



# CONESTOGA

Connect Life and Learning

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<b>Deliverable:</b>	Assignment 3
<b>Course Name:</b>	NTWK8121-24S-Sec3-SQL Server

<b>Date Assigned:</b>	25/07/2024
<b>Date Due:</b>	30/07/2024
<b>Rules:</b>	<ul style="list-style-type: none"><li>• Individual.</li><li>• Cheating is not allowed.</li><li>• Plagiarism counts as cheating!</li><li>• That FAILURE to submit work in the course can result in a grade of 'F' or 'I' for failure to complete the course!</li></ul>

## Domain Controller

The screenshot shows the Windows Server Manager interface for a domain controller named SQL-DC-Assign1. The left sidebar shows navigation links like Dashboard, Local Server, All Servers, AD DS, DNS, and File and Storage Services. The main pane displays the 'PROPERTIES' section for the local server, listing details such as Computer name (SQL-DC-Assign1), Domain (Ashah5540.local), and various system configurations like Windows Defender Firewall settings and processor information (Intel(R) Xeon(R) Platinum 8268 CPU @ 2.90GHz). Below the properties, there is an 'EVENTS' section showing 33 total events. The taskbar at the bottom shows the date and time as 7/29/2024 at 7:36 AM.

## Member Servers connected to the domain controller

The screenshot shows the Active Directory Users and Computers (ADUC) console. The left sidebar shows navigation links like Dashboard, Local Server, All Servers, AD DS, DNS, and File and Storage Services. The main pane displays the 'Active Directory Users and Computers' window, which lists member servers under the 'Computers' node. The table shows three entries: MEM2, MEM3, and SQL-MBRSRV-ASS1. The taskbar at the bottom shows the date and time as 7/29/2024 at 4:37 AM.

## Member Server1

The screenshot shows the Windows Server Manager interface for 'SQL Member Srv1'. The left navigation pane includes 'Dashboard', 'Local Server' (selected), 'All Servers', and 'File and Storage Services'. The main content area displays the 'PROPERTIES' tab for the server, which has the identifier 'SQL-MbrSvr-Ass1'. Key details include:

Computer name	SQL-MbrSvr-Ass1	Last installed updates	Yesterday at 5:41 PM
Domain	Ashah5540.local	Windows Update	Download updates only, using Windows Update
Windows Defender Firewall	Private: On	Windows Defender Antivirus	Real-Time Protection: On
Remote management	Enabled	Feedback & Diagnostics	Settings
Remote Desktop	Disabled	IE Enhanced Security Configuration	On
NIC Teaming	Disabled	Time zone	(UTC-08:00) Pacific Time (US & Canada)
Ethernet0	172.23.78.21, IPv6 enabled	Product ID	Not activated
Operating system version	Microsoft Windows Server 2019 Datacenter	Processors	Intel(R) Xeon(R) Platinum 8268 CPU @ 2.90GHz
Hardware information	VMware, Inc. VMware7.1	Installed memory (RAM)	4 GB
		Total disk space	89.4 GB

The 'EVENTS' section shows 35 total events.

The taskbar at the bottom shows the date and time as 7/29/2024 7:38 AM.

## Install 2 SQL Servers

### Member Server2

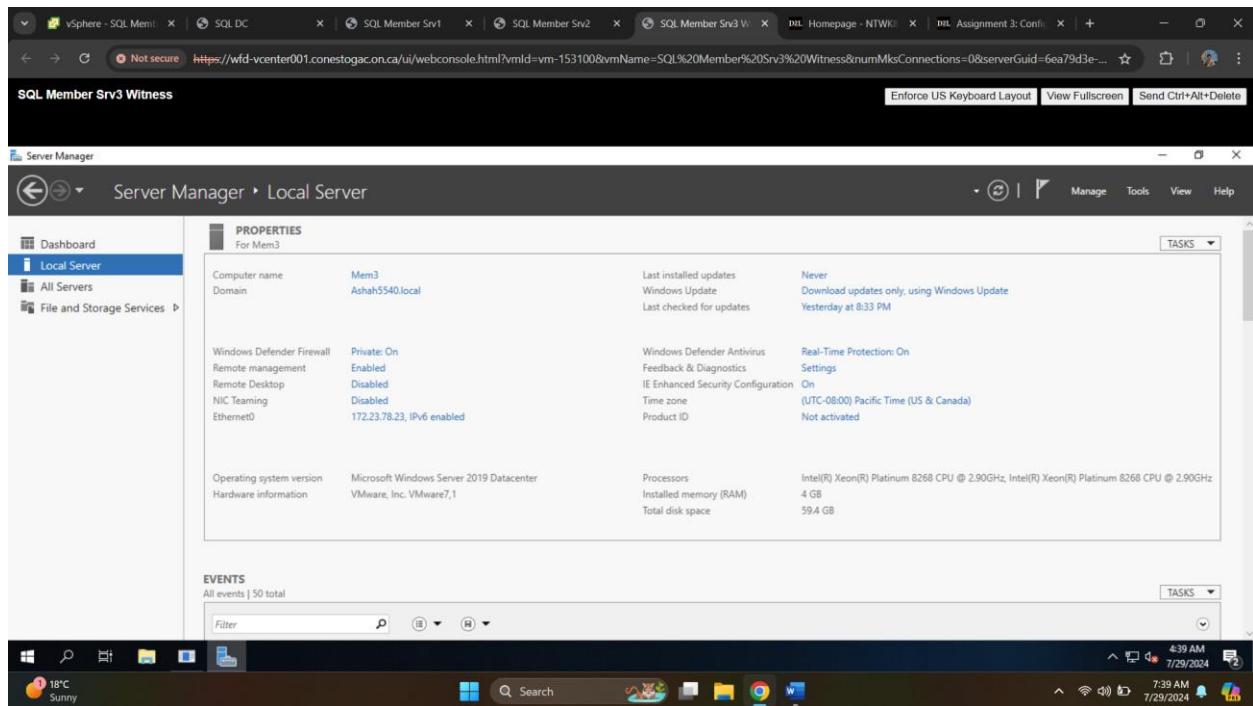
The screenshot shows the Windows Server Manager interface for 'Mem2' (Member Server 2). The left navigation pane includes 'Dashboard', 'Local Server' (selected), 'All Servers', and 'File and Storage Services'. The main content area displays the 'PROPERTIES' tab for the server, which has the identifier 'Mem2'. Key details include:

Computer name	Mem2	Last installed updates	Never
Domain	Ashah5540.local	Windows Update	Download updates only, using Windows Update
Windows Defender Firewall	Private: On	Windows Defender Antivirus	Real-Time Protection: On
Remote management	Enabled	Feedback & Diagnostics	Settings
Remote Desktop	Disabled	IE Enhanced Security Configuration	On
NIC Teaming	Disabled	Time zone	(UTC-08:00) Pacific Time (US & Canada)
Ethernet0	172.23.78.22, IPv6 enabled	Product ID	Not activated
Operating system version	Microsoft Windows Server 2019 Datacenter	Processors	Intel(R) Xeon(R) Platinum 8268 CPU @ 2.90GHz, Intel(R) Xeon(R) Platinum 8268 CPU @ 2.90GHz
Hardware information	VMware, Inc. VMware7.1	Installed memory (RAM)	4 GB
		Total disk space	59.4 GB

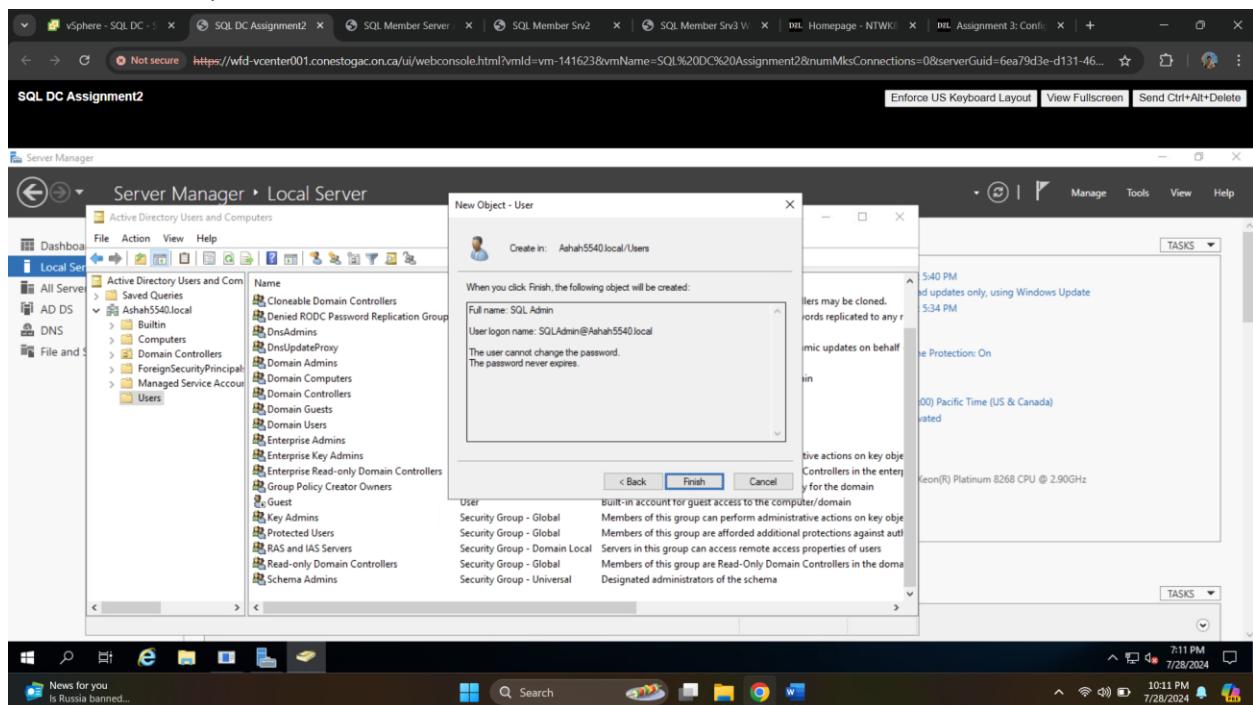
The 'EVENTS' section shows 44 total events.

The taskbar at the bottom shows the date and time as 7/29/2024 4:39 AM.

