

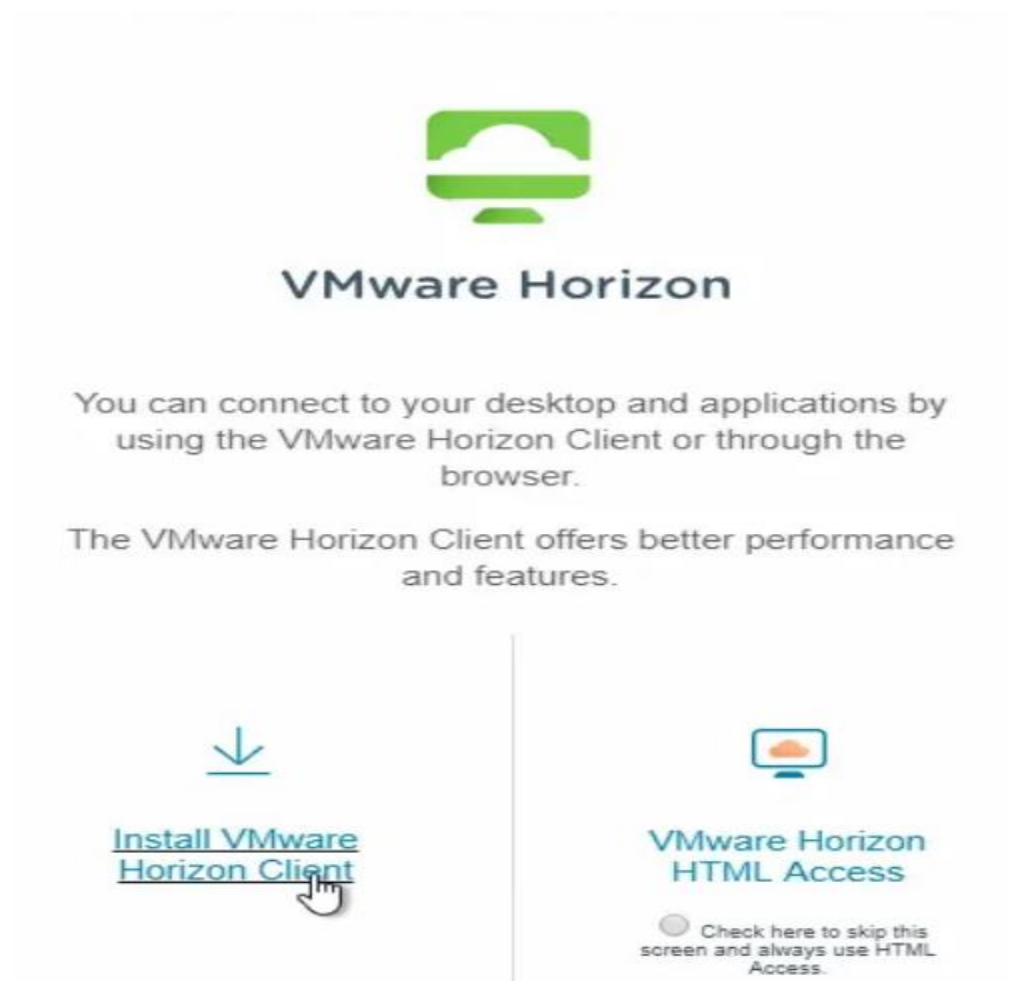
# VMWare Horizon View 8 2006 – Part 2

In this post, we will carryout the following installs and configurations.

1. Horizon Client link
2. Console Timeout
3. vCenter Role and Permission for VMWare Horizon Users
4. Disallow Non-Empty Pool Deletion
5. Help Desk Tool Timing Profiler
6. Installing Horizon Client
7. Virtual Machine Creation, SQL 2019, CU4 & SSMS Installation
8. Database Connection & EventLog Configuration
9. Install VMWare Horizon View Composer
10. Create Service Account & Add vCenter Server + Composer
11. Branding – Check <https://www.definetomorrow.co.uk/blog/2019/1/15/horizon-view-7x-branding-the-logon-pge>

## **HORIZON CLIENT LINK:**

When you point your browser to the Horizon Connection Server (without /admin in the path), the Install VMware Horizon Client link redirects to the VMware.com site for downloading Horizon Clients. You can change it so it can be downloaded directly from Horizon Connection Server.



On the connection server (conn1), go to this path and create a folder called Downloads

CONN1 > Local Disk (C:) > Program Files > VMware > VMware View > Server > broker > webapps >				
Name	Date modified	Type	Size	
admin	25-Aug-2020 2:58 ...	File folder		
portal	25-Aug-2020 2:58 ...	File folder		
rest	25-Aug-2020 2:58 ...	File folder		
ROOT	25-Aug-2020 3:00 ...	File folder		
sse	25-Aug-2020 3:01 ...	File folder		
view-client	25-Aug-2020 3:01 ...	File folder		
view-vlsi	25-Aug-2020 3:02 ...	File folder		
admin.war	17-Jul-2020 7:07 AM	WAR File	17,745 KB	
open_source licenses View Feature Pack...	22-Jun-2020 8:46 ...	Text Document	130 KB	
portal.war	22-Jun-2020 8:48 ...	WAR File	5,975 KB	
rest.war	17-Jul-2020 7:07 AM	WAR File	24,308 KB	
ROOT.war	17-Jul-2020 7:07 AM	WAR File	7,789 KB	
sse.war	17-Jul-2020 7:07 AM	WAR File	21,274 KB	
view-client.war	22-Jun-2020 8:48 ...	WAR File	5 KB	
view-vlsi.war	17-Jul-2020 7:07 AM	WAR File	22,560 KB	

If you haven't downloaded the client yet – you can get it from here – Copy the exe to download folder. Please note there is ONE version only (both for x86 and x64)

[https://my.vmware.com/web/vmware/downloads/details?downloadGroup=CART21FQ1\\_WIN\\_543&productId=863&rpid=47870](https://my.vmware.com/web/vmware/downloads/details?downloadGroup=CART21FQ1_WIN_543&productId=863&rpid=47870)

CONN1 > Local Disk (C:) > Program Files > VMware > VMware View > Server > broker > webapps > downloads				
Name	Date modified	Type	Size	
VMware-Horizon-Client-5.4.3-16346110.exe	28-Aug-2020 9:13 ...	Application	224,252 KB	

Go to this location and open the file in Notepad as Administrator

CONN1 > Local Disk (C:) > ProgramData > VMware > VDM > portal				
Name	Date modified	Type	Size	
portal-links-html-access.properties	22-Jun-2020 8:46 ...	PROPERTIES File	2 KB	

Now copy Horizon Client file name and replace. Check Before and After screen shot.

portal-links-html-access.properties - Notepad

File Edit Format View Help

# Configure whether download page is accessible  
enable.download=true  
# Configure whether web client page is accessible  
enable.webclient=true  
# Configure the download page's URL address  
link.download=https://www.vmware.com/go/viewclients  
# Configure the help page's URL address  
link.help=https://www.vmware.com/support/viewclients/doc/viewclients\_pubs.html  
# Links of view clients installers on different platforms  
link.win32=https://www.vmware.com/go/viewclients#win32  
link.win64=https://www.vmware.com/go/viewclients#win64  
link.linux32=https://www.vmware.com/go/viewclients#linux32  
link.linux64=https://www.vmware.com/go/viewclients#linux64  
link.mac=https://www.vmware.com/go/viewclients#mac  
link.ios=https://itunes.apple.com/us/app/vmware-view-for-ipad/id417993697  
link.android=https://play.google.com/store/apps/details?id=com.vmware.view.client.android  
link.chromeos=https://chrome.google.com/webstore/detail/vmware-horizon-client/pckbpdplfajmgaip1jfamclkinbjdnma  
link.winmobile=https://www.microsoft.com/en-us/store/p/vmware-horizon-client/9nblggh51p19

**BEFORE**

In Notepad modify link.win32 and link.win64 by specifying the relative path to the Horizon Client executable under /downloads. Don't forget to save the file.

portal-links-html-access.properties - Notepad

File Edit Format View Help

# Configure whether download page is accessible  
enable.download=true  
# Configure whether web client page is accessible  
enable.webclient=true  
# Configure the download page's URL address  
link.download=https://www.vmware.com/go/viewclients  
# Configure the help page's URL address  
link.help=https://www.vmware.com/support/viewclients/doc/viewclients\_pubs.html  
# Links of view clients installers on different platforms  
link.win32=/downloads/VMware-Horizon-Client-5.4.3-16346110.exe  
link.win64=/downloads/VMware-Horizon-Client-5.4.3-16346110.exe  
link.linux32=https://www.vmware.com/go/viewclients#linux32  
link.linux64=https://www.vmware.com/go/viewclients#linux64  
link.mac=https://www.vmware.com/go/viewclients#mac  
link.ios=https://itunes.apple.com/us/app/vmware-view-for-ipad/id417993697  
link.android=https://play.google.com/store/apps/details?id=com.vmware.view.client.android  
link.chromeos=https://chrome.google.com/webstore/detail/vmware-horizon-client/pckbpdplfajmgaip1jfamclkinbjdnma  
link.winmobile=https://www.microsoft.com/en-us/store/p/vmware-horizon-client/9nblggh51p19

**AFTER**

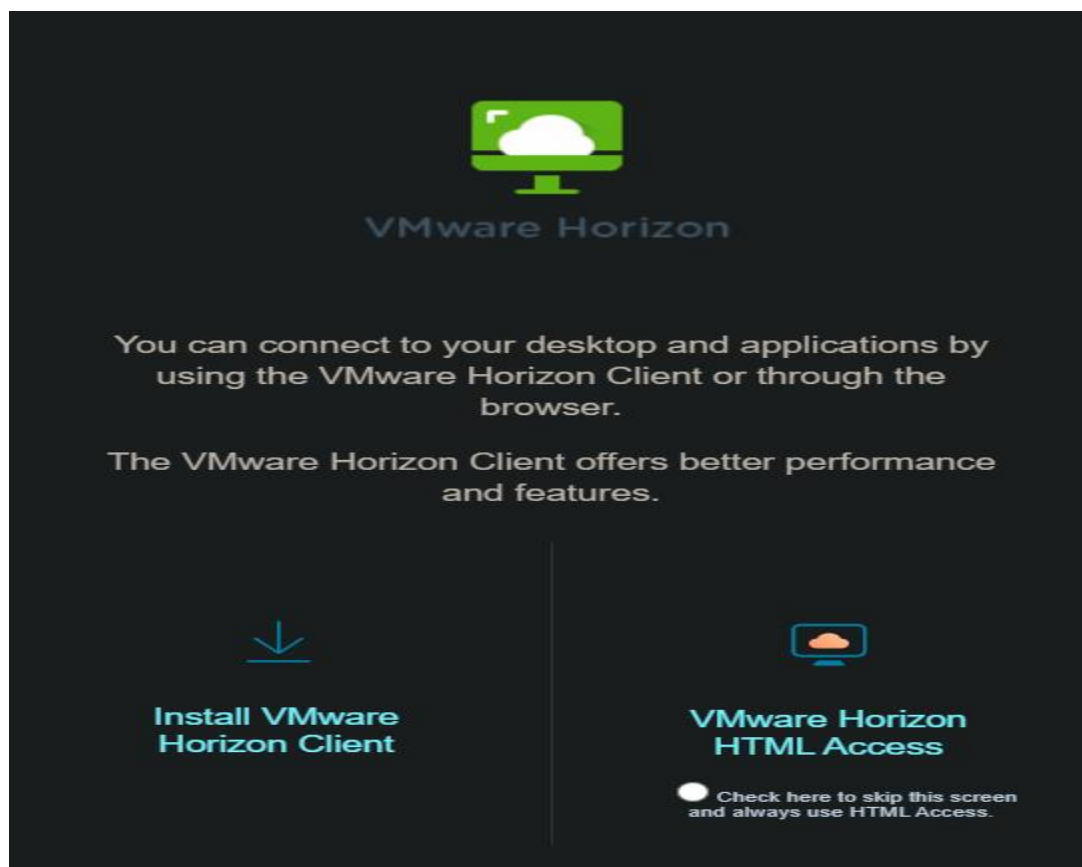
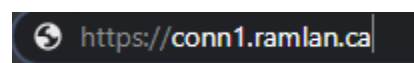
Restart the VMware Horizon View Web Component service or restart the entire Connection Server

Services

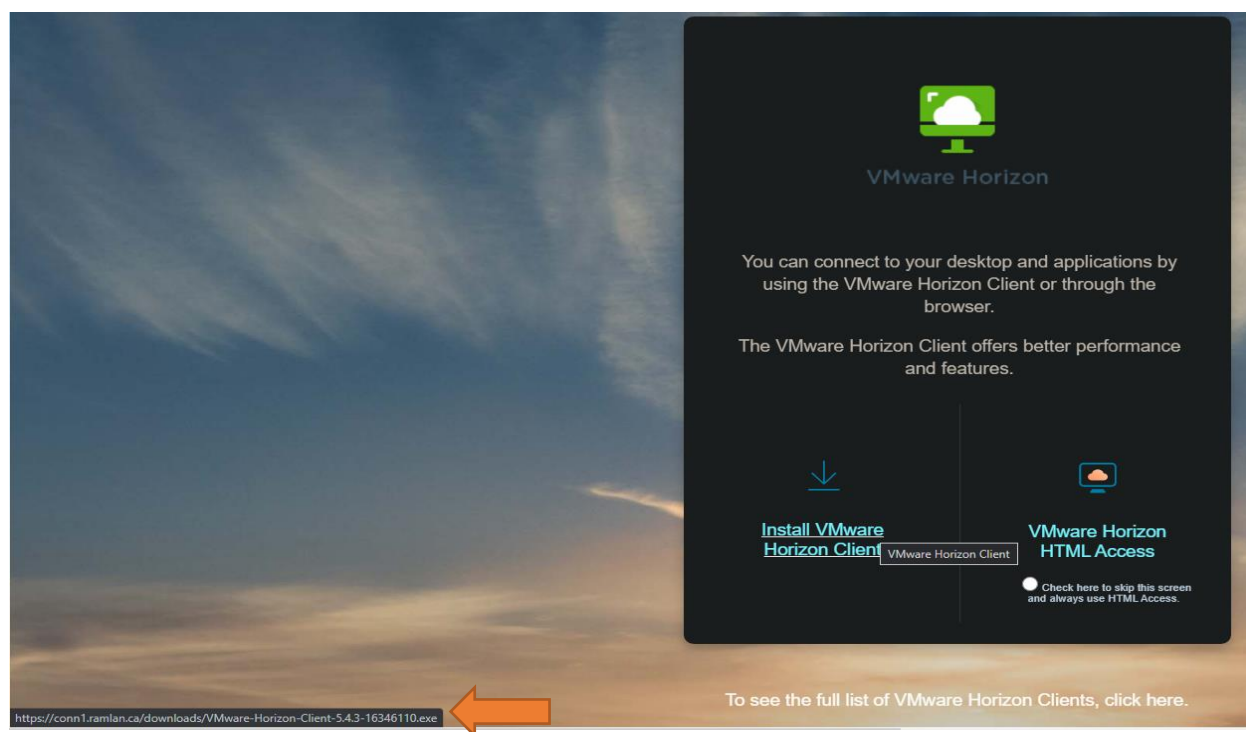
File Action View Help

Name	Description	Status	Startup Type	Log On As
Virtual Disk	Provides m...		Manual	Local Syste...
VMware Horizon Log Collector	Provides su...	Running	Manual	Local Syste...
VMware Horizon View Blast Secure Gateway	Provides V...	Running	Manual	Local Syste...
VMware Horizon View Connection Server	Provides Ho...	Running	Automatic	Local Syste...
VMware Horizon View Framework Component	Provides V...	Running	Manual	Local Syste...
VMware Horizon View Message Bus Component	Provides Ho...	Running	Manual	Local Syste...
VMware Horizon View PCoIP Secure Gateway	Provides V...	Running	Manual	Local Syste...
VMware Horizon View Script Host	Provides V...		Disabled	Local Syste...
VMware Horizon View Security Gateway Component	Provides Ho...	Running	Manual	Local Syste...
VMware Horizon View Web Component	Provides Ho...	Running	Manual	Local Syste...

Open browser and type the link but replace it with your connection server.



