

Atualização SUSE

Manual para instrução de atualização do SO SUSE da versão 12 SP5 para à versão 15 SP3

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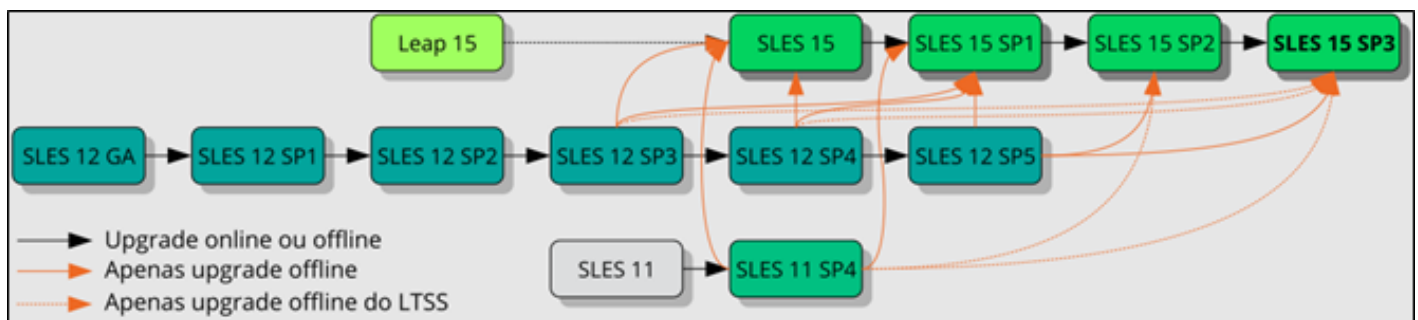
1. Objetivo

Este documento visa descrever as etapas envolvidas no processo de atualização do Suse Linux da versão 12 SP5 para a versão 15 SP3.

3. Processo de atualização

Segundo o fabricante, a atualização do SUSE Linux na versão 12 SP5 para a versão 15 SP3 só é possível de forma offline.

O upgrade offline implica no sistema operacional não estar em execução (estado do sistema inativo). Em vez disso, o instalador para o sistema operacional de destino é inicializado (por exemplo, da mídia de instalação, por rede ou por meio do carregador de boot local) e executa o upgrade.



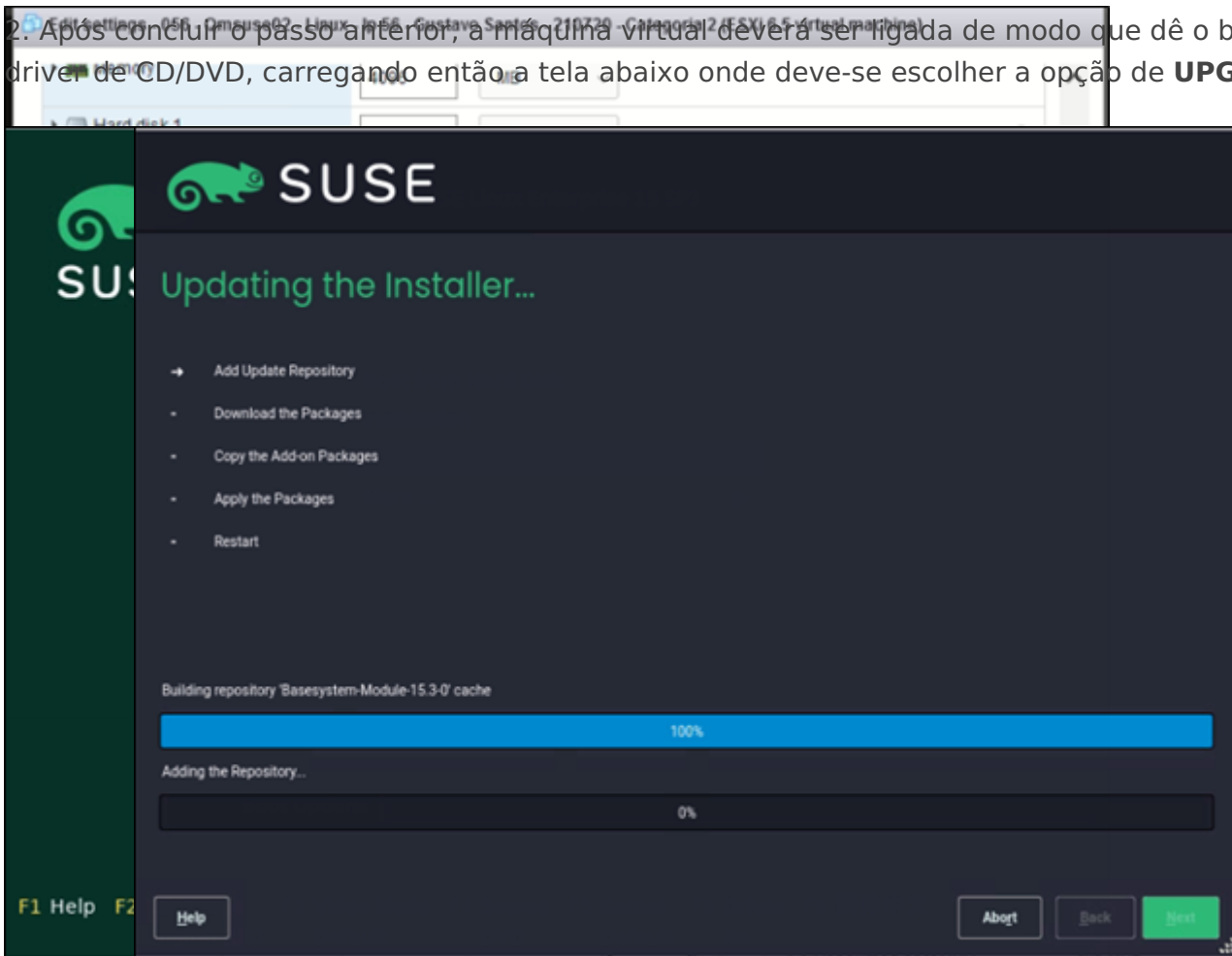
<https://documentation.suse.com/pt-br/sles/15-SP3/single-html/SLES-upgrade/>