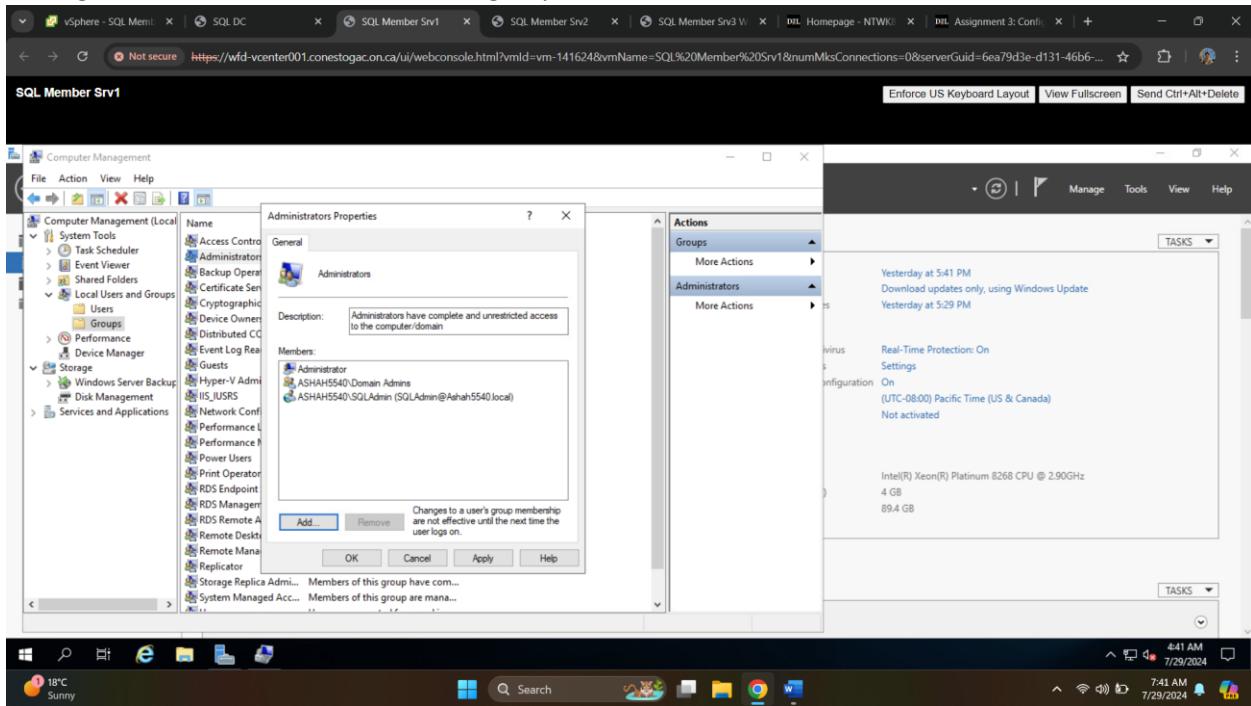
## Member Server3



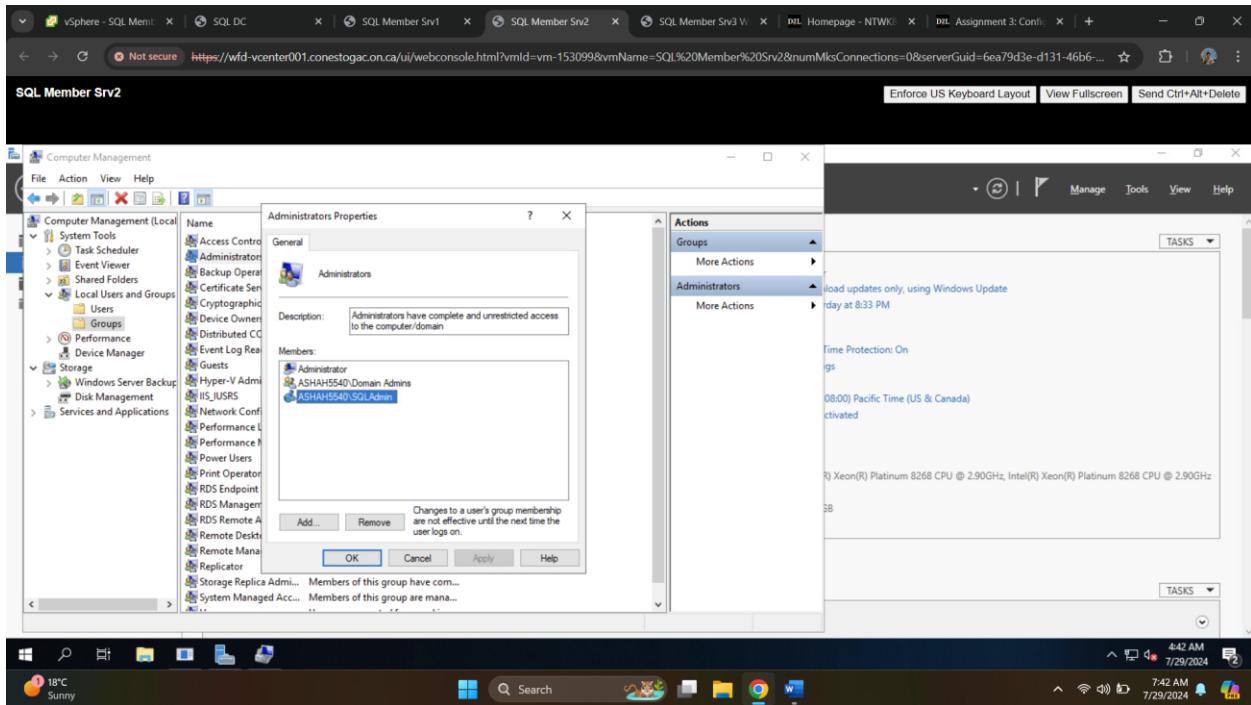
## Created user "SQL Admin"



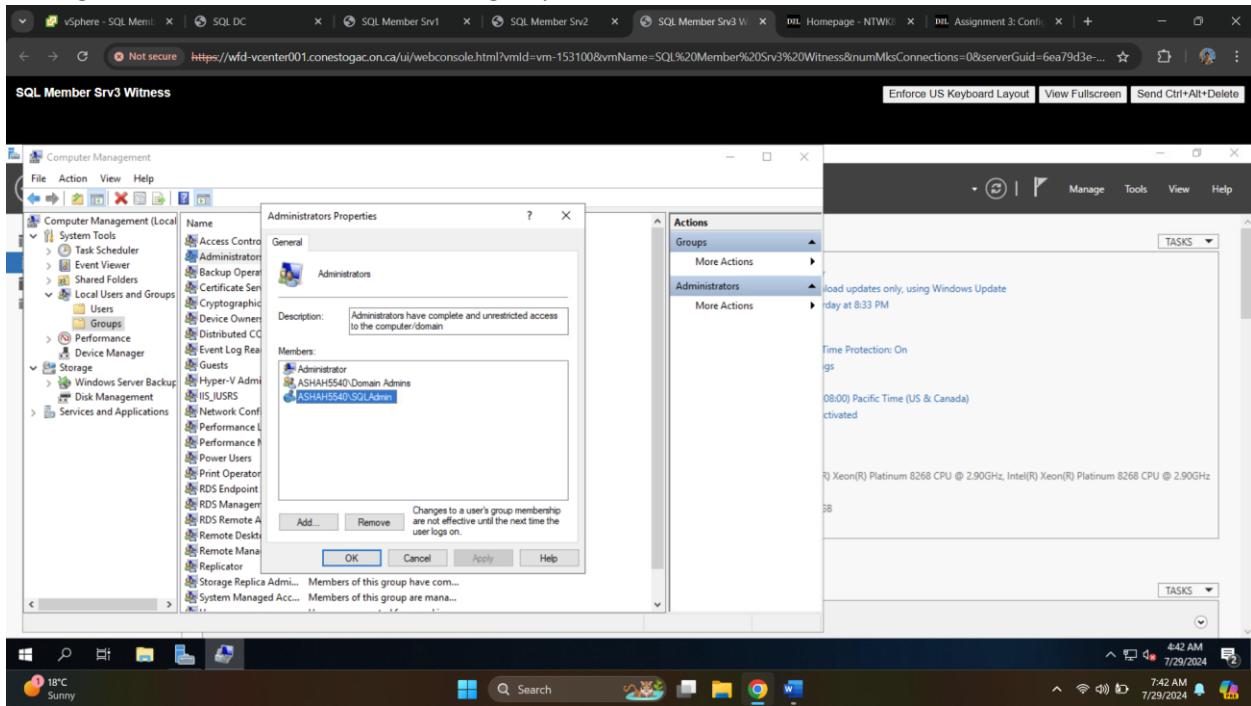
## Adding user SQL admin in administrator group in Member Server1



