

Atualização Ubuntu

Este documento visa esclarecer todos os passos para uma atualização segura do sistema operacional da template do QM seguindo do Ubuntu 16.04 para a versão 20.04.

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Processo de atualização

Antes de iniciar a atualização é recomendável que seja feito um backup (snapshot) do servidor e esteja ciente que todo processo de atualização pode durar no mínimo 2 horas pois será necessário fazer a atualização da versão 16.0.4 para a versão 18.0.4 e na sequencia fazer a atualização da versão 18.0.4 para a versão final 20.0.4.

Para dar início ao processo de atualização é necessário acessar o servidor desejado via ssh, verificar o status do firewall do servidor e caso esteja ativo, deve-se liberar a porta de administração de emergência, utilizando os comandos abaixo:

```
$ sudo ufw status  
$ sudo ufw allow 1022
```

Upgrade

Como mencionado anteriormente, este processo deverá ser feito duas vezes:

1. Upgrade da versão 16.04 para a versão 18.04
2. Upgrade da versão 18.04 para a versão 20.04

Para iniciar o upgrade, o usuário deverá estar logado com o usuário ROOT e executar os comandos abaixo:

```
$ apt update
$ apt upgrade
$ reboot now
$ do-release-upgrade
```

Durante a execução do ultimo comando listado aparecerão na tela algumas opções que deverão ser selecionadas conforme os prints abaixo:

• Processo de upgrade da versão 16.04 para a versão 18.04:

```
| Configuring libc6 |
Running services and programs that are using NSS need to be restarted, otherwise they might not be able to do lookup or authentication any more. The installation process is able to restart some services (such as ssh or telnetd), but other programs cannot be restarted automatically. One such program that needs manual stopping and restart after the glibc upgrade by yourself is xdm - because automatic restart might disconnect your active X11 sessions.

This script detected the following installed services which must be stopped before the upgrade: postgresql

If you want to interrupt the upgrade now and continue later, please answer No to the question below.

Do you want to upgrade glibc now?

      <Yes>                                <No>
```

```
Configuration file '/etc/sysctl.conf'
==> Modified (by you or by a script) since installation.
==> Package distributor has shipped an updated version.
What would you like to do about it? Your options are:
  Y or I : install the package maintainer's version
  N or O : keep your currently-installed version
  D      : show the differences between the versions
  Z      : start a shell to examine the situation
The default action is to keep your current version.
*** sysctl.conf (Y/I/N/O/D/Z) [default=N] ? y
```

```
Configuration file '/etc/default/ufw'
==> Modified (by you or by a script) since installation.
==> Package distributor has shipped an updated version.
What would you like to do about it? Your options are:
  Y or I : install the package maintainer's version
  N or O : keep your currently-installed version
  D      : show the differences between the versions
  Z      : start a shell to examine the situation
The default action is to keep your current version.
*** ufw (Y/I/N/O/D/Z) [default=N] ? N
```

```
before.rules: A new version (/usr/share/ufw/iptables/before.rules) of configuration file /etc/ufw/before.rules
is available, but the version installed currently has been locally modified.
```

What do you want to do about modified configuration file before.rules?

```
install the package maintainer's version
keep the local version currently installed
show the differences between the versions
show a side-by-side difference between the versions
start a new shell to examine the situation
```

<ok>

```
sshd_config: A new version (/tmp/filevwYFlz) of configuration file /etc/ssh/sshd_config is available, but the
version installed currently has been locally modified.
```

What do you want to do about modified configuration file sshd_config?

```
install the package maintainer's version
keep the local version currently installed
show the differences between the versions
show a side-by-side difference between the versions
start a new shell to examine the situation
```

<ok>

System upgrade is complete.

Restart required

To finish the upgrade, a restart is required.
If you select 'y' the system will be restarted.

