

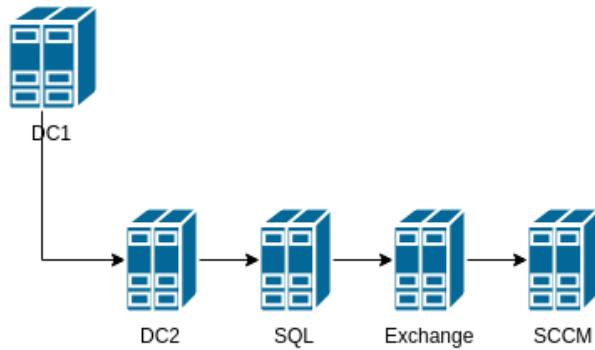
Windows Server: SQL Server

Jens Du Four

2018 - 2019

1 Introductie

U bent IT-Consultant en krijgt de vraag om een voorstel te maken en te demonstreren van een Windowsomgeving. Deze omgeving moet bestaan uit het volgende . De cliënt wenst een redundante oplossing voor zijn servers. Dit vooral op de domeincontrollers. De cliënt wenst ook dat er een mailomgeving geïnstalleerd wordt en een omgeving die toelaat om op een efficiënte manier Windows toestellen te installeren en te deployen.



2 Server Requirements

1. DC1
 - (a) RAM: 2048 MB
 - (b) HDD: 50 GB
 - (c) Netwerkadapters: NAT en Internal Network (jenduf.gent)
 - i. NAT
 - i. IP: 192.168.1.1
 - ii. SN: 255.255.255.0
 - (d) OS Version: Windows Server 2016

2. DC2

- (a) RAM: 2048 MB
- (b) HDD: 50 GB
- (c) Netwerkadapters: Internal Network (jenduf.gent)
 - i. IP: 192.168.1.2
 - ii. SN: 255.255.255.0
 - iii. DG: 192.168.1.1
- (d) OS Version: Windows Server 2016

3. SQL Server

- (a) RAM: 2048 MB
- (b) HDD: 50 GB
- (c) Netwerkadapters: Internal Network (jenduf.gent)
 - i. IP: 192.168.1.3
 - ii. SN: 255.255.255.0
 - iii. DG: 192.168.1.1
- (d) OS Version: Windows Server 2016
- (e) SQL Version: SQL Server 2013-2016

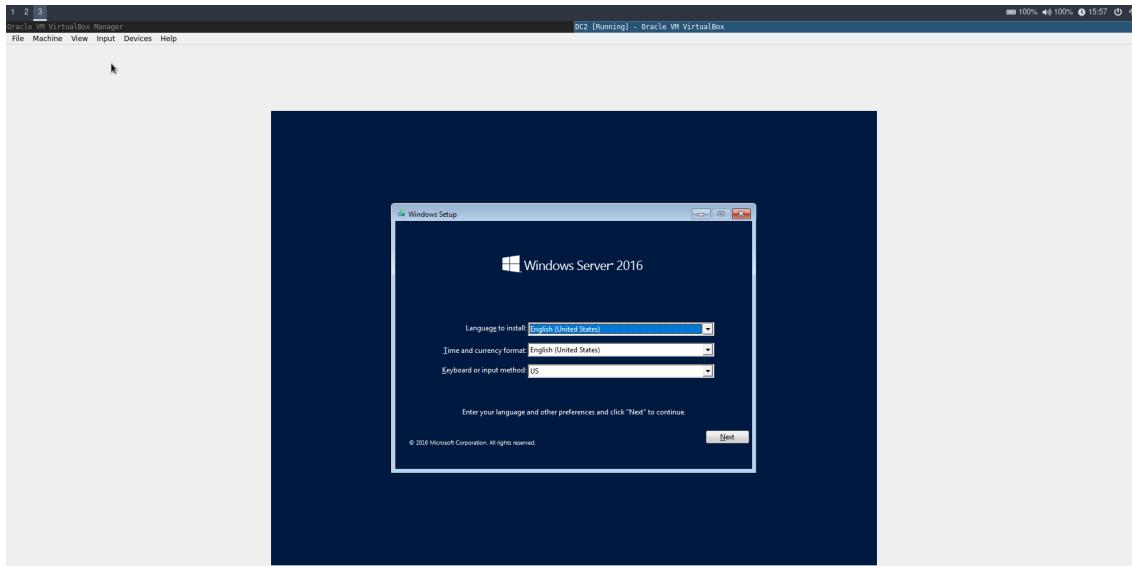
4. Exchange Server

- (a) RAM: 8096 MB
- (b) HDD: 100 GB
- (c) Netwerkadapters: Internal Network (jenduf.gent)
 - i. IP: 192.168.1.4
 - ii. SN: 255.255.255.0
 - iii. DG: 192.168.1.1
- (d) OS Version: Windows Server 2016
- (e) Exchange Version: Exchange Server 2013-2016

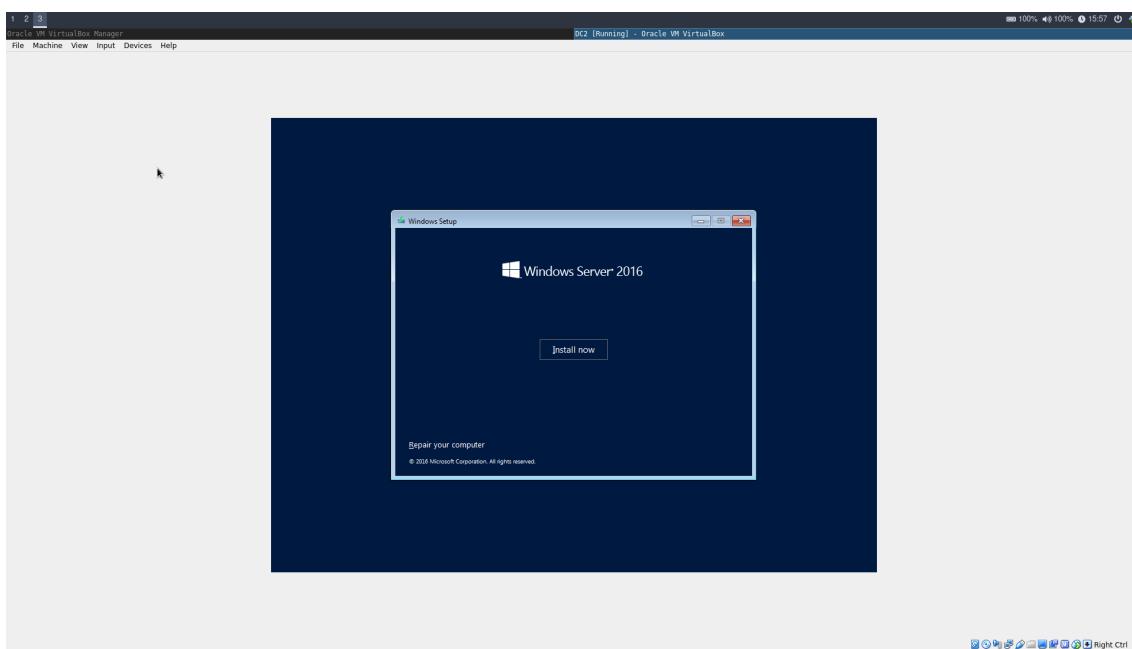
5. SCCM Server

- (a) RAM: 8089 MB
- (b) HDD: 100 GB
- (c) Netwerkadapters: Internal Network (jenduf.gent)
 - i. IP: 192.168.1.5
 - ii. SN: 255.255.255.0
 - iii. DG: 192.168.1.1
- (d) OS Version: Windows Server 2016
- (e) OS Version: Windows Deployment Server 2012

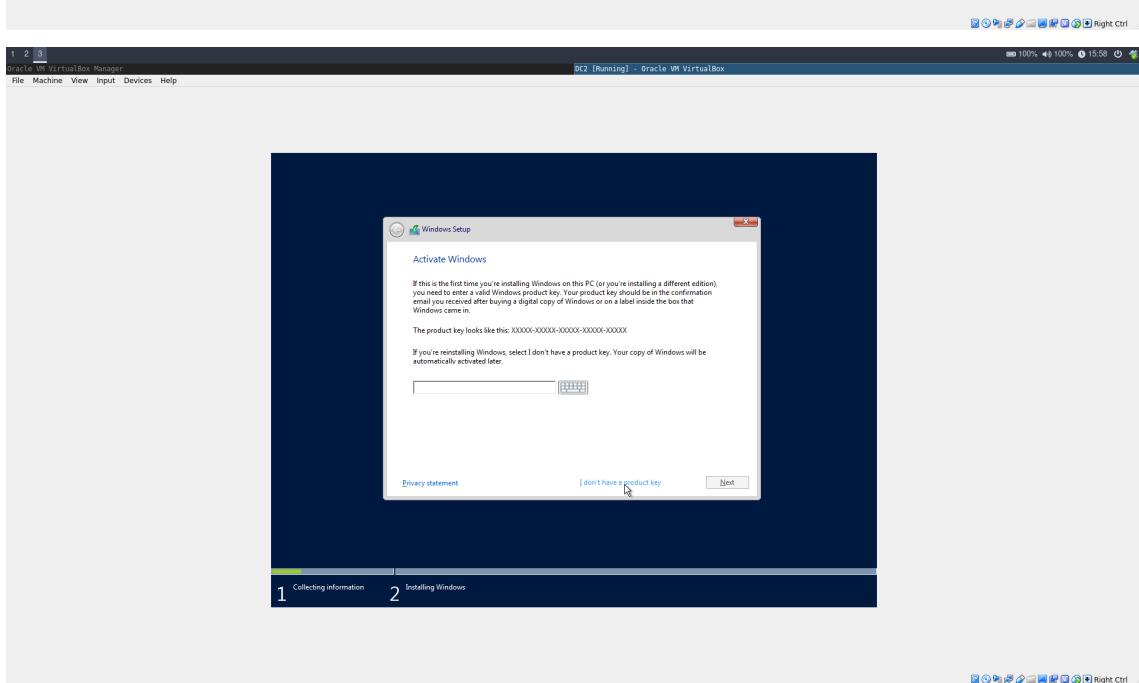
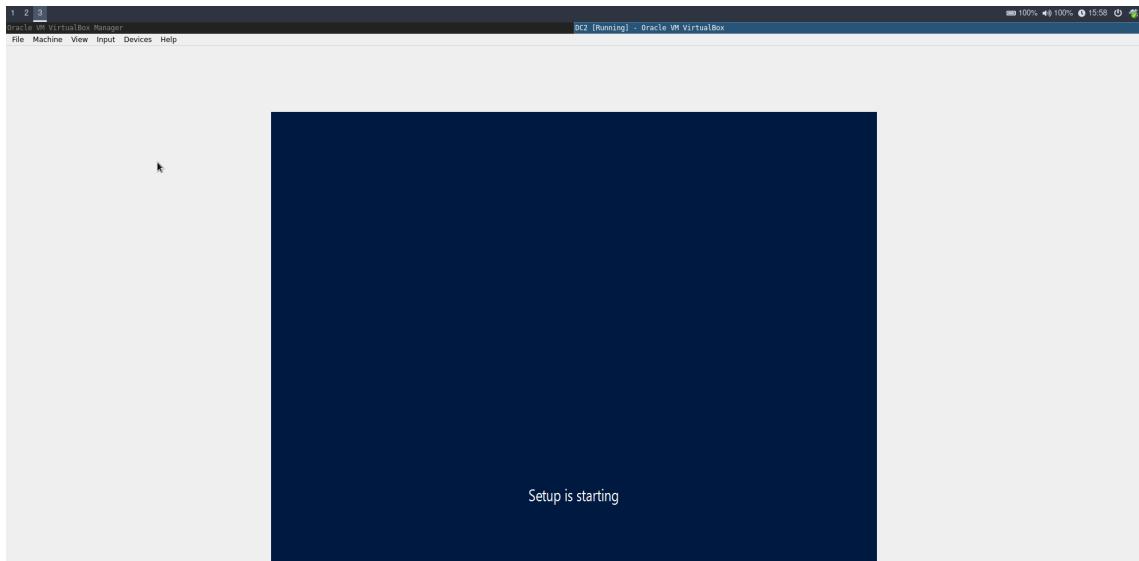
3 Windows Server Installatie



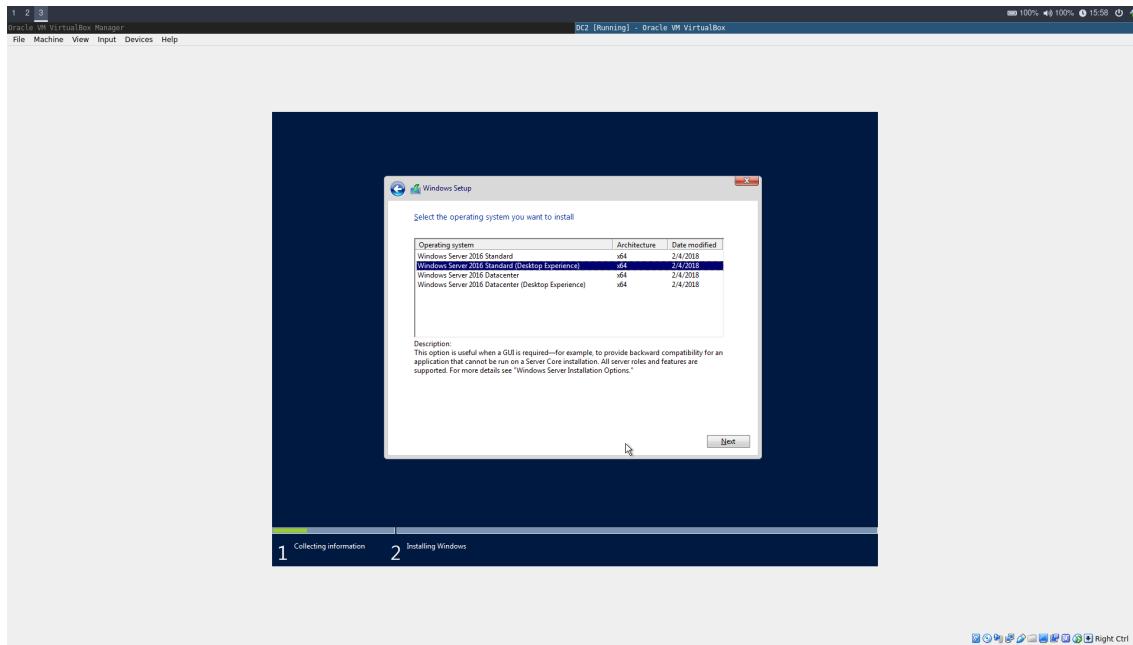
Selecteer de gewenste taalinstellingen.