## Adding user SQL admin in administrator group in Member Server2

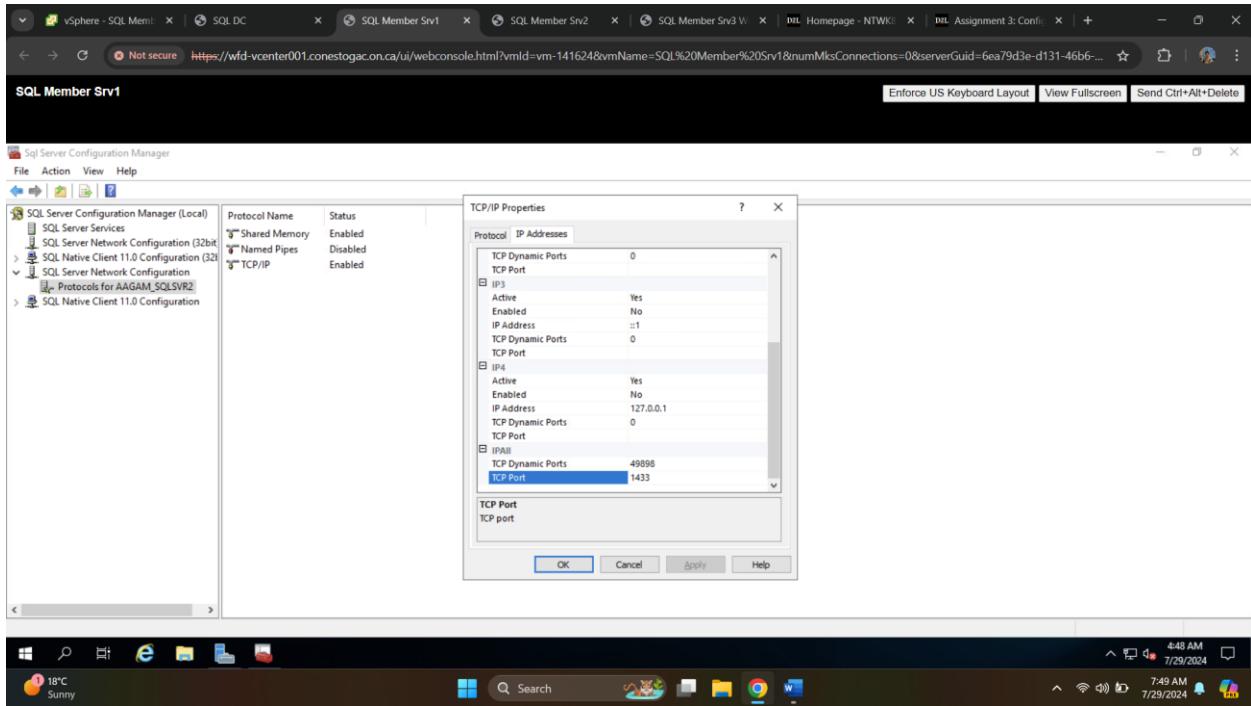


## Adding user SQL admin in administrator group in Member Server3

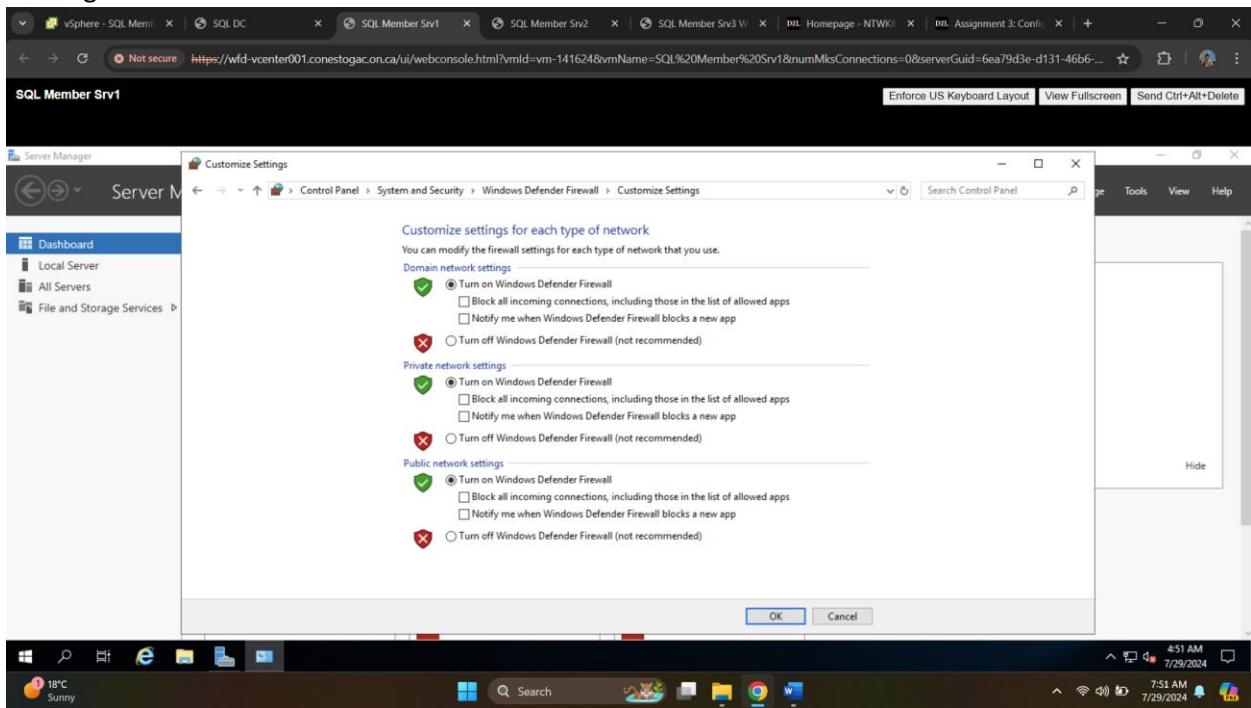


## SQL Server network configuration and firewall

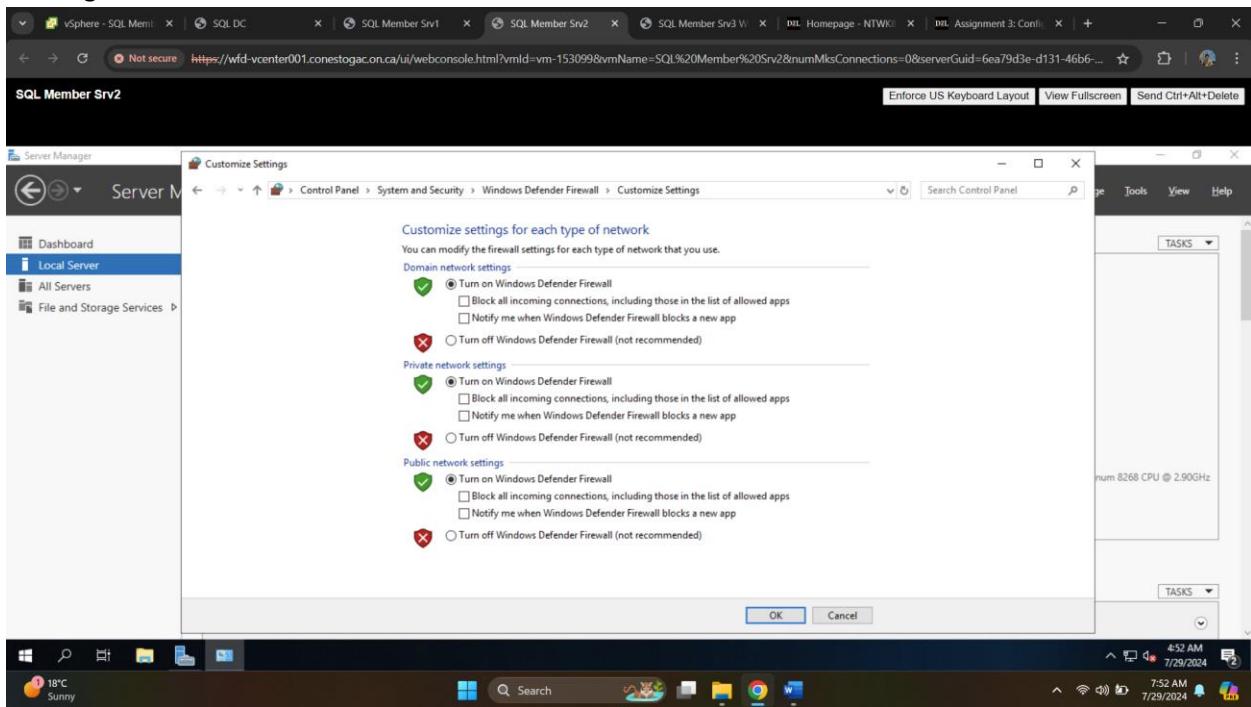
Adding port 1433 in TCP/IP properties on Member Server1, similarly on Member server 2 and member server 3



