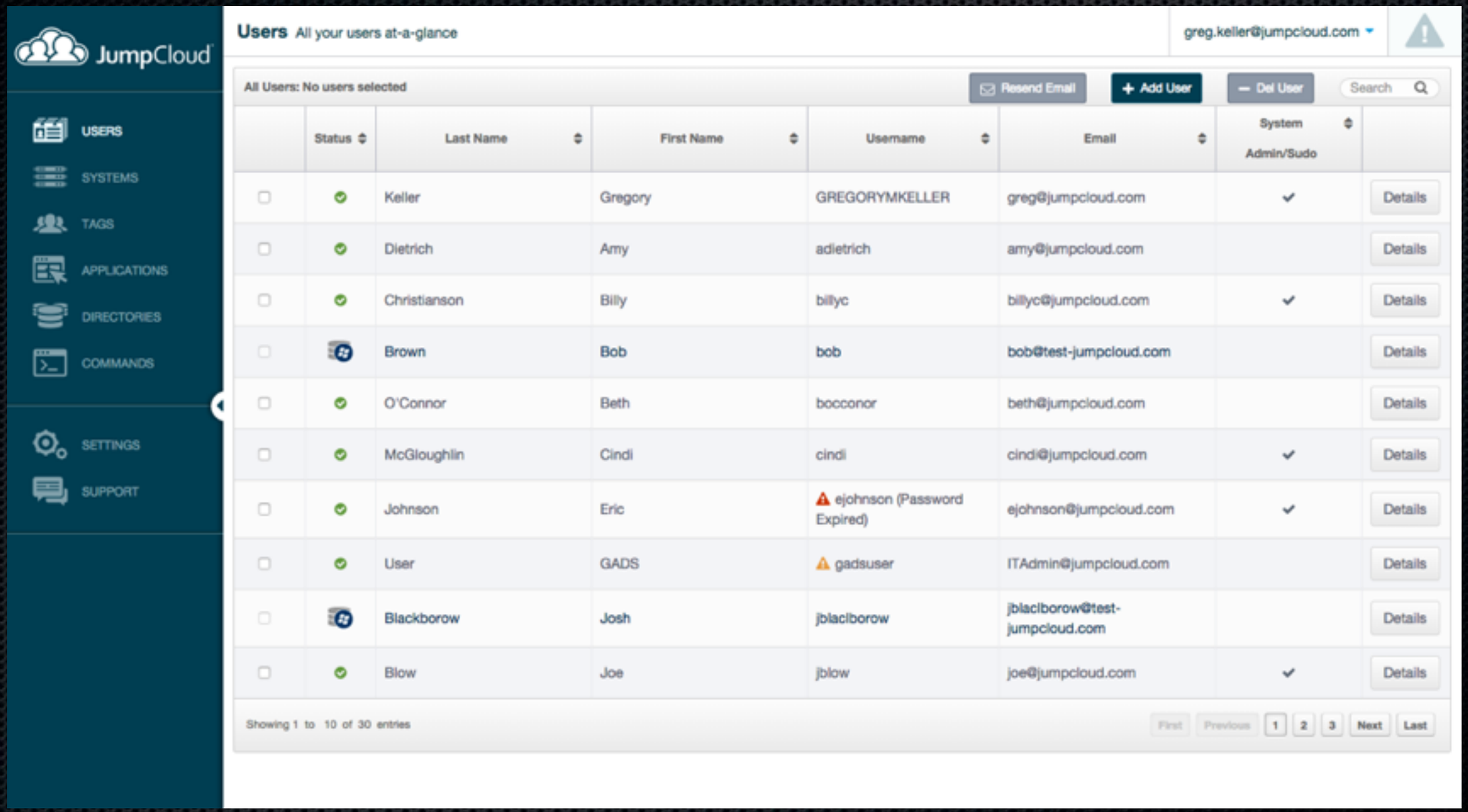
```
sudo apt-get -s upgrade
```

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

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

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
```

Tools and Utilities