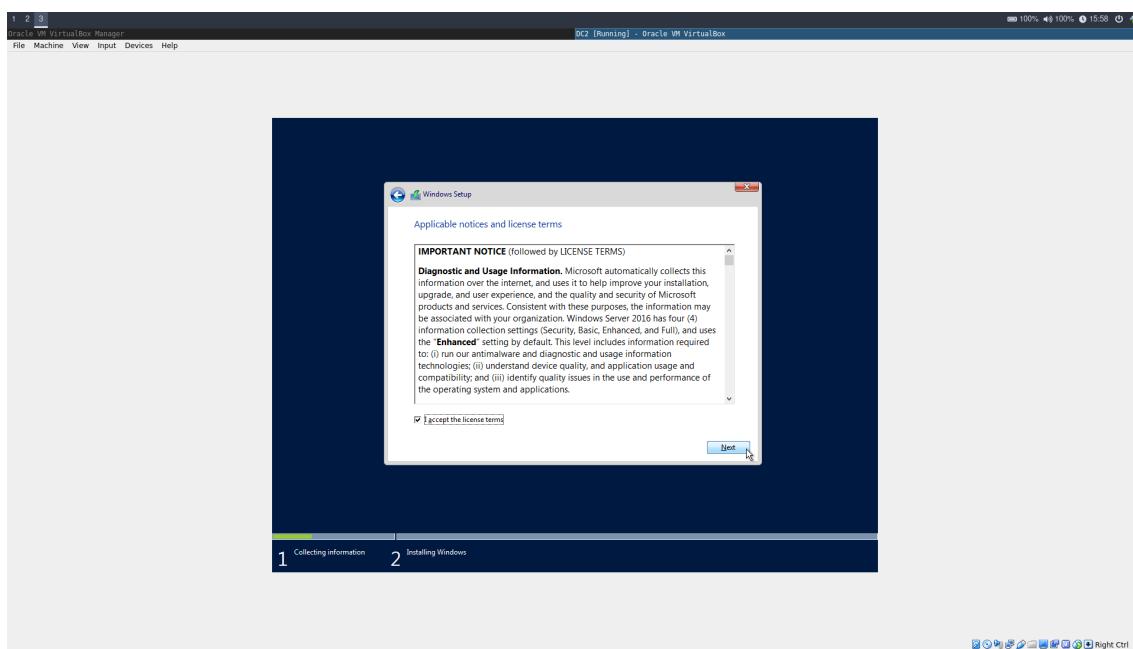
Start de installatie.



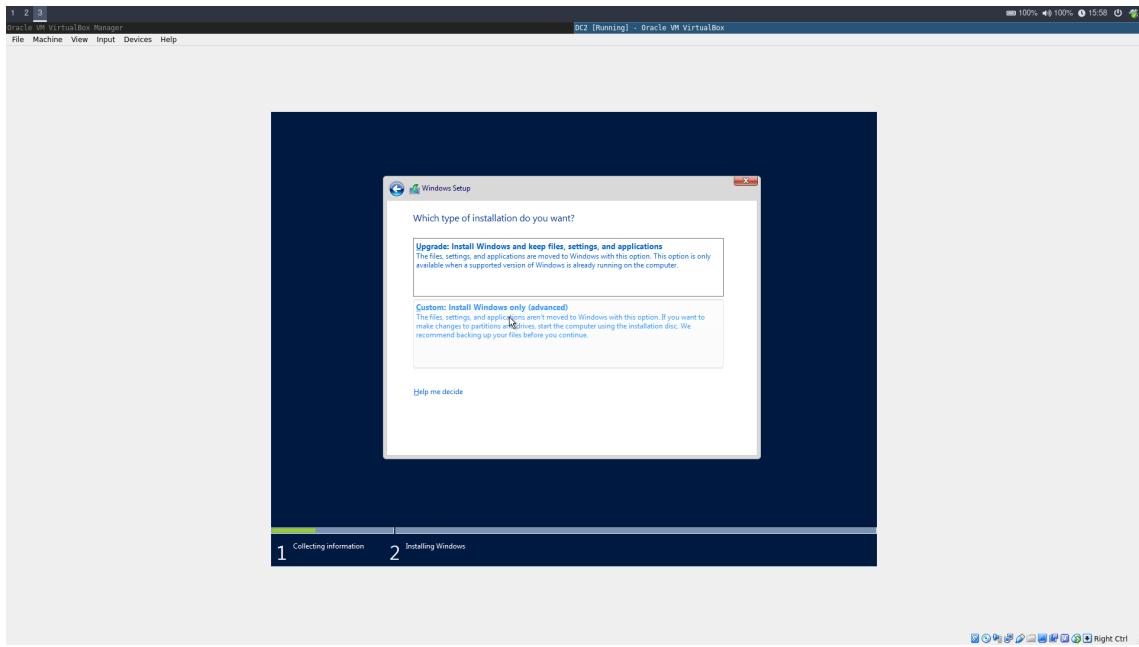
Selecteer "I don't have a product key".



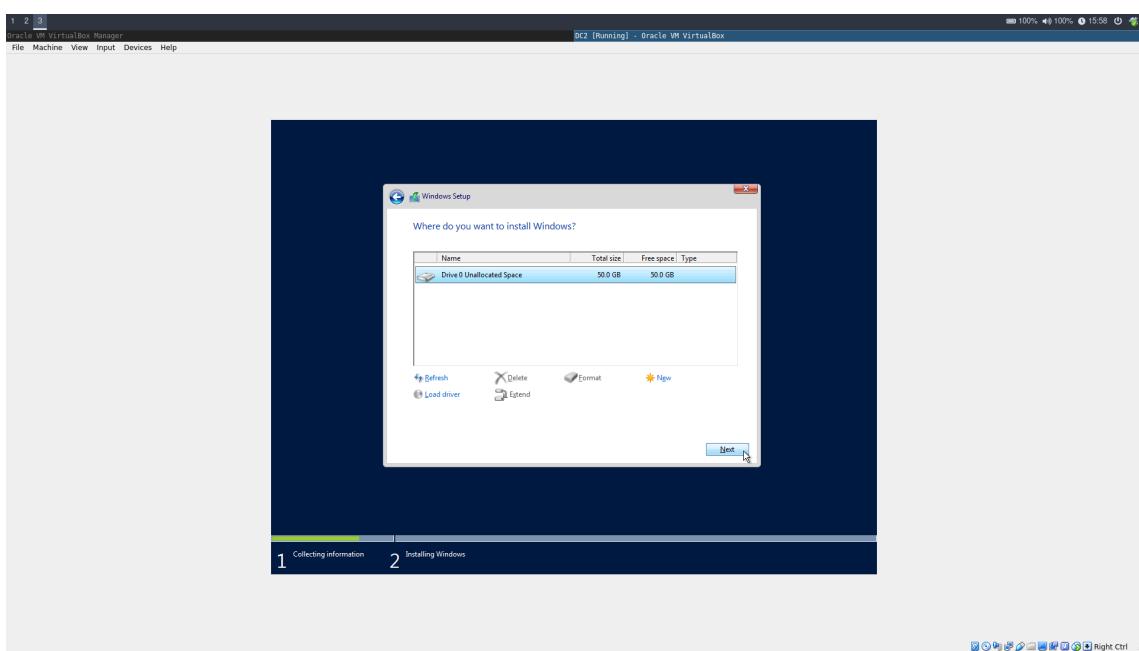
Selecteer "Windows Server 2016 Standard (Desktop Experience)".



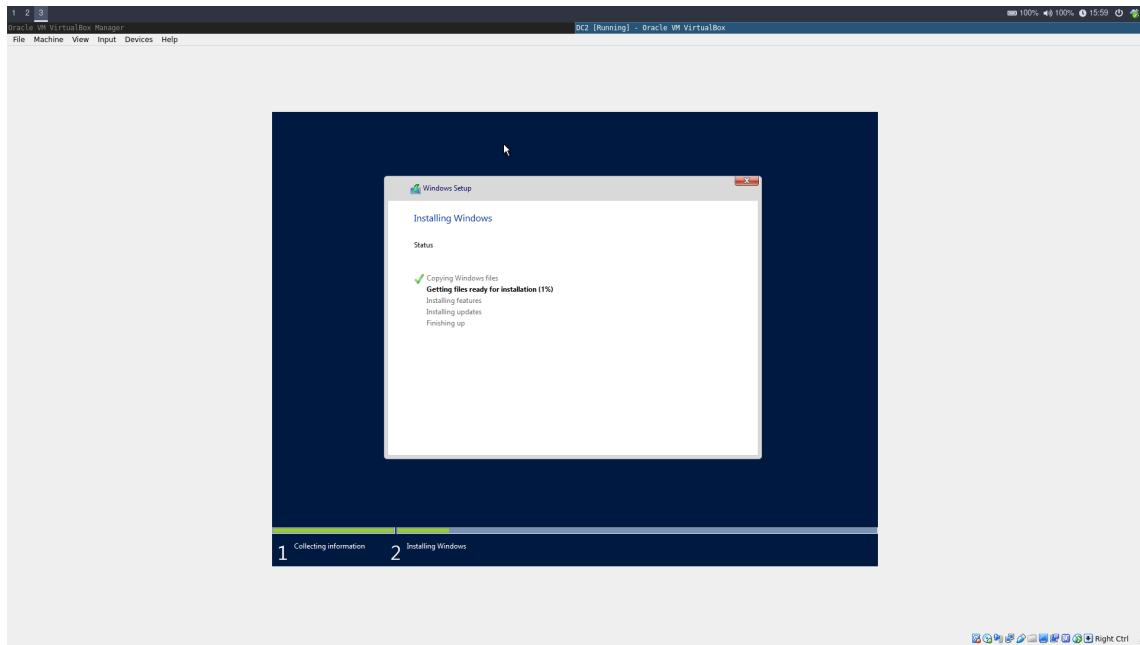
Ga akkoord met de gebruiksvoorwaarden.



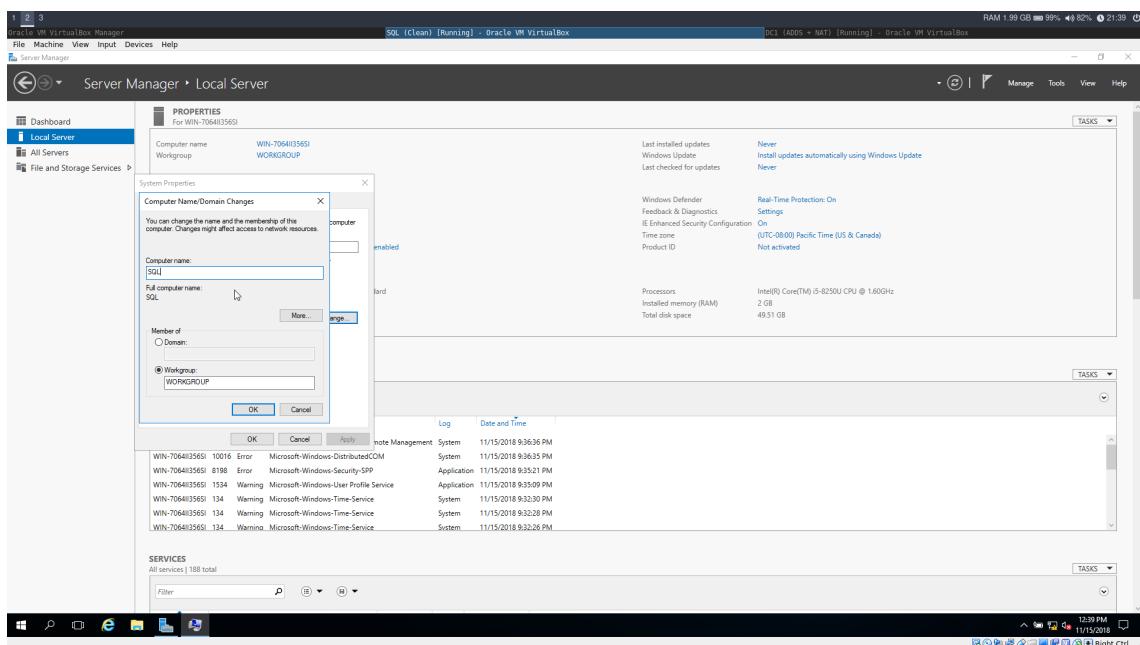
Selecteer "Costum: Install Windows only (Advanced)".



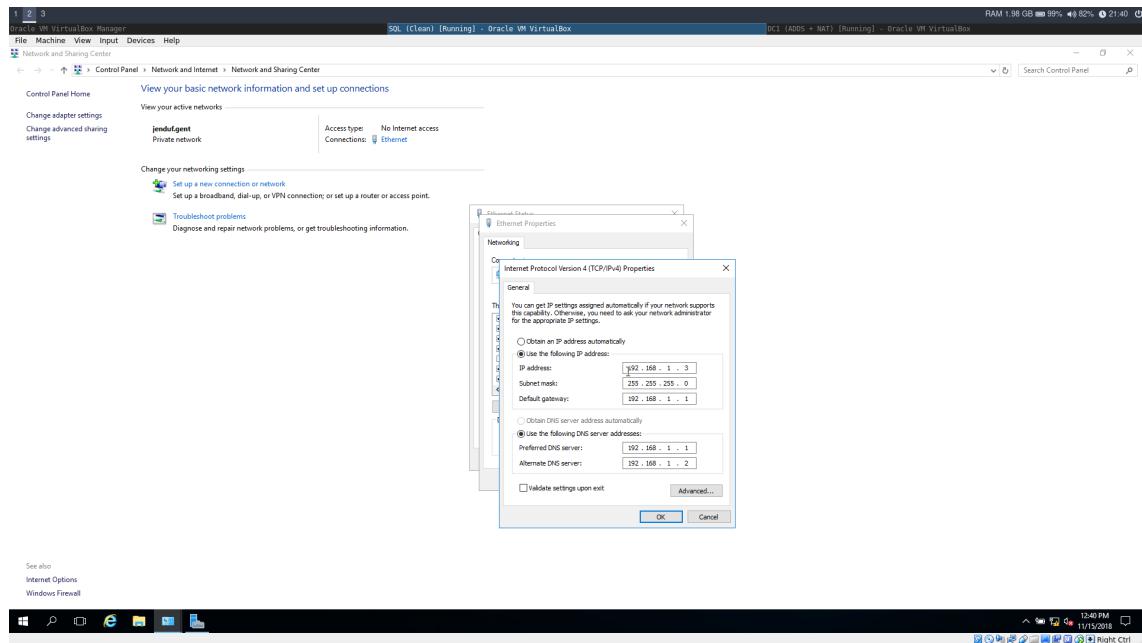
Ga verder.