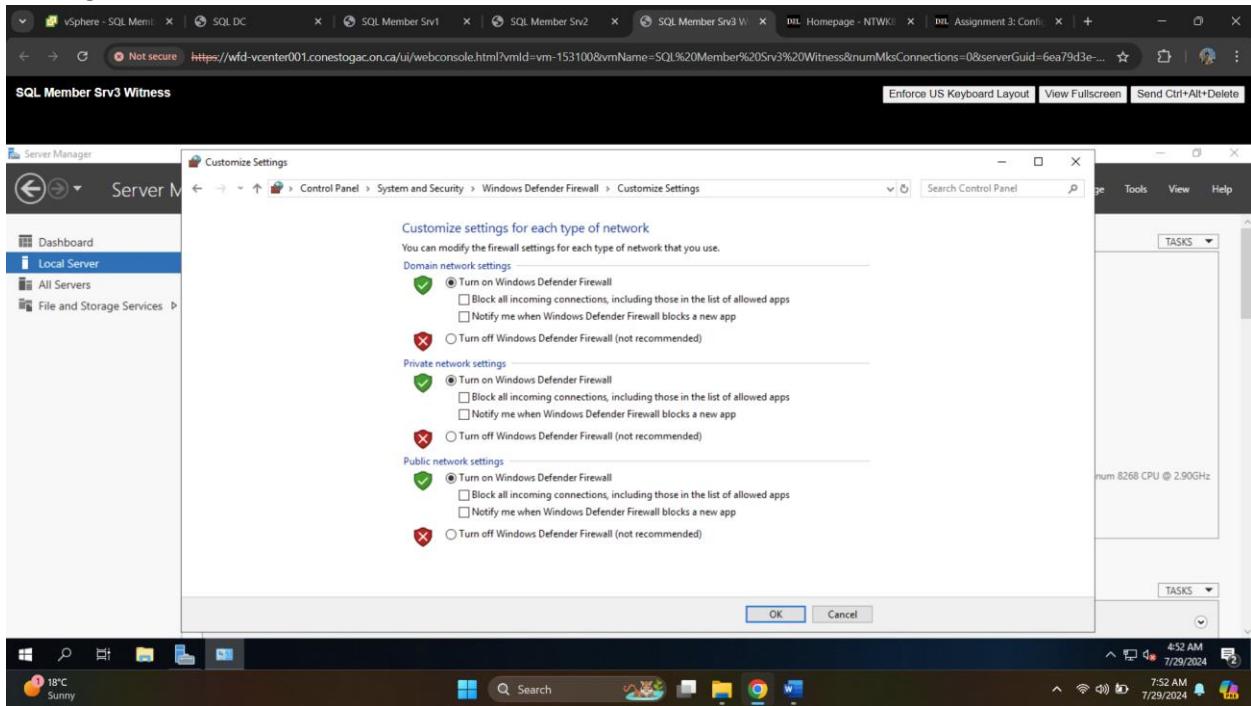
## Turning Firewall on Member Server1



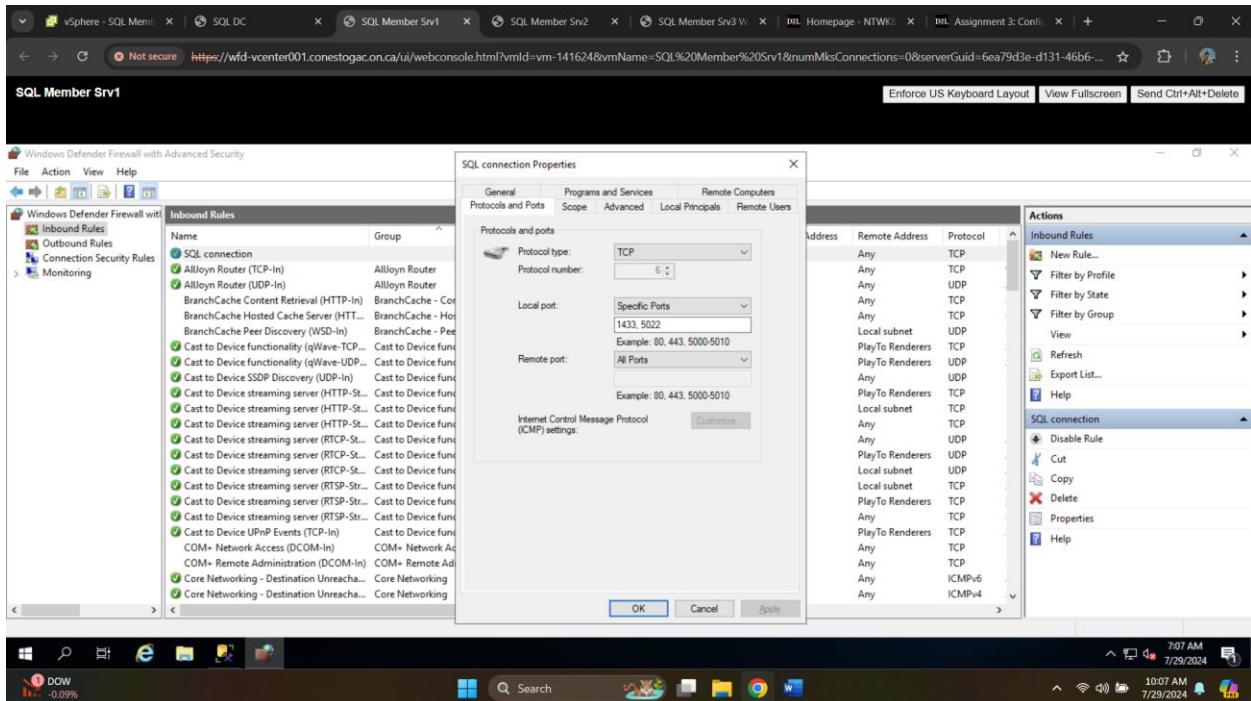
## Turning Firewall on Member Server2

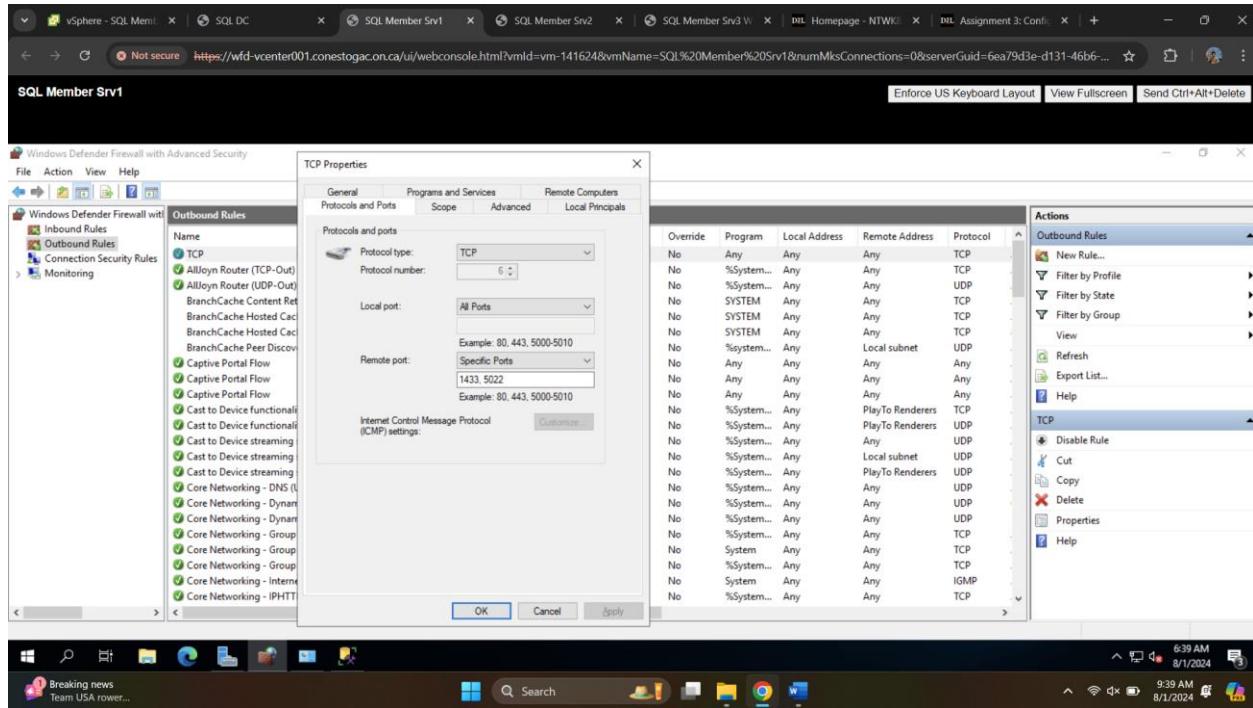


## Turning Firewall on Member Server3

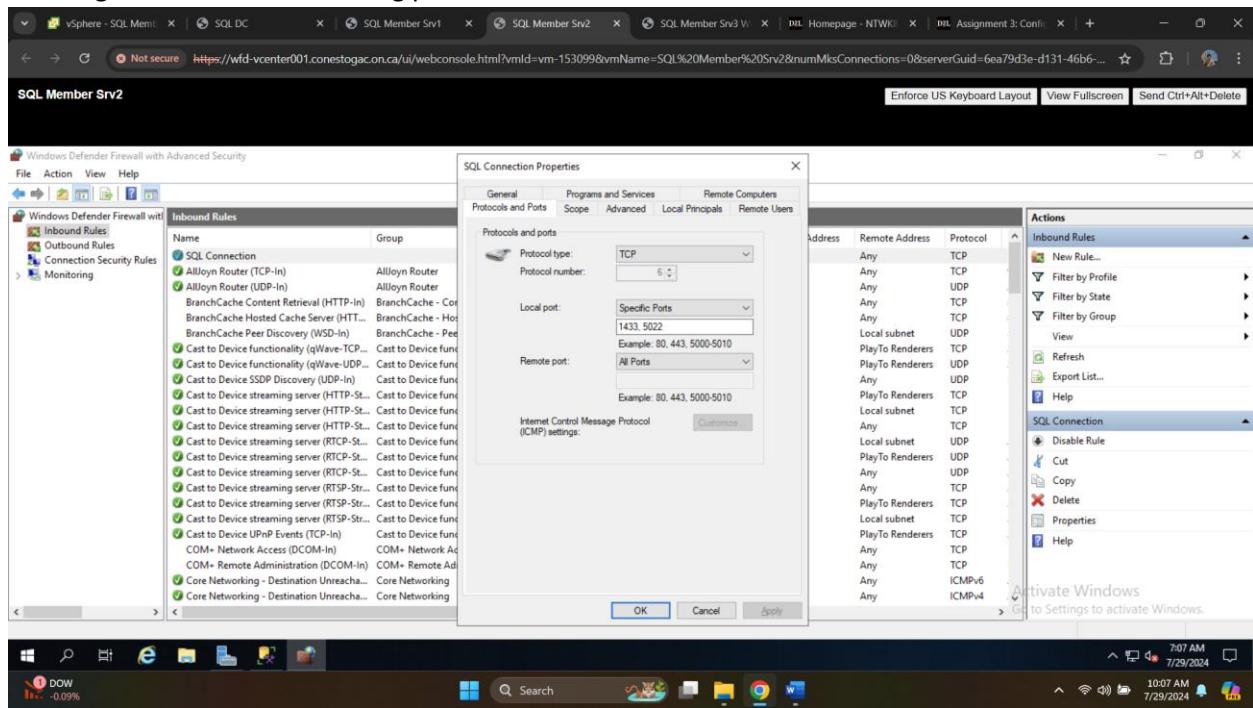


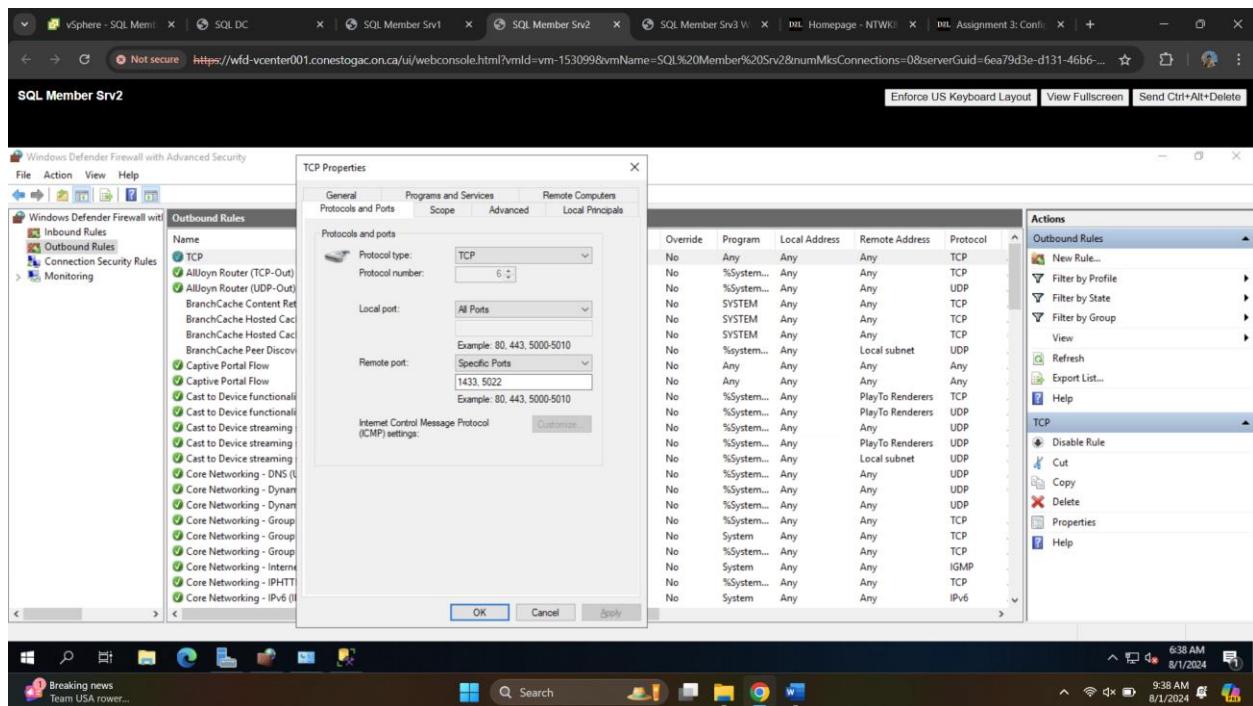
## Creating firewall rule for allowing port 1433 and 5022 on Member Server 1



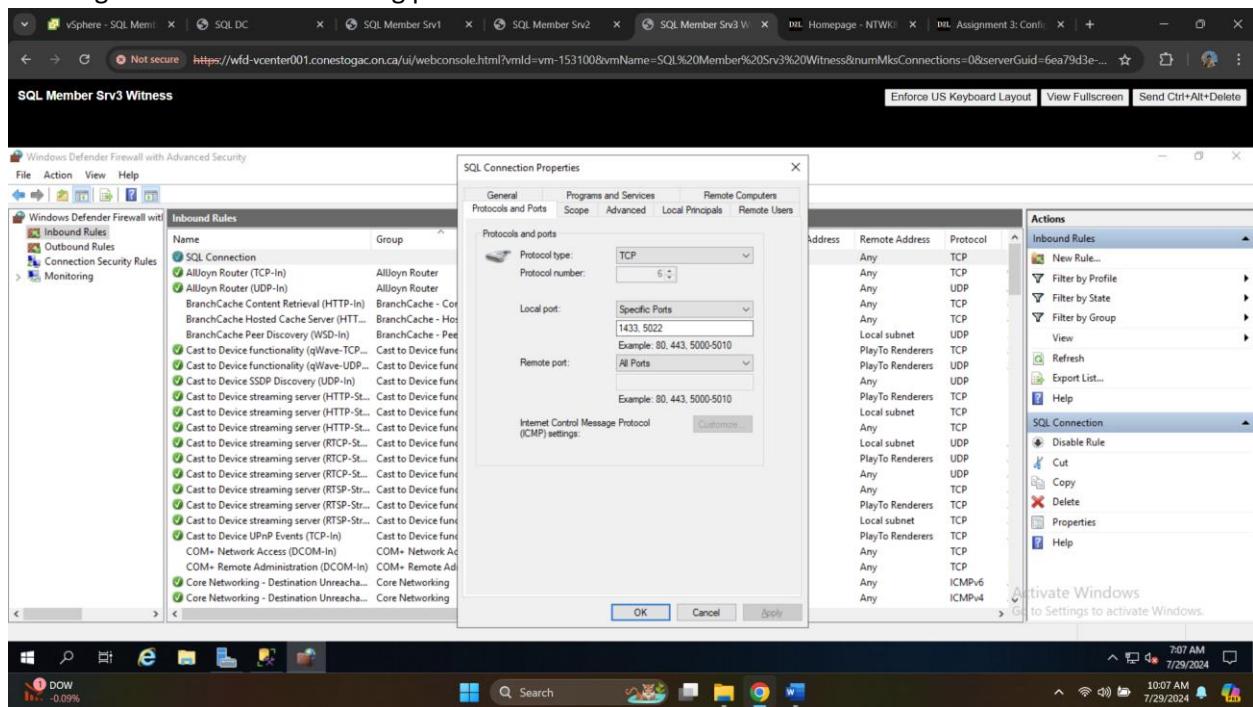


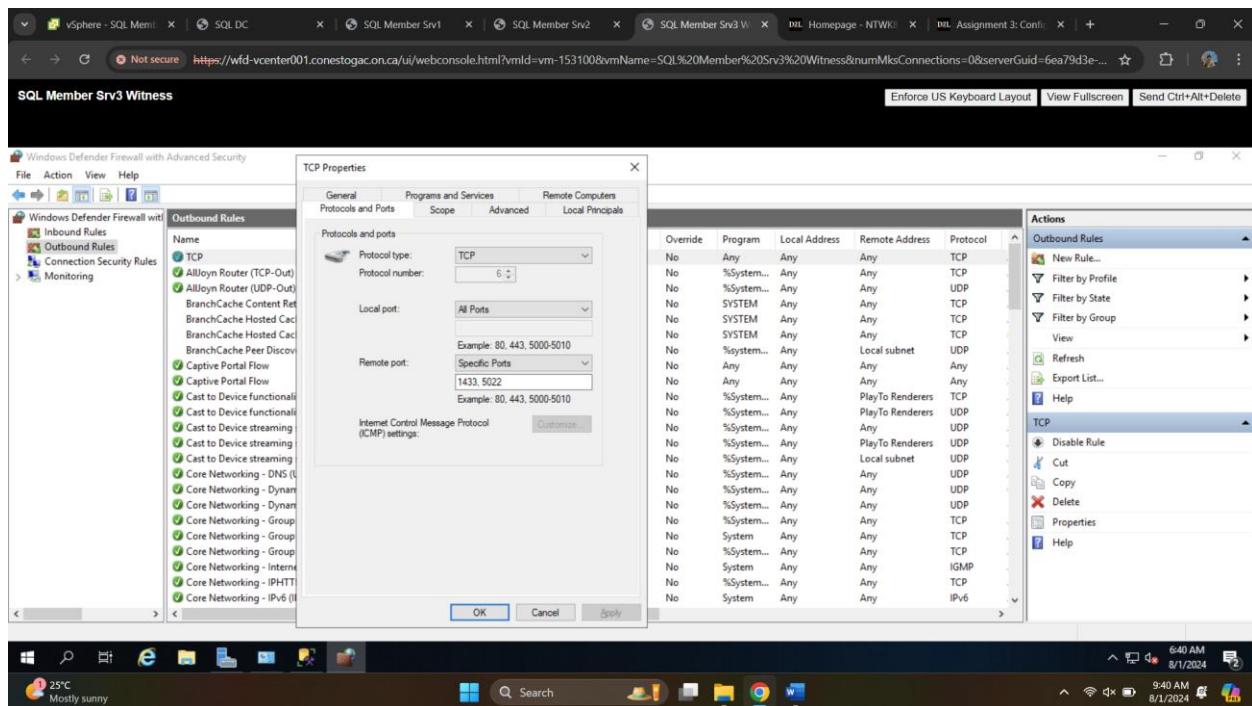
## Creating firewall rule for allowing port 1433 and 5022 on Member Server 2



