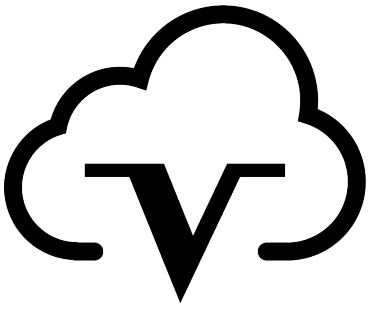


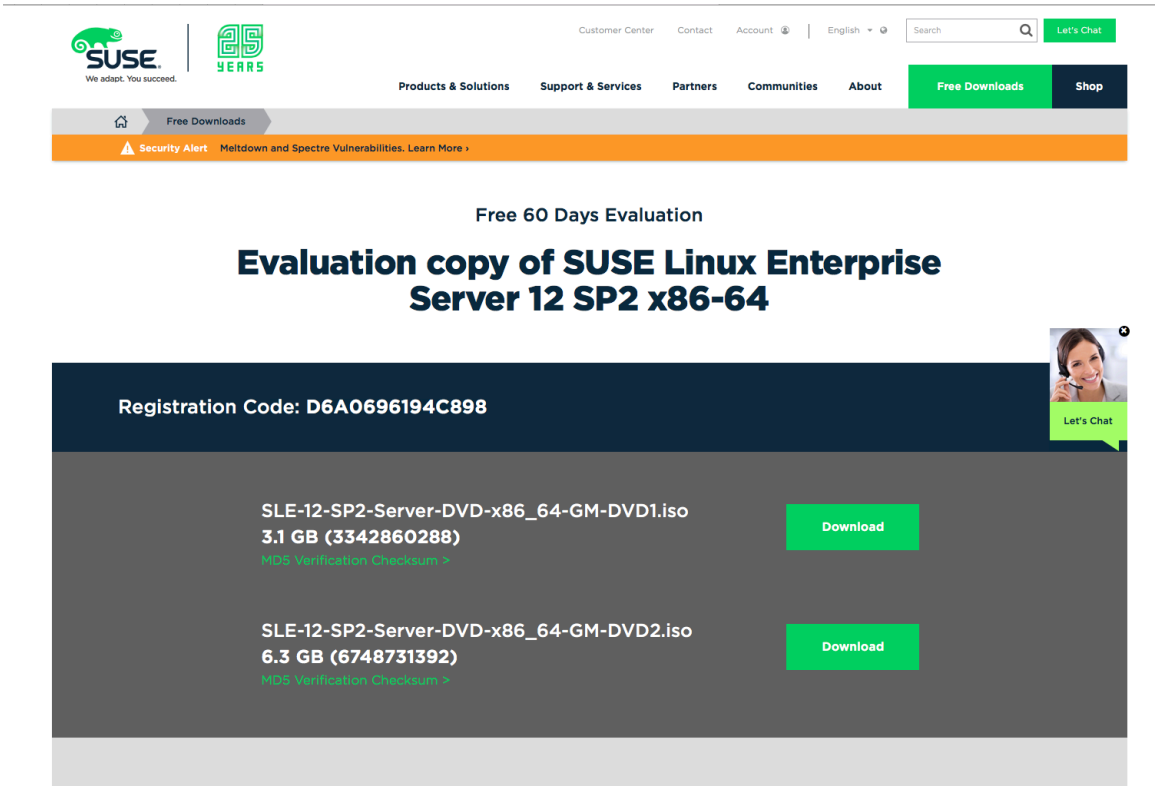
VISCOSITY
NORTH AMERICA

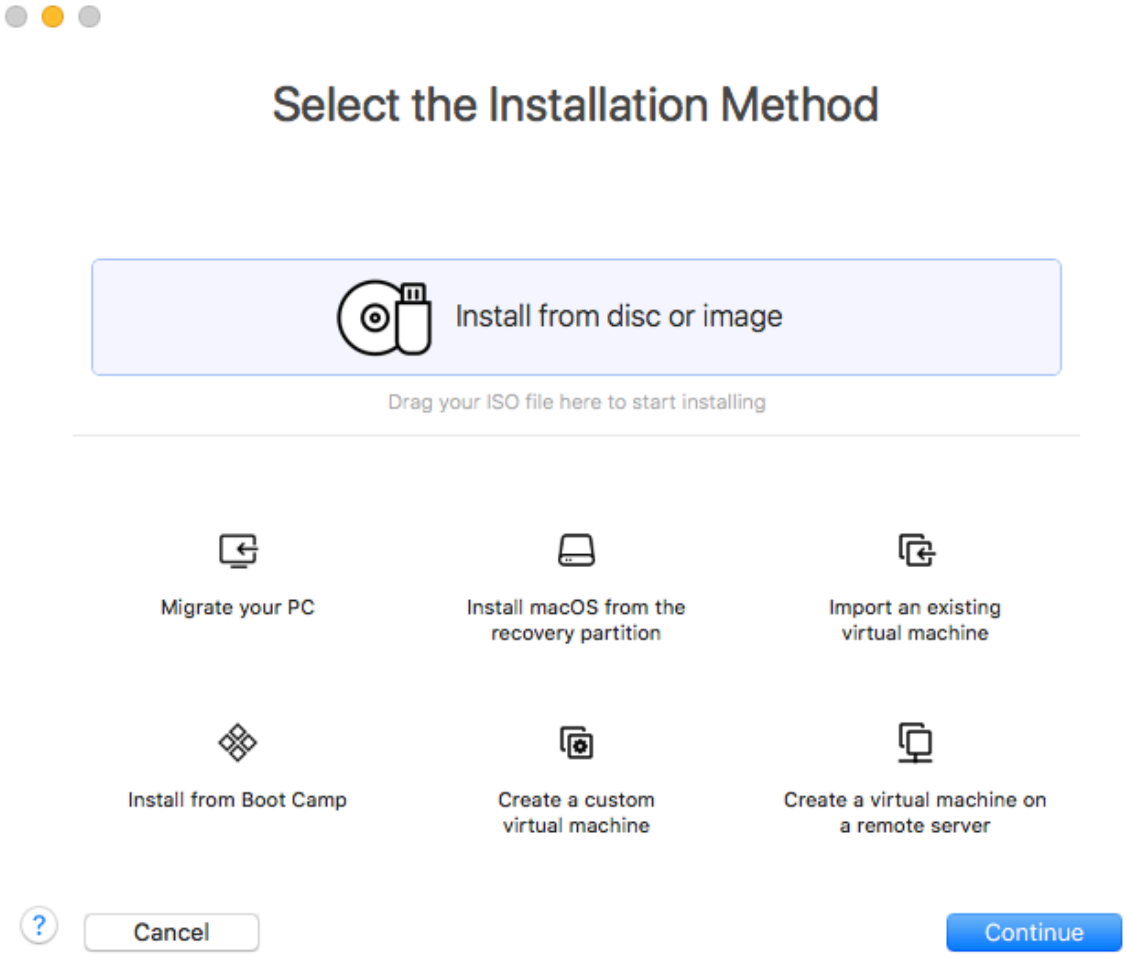
SQL SERVER INSTALLATION AND CONFIGURATION ON SUSE LINUX

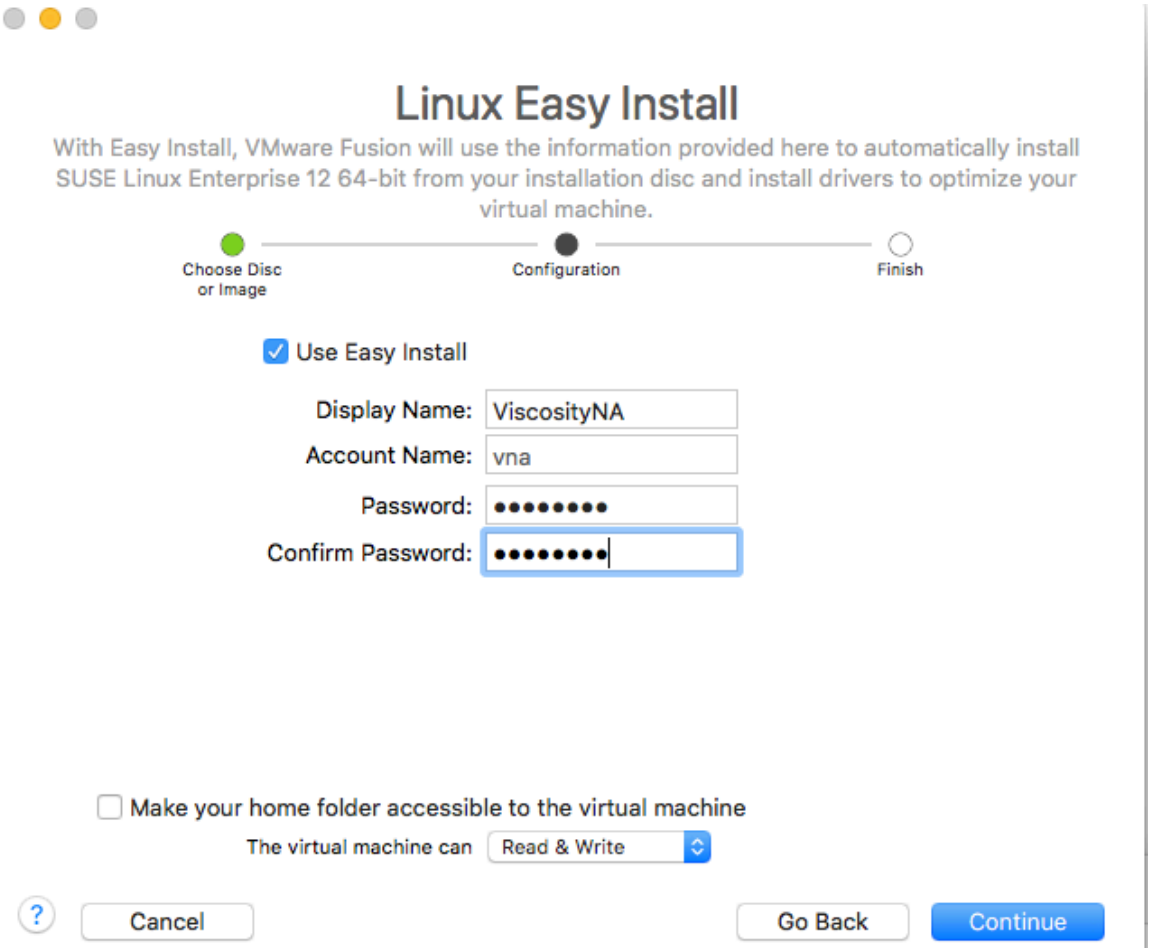
Includes SUSE Installation

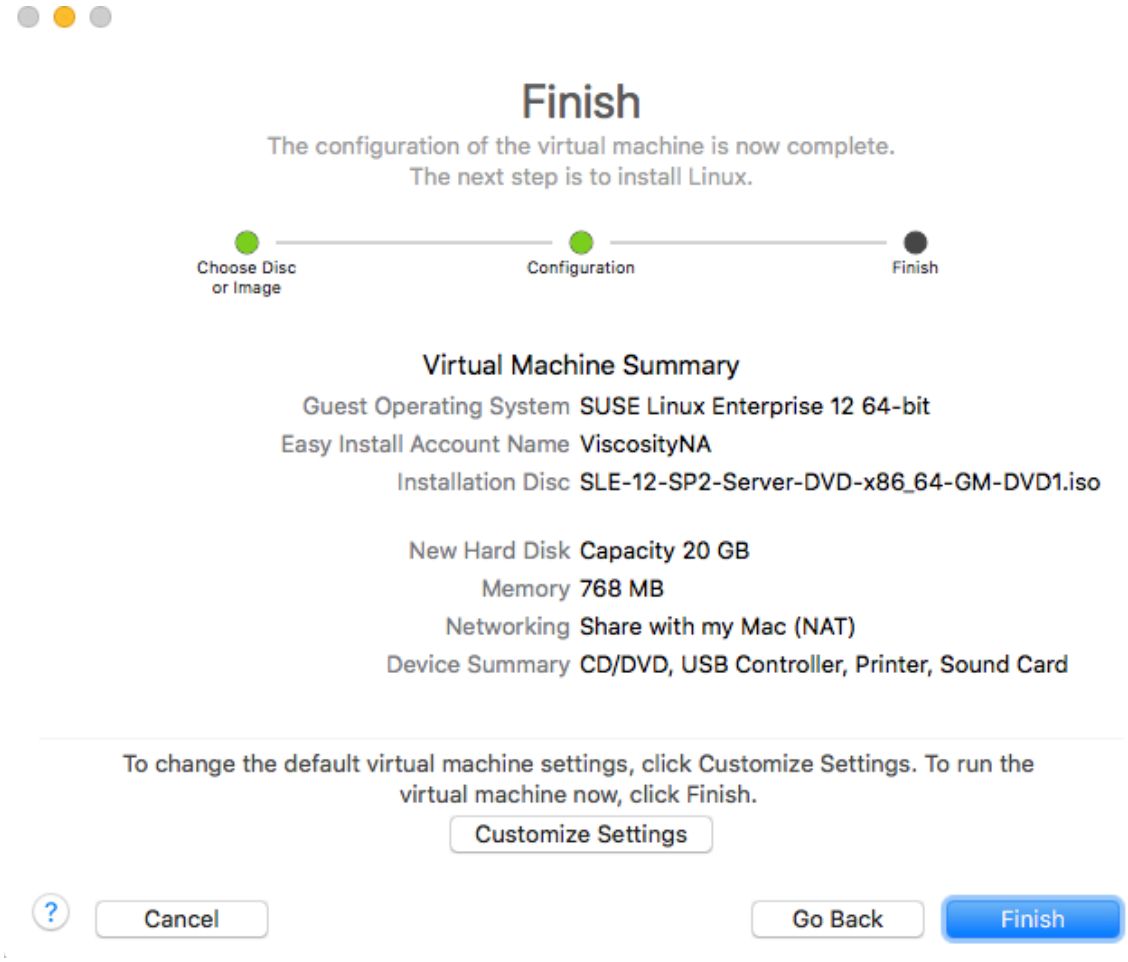
DOWNLOAD AND INSTALL SUSE

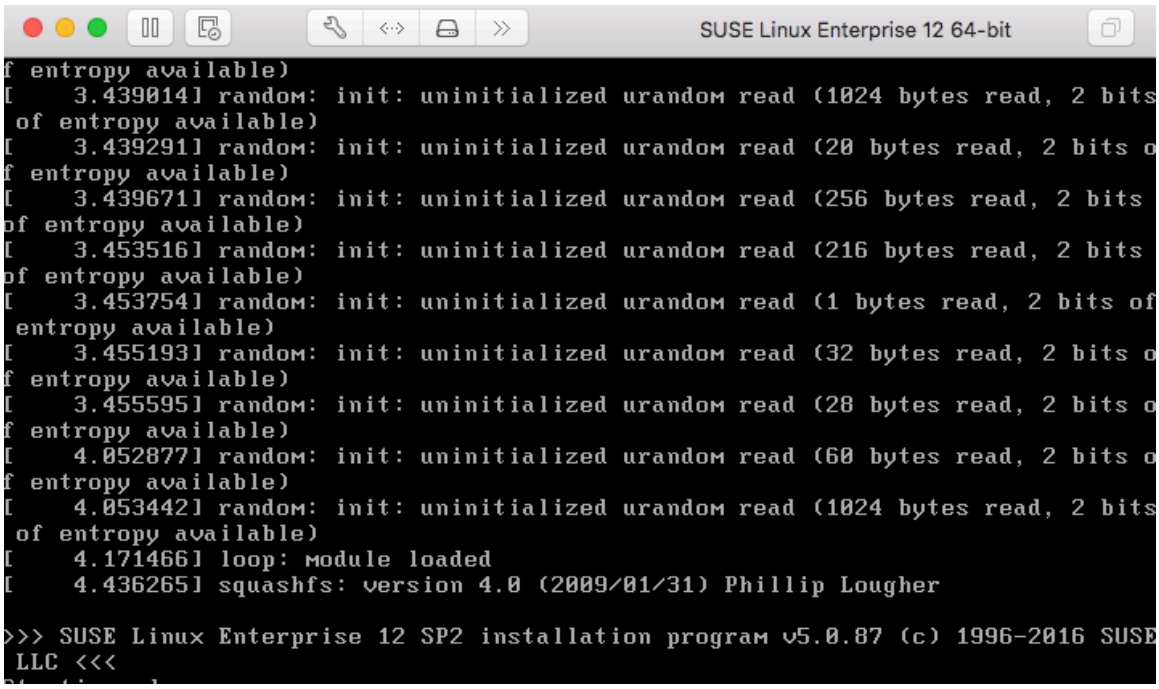
https://www.suse.com/eval/download/OWglKQbc8MY~/?event_id=GSDGNweb23162&event_name=Eval:+SLES+SP2+-+AMD+64+Page&icid=GSDGNweb23678&icname=Eval:+SLES+SP2+-+AMD%2064+Page+Nurture&login_required=1

