

Configure seu primeiro servidor VPS na nuvem

Tchelinux Porto Alegre 2019

Olá, sou o William!

E eu adoro codar com software livre :D

Sobre mim

- Desenvolvedor e usuário de Software Livre há 8 anos
- Defensor das boas práticas de design de código
- Automatiza tudo que for possível
- Gosta de atuar como DevOps
- Trabalha com Microsserviços Java na Compasso UOL Diveo

Por que saber configurar
um VPS?

Por que saber configurar um VPS?

- Virtual Private Server
- Acesso admin ao servidor
- Configuração completa
- Você escolhe o que vai rodar
- Totalmente escalável
- Mais poderoso do que utilizar uma hospedagem compartilhada
- Mais barato que manter um servidor dedicado

Por que usar Linode para
hospedar um VPS?

Primeiro por um motivo
vindo da comunidade :D



Everton Cardoso

19/06/11



Re: [TcheLinux] Indicação de Provedor Cloud no Brasil - Tipo EC2

Tem que ser aqui?

Vas pagar caro por algo que não chega as pés das soluções la de fora..

Já usei o Amazon e o Rackspace por uns 2 anos, mas hoje prefiro ter meu VSP na Linode, com isso economia de mais de 1/3 do valor.

Abs.

Outros motivos para escolher o Linode ao hospedar um VPS

- Muito simples e intuitivo instanciar um VPS
- Possui um API para automatizar o gerenciamento dos VPS
- Possui vários serviços que simplificam a administração da sua infra
- Novos recursos e upgrades de conta SEM CUSTO
- Confirmo que é tudo isso aí desde 2012

Botando a mão na massa

Criando uma instância (Linode)

Criando uma instância (Linode)

- Na home do Dashboard

The screenshot shows the Linode Dashboard interface. On the left is a sidebar with navigation links: Dashboard, Linodes, Volumes, Object Storage, NodeBalancers, Domains, Longview, StackScripts, Images, Account, and Get Help. The main area is titled 'Dashboard' and contains sections for 'Linodes', 'Volumes', 'NodeBalancers', and 'Domains', each stating 'No items to display.' To the right is a 'Services' section with cards for 'Linode', 'Volume', 'NodeBalancer', 'Domain', and 'One-Click App'. A red box highlights the 'Create' button in the top right corner of the dashboard header, and a red arrow points from the text 'Na home do Dashboard' to this button.

linode

≡ Search for Linodes, Volumes, NodeBalancers, Domains, Tags...

Create ^

Linode
High performance SSD Linux servers for all of your infrastructure needs

Volume
Block Storage service allows you to attach additional storage to your Linode

NodeBalancer
Ensure your valuable applications and services are highly-available

Domain
Manage your DNS records using Linode's high-availability name servers

One-Click App
Deploy blogs, game servers, and other web apps with ease.

Criando uma instância (Linode)

- Na Criação do Novo Linode

Create New Linode

Distributions One-Click My Images

Choose a Distribution

Images

 CentOS 8 x ▼

Region
Determine the best location for your Linode. [Use our speedtest page](#) to find the best region for your current location.

Select a region

 Atlanta, GA ▼

Criando uma instância (Linode)

- Na Criação do Novo Linode

Linode Plan

Nanode **Standard** Dedicated CPU High Memory GPU

Standard instances are good for medium-duty workloads and are a good mix of performance, resources, and price.

Linode Plan	Monthly	Hourly	CPUs	Storage	Ram
<input checked="" type="radio"/> Linode 2GB	\$10	\$0.015	1	50 GB	2 GB
<input type="radio"/> Linode 4GB	\$20	\$0.03	2	80 GB	4 GB
<input type="radio"/> Linode 8GB	\$40	\$0.06	4	160 GB	8 GB

Criando uma instância (Linode)

- Na Criação do Novo Linode

The screenshot shows a user interface for creating a new Linode. At the top, there is a field labeled "Linode Label" containing the text "centos-tchelinux-poa". Below it is a section labeled "Add Tags" with a placeholder "Type to choose or create a tag." A dropdown arrow icon is located to the right of the input field. At the bottom, there is a "Root Password" field containing "••••••|". To the left of the password field is a circular eye icon, and to the right is a key icon with a dropdown arrow. Below the password field is a strength meter consisting of three blue bars followed by a grey bar, with the text "Strength: Fair" next to it. A note at the bottom states: "Password must be at least 6 characters and contain at least two of the following character classes: uppercase letters, lowercase letters, numbers, and punctuation."

Linode Label

centos-tchelinux-poa

Add Tags

Type to choose or create a tag.

Root Password

••••••|

Strength: Fair

Password must be at least 6 characters and contain at least two of the following character classes: uppercase letters, lowercase letters, numbers, and punctuation.

Criando uma instância (Linode)

- Na Criação do Novo Linode

The screenshot shows the 'Linode Summary' section of a Linode creation interface. On the left, there's a placeholder for an SSH key icon with a dropdown arrow, labeled 'Strength: Fair'. Below it, a note says 'Maintain at least two of the following character classes: uppercase letters, lowercase letters, numbers, and symbols.' A 'SSH Keys' section indicates 'You don't have any SSH keys available.' On the right, the 'Linode Summary' panel lists the configuration: 'CentOS' (CentOS 8), 'US' (Atlanta, GA), 'Linode 2GB' (1 CPU, 50GB Storage, 2GB RAM), 'Linode Label' (centos-tchelinux-poa), and a price of '\$10.00/mo'. A large blue 'Create' button at the bottom right is highlighted with a red border.