Continue [yN] y

Conferindo a versão do SO após o reboot da primeira etapa do Upgrade:

```
$ cat /etc/os-release
```

```
root@qm-template:~# cat /etc/os-release
NAME="Ubuntu"
VERSION="18.04.6 LTS (Bionic Beaver)"
ID=ubuntu
ID_LIKE=debian
PRETTY_NAME="Ubuntu 18.04.6 LTS"
VERSION_ID="18.04"
HOME_URL="https://www.ubuntu.com/"
SUPPORT_URL="https://help.ubuntu.com/"
BUG_REPORT_URL="https://bugs.launchpad.net/ubuntu/"
PRIVACY_POLICY_URL="https://www.ubuntu.com/legal/terms-and-policies/privacy-policy"
VERSION_CODENAME=bionic
UBUNTU_CODENAME=bionic
```

Processo de upgrade da versão 18.04 para a versão 20.04:

Configuring libc6

Running services and programs that are using NSS need to be restarted, otherwise they might not be able to do lookup or authentication any more. The installation process is able to restart some services (such as ssh or telnetd), but other programs cannot be restarted automatically. One such program that needs manual stopping and restart after the glibc upgrade by yourself is xdm - because automatic restart might disconnect your active X11 sessions.

This script detected the following installed services which must be stopped before the upgrade: postgresql

If you want to interrupt the upgrade now and continue later, please answer No to the question below.

Do you want to upgrade glibc now?

 <Yes>

<No>

Configuring libc6

There are services installed on your system which need to be restarted when certain libraries, such as libpam, libc, and libssl, are upgraded. Since these restarts may cause interruptions of service for the system, you will normally be prompted on each upgrade for the list of services you wish to restart. You can choose this option to avoid being prompted; instead, all necessary restarts will be done for you automatically so you can avoid being asked questions on each library upgrade.

Restart services during package upgrades without asking?

 <Yes>

<No>

Configuring openssh-server

A new version (/tmp/fileprp1sM) of configuration file /etc/ssh/sshd_config is available, but the version installed currently has been locally modified.

What do you want to do about modified configuration file sshd_config?

 install the package maintainer's version
keep the local version currently installed
show the differences between the versions
show a side-by-side difference between the versions
show a 3-way difference between available versions
do a 3-way merge between available versions
start a new shell to examine the situation

<ok>

```
Configuration file '/etc/default/ufw'
==> Modified (by you or by a script) since installation.
==> Package distributor has shipped an updated version.
What would you like to do about it? Your options are:
  Y or I : install the package maintainer's version
  N or O : keep your currently-installed version
  D      : show the differences between the versions
  Z      : start a shell to examine the situation
The default action is to keep your current version.
*** ufw (Y/I/N/O/D/Z) [default=N] ? N
```

```
Configuration file '/etc/sysctl.conf'
==> Modified (by you or by a script) since installation.
==> Package distributor has shipped an updated version.
What would you like to do about it? Your options are:
  Y or I : install the package maintainer's version
  N or O : keep your currently-installed version
  D      : show the differences between the versions
  Z      : start a shell to examine the situation
The default action is to keep your current version.
*** sysctl.conf (Y/I/N/O/D/Z) [default=N] ? y
```

```
Remove obsolete packages?
40 packages are going to be removed.
Continue [yN] Details [d]y
```

```
System upgrade is complete.
Restart required
To finish the upgrade, a restart is required.
If you select 'y' the system will be restarted.
Continue [yN] y
```

Conferindo a versão do SO após o reboot da primeira etapa do Upgrade:

```
$ cat /etc/os-release
```

```
md2net@qm-template:~$ su -  
Password:  
root@qm-template:~# cat /etc/os-release  
NAME="Ubuntu"  
VERSION="20.04.3 LTS (Focal Fossa)" ←  
ID=ubuntu  
ID_LIKE=debian  
PRETTY_NAME="Ubuntu 20.04.3 LTS"  
VERSION_ID="20.04"  
HOME_URL="https://www.ubuntu.com/"  
SUPPORT_URL="https://help.ubuntu.com/"  
BUG_REPORT_URL="https://bugs.launchpad.net/ubuntu/"  
PRIVACY_POLICY_URL="https://www.ubuntu.com/legal/terms-and-policies/privacy-policy"  
VERSION_CODENAME=focal  
UBUNTU_CODENAME=focal  
root@qm-template:~#
```

Processo Pós Atualização do SO - Versão do Tomcat

Após a atualização do Sistema Operacional, alguns pontos precisam ser validados e modificados, tais como:

- Versão do Tomcat
- Versão do PostgreSQL
- Versão do Java (JDK)

1. Versão do Tomcat

Ao atualizar o sistema operacional, o Tomcat7 será descartado e será utilizado apenas o Tomcat 9.0.43. Para fazer a instalação do mesmo, basta executar os seguintes comandos:

```
$ vim /etc/apt/sources.list.d/ubuntu-tomcat9.0.43.list
```