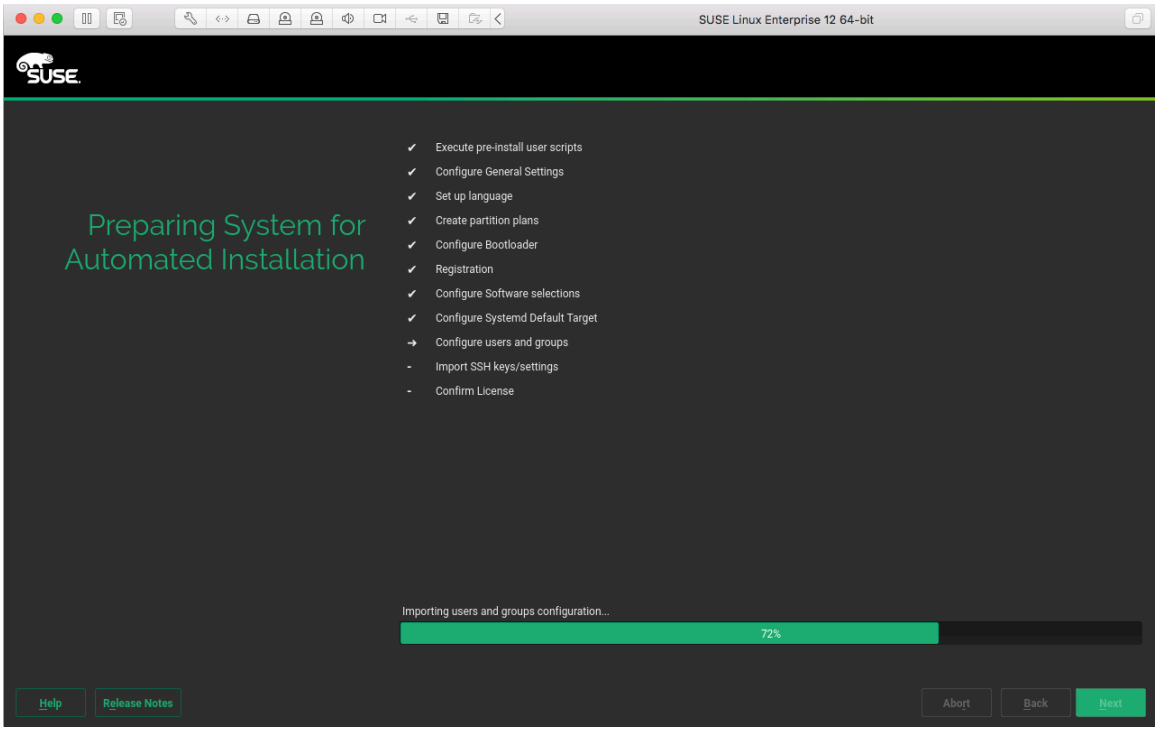


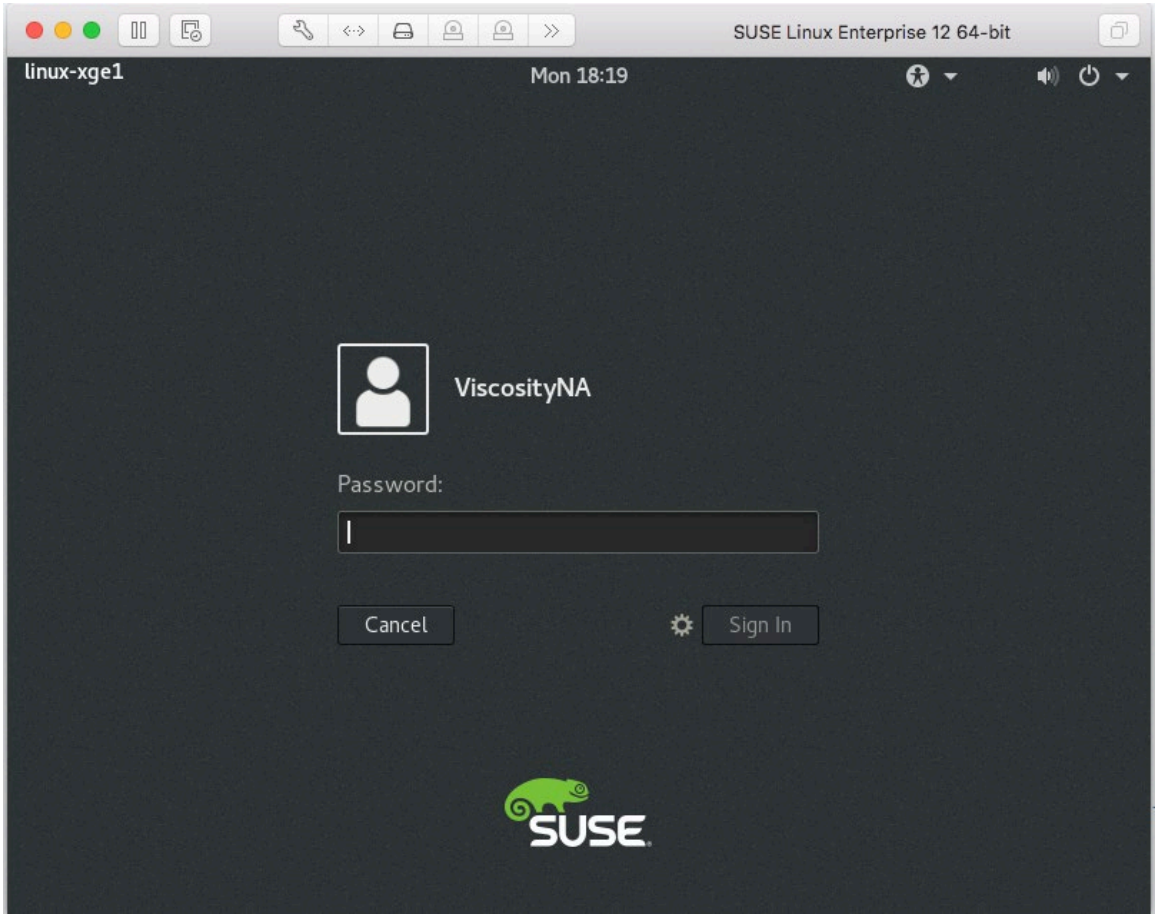

Select the Installation Method
Install from disc or image
Drag your ISO file here to start installing
Migrate your PC
Install macOS from the recovery partition
Import an existing virtual machine
Install from Boot Camp
Create a custom virtual machine
Create a virtual machine on a remote server
Cancel
Continue

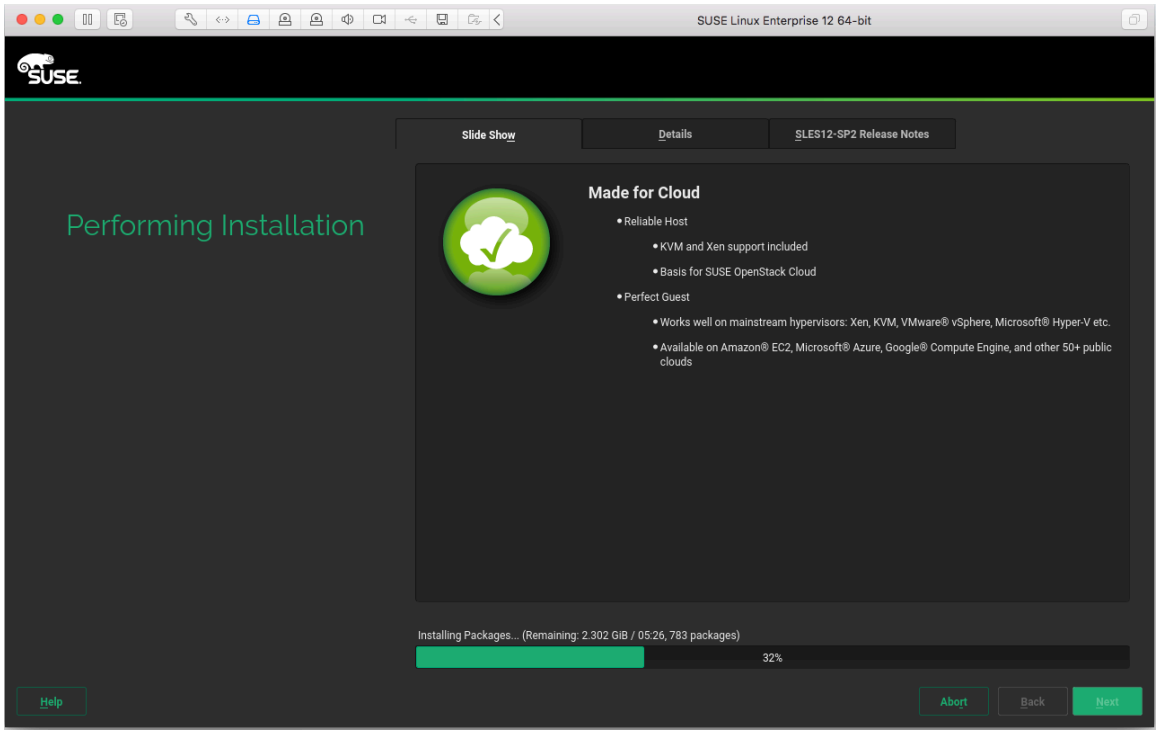

Linux Easy Install
With Easy Install, VMware Fusion will use the information provided here to automatically install SUSE Linux Enterprise 12 64-bit from your installation disc and install drivers to optimize your virtual machine.
Choose Disc or Image
Configuration
Finish
Use Easy Install
Display Name: ViscosityNA
Account Name: vna
Password:
Confirm Password:
Make your home folder accessible to the virtual machine
The virtual machine can Read & Write
Cancel
Go Back
Continue


Finish
The configuration of the virtual machine is now complete.
The next step is to install Linux.
Choose Disc or Image
Configuration
Finish
Virtual Machine Summary
Guest Operating System SUSE Linux Enterprise 12 64-bit
Easy Install Account Name ViscosityNA
Installation Disc SLE-12-SP2-Server-DVD-x86_64-GM-DVD1.iso
New Hard Disk Capacity 20 GB
Memory 768 MB
Networking Share with my Mac (NAT)
Device Summary CD/DVD, USB Controller, Printer, Sound Card
To change the default virtual machine settings, click Customize Settings. To run the virtual machine now, click Finish.
Customize Settings
Cancel
Go Back
Finish


SUSE Linux Enterprise 12 64-bit
f entropy available)
[3.439014] random: init: uninitialized urandom read (1024 bytes read, 2 bits
of entropy available)
[3.439291] random: init: uninitialized urandom read (20 bytes read, 2 bits o
f entropy available)
[3.439671] random: init: uninitialized urandom read (256 bytes read, 2 bits
of entropy available)
[3.453516] random: init: uninitialized urandom read (216 bytes read, 2 bits
of entropy available)
[3.453754] random: init: uninitialized urandom read (1 bytes read, 2 bits of
entropy available)
[3.455193] random: init: uninitialized urandom read (32 bytes read, 2 bits o
f entropy available)
[3.455595] random: init: uninitialized urandom read (28 bytes read, 2 bits o
f entropy available)
[4.052877] random: init: uninitialized urandom read (60 bytes read, 2 bits o
f entropy available)
[4.053442] random: init: uninitialized urandom read (1024 bytes read, 2 bits
of entropy available)
[4.171466] loop: module loaded
[4.436265] squashfs: version 4.0 (2009/01/31) Phillip Lougher
>>> SUSE Linux Enterprise 12 SP2 installation program v5.0.87 (c) 1996-2016 SUSE
LLC <<<


SUSE Linux Enterprise 12 64-bit
SUSE
Preparing System for Automated Installation
✔ Execute pre-install user scripts
✔ Configure General Settings
✔ Set up language
✔ Create partition plans
✔ Configure Bootloader
✔ Registration
✔ Configure Software selections
✔ Configure Systemd Default Target
➔ Configure users and groups
- Import SSH keys/settings
- Confirm License
Importing users and groups configuration...
72%
Help
Release Notes
Abort
Back
Next


SUSE Linux Enterprise 12 64-bit
linux-xge1
Mon 18:19
ViscosityNA
Password:
Cancel
Sign In
SUSE