4. Upgrade

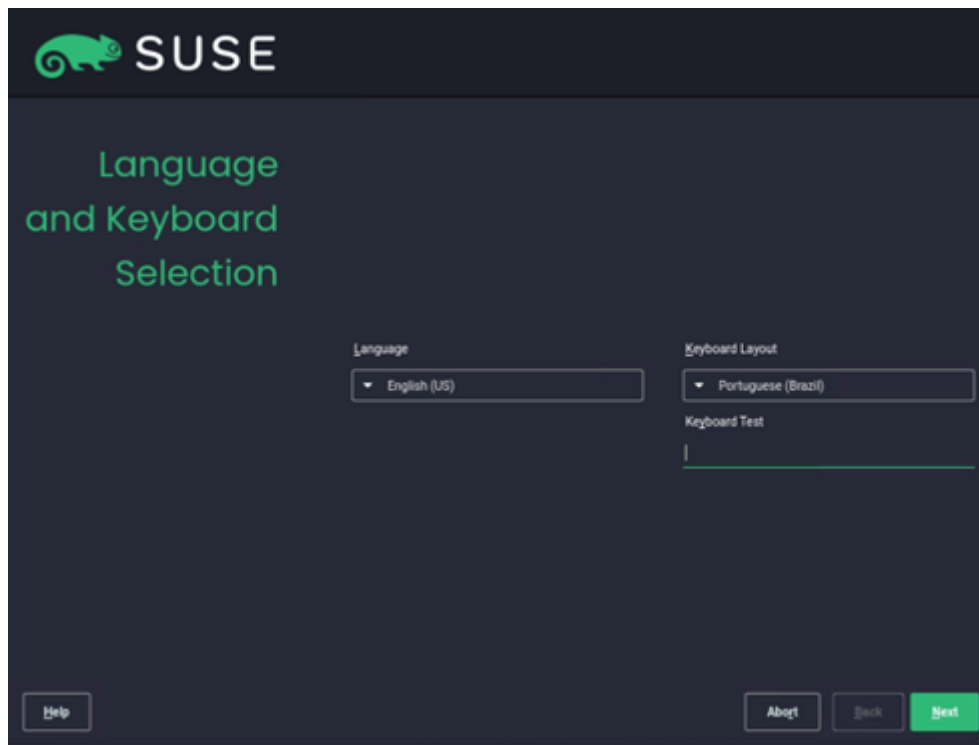
Obs: É de extrema importância que seja feito um backup e/ou um snapshot do servidor em questão antes de iniciar o processo de atualização do SO.

1. Com a máquina virtual já desligada, deve-se inserir a ISO do SUSE Linux 15 SP3 nas configurações do driver de CD/DVD da VM:

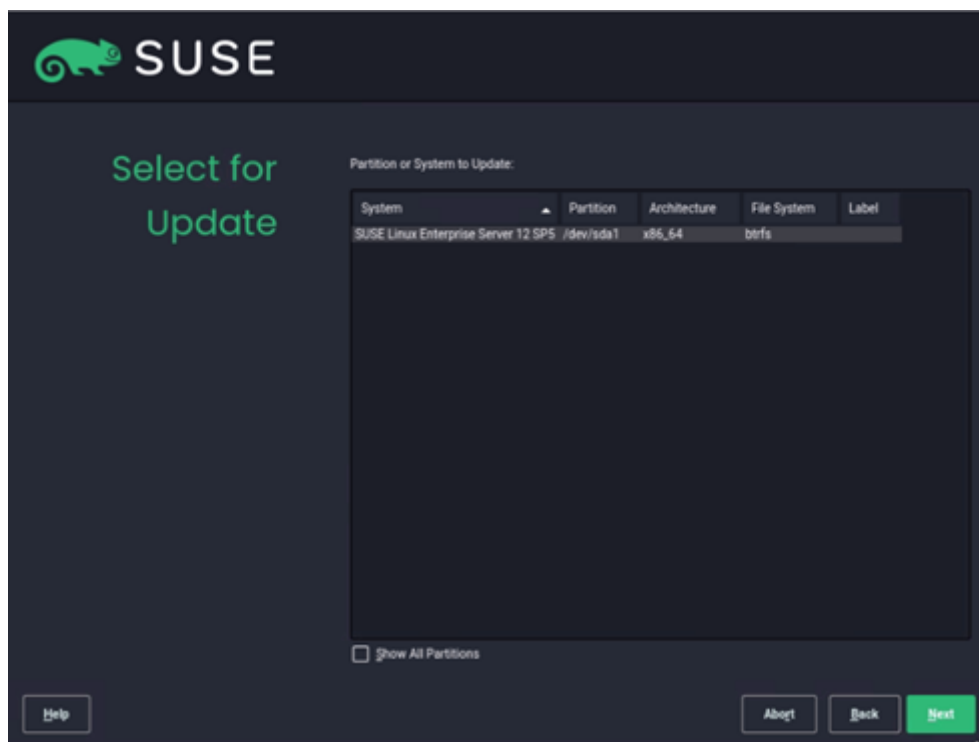
2. Após concluir o passo anterior, a máquina virtual deverá ser ligada de modo que dê o boot pelo driver de CD/DVD, carregando então a tela abaixo onde deve-se escolher a opção de **UPGRADE**:

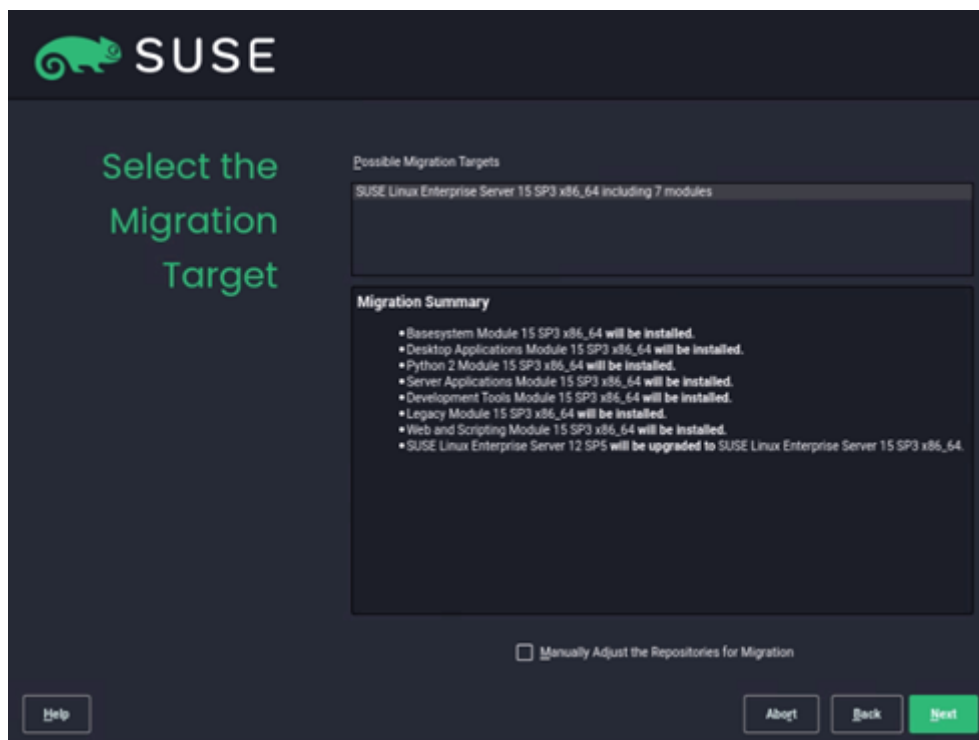


3. Escolha o layout do teclado:



4. Seleção da partição onde o SUSE Linux 12 SP5 está instalado:

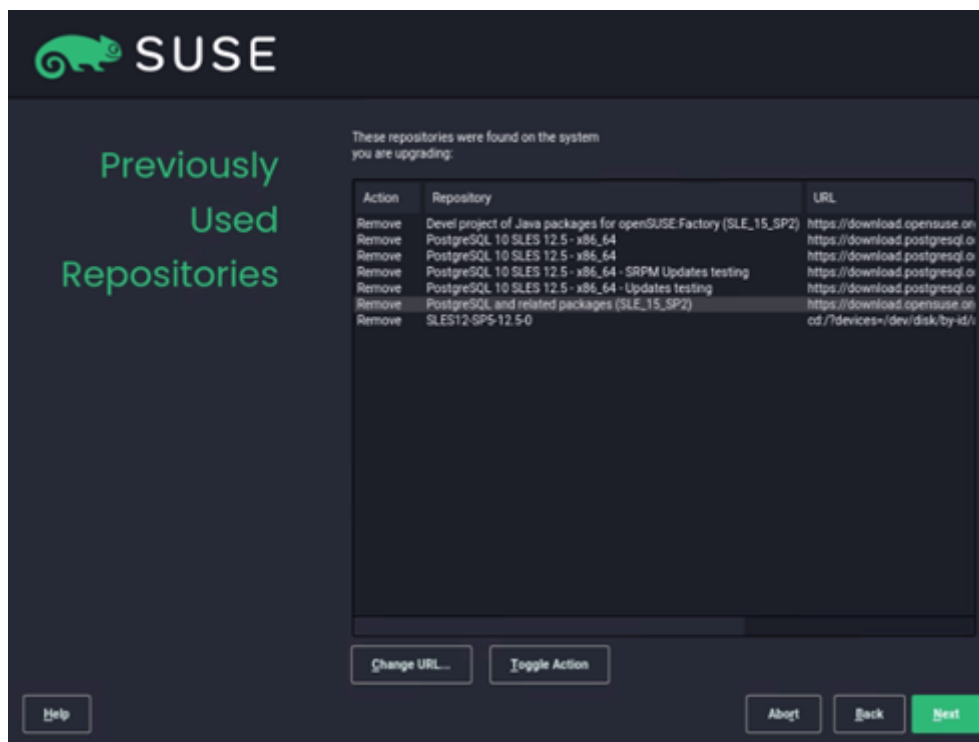




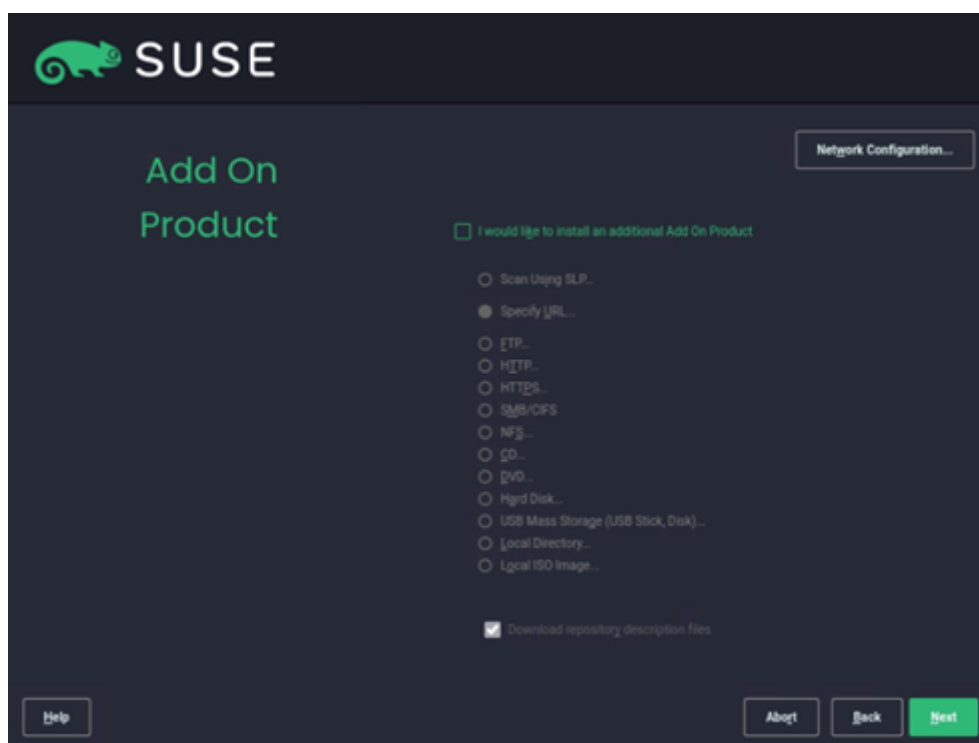
5. Termos de licença:



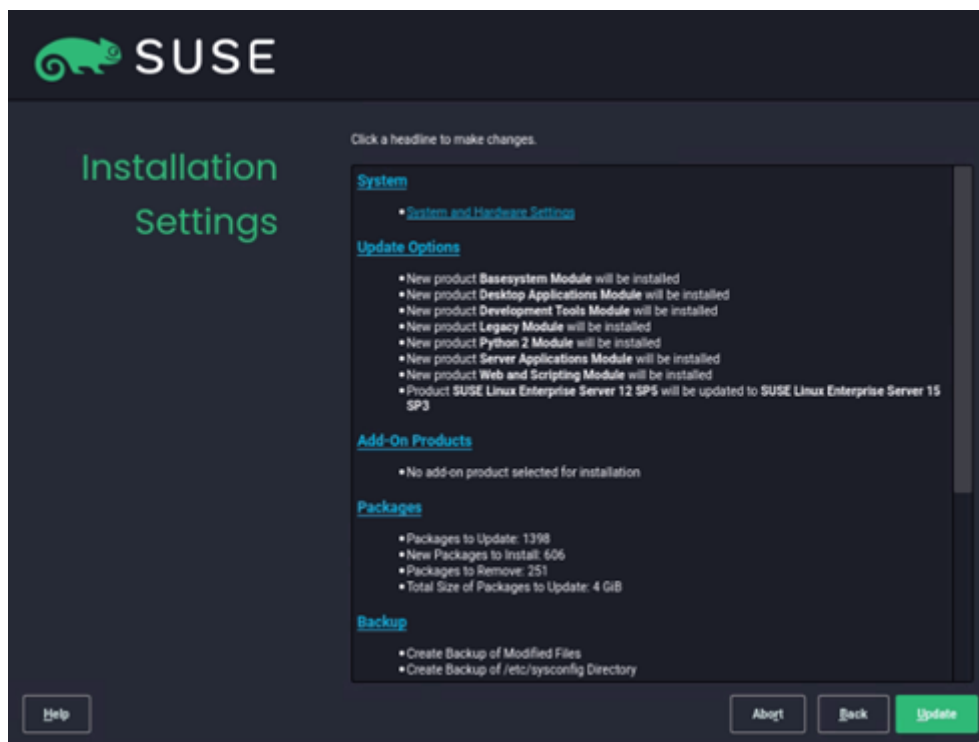
6. Lista de repositórios encontrados no sistema:



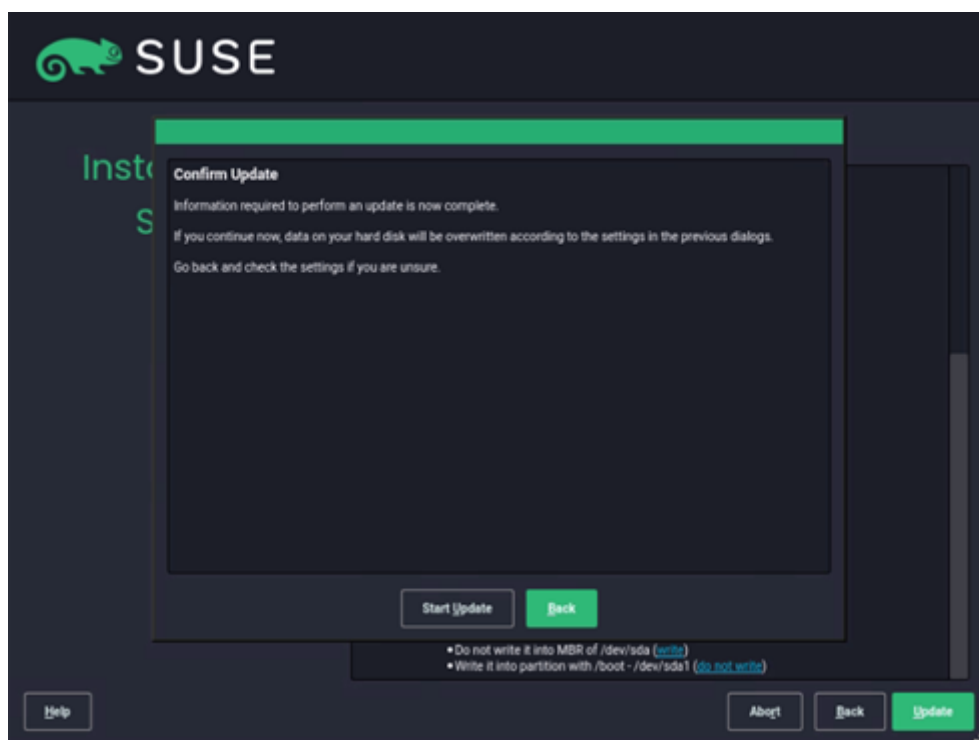
7. Seleção de algum produto adicional (não se aplica):