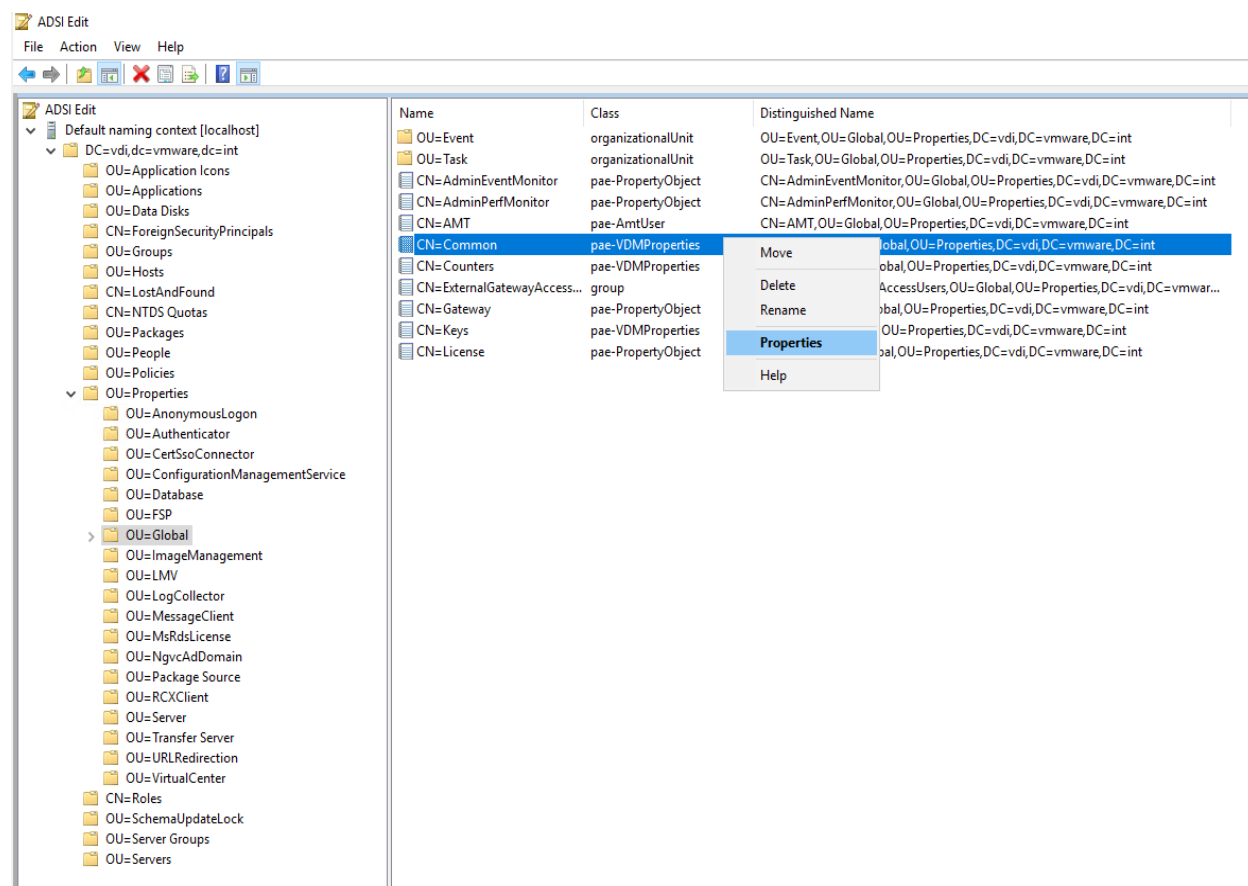
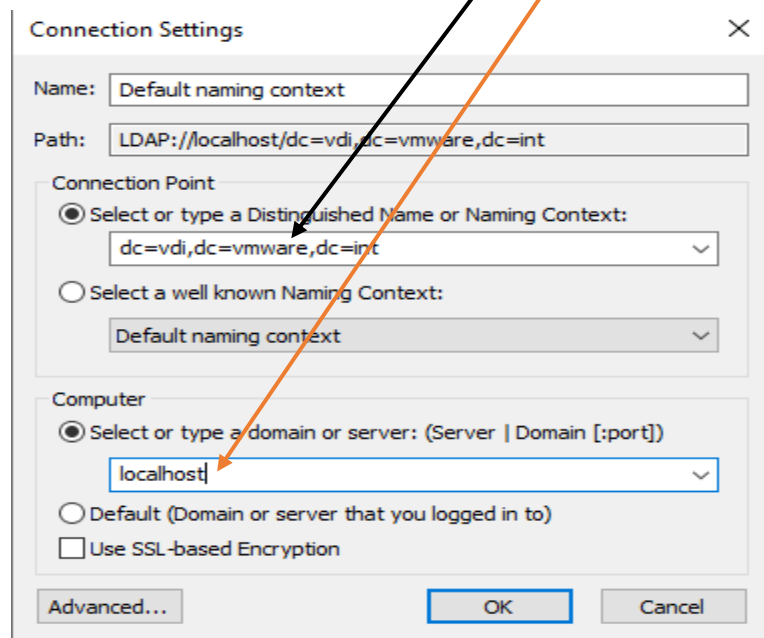
Now you can see it will download from conn1.ramlan.ca server instead of going to VMWare site. Not a big deal but convenience.



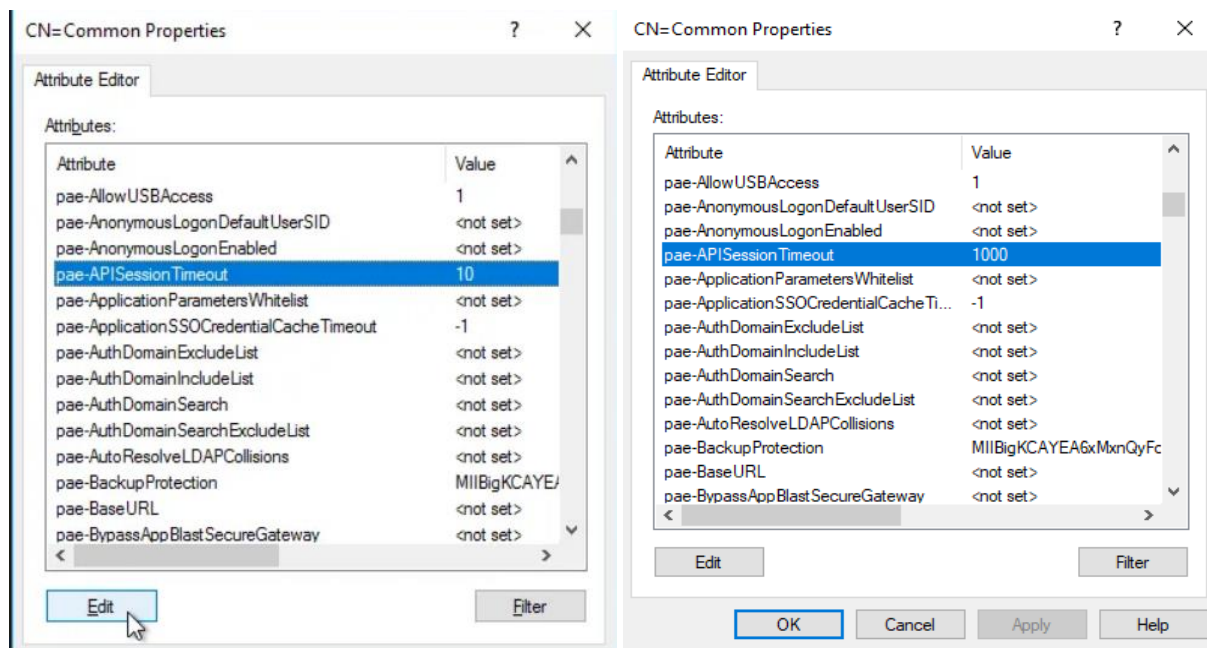
## CONSOLE TIMEOUT:

The HTML5 Horizon Console (<https://MyConnectionServer/newadmin>) has a default timeout of 10 minutes. Changing the Horizon Administrator timeout will not affect the Horizon Console timeout. You can use adsiedit.msc to increase the Horizon Console timeout or use Global Settings as well. I will show both.

Open ADSIEdit and change the connection point



Click Edit – Change to required minutes. I entered 1000 minutes



You can do the same after login to Connection Server – Click Global Settings

## Global Settings

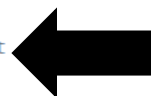
General Settings

Security Settings

Client Restriction Settings

Edit

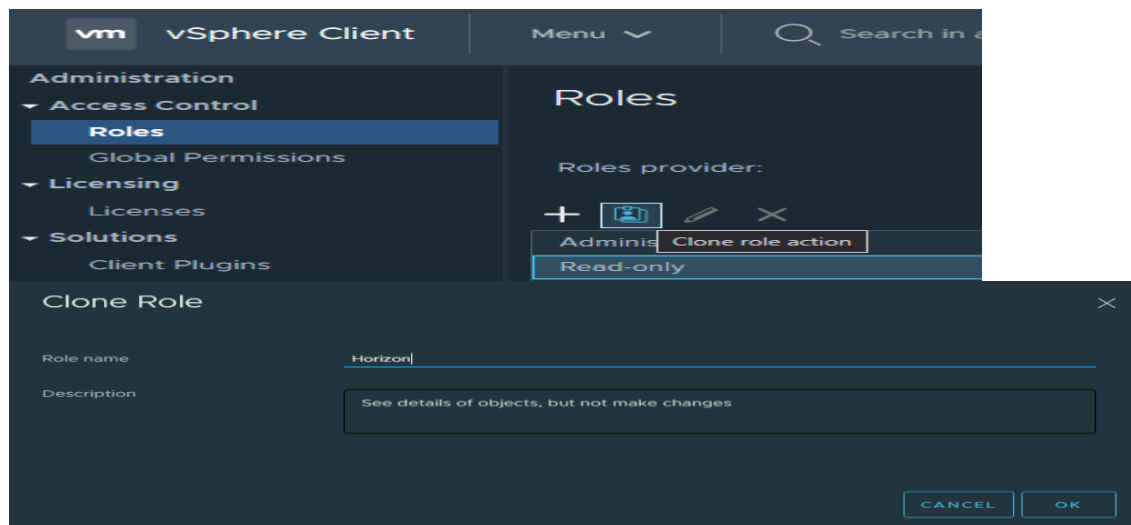
View Administrator Session Timeout  
1,000 minutes

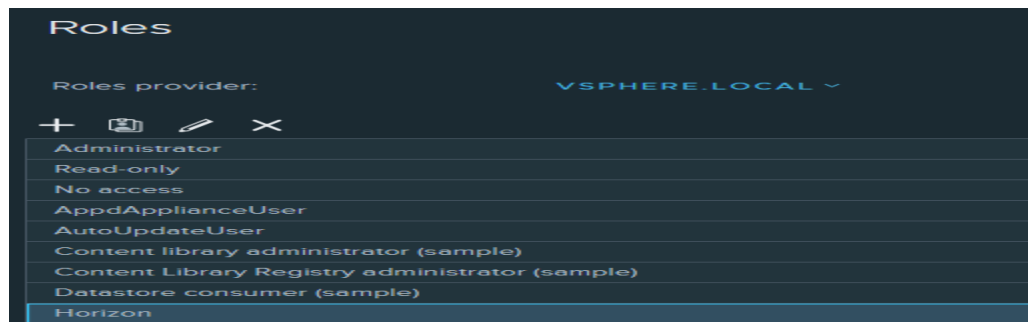


### ROLE / PERMISSION FOR HORIZON USERS:

Now we will create a role and assign proper permission for Horizon Users.

From vSphere Client, go to Menu > Administration > Access Control > Roles area, select the Read-only role and click on the Clone role action icon.



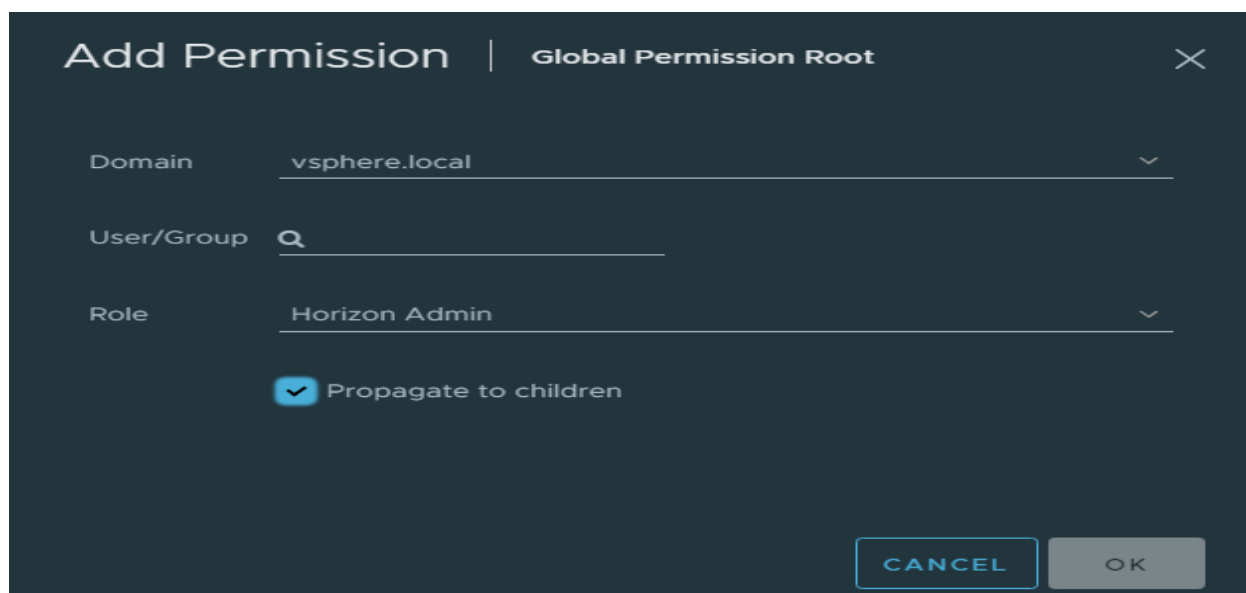


These are the permission, I assign to above group.

Privileges Required for the View Manager Role	
Privilege Group	Privileges to Enable
Folder	<ul style="list-style-type: none"> <li>Create Folder</li> <li>Delete Folder</li> </ul>
Datastore	<ul style="list-style-type: none"> <li>Allocate space</li> </ul>
Virtual Machine	<p>In Configuration:</p> <ul style="list-style-type: none"> <li>Add or remove device</li> <li>Advanced</li> <li>Modify device settings</li> </ul> <p>In Interaction:</p> <ul style="list-style-type: none"> <li>Power Off</li> <li>Power On</li> <li>Reset</li> <li>Suspend</li> <li>Perform wipe or shrink operations</li> </ul> <p>In Inventory:</p> <ul style="list-style-type: none"> <li>Create new</li> <li>Create from existing</li> <li>Remove</li> </ul> <p>In Provisioning:</p> <ul style="list-style-type: none"> <li>Customize</li> <li>Deploy template</li> <li>Read customization specifications</li> <li>Clone Template</li> <li>Clone Virtual Machine</li> </ul>
Resource	Assign virtual machine to resource pool
Global	<p>Act as vCenter Server</p> <p>The vCenter Server user requires this privilege even if you are not using ESXi host caching.</p>
Host	<p>The following <b>Host</b> privilege is required to implement ESXi host caching. If you do not use View Storage, you do not need this privilege.</p> <p>In Configuration:</p> <ul style="list-style-type: none"> <li>Advanced settings</li> </ul>
Profile Driven Storage (If you are using vSAN datastores or Virtual Volumes)	(all)



Now go to Global Permissions – Add User or Group and assign Horizon role we created before.



Now this user or group will have access to vCenter with the permission we granted before.

### **DISALLOW NON-EMPTY POOL DELETION:**

Configure View to Disallow the Deletion of a Desktop Pool That Contains Desktop Machines at VMware Docs.

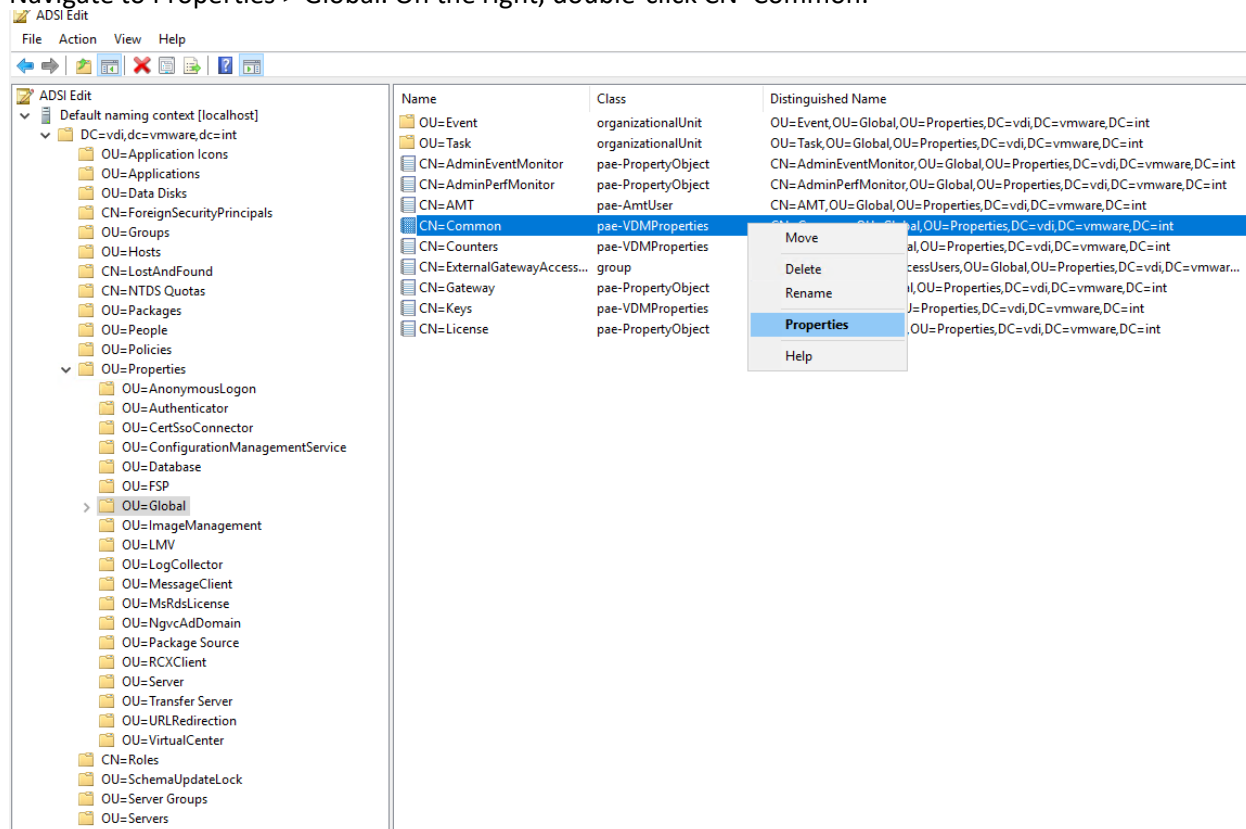
On the Horizon Connection Server, run ADSI Edit.

Right-click ADSI Edit and click Connect to...

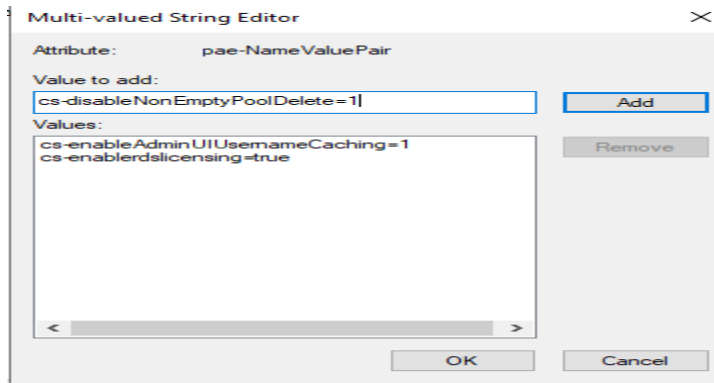
Change the first selection to Select or type a Distinguished Name and enter dc=vdi,dc=vmware,dc=int.

Change the second selection to Select or type a domain or server and enter localhost. Click OK.

Navigate to Properties > Global. On the right, double-click CN=Common.







Click Add – OK

### **HELP DESK TOOL TIMING PROFILER:**

<https://docs.vmware.com/en/VMware-Horizon-7/7.9/horizon-administration/GUID-256CFA52-E742-4A3F-8F3E-6DE9CEDE5272.html>

Horizon Help Desk Tool is a Web application that you can use to get the status of Horizon 7 user sessions and to perform troubleshooting and maintenance operations.

In Horizon Help Desk Tool, you can look up user sessions to troubleshoot problems and perform desktop maintenance operations such as restart or reset desktops.