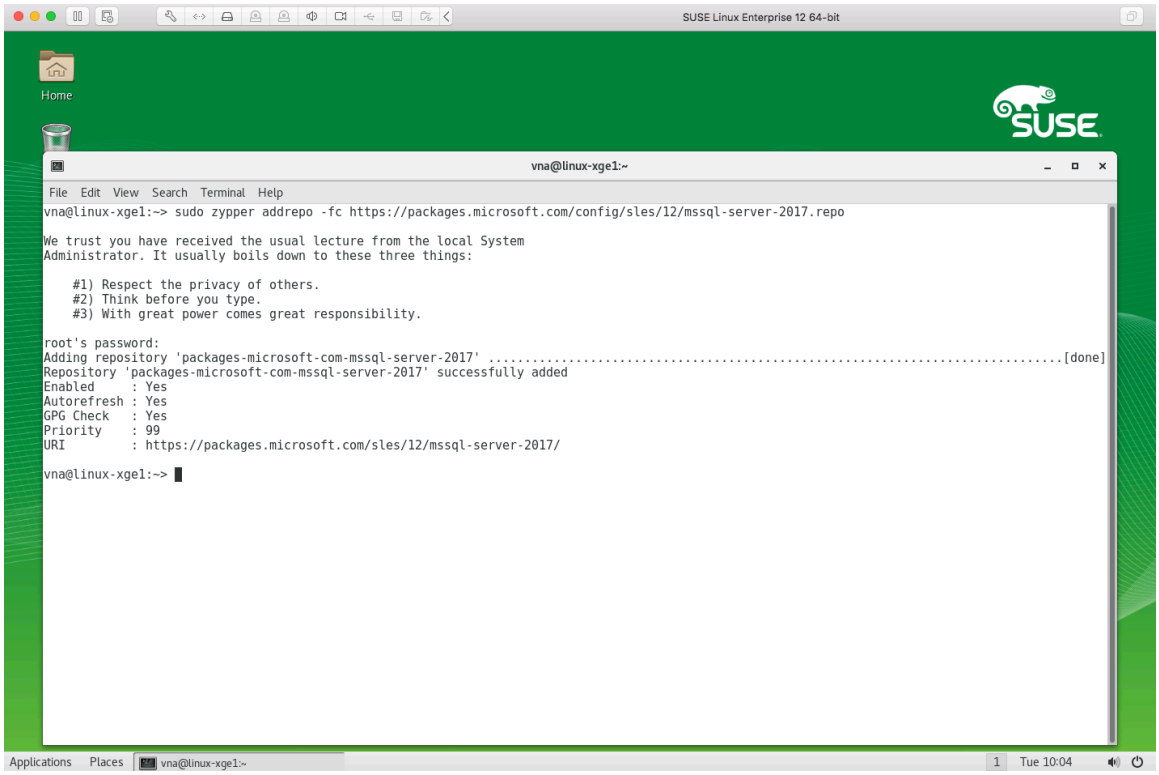

SUSE Linux Enterprise 12 64-bit
SUSE
Slide Show
Details
SLES12-SP2 Release Notes
Performing Installation
Made for Cloud
• Reliable Host
• KVM and Xen support included
• Basis for SUSE OpenStack Cloud
• Perfect Guest
• Works well on mainstream hypervisors: Xen, KVM, VMware® vSphere, Microsoft® Hyper-V etc.
• Available on Amazon® EC2, Microsoft® Azure, Google® Compute Engine, and other 50+ public clouds
Installing Packages... (Remaining: 2.302 GiB / 05:26, 783 packages)
32%
Help
Abort
Back
Next

INSTALL SQL SERVER AND CREATE A DATABASE ON SUSE LINUX ENTERPRISE SERVER

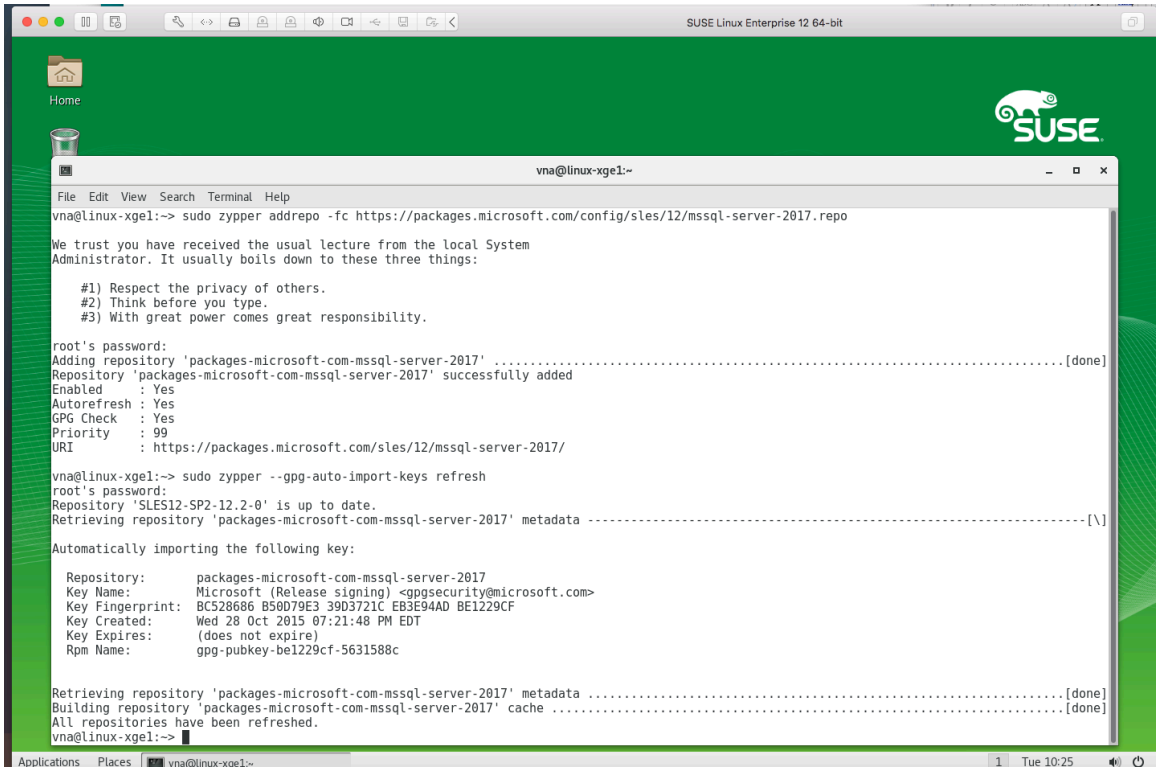
https://docs.microsoft.com/en-us/sql/linux/quickstart-install-connect-suse

You must have a SLES v12 SP2 machine with **at least 2 GB** of memory. The file system must be **XFS** or **EXT4**. Other file systems, such as **BTRFS**, are unsupported.

```
sudo zypper addrepo -fc https://packages.microsoft.com/config/sles/12/mssql-server-2017.repo
```

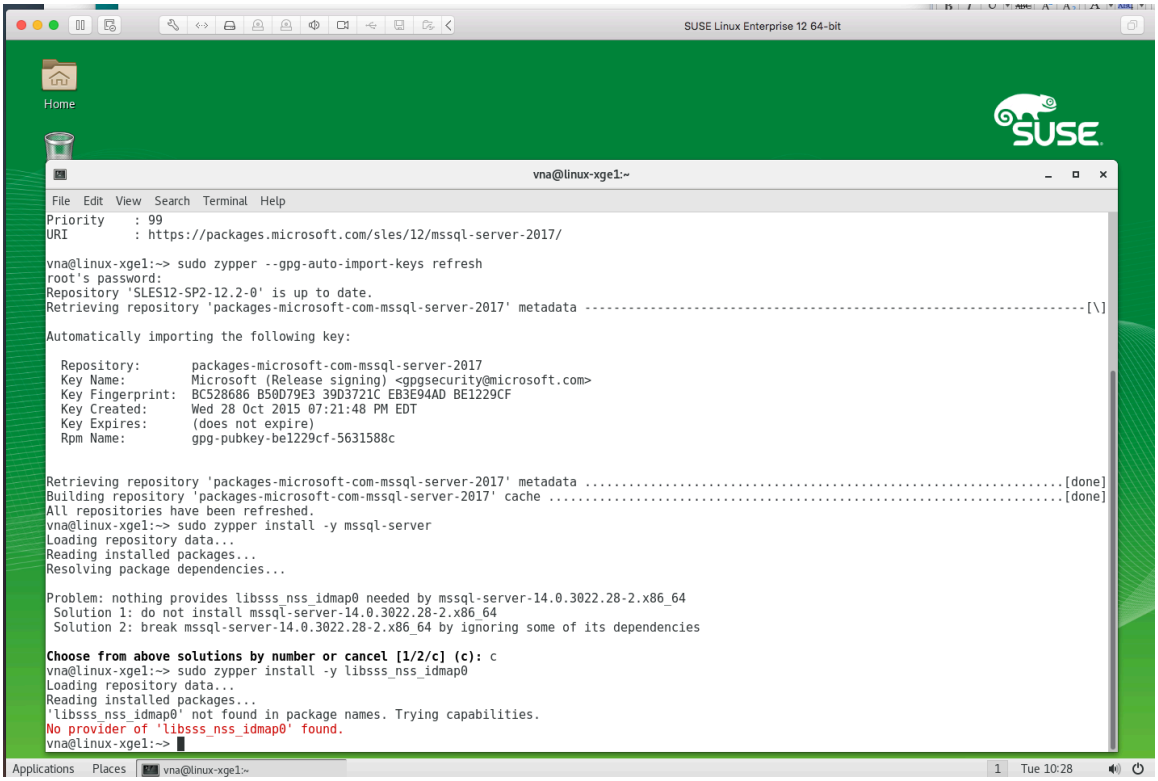



```
sudo zypper --gpg-auto-import-keys refresh
```




```
sudo zypper install -y mssql-server
```

Problem: nothing provides libsss_nss_idmap0 needed by mssql-server-14.0.3022.28-2.x86_64



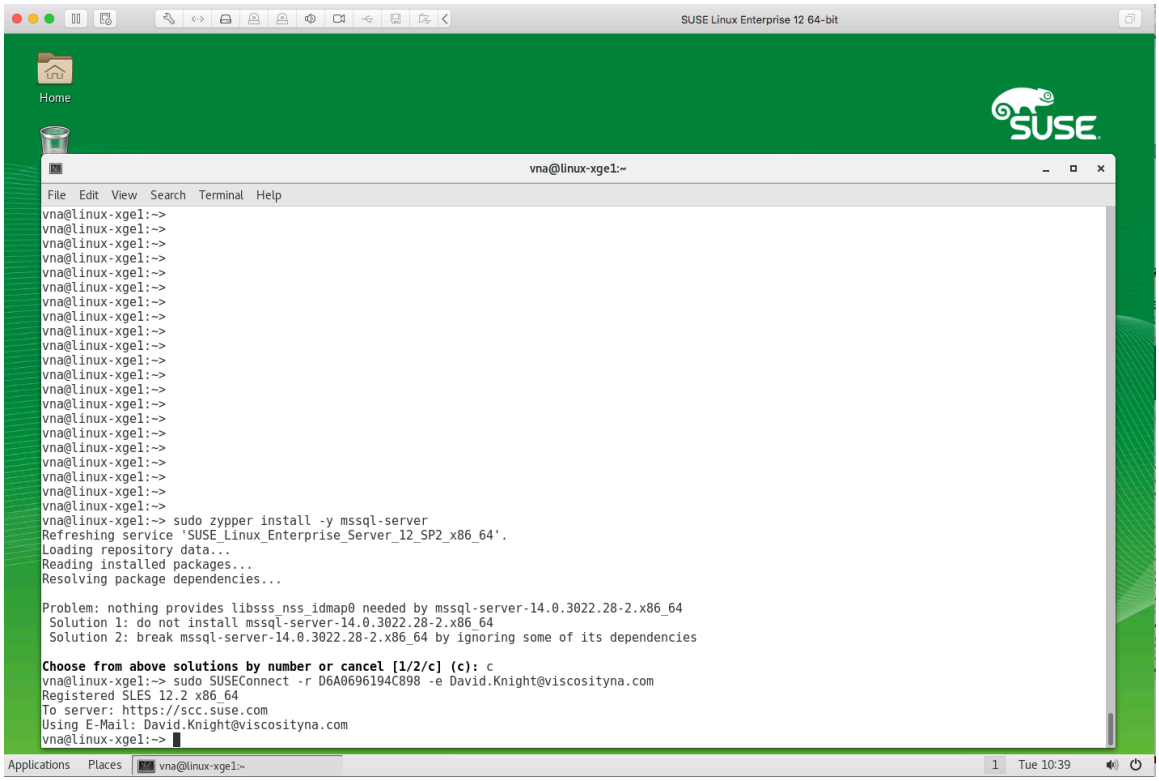
This error is due to libsss_nss_idmap0 not binging included in the standard suse repo

To install libsss_nss_idmap0 you must first register SUSE Linux with either the trial or your enterprise license code if you have not done so yet.

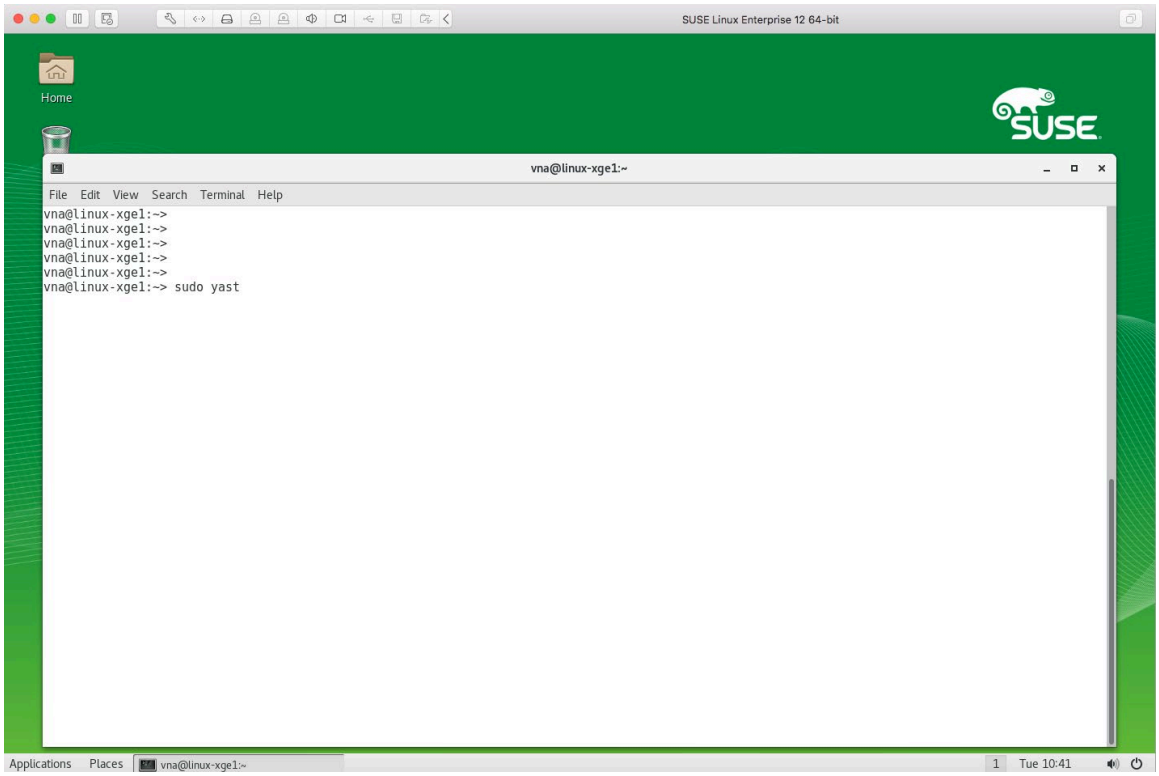
Next install **SUSE Linux Enterprise Software Development kit with yast:**

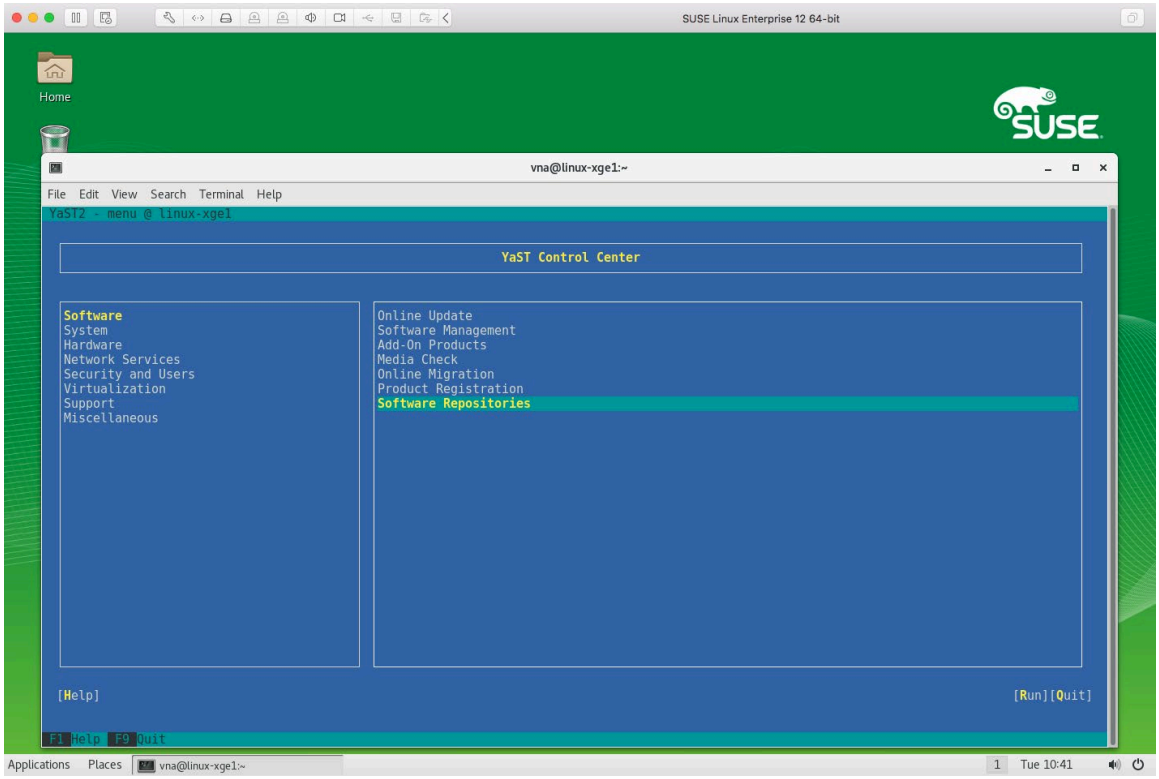
YAST2>>Software Repositories>>Add>>Extensions and Modules from Registration Server>> SUSE Linux Enterprise Software Development kit SP2 x86_64.