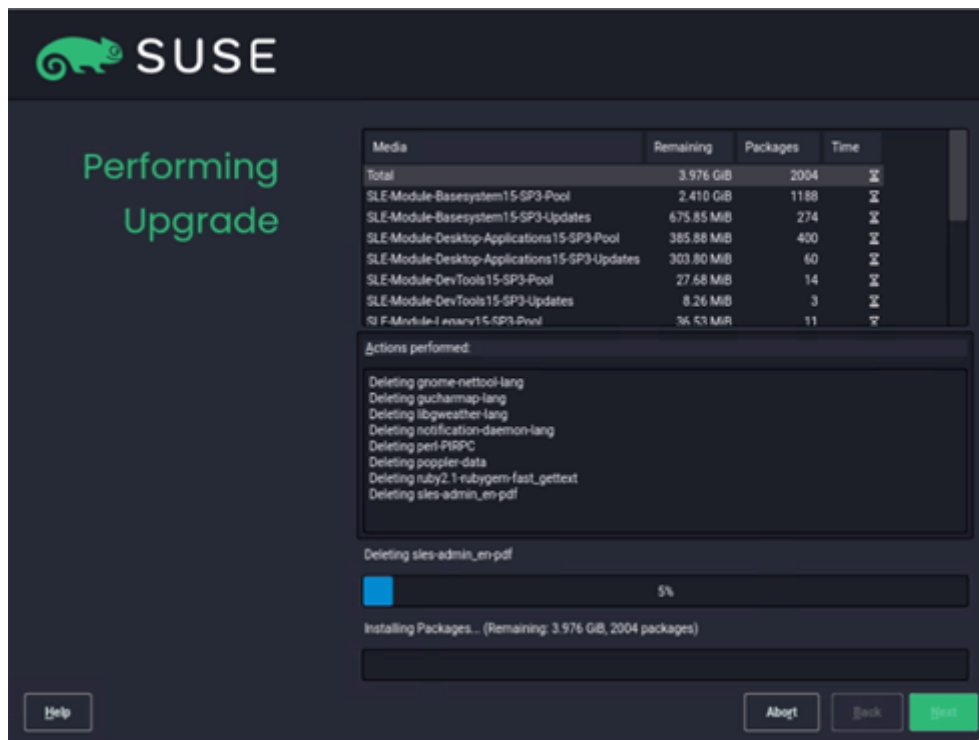
8. Resumo:



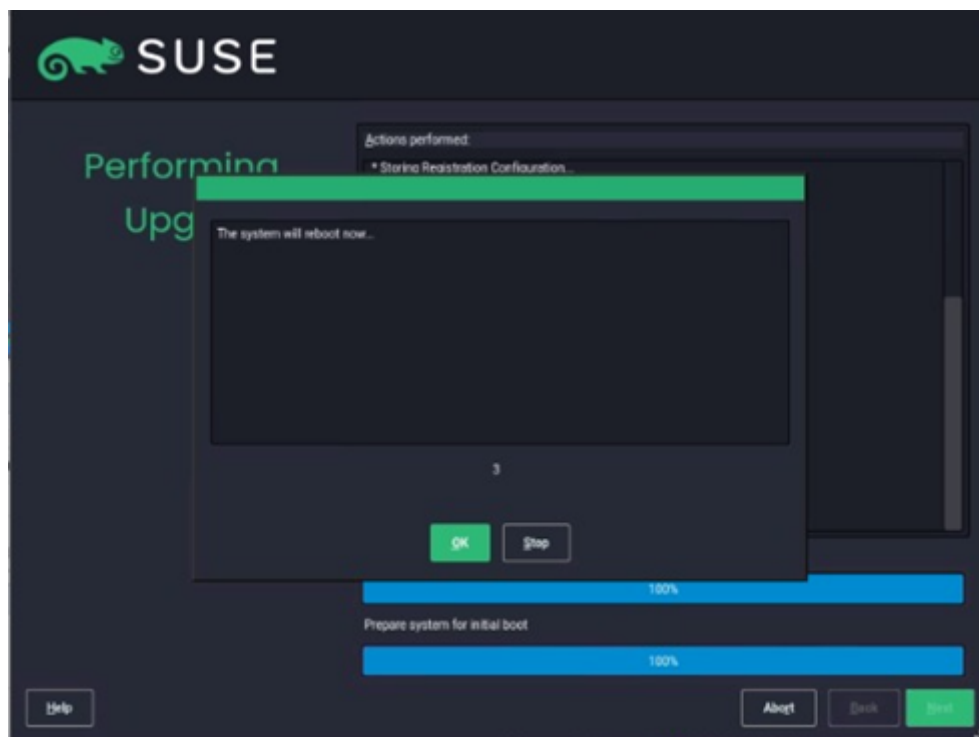
9. Confirmação para iniciar a atualização:



10. Início da atualização:



11. Finalização da atualização, sem erros:



12. Verificação de registro e de versão do SO:

```
qmsuse02:~ # SUSEConnect --status
[{"identifier":"SLES","version":"15.3","arch":"x86_64","status":"Registered","regcode":"0042278019D48B07","starts_at":"2020-09-01 00:00:00 UTC","expires_at":"2021-08-31 00:00:00 UTC","subscription_status":"ACTIVE","type":"full"},{"identifier":"sle-module-basesystem","version":"15.3","arch":"x86_64","status":"Registered"},{"identifier":"sle-module-legacy","version":"15.3","arch":"x86_64","status":"Registered"},{"identifier":"sle-module-server-applications","version":"15.3","arch":"x86_64","status":"Registered"},{"identifier":"sle-module-python2","version":"15.3","arch":"x86_64","status":"Registered"},{"identifier":"sle-module-desktop-applications","version":"15.3","arch":"x86_64","status":"Registered"},{"identifier":"sle-module-development-tools","version":"15.3","arch":"x86_64","status":"Registered"},{"identifier":"sle-module-web-scripting","version":"15.3","arch":"x86_64","status":"Registered"}]
qmsuse02:~ # cat /etc/os-release
NAME="SLES"
VERSION="15-SP3"
VERSION_ID="15.3"
PRETTY_NAME="SUSE Linux Enterprise Server 15 SP3"
ID="sles"
ID_LIKE="suse"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:15:sp3"
DOCUMENTATION_URL="https://documentation.suse.com/"
qmsuse02:~ #
```

5. Configurações pós-atualização

5.1. Ajustes no PostgreSQL

Durante o processo de atualização foi instalado o PostgreSQL 13 que será necessário ser removido para instalar o PostgreSQL 12 (versão atualmente homologada pelo Quality Manager).

```
qmsuse02:~ # psql -V
psql (PostgreSQL) 13.3
qmsuse02:~ #
```