Linode Summary

CentOS
CentOS 8

US
Atlanta, GA

Linode 2GB
1 CPU, 50GB Storage, 2GB RAM

Linode Label
centos-tchelinux-poa

\$10.00/mo

Create

Conectando ao seu
servidor

Conectando ao seu servidor

- Resumo do Linode criado

The screenshot shows the Linode control panel interface. At the top, it displays the path "Linodes / centos-tchelinux-poa". To the right, there are status indicators: "Launch Console" (green), "Running" (green circle), and a dropdown menu. Below the header, a navigation bar includes "Summary" (underlined in blue), Volumes, Networking, Resize, Rescue, Rebuild, Backups, Activity, Settings, and Advanced.

The main content area shows the details for a "CentOS 8, Linode 2GB: 1 CPU, 50GB Storage, 2GB RAM" instance. It indicates "Volumes: 0, Region: Atlanta, GA".

The "Activity Feed" section shows two recent events:

- Linode centos-tchelinux-poa has been booted with config My CentOS 8 Disk Profile by brendaw. (2 minutes ago)
- Linode centos-tchelinux-poa has been created by brendaw. (2 minutes ago)

A "Select Time Range" dropdown is set to "Last 24 Hours".

On the right side, there are two sections: "IP Addresses" and "Monthly Network Transfer". The "IP Addresses" section lists two IP addresses: 45.79.212.157 (highlighted with a red box) and 2600:3c02::f03c:92ff:fe0a:a42f. The "Monthly Network Transfer" section shows 0 bytes Used and 2000 GB Available.

Conectando ao seu servidor

- No terminal

```
● ● ●  ~1                               root@li1311-157:~  
brendaw:tchelinux-poa-2019 $ ssh root@45.79.212.157  
root@45.79.212.157's password:  
Last login: Thu Dec 12 03:03:27 2019 from 201.21.39.68  
[root@li1311-157 ~]# █
```

Configuração básica do servidor

Configuração básica do servidor

- Definindo o hostname

```
● ● ●  ~#1                                     root@li1311-157:~  
[root@li1311-157 ~]# echo "tchelinux-poa-2019" > /etc/hostname  
[root@li1311-157 ~]# hostname -F /etc/hostname  
[root@li1311-157 ~]# hostname  
tchelinux-poa-2019  
[root@li1311-157 ~]# █
```

Configuração básica do servidor

- Atualizando o CentOS 8

```
● ● ●  ~#1 root@li1311-157:~  
[root@li1311-157 ~]# yum update -y  
Failed to set locale, defaulting to C  
Last metadata expiration check: 0:33:14 ago on Wed Dec 11 23:46:55 2019.  
Dependencies resolved.  
=====  


| Package              | Arch   | Version                                    | Repository | Size  |
|----------------------|--------|--------------------------------------------|------------|-------|
| Installing:          |        |                                            |            |       |
| kernel               | x86_64 | 4.18.0-80.11.2.el8_0                       | BaseOS     | 424 k |
| kernel-core          | x86_64 | 4.18.0-80.11.2.el8_0                       | BaseOS     | 24 M  |
| kernel-modules       | x86_64 | 4.18.0-80.11.2.el8_0                       | BaseOS     | 20 M  |
| Upgrading:           |        |                                            |            |       |
| qemu-guest-agent     | x86_64 | 15:2.12.0-65.module_el8.0.0+189+f9babebb.5 | AppStream  | 188 k |
| bash                 | x86_64 | 4.4.19-8.el8_0                             | BaseOS     | 1.5 M |
| dracut               | x86_64 | 049-10.git20190115.el8_0.1                 | BaseOS     | 361 k |
| dracut-config-rescue | x86_64 | 049-10.git20190115.el8_0.1                 | BaseOS     | 51 k  |
| dracut-network       | x86_64 | 049-10.git20190115.el8_0.1                 | BaseOS     | 96 k  |
| dracut-squash        | x86_64 | 049-10.git20190115.el8_0.1                 | BaseOS     | 52 k  |
| grub2-common         | noarch | 1:2.02-66.el8_0.1                          | BaseOS     | 880 k |


```

Configuração básica do servidor

- Atualizando o CentOS 8

```
● ● ●  ⟳ 1 root@li1311-157:~  
  
libnfsidmap-1:2.3.3-14.el8_0.2.x86_64  
platform-python-3.6.8-4.el8_0.x86_64  
python3-libs-3.6.8-4.el8_0.x86_64  
python3-perf-4.18.0-80.11.2.el8_0.x86_64  
python3-rpm-4.14.2-11.el8_0.x86_64  
rpm-4.14.2-11.el8_0.x86_64  
rpm-build-libs-4.14.2-11.el8_0.x86_64  
rpm-libs-4.14.2-11.el8_0.x86_64  
rpm-plugin-selinux-4.14.2-11.el8_0.x86_64  
rpm-plugin-systemd-inhibit-4.14.2-11.el8_0.x86_64  
selinux-policy-3.14.1-61.el8_0.2.noarch  
selinux-policy-targeted-3.14.1-61.el8_0.2.noarch  
  
Installed:  
kernel-4.18.0-80.11.2.el8_0.x86_64          kernel-core-4.18.0-80.11.2.el8_0.x86_64  
kernel-modules-4.18.0-80.11.2.el8_0.x86_64     grub2-tools-efi-1:2.02-66.el8_0.1.x86_64  
  
Complete!  
[root@li1311-157 ~]# 
```