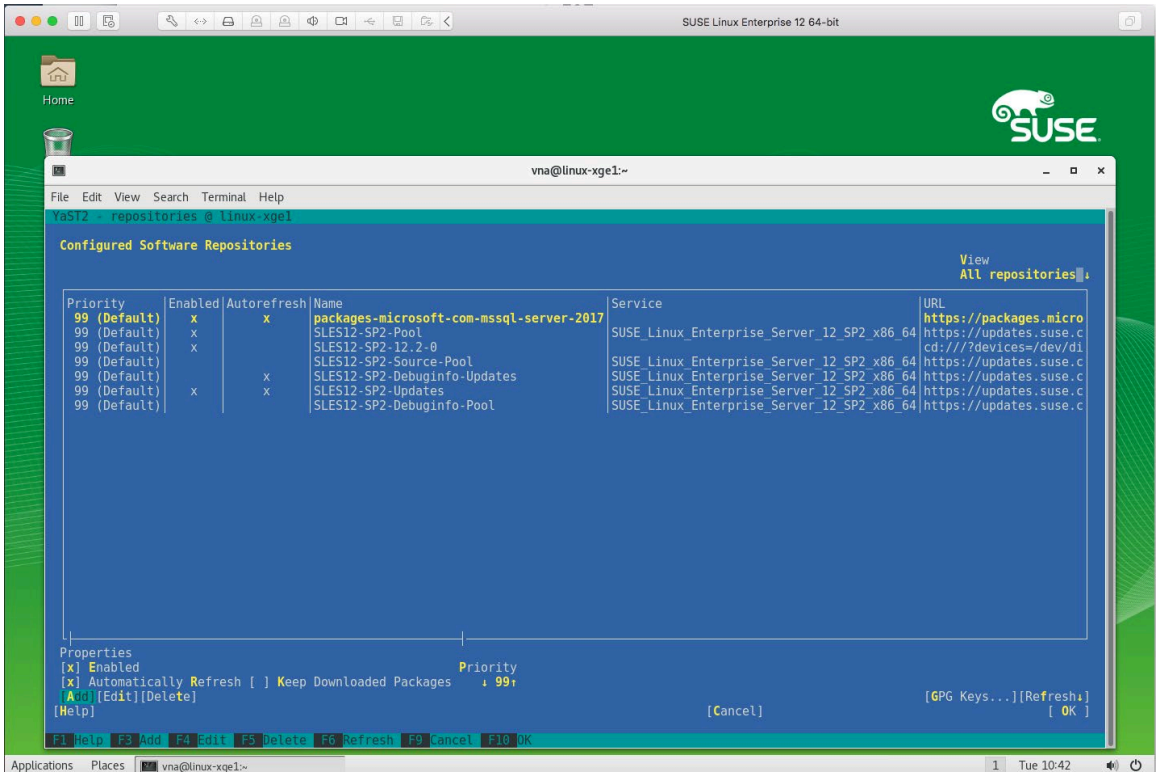
sudo SUSEConnect -r D6A0696194C898 -e David.Knight@viscosityna.com

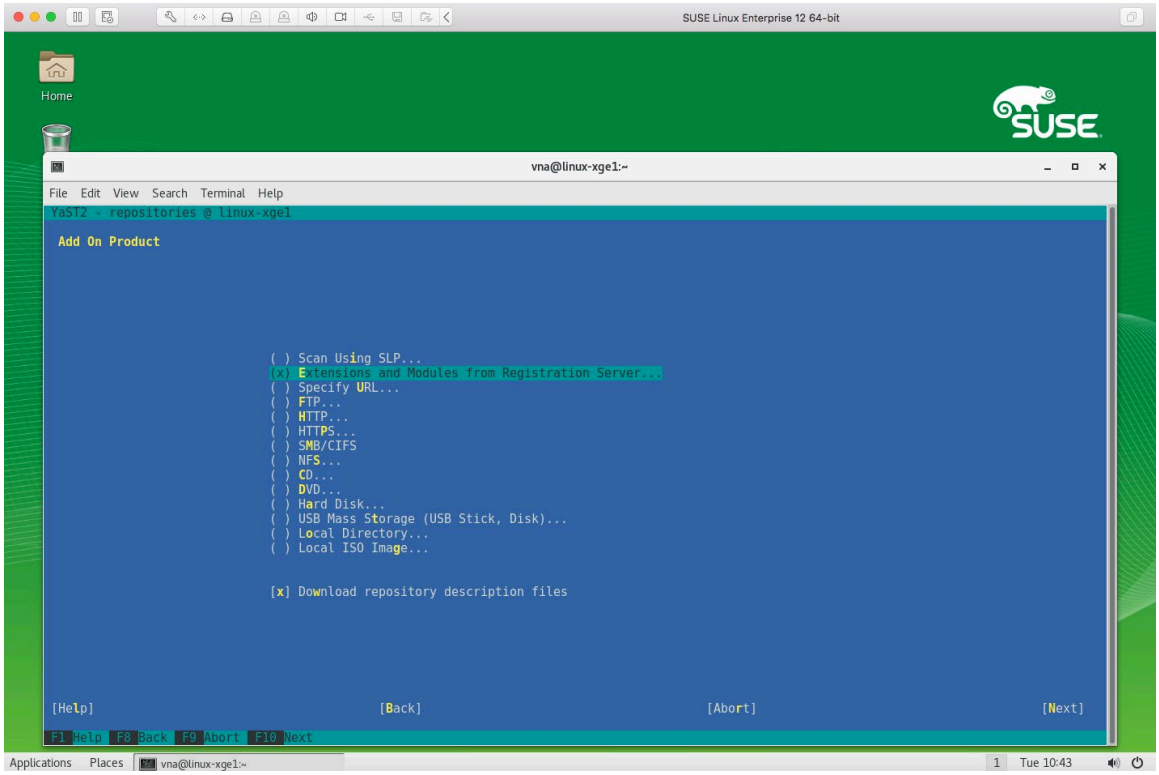

SUSE Linux Enterprise 12 64-bit
Home
vna@linux-xge1:~
File Edit View Search Terminal Help
vna@linux-xge1:~>
vna@linux-xge1:~> sudo zypper install -y mssql-server
Refreshing service 'SUSE_Linux_Enterprise_Server_12_SP2_x86_64'.
Loading repository data...
Reading installed packages...
Resolving package dependencies...
Problem: nothing provides libsss_nss_idmap0 needed by mssql-server-14.0.3022.28-2.x86_64
Solution 1: do not install mssql-server-14.0.3022.28-2.x86_64
Solution 2: break mssql-server-14.0.3022.28-2.x86_64 by ignoring some of its dependencies
Choose from above solutions by number or cancel [1/2/c] (c): c
vna@linux-xge1:~> sudo SUSEConnect -r D6A0696194C898 -e David.Knight@viscosityna.com
Registered SLES 12.2 x86_64
To server: https://scc.suse.com
Using E-Mail: David.Knight@viscosityna.com
vna@linux-xge1:~>
Applications Places vna@linux-xge1:~
1 Tue 10:39

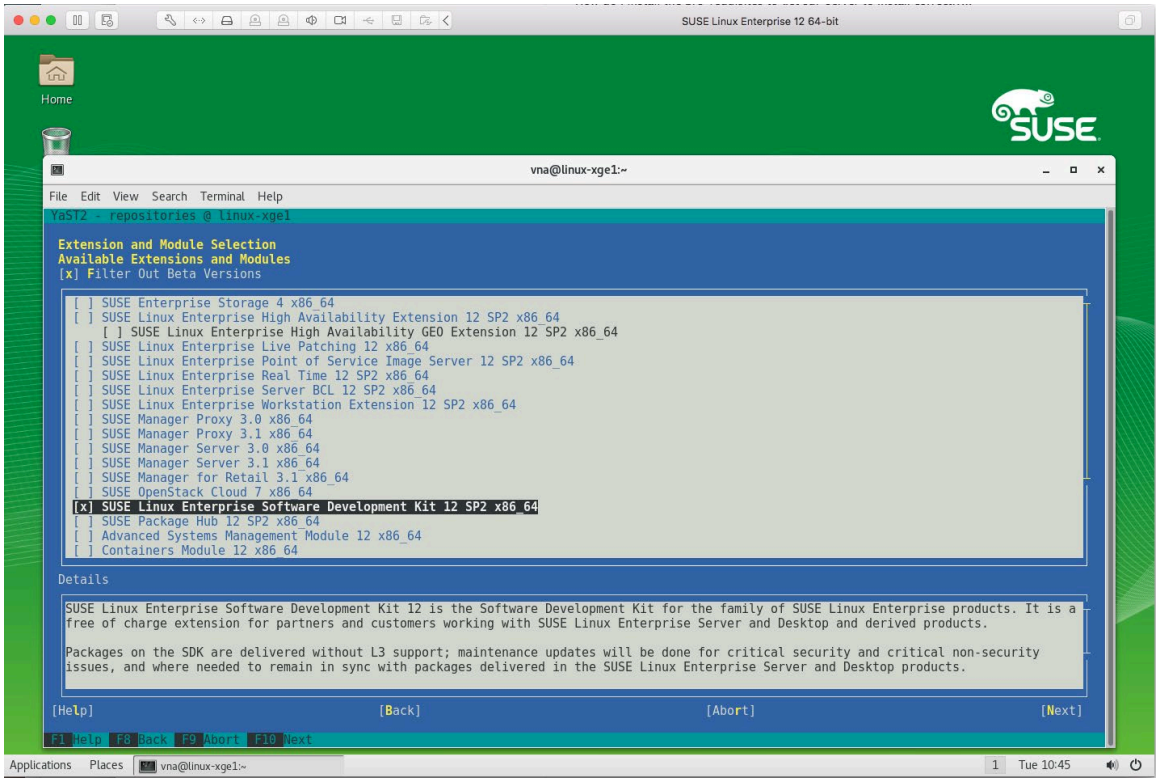
SUDO YAST

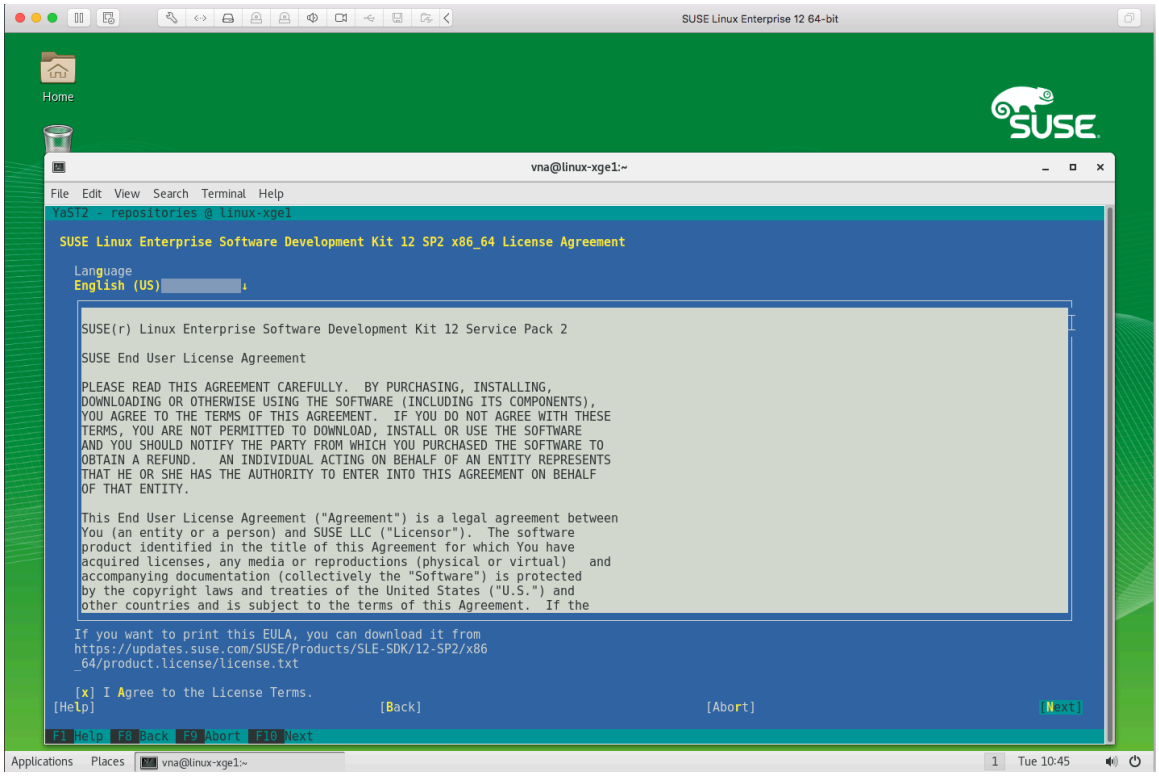

SUSE Linux Enterprise 12 64-bit
Home
vna@linux-xge1:~
File Edit View Search Terminal Help
vna@linux-xge1:~>
vna@linux-xge1:~>
vna@linux-xge1:~>
vna@linux-xge1:~>
vna@linux-xge1:~>
vna@linux-xge1:~> sudo yast
Applications Places vna@linux-xge1:~
1 Tue 10:41