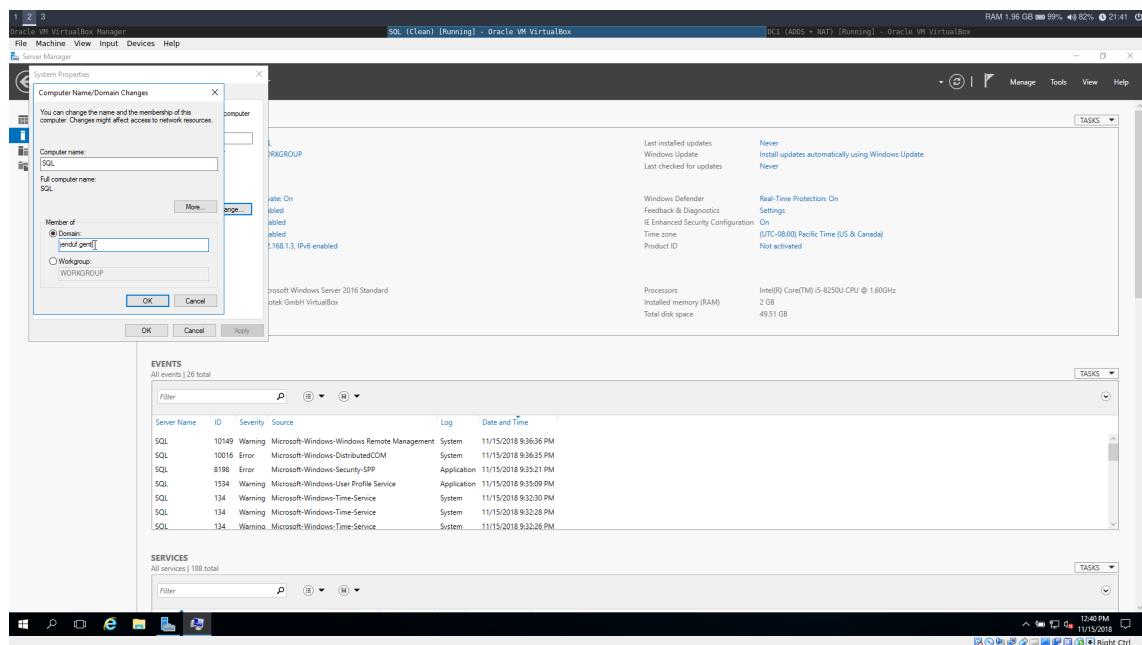
3.1 Server Hernoemen



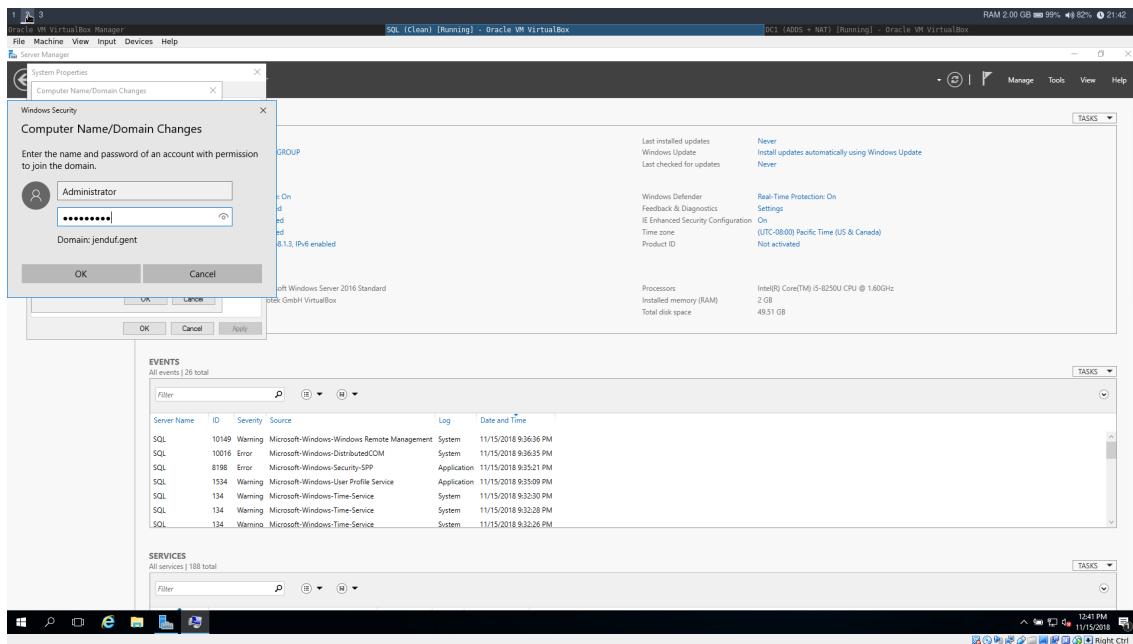
3.2 IP Instellingen



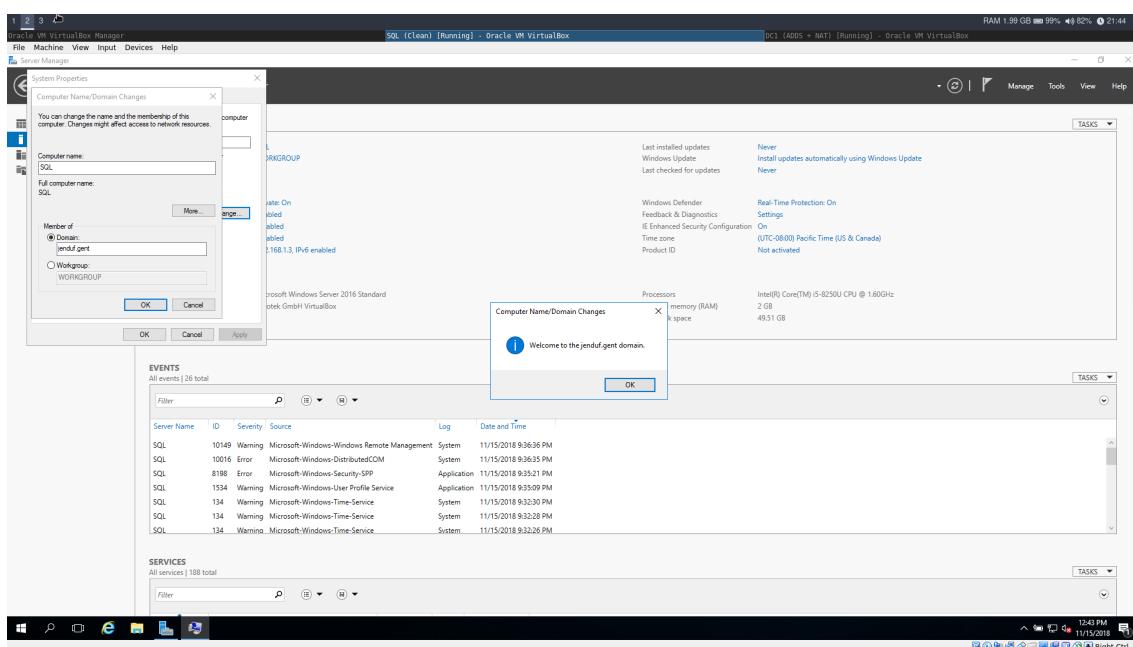
3.3 Toevoegen aan het domein



Geef als domein jenduf.gent in.

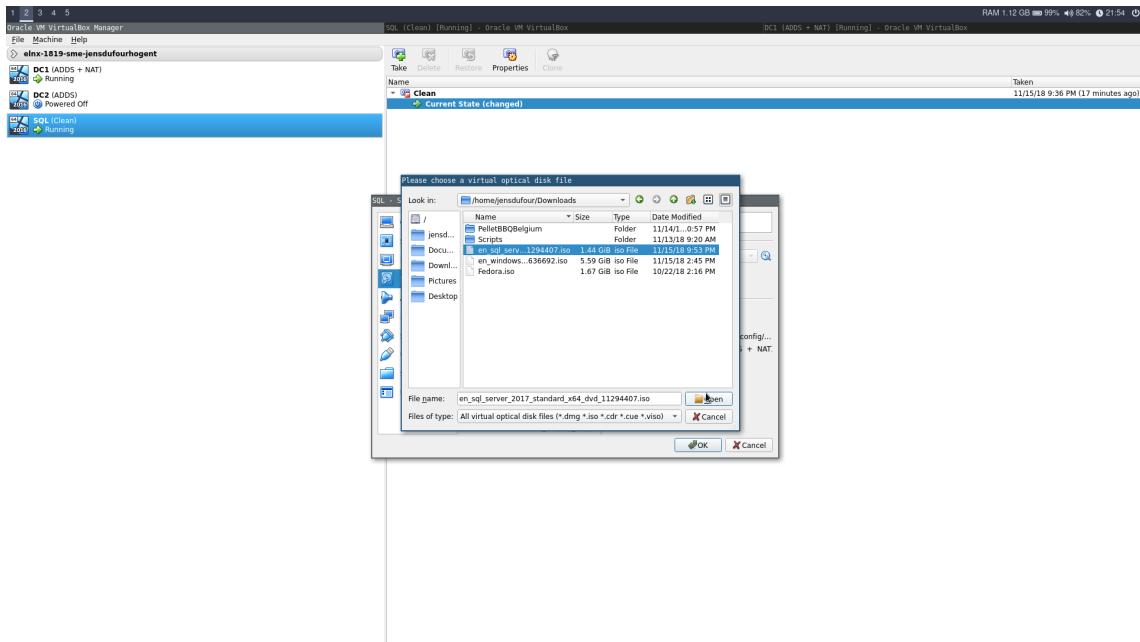


Geef gebruikersnaam "Administrator" in en paswoord "Admin2018".

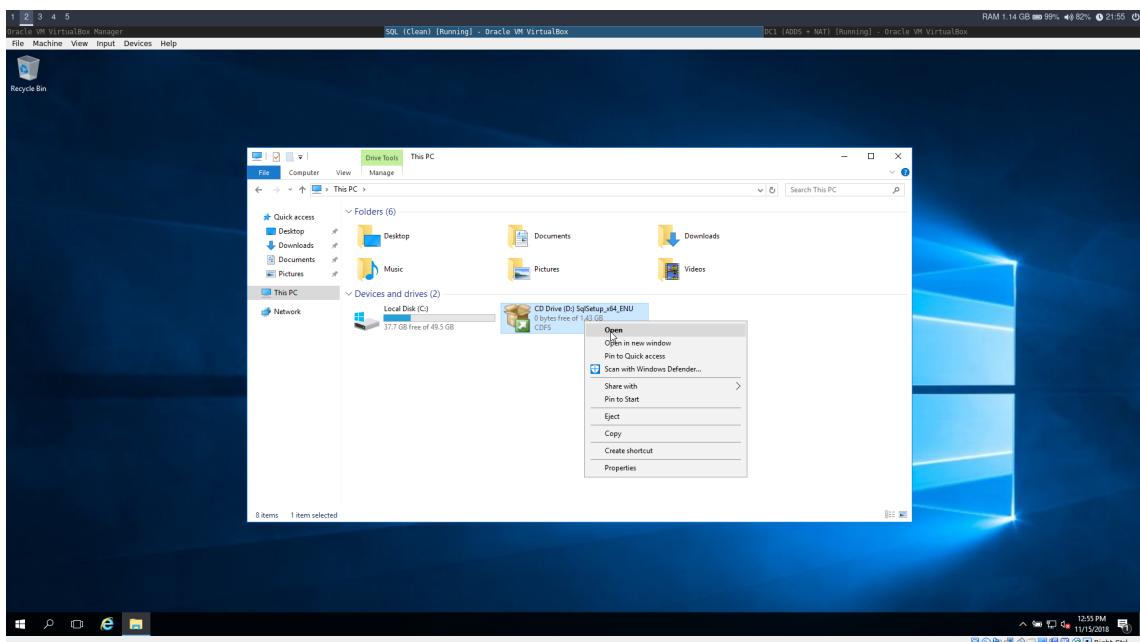


De connectie is geslaagd bij het weergeven van volgende boodschap.