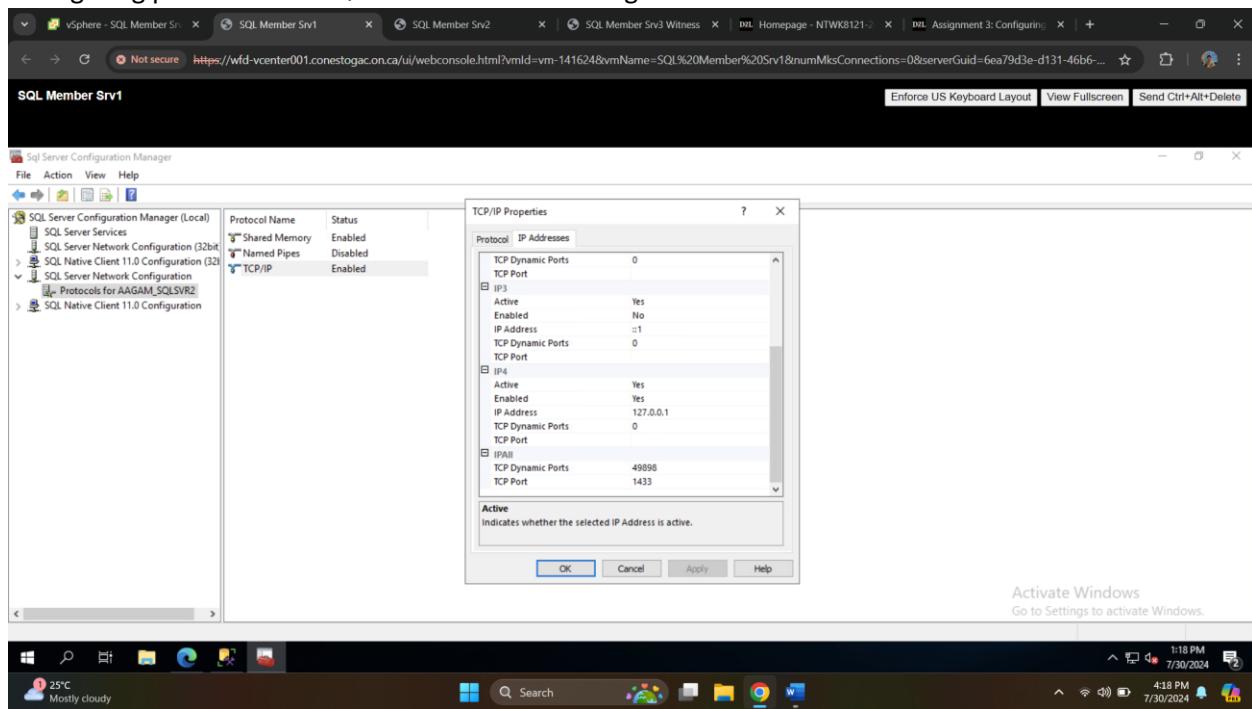


## Creating firewall rule for allowing port 1433 and 5022 on Member Server 3

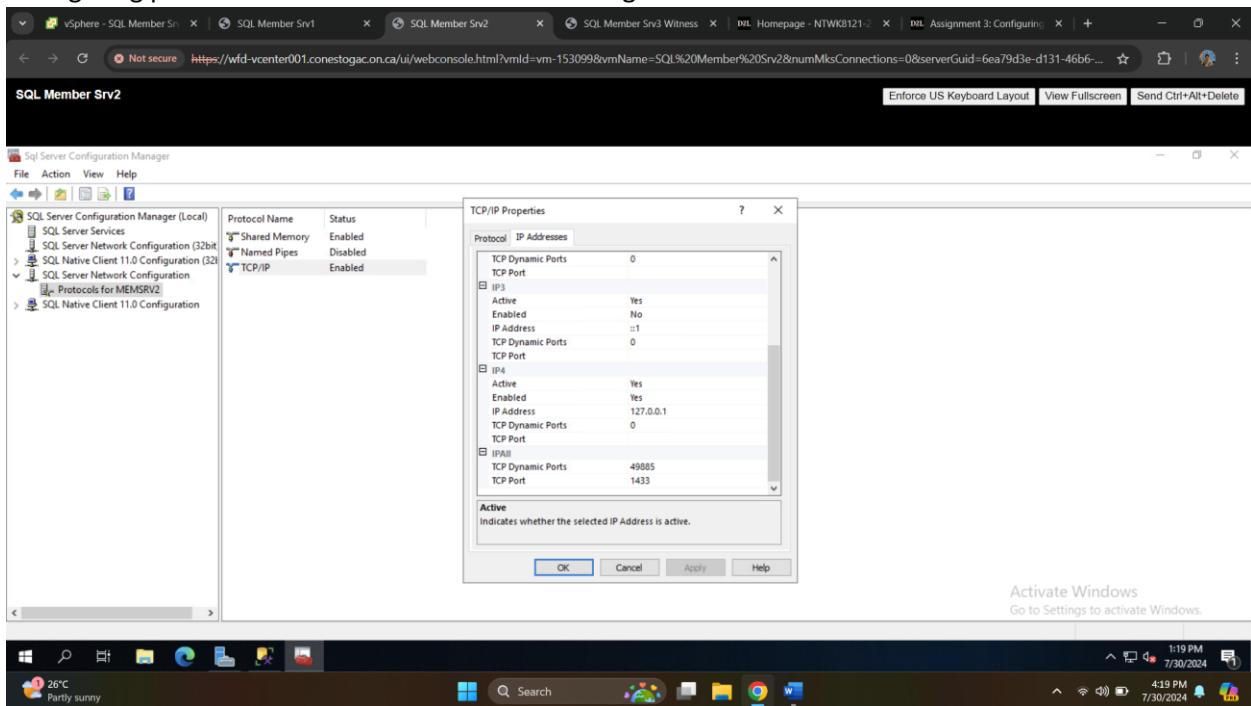




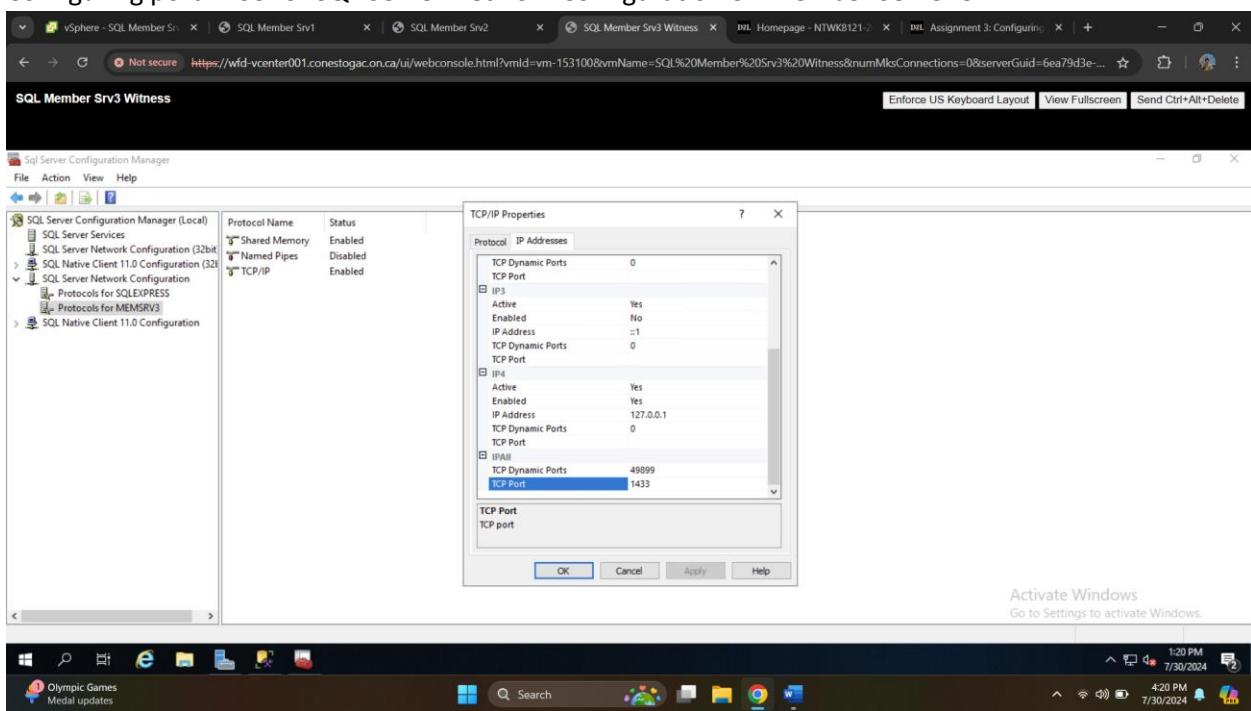
## Configuring port 1433 for SQL Server Network Configuration on Member Server 1



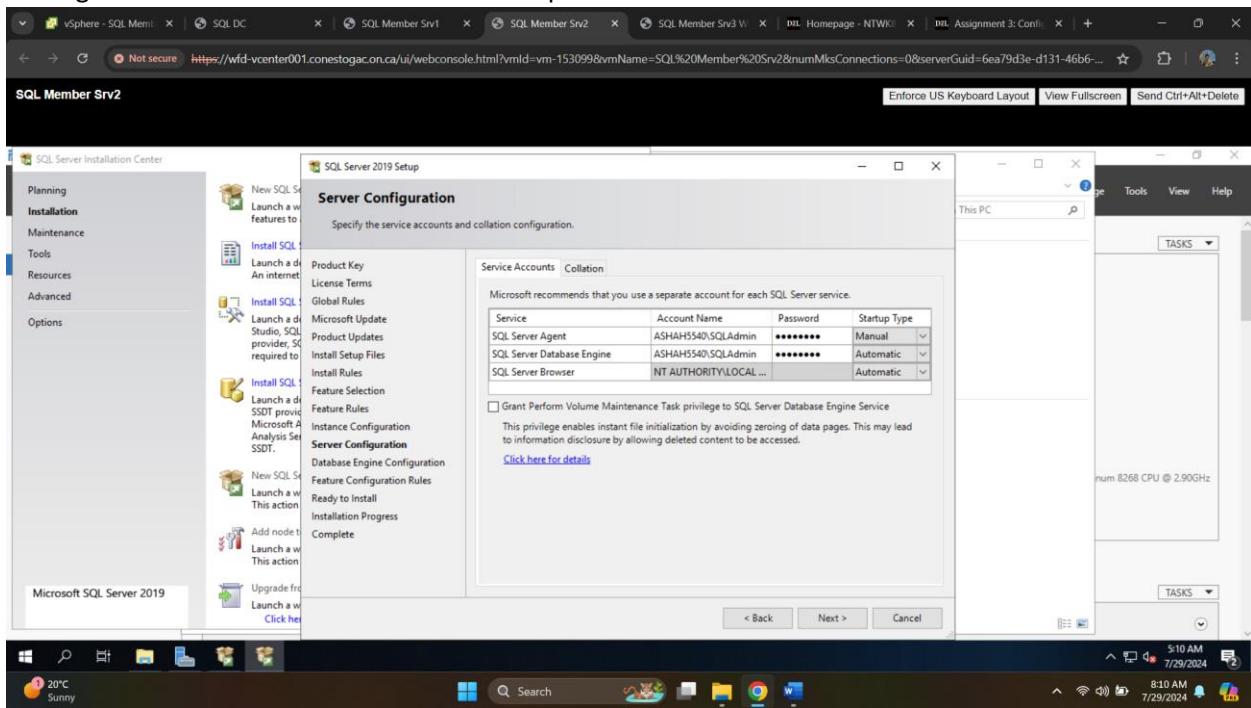
## Configuring port 1433 for SQL Server Network Configuration on Member Server 2



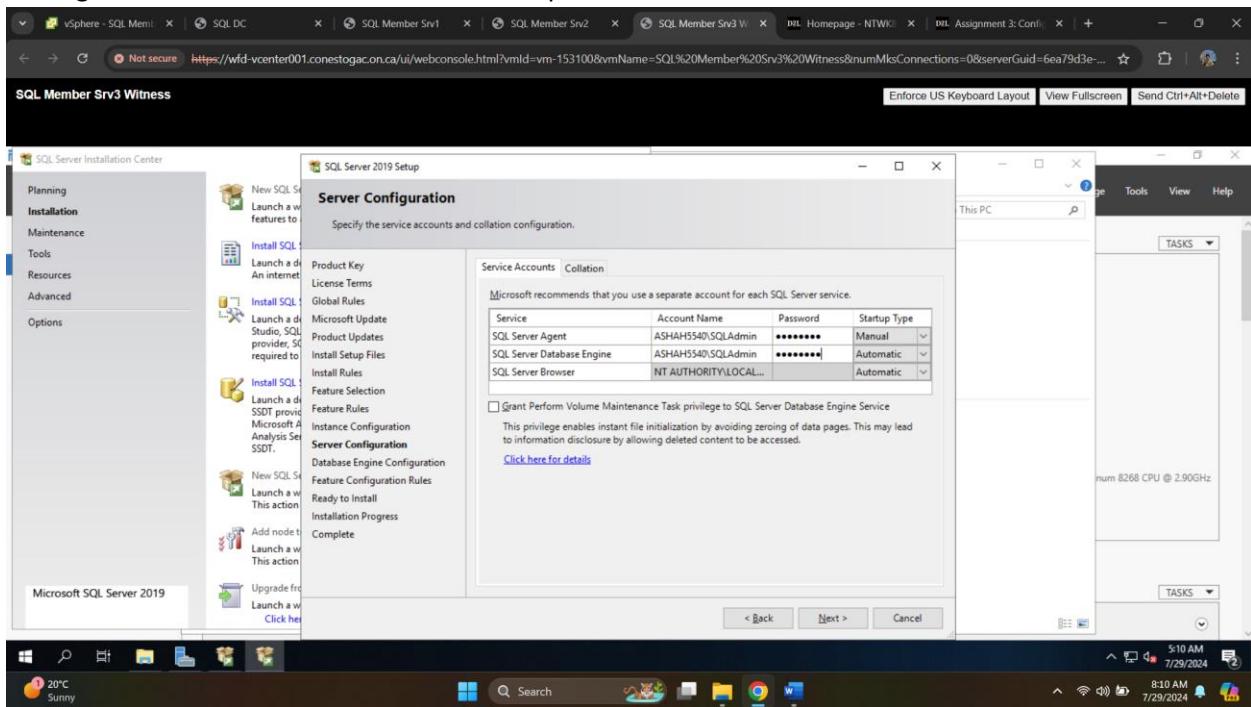
## Configuring port 1433 for SQL Server Network Configuration on Member Server 3