To configure Horizon Help Desk Tool, you must meet the following requirements:

- Horizon Enterprise edition license or Horizon Apps Advanced edition license for Horizon 7. To verify that you have the correct license, see [Verify Horizon Help Desk Tool License](#).
- An event database to store information about Horizon 7 components. For more information about configuring an event database, see the *Horizon 7 Installation* document.
- The Help Desk Administrator role or the Help Desk Administrator (Read Only) role to log in to Horizon Help Desk Tool. For more information on these roles see, [Configure Role-Based Access for Horizon Help Desk Tool](#)
- Enable the timing profiler on each Connection Server instance to view logon segments.

Use the following `vdmadmin` command to enable the timing profiler on each Connection Server instance:

```
vdmadmin -I -timingProfiler -enable
```

Run this command on both connection server (standard and replica)

Administrator: Command Prompt

```
Microsoft Windows [Version 10.0.17763.1432]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\ADMINISTRATOR.RAMLAN>vdmadmin -I -timingProfiler -enable
Successfully enabled timing profiler.

C:\Users\ADMINISTRATOR.RAMLAN>
```

### **INSTALLING HORIZON CLIENT:**

We will install Horizon Client on workstation for regular use. This can be automated through SCCM as well. If you have few clients it is worth manual install.

Click the Exe and follow required input

[VMware-Horizon-Client-2006-8.0.0-16531419](#)



# VMware Horizon®

Version 2006

You must agree to the [Privacy Agreement](#) and [License Terms](#) before you can install the product

Agree & Install



[Customize Installation](#)

# VMware Horizon®

Version 2006

## Where to install





C:\Program Files (x86)\VMware\VMware Horizon View Client



## Internet Protocol

- ☒ IPv4
- ☐ IPv6
- ☐ Automatic Selection

## Additional features

- ☒ USB Redirection 
- ☒ Log in as current user 
  - ☒ Show "Log in as current user" menu option 
  - ☒ Set default to "Log in as current user" 

## Default connection server

CONN1.RAMLAN.CA

## Virtualization Pack for Skype for Business

- ☒ Virtualization Pack for Skype for Business 

## 32-bit Core Remote Experience

- ☐ Install 32-bit Core Remote Experience on this 64-bit machine 

## Support for HTML5 Multimedia Redirection and Browser Redirection

- ☒ Install Support for HTML5 Multimedia Redirection and Browser Redirection 

## Enable Media Optimization for Microsoft Teams

- ☒ Media Optimization for Microsoft Teams 

You must agree to the [Privacy Agreement](#) and [License Terms](#) before you can install the product

Agree & Install



Installing VMware Horizon HTML5 Multimedia Redirection Client

[Cancel Installation](#)

Success!



Finish



You must restart your system for the configuration changes made to VMware Horizon Client to take effect.

Restart Now

[Restart Later](#)

VMware Horizon Client

New Server



CONN1.RAMLAN.CA



CONN2.RAMLAN.CA

Disclaimer

<https://CONN1.RAMLAN.CA>

Welcome to Horizon View 8 Lab hosted by RAMLAN INC.

Cancel

Accept

Login

Server: <https://CONN1.RAMLAN.CA>

User name: administrator

Password: ••••••••

Cancel

Login

## VMWARE COMPOSER VIRTUAL MACHINE:

We will create a virtual machine running Windows Server 2019 – install all the updates – install SQL 2019 and have it ready for Composer install. The server will have 8GB memory and 250GB Hard Disk. We will use this server for Creating Database for Composer and EventLog as well. Will be using ODBC connection for Composer Database and EventLog Database.

Here, I am cloning a virtual machine for Composer.

### 2019Template - Clone Existing Virtual Machine

1 Select a name and folder

2 Select a compute resource

3 Select storage

4 Select clone options

5 Ready to complete

Select a name and folder

Specify a unique name and target location

Virtual machine name:

Select a location for the virtual machine.

VC.RAMLAN.CA

> Toronto

CANCEL

BACK

NEXT

### 2019Template - Clone Existing Virtual Machine

✓ 1 Select a name and folder

2 Select a compute resource

3 Select storage

4 Select clone options

5 Ready to complete

Select a compute resource

Select the destination compute resource for this operation

Toronto

> Nested

> Others

> Standalone

esx2.ramlan.ca

> vSAN

Compatibility

✓ Compatibility checks succeeded.

CANCEL

BACK

NEXT

## 2019Template - Clone Existing Virtual Machine

- ✓ 1 Select a name and folder
- ✓ 2 Select a compute resource
- 3 Select storage**
- 4 Select clone options
- 5 Ready to complete

### Select storage

Select the storage for the configuration and disk files

Configure per disk ☐

Select virtual disk format:

Same format as source

VM Storage Policy:

Keep existing VM storage policies

Name	Capacity	Provisioned	Free	Type	Cluster
datastore1	104.75 GB	447.53 GB	66.59 GB	VMFS 6	
Datastore5	999.75 GB	24.39 GB	975.36 GB	VMFS 6	
SATAHD	465.5 GB	1.01 TB	345.31 GB	VMFS 6	

### Compatibility

✓ Compatibility checks succeeded.

CANCEL

BACK

NEXT

## 2019Template - Clone Existing Virtual Machine

- ✓ 1 Select a name and folder
- ✓ 2 Select a compute resource
- ✓ 3 Select storage
- 4 Select clone options**
- 5 Customize hardware
- 6 Ready to complete

### Select clone options

Select further clone options

- ☐ Customize the operating system
- ☒ Customize this virtual machine's hardware
- ☐ Power on virtual machine after creation

CANCEL

BACK

NEXT

## 2019Template - Clone Existing Virtual Machine

- ✓ 1 Select a name and folder
- ✓ 2 Select a compute resource
- ✓ 3 Select storage
- ✓ 4 Select clone options
- 5 Customize hardware**
- 6 Ready to complete

Customize hardware  
Configure the virtual machine hardware

Virtual Hardware VM Options

ADD NEW DEVICE

> CPU	2		
> Memory *	8	GB	
> Hard disk 1	250	GB	
> SCSI controller 0	LSI Logic SAS		
> Network adapter 1	VM Network		<input checked="" type="checkbox"/> Connect...
> CD/DVD drive 1 *	Client Device		<input type="checkbox"/> Connect...
> USB xHCI controller	USB 3.1		
> Video card	Specify custom settings		
> Security Devices	Not Configured		
VMCI device			
SATA controller 0 AHCI			
> Other	Additional Hardware		

CANCEL

BACK

NEXT

## 2019Template - Clone Existing Virtual Machine

- ✓ 1 Select a name and folder**
- ✓ 2 Select a compute resource
- ✓ 3 Select storage
- ✓ 4 Select clone options
- ✓ 5 Customize hardware
- 6 Ready to complete**

Ready to complete  
Click Finish to start creation.

Source virtual machine	2019Template
Virtual machine name	COMP
Folder	Toronto
Host	esx2.ramlan.ca
Datastore	SATAHD
Disk storage	Same format as source
Hard disk 1 (250 GB)	SATAHD (Same format as source)

CANCEL

BACK

FINISH

Recent Tasks		Alarms							
Task Name	Target	Status	Details	Initiator	Queued For	Start Time	Completion Time		
Scan entity	vsan	✓ Completed		com.vmware.vsan.health	15 ms	08/28/2020, 3:14:51 PM	08/28/2020, 3:15:11 PM		
Validate the cluster specification	vsan	✓ Completed		com.vmware.vsan.health	7 ms	08/28/2020, 3:10:15 PM	08/28/2020, 3:10:15 PM		
Clone virtual machine	2019Template	✓ Completed	Copying Virtual Machine configuration	VSPHERELOCAL\Admi...	4 ms	08/28/2020, 3:06:18 PM	08/28/2020, 3:16:46 PM		

Power on the VM.

COMP

ACTIONS

Summary

Monitor

Configure

Permissions

Datastores


Networks

Snapshots

Updates

Guest OS

ACTIONS



LAUNCH REMOTE CONSOLE

LAUNCH WEB CONSOLE

Power Status

Powered On

Guest OS

Microsoft Windows Server 2019 (64-bit) - VBS true

Encryption

Not encrypted

VMware Tools

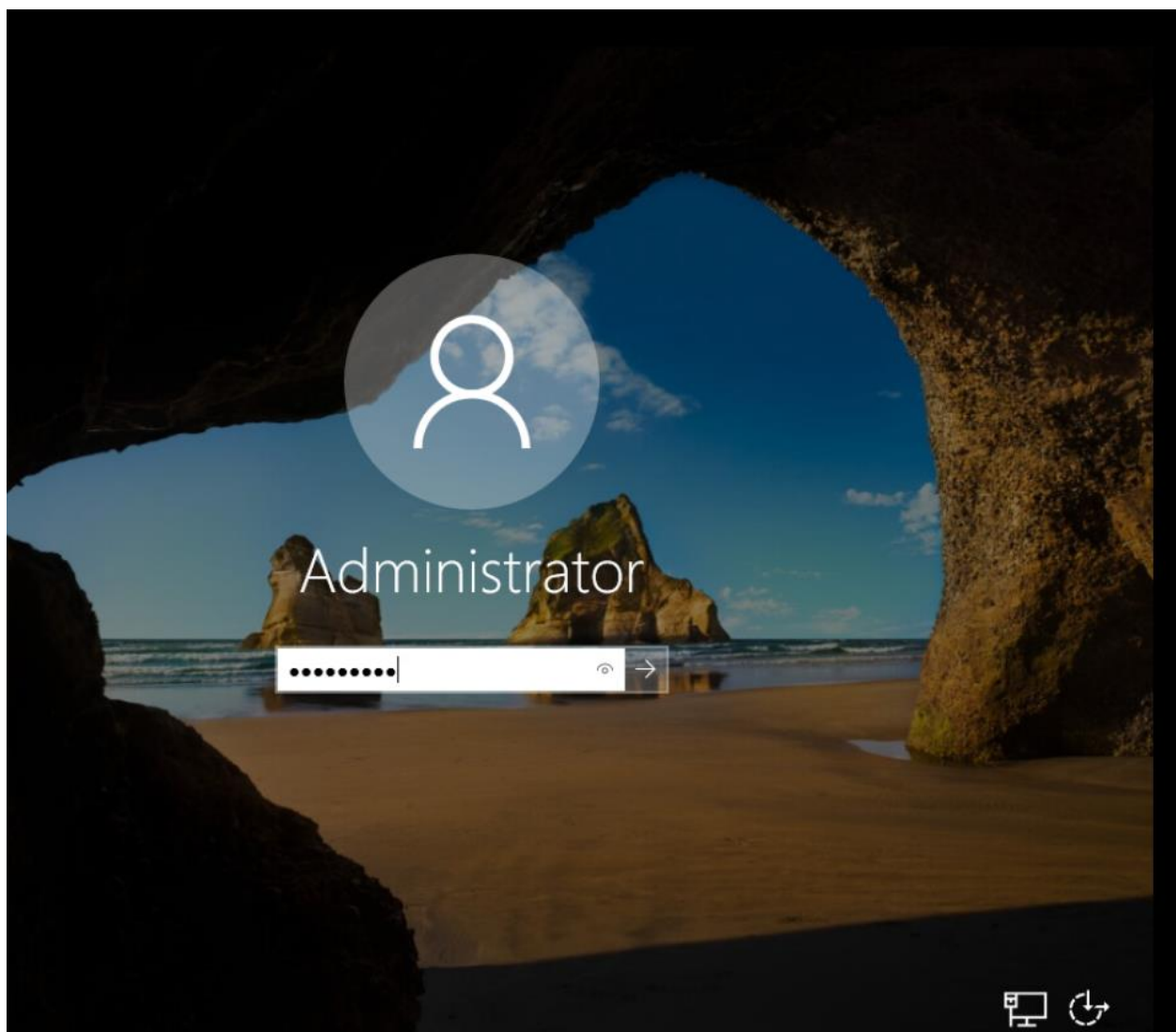
Not running, not installed

DNS Name

--

IP Addresses

--





Server Manager ▸ Local Server

Dashboard  
Local Server  
All Servers  
File and Storage Services ▸

PROPERTIES  
For COMP

Computer name	COMP	Last installed updates	20-Aug-2020 2:07 PM
Domain	RAMLAN.CA	Windows Update	Download updates only, using Windows Update
		Last checked for updates	20-Aug-2020 2:08 PM
Windows Defender Firewall	Domain: Off	Windows Defender Antivirus	Real-Time Protection: On
Remote management	Enabled	Feedback & Diagnostics	Settings
Remote Desktop	Enabled	IE Enhanced Security Configuration	Off
NIC Teaming	Disabled	Time zone	(UTC-05:00) Eastern Time (US & Canada)
Ethernet0	192.168.0.134	Product ID	00430-00000-00000-AA379 (activated)
Operating system version	Microsoft Windows Server 2019 Datacenter	Processors	Intel(R) Core(TM) i5-3470 CPU @ 3.20GHz
Hardware information	VMware, Inc. VMware7,1	Installed memory (RAM)	8 GB
		Total disk space	249.4 GB

TASKS ▾

Settings

Home

Find a setting


Update & Security

- Windows Update
- Delivery Optimization
- Windows Security
- Troubleshoot
- Recovery
- Activation
- For developers

## Windows Update

\*Some settings are managed by your organization  
[View configured update policies](#)

Looking for info on the latest updates?  
[Learn more](#)

 **Updates available**  
Last checked: Today, 3:43 PM

Security Intelligence Update for Microsoft Defender Antivirus - KB2267602 (Version 1.323.56.0)  
**Status:** Downloading - 13%

2020-08 Cumulative Update Preview for .NET Framework 3.5, 4.7.2 and 4.8 for Windows Server 2019 for x64 (KB4571462)  
**Status:** Pending download

\*We'll automatically download updates, except on metered connections (where charges may apply). In that case, we'll automatically download only those updates required to keep Windows running smoothly. We'll ask you to install updates after they've been downloaded.

[Change active hours](#)  
[View update history](#)  
[Advanced options](#)

Related links  
[Check Storage](#)  
[OS build info](#)

Settings

Home


Find a setting

Update & Security

- Windows Update
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- Windows Security
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- Recovery
- Activation
- For developers

## Windows Update

\*Some settings are managed by your organization  
[View configured update policies](#)

 **You're up to date**  
Last checked: Today, 5:35 PM

[Check for updates](#)

[Check online for updates from Microsoft Update.](#)

\*We'll automatically download updates, except on metered connections (where charges may apply). In that case, we'll automatically download only those updates required to keep Windows running smoothly. We'll ask you to install updates after they've been downloaded.

[Change active hours](#)  
[View update history](#)  
[Advanced options](#)

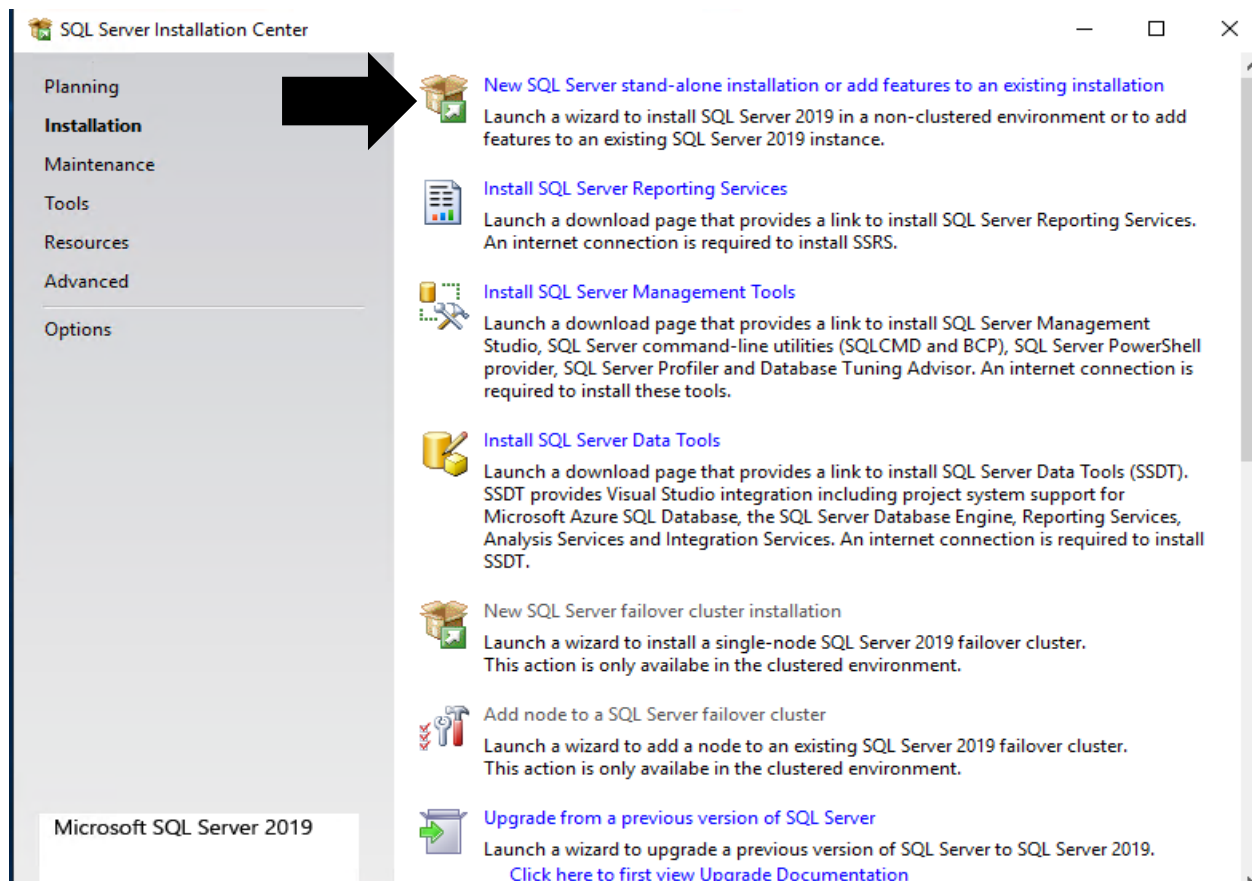
Once the updates are installed, I will perform SQL 2019 installation and SSMS.