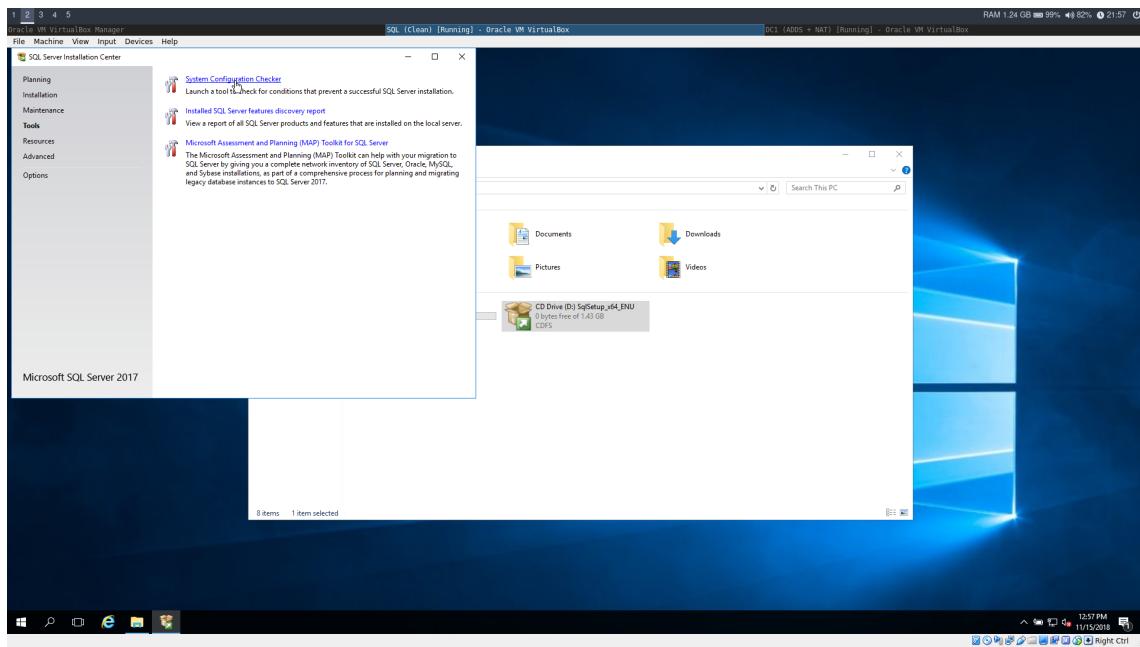
4 Installatie SQL Server



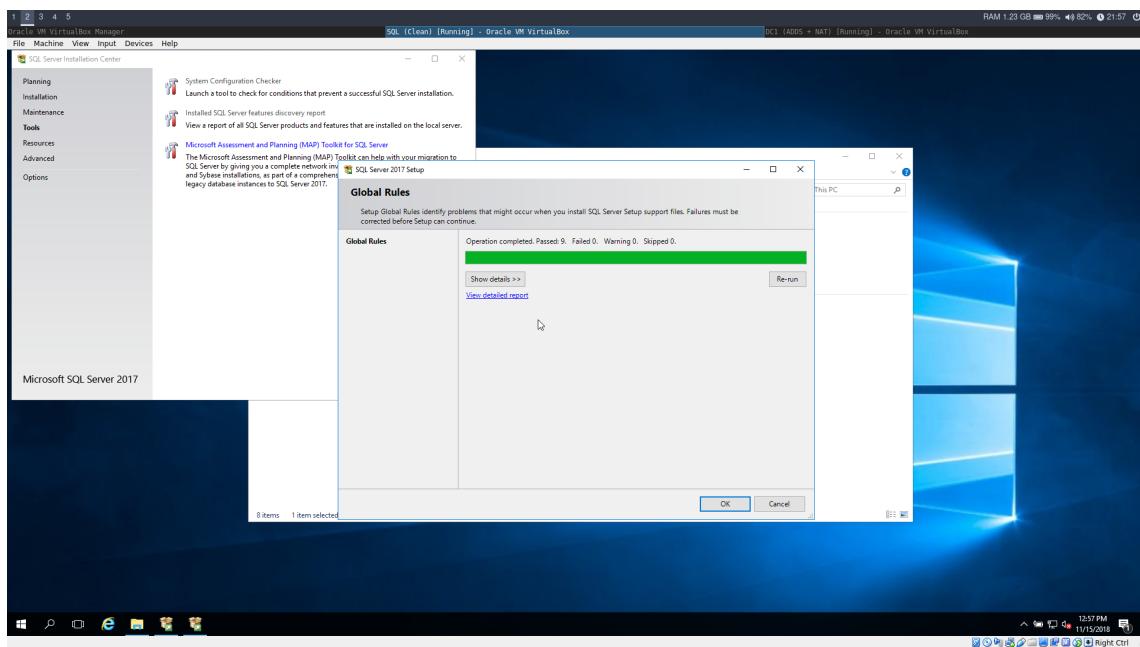
Verbind de installatieschijf van SQL Server met de VM.

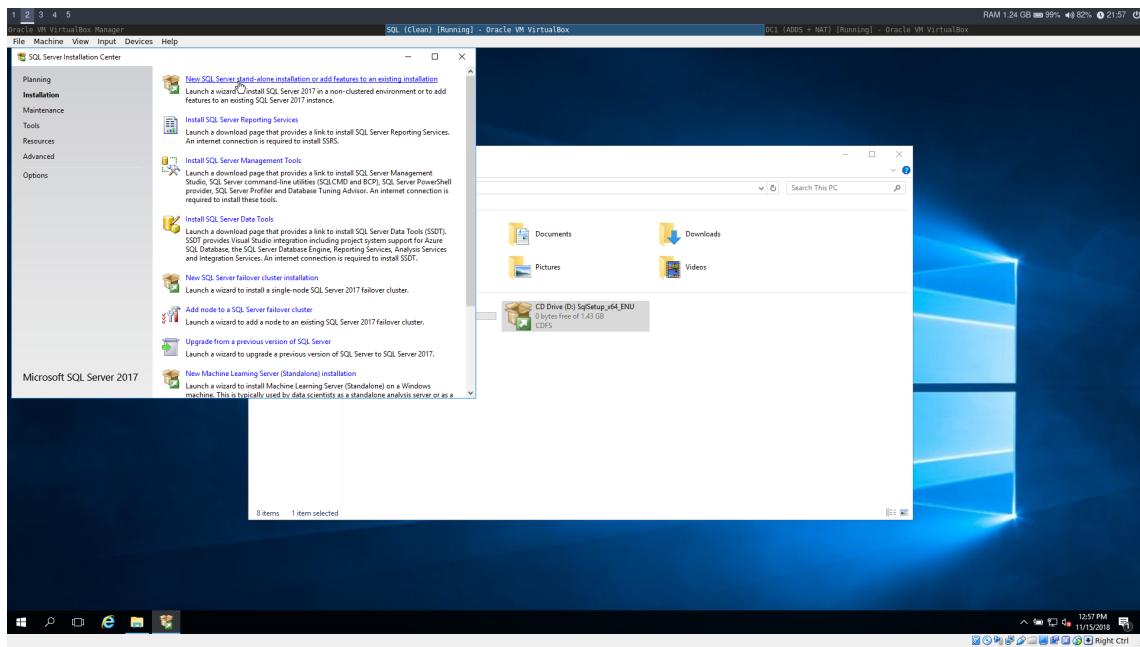


Start de installatieprocedure vanuit Windows Verkenner.

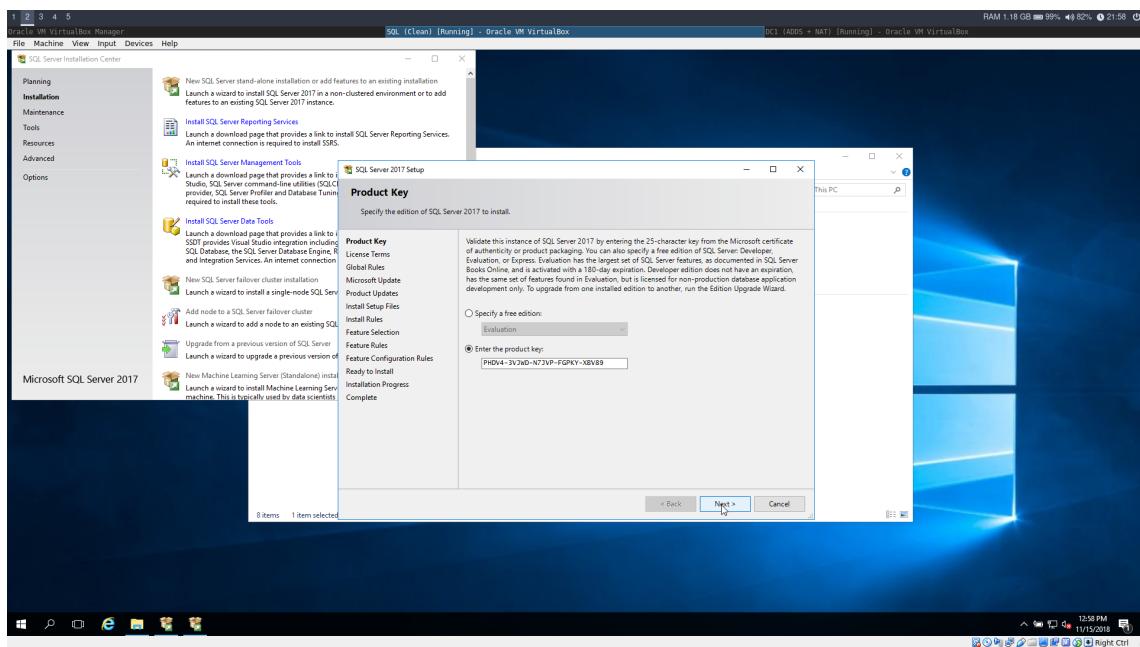


Voer de systeemsconfiguratiestesten uit.

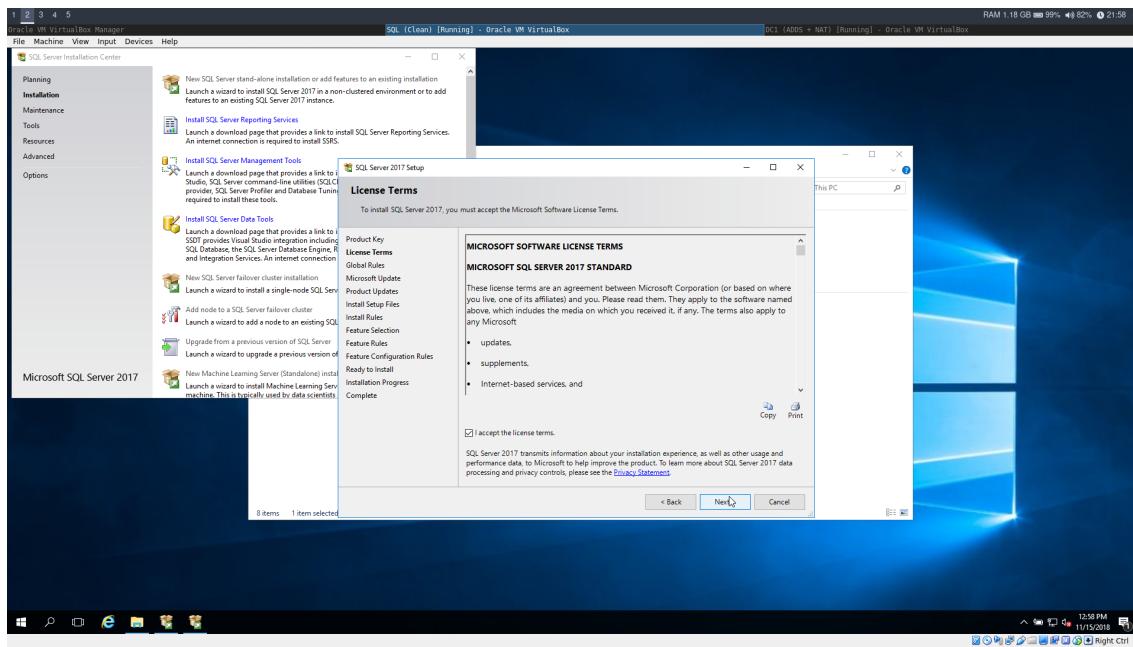




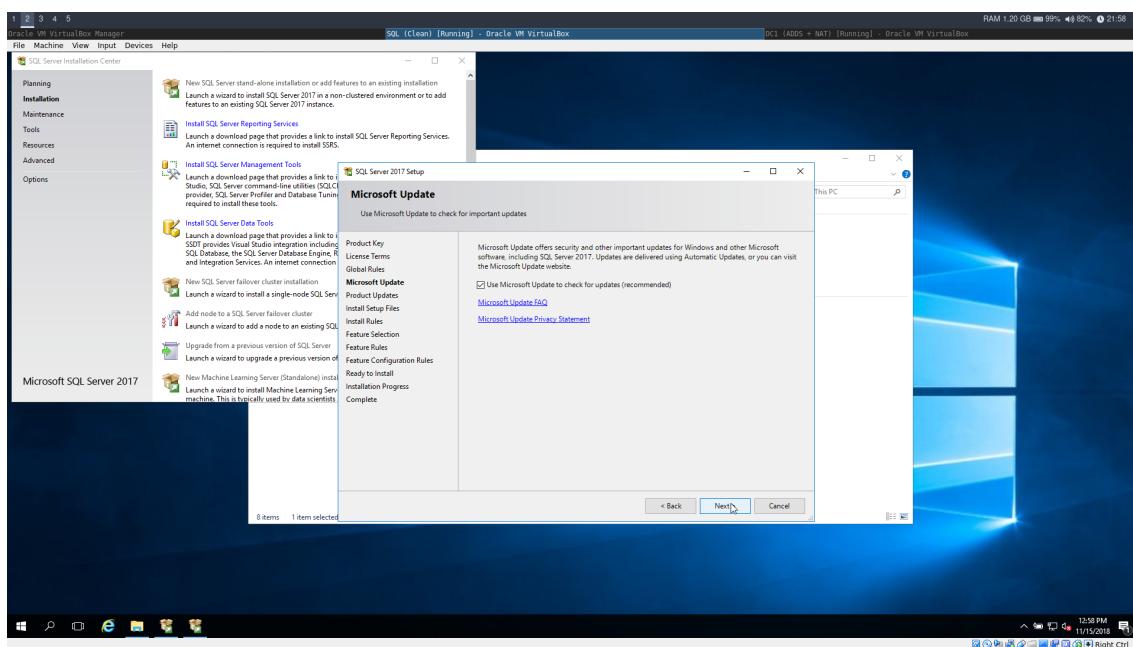
Start de installatie van de SQL Server.



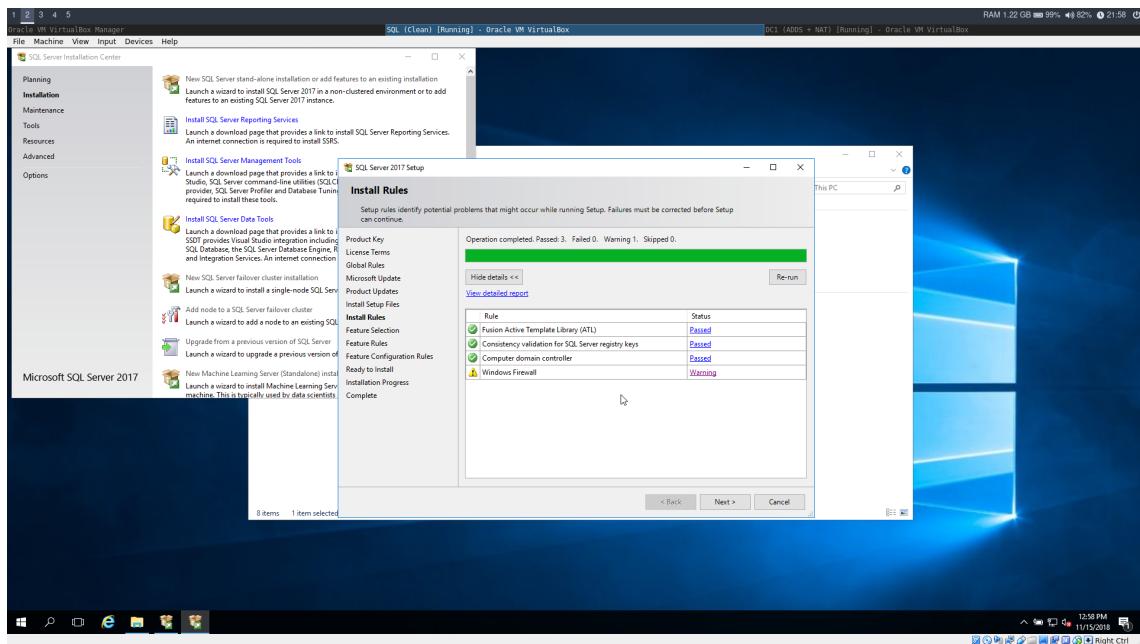
Voer de licentiecode in.