Configuração básica de segurança

Configuração básica de segurança

- Criando um novo usuário

```
● ● ●  ~#1 william@tchelinux-poa-2019:/root

[root@tchelinux-poa-2019 ~]# useradd -G wheel william
[root@tchelinux-poa-2019 ~]# passwd william
Changing password for user william.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
[root@tchelinux-poa-2019 ~]# su william
[william@tchelinux-poa-2019 root]$ sudo whoami
```

We trust you have received the usual lecture from the local System Administrator. It usually boils down to these three things:

- #1) Respect the privacy of others.
- #2) Think before you type.
- #3) With great power comes great responsibility.

```
[sudo] password for william:
root
[william@tchelinux-poa-2019 root]$ █
```

Configuração básica de segurança

- Validando o novo usuário

```
● ● ●  ~#1 william@tchelinux-poa-2019:~  
  
[william@tchelinux-poa-2019 root]$ exit  
exit  
[root@tchelinux-poa-2019 ~]# exit  
logout  
Connection to 45.79.212.157 closed.  
brendaw:brendaw $ ssh william@45.79.212.157  
william@45.79.212.157's password:  
Last login: Thu Dec 12 00:47:49 2019  
[william@tchelinux-poa-2019 ~]$ █
```

Configuração básica de segurança

- Gerando chaves SSH

```
● ● ● ✎#1 william@tchelinux-poa-2019:~  
brendaw:brendaw $ ssh-keygen -t rsa -b 4096 -C "williambrendaw@protonmail.com" -f ~/.ssh/vps_rsa  
Generating public/private rsa key pair.  
Enter passphrase (empty for no passphrase):  
Enter same passphrase again:  
Your identification has been saved in /Users/brendaw/.ssh/vps_rsa.  
Your public key has been saved in /Users/brendaw/.ssh/vps_rsa.pub.  
The key fingerprint is:  
SHA256:k3n7XLvR2UwZWdk0QoBpPgyRYvnT0R3g0SMqU5Fh6dE williambrendaw@protonmail.com  
The key's randomart image is:  
+---[RSA 4096]---+  
| .=0o=.o. . . |  
| +.B.E.+ . .oo |  
| . = 0.+ o ..o.. |  
| o = B + .o |  
| o . S . .. |  
| o . +o |  
| . o.+ |  
| o . o |  
| o o. |  
+---[SHA256]---+  
brendaw:brendaw $ █
```

Configuração básica de segurança

- Copiando a chave pública para o VPS

```
● ● ●  ~1 william@tchelinux-poa-2019:~  
brendaw:brendaw $ scp ~/.ssh/vps_rsa.pub william@45.79.212.157:  
william@45.79.212.157's password:  
vps_rsa.pub                                              100%   755      3.6KB/s   00:00  
brendaw:brendaw $ ssh william@45.79.212.157  
william@45.79.212.157's password:  
Last login: Thu Dec 12 00:48:16 2019 from 201.21.39.68  
[william@tchelinux-poa-2019 ~]$ mkdir .ssh  
[william@tchelinux-poa-2019 ~]$ mv vps_rsa.pub .ssh/authorized_keys  
[william@tchelinux-poa-2019 ~]$ chown -R william:william .ssh  
[william@tchelinux-poa-2019 ~]$ chmod 700 .ssh  
[william@tchelinux-poa-2019 ~]$ chmod 600 .ssh/authorized_keys  
[william@tchelinux-poa-2019 ~]$ █
```

Configuração básica de segurança

- Desabilitando login com root

```
● ● ●  ~1 william@tchelinux-poa-2019:~  
[william@tchelinux-poa-2019 ~]$ sudo vim /etc/ssh/sshd_config  
[sudo] password for william: █
```

Configuração básica de segurança

- Desabilitando login com root

```
● ● ●   1 william@tchelinux-poa-2019:~  
  
# Logging  
#SyslogFacility AUTH  
SyslogFacility AUTHPRIV  
#LogLevel INFO  
  
# Authentication:  
  
#LoginGraceTime 2m  
PermitRootLogin no  
#StrictModes yes  
#MaxAuthTries 6  
#MaxSessions 10  
  
#PubkeyAuthentication yes  
  
# The default is to check both .ssh/authorized_keys and .ssh/authorized_keys2  
# but this is overridden so installations will only check .ssh/authorized_keys  
AuthorizedKeysFile      .ssh/authorized_keys
```

Configuração básica de segurança

- Desabilitando login com root

```
william@tchelinux-poa-2019:~  
[william@tchelinux-poa-2019 ~]$ sudo vim /etc/ssh/sshd_config  
[william@tchelinux-poa-2019 ~]$ sudo systemctl restart sshd  
[william@tchelinux-poa-2019 ~]$ exit  
logout  
Connection to 45.79.212.157 closed.  
brendaw:tchelinux-poa-2019 $ ssh william@45.79.212.157  
Last login: Thu Dec 12 01:55:57 2019 from 201.21.39.68  
[william@tchelinux-poa-2019 ~]$ 
```

Configuração avançada de segurança

Configuração avançada de segurança

- Instalando Extra Packages for Enterprise Linux Repo

```
● ● ●  ~ 1 william@tchelinux-poa-2019:~  
[william@tchelinux-poa-2019 ~]$ sudo yum install -y epel-release  
Failed to set locale, defaulting to C  
Last metadata expiration check: 1:42:47 ago on Fri Dec 13 21:05:36 2019.  
Dependencies resolved.  
=====  


| Package      | Arch   | Version | Repository | Size |
|--------------|--------|---------|------------|------|
| Installing:  |        |         |            |      |
| epel-release | noarch | 8-5.el8 | extras     | 22 k |

  
Transaction Summary  
=====  


| Install 1 Package               |                       |
|---------------------------------|-----------------------|
| Total download size: 22 k       |                       |
| Installed size: 30 k            |                       |
| Downloading Packages:           |                       |
| epel-release-8-5.el8.noarch.rpm | 22 kB/s   22 kB 00:01 |

  
Total  
=====  


|       | 22 kB/s   22 kB 00:01 |
|-------|-----------------------|
| Total |                       |