1. Backup do banco atual:

```
$ pg_dump -h 127.0.0.1 -U md2net -d qualitymanager | gzip --best > ./bkp_DB_QM_$(date +%Y%m%d_%I_%M_%p).psql.gz
```

2. Desinstalação do PostgreSQL 13:

```
$ zypper remove postgresql13
```

```
qmsuse02:~ # zypper remove postgresql13
Reading installed packages...
Resolving package dependencies...

The following 3 packages are going to be REMOVED:
 postgresql13 postgresql13-contrib postgresql13-server

3 packages to remove.
After the operation, 30.1 MiB will be freed.
Continue? [y/n/v/...? shows all options] (y): y
```

3. Instalação do PostgreSQL 12:

```
$ zypper install postgresql12 postgresql12-contrib postgresql12-server
```

```

qmsuse02:~ # zypper install postgresql12 postgresql12-contrib postgresql12-server
Refreshing service 'Basesystem_Module_15_SP3_x86_64'.
Refreshing service 'Desktop_Applications_Module_15_SP3_x86_64'.
Refreshing service 'Development_Tools_Module_15_SP3_x86_64'.
Refreshing service 'Legacy_Module_15_SP3_x86_64'.
Refreshing service 'Python_2_Module_15_SP3_x86_64'.
Refreshing service 'SUSE_Linux_Enterprise_Server_15_SP3_x86_64'.
Refreshing service 'Server_Applications_Module_15_SP3_x86_64'.
Refreshing service 'Web_and_Scripting_Module_15_SP3_x86_64'.
Loading repository data...
Reading installed packages...
Resolving package dependencies...

The following 3 NEW packages are going to be installed:
 postgresql12 postgresql12-contrib postgresql12-server

The following 3 packages need additional customer contract to get support:
 postgresql12 postgresql12-contrib postgresql12-server

3 new packages to install.
Overall download size: 6.8 MiB. Already cached: 0 B. After the operation, additional 29.9 MiB will be used.
Continue? [y/n/v/...? shows all options] (y): █

```

4. Após instalar o PostgreSQL12, deve-se parar os serviços do postgresql para então começar o processo de migração do postgresql10 para o recém-instalado, postgresql12.

```
$ systemctl stop postgresql.service
```

```

qmsuse02:/opt/qm_static/script # systemctl stop postgresql.service
qmsuse02:/opt/qm_static/script # systemctl status postgresql.service
● postgresql.service - PostgreSQL database server
   Loaded: loaded (/usr/lib/systemd/system/postgresql.service; enabled; vendor preset: disabled)
   Active: inactive (dead) since Fri 2021-08-06 12:00:22 -03; 11s ago
     Process: 1612 ExecStart=/usr/share/postgresql/postgresql-script start (code=exited, status=0/SUCCESS)
     Process: 5721 ExecStop=/usr/share/postgresql/postgresql-script stop (code=exited, status=0/SUCCESS)
    Main PID: 1675 (code=exited, status=0/SUCCESS)

Aug 06 11:55:20 qmsuse02 postgresql-script[1675]: 2021-08-06 11:55:20.802 -03 [1675]LOG: listening on Unix socket "/var/run/postgresql/.s.PGSQL.5432"
Aug 06 11:55:20 qmsuse02 postgresql-script[1675]: 2021-08-06 11:55:20.804 -03 [1675]LOG: listening on Unix socket "/tmp/.s.PGSQL.5432"
Aug 06 11:55:21 qmsuse02 postgresql-script[1675]: 2021-08-06 11:55:21.529 -03 [1675]LOG: redirecting log output to logging collector process
Aug 06 11:55:21 qmsuse02 postgresql-script[1675]: 2021-08-06 11:55:21.529 -03 [1675]HINT: Future log output will appear in directory "log".
Aug 06 11:55:21 qmsuse02 systemd[1]: Started PostgreSQL database server.
Aug 06 12:00:22 qmsuse02 systemd[1]: Stopping PostgreSQL database server...
Aug 06 12:00:22 qmsuse02 postgresql-script[5721]: Your database files were created by PostgreSQL version 10.
Aug 06 12:00:22 qmsuse02 postgresql-script[5721]: Using the executables in /usr/lib/postgresql10/bin.
Aug 06 12:00:22 qmsuse02 systemd[1]: postgresql.service: Succeeded.
Aug 06 12:00:22 qmsuse02 systemd[1]: Stopped PostgreSQL database server.
qmsuse02:/opt/qm_static/script # █

```

5. Por padrão do SUSE Linux, o diretório de dados do postgre encontra-se no seguinte diretório: **/var/lib/pgsql/**. A pasta “data” deve ser renomeada para “data.old”:

```
$ cd /var/lib/pgsql
```

```
$ mv data/ data.old
```

```

qmsuse02:/var/lib/pgsql # pwd
/var/lib/pgsql
qmsuse02:/var/lib/pgsql # ls
.bash_history .bash_profile .pgpass .psql_history .viminfo data initlog
qmsuse02:/var/lib/pgsql # mv data/ data.old
qmsuse02:/var/lib/pgsql # ls
.bash_history .bash_profile .pgpass .psql_history .viminfo data.old initlog
qmsuse02:/var/lib/pgsql # █

```

6. Deve-se iniciar e parar o serviço do postgre para que uma nova pasta “data” seja criada:

```
$ systemctl start postgresql.service
```

```
$ systemctl stop postgresql.service
```

```
qmsuse02:/var/lib/pgsql # systemctl start postgresql.service
qmsuse02:/var/lib/pgsql # systemctl stop postgresql.service
```