Microsoft SQL Server 2019 Express	✓
Microsoft SQL Server 2019 Standard	✓
Microsoft SQL Server 2019 Enterprise	✓

## Composer System Requirements

Hardware Component	Required	Recommended
Processor	1.4 GHz or faster Intel 64 or AMD 64 processor with 2 CPUs	2GHz or faster and 4 CPUs
Networking	One or more 10/100Mbps network interface cards (NICs)	1Gbps NICs
Memory	4GB RAM or higher	8GB RAM or higher for deployments of 50 or more remote desktops
Disk space	40GB	60GB

Name	Date modified	Type	Size
1033_ENU_LP	24-Sep-2019 11:51...	File folder	
redist	24-Sep-2019 11:15...	File folder	
resources	24-Sep-2019 10:09...	File folder	
Tools	25-Sep-2019 12:28...	File folder	
x64	25-Sep-2019 6:46 ...	File folder	
autorun.inf	24-Sep-2019 10:32...	Setup Information	1 KB
MediaInfo.xml	24-Sep-2019 10:32...	XML Document	1 KB
setup.exe	24-Sep-2019 10:32...	Application	124 KB
setup.exe.config	24-Sep-2019 10:32...	CONFIG File	1 KB
SqlSetupBootstrapper.dll	24-Sep-2019 10:32...	Application extens...	216 KB



The image shows the SQL Server Installation Center (SSIC) window. On the left is a navigation pane with the following options: Planning, Installation, Maintenance, Tools, Resources, Advanced, and Options. A large black arrow points from the 'Installation' option to the main content area. The main content area lists several installation options, each with an icon and a description:

- New SQL Server stand-alone installation or add features to an existing installation**: Launch a wizard to install SQL Server 2019 in a non-clustered environment or to add features to an existing SQL Server 2019 instance.
- Install SQL Server Reporting Services**: Launch a download page that provides a link to install SQL Server Reporting Services. An internet connection is required to install SSRS.
- Install SQL Server Management Tools**: Launch a download page that provides a link to install SQL Server Management Studio, SQL Server command-line utilities (SQLCMD and BCP), SQL Server PowerShell provider, SQL Server Profiler and Database Tuning Advisor. An internet connection is required to install these tools.
- Install SQL Server Data Tools**: Launch a download page that provides a link to install SQL Server Data Tools (SSDT). SSDT provides Visual Studio integration including project system support for Microsoft Azure SQL Database, the SQL Server Database Engine, Reporting Services, Analysis Services and Integration Services. An internet connection is required to install SSDT.
- New SQL Server failover cluster installation**: Launch a wizard to install a single-node SQL Server 2019 failover cluster. This action is only available in the clustered environment.
- Add node to a SQL Server failover cluster**: Launch a wizard to add a node to an existing SQL Server 2019 failover cluster. This action is only available in the clustered environment.
- Upgrade from a previous version of SQL Server**: Launch a wizard to upgrade a previous version of SQL Server to SQL Server 2019. [Click here to first view Upgrade Documentation](#)

At the bottom left of the window, it says 'Microsoft SQL Server 2019'.

## Product Key

Specify the edition of SQL Server 2019 to install.

### Product Key

License Terms

Global Rules

Microsoft Update

Product Updates

Install Setup Files

Install Rules

Feature Selection

Feature Rules

Feature Configuration Rules

Ready to Install

Installation Progress

Complete

Validate this instance of SQL Server 2019 by entering the 25-character key from the Microsoft certificate of authenticity or product packaging. You can also specify a free edition of SQL Server: Developer, Evaluation, or Express. Evaluation has the largest set of SQL Server features, as documented in SQL Server Books Online, and is activated with a 180-day expiration. Developer edition does not have an expiration, has the same set of features found in Evaluation, but is licensed for non-production database application development only. To upgrade from one installed edition to another, run the Edition Upgrade Wizard.

☐ Specify a free edition:

Evaluation

☒ Enter the product key:

< Back

Next >

Cancel

## License Terms

To install SQL Server 2019, you must accept the Microsoft Software License Terms.

Product Key

**License Terms**

Global Rules

Microsoft Update

Product Updates

Install Setup Files

Install Rules

Feature Selection

Feature Rules

Feature Configuration Rules

Ready to Install

Installation Progress

Complete

### MICROSOFT SOFTWARE LICENSE TERMS

#### MICROSOFT SQL SERVER 2019 ENTERPRISE

These license terms are an agreement between you and Microsoft Corporation (or one of its affiliates). They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft services or software updates (except to the extent such services or updates are accompanied by new or additional terms, in which case those different terms apply prospectively and do not alter your or Microsoft's rights relating to pre-updated software or services). **IF YOU COMPLY WITH THESE LICENSE TERMS, YOU HAVE THE RIGHTS BELOW FOR EACH SERVER YOU**



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Print

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Notice: A paid SQL Server edition product key has been provided for the current action - Enterprise. Please ensure you are entitled to this SQL Server edition with proper licensing in place for the product key (edition) supplied.

SQL Server transmits information about your installation experience, as well as other usage and performance data, to Microsoft to help improve the product. To learn more about data processing and privacy controls, and to turn off the collection of this information after installation, see the [documentation](#).

< Back

Next >

Cancel

## Microsoft Update

Use Microsoft Update to check for important updates

Product Key  
License Terms  
Global Rules  
**Microsoft Update**  
Product Updates  
Install Setup Files  
Install Rules  
Feature Selection  
Feature Rules  
Feature Configuration Rules  
Ready to Install  
Installation Progress  
Complete

Microsoft Update offers security and other important updates for Windows and other Microsoft software, including SQL Server 2019. Updates are delivered using Automatic Updates, or you can visit the Microsoft Update website.

☒ Use Microsoft Update to check for updates (recommended)

[Microsoft Update FAQ](#)

[Microsoft Update Privacy Statement](#)

< Back

Next >

Cancel

## Install Rules

Setup rules identify potential problems that might occur while running Setup. Failures must be corrected before Setup can continue.

Product Key  
License Terms  
Global Rules  
Microsoft Update  
Product Updates  
Install Setup Files  
**Install Rules**  
Feature Selection  
Feature Rules  
Feature Configuration Rules  
Ready to Install  
Installation Progress  
Complete

Operation completed. Passed: 3. Failed 0. Warning 1. Skipped 0.

Hide details <<

Re-run

[View detailed report](#)

Result	Rule	Status
✓	Consistency validation for SQL Server registry keys	<a href="#">Passed</a>
✓	Computer domain controller	<a href="#">Passed</a>
⚠	Windows Firewall	<a href="#">Warning</a>
✓	SQL 2019 minimum CTP for Upgrade and Side by Side Support	<a href="#">Passed</a>

< Back

Next >

Cancel

## Feature Selection

Select the Enterprise features to install.

Product Key  
License Terms  
Global Rules  
Microsoft Update  
Product Updates  
Install Setup Files  
Install Rules  
**Feature Selection**  
Feature Rules  
Instance Configuration  
Server Configuration  
Database Engine Configuration  
Feature Configuration Rules  
Ready to Install  
Installation Progress  
Complete

Looking for Reporting Services? [Download it from the web](#)

Features:

### Instance Features

- ☒ Database Engine Services
  - ☐ SQL Server Replication
  - ☐ Machine Learning Services and Language
    - ☐ R
    - ☐ Python
    - ☐ Java
  - ☐ Full-Text and Semantic Extractions for Search
  - ☐ Data Quality Services
  - ☐ PolyBase Query Service for External Data
  - ☐ In-Memory OLAP

Feature description:

The configuration and operation of each instance feature of a SQL Server instance is isolated from other SQL Server instances. SQL

Prerequisites for selected features:

Already installed:

Windows PowerShell 3.0 or higher

To be installed from media:

Disk Space Requirements

Drive C: 1003 MB required, 232544 MB available

Select All

Unselect All

Instance root directory:

C:\Program Files\Microsoft SQL Server\

Shared feature directory:

C:\Program Files\Microsoft SQL Server\

Shared feature directory (x86):

C:\Program Files (x86)\Microsoft SQL Server\

< Back

Next >

Cancel

## Instance Configuration

Specify the name and instance ID for the instance of SQL Server. Instance ID becomes part of the installation path.

Product Key  
License Terms  
Global Rules  
Microsoft Update  
Product Updates  
Install Setup Files  
Install Rules  
Feature Selection  
Feature Rules  
**Instance Configuration**  
Server Configuration  
Database Engine Configuration  
Feature Configuration Rules  
Ready to Install  
Installation Progress  
Complete

☒ Default instance

☐ Named instance: MSSQLSERVER

Instance ID: MSSQLSERVER

SQL Server directory: C:\Program Files\Microsoft SQL Server\MSSQL15.MSSQLSERVER

Installed instances:

Instance Name	Instance ID	Features	Edition	Version

< Back

Next >

Cancel

## Server Configuration

Specify the service accounts and collation configuration.

Product Key  
License Terms  
Global Rules  
Microsoft Update  
Product Updates  
Install Setup Files  
Install Rules  
Feature Selection  
Feature Rules  
Instance Configuration  
**Server Configuration**  
Database Engine Configuration  
Feature Configuration Rules  
Ready to Install  
Installation Progress  
Complete

Service Accounts Collation

Microsoft recommends that you use a separate account for each SQL Server service.

Service	Account Name	Password	Startup Type
SQL Server Agent	NT AUTHORITY\SYSTEM		Automatic ▾
SQL Server Database Engine	NT AUTHORITY\SYSTEM		Automatic ▾
SQL Server Browser	NT AUTHORITY\LOCAL ...		Automatic ▾

☐ Grant Perform Volume Maintenance Task privilege to SQL Server Database Engine Service

This privilege enables instant file initialization by avoiding zeroing of data pages. This may lead to information disclosure by allowing deleted content to be accessed.

[Click here for details](#)

< Back

Next >

Cancel

## Server Configuration

Specify the service accounts and collation configuration.

Product Key  
License Terms  
Global Rules  
Microsoft Update  
Product Updates  
Install Setup Files  
Install Rules  
Feature Selection  
Feature Rules  
Instance Configuration  
**Server Configuration**  
Database Engine Configuration  
Feature Configuration Rules  
Ready to Install  
Installation Progress  
Complete

Service Accounts Collation

Database Engine:

Latin1\_General\_CI\_AS

Customize...

Latin1-General, case-insensitive, accent-sensitive, kanatype-insensitive, width-insensitive

< Back

Next >

Cancel

## Database Engine Configuration

Specify Database Engine authentication security mode, administrators, data directories, TempDB, MaxDOP, Memory, and FileStream settings.

Product Key  
License Terms  
Global Rules  
Microsoft Update  
Product Updates  
Install Setup Files  
Install Rules  
Feature Selection  
Feature Rules  
Instance Configuration  
Server Configuration  
**Database Engine Configuration**  
Feature Configuration Rules  
Ready to Install  
Installation Progress  
Complete

Server Configuration | Data Directories | TempDB | MaxDOP | Memory | FILESTREAM

Specify the authentication mode and administrators for the Database Engine.

Authentication Mode

- ☒ Windows authentication mode  
☐ Mixed Mode (SQL Server authentication and Windows authentication)

Specify the password for the SQL Server system administrator (sa) account.

Enter password:

Confirm password:

Specify SQL Server administrators

RAMLAN\Administrator (Administrator)  
COMP\Administrator (Administrator)  
RAMLAN\ram (Ram)  
RAMLAN\VADMIN (VADMIN)  
RAMLAN\HorizonAdmins (HorizonAdmins)

SQL Server administrators have unrestricted access to the Database Engine.

Add Current User

Add...

Remove

< Back

Next >

Cancel

## Ready to Install

Verify the SQL Server 2019 features to be installed.

Product Key  
License Terms  
Global Rules  
Microsoft Update  
Product Updates  
Install Setup Files  
Install Rules  
Feature Selection  
Feature Rules  
Instance Configuration  
Server Configuration  
Database Engine Configuration  
Feature Configuration Rules  
**Ready to Install**  
Installation Progress  
Complete

Ready to install SQL Server 2019:

Summary

- Edition: Enterprise
- Action: Install (Product Update)
- Prerequisites
  - Already installed:
    - Windows PowerShell 3.0 or higher
  - To be installed from media:
    - Microsoft Visual C++ 2017 Redistributable
- General Configuration
  - Features
    - Database Engine Services
  - Instance configuration
    - Instance Name: MSSQLSERVER
    - Instance ID: MSSQLSERVER
  - Instance IDs
    - SQL Database Engine: MSSQL15.MSSQLSERVER
    - Instance Directory: C:\Program Files\Microsoft SQL Server\

Configuration file path:

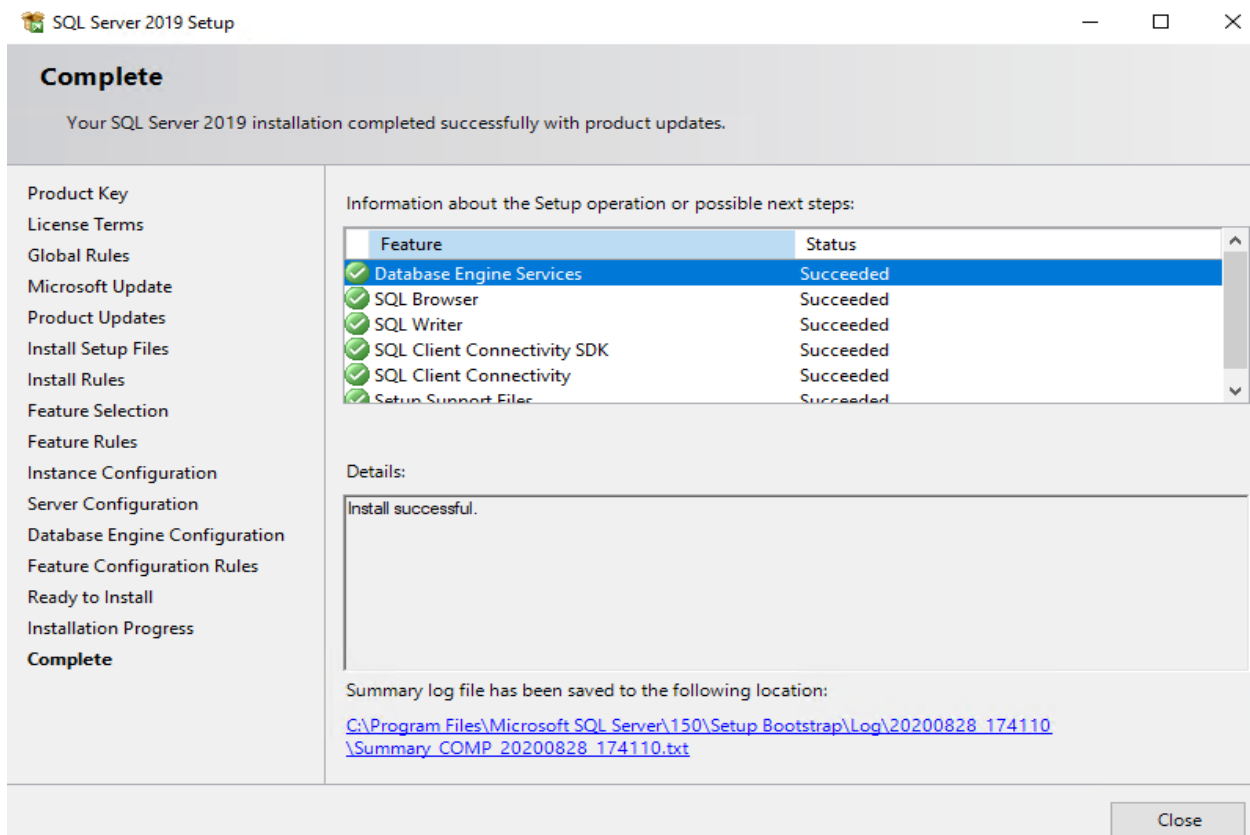
C:\Program Files\Microsoft SQL Server\150\Setup Bootstrap\Log\20200828\_174110\ConfigurationFile.ini

< Back

Install

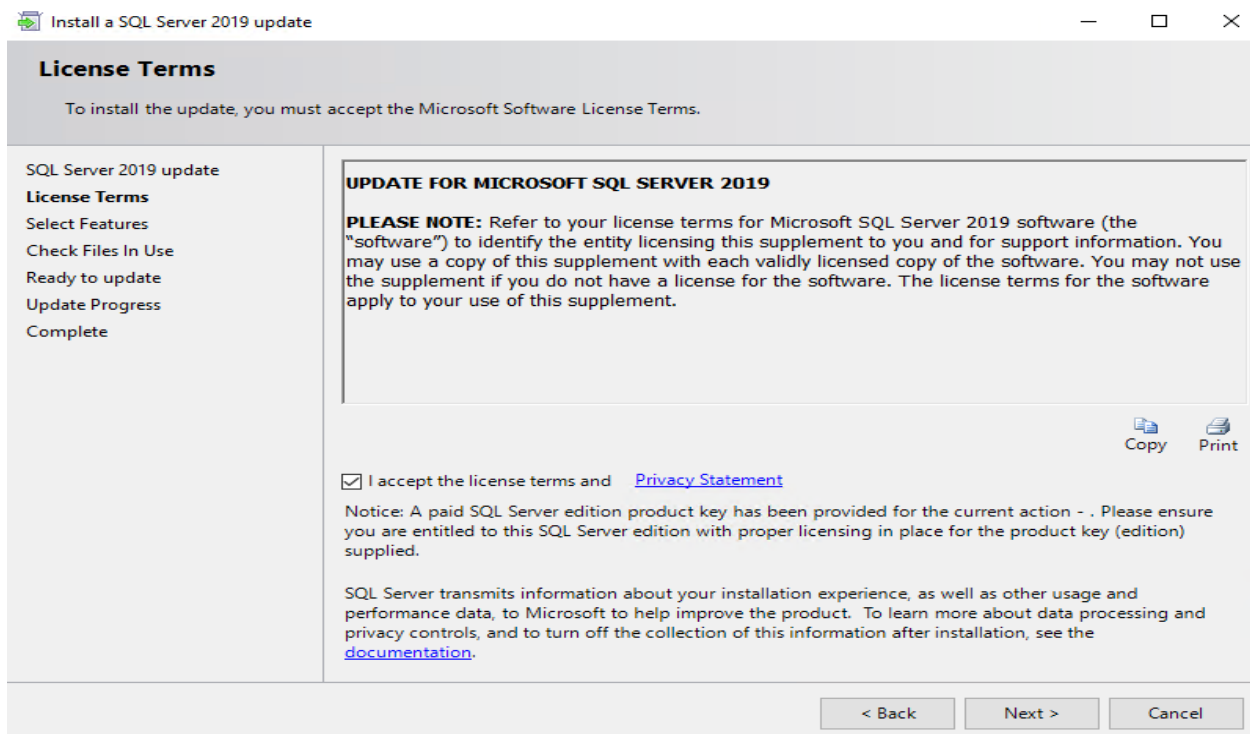
Cancel





Now will install KB4548597 CU4.

Name	Date modified	Type	Size
01 SQL Server 2019 x64.iso	01-Oct-2019 2:25 ...	WinRAR archive	1,393,286 KB
02 SQL Server 2019 CU4 KB4548597.exe	04-Apr-2020 1:17 ...	Application	585,545 KB
03 SSMS v18.5.exe	15-May-2020 3:47 ...	Application	547,615 KB



## Select Features

Specify the features to update.