```

Configuração avançada de segurança

- Evitando tentativas repetidas de login com Fail2Ban

```
● ● ● 🌐 1 william@tchelinux-poa-2019:~  
[william@tchelinux-poa-2019 ~]$ sudo yum install -y fail2ban  
Failed to set locale, defaulting to C  
Extra Packages for Enterprise Linux 8 - x86_64 859 kB/s | 4.3 MB 00:05  
Last metadata expiration check: 0:00:02 ago on Fri Dec 13 22:52:13 2019.  
Dependencies resolved.  
=====  


| Package                  | Arch   | Version                            | Repository | Size  |
|--------------------------|--------|------------------------------------|------------|-------|
| Installing:              |        |                                    |            |       |
| fail2ban                 | noarch | 0.10.4-8.el8                       | epel       | 17 k  |
| Installing dependencies: |        |                                    |            |       |
| perl-Digest              | noarch | 1.17-395.el8                       | AppStream  | 27 k  |
| perl-Digest-MD5          | x86_64 | 2.55-396.el8                       | AppStream  | 37 k  |
| perl-Net-SSLeay          | x86_64 | 1.85-6.el8                         | AppStream  | 358 k |
| perl-URI                 | noarch | 1.73-3.el8                         | AppStream  | 116 k |
| perl-libnet              | noarch | 3.11-3.el8                         | AppStream  | 121 k |
| python3-pip              | noarch | 9.0.3-13.el8                       | AppStream  | 18 k  |
| python3-systemd          | x86_64 | 234-8.el8                          | AppStream  | 81 k  |
| python36                 | x86_64 | 3.6.8-2.module_el8.0.0+33+0a10c0e1 | AppStream  | 19 k  |
| perl-Carp                | noarch | 1.42-396.el8                       | BaseOS     | 30 k  |


```

Configuração avançada de segurança

- Evitando tentativas repetidas de login com Fail2Ban

```
● ● ●  ↵ 1 william@tchelinux-poa-2019:~  
perl-Pod-Escapes-1:1.07-395.el8.noarch perl-Pod-Perldoc-3.28-396.el8.noarch  
perl-Pod-Simple-1:3.35-395.el8.noarch perl-Pod-Usage-4:1.69-395.el8.noarch  
perl-Scalar-List-Utils-3:1.49-2.el8.x86_64 perl-Socket-4:2.027-2.el8.x86_64  
perl-Storable-1:3.11-3.el8.x86_64 perl-Term-ANSIColor-4.06-396.el8.noarch  
perl-Term-Cap-1.17-395.el8.noarch perl-Text-ParseWords-3.30-395.el8.noarch  
perl-Text-Tabs+Wrap-2013.0523-395.el8.noarch perl-Time-Local-1:1.280-1.el8.noarch  
perl-Unicode-Normalize-1.25-396.el8.x86_64 perl-constant-1.33-396.el8.noarch  
perl-interpreter-4:5.26.3-416.el8.x86_64 perl-libs-4:5.26.3-416.el8.x86_64  
perl-macros-4:5.26.3-416.el8.x86_64 perl-parent-1:0.237-1.el8.noarch  
perl-podlators-4.11-1.el8.noarch perl-threads-1:2.21-2.el8.x86_64  
perl-threads-shared-1.58-2.el8.x86_64 python3-setuptools-39.2.0-4.el8.noarch  
exim-4.92.3-3.el8.x86_64 fail2ban-firewalld-0.10.4-8.el8.noarch  
fail2ban-sendmail-0.10.4-8.el8.noarch fail2ban-server-0.10.4-8.el8.noarch  
  
Complete!  
[william@tchelinux-poa-2019 ~]$ sudo systemctl enable fail2ban  
Created symlink /etc/systemd/system/multi-user.target.wants/fail2ban.service → /usr/lib/systemd/system/fail2ban.service.  
[william@tchelinux-poa-2019 ~]$ sudo systemctl start fail2ban  
[william@tchelinux-poa-2019 ~]$ █
```

Configuração avançada de segurança

- Evitando tentativas repetidas de login com Fail2Ban

Configuração avançada de segurança

- Evitando tentativas repetidas de login com Fail2Ban

● ● ● ☰

william@tchelinux-poa-2019:~

```
[william@tchelinux-poa-2019 ~]$ sudo vim /etc/fail2ban/jail.local
[william@tchelinux-poa-2019 ~]$ sudo systemctl restart fail2ban
[william@tchelinux-poa-2019 ~]$ █
```

Configuração avançada de segurança

- Adicionando configuração de firewall



william@tchelinux-poa-2019:~

```
[william@tchelinux-poa-2019 ~]$ sudo vim /etc/iptables.firewall.rules
```