7. Iniciando a migração com o usuário “postgres”.

```
$ sudo su - postgres
```

```
$ pg_upgrade --old-datadir "/var/lib/pgsql/data.old" --new-datadir "/var/lib/pgsql/data" --old-bindir "/usr/lib/postgresql10/bin/" --new-bindir "/usr/lib/postgresql12/bin/"
```

```
qmsuse02:/var/lib/pgsql # sudo su - postgres
postgres@qmsuse02:~$ pg_upgrade --old-datadir "/var/lib/pgsql/data.old" --new-datadir "/var/lib/pgsql/data" --old-bindir "/usr/lib/postgresql10/bin/" --new-bindir "/usr/lib/postgresql12/bin/"
Performing Consistency Checks
-----
Checking cluster versions                                ok
Checking database user is the install user              ok
Checking database connection settings                   ok
Checking for prepared transactions                      ok
Checking for system-defined composite types in user tables ok
Checking for reg* data types in user tables             ok
Checking for contrib/iso with bigint-passing mismatch  ok
Checking for tables WITH OIDS                           ok
Checking for invalid "sql_identifier" user columns      ok
Creating dump of global objects                         ok
Creating dump of database schemas                      ok
```

```
qmsuse02:/var/lib/pgsql # sudo su - postgres
postgres@qmsuse02:~$ psql
psql (12.7)
Type "help" for help.

postgres=# select version();
               version
-----
PostgreSQL 12.7 on x86_64-suse-linux-gnu, compiled by gcc (SUSE Linux) 7.5.0, 64-bit
(1 row)

postgres=#
```

8. Durante a migração o banco de dados “qualitymanager”, as roles “md2net” e “mdm” foram perdidas:

```
postgres=# \l
               List of databases
  Name      | Owner   | Encoding | Collate | Ctype   | Access privileges
-----+-----+-----+-----+-----+-----
postgres   | postgres | UTF8     | C       | en_US.UTF-8 |
template0  | postgres | UTF8     | C       | en_US.UTF-8 | =c/postgres +
           |          |          |          |          | postgres=CTc/postgres
template1  | postgres | UTF8     | C       | en_US.UTF-8 | =c/postgres +
           |          |          |          |          | postgres=CTc/postgres
(3 rows)

postgres=#
```

```
postgres=# \du
```

Role name	Attributes	Member of
postgres	Superuser, Create role, Create DB, Replication, Bypass RLS	{}

9. Criando o banco de dados e roles:

```
postgres=# create user md2net with encrypted password 'md2net2018';
CREATE ROLE
postgres=# alter user md2net with superuser;
ALTER ROLE
postgres=# create user mdm with encrypted password 'md2net2018';
CREATE ROLE
postgres=# \du
```

Role name	Attributes	Member of
md2net	Superuser	{}
mdm		{}
postgres	Superuser, Create role, Create DB, Replication, Bypass RLS	{}

```
postgres=#
```

```
postgres=# create database qualitymanager;
CREATE DATABASE
postgres=# \l
```

Name	Owner	Encoding	Collate	Ctype	Access privileges
postgres	postgres	UTF8	C	en_US.UTF-8	
qualitymanager	postgres	UTF8	C	en_US.UTF-8	
template0	postgres	UTF8	C	en_US.UTF-8	=c/postgres + postgres=CTc/postgres
template1	postgres	UTF8	C	en_US.UTF-8	=c/postgres + postgres=CTc/postgres

(4 rows)

```
postgres=#
```

10. Ajuste no arquivo pg_hba.conf para permitir conexões remotas:

```
$ vim /var/lib/pgsql/data/pg_hba.conf
```

```
# TYPE DATABASE USER ADDRESS METHOD
# "local" is for Unix domain socket connections only
local all all peer
# IPv4 local connections:
#host all all 127.0.0.1/32 ident
host all md2net 0.0.0.0/0 md5
# IPv6 local connections:
#host all all ::1/128 ident
host all md2net ::1/128 md5
```

11. Executando dump (backup) do banco de dados feito no passo 1:

```
qmsuse02:/tmp # gunzip -c BKP_DB_QM_20210806_03_36_PM.psqli.gz | psql -h 127.0.0.1 -U md2net qualitymanager
```


5.2. Ajustes do Tomcat

1. Verificação da versão do JAVA.

```
qmsuse02:/var/lib/tomcat # java -version
openjdk version "1.8.0_292"
OpenJDK Runtime Environment (IcedTea 3.19.0) (build 1.8.0_292-b10 suse-3.52.1-x86_64)
OpenJDK 64-Bit Server VM (build 25.292-b10, mixed mode)
qmsuse02:/var/lib/tomcat #
```

2. Download do tomcat 9.0.31.

```
$ cd /var/lib/tomcat/
$ wget https://archive.apache.org/dist/tomcat/tomcat-9/v9.0.31/bin/apache-tomcat-9.0.31.tar.gz
$ tar -vzxf apache-tomcat-9.0.31.tar.gz
$ chown -R tomcat:root apache-tomcat-9.0.31.tar.gz
```

```
qmsuse02:/var/lib/tomcat # wget https://archive.apache.org/dist/tomcat/tomcat-9/v9.0.31/bin/apache-tomcat-9.0.31.tar.gz
--2021-08-06 12:19:41-- https://archive.apache.org/dist/tomcat/tomcat-9/v9.0.31/bin/apache-tomcat-9.0.31.tar.gz
Resolving archive.apache.org (archive.apache.org)... 138.201.131.134, 2a01:4f8:172:2ec5::2
Connecting to archive.apache.org (archive.apache.org)|138.201.131.134|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 11042076 (11M) [application/x-gzip]
Saving to: 'apache-tomcat-9.0.31.tar.gz'

apache-tomcat-9.0.31.tar.gz                               100%[=====]
2021-08-06 12:19:44 (4.19 MB/s) - 'apache-tomcat-9.0.31.tar.gz' saved [11042076/11042076]
qmsuse02:/var/lib/tomcat #
```

```
qmsuse02:/var/lib/tomcat # tar -vzxf apache-tomcat-9.0.31.tar.gz
apache-tomcat-9.0.31/conf/
apache-tomcat-9.0.31/conf/catalina.policy
apache-tomcat-9.0.31/conf/catalina.properties
apache-tomcat-9.0.31/conf/context.xml
apache-tomcat-9.0.31/conf/jaspic-providers.xml
apache-tomcat-9.0.31/conf/jaspic-providers.xsd
apache-tomcat-9.0.31/conf/logging.properties
apache-tomcat-9.0.31/conf/server.xml
apache-tomcat-9.0.31/conf/tomcat-users.xml
apache-tomcat-9.0.31/conf/tomcat-users.xsd
apache-tomcat-9.0.31/conf/web.xml
apache-tomcat-9.0.31/bin/
apache-tomcat-9.0.31/lib/
apache-tomcat-9.0.31/logs/
```

```
qmsuse02:/var/lib/tomcat # chown -R tomcat:root apache-tomcat-9.0.31/
qmsuse02:/var/lib/tomcat #
```