SQL Server 2019 update

License Terms

**Select Features**

Check Files In Use

Ready to update

Update Progress

Complete

Instances:

- ☒ MSSQLSERVER
  - Database Engine Services
  - ☒ Shared Features
    - SQL Client Connectivity SDK

Description:

Language:

Edition:

Patch Level:

Architecture:

Service Pack:

Upgrade Status:

Select All

Unselect All

< Back

Next >

Cancel

## Check Files In Use

The following services and applications are using files that Setup needs to complete the installation. To avoid a computer restart, stop the applications and services.

SQL Server 2019 update

License Terms

Select Features

**Check Files In Use**

Ready to update

Update Progress

Complete

Files in use check completed.

Stop check

Refresh check

< Back

Next >

Cancel

## Ready to update

Verify the list of features to be updated.

SQL Server 2019 update

License Terms

Select Features

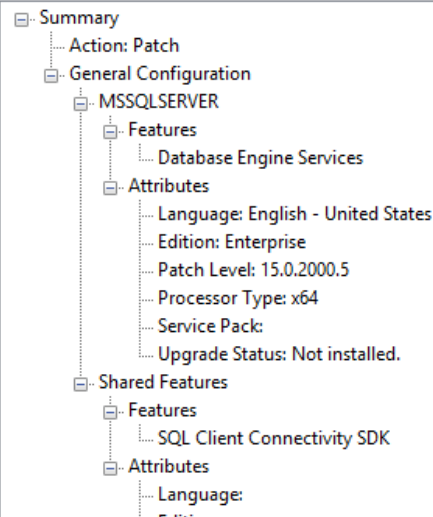
Check Files In Use

**Ready to update**

Update Progress

Complete

Ready to update:



Configuration file path:

< Back

Update

Cancel

## Complete

Your SQL Server 2019 update operation is complete.

SQL Server 2019 update

License Terms

Select Features

Check Files In Use

Ready to update

Update Progress

**Complete**

Information about the Setup operation or possible next steps:




Feature	Status
✓ Database Engine Services (MSSQLSERVER)	Succeeded
✓ SQL Browser (MSSQLSERVER)	Succeeded
✓ SQL Writer (MSSQLSERVER)	Succeeded
✓ Setup Support Files (MSSQLSERVER)	Succeeded

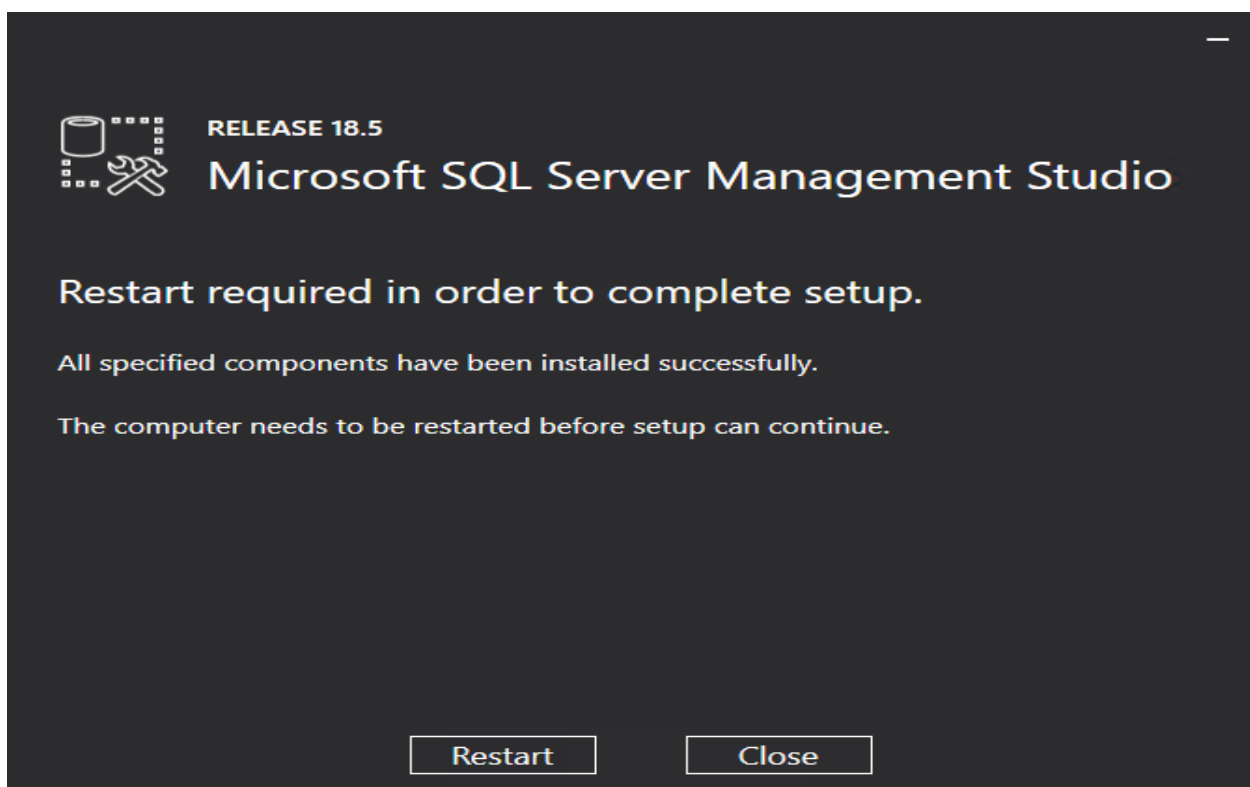
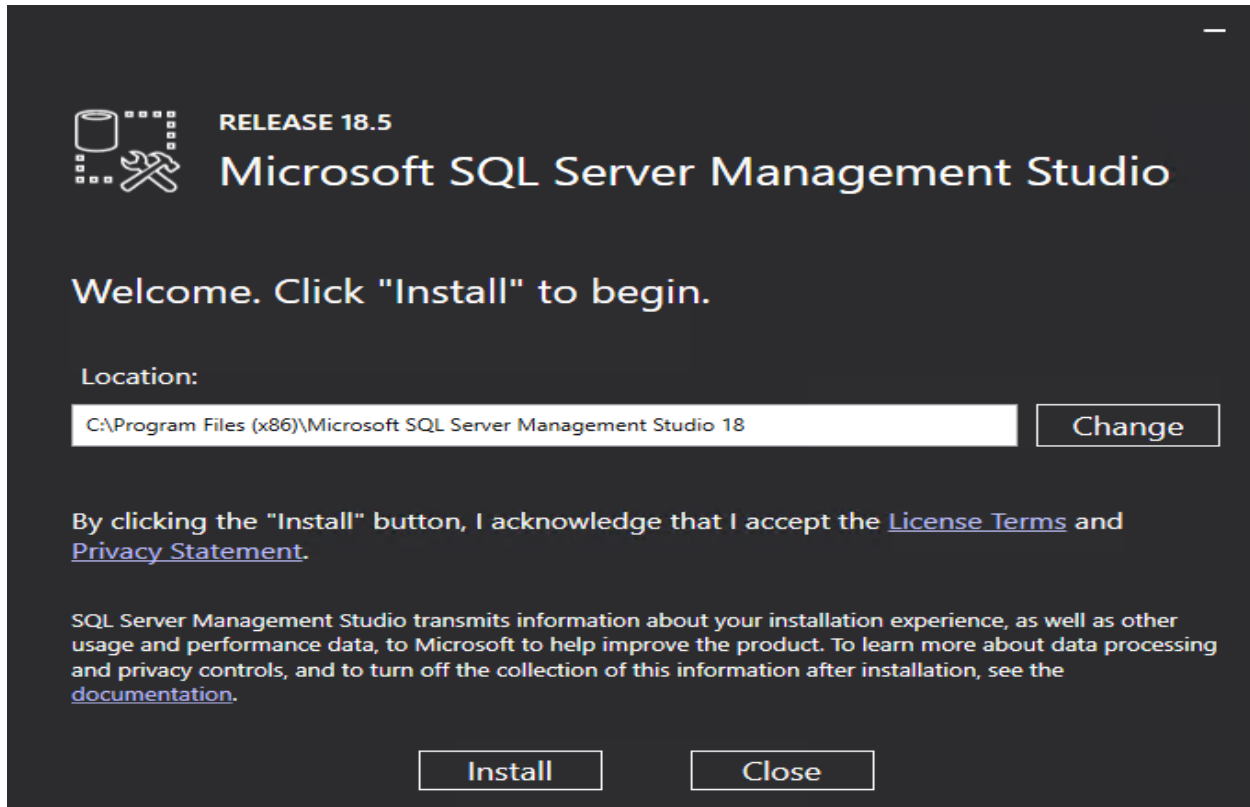
Summary log file has been saved to the following location:

[C:\Program Files\Microsoft SQL Server\150\Setup Bootstrap\Log\20200828\\_175327\Summary\\_COMP\\_20200828\\_175327.txt](C:\Program Files\Microsoft SQL Server\150\Setup Bootstrap\Log\20200828_175327\Summary_COMP_20200828_175327.txt)

Close

Now we will install SSMS

Name	Date modified	Type	Size
 01 SQL Server 2019 x64.iso	01-Oct-2019 2:25 ...	WinRAR archive	1,393,286 KB
 02 SQL Server 2019 CU4 KB4548597.exe	04-Apr-2020 1:17 ...	Application	585,545 KB
 03 SSMS v18.5.exe	15-May-2020 3:47 ...	Application	547,615 KB



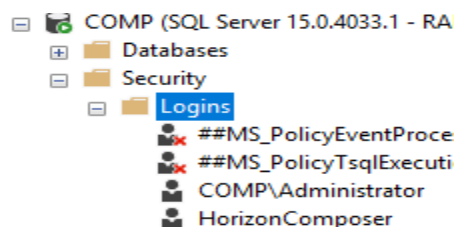
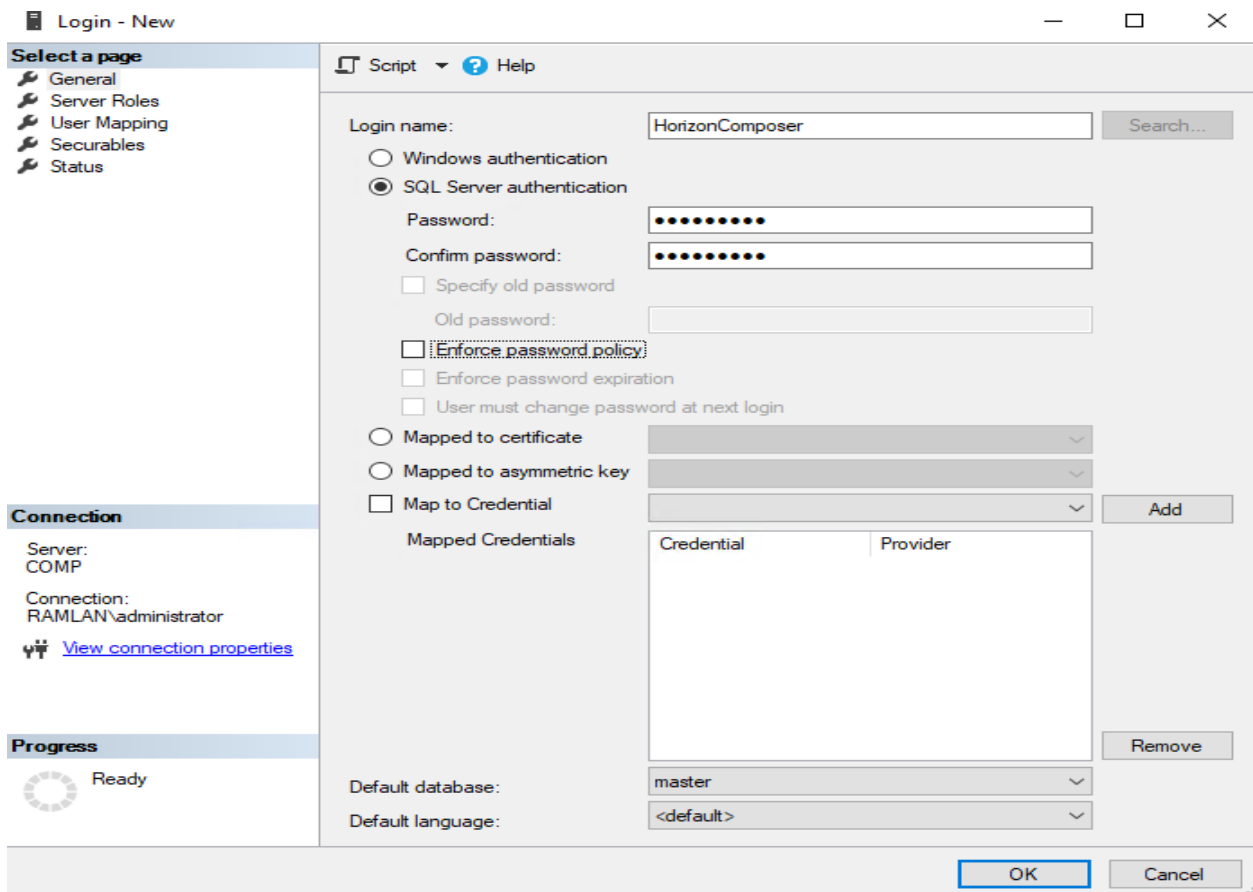
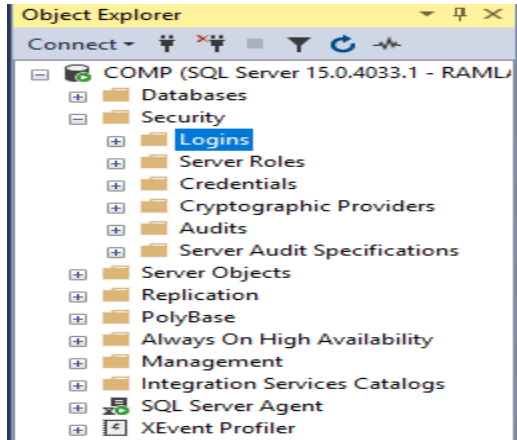
## DATABASE & EVENTLOG CONFIGURATION:

Now we will create SA account which will be local and then complete EventLog Configuration.

### Create a local user

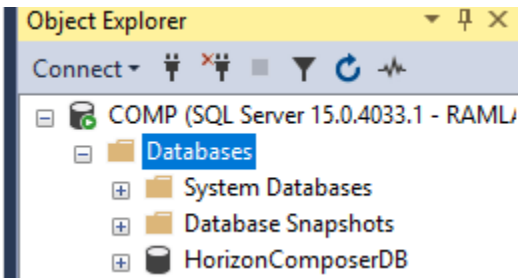
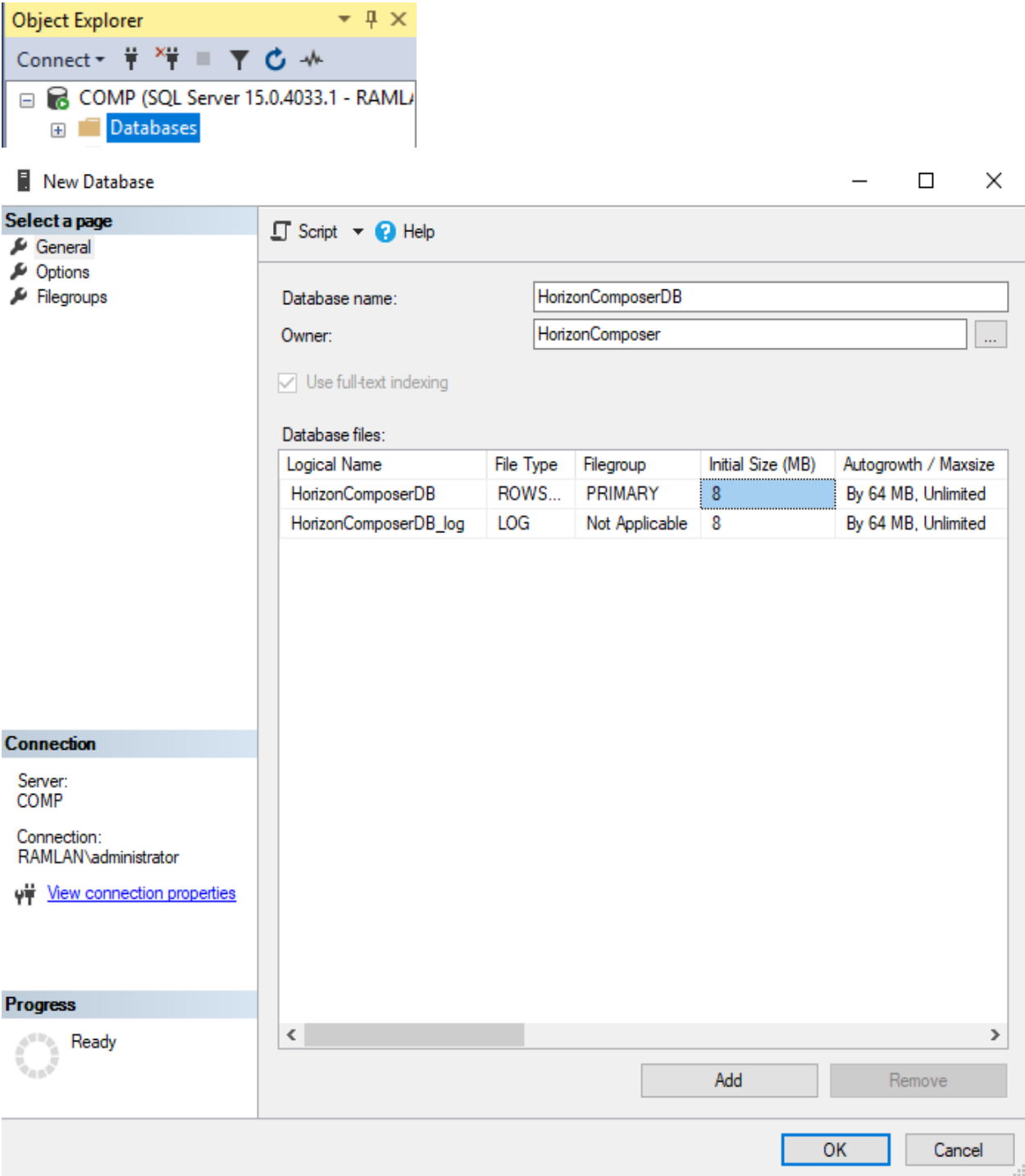
In View Composer only SQL local accounts are supported thus domain accounts can't be used.

Expand Security item and right click Logins. Select New login to create a new local user.