Adicionar a linha abaixo e salvar (:x):

```
deb http://us.archive.ubuntu.com/ubuntu/ hirsute universe
```

Executar os comandos:

```
$ apt update  
$ apt install tomcat9
```

Após a instalação concluída, deve-se seguir ao diretório do serviço do tomcat para alterar o arquivo tomcat9.service:

```
$ vim /lib/systemd/system/tomcat9.service
```

Adicionar o parâmetro abaixo no grupo #Security e executar os comandos:

```
ReadWritePaths=/opt/qm_static/
```

```
# Security
User=tomcat
Group=tomcat
PrivateTmp=yes
AmbientCapabilities=CAP_NET_BIND_SERVICE
NoNewPrivileges=true
CacheDirectory=tomcat9
CacheDirectoryMode=750
ProtectSystem=strict
ReadWritePaths=/etc/tomcat9/Catalina/
ReadWritePaths=/var/lib/tomcat9/webapps/
ReadWritePaths=/var/log/tomcat9/
ReadWritePaths=/opt/qm_static/ ←
```

```
$ systemctl daemon-reload
$ chown -R tomcat:tomcat /opt/qm_static
$ mv /var/lib/tomcat7/webapps/qualityManager-prj.war /var/lib/tomcat9/webapps/
$ systemctl restart tomcat9.service
$ rm -rf /etc/apt/sources.list.d/ubuntu-tomcat9.0.43.list
$ apt update
```

Processo Pós Atualização do SO - Versão do Java

Após a atualização do SO, o java costuma ser atualizado para uma versão que não está homologada para receber a aplicação. Sendo assim, será necessário conferir a versão e caso o mesmo tenha sido atualizado, a versão correta deverá ser instalada.

A versão correta do JAVA é a versão 1.8.0_292.

Conferindo a versão:

```
$ java -version
```

Instalando a versão correta:

```
$ apt install openjdk-8-jdk  
$ update-alternatives --config java
```

Escolhendo a opção correta do java:

```
root@192:~# update-alternatives --config java  
There are 2 choices for the alternative java (providing /usr/bin/java).  


| Selection | Path                                           | Priority | Status      |
|-----------|------------------------------------------------|----------|-------------|
| * 0       | /usr/lib/jvm/java-11-openjdk-amd64/bin/java    | 1111     | auto mode   |
| 1         | /usr/lib/jvm/java-11-openjdk-amd64/bin/java    | 1111     | manual mode |
| 2         | /usr/lib/jvm/java-8-openjdk-amd64/jre/bin/java | 1081     | manual mode |

  
Press <enter> to keep the current choice[*], or type selection number: 2
```

```
root@192:~# java -version  
openjdk version "1.8.0_292"  
OpenJDK Runtime Environment (build 1.8.0_292-8u292-b10-0ubuntu1~20.04-b10)  
OpenJDK 64-Bit Server VM (build 25.292-b10, mixed mode)  
root@192:~#
```

Processo Pós Atualização do SO - Versão do PostgreSQL

Durante a atualização do SO é instalado o PostgreSQL 13, versão na qual não está homologada para receber o repositório do Quality Manager.

É de extrema importância que os comando a seguir sejam executados:

- Verificando a versão que foi instalada após o processo de atualização do SO.

```
$ psql -V
```

```
root@qm-template:~# psql -V
psql (PostgreSQL) 13.3 (Ubuntu 13.3-1.pgdg16.04+1)
root@qm-template:~# █
```

- Verificando as versões instaladas no servidor:

```
$ pg_lsclusters
```

A versão que está homologada para receber o repositório do Quality Manager é a 12:

```
root@qm-template:~# pg_lsclusters
Ver Cluster Port Status Owner  Data directory          Log file
12 main      5432 online postgres /var/lib/postgresql/12/main /var/log/postgresql/postgresql-12-main.log
13 main      5433 online postgres /var/lib/postgresql/13/main /var/log/postgresql/postgresql-13-main.log
root@qm-template:~# █
```

- Apagando o PostgreSQL13 e deixando apenas a versão homologada:

```
$ pg_dropcluster --stop 13 main
```

Obs: Em alguns casos, durante a atualização do SO é instalado a versão 10 do PostgreSQL. Nestes casos, basta executar o comando abaixo:

```
$ pg_dropcluster --stop 10 main
```

- Validando o acesso ao banco de dados:

```
$ psql -h 127.0.0.1 -U md2net -d qualitymanager
```