SUSE Linux Enterprise 12 64-bit
Home
vna@linux-xge1:~
File Edit View Search Terminal Help
YaST2 - menu @ linux-xge1
YaST Control Center
Software
System
Hardware
Network Services
Security and Users
Virtualization
Support
Miscellaneous
Online Update
Software Management
Add-On Products
Media Check
Online Migration
Product Registration
Software Repositories
[Help]
[Run][Quit]
F1 Help F9 Quit
Applications Places vna@linux-xge1:~
1 Tue 10:41


SUSE Linux Enterprise 12 64-bit
Home
vna@linux-xge1:~
File Edit View Search Terminal Help
YaST2 - repositories @ linux-xge1
Configured Software Repositories
View
All repositories
Priority | Enabled | Autorefresh | Name | Service | URL
99 (Default) | x | x | packages-microsoft-com-mssql-server-2017 | | https://packages.micro
99 (Default) | x | | SLES12-SP2-Pool | SUSE_Linux_Enterprise_Server_12_SP2_x86_64 | https://updates.suse.c
99 (Default) | x | | SLES12-SP2-12.2-0 | | cd:///?devices=/dev/di
99 (Default) | | | SLES12-SP2-Source-Pool | SUSE_Linux_Enterprise_Server_12_SP2_x86_64 | https://updates.suse.c
99 (Default) | | x | SLES12-SP2-Debuginfo-Updates | SUSE_Linux_Enterprise_Server_12_SP2_x86_64 | https://updates.suse.c
99 (Default) | x | x | SLES12-SP2-Updates | SUSE_Linux_Enterprise_Server_12_SP2_x86_64 | https://updates.suse.c
99 (Default) | | | SLES12-SP2-Debuginfo-Pool | SUSE_Linux_Enterprise_Server_12_SP2_x86_64 | https://updates.suse.c
Properties
[x] Enabled
Priority
99
[x] Automatically Refresh [ ] Keep Downloaded Packages
[Add][Edit][Delete]
[GPG Keys...][Refresh]
[Help]
[Cancel]
[OK]
F1 Help F3 Add F4 Edit F5 Delete F6 Refresh F9 Cancel F10 OK
Applications Places vna@linux-xge1:~
1 Tue 10:42


SUSE Linux Enterprise 12 64-bit
Home
vna@linux-xge1:~
File Edit View Search Terminal Help
YaST2 - repositories @ linux-xge1
Add On Product
( ) Scan Using SLP...
(x) Extensions and Modules from Registration Server...
( ) Specify URL...
( ) FTP...
( ) HTTP...
( ) HTTPS...
( ) SMB/CIFS
( ) NFS...
( ) CD...
( ) DVD...
( ) Hard Disk...
( ) USB Mass Storage (USB Stick, Disk)...
( ) Local Directory...
( ) Local ISO Image...
[x] Download repository description files
[Help]
[Back]
[Abort]
[Next]
F1 Help F8 Back F9 Abort F10 Next
Applications Places vna@linux-xge1:~
1 Tue 10:43


SUSE Linux Enterprise 12 64-bit
Home
vna@linux-xge1:~
File Edit View Search Terminal Help
YaST2 - repositories @ linux-xge1
Extension and Module Selection
Available Extensions and Modules
[x] Filter Out Beta Versions
[ ] SUSE Enterprise Storage 4 x86_64
[ ] SUSE Linux Enterprise High Availability Extension 12 SP2 x86_64
[ ] SUSE Linux Enterprise High Availability GEO Extension 12 SP2 x86_64
[ ] SUSE Linux Enterprise Live Patching 12 x86_64
[ ] SUSE Linux Enterprise Point of Service Image Server 12 SP2 x86_64
[ ] SUSE Linux Enterprise Real Time 12 SP2 x86_64
[ ] SUSE Linux Enterprise Server BCL 12 SP2 x86_64
[ ] SUSE Linux Enterprise Workstation Extension 12 SP2 x86_64
[ ] SUSE Manager Proxy 3.0 x86_64
[ ] SUSE Manager Proxy 3.1 x86_64
[ ] SUSE Manager Server 3.0 x86_64
[ ] SUSE Manager Server 3.1 x86_64
[ ] SUSE Manager for Retail 3.1 x86_64
[ ] SUSE OpenStack Cloud 7 x86_64
[x] SUSE Linux Enterprise Software Development Kit 12 SP2 x86_64
[ ] SUSE Package Hub 12 SP2 x86_64
[ ] Advanced Systems Management Module 12 x86_64
[ ] Containers Module 12 x86_64
Details
SUSE Linux Enterprise Software Development Kit 12 is the Software Development Kit for the family of SUSE Linux Enterprise products. It is a free of charge extension for partners and customers working with SUSE Linux Enterprise Server and Desktop and derived products.
Packages on the SDK are delivered without L3 support; maintenance updates will be done for critical security and critical non-security issues, and where needed to remain in sync with packages delivered in the SUSE Linux Enterprise Server and Desktop products.
[Help] [Back] [Abort] [Next]
F1 Help F8 Back F9 Abort F10 Next
Applications Places vna@linux-xge1:~
Tue 10:45


SUSE Linux Enterprise 12 64-bit
Home
vna@linux-xge1:~
File Edit View Search Terminal Help
YaST2 - repositories @ linux-xge1
SUSE Linux Enterprise Software Development Kit 12 SP2 x86_64 License Agreement
Language
English (US)
SUSE(r) Linux Enterprise Software Development Kit 12 Service Pack 2
SUSE End User License Agreement
PLEASE READ THIS AGREEMENT CAREFULLY. BY PURCHASING, INSTALLING, DOWNLOADING OR OTHERWISE USING THE SOFTWARE (INCLUDING ITS COMPONENTS), YOU AGREE TO THE TERMS OF THIS AGREEMENT. IF YOU DO NOT AGREE WITH THESE TERMS, YOU ARE NOT PERMITTED TO DOWNLOAD, INSTALL OR USE THE SOFTWARE AND YOU SHOULD NOTIFY THE PARTY FROM WHICH YOU PURCHASED THE SOFTWARE TO OBTAIN A REFUND. AN INDIVIDUAL ACTING ON BEHALF OF AN ENTITY REPRESENTS THAT HE OR SHE HAS THE AUTHORITY TO ENTER INTO THIS AGREEMENT ON BEHALF OF THAT ENTITY.
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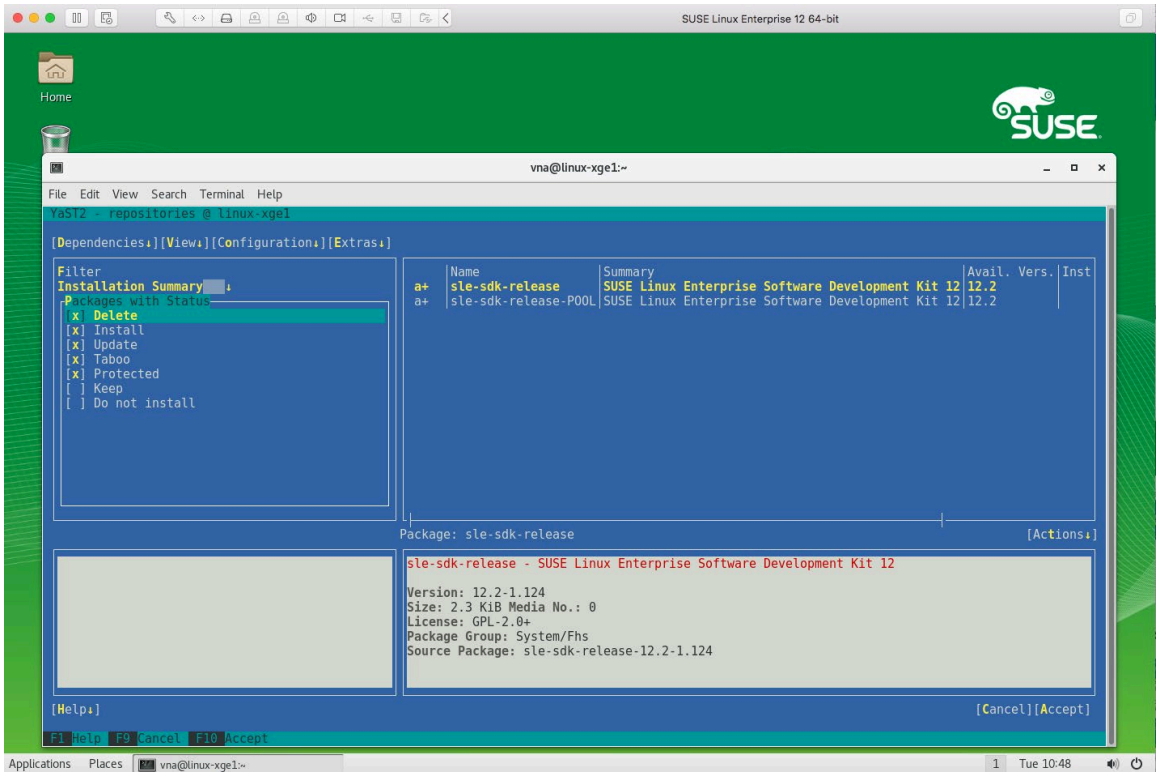
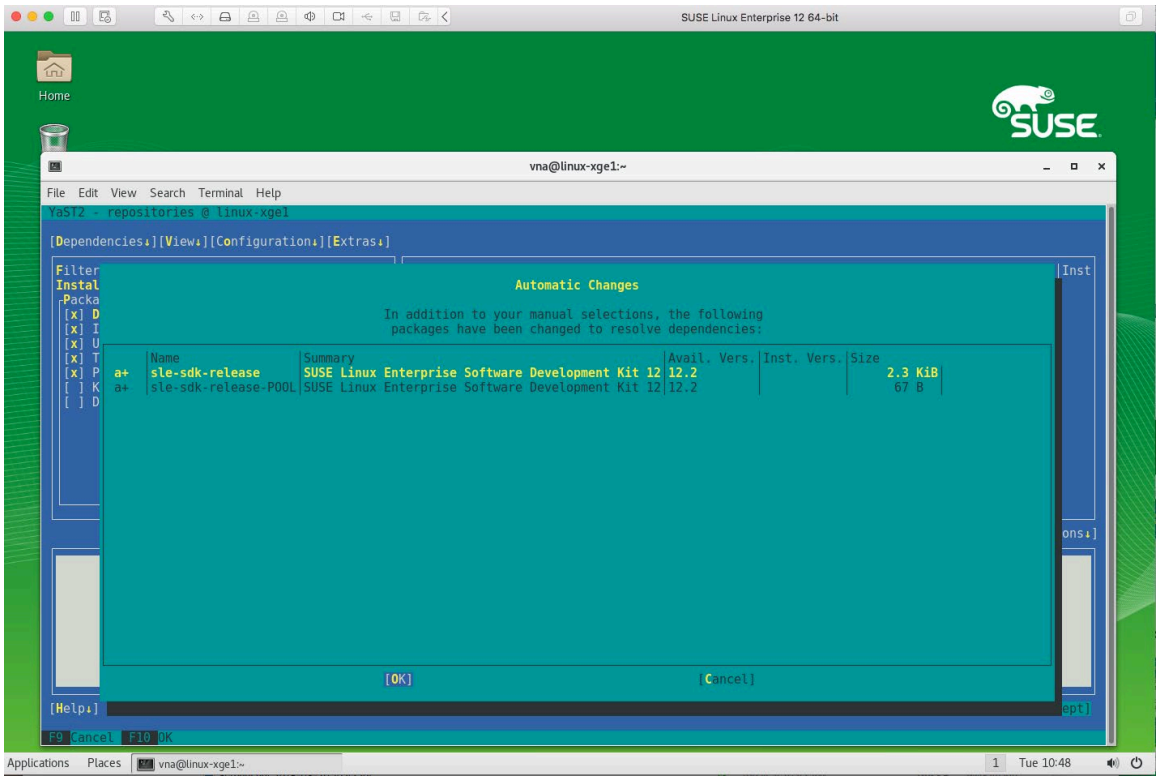
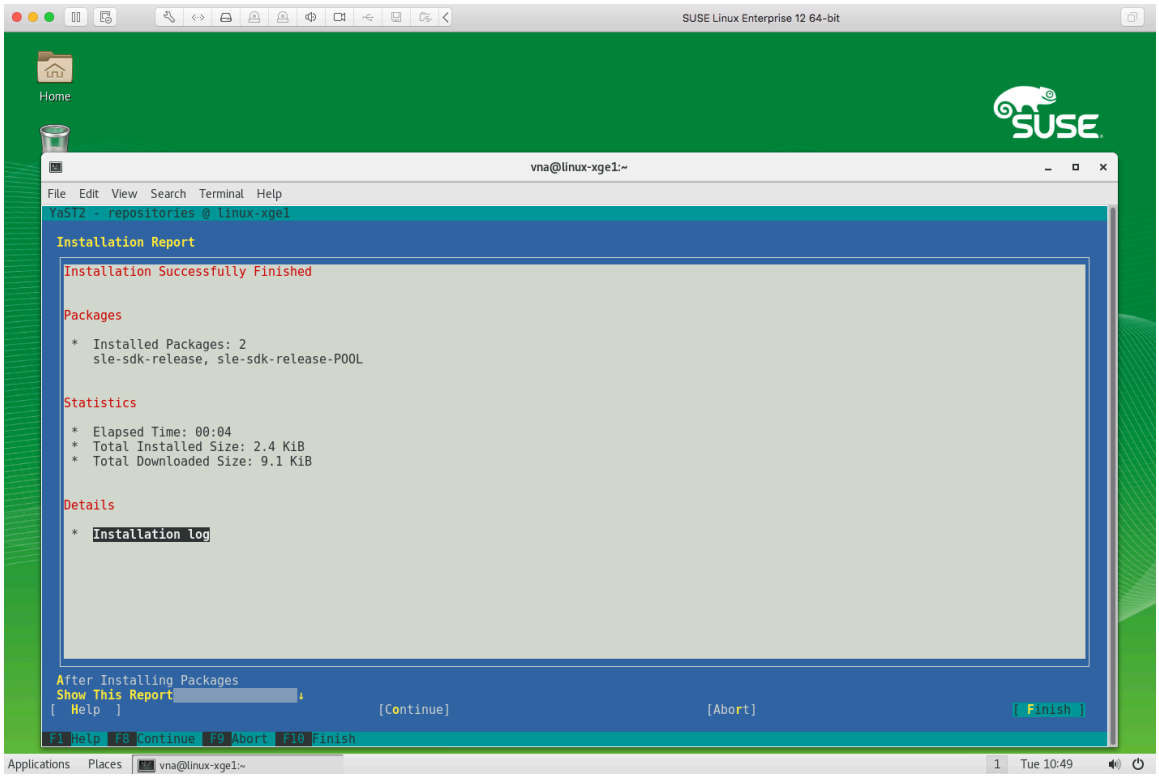
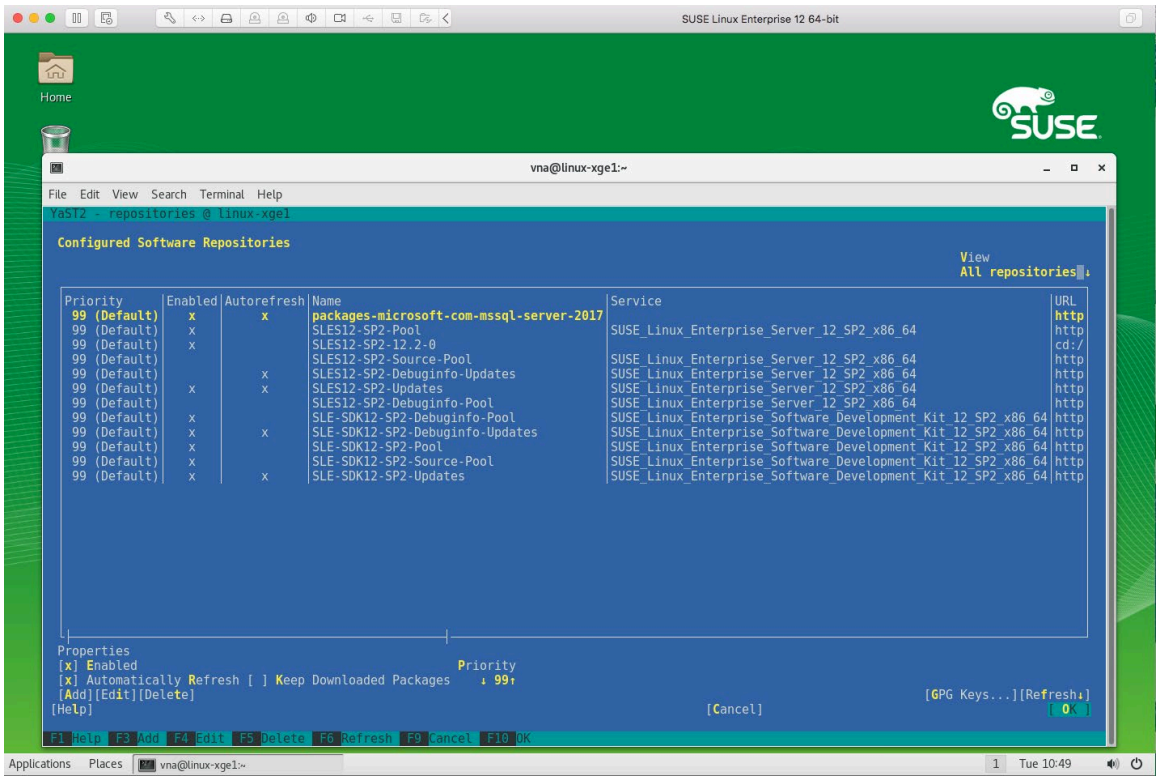
If you want to print this EULA, you can download it from https://updates.suse.com/SUSE/Products/SLE-SDK/12-SP2/x86_64/product.license/license.txt
[x] I Agree to the License Terms.
[Help] [Back] [Abort] [Next]
F1 Help F8 Back F9 Abort F10 Next
Applications Places vna@linux-xge1:~
Tue 10:45