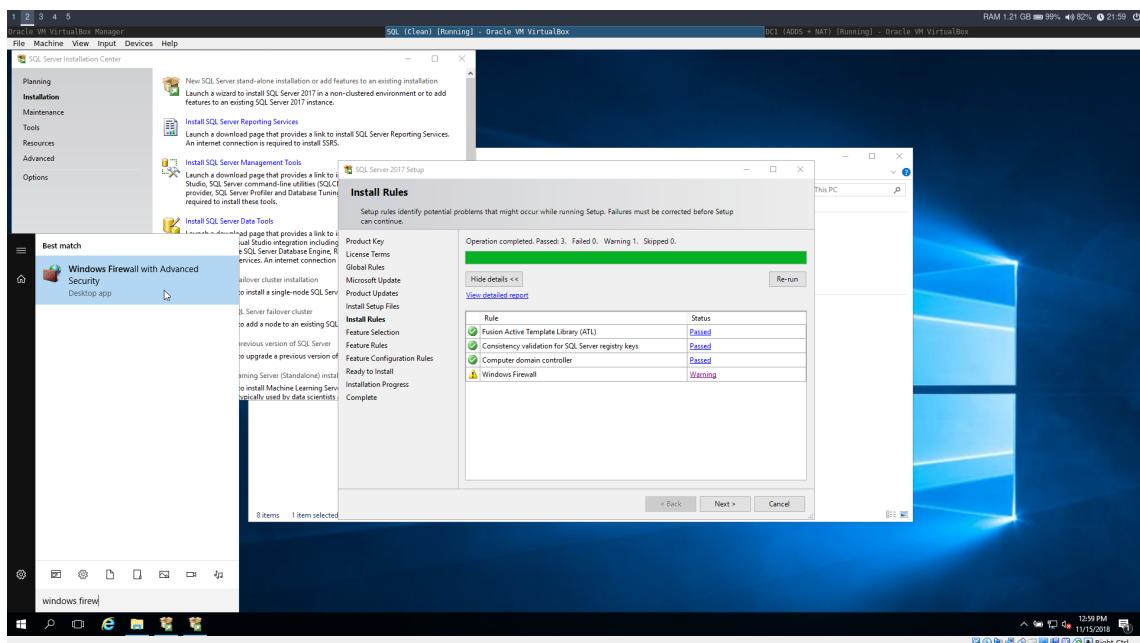
Volg de installatiewizard.

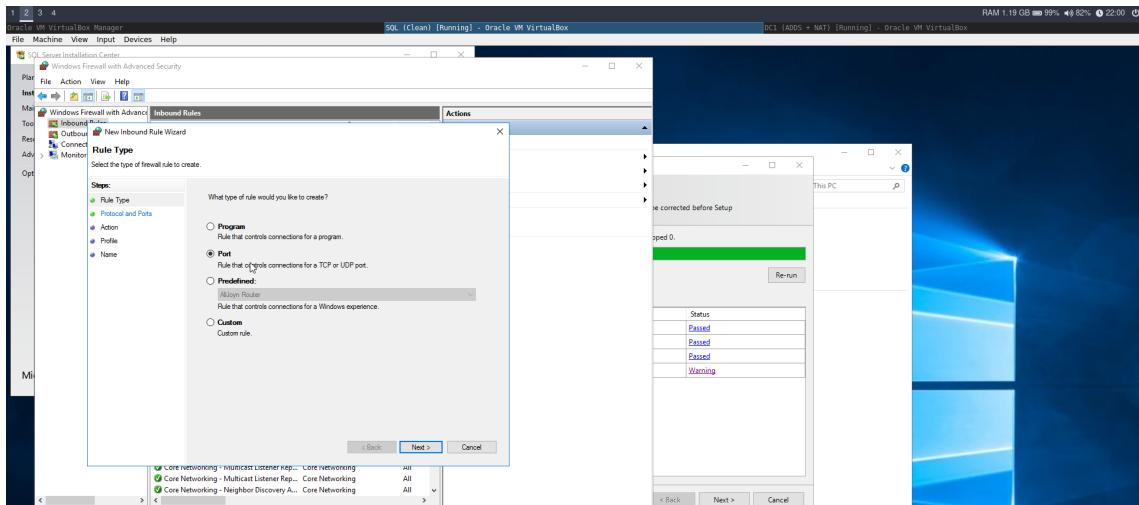
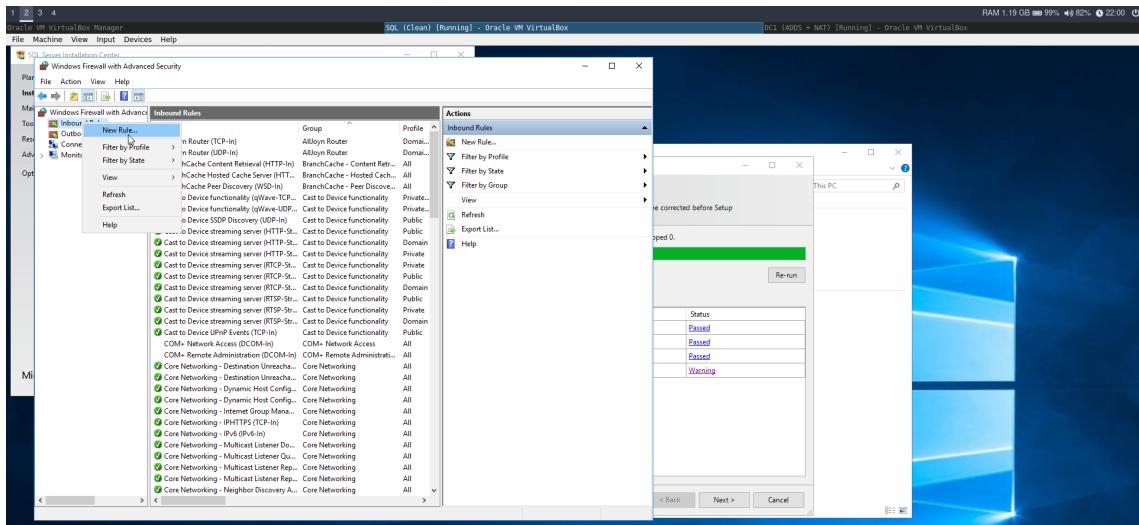


Accepteer de licentievoorwaarden.

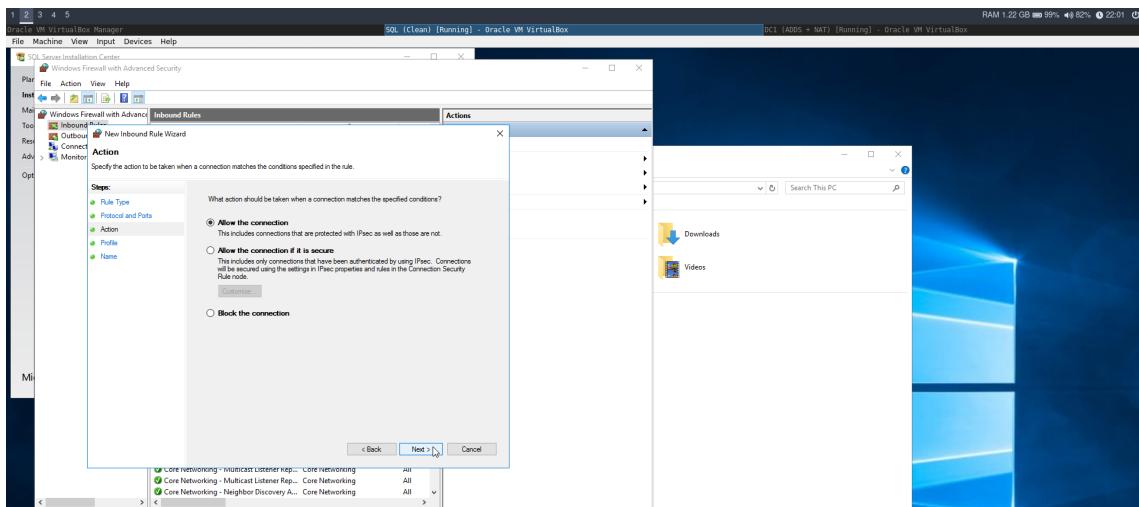
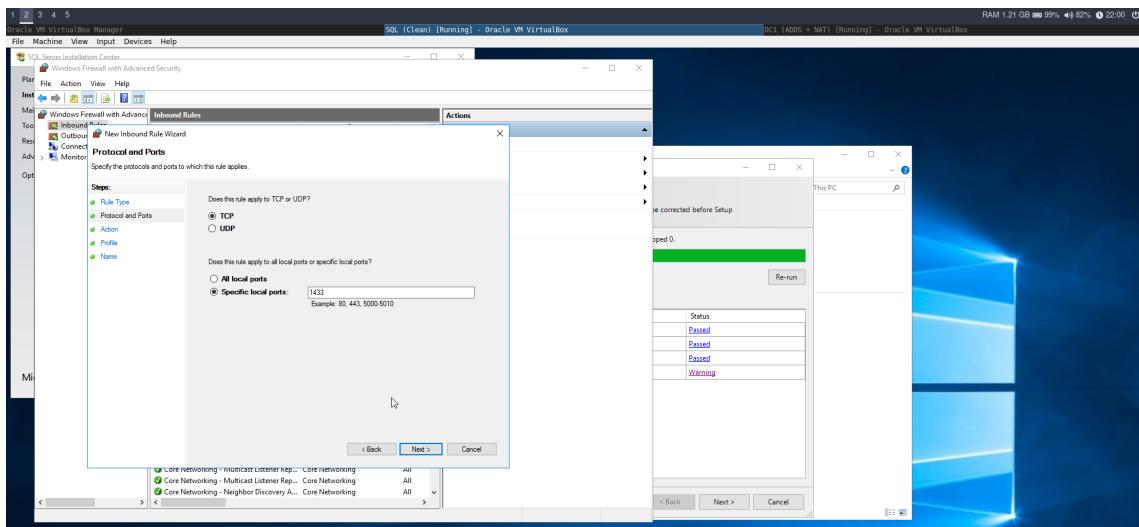


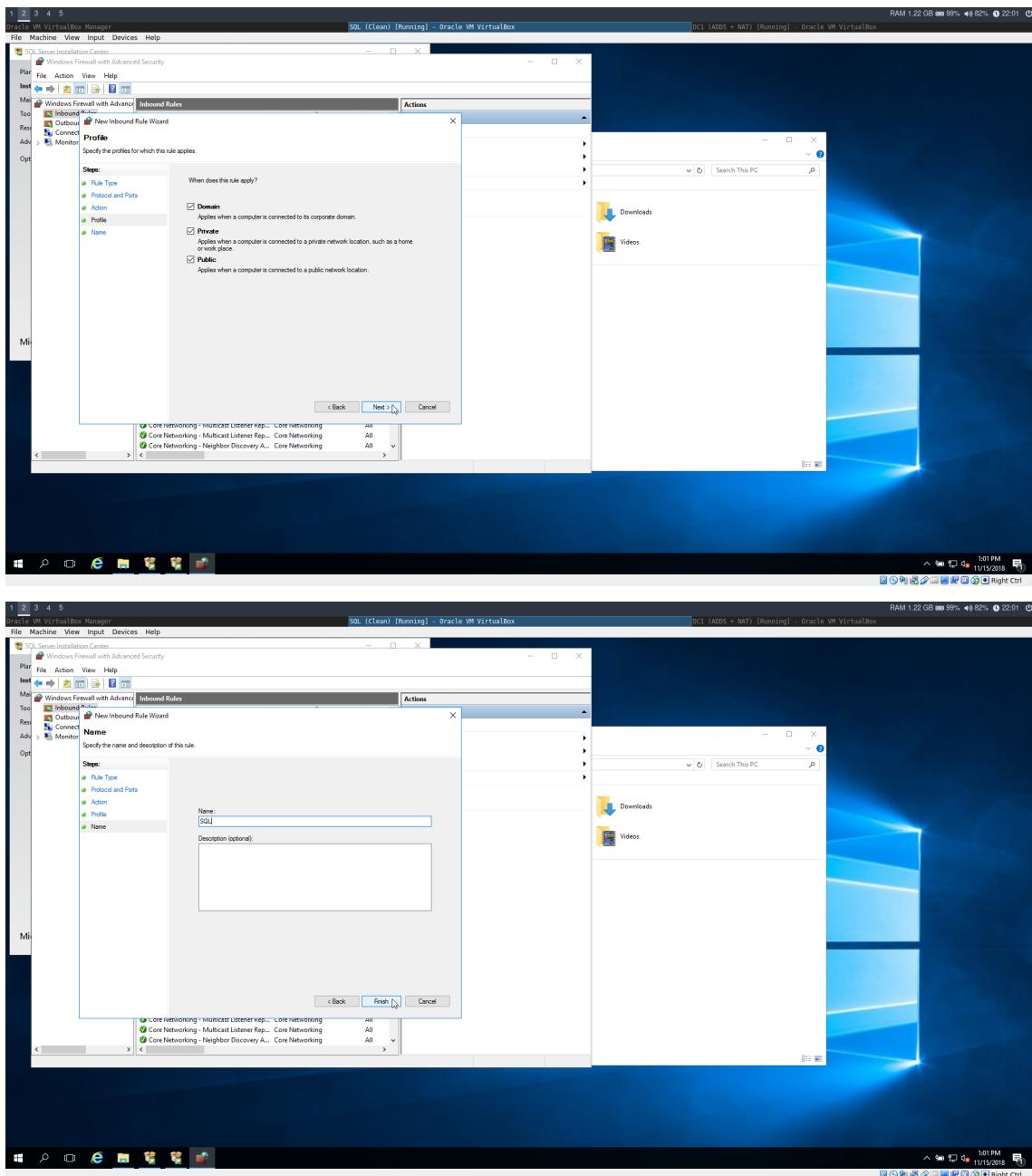
Indien een waarschuwing bij de Firewall gegeven wordt, moet een regel toegevoegd worden.