Create the database

Right click Databases and select New Database.



Right click the SQL Server name and select Properties.

Server Properties - COMP

Select a page

- General
- Memory
- Processors
- Security
- Connections
- Database Settings
- Advanced
- Permissions

Connection

Server: COMP

Connection: RAMLAN\administrator

[View connection properties](#)

Progress

Ready

Script Help

Server authentication

☐ Windows Authentication mode

☒ SQL Server and Windows Authentication mode

Login auditing

☐ None

☒ Failed logins only

☐ Successful logins only

☐ Both failed and successful logins

Server proxy account

☐ Enable server proxy account

Proxy account:

Password:

Options

☐ Enable Common Criteria compliance

☐ Enable C2 audit tracing

☐ Cross database ownership chaining

OK Cancel

Microsoft SQL Server Management Studio

Some of your configuration changes will not take effect until SQL Server is restarted.

Copy message

OK

Restart the server.

### Create SQL DB ODBC Connection

Access the Windows Server where the View Composer will be installed, open the Administrative Tools folder and double click ODBC Data Sources (64-bit) item.

ODBC Data Source Administrator (64-bit)

User DSN System DSN File DSN Drivers Tracing Connection Pooling About

System Data Sources:

Name	Platform	Driver
------	----------	--------

Add...

Remove


Configure...

An ODBC System data source stores information about how to connect to the indicated data provider. A System data source is visible to all users on this machine, including NT services.

OK Cancel Apply Help



## Create New Data Source




Select a driver for which you want to set up a data source.

Name	Version
ODBC Driver 17 for SQL Server	2017.175.01.01
<b>SQL Server</b>	10.00.17763.01
SQL Server Native Client 11.0	2011.110.7462.06
SQL Server Native Client RDA 11.0	2011.110.5069.66

< >

< Back Finish Cancel

## Create a New Data Source to SQL Server



This wizard will help you create an ODBC data source that you can use to connect to SQL Server.

What name do you want to use to refer to the data source?

Name:

How do you want to describe the data source?


Description:

Which SQL Server do you want to connect to?

Server:

Finish Next > Cancel Help

## Create a New Data Source to SQL Server



How should SQL Server verify the authenticity of the login ID?

☐ With Windows NT authentication using the network login ID.

☒ With SQL Server authentication using a login ID and password entered by the user.

To change the network library used to communicate with SQL Server, click Client Configuration.

Client Configuration...

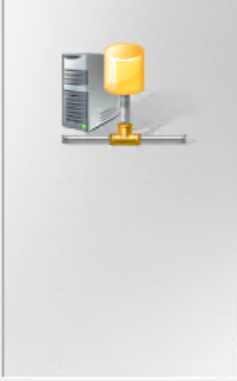
☒ Connect to SQL Server to obtain default settings for the additional configuration options.

Login ID:

Password:

< Back Next > Cancel Help

Create a New Data Source to SQL Server



☒ Change the default database to:  
HorizonComposerDB

☐ Attach database filename:  
\_\_\_\_\_

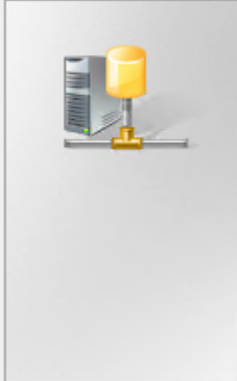
☒ Use ANSI quoted identifiers.

☒ Use ANSI nulls, paddings and warnings.

☐ Use the failover SQL Server if the primary SQL Server is not available.

< Back   Next >   Cancel   Help

Create a New Data Source to SQL Server



☐ Change the language of SQL Server system messages to:  
English

☐ Use strong encryption for data

☒ Perform translation for character data

☐ Use regional settings when outputting currency, numbers, dates and times.

☐ Save long running queries to the log file:  
C:\Users\ADMINI~1.RAM\AppData\Local\Temp\G   Browse...  
Long query time (milliseconds): 30000

☐ Log ODBC driver statistics to the log file:  
C:\Users\ADMINI~1.RAM\AppData\Local\Temp\S   Browse...

< Back   Finish   Cancel   Help

ODBC Microsoft SQL Server Setup



A new ODBC data source will be created with the following configuration:

Microsoft SQL Server ODBC Driver Version 10.00.17763

Data Source Name: HorizonComposerDB  
Data Source Description: Horizon Composer DB  
Server: COMP  
Database: HorizonComposerDB  
Language: (Default)  
Translate Character Data: Yes  
Log Long Running Queries: No  
Log Driver Statistics: No  
Use Regional Settings: No  
Prepared Statements Option: Drop temporary procedures on disconnect  
Use Failover Server: No  
Use ANSI Quoted Identifiers: Yes  
Use ANSI Null, Paddings and Warnings: Yes  
Data Encryption: No

Test Data Source...   OK   Cancel

SQL Server ODBC Data Source Test



Test Results

Microsoft SQL Server ODBC Driver Version 10.00.17763

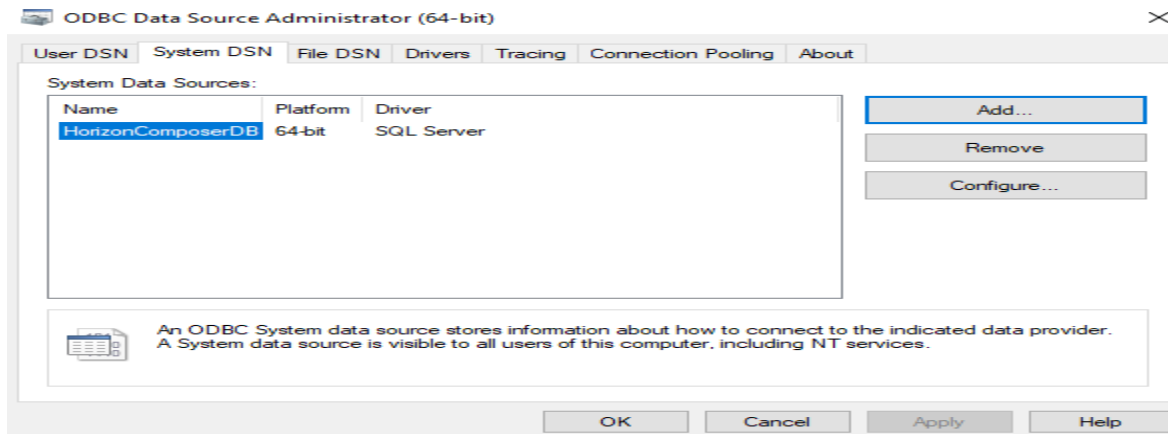
Running connectivity tests...

Attempting connection  
Connection established  
Verifying option settings  
Disconnecting from server

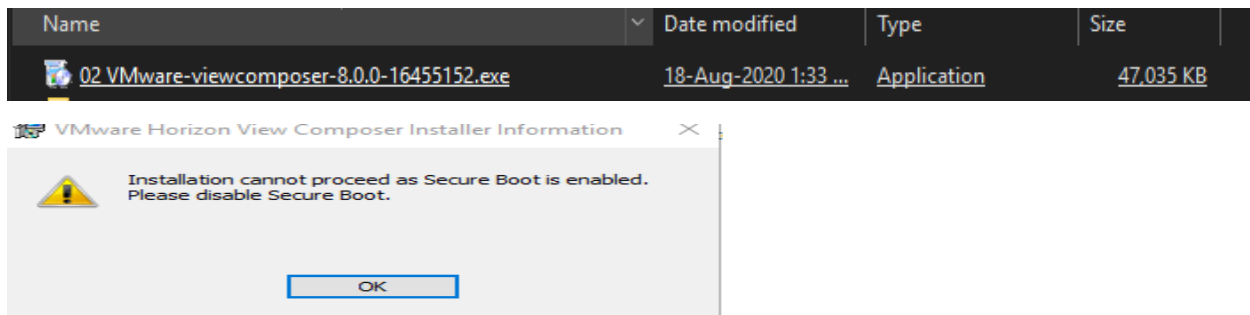
TESTS COMPLETED SUCCESSFULLY!

OK

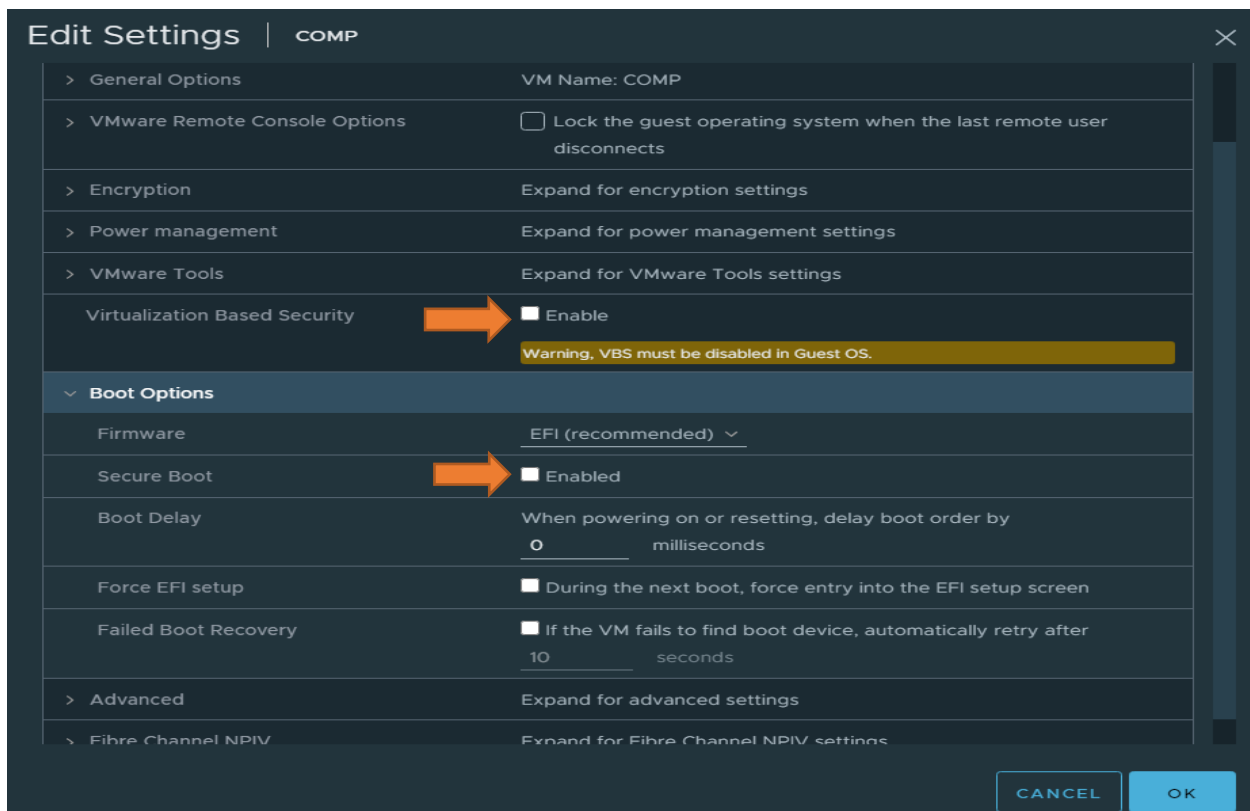
The new System DSN has been created. Click OK.



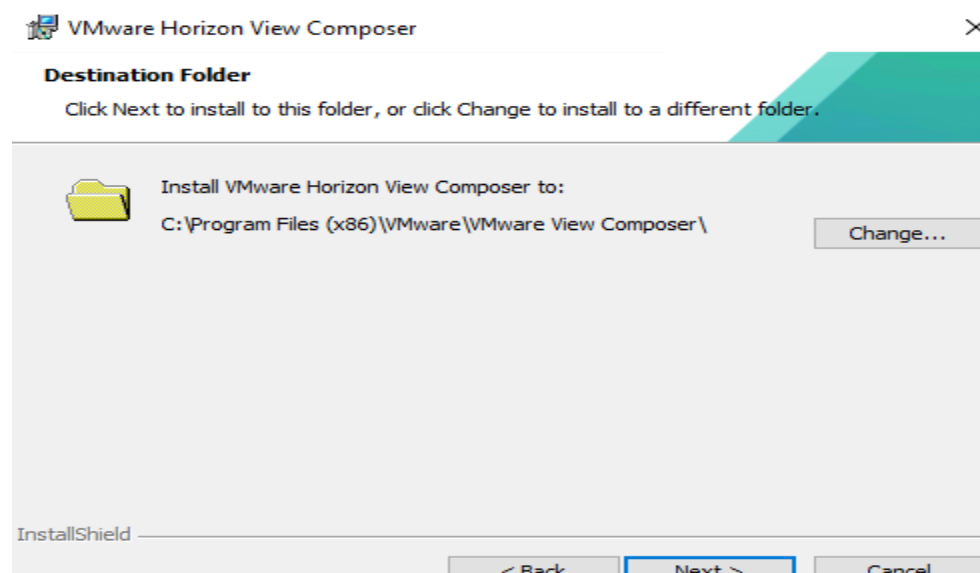
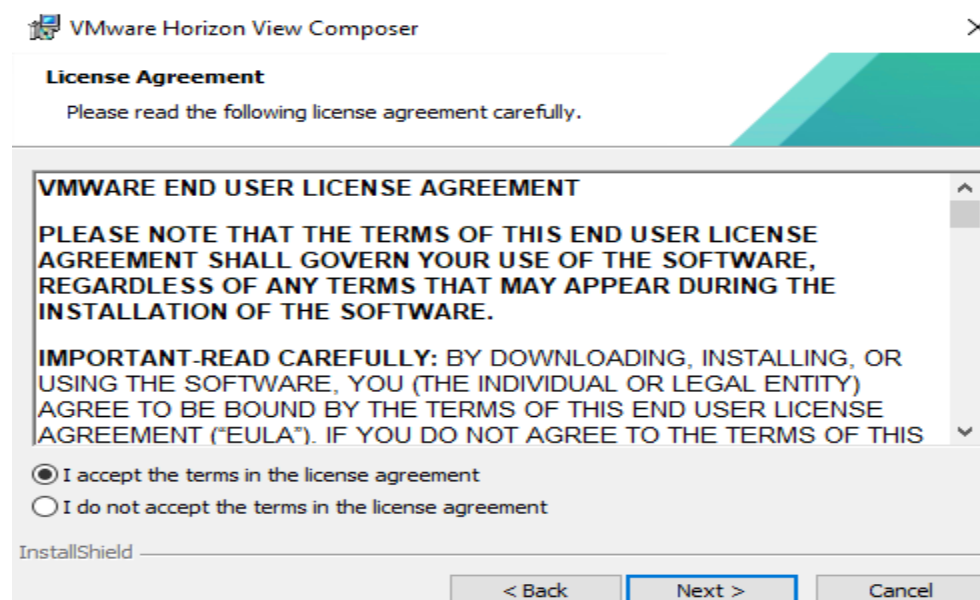
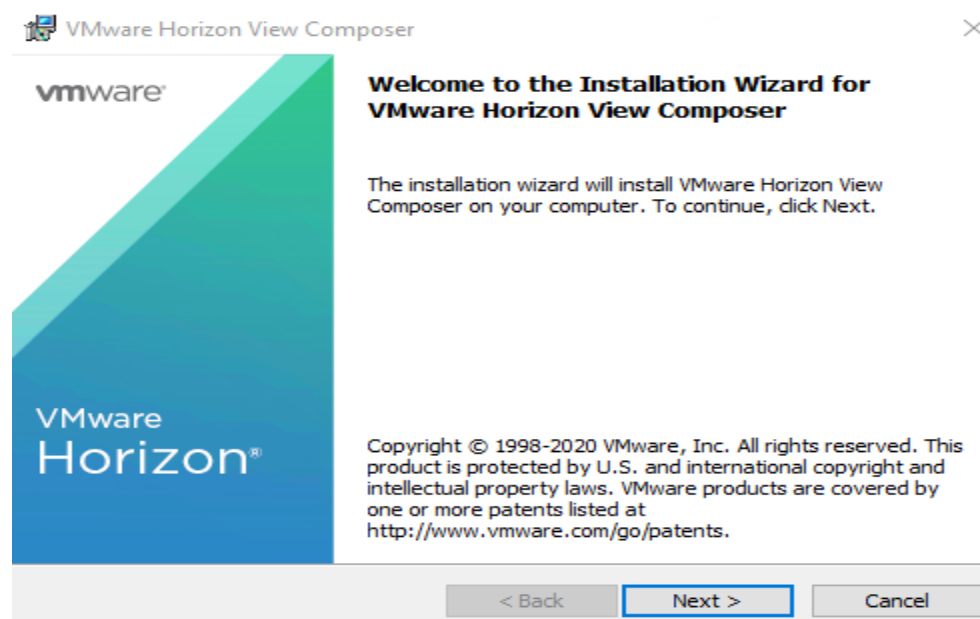
## Install View Composer



To fix above error - Shutdown the composer server VM and select Firmware as EFI and secure boot to disable as shown below.



Now power on the VM and continue with the install.



VMware Horizon View Composer

### Database Information

Enter additional database configuration information.

Enter the Data Source Name (DSN) for the VMware Horizon View Composer database. To set up the DSN click the ODBC Setup button.

HorizonComposerDB ODBC DSN Setup...

Enter the username that you entered in the ODBC Data Source Administrator.

HorizonComposer

Enter the password for this database connection.

.....

InstallShield

< Back Next > Cancel

VMware Horizon View Composer

### VMware Horizon View Composer Port Settings

Enter the connection information for the VMware Horizon View Composer.

Specify the web access port and security settings for VMware Horizon View Composer.

SOAP Port: 18443

SSL Certificate: ☒ Create default SSL certificate  
☐ Use an existing SSL certificate

InstallShield

< Back Next > Cancel

VMware Horizon View Composer

### Ready to Install the Program

The wizard is ready to begin installation.