Configuração avançada de segurança

- Adicionando configuração de firewall

```
● ● ●  ~%1 william@tchelinux-poa-2019:~  
*filter  
  
# Permitir todo o tráfego loopback (lo0) e derrubar todo o tráfego ao 127/8 que não utiliza lo0  
-A INPUT -i lo -j ACCEPT  
-A INPUT ! -i lo -d 127.0.0.0/8 -j REJECT  
  
# Permitir todas as conexões de entrada estabelecidas  
-A INPUT -m state --state ESTABLISHED,RELATED -j ACCEPT  
  
# Permitir todo o tráfego de saída  
-A OUTPUT -j ACCEPT  
|  
# Permitir conexões HTTP e HTTPS de qualquer lugar (as portas padrão para sites e SSL).  
-A INPUT -p tcp --dport 80 -j ACCEPT  
-A INPUT -p tcp --dport 443 -j ACCEPT  
  
# Permitir portas para testes  
-A INPUT -p tcp --dport 8080:8090 -j ACCEPT  
  
-- INSERT --
```

Configuração avançada de segurança

- Adicionando configuração de firewall

```
# Permitir portas para testes
-A INPUT -p tcp --dport 8080:8090 -j ACCEPT

# Permitir conexões SSH
# O número da porta na flag -dport precisa ser o mesmo número que você definiu no sshd_config
-A INPUT -p tcp -m state --state NEW --dport 22 -j ACCEPT

# Permitir ping
-A INPUT -p icmp -m icmp --icmp-type 8 -j ACCEPT

# Logar chamadas negadas pelo iptables
-A INPUT -m limit --limit 5/min -j LOG --log-prefix "iptables denied: " --log-level 7

# Rejeitar todo o resto do tráfego de entrada – nega tráfego por padrão a menos se existir uma
política de permissão explícita
-A INPUT -j REJECT
-A FORWARD -j REJECT

COMMIT
-- INSERT --
```

Configuração avançada de segurança

- Adicionando configuração de firewall

```
● ● ● ~#1 william@tchelinux-poa-2019:~  
[william@tchelinux-poa-2019 ~]$ sudo vim /etc/iptables.firewall.rules  
[william@tchelinux-poa-2019 ~]$ sudo iptables-restore < /etc/iptables.firewall.rules  
[william@tchelinux-poa-2019 ~]$ sudo mkdir /etc/firewall  
[william@tchelinux-poa-2019 ~]$ sudo vim /etc/firewall/firewall.sh  
[william@tchelinux-poa-2019 ~]$ sudo chmod +x /etc/firewall/firewall.sh  
[william@tchelinux-poa-2019 ~]$ sudo vim /etc/crontab  
[william@tchelinux-poa-2019 ~]$ █
```

Configuração avançada de segurança

- Adicionando configuração de firewall

Configuração avançada de segurança

- Adicionando configuração de firewall

```
● ● ● ~#1 william@tchelinux-poa-2019:~  
[william@tchelinux-poa-2019 ~]$ sudo vim /etc/iptables.firewall.rules  
[william@tchelinux-poa-2019 ~]$ sudo iptables-restore < /etc/iptables.firewall.rules  
[william@tchelinux-poa-2019 ~]$ sudo mkdir /etc/firewall  
[william@tchelinux-poa-2019 ~]$ sudo vim /etc/firewall/firewall.sh  
[william@tchelinux-poa-2019 ~]$ sudo chmod +x /etc/firewall/firewall.sh  
[william@tchelinux-poa-2019 ~]$ sudo vim /etc/crontab  
[william@tchelinux-poa-2019 ~]$ █
```

Configuração avançada de segurança

- Adicionando configuração de firewall

```
● ● ●  ~1 william@tchelinux-poa-2019:~  
SHELL=/bin/bash  
PATH=/sbin:/bin:/usr/sbin:/usr/bin  
MAILTO=root  
  
# For details see man 4 crontabs  
  
# Example of job definition:  
# .----- minute (0 - 59)  
# | .----- hour (0 - 23)  
# | | .----- day of month (1 - 31)  
# | | | .---- month (1 - 12) OR jan,feb,mar,apr ...  
# | | | | .--- day of week (0 - 6) (Sunday=0 or 7) OR sun,mon,tue,wed,thu,fri,sat  
# | | | | |  
# * * * * * user-name command to be executed  
  
@reboot /etc/firewall/firewall.sh  
~  
~  
~  
:wq
```

Configuração do MariaDB

Configuração do MariaDB

- Instalando o MariaDB Server

```
● ● ● �新  william@tchelinux-poa-2019:~  
[william@tchelinux-poa-2019 ~]$ sudo yum install -y mariadb-server  
[sudo] password for william:  
Failed to set locale, defaulting to C  
Extra Packages for Enterprise Linux 8 - x86_64           13 kB/s |  16 kB   00:01  
Extra Packages for Enterprise Linux 8 - x86_64           1.6 MB/s | 4.3 MB   00:02  
Last metadata expiration check: 0:00:02 ago on Sat Dec 14 01:01:26 2019.  
Dependencies resolved.  
=====  


| Package                    | Arch   | Version                                | Repository | Size  |
|----------------------------|--------|----------------------------------------|------------|-------|
| Installing:                |        |                                        |            |       |
| mariadb-server             | x86_64 | 3:10.3.11-2.module_el8.0.0+35+6f2527ed | AppStream  | 16 M  |
| Installing dependencies:   |        |                                        |            |       |
| mariadb                    | x86_64 | 3:10.3.11-2.module_el8.0.0+35+6f2527ed | AppStream  | 6.2 M |
| mariadb-common             | x86_64 | 3:10.3.11-2.module_el8.0.0+35+6f2527ed | AppStream  | 62 k  |
| mariadb-connector-c        | x86_64 | 3.0.7-1.el8                            | AppStream  | 148 k |
| mariadb-connector-c-config | noarch | 3.0.7-1.el8                            | AppStream  | 13 k  |
| mariadb-errmsg             | x86_64 | 3:10.3.11-2.module_el8.0.0+35+6f2527ed | AppStream  | 232 k |
| perl-DBD-MySQL             | x86_64 | 4.046-2.module_el8.0.0+72+668237d8     | AppStream  | 156 k |
| perl-DBI                   | x86_64 | 1.641-2.module_el8.0.0+66+fe1eca09     | AppStream  | 740 k |
| libaio                     | x86_64 | 0.3.110-12.el8                         | BaseOS     | 32 k  |