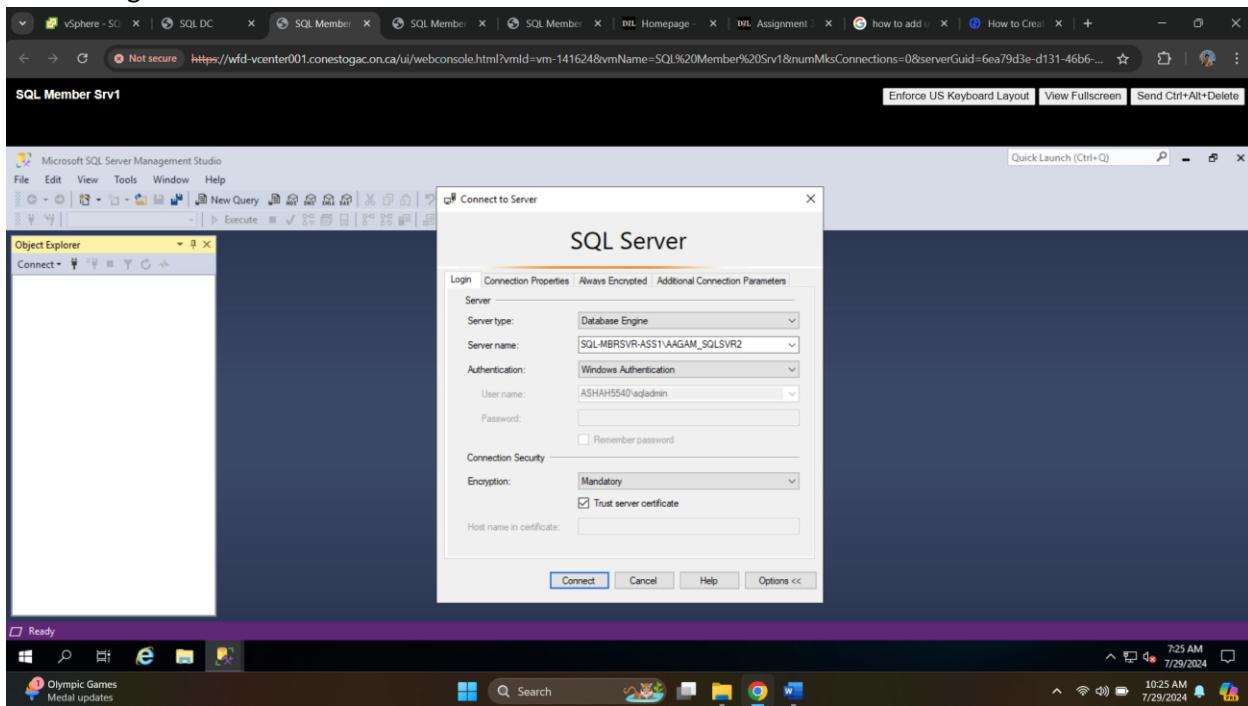
## Adding SQL admin account name as user and password for SQL access on Member Server 2



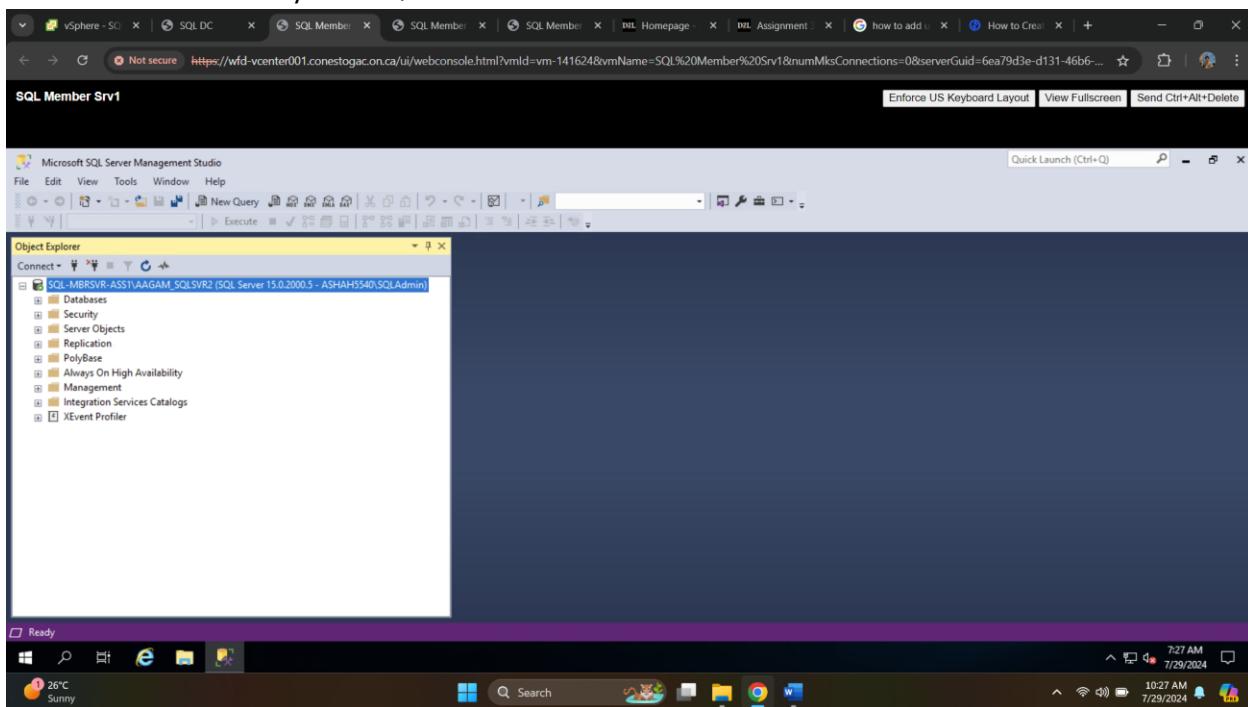
## Adding SQL admin account name as user and password for SQL access on Member Server 3



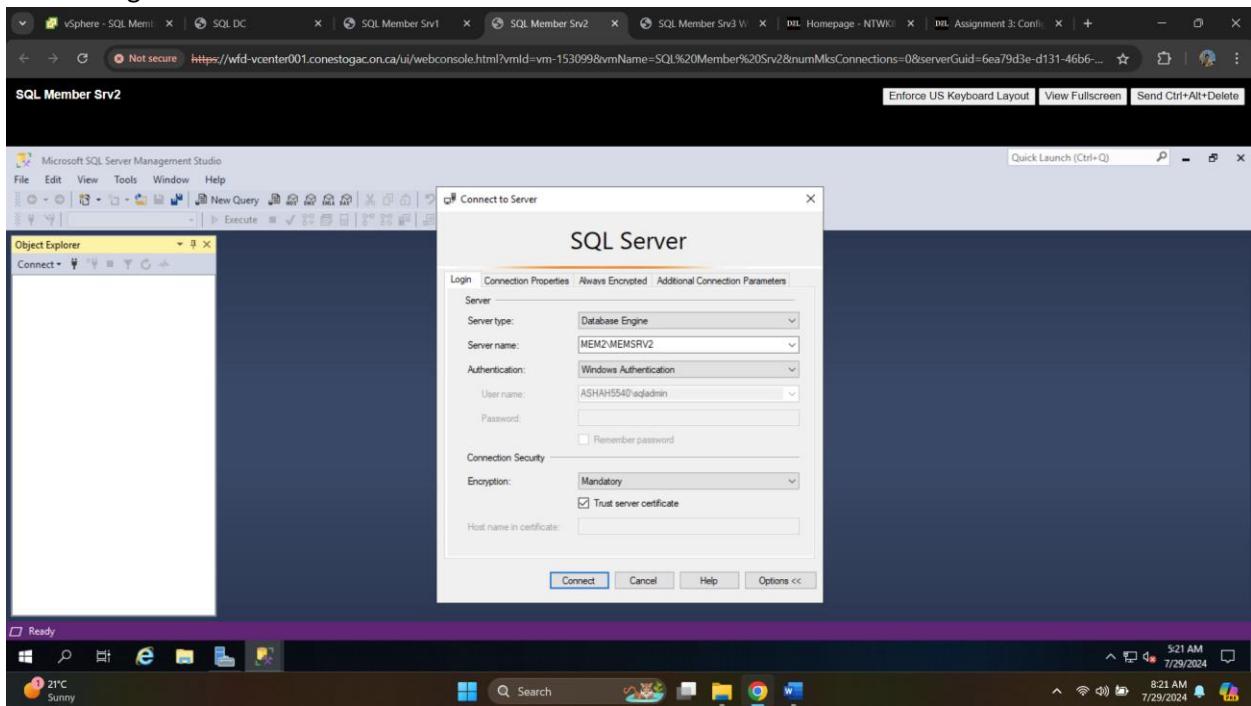
## Connecting SQL Server with user SQL admin on Member Server1