3. Alteração do diretório dentro do arquivo do serviço do Tomcat.

```
$ vim /etc/systemd/system/tomcat.service
```

```
$ systemctl daemon-reload
```

```
$ systemctl start tomcat
```

```
$ systemctl status tomcat
```

```
qmsuse02:/var/lib/tomcat/apache-tomcat-7.0.105/conf # vim /etc/systemd/system/tomcat.service
[Unit]
Description=Apache Tomcat Web Application Container
After=syslog.target network.target

[Service]
Type=forking
ExecStart=/var/lib/tomcat/apache-tomcat-9.0.31/bin/startup.sh
ExecStop=/var/lib/tomcat/apache-tomcat-9.0.31/bin/shutdown.sh
User=tomcat
Group=root

[Install]
WantedBy=multi-user.target
~
```

```
qmsuse02:/var/lib/tomcat/apache-tomcat-7.0.105/conf # systemctl daemon-reload
qmsuse02:/var/lib/tomcat/apache-tomcat-7.0.105/conf # systemctl start tomcat
qmsuse02:/var/lib/tomcat/apache-tomcat-7.0.105/conf # systemctl status tomcat
● tomcat.service - Apache Tomcat Web Application Container
   Loaded: loaded (/etc/systemd/system/tomcat.service; disabled; vendor preset: disabled)
   Active: active (running) since Fri 2021-08-06 12:23:59 -03; 18s ago
     Main PID: 18431 (java)
       Tasks: 42
      CGroup: /system.slice/tomcat.service
              └─18431 /usr/bin/java -Djava.util.logging.config.file=/var/lib/tomcat/apache-to

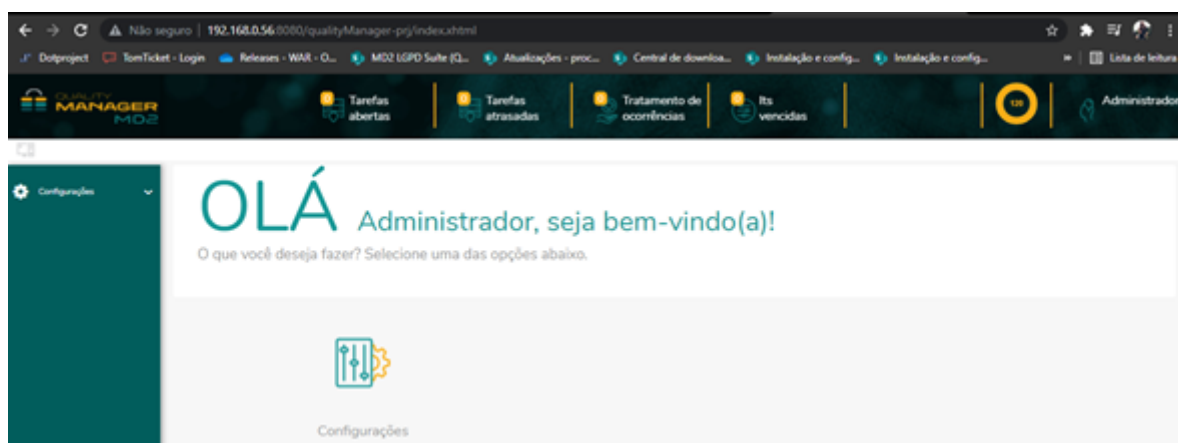
Aug 06 12:23:59 qmsuse02 systemd[1]: Starting Apache Tomcat Web Application Container...
Aug 06 12:23:59 qmsuse02 startup.sh[18417]: Tomcat started.
Aug 06 12:23:59 qmsuse02 systemd[1]: Started Apache Tomcat Web Application Container.
lines 1-11/11 (END)
```

4. Transferência do arquivo da aplicação para a pasta webapps do Tomcat:

```
qmsuse02:/tmp # systemctl stop tomcat
qmsuse02:/tmp # rm -rf /var/lib/tomcat/apache-tomcat-9.0.31/webapps/qualityManager-prj*
qmsuse02:/tmp # mv qm2-war-2.43.1.war /var/lib/tomcat/apache-tomcat-9.0.31/webapps/qualityManager-prj.war
qmsuse02:/tmp # systemctl start tomcat
qmsuse02:/tmp # systemctl status tomcat
● tomcat.service - Apache Tomcat Web Application Container
   Loaded: loaded (/etc/systemd/system/tomcat.service; disabled; vendor preset: disabled)
   Active: active (running) since Fri 2021-08-06 12:38:26 -03; 4s ago
     Process: 23722 ExecStart=/var/lib/tomcat/apache-tomcat-9.0.31/bin/startup.sh (code=exited, status=0/SUCCESS)
    Main PID: 23736 (java)
       Tasks: 16
      CGroup: /system.slice/tomcat.service
              └─23736 /usr/bin/java -Djava.util.logging.config.file=/var/lib/tomcat/apache-tomcat-9.0.31/conf/logging

Aug 06 12:38:26 qmsuse02 systemd[1]: Starting Apache Tomcat Web Application Container...
Aug 06 12:38:26 qmsuse02 startup.sh[23722]: Tomcat started.
Aug 06 12:38:26 qmsuse02 systemd[1]: Started Apache Tomcat Web Application Container.
lines 1-12/12 (END)
```

5. Teste via browser:



6. Conclusão

Este documento descreve e evidencia, em linhas gerais, as etapas e procedimentos realizados para a atualização do SUSE Linux para receber a aplicação do Quality Manager.