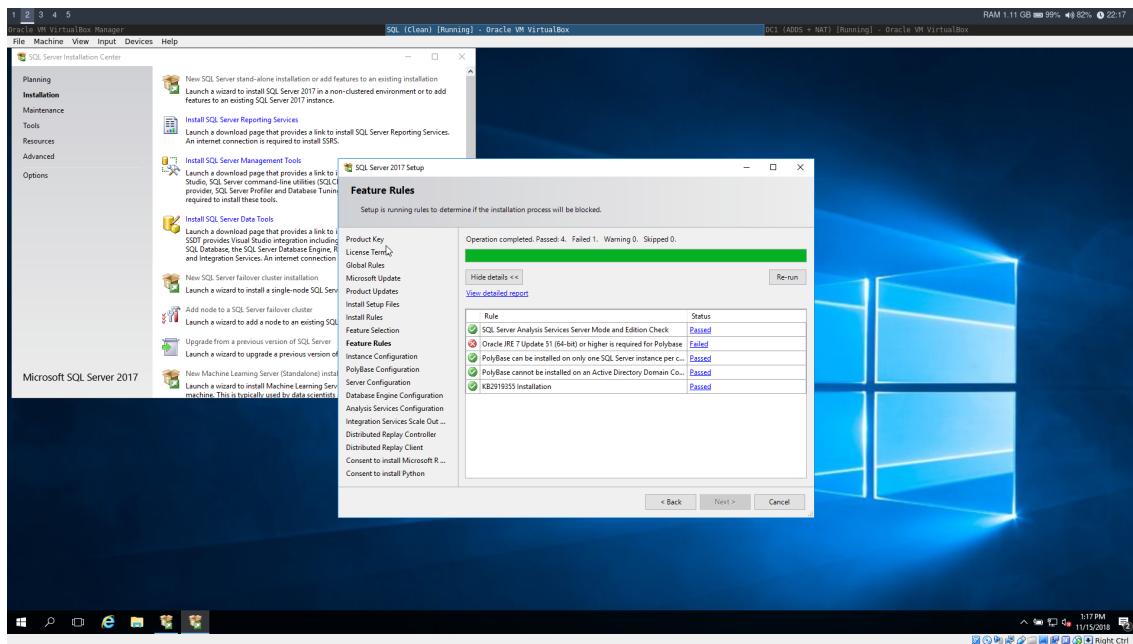




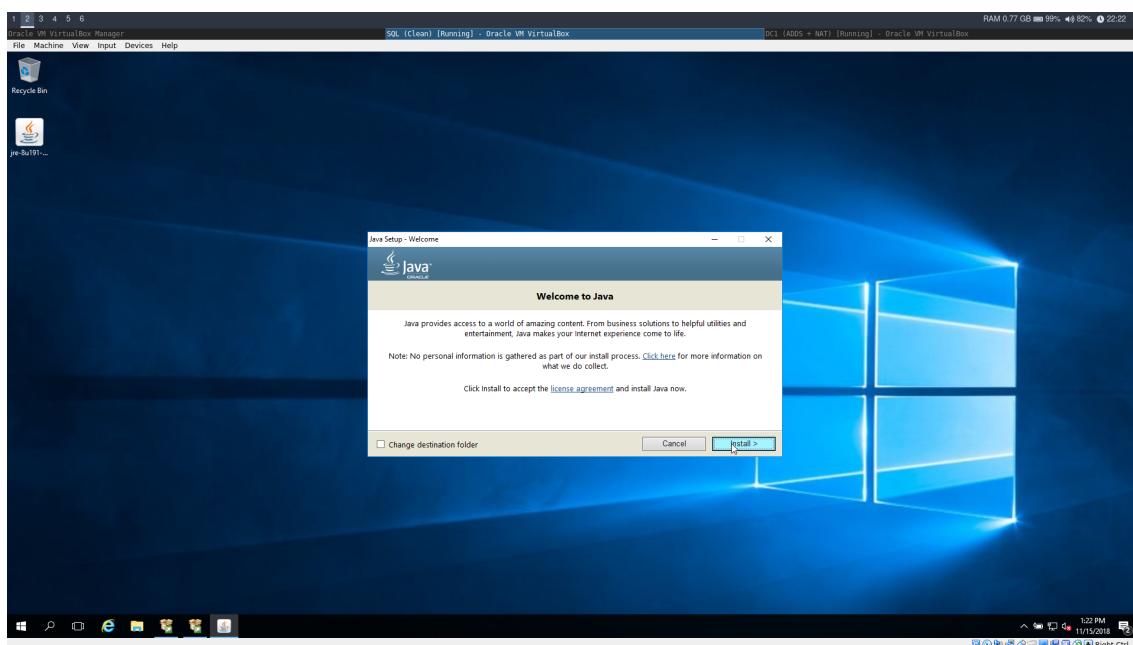
Volg de configuratiewizard.



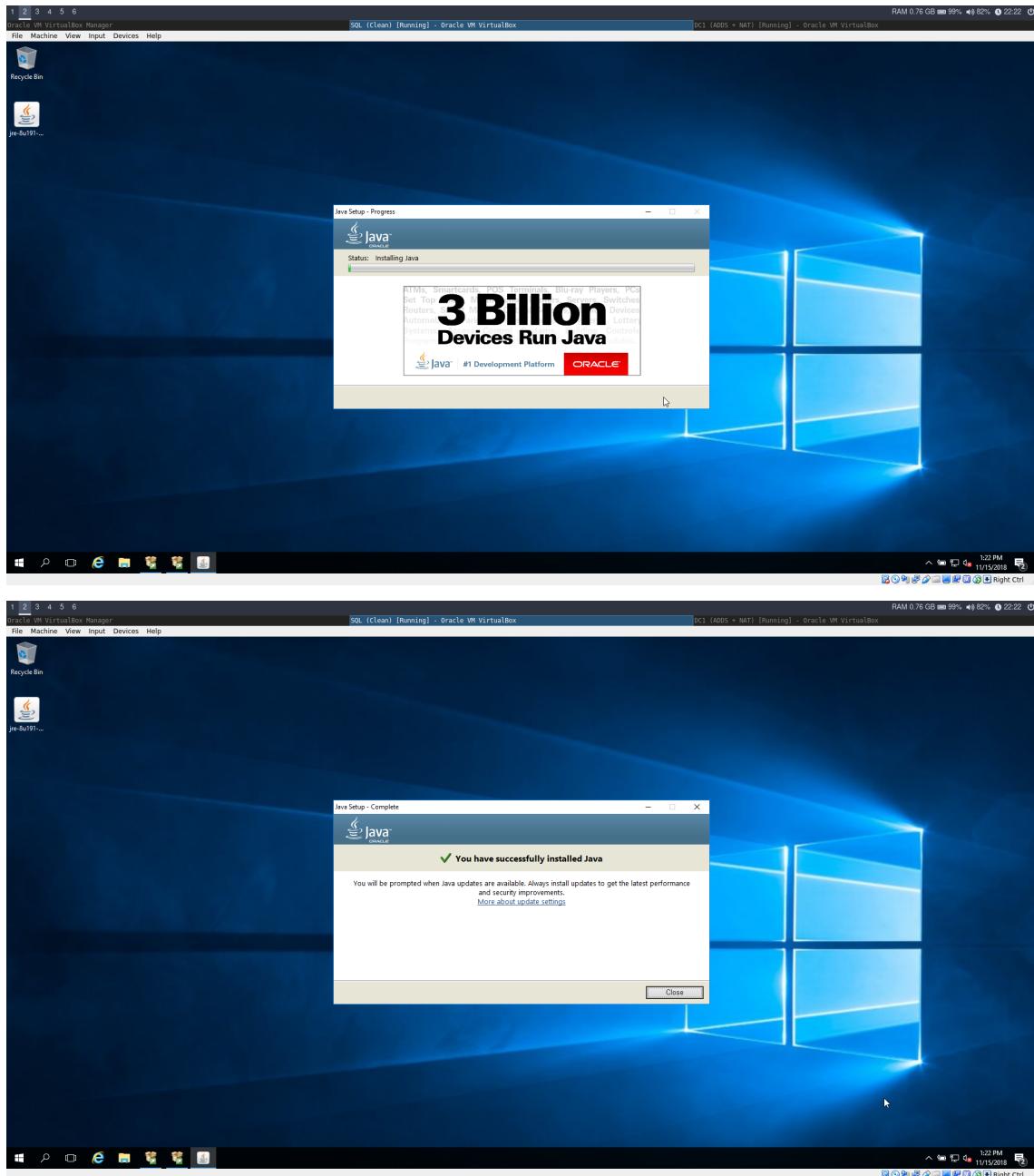


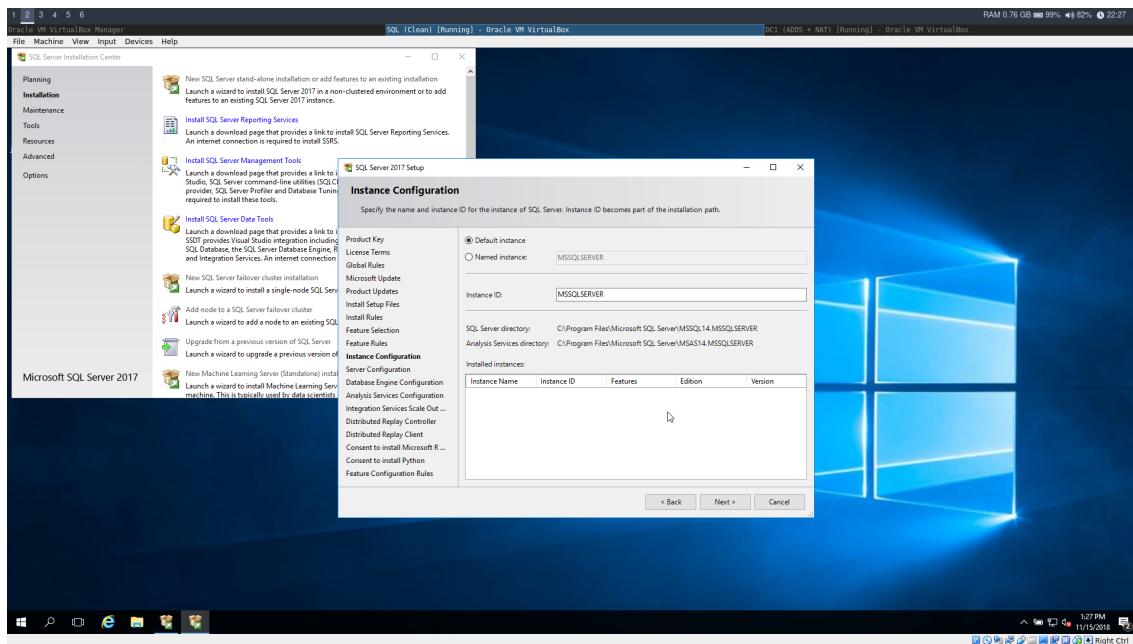


Bij deze foutmelding dient Oracle JRE (Java) geïnstalleerd te worden.

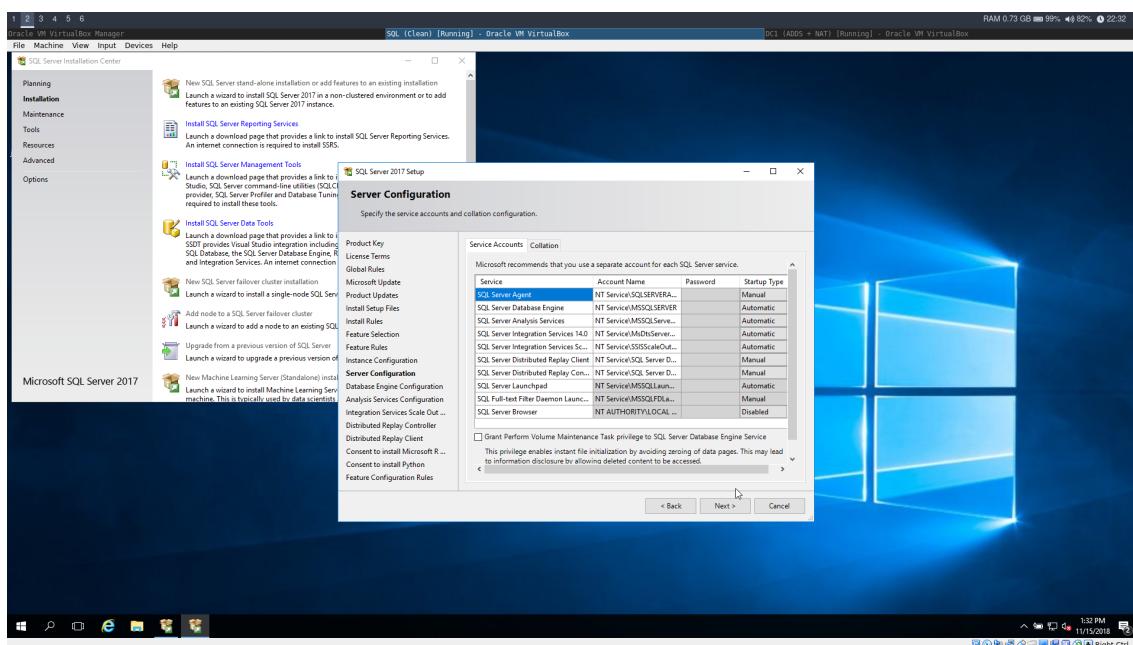


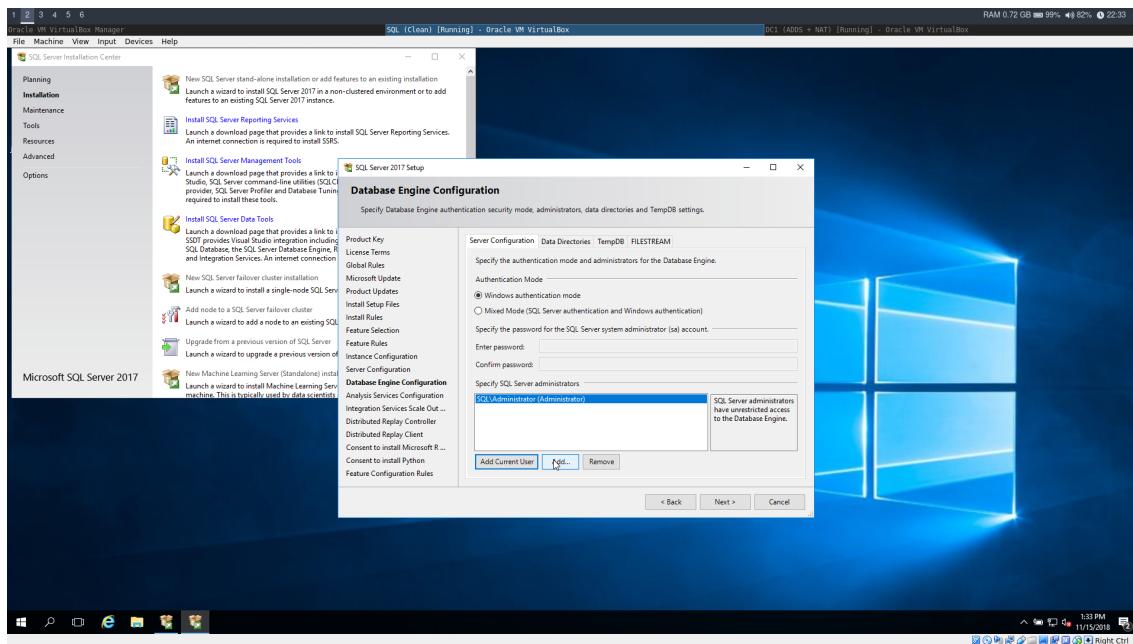
Volg de installatiewizard.