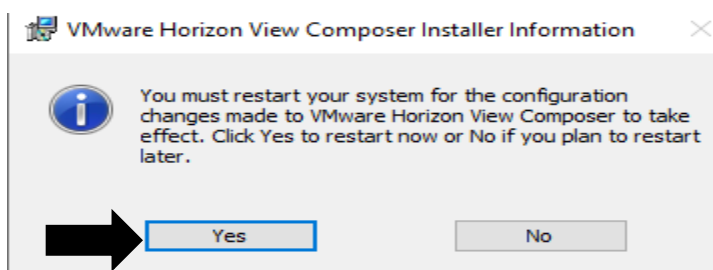
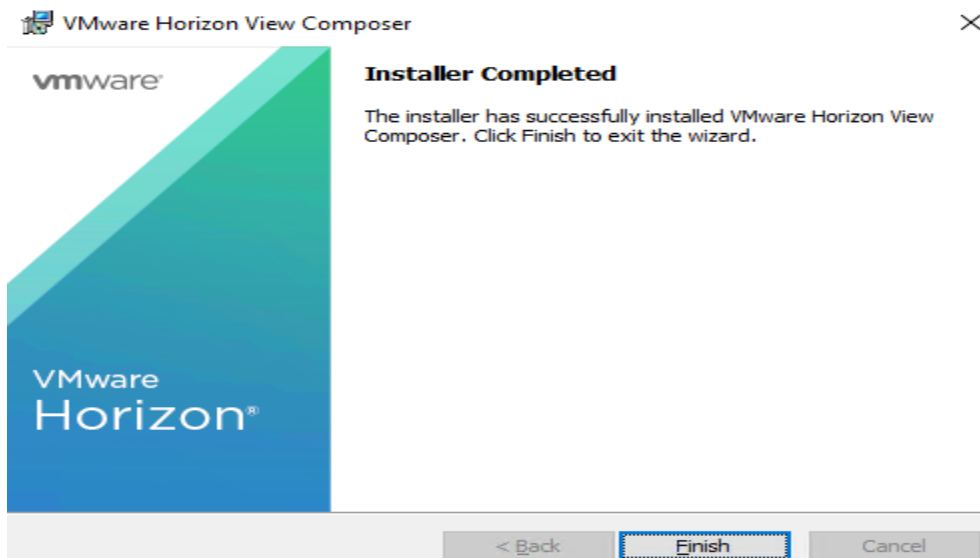
VMware Horizon View Composer will be installed in:

C:\Program Files (x86)\VMware\VMware View Composer\

If you want to review or change any of your installation settings, click Back. Click Install to begin the installation or Cancel to exit the wizard.

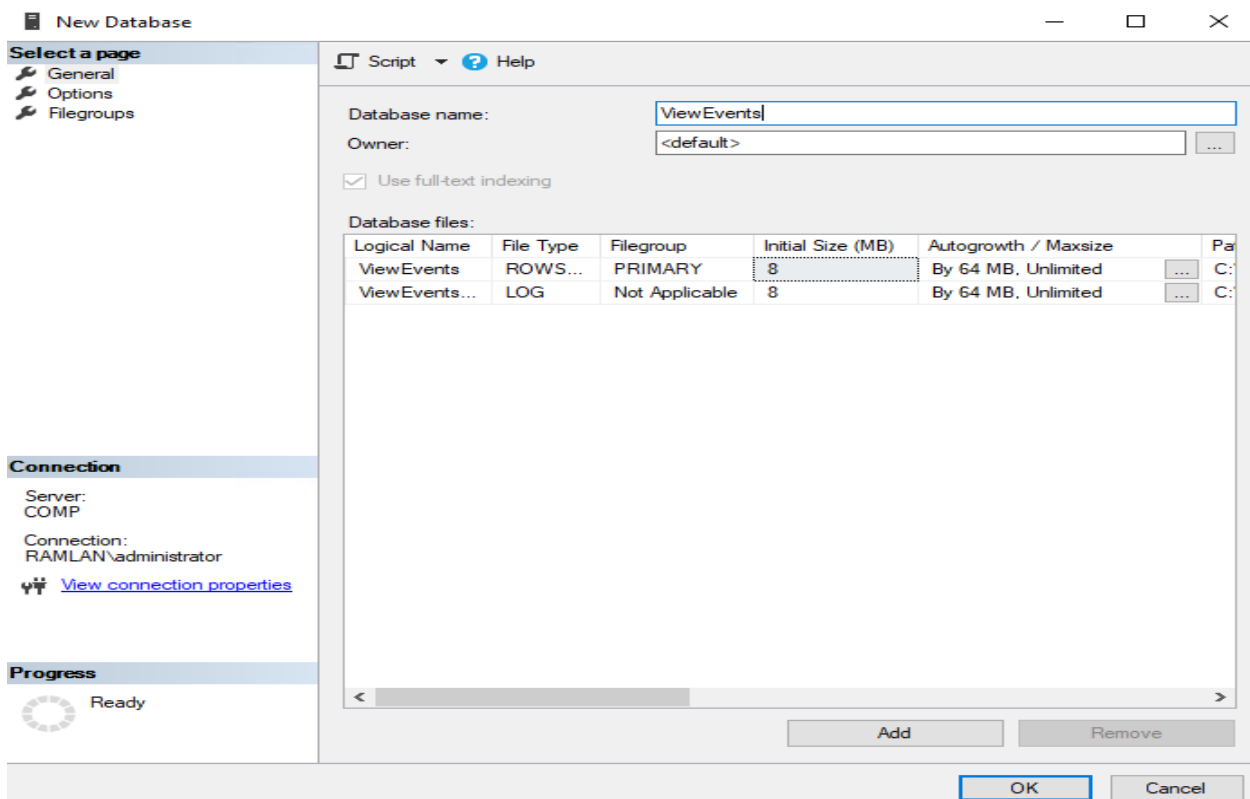
InstallShield

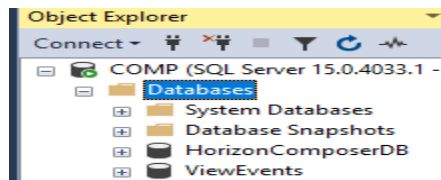
< Back Install Cancel



## Create the Event Database

From Microsoft SQL Server Management Studio, right click Databases and select New Database.





## Create New User (Local)

Login - New

Select a page

- General
- Server Roles
- User Mapping
- Securables
- Status

Connection

Server: COMP

Connection: RAMLAN\administrator

[View connection properties](#)

Progress

Ready

Script Help

Login name: viewadmin Search...

☐ Windows authentication

☒ SQL Server authentication

Password: .....

Confirm password: .....

☐ Specify old password

Old password:

☐ Enforce password policy

☐ Enforce password expiration

☐ User must change password at next login

☐ Mapped to certificate

☐ Mapped to asymmetric key

☐ Map to Credential

Mapped Credentials

Credential	Provider
------------	----------

Add

Remove

Default database: master

Default language: <default>

OK Cancel

Access the User Mapping field, map the database and assign the db\_owner role to the new user.

Login - New

Select a page

- General
- Server Roles
- User Mapping
- Securables
- Status

Connection

Server: COMP

Connection: RAMLAN\administrator

[View connection properties](#)

Progress

Ready

Script Help

Users mapped to this login:

Map	Database	User	Default Schema
<input type="checkbox"/>	HorizonComposerDB		
<input type="checkbox"/>	master		
<input type="checkbox"/>	model		
<input type="checkbox"/>	msdb		
<input type="checkbox"/>	tempdb		
<input checked="" type="checkbox"/>	ViewEvents	viewadmin	

☐ Guest account enabled for: ViewEvents

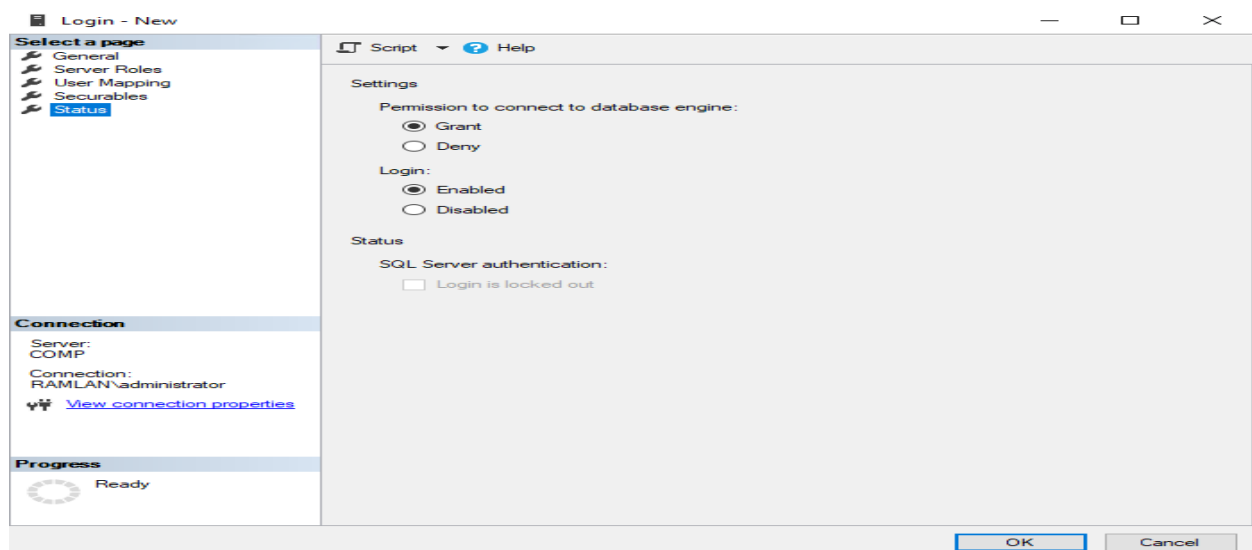
Database role membership for: ViewEvents

- ☐ db\_accessadmin
- ☐ db\_backupoperator
- ☐ db\_datareader
- ☐ db\_datawriter
- ☐ db\_ddladmin
- ☐ db\_denydatareader
- ☐ db\_denydatawriter
- ☒ db\_owner
- ☐ db\_securityadmin
- ☒ public

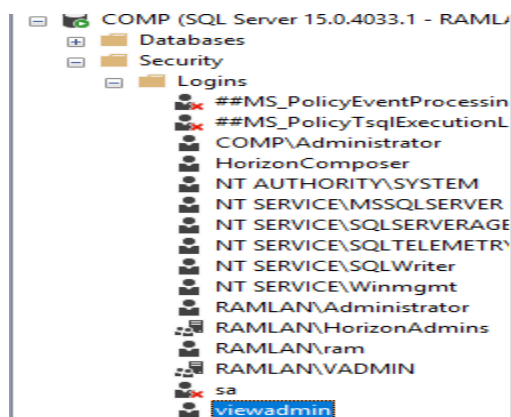
OK Cancel



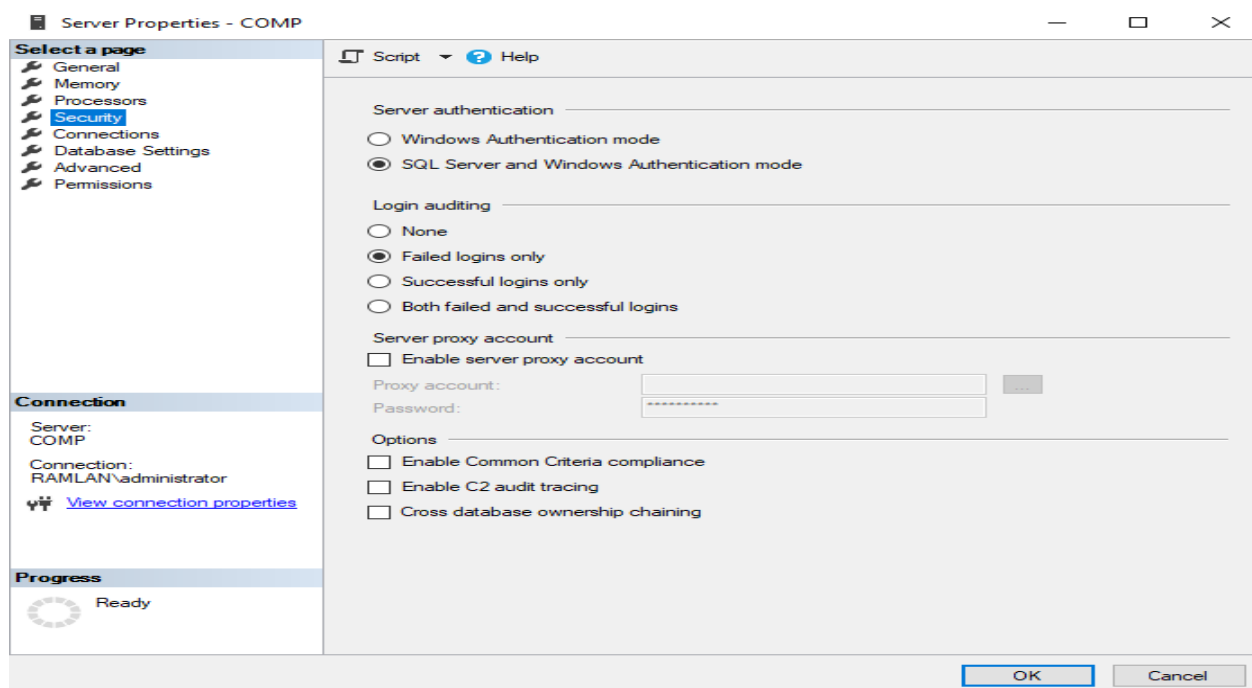
In Status field make sure the user is enabled to login. Click OK.



The new user has been created successfully.

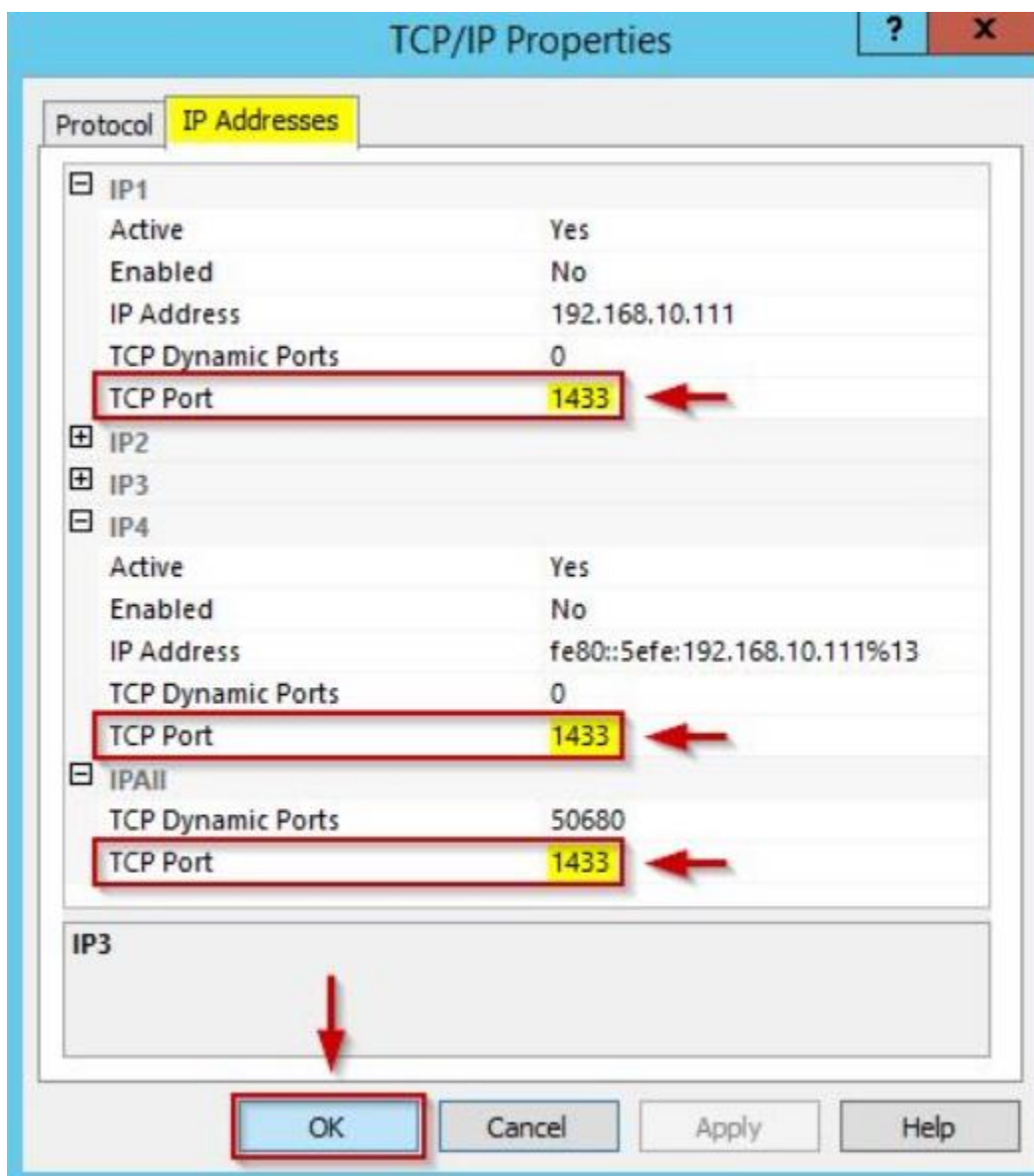
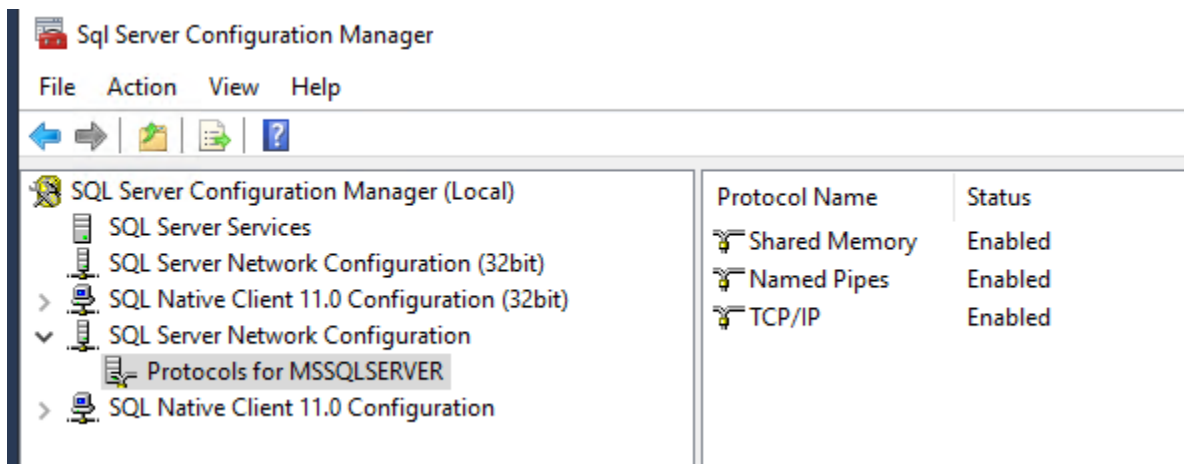


In Server Properties under Security, double check that SQL Server and Windows Authentication mode is enable. Click OK.