SUSE Linux Enterprise 12 64-bit
Home
vna@linux-xge1:~
File Edit View Search Terminal Help
YaST2 - repositories @ linux-xge1
[Dependencies↓][View↓][Configuration↓][Extras↓]
Filter
Installation Summary
Packages with Status
[x] Delete
[x] Install
[x] Update
[x] Taboo
[x] Protected
[ ] Keep
[ ] Do not install
Name Summary Avail. Vers. Inst
a+ sle-sdk-release SUSE Linux Enterprise Software Development Kit 12 12.2
a+ sle-sdk-release-POOL SUSE Linux Enterprise Software Development Kit 12 12.2
Package: sle-sdk-release
[Actions↓]
sle-sdk-release - SUSE Linux Enterprise Software Development Kit 12
Version: 12.2-1.124
Size: 2.3 KiB Media No.: 0
License: GPL-2.0+
Package Group: System/Fhs
Source Package: sle-sdk-release-12.2-1.124
[Help↓]
[Cancel][Accept]
F1 Help F9 Cancel F10 Accept
Applications Places vna@linux-xge1:~
1 Tue 10:48

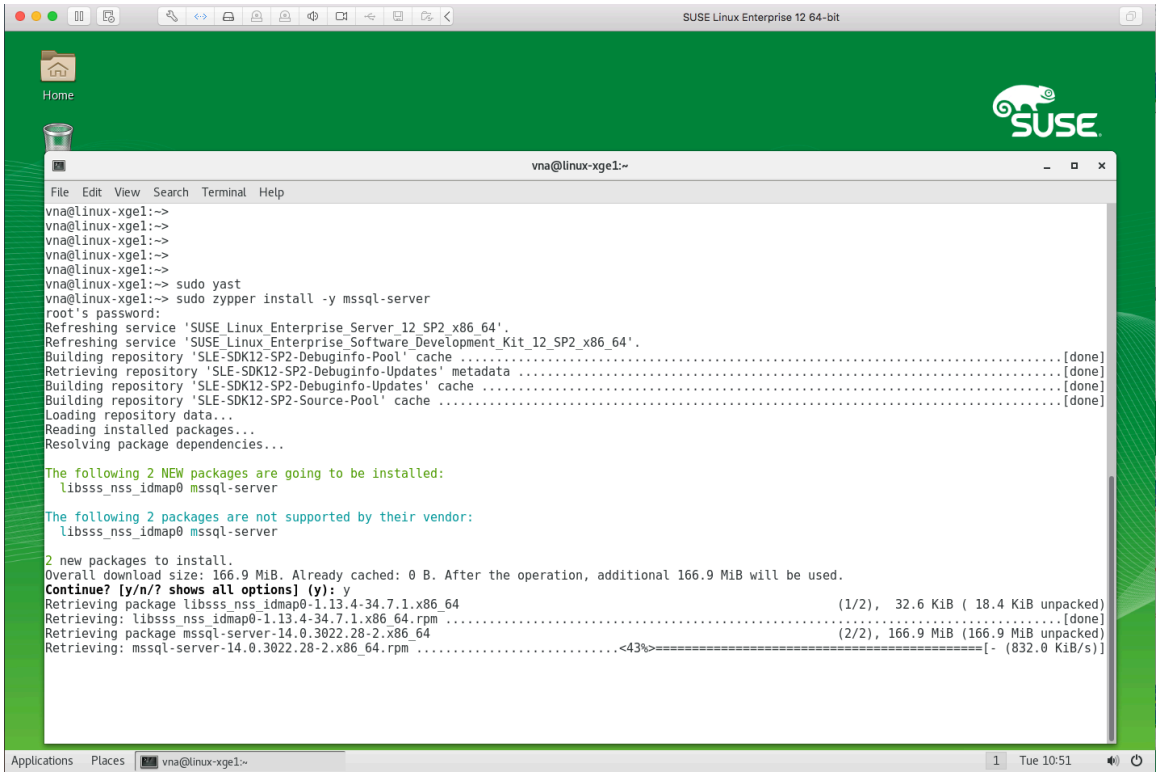

SUSE Linux Enterprise 12 64-bit
Home
vna@linux-xge1:~
File Edit View Search Terminal Help
YaST2 - repositories @ linux-xge1
[Dependencies↓][View↓][Configuration↓][Extras↓]
Automatic Changes
In addition to your manual selections, the following
packages have been changed to resolve dependencies:
Name Summary Avail. Vers. Inst. Vers. Size
a+ sle-sdk-release SUSE Linux Enterprise Software Development Kit 12 12.2 2.3 KiB
a+ sle-sdk-release-POOL SUSE Linux Enterprise Software Development Kit 12 12.2 67 B
[OK]
[Cancel]
[Help↓]
F9 Cancel F10 OK
Applications Places vna@linux-xge1:~
1 Tue 10:48


SUSE Linux Enterprise 12 64-bit
Home
vna@linux-xge1:~
File Edit View Search Terminal Help
YaST2 - repositories @ linux-xge1
Installation Report
Installation Successfully Finished
Packages
* Installed Packages: 2
sle-sdk-release, sle-sdk-release-POOL
Statistics
* Elapsed Time: 00:04
* Total Installed Size: 2.4 KiB
* Total Downloaded Size: 9.1 KiB
Details
* Installation log
After Installing Packages
Show This Report
[Help] [Continue] [Abort] [Finish]
F1 Help F8 Continue F9 Abort F10 Finish
Applications Places vna@linux-xge1:~
1 Tue 10:49


SUSE Linux Enterprise 12 64-bit
Home
vna@linux-xge1:~
File Edit View Search Terminal Help
YaST2 - repositories @ linux-xge1
Configured Software Repositories
View
All repositories
Priority Enabled Autorefresh Name Service URL
99 (Default) x x packages-microsoft-com-mssql-server-2017 http
99 (Default) x SLES12-SP2-Pool SUSE_Linux_Enterprise_Server_12_SP2_x86_64 http
99 (Default) x SLES12-SP2-12.2-0 cd:/
99 (Default) SLES12-SP2-Source-Pool SUSE_Linux_Enterprise_Server_12_SP2_x86_64 http
99 (Default) x SLES12-SP2-Debuginfo-Updates SUSE_Linux_Enterprise_Server_12_SP2_x86_64 http
99 (Default) x x SLES12-SP2-Updates SUSE_Linux_Enterprise_Server_12_SP2_x86_64 http
99 (Default) SLES12-SP2-Debuginfo-Pool SUSE_Linux_Enterprise_Server_12_SP2_x86_64 http
99 (Default) x SLE-SDK12-SP2-Debuginfo-Pool SUSE_Linux_Enterprise_Software_Development_Kit_12_SP2_x86_64 http
99 (Default) x x SLE-SDK12-SP2-Debuginfo-Updates SUSE_Linux_Enterprise_Software_Development_Kit_12_SP2_x86_64 http
99 (Default) x SLE-SDK12-SP2-Pool SUSE_Linux_Enterprise_Software_Development_Kit_12_SP2_x86_64 http
99 (Default) x SLE-SDK12-SP2-Source-Pool SUSE_Linux_Enterprise_Software_Development_Kit_12_SP2_x86_64 http
99 (Default) x x SLE-SDK12-SP2-Updates SUSE_Linux_Enterprise_Software_Development_Kit_12_SP2_x86_64 http
Properties
[x] Enabled Priority
[x] Automatically Refresh [ ] Keep Downloaded Packages 99
[Add][Edit][Delete]
[GPG Keys...][Refresh]
[Help] [Cancel] [OK]
F1 Help F3 Add F4 Edit F5 Delete F6 Refresh F9 Cancel F10 OK
Applications Places vna@linux-xge1:~
1 Tue 10:49

Now retry the install of mssql-server:

sudo zypper install -y mssql-server

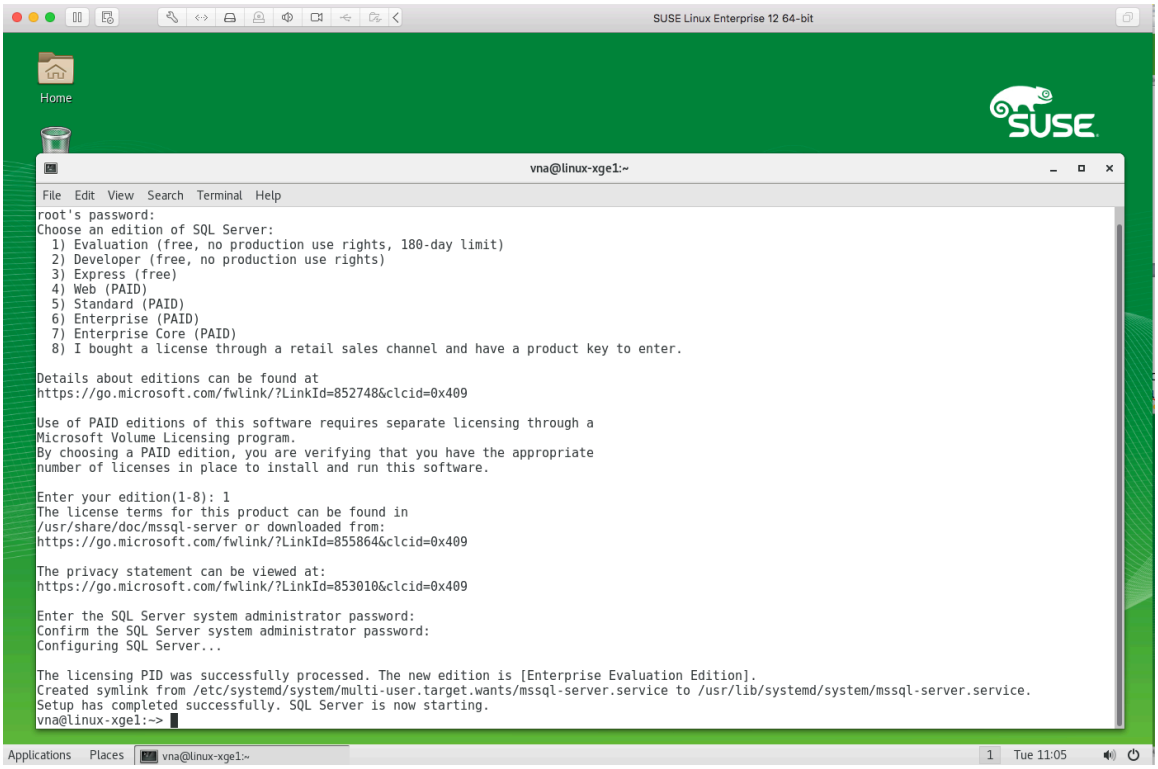


touch: cannot touch '/var/lib/rpm-state/mssql-sqlagent-disable': No such file or directory

MS123456!!