```

Configuração do MariaDB

- Instalando o MariaDB Server

```
● ● ●  ⟲⌘1 william@tchelinux-poa-2019:~  
[william@tchelinux-poa-2019 ~]$ sudo systemctl enable mariadb.service  
Created symlink /etc/systemd/system/mysql.service → /usr/lib/systemd/system/mariadb.service.  
Created symlink /etc/systemd/system/mysqld.service → /usr/lib/systemd/system/mariadb.service.  
Created symlink /etc/systemd/system/multi-user.target.wants/mariadb.service → /usr/lib/systemd/  
system/mariadb.service.  
[william@tchelinux-poa-2019 ~]$ sudo systemctl start mariadb.service  
[william@tchelinux-poa-2019 ~]$ █
```

Configuração do MariaDB

- Configurando de forma segura o MariaDB

```
● ● ● ⟲⌘1
```

```
william@tchelinux-poa-2019:~
```

```
[william@tchelinux-poa-2019 ~]$ sudo mysql_secure_installation
```

```
NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB
      SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY!
```

In order to log into MariaDB to secure it, we'll need the current password for the root user. If you've just installed MariaDB, and you haven't set the root password yet, the password will be blank, so you should just press enter here.

```
Enter current password for root (enter for none):
OK, successfully used password, moving on...
```

Setting the root password ensures that nobody can log into the MariaDB root user without the proper authorisation.

```
Set root password? [Y/n]
New password:
Re-enter new password:
Password updated successfully!
Reloading privilege tables..
```

Configuração do MariaDB

- Configurando de forma segura o MariaDB

● ● ● ⌂⌘1

william@tchelinux-poa-2019:~

By default, a MariaDB installation has an anonymous user, allowing anyone to log into MariaDB without having to have a user account created for them. This is intended only for testing, and to make the installation go a bit smoother. You should remove them before moving into a production environment.

Remove anonymous users? [Y/n]

... Success!

Normally, root should only be allowed to connect from 'localhost'. This ensures that someone cannot guess at the root password from the network.

Disallow root login remotely? [Y/n]

... Success!

By default, MariaDB comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving into a production environment.

Configuração do MariaDB

- Configurando de forma segura o MariaDB

```
● ● ●  ~#1 william@tchelinux-poa-2019:~
```

```
before moving into a production environment.
```

```
Remove test database and access to it? [Y/n]
```

```
- Dropping test database...
```

```
... Success!
```

```
- Removing privileges on test database...
```

```
... Success!
```

```
Reloading the privilege tables will ensure that all changes made so far  
will take effect immediately.
```

```
Reload privilege tables now? [Y/n]
```

```
... Success!
```

```
Cleaning up...
```

```
All done! If you've completed all of the above steps, your MariaDB  
installation should now be secure.
```

```
Thanks for using MariaDB!
```

```
[william@tchelinux-poa-2019 ~]$ █
```

Configuração do MariaDB

- Configurando de forma segura o MariaDB

```
● ● ●  ~%1 william@tchelinux-poa-2019:~  
[william@tchelinux-poa-2019 ~]$ mysql -u root -p  
Enter password:  
Welcome to the MariaDB monitor. Commands end with ; or \g.  
Your MariaDB connection id is 22  
Server version: 10.3.11-MariaDB MariaDB Server  
  
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
  
MariaDB [(none)]> CREATE USER 'admin'@'localhost' IDENTIFIED BY 'password';  
Query OK, 0 rows affected (0.001 sec)  
  
MariaDB [(none)]> GRANT ALL PRIVILEGES ON *.* TO 'admin'@'localhost' WITH GRANT OPTION;  
Query OK, 0 rows affected (0.001 sec)  
  
MariaDB [(none)]> █
```

Configuração do Java 8

Configuração do Java 8

- Instalando o OpenJDK 8

```
william@tchelinux-poa-2019:~  
[william@tchelinux-poa-2019 ~]$ sudo yum install -y java-1.8.0-openjdk java-1.8.0-openjdk-devel  
[sudo] password for william:  
Failed to set locale, defaulting to C  
CentOS-8 - AppStream 4.3 kB/s | 4.3 kB 00:01  
CentOS-8 - Base 3.9 kB/s | 3.9 kB 00:01  
CentOS-8 - Extras 284 kB/s | 1.5 kB 00:00  
Extra Packages for Enterprise Linux 8 - x86_64 13 kB/s | 16 kB 00:01  
Dependencies resolved.  
=====  
 Package Arch Version Repository Size  
=====  
Installing:  
 java-1.8.0-openjdk x86_64 1:1.8.0.232.b09-0.el8_0 AppStream 299 k  
 java-1.8.0-openjdk-devel x86_64 1:1.8.0.232.b09-0.el8_0 AppStream 9.7 M  
Installing dependencies:  
 alsa-lib x86_64 1.1.6-3.el8 AppStream 432 k  
 atk x86_64 2.28.1-1.el8 AppStream 272 k  
 cairo x86_64 1.15.12-3.el8 AppStream 721 k  
 copy-jdk-configs noarch 3.7-1.el8 AppStream 27 k  
 fribidi x86_64 1.0.4-6.el8 AppStream 89 k  
 gdk-pixbuf2-modules x86_64 2.36.12-2.el8 AppStream 108 k
```