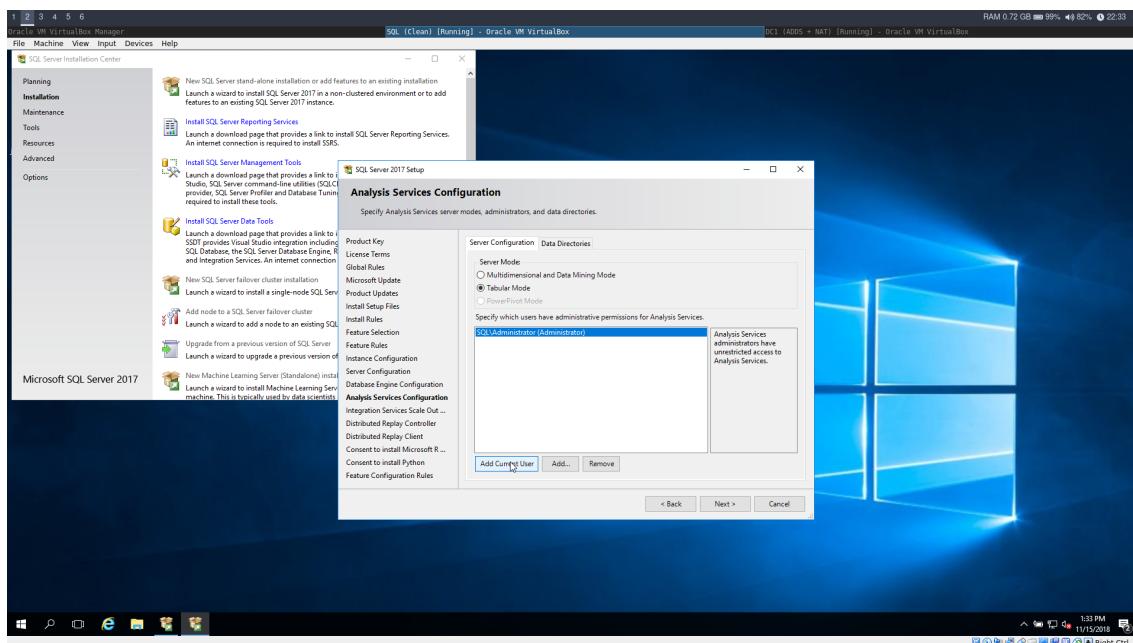


Ga verder met de installatiewizard voor SQL Server.

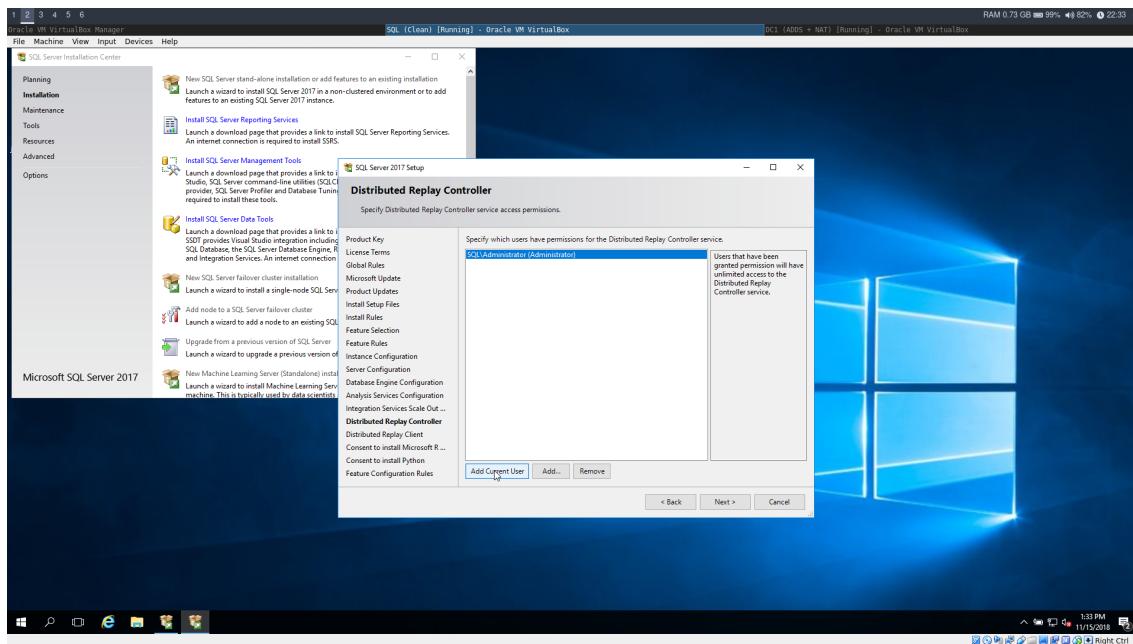




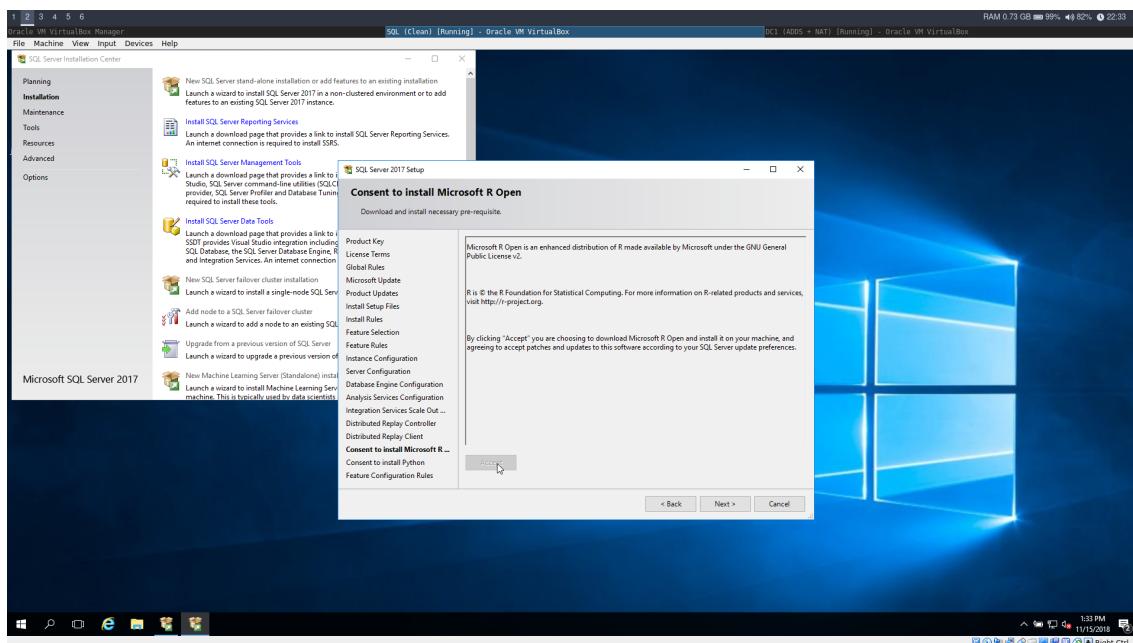
Voeg de huidige gebruiker toe.



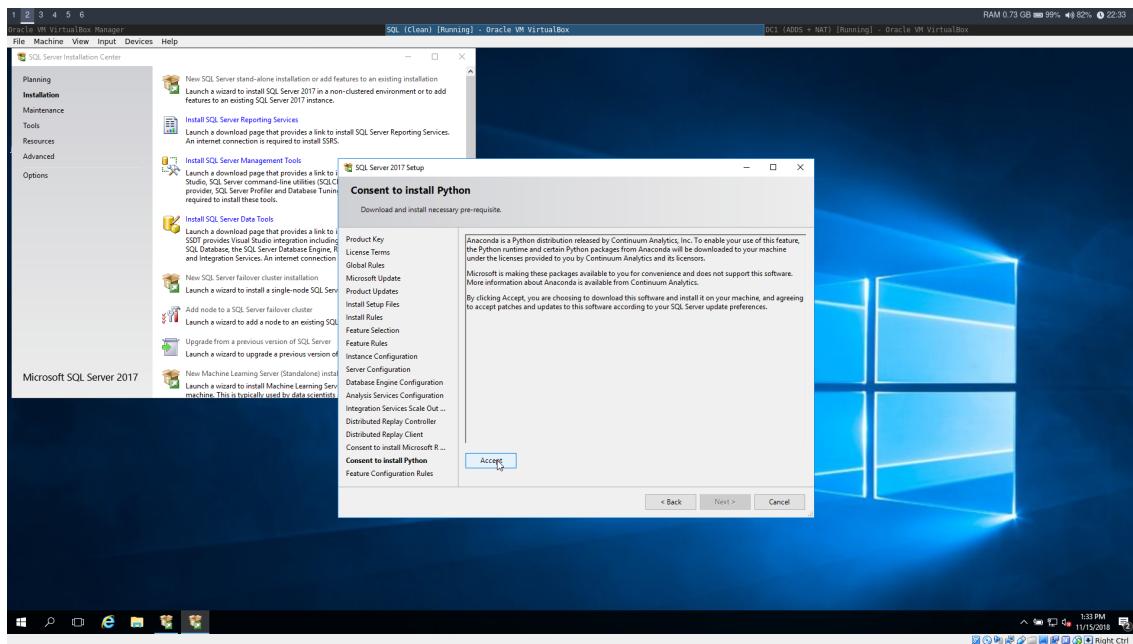
Voeg de huidige gebruiker toe.



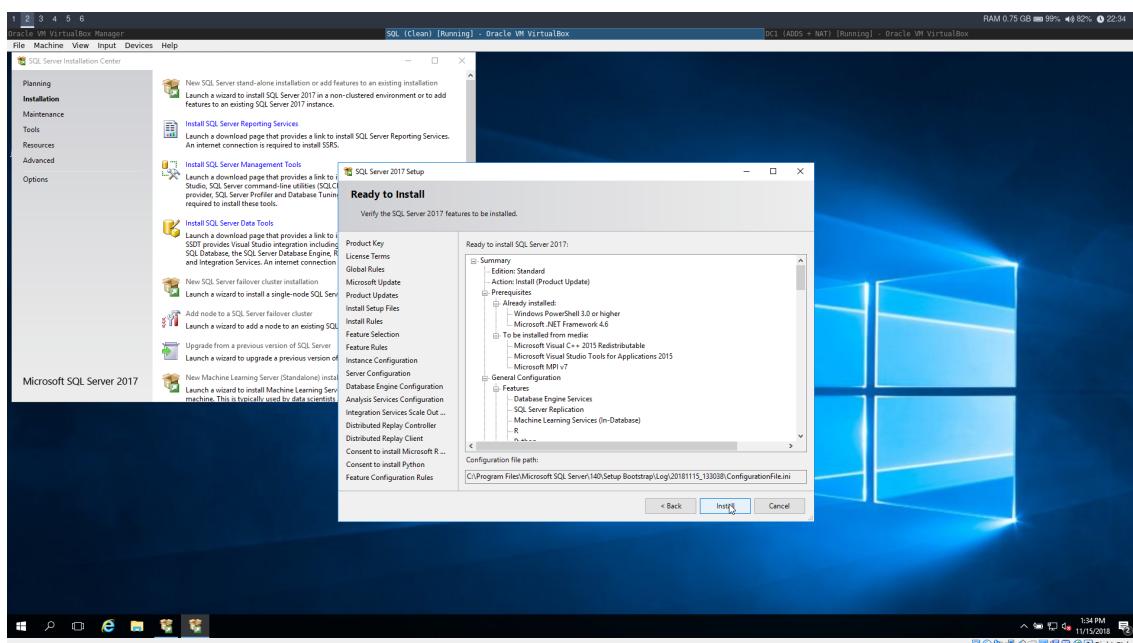
Voeg de huidige gebruiker toe.



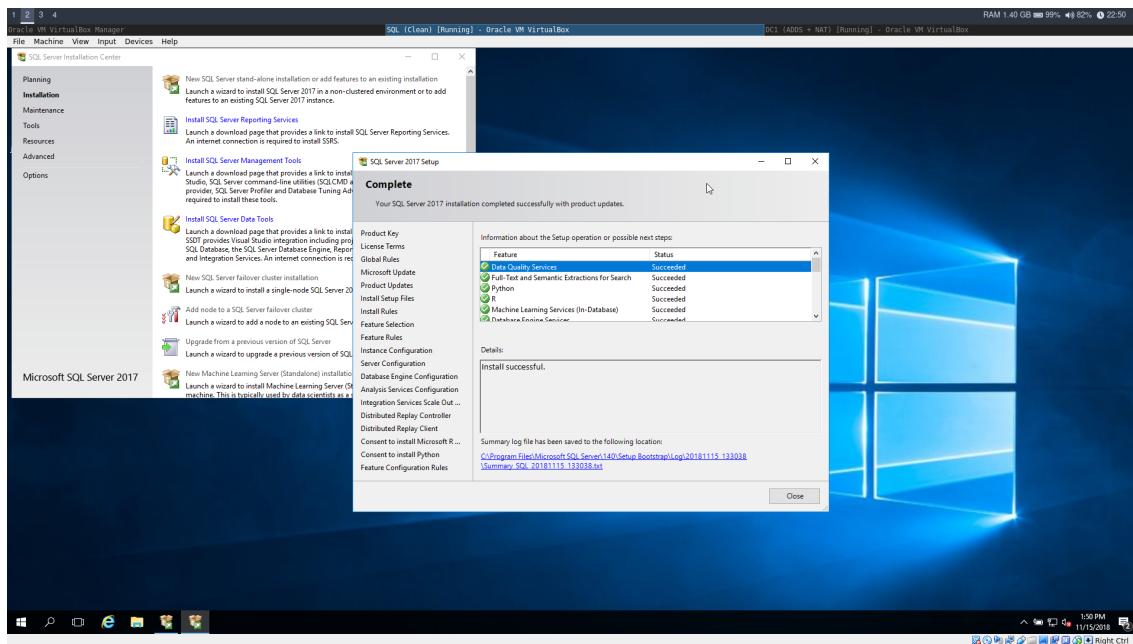
Ga akkoord met de licentievoorwaarden.