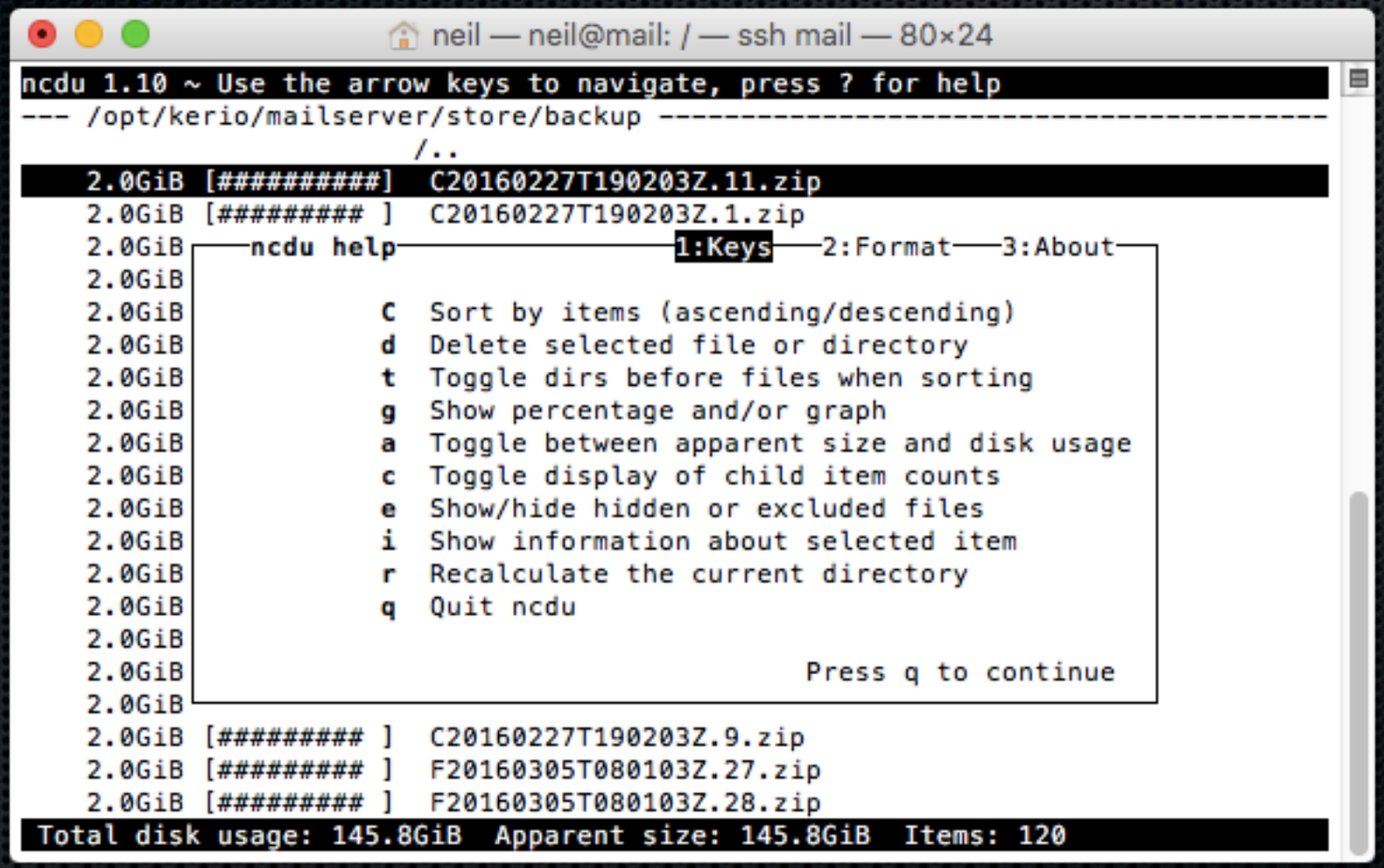
- ncdu

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

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

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?

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