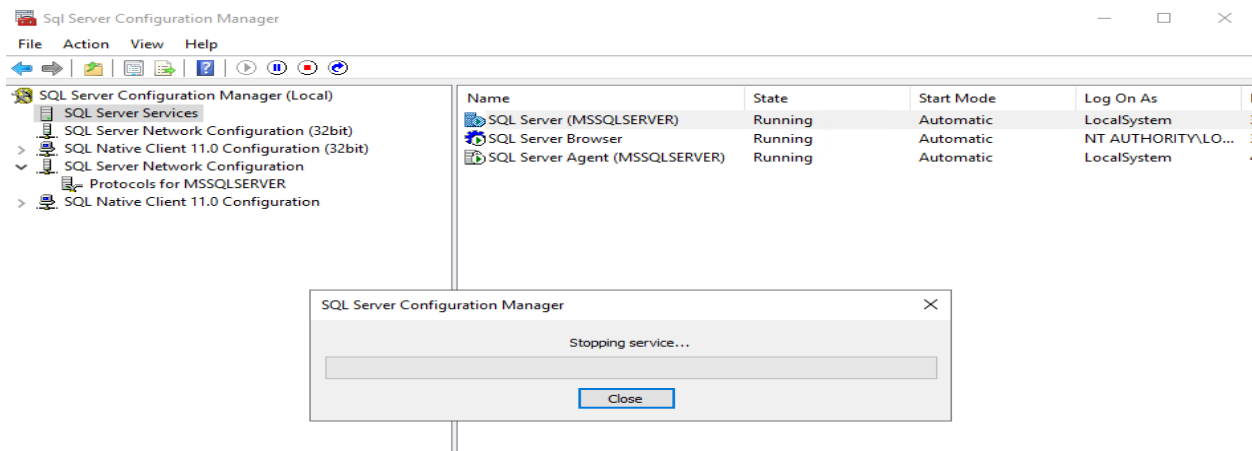


## Configure TCP Port

To configure the Event Database, you need to know the port to connect to. Start the SQL Server Configuration Manager and under SQL Server Network Configuration select Protocols for MSSQLSERVER. Right click in the right pane the TCP/IP protocol and select Properties.



Select SQL Server Services in the left side then right click SQL Server. Select Restart to restart the service.



## Configure Event Database in Horizon

From the Horizon console, access the Event Configuration field and click Edit in the Event Database area.

### Event Configuration

#### Event Database

[Edit](#)

#### Edit Event Database

**\* Database Server**

**Database Type**

**\* Port**

**\* Database Name**

**\* User Name**

**\* Password**

**\* Confirm Password**

**Table Prefix**

[Cancel](#) [OK](#)

# Event Configuration

## Event Database

---

Clear

Edit

Database Server Type

**Microsoft SQL Server**

Database Server

**COMP.RAMLAN.CA**

Port

**1433**

Database Name

**ViewEvents**

User Name

**viewadmin**

Table Prefix

**event\_**

## Event Settings

---

Edit

Show events in View Administrator for:

**3 Months**

Classify events as new for:

**2 Days**

Create a shared folder on Connection Server (conn1.ramlan.ca) so we can save the logs.

## Events to File System

Log to File

☐ Always

☒ Log to File on Error ⓘ

☐ Never

Copy to Location

Edit


Delete

UNC Path	\\comp\logs
User Name	administrator
Domain	RAMLAN.CA

### Service Account

1. Create an account in Active Directory that Horizon View will use to login to vCenter. This account can also be used by Composer and Instant Clones to create computer accounts in Active Directory.
2. Make sure the password does not expire.
3. Domain User is sufficient. Permissions will be delegated where needed.

New Object - User ×

 Create in: RAMLAN.CA/HORIZON

---

First name:  Initials:

Last name:

Full name:

User logon name:

User logon name (pre-Windows 2000):

---

**New Object - User** [X]

Create in: RAMLAN.CA/HORIZON

Password: [.....]

Confirm password: [.....]

☐ User must change password at next logon

☐ User cannot change password

☒ Password never expires

☐ Account is disabled

< Back   **Next >**   Cancel

**New Object - User** [X]

Create in: RAMLAN.CA/HORIZON

When you click Finish, the following object will be created:

Full name: Horizon View

User logon name: horizonview@RAMLAN.CA

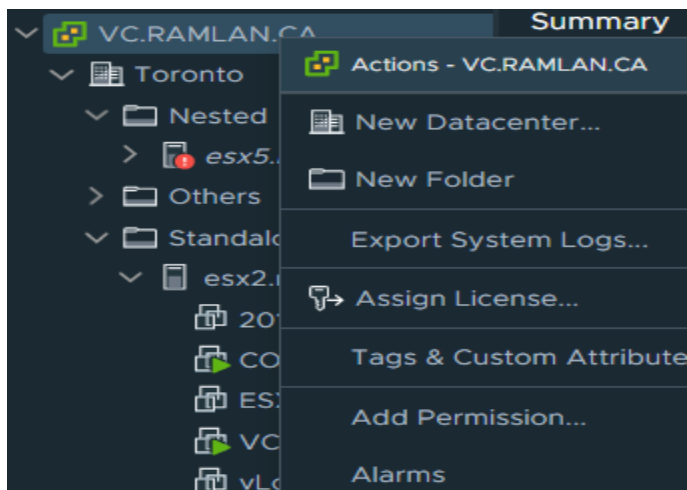
The password never expires.

< Back   **Finish**   Cancel

### Assign role to service account:

Create an account in Active Directory that Horizon View will use to login to vCenter.

In vSphere Web Client, in Hosts and Clusters view, browse to the vCenter object. Permissions must be assigned at the vCenter level. It won't work at any lower level.



Add Permission | VC.RAMLAN.CA

Domain

RAMLAN.CA

User/Group

Q

HorizonUsers

Role

Horizon Admin

☒

Propagate to children

CANCEL

OK

## Active Directory Delegation for Instant Clones and Composer

Horizon Composer and Instant Clones create computer objects in Active Directory. Horizon is configured with an Active Directory service account that must be granted permission to create computer objects.

### Active Directory Provisioning Account

The Active Directory Provisioning Service account is used by Horizon to manage the computer accounts that are created for Instant Clone desktops.

This account can be created as a standard domain user, and it should not have domain administrator or account operator rights – it only needs a select group of permissions on the OU (or OUs) where the virtual desktop computer accounts will be placed.

After this account has been created, you need to delegate permissions to it on the OU (or OUs) where your VDI desktops will be placed. If you use the structure like the one I outlined in Part 4, you only need to delegate permissions on the top-level OU and permission inheritance, if turned on, will apply them to any child or grandchild objects beneath it.

*Note: If inheritance is not turned on, you will need to check the Apply to All Child Objects checkbox before applying the permissions.*

The permissions that need to be delegated on the OU are:


- List Contents
- Read All Properties
- Write All Properties
- Create Computer Objects
- Delete Computer Objects
- Read Permissions
- Reset Password

*Note: Although granting this account Domain Administrator or Account Operator permissions may seem like an easy way to grant it the permissions it needs, it will grant a number of other permissions that are not needed and could pose a security risk if that account is compromised. Only the required permissions should be granted in a production environment.*

- > HORIZON
- > Keys Delegate Control...

Delegation of Control Wizard





## Welcome to the Delegation of Control Wizard

This wizard helps you delegate control of Active Directory objects. You can grant users permission to manage users, groups, computers, organizational units, and other objects stored in Active Directory Domain Services.

To continue, click Next.


< Back Next > Cancel Help

Delegation of Control Wizard



### Users or Groups

Select one or more users or groups to whom you want to delegate control.



Selected users and groups:

Horizon View (horizonview@RAMLAN.CA)

Add... Remove


< Back Next > Cancel Help

Delegation of Control Wizard



### Tasks to Delegate

You can select common tasks or customize your own.



☐ Delegate the following common tasks:

☐ Create, delete, and manage user accounts  
☐ Reset user passwords and force password change at next logon  
☐ Read all user information  
☐ Create, delete and manage groups  
☐ Modify the membership of a group  
☐ Manage Group Policy links  
☐ Generate Resultant Set of Policy (Planning)

☒ Create a custom task to delegate

< Back Next > Cancel Help



**Active Directory Object Type**

Indicate the scope of the task you want to delegate.



Delegate control of:

- ☐ This folder, existing objects in this folder, and creation of new objects in this folder
- ☒ Only the following objects in the folder:

- ☐ applicationVersion objects
- ☐ bootableDevice objects
- ☐ certificationAuthority objects
- ☒ Computer objects
- ☐ Connection objects
- ☐ Contact objects

☒ Create selected objects in this folder

☒ Delete selected objects in this folder

&lt; Back

Next &gt;

Cancel

Help

**Permissions**

Select the permissions you want to delegate.



Show these permissions:

- ☒ General
- ☒ Property-specific
- ☐ Creation/deletion of specific child objects

Permissions:

- ☒ Read All Properties
- ☒ Write All Properties
- ☐ Change password
- ☒ Reset password
- ☐ Send as
- ☐ Receive as

&lt; Back

Next &gt;

Cancel

Help

**Completing the Delegation of Control Wizard**

You have successfully completed the Delegation of Control wizard.

You chose to delegate control of objects in the following Active Directory folder:

RAMLAN.CA/HORIZON

The groups, users, or computers to which you have given control are:

Horizon View (horizonview@RAMLAN.CA)

They have the following permissions:

To close this wizard, click Finish.

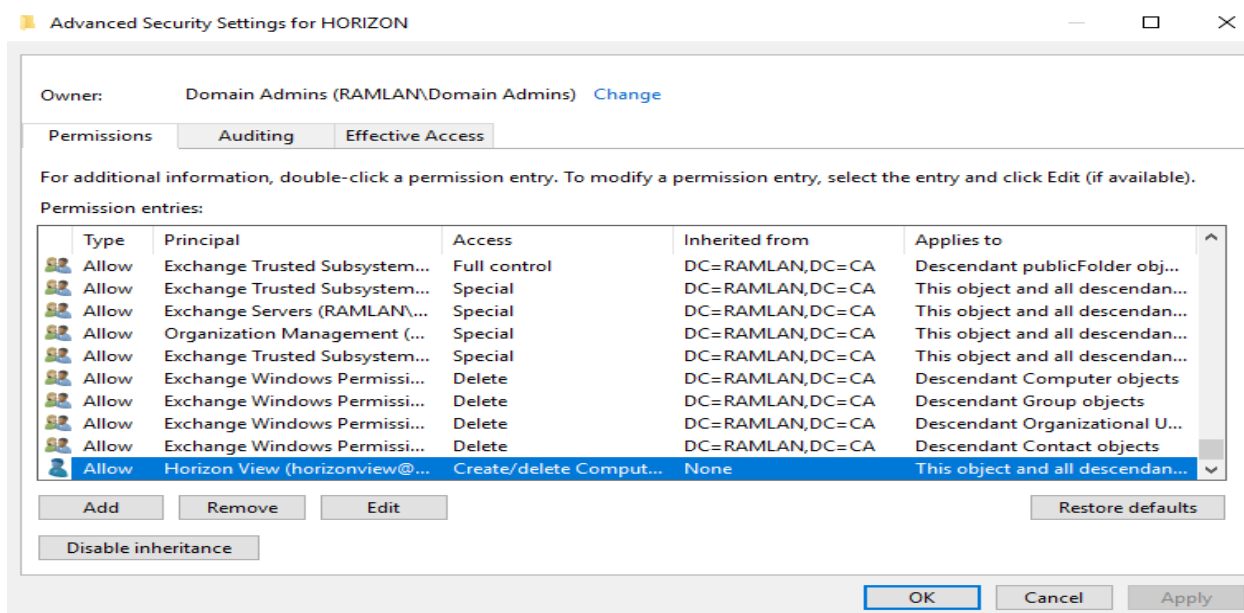
&lt; Back

Finish

Cancel

Help

If you are viewing Advanced Features in Active Directory Users & Computers, if you view the properties of the OU, on the Security tab, click Advanced, find your service account, you should see permissions similar to the following.



## Adding vCenter Server

### Servers

[vCenter Servers](#)

[Gateways](#)

[Connection Servers](#)

Add

Edit

Remove

Disable Provisioning

Enable Provisioning

vCenter Server

View Composer Type

VM Disk Space Reclamation

No records available.

### Add vCenter Server

1 vCenter Information

2 View Composer

3 Storage

4 Ready to Complete

\* Server address ⓘ

VC.RAMLAN.CA

\* User Name

ADMINISTRATOR@VSPHERE.LOCAL

\* Password

.....

Description

Primary vC

\* Port

443

Advanced Settings

Specify the concurrent operation limits. ⓘ

\* Max concurrent vCenter provisioning operations

20

Cancel

Previous

Next

# Invalid Certificate Detected



08/29/2020, 6:06 AM

The identity of the specified vCenter Server cannot be verified for the following reasons:

- ⚠ Server's certificate is not trusted.
- ⚠ Server's certificate cannot be checked.

VMware recommends the use of certificates signed by a trusted Certificate Authority.

View Certificate

Cancel

## Certificate Information



Issued to	VC.RAMLAN.CA
Issued by	CA
Valid from	08/27/2020, 10:56 AM to 08/27/2022, 10:56 PM
Subject	C=US CN=VC.RAMLAN.CA
Issuer	OU=VMware Engineering O=VC.RAMLAN.CA ST=California C=US DC=local DC=vsphere CN=CA
Serial Number	00 c0 98 66 48 aa 9d 72 b7
Version	3
Signature Algorithm	SHA256withRSA
Public Key Algorithm	RSA
Public Key	30 82 01 22 30 0d 06 09 2a 86 48 86 f7 0d 01 01 01 05 00 03 82 01 0f 00 30 82 01 0a 02 82 01 01 00 c7 cc 7a 4a 93 18 bf 03 7a e5 4a 2e f6 95 64 7d b9 19 72 7b e7 17 5f db b2 cb fd 29 7a 08 bf 72 e8 4d da 9c bf 0c 70 b1 f7 a5 b0 06 9d 38 dd c8 bc 1e b7 9b 5d 8b 31 71 eb de 5e e1 1b bf c9 33 cd 56 4b 62 f5 9e d6 e2 be ac e9 d1 4c 8c 25 78 a5 fe bf ec f0 a3 b6 4b 11 8b a6 3e fe dc 7b 3a e7 28 35 c9 78 64 b8 c5 7b 9c 30 10 e9 43 12 b8 79 69 55 fc 84 d5 0b

Accept

Reject

## Add vCenter Server

✓ vCenter Information

2 View Composer

3 View Composer Domains

4 Storage

5 Ready to Complete

ⓘ View Composer linked clones are being deprecated in Horizon 8.0 and will not be available in Horizon 8.1 and later versions. If you currently use this feature, select instant clones instead.

### View Composer Settings ⓘ

☐ Do not use View Composer

☐ View Composer co-installed with vCenter Server

Choose this if View Composer is installed on the same server as vCenter.

\* Port 18443

☒ Standalone View Composer Server

Choose this if View Composer is installed on a separate server from vCenter.

\* Server address COMP.RAMLAN.CA

\* User Name administrator

\* Password .....

\* Port 18443

Cancel

Previous

Next

# Invalid Certificate Detected



08/29/2020, 6:07 AM

The identity of the specified View Composer Server cannot be verified for the following reasons:

- ⚠ Server's certificate subject name does not match the server's External URL.
- ⚠ Server's certificate is not trusted.

VMware recommends the use of certificates signed by a trusted Certificate Authority.

View Certificate

Cancel

## Certificate Information



Issued to	COMP
Issued by	COMP
Valid from	08/28/2020, 7:08 PM to 08/28/2022, 7:08 PM
Subject	C=US ST=CA L=CA O=VMware Inc. OU=VMware Inc. CN=COMP EMAILADDRESS=support@vmware.com
Issuer	C=US ST=CA L=CA O=VMware Inc. OU=VMware Inc. CN=COMP EMAILADDRESS=support@vmware.com
Serial Number	19 e1 26 af 03 f2 63 85 47 99 19 68 90 4b af dc
Version	3
Signature Algorithm	SHA256withRSA
Public Key Algorithm	RSA

Accept

Reject

## Add vCenter Server

✓ vCenter Information

✓ View Composer

3 View Composer Domains

4 Storage

5 Ready to Complete

Add

Edit

Remove

Domains User Desktops & Farms

No records available.

Cancel

Previous

Next

## Edit Domain



\* Full domain name

RAMLAN.CA

\* User name

administrator@ramlan.ca

\* Password

Cancel

Submit

## Add Domain



\* Full domain name

RAMLAN.CA

\* User name

administrator

\* Password

.....|

Cancel

Submit

## Add vCenter Server

✓ vCenter Information

✓ View Composer

✓ View Composer Domains

4 Storage

5 Ready to Complete

### Storage Settings ⓘ

☒ Reclaim VM disk space

☒ Enable View Storage Accelerator

Default Host Cache Size  MB

Cache must be between 100 MB and 32,768 MB.

### Hosts

☐ Show All Hosts

Edit Cache Size

Host	Cache Size (MB)
/Toronto/host/Standalone/esx2.ramlan.ca	Default
/Toronto/host/vSAN/esx1.ramlan.ca	Default
/Toronto/host/vSAN/esx3.ramlan.ca	Default

Cancel

Previous

Next

## Add vCenter Server

✓ vCenter Information

✓ View Composer

✓ View Composer Domains

✓ Storage

5 Ready to Complete

**vCenter Server**VC.RAMLAN.CA

**User Name**administrator

**Password**\*\*\*\*\*

**Description**Primary VC

**Server Port**443

**Max Provision**20

**Max Power**50

**Max View Composer Operations**12

**Max View Composer Provision**8

**Max Instant Clone Engine Provision**20

**View Composer State**Standalone View Composer Server

**View Composer Address**COMPRAMLAN.CA

Cancel

Previous

Submit

## Servers

vCenter Servers Gateways Connection Servers

Add Edit Remove Disable Provisioning Enable Provisioning

Filter

vCenter Server	View Composer Type	VM Disk Space Reclamation	View Storage Accelerator	Provisioning	Deployment Type
VC.RAMLAN.CA(administrator)	Standalone View Composer Server	✓	✓	✓	General

## Servers

vCenter Servers Gateways Connection Servers

Enable Disable Edit Backup Now

Filter

Connection Server	Version	PCoIP Secure Gateway	State	Settings	Last Backup
CONN1	8.0.0-16592062	Installed	Enabled	Secure tunnel connection, Smart card authentication: Optional, Automatic backup	✓ 08/29/2020, 12:00 AM
CONN2	8.0.0-16592062	Installed	Enabled	Secure tunnel connection, Smart card authentication: Optional, Automatic backup	✓ 08/29/2020, 12:00 AM

With this we have completed Composer Install and added vCenter. In Part 3, I will cover instant clone and linked clone setup.

Thanks

**Ram Lan**  
**29<sup>th</sup> Aug 2020**