Configuração do Java 8

- Configurando variáveis do ambiente para o Java

```
● ● ●  ~1 william@tchelinux-poa-2019:~  
[william@tchelinux-poa-2019 ~]$ vim .bash_profile  
[william@tchelinux-poa-2019 ~]$ source .bash_profile  
[william@tchelinux-poa-2019 ~]$ java -version  
openjdk version "1.8.0_232"  
OpenJDK Runtime Environment (build 1.8.0_232-b09)  
OpenJDK 64-Bit Server VM (build 25.232-b09, mixed mode)  
[william@tchelinux-poa-2019 ~]$ javac -version  
javac 1.8.0_232  
[william@tchelinux-poa-2019 ~]$ █
```

Configuração do Java 8

- Configurando variáveis do ambiente para o Java

Implantação de uma aplicação Spring Boot

Implantação de uma aplicação Spring Boot

- Aplicação a ser implantada

 [brendaw / open-projects-api](#) Code Issues 0 Pull requests 0 Actions Projects 0 Wiki Security Insights Settings Unwatch ▾ 1 Star 0 Fork 0

Uma demonstração simples de CRUD em Spring Boot. Edit

[Manage topics](#)

 2 commits	 1 branch	 0 packages	 0 releases	 1 contributor
---	--	--	--	---

Branch: master New pull request Create new file Upload files Find file Clone or download ▾

 brendaw Implementa o CRUD	Latest commit bb9ddc3 18 minutes ago	
 .mvn/wrapper	Commit inicial	3 hours ago
 src	Implementa o CRUD	18 minutes ago
 .gitignore	Commit inicial	3 hours ago
 README.md	Implementa o CRUD	18 minutes ago

Implantação de uma aplicação Spring Boot

- Instalando Git e Maven para construir a solução

```
william@tchelinux-poa-2019:~$ sudo yum install -y git
Failed to set locale, defaulting to C
CentOS-8 - AppStream                               4.3 kB/s | 4.3 kB   00:01
CentOS-8 - Base                                     609 kB/s | 3.9 kB   00:00
CentOS-8 - Extras                                  340 kB/s | 1.5 kB   00:00
Extra Packages for Enterprise Linux 8 - x86_64      14 kB/s | 18 kB   00:01
Dependencies resolved.

=====
          Package           Arch         Version      Repository      Size
=====
Installing:
  git                  x86_64       2.18.1-3.el8    AppStream     186 k
Installing dependencies:
  git-core              x86_64       2.18.1-3.el8    AppStream     4.1 M
  git-core-doc          noarch      2.18.1-3.el8    AppStream     2.3 M
  perl-Error            noarch      1:0.17025-2.el8 AppStream     46 k
  perl-Git              noarch      2.18.1-3.el8    AppStream     77 k
  perl-TermReadKey     x86_64       2.37-7.el8      AppStream     40 k
  emacs-filesystem     noarch      1:26.1-5.el8    BaseOS       69 k

Transaction Summary
```

Implantação de uma aplicação Spring Boot

- Instalando Git e Maven para construir a solução

```
● ● ●  ~  william@tchelinux-poa-2019:~  
[william@tchelinux-poa-2019 ~]$ sudo yum install -y maven  
Failed to set locale, defaulting to C  
Last metadata expiration check: 0:03:09 ago on Sat Dec 14 04:57:33 2019.  
Dependencies resolved.  
=====  


| Package                  | Arch   | Version                                       | Repository | Size  |
|--------------------------|--------|-----------------------------------------------|------------|-------|
| Installing:              |        |                                               |            |       |
| maven                    | noarch | 1:3.5.4-5.module_el8.0.0+39+6a9b6e22          | AppStream  | 27 k  |
| Installing dependencies: |        |                                               |            |       |
| aopalliance              | noarch | 1.0-17.module_el8.0.0+39+6a9b6e22             | AppStream  | 17 k  |
| apache-commons-cli       | noarch | 1.4-4.module_el8.0.0+39+6a9b6e22              | AppStream  | 74 k  |
| apache-commons-codec     | noarch | 1.11-3.module_el8.0.0+39+6a9b6e22             | AppStream  | 288 k |
| apache-commons-io        | noarch | 1:2.6-3.module_el8.0.0+39+6a9b6e22            | AppStream  | 224 k |
| apache-commons-lang3     | noarch | 3.7-3.module_el8.0.0+39+6a9b6e22              | AppStream  | 483 k |
| apache-commons-logging   | noarch | 1.2-13.module_el8.0.0+39+6a9b6e22             | AppStream  | 85 k  |
| atinject                 | noarch | 1-28.20100611svn86.module_el8.0.0+39+6a9b6e22 | AppStream  | 20 k  |
| cdi-api                  | noarch | 1.2-8.module_el8.0.0+39+6a9b6e22              | AppStream  | 70 k  |
| geronimo-annotation      | noarch | 1.0-23.module_el8.0.0+39+6a9b6e22             | AppStream  | 25 k  |


```

Implantação de uma aplicação Spring Boot

- Clonando o repositório no servidor

```
● ● ●  ~#1 william@tchelinux-poa-2019:~/tchelinux-poa-2019

[william@tchelinux-poa-2019 tchelinux-poa-2019]$ git clone https://github.com/brendaw/open-projects-api.git
Cloning into 'open-projects-api'...
remote: Enumerating objects: 51, done.
remote: Counting objects: 100% (51/51), done.
remote: Compressing objects: 100% (31/31), done.
remote: Total 51 (delta 5), reused 51 (delta 5), pack-reused 0
Unpacking objects: 100% (51/51), done.
[william@tchelinux-poa-2019 tchelinux-poa-2019]$ █
```