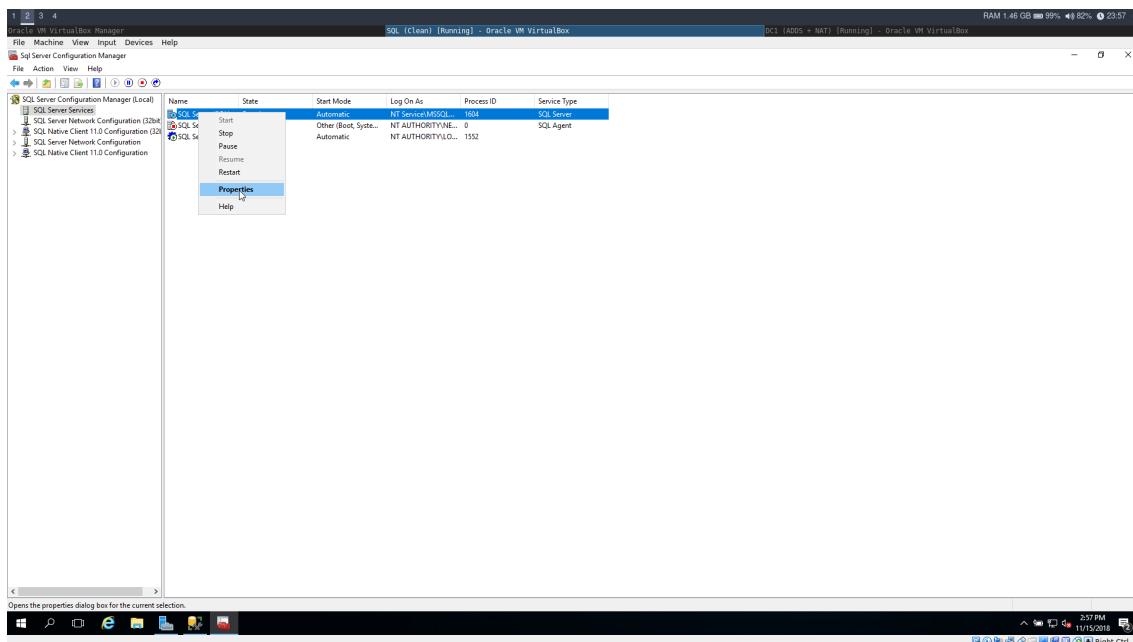
Ga akkoord met de licentievoorwaarden.



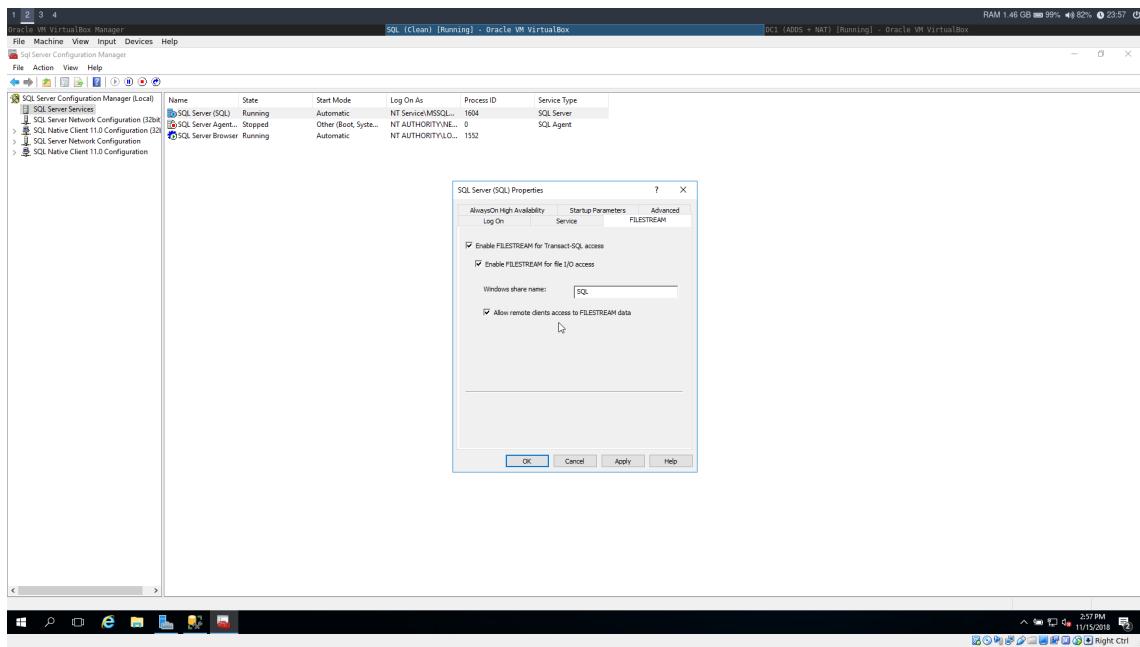
Start de installatie.



De installatie is voltooid.

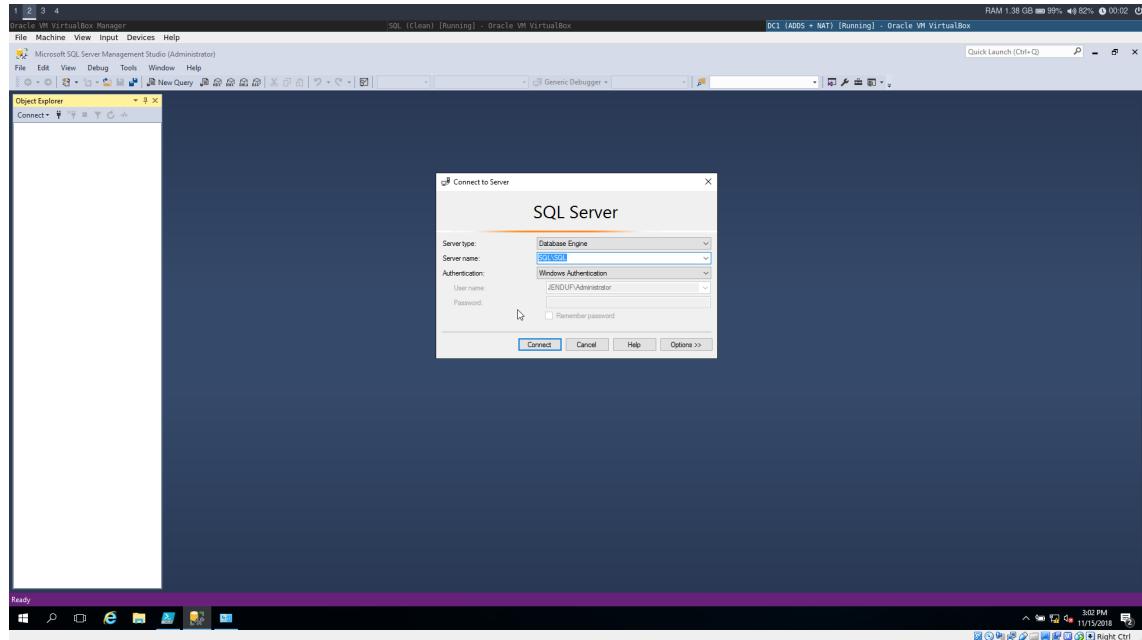


Open via "SQL Server Configuration Manager" de eigenschappen van de SQL Server.

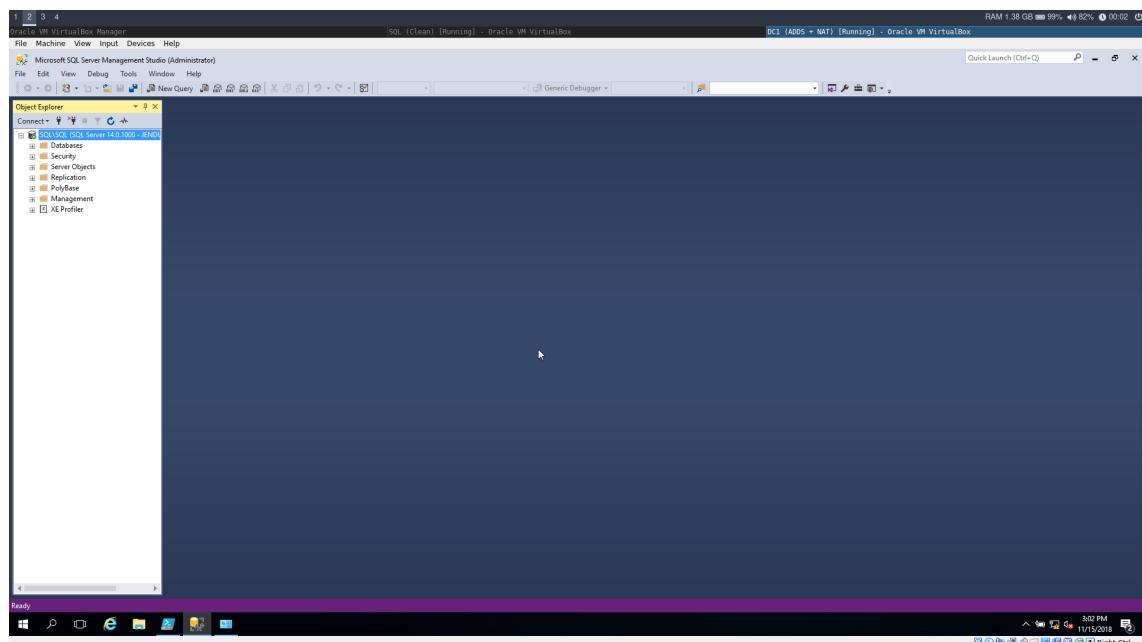


Vink bij het tabblad "FILESTREAM" alles aan.

5 Connectie vanop DC1



Connecteer met de aangegeven parameters.



Bij het zien van dit scherm is de connectie succesvol.

6 Powershell

Script 1:

```
#Activeer PS
Set-ExecutionPolicy Unrestricted
Function setName{
Write-Host 'Computernaam wijzigen'
#Change Name
Get-WmiObject win32_ComputerSystem
$ComputerName = Get-WmiObject win32_ComputerSystem
$name = "SQL"
$ComputerName.Rename($name)
}

Function setIP{
Write-Host 'IP adres geven'
#IP configuration
New-NetIPAddress -InterfaceAlias "Ethernet" -IPAddress 192.168.1.3
-DefaultGateway 192.168.1.1 -PrefixLength 24
Set-DnsClientServerAddress -InterfaceAlias "Ethernet" -ServerAddresses 192.168.1.1, 192.168.1.2
}

Function createDirectories{
Write-Host 'Directories aanmaken'
#Directories
MD 'C:\Program Files\Microsoft SQL Server'
MD 'C:\Program Files (x86)\Microsoft SQL Server'
MD 'c:\Program Files (x86)\Microsoft SQL Server\DR replay Client\ResultDir'
MD 'c:\Program Files (x86)\Microsoft SQL Server\DR replay Client\WorkingDir'
}

Function NuGet{
Install-PackageProvider -Name NuGet -MinimumVersion 2.8.5.201 -Force
}

Function ServerManager {
Import-Module ServerManager
}

setName
setIP
createDirectories
NuGet
ServerManager
Restart-Computer
```

Script 2:

```
Function Firewall{
Write-Host 'Firewall Config'
Set-NetFirewallProfile -Profile Domain,Public,Private -Enabled False
Write-Host 'Firewall Rule Port 1433'
New-NetFirewallRule -DisplayName "MSSQL ENGINE TCP" -Direction Inbound
-LocalPort 1433 -Protocol TCP -Action Allow
```

```

}

Function JoinDomain{
Write-Host 'Trying to join domain jenduf.gent'
$DomainName = "jenduf.gent"
$SafeModeAdministratorPassword = "Admin2018" | ConvertTo-SecureString -AsPlainText -Force
$domain = "jensduf"
$joindomainuser = "Administrator"
$credential = New-Object System.Management.Automation.PSCredential
($joindomainuser,$SafeModeAdministratorPassword)
Add-Computer -DomainName $DomainName -Credential $credential
}

JoinDomain
Firewall
Restart-Computer

Script 3:

Function SQL{
echo "Downloading SQL..."
cd C:/
wget "https://download.microsoft.com/download/5/E/9/5E9B18CC-8FD5-467E-B5BF-BADE39C51F73/
SQLServer2017-SSEI-Expr.exe" -OutFile SQLServer2017-SSEI.exe
Start-Process -FilePath ./SQLServer2017-SSEI.exe -ArgumentList "/action=download
/quiet /enu /MediaPath=C:/" -wait
Remove-Item ./SQLServer2017-SSEI.exe
Start-Process -FilePath C:/SQLEXPRESS_x64_ENU.exe -WorkingDirectory C:/ /q -wait
Write-Host 'SQL Installeren'
Start-Process -FilePath C:/SQLEXPRESS_x64_ENU/SETUP.EXE -ArgumentList "/Q /Action=install
/IAcceptSQLServerLicenseTerms /FEATURES=SQL,Tools /TCPENABLED=1 /SECURITYMODE='SQL'
/SQLSYSADMINACCOUNTS='BUILTIN\Administrators' /INSTANCENAME='SQL' /INSTANCEID='SQL'
/SAPWD='@Admin2018'" -wait

}

Function SSMS{
Write-Host 'SQL Management Studio Installeren'
cd C:/
wget "https://go.microsoft.com/fwlink/?linkid=858904" -OutFile SSMS-Setup-ENU.exe
Start-Process -FilePath "C:\SSMS-Setup-ENU.exe" -ArgumentList '/s' -Wait -PassThru
}

SQL
SSMS
Restart-Computer

```