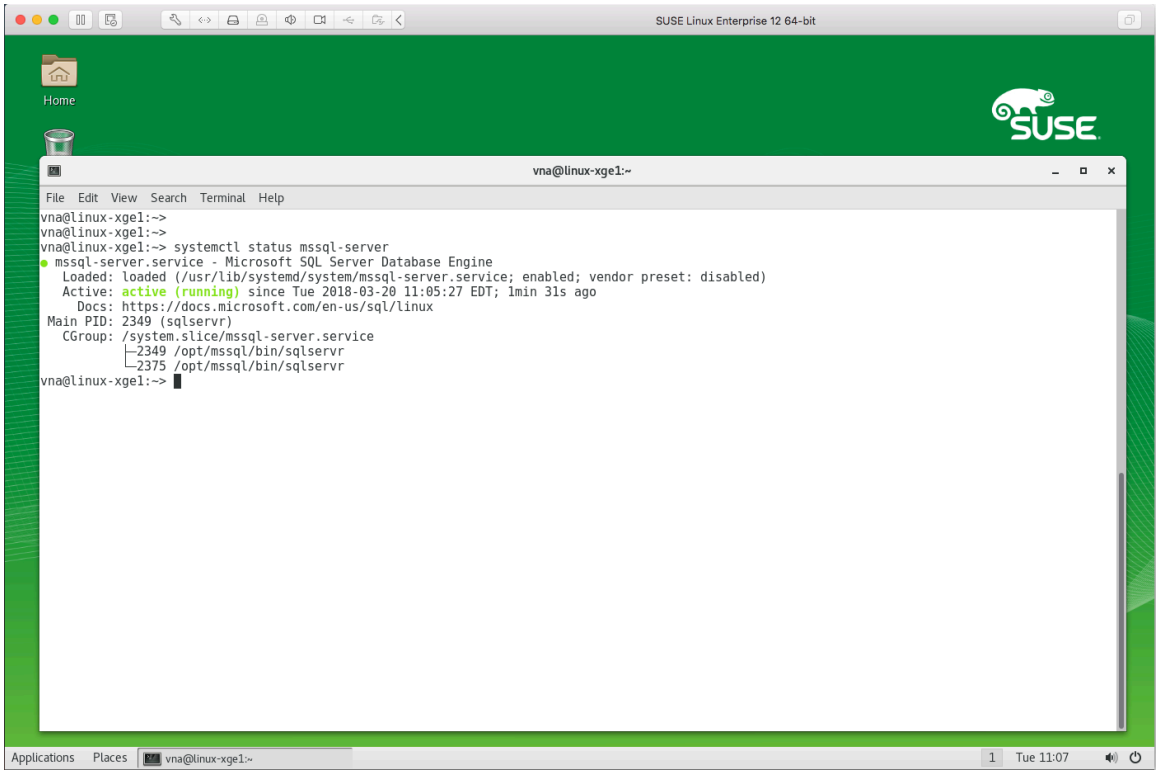
SQL SERVER CONFIGURATION

```
sudo /opt/mssql/bin/mssql-conf setup
```



CHECK THE STATUS:

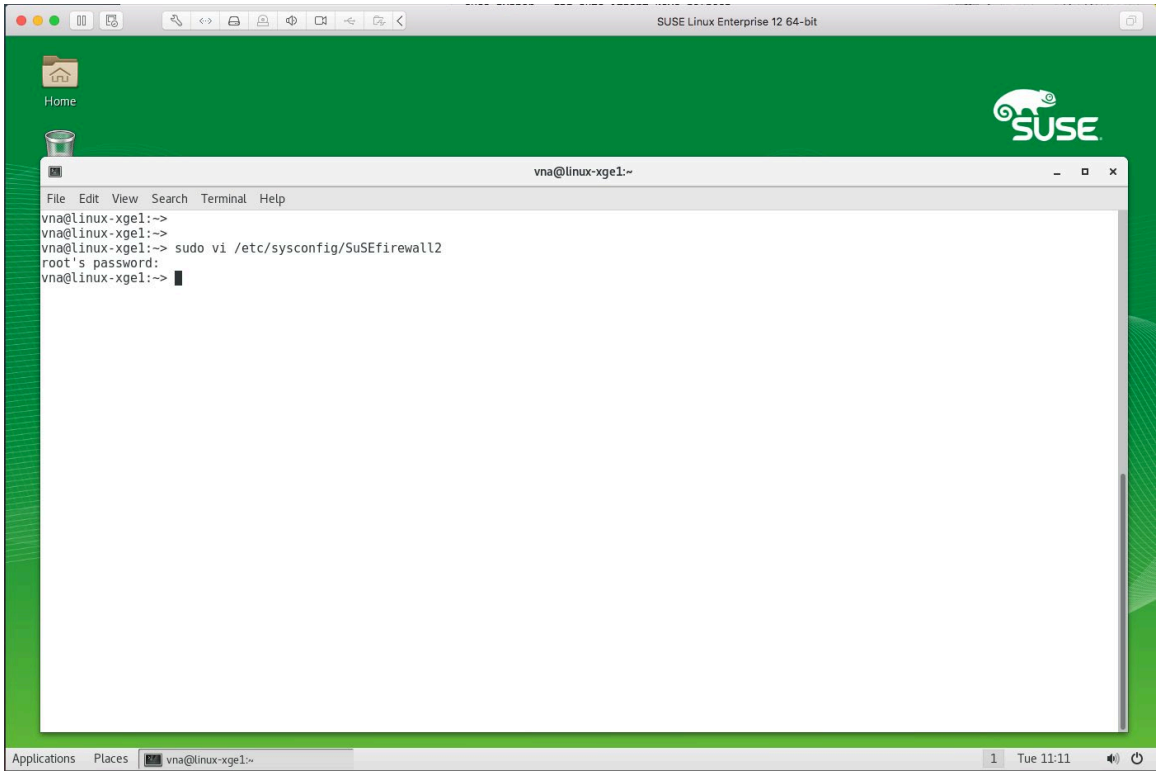
```
systemctl status mssql-server
```

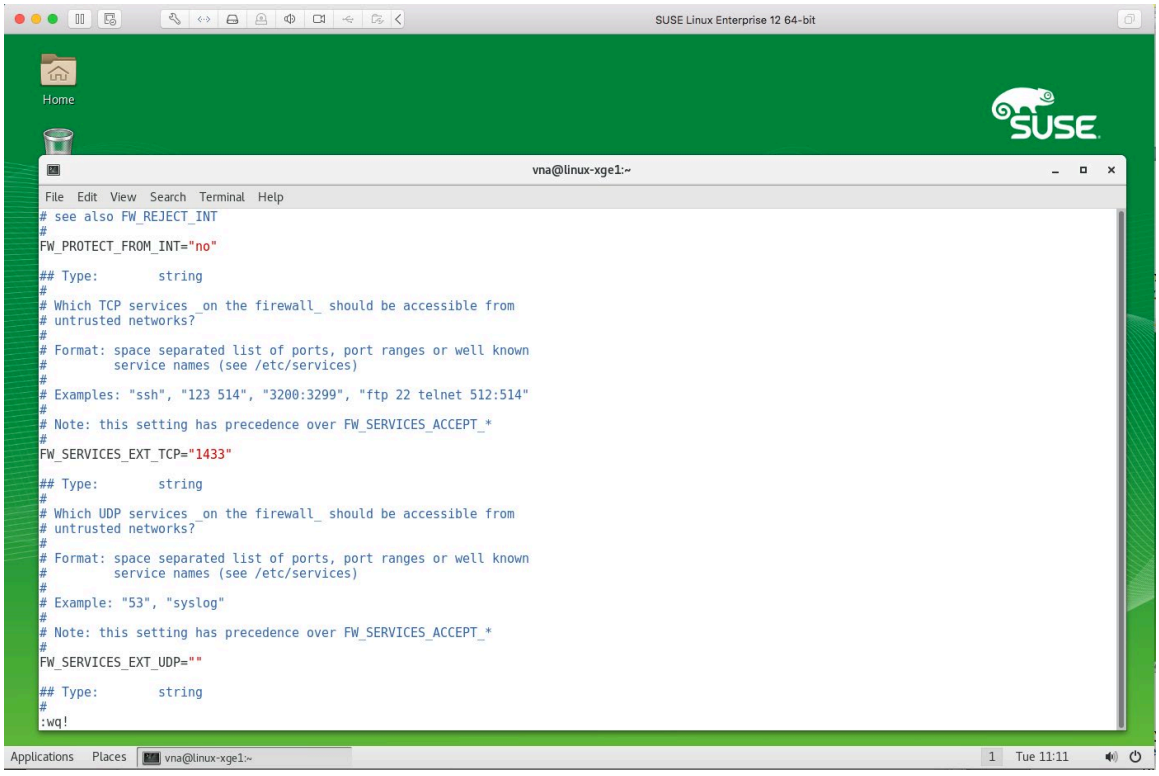


If you are running the suse firewall and require remote connections to your SQL Server database you will need to edit the **/etc/sysconfig/SuSEfirewall2** configuration file. Modify the **FW_SERVICES_EXT_TCP** entry to include the SQL Server port number.

Copy

```
FW_SERVICES_EXT_TCP="1433"
```

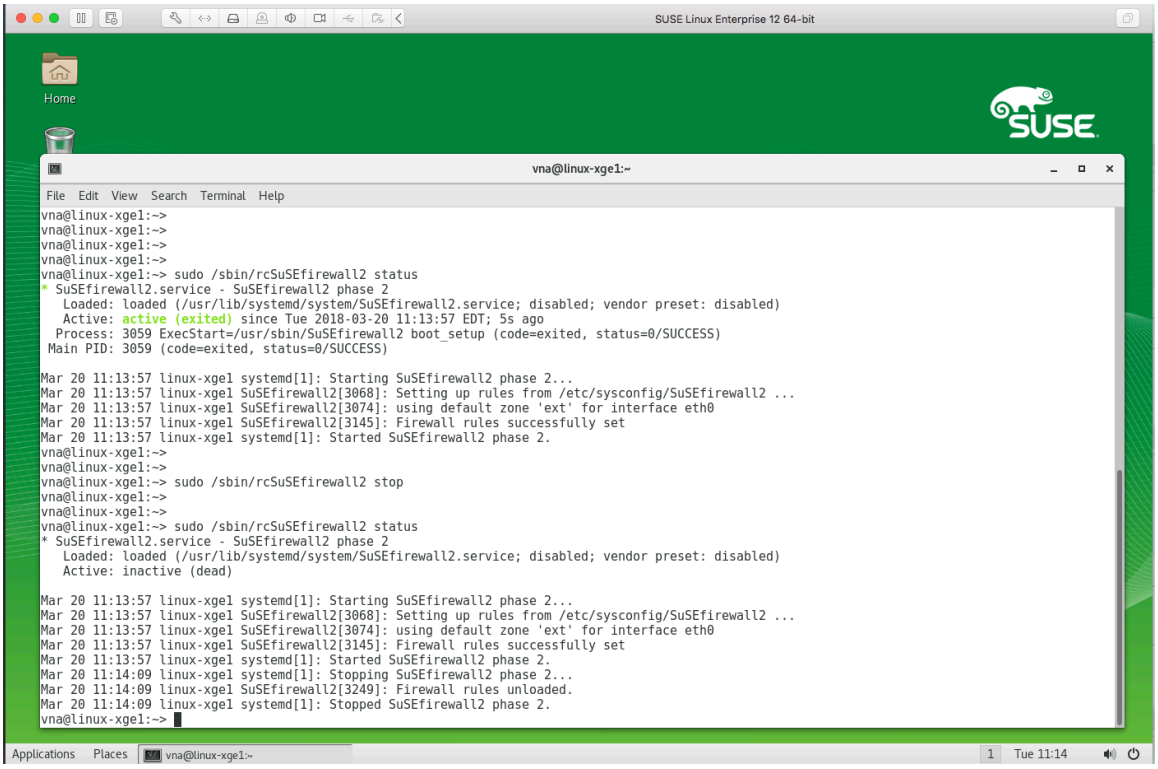

SUSE Linux Enterprise 12 64-bit
Home
vna@linux-xge1:~
File Edit View Search Terminal Help
vna@linux-xge1:~>
vna@linux-xge1:~>
vna@linux-xge1:~> sudo vi /etc/sysconfig/SuSEfirewall2
root's password:
vna@linux-xge1:~>
Applications Places vna@linux-xge1:~
1 Tue 11:11


SUSE Linux Enterprise 12 64-bit
Home
vna@linux-xge1:~
File Edit View Search Terminal Help
see also FW_REJECT_INT
#
FW_PROTECT_FROM_INT="no"
Type: string
#
Which TCP services _on the firewall_ should be accessible from
untrusted networks?
#
Format: space separated list of ports, port ranges or well known
service names (see /etc/services)
#
Examples: "ssh", "123 514", "3200:3299", "ftp 22 telnet 512:514"
#
Note: this setting has precedence over FW_SERVICES_ACCEPT_*
#
FW_SERVICES_EXT_TCP="1433"
Type: string
#
Which UDP services _on the firewall_ should be accessible from
untrusted networks?
#
Format: space separated list of ports, port ranges or well known
service names (see /etc/services)
#
Example: "53", "syslog"
#
Note: this setting has precedence over FW_SERVICES_ACCEPT_*
#
FW_SERVICES_EXT_UDP=""
Type: string
#
:wq!
Applications Places vna@linux-xge1:~
1 Tue 11:11

TO CHECK THE STATUS AND DISABLE STOP THE SUSE FIREWALL:

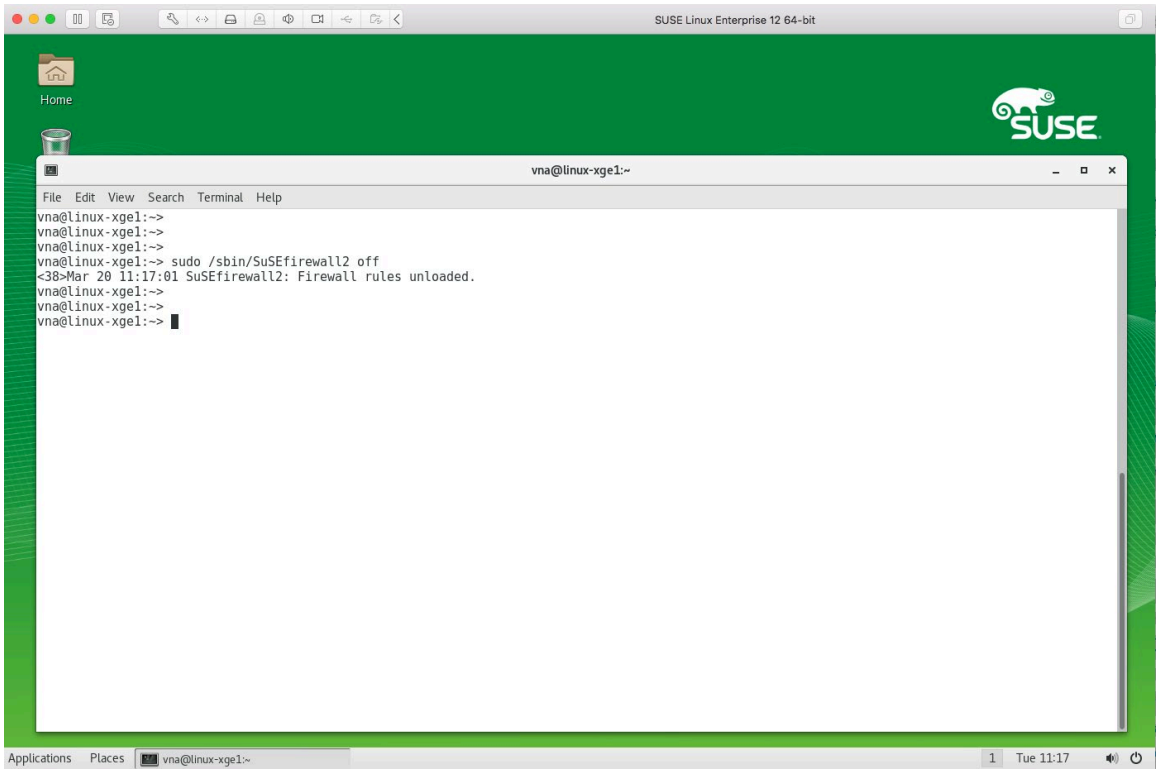
sudo /sbin/rcSuSEfirewall2 status

sudo /sbin/rcSuSEfirewall2 stop



TO DISABLE THE FIREWALL:

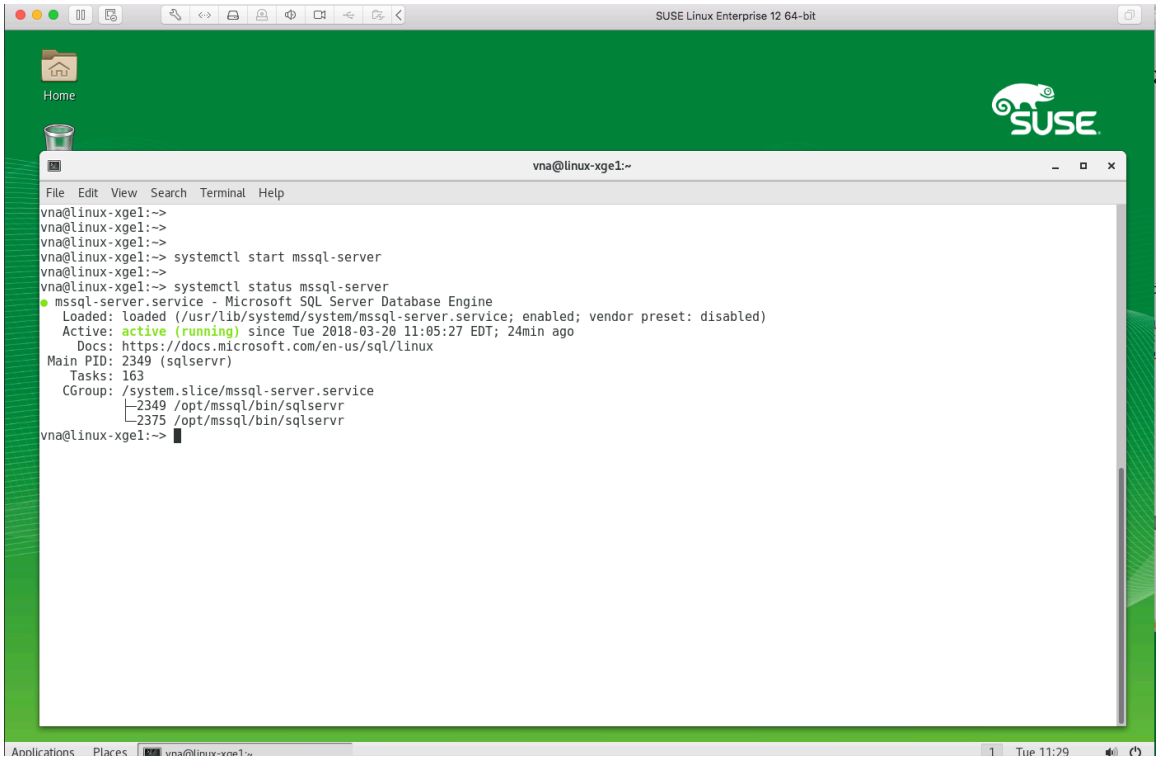
sudo `/sbin/SuSEfirewall2 off`



TO START AND CHECK THE STATUS OF THE MSSQL-SERVER SERVICE:

systemctl start mssql-server

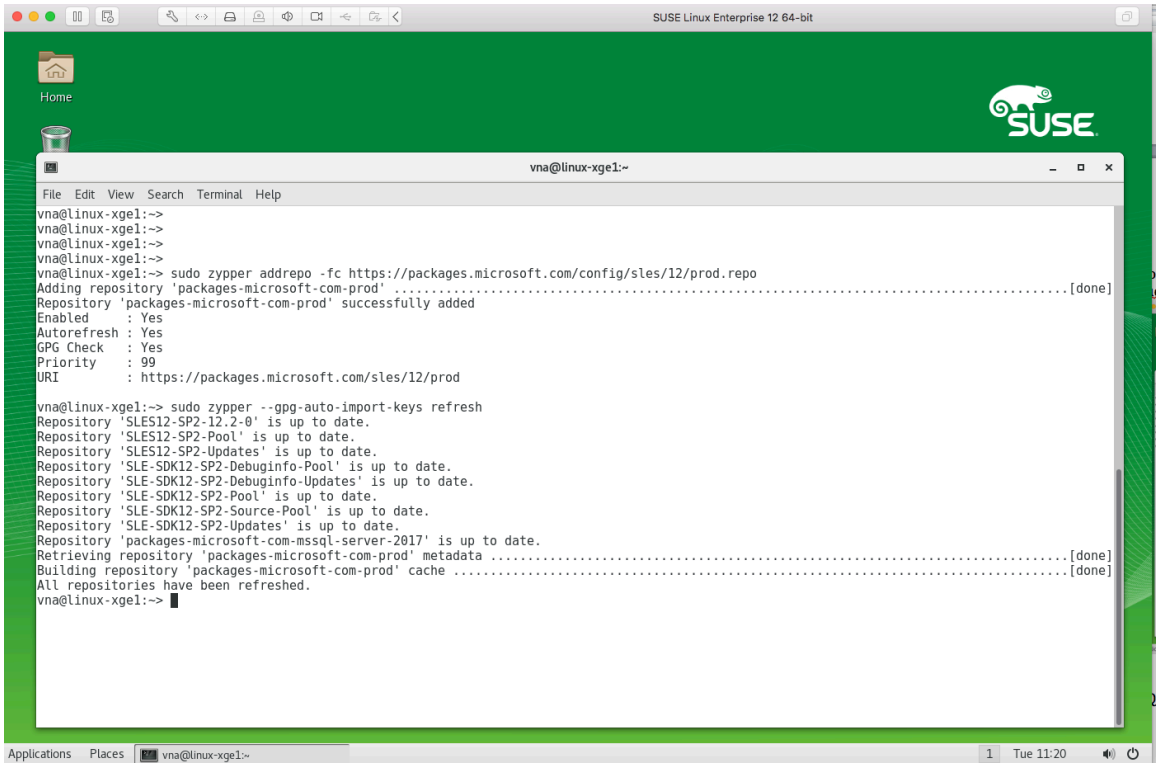
systemctl status mssql-server


SUSE Linux Enterprise 12 64-bit
Home
vna@linux-xge1:~
File Edit View Search Terminal Help
vna@linux-xge1:~>
vna@linux-xge1:~>
vna@linux-xge1:~>
vna@linux-xge1:~> systemctl start mssql-server
vna@linux-xge1:~>
vna@linux-xge1:~> systemctl status mssql-server
● mssql-server.service - Microsoft SQL Server Database Engine
Loaded: loaded (/usr/lib/systemd/system/mssql-server.service; enabled; vendor preset: disabled)
Active: active (running) since Tue 2018-03-20 11:05:27 EDT; 24min ago
Docs: https://docs.microsoft.com/en-us/sql/linux
Main PID: 2349 (sqlservr)
Tasks: 163
CGroup: /system.slice/mssql-server.service
├─2349 /opt/mssql/bin/sqlservr
└─2375 /opt/mssql/bin/sqlservr
vna@linux-xge1:~>
Applications Places
Tue 11:29

INSTALL THE SQL SERVER COMMAND-LINE TOOLS

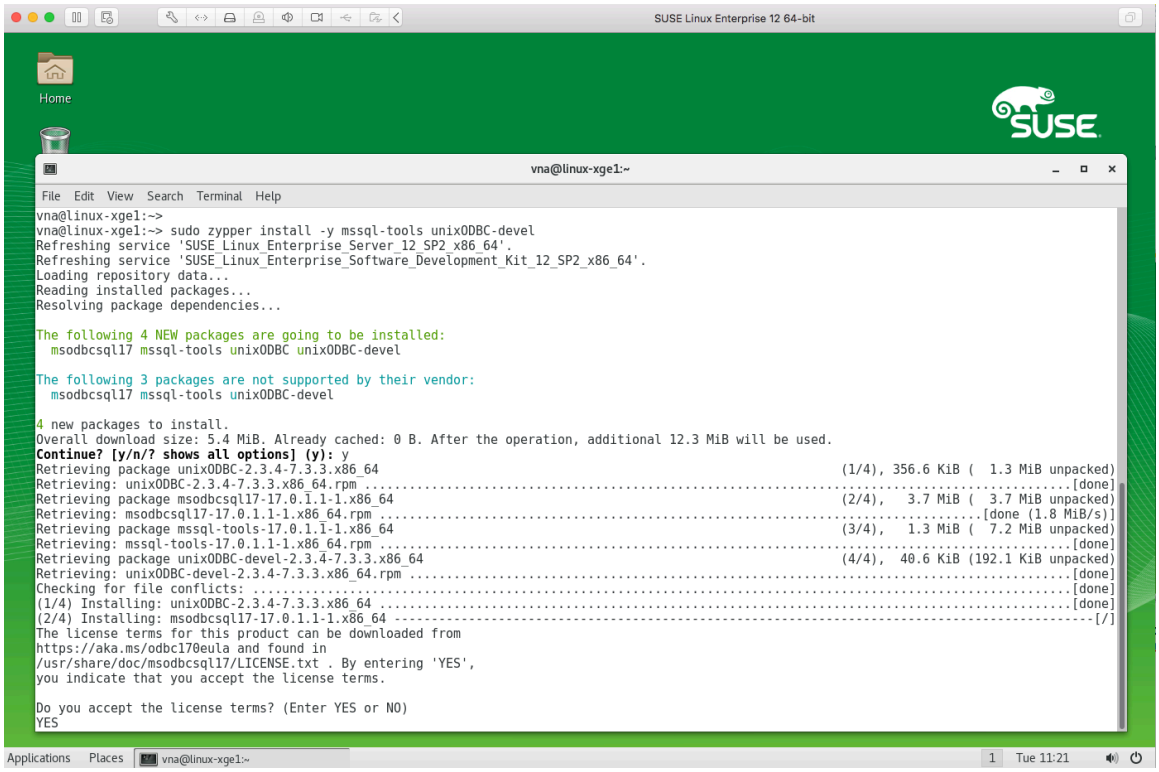
Add the SQL Server repository if not yet added:

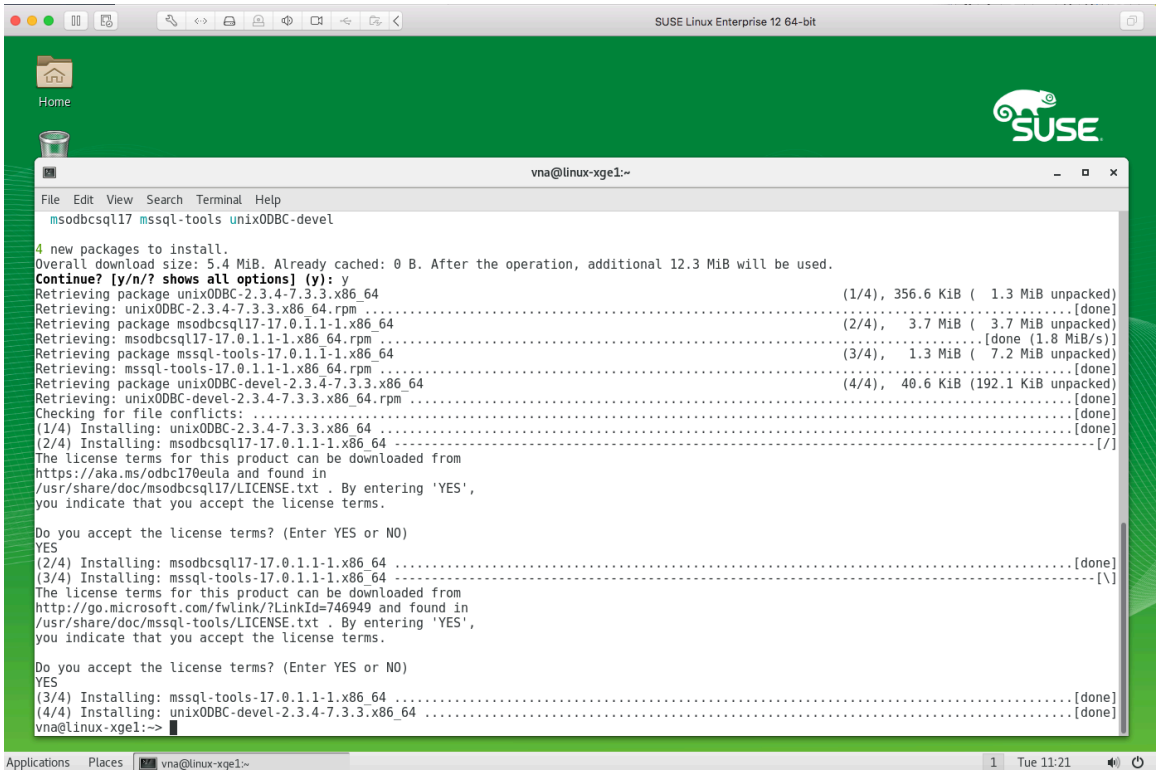
```
sudo zypper addrepo -fc https://packages.microsoft.com/config/sles/12/prod.repo  sudo zypper --gpg-auto-import-keys refresh
```



Now install the tools:

```
sudo zypper install -y mssql-tools unixODBC-devel
```



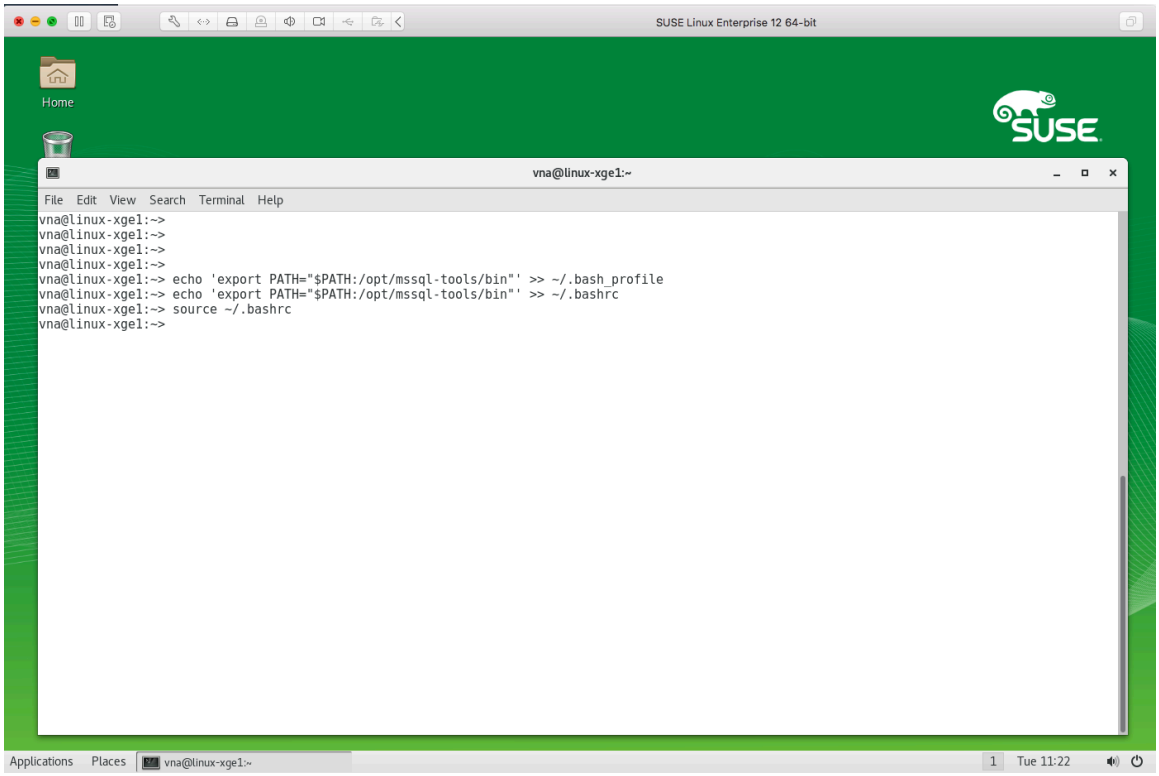


Update your path to include the mssql-tools/bin directory:

```
echo 'export PATH="$PATH:/opt/mssql-tools/bin"' >> ~/.bash_profile

echo 'export PATH="$PATH:/opt/mssql-tools/bin"' >> ~/.bashrc

source ~/.bashrc
```



Test your connection using the password you set in the mssql-config setup step:

sqlcmd -S localhost -U SA -P ‘MS12345!!’

TROUBLEHOOTING:

CHECK LOGS UNDER:

/var/opt/mssql/log/