Implantação de uma aplicação Spring Boot

- Compilando a aplicação

```
● ● ● ✎ 1 william@tchelinux-poa-2019:~/open-projects-api

[william@tchelinux-poa-2019 ~]$ cd open-projects-api/
[william@tchelinux-poa-2019 open-projects-api]$ mvn clean install package -DskipTests
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.brendaw:open-projects >-----
[INFO] Building demo 0.1
[INFO] -----[ jar ]-----
[INFO]
[INFO] --- maven-clean-plugin:3.1.0:clean (default-clean) @ open-projects ---
[INFO] Deleting /home/william/open-projects-api/target
[INFO]
[INFO] --- maven-resources-plugin:3.1.0:resources (default-resources) @ open-projects ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] Copying 1 resource
[INFO] Copying 1 resource
[INFO]
[INFO] --- maven-compiler-plugin:3.8.1:compile (default-compile) @ open-projects ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 6 source files to /home/william/open-projects-api/target/classes
[INFO]
[INFO] --- maven-resources-plugin:3.1.0:testResources (default-testResources) @ open-projects -
```

Implantação de uma aplicação Spring Boot

- Adicionando variáveis do ambiente para execução

```
● ● ● ~:1 william@tchelinux-poa-2019:~/open-projects-api  
[william@tchelinux-poa-2019 open-projects-api]$ vim ~/.open-projects-env  
[william@tchelinux-poa-2019 open-projects-api]$ source ~/.open-projects-env  
[william@tchelinux-poa-2019 open-projects-api]$ █
```

Implantação de uma aplicação Spring Boot

- Adicionando variáveis do ambiente para execução

Implantação de uma aplicação Spring Boot

- Criando schema da aplicação no MariaDB

```
● ● ●  ~#1 william@tchelinux-poa-2019:~/open-projects-api  
[william@tchelinux-poa-2019 open-projects-api]$ mysql -u root -p  
Enter password:  
Welcome to the MariaDB monitor. Commands end with ; or \g.  
Your MariaDB connection id is 25  
Server version: 10.3.11-MariaDB MariaDB Server  
  
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
  
MariaDB [(none)]> create database open_projects;  
Query OK, 1 row affected (0.001 sec)  
  
MariaDB [(none)]> █
```

Implantação de uma aplicação Spring Boot

- Rodando a aplicação

```
● ● ●  ~#1          root@tchelinux-poa-2019:/home/william/open-projects-api

[root@tchelinux-poa-2019 open-projects-api]# java -jar target/open-projects-0.1.jar

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                                                                                   :: Spring Boot ::      (v2.2.2.RELEASE)

2019-12-14 06:22:34.535  INFO 6416 --- [           main] c.b.o.OpenProjectsApplication
: Starting OpenProjectsApplication v0.1 on tchelinux-poa-2019 with PID 6416 (/home/william/o
pen-projects-api/target/open-projects-0.1.jar started by root in /home/william/open-projects-ap
i)
2019-12-14 06:22:34.540  INFO 6416 --- [           main] c.b.o.OpenProjectsApplication
: No active profile set, falling back to default profiles: default
2019-12-14 06:22:37.047  INFO 6416 --- [           main] .s.d.r.c.RepositoryConfigurationDelega
te : Bootstrapping Spring Data JPA repositories in DEFAULT mode.
2019-12-14 06:22:37.302  INFO 6416 --- [           main] .s.d.r.c.RepositoryConfigurationDelega
te : Finished Spring Data repository scanning in 210ms. Found 1 JPA repository interfaces.
2019-12-14 06:22:38.742  INFO 6416 --- [           main] trationDelegate$BeanPostProcessorCheck
```

Configuração de backups do seu servidor

Configuração de backups do seu servidor

- Adicionando uma rotina de backup

```
● ● ●  ~#1 william@tchelinux-poa-2019:~  
  
brendaw:brendaw $ ssh william@45.79.212.157  
Last login: Sat Dec 14 06:20:35 2019 from 201.21.39.68  
[william@tchelinux-poa-2019 ~]$ crontab -e  
no crontab for william - using an empty one  
crontab: installing new crontab  
[william@tchelinux-poa-2019 ~]$ 
```

Configuração de backups do seu servidor

- Adicionando uma rotina de backup

Configuração de backups do seu servidor

- Contratando o serviço de backup do Linode

[Linodes](#) / `centos-tchelinux-poa` [Launch Console](#) 

Summary Volumes Networking Resize Rescue Rebuild **Backups** Activity Settings Advanced



Backups

Three backup slots are executed and rotated automatically: a daily backup, a 2-7 day old backup, and 8-14 day old backup. To enable backups for just **\$2.50 per month**, click below.

[Enable Backups](#)

Indo além

Indo além

- Configurar outros serviços (Apache, Nginx, Node...)
- Usar API do Linode para monitoria do VPS
- Automatizar todo esse processo com scripts
- Montar um processo para escalar os VPSs
- Refinar as configurações de firewall, banco e web
- E o que mais aparecer de interessante pra fazer :D

Perguntas?

Muito obrigado!

Configure seu primeiro servidor VPS na Nuvem
Por William Brendaw

GitHub @brendaw / Twitter @willbdw / williambrendaw.com