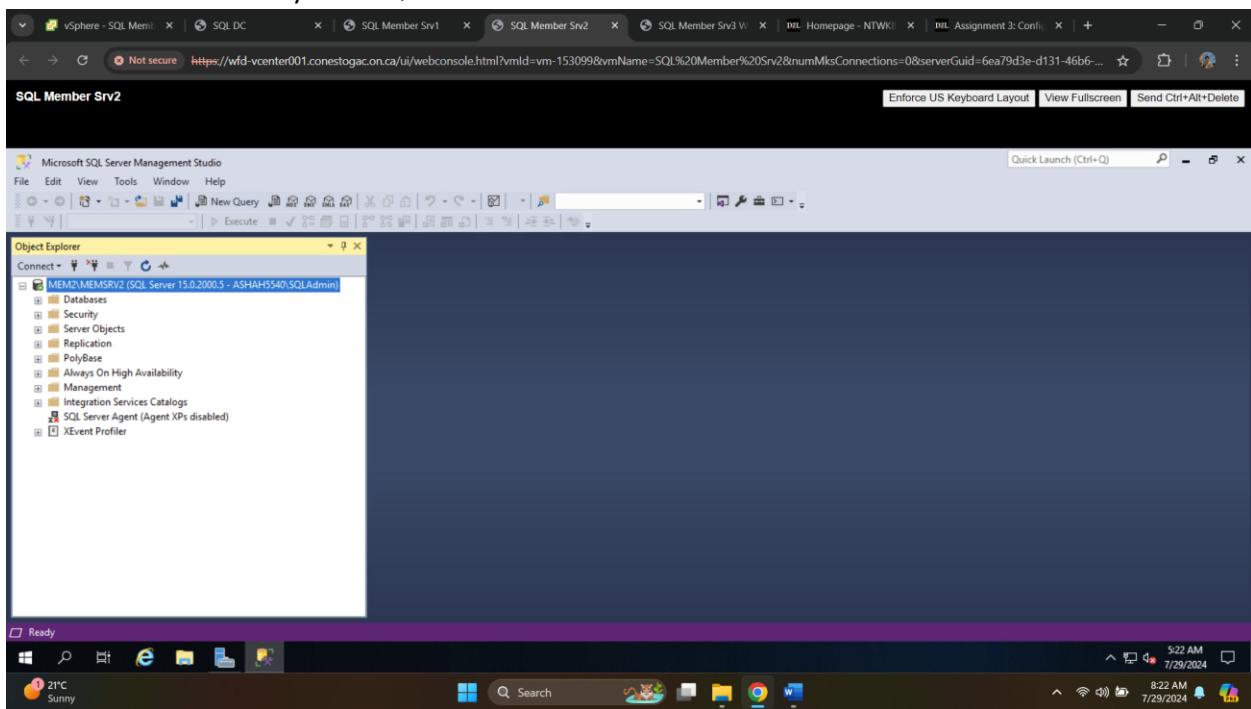
Connection successful by user SQL admin



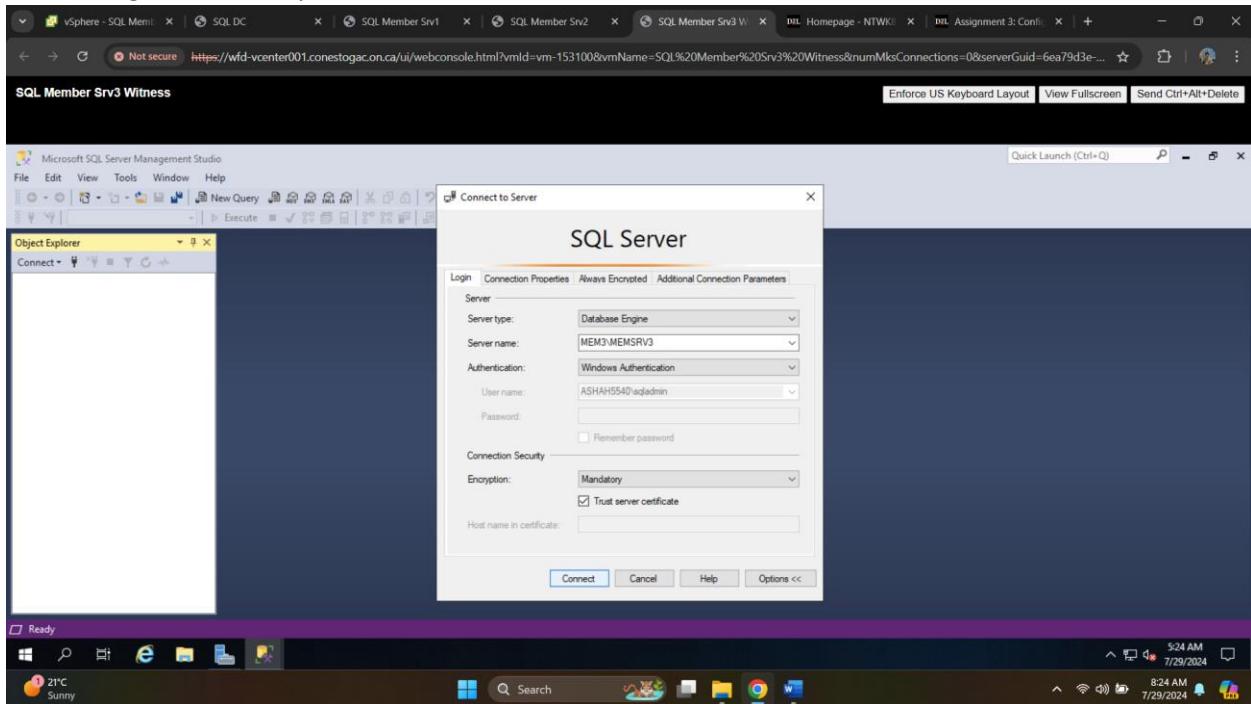
## Connecting SQL Server with user SQL admin on Member Server2



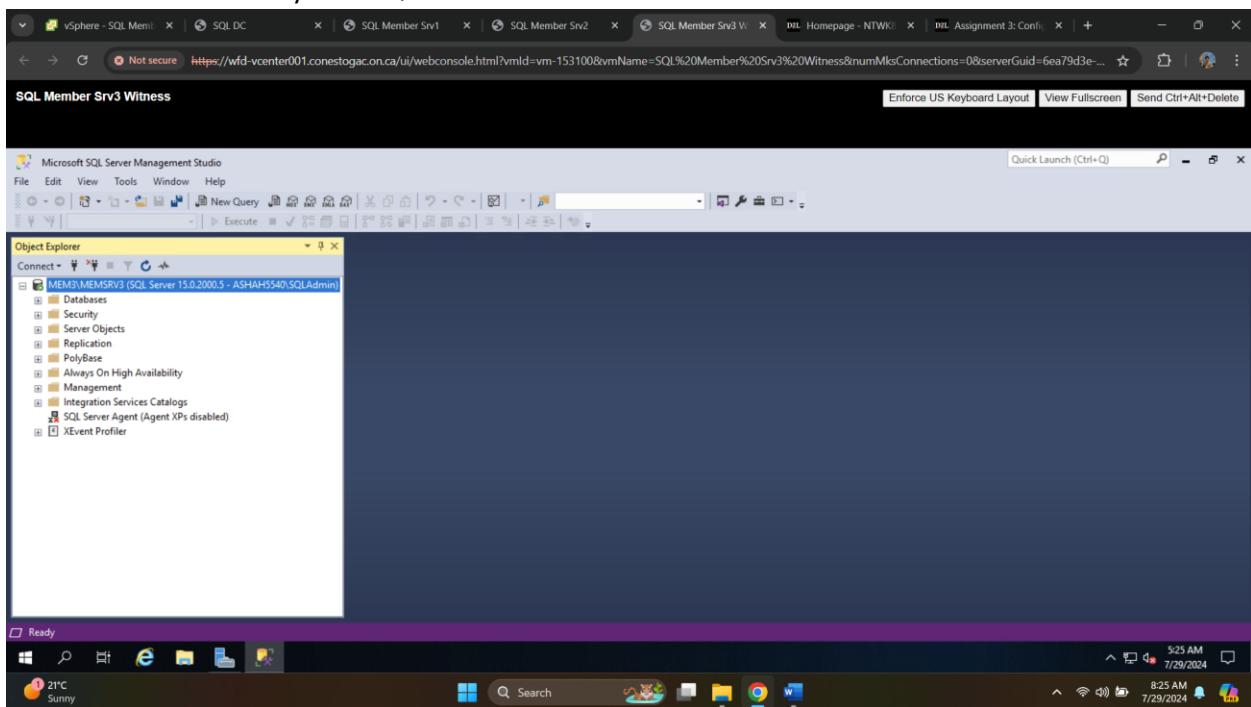
Connection successful by user SQL admin



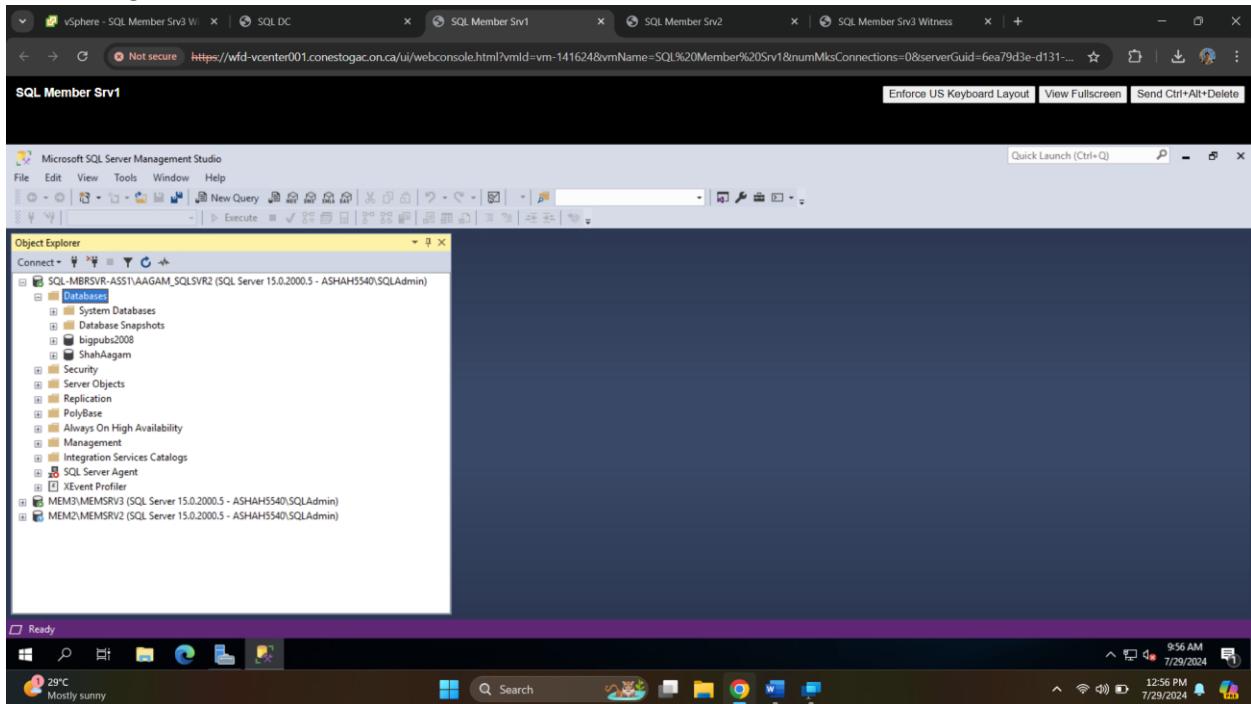
## Connecting SQL server by user SQL admin



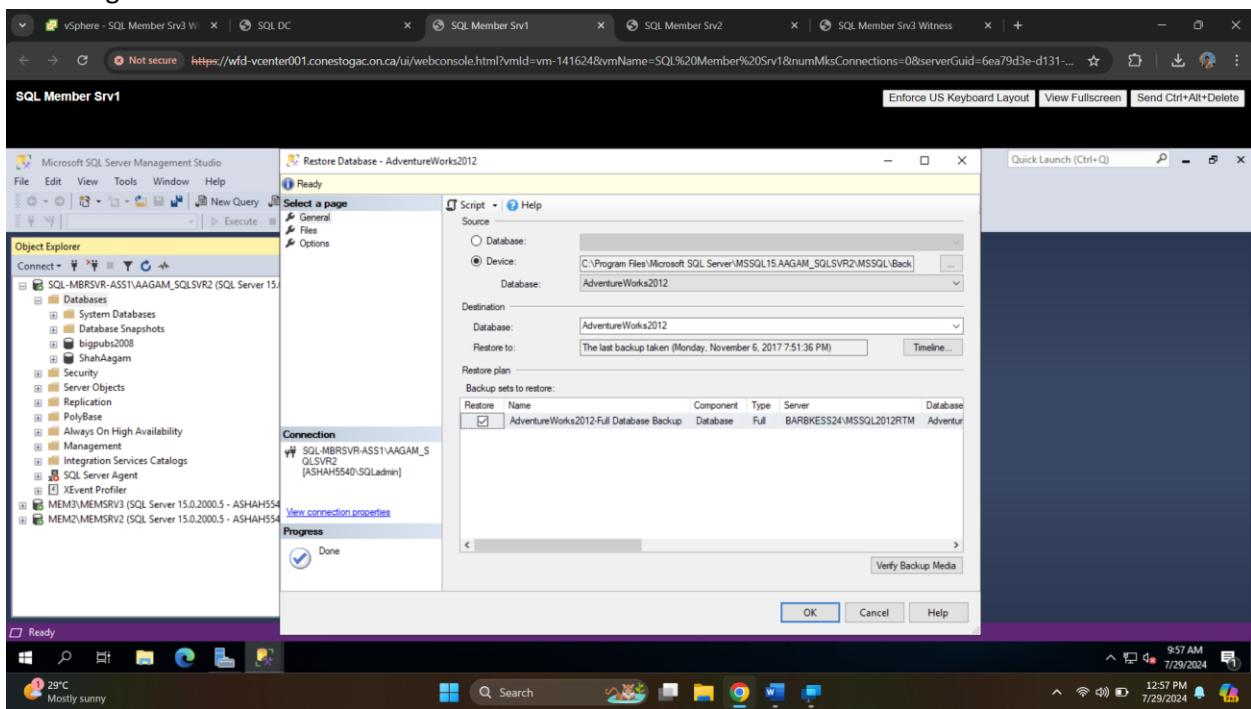
## Connection successful by user SQL admin



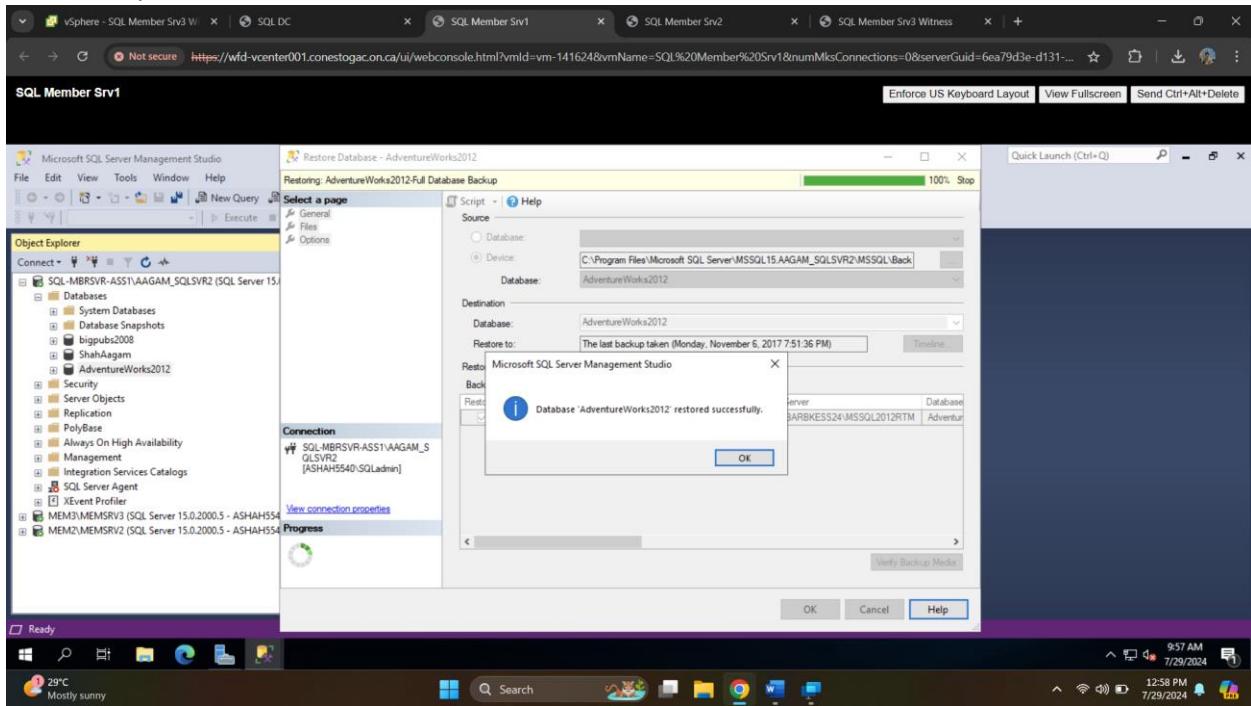
## Connecting Member Server 2 and Member Server 3 with Member Server 1



## Restoring Database "AdventureWorks2012" on member servers

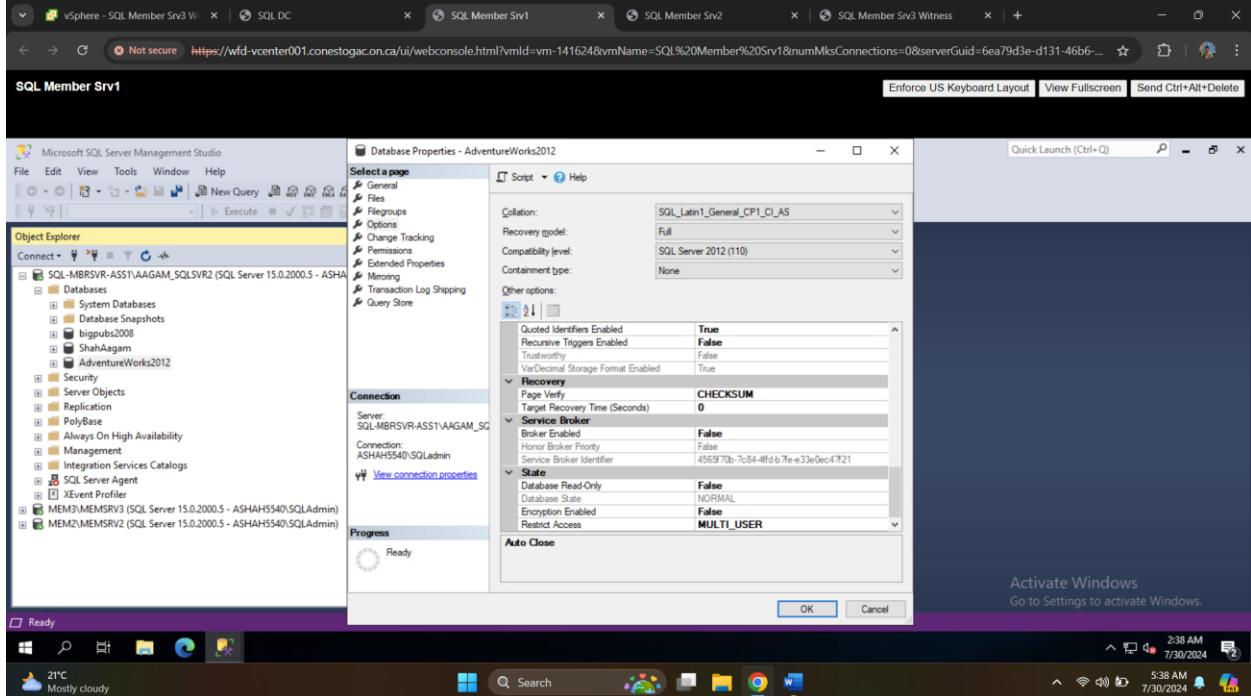


## Successfully database restored

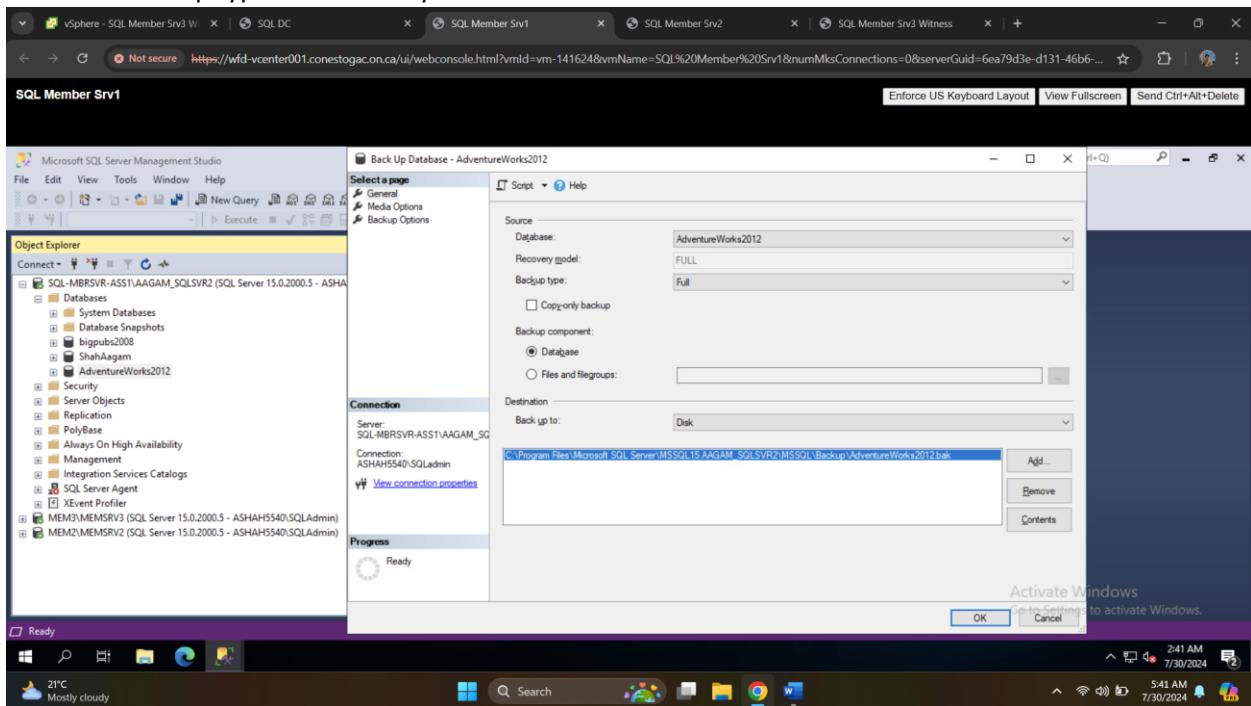


## Change Recovery model

### Changing recovery model to FULL

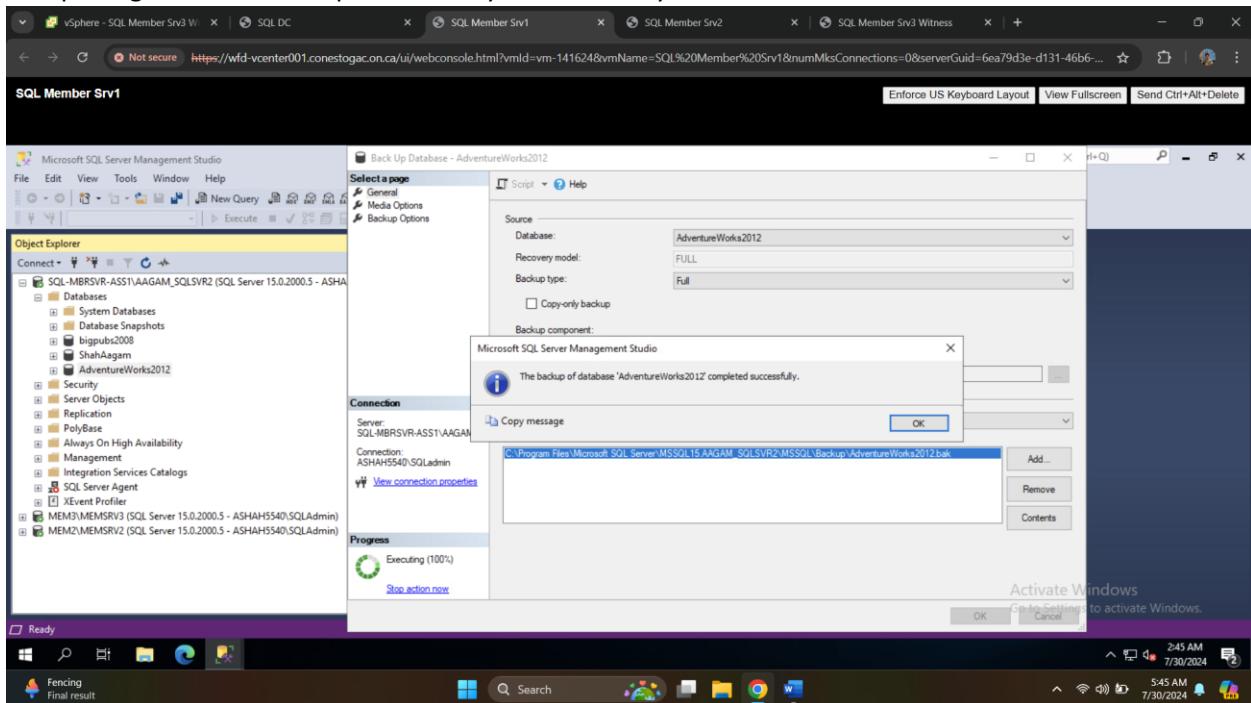


## Database backup type and recovery model is full

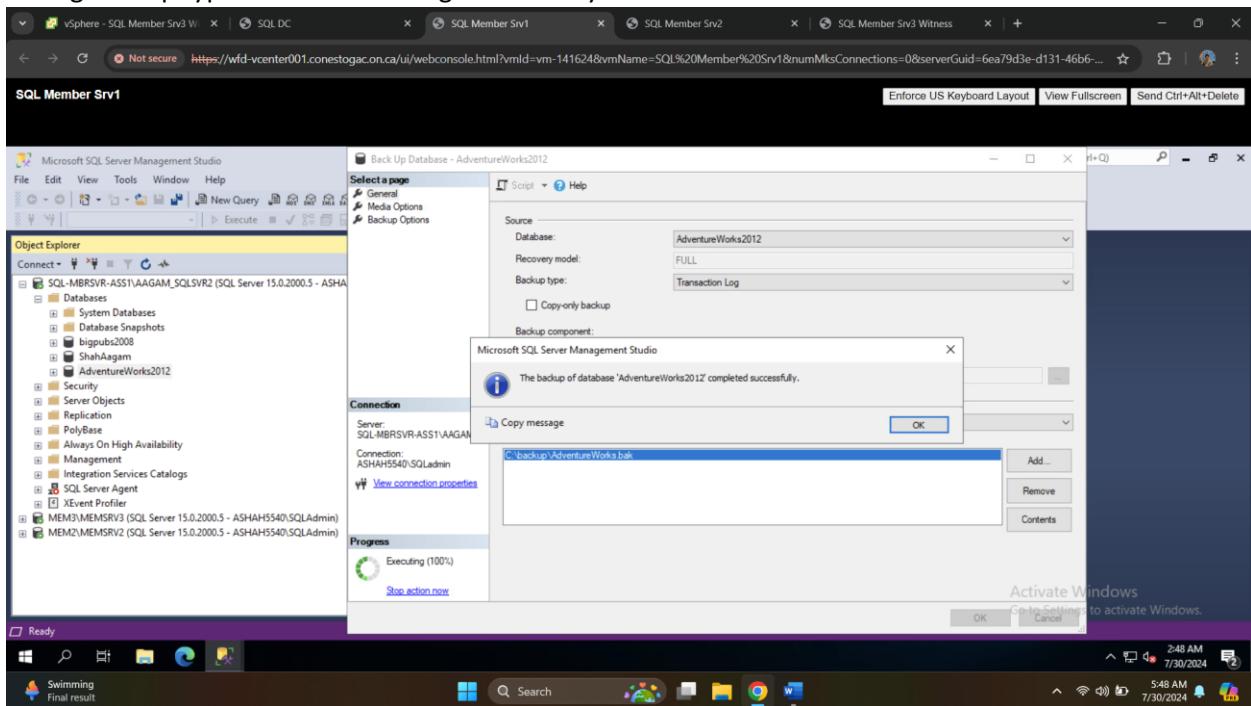


## Able do full backup

Completing database backup successfully with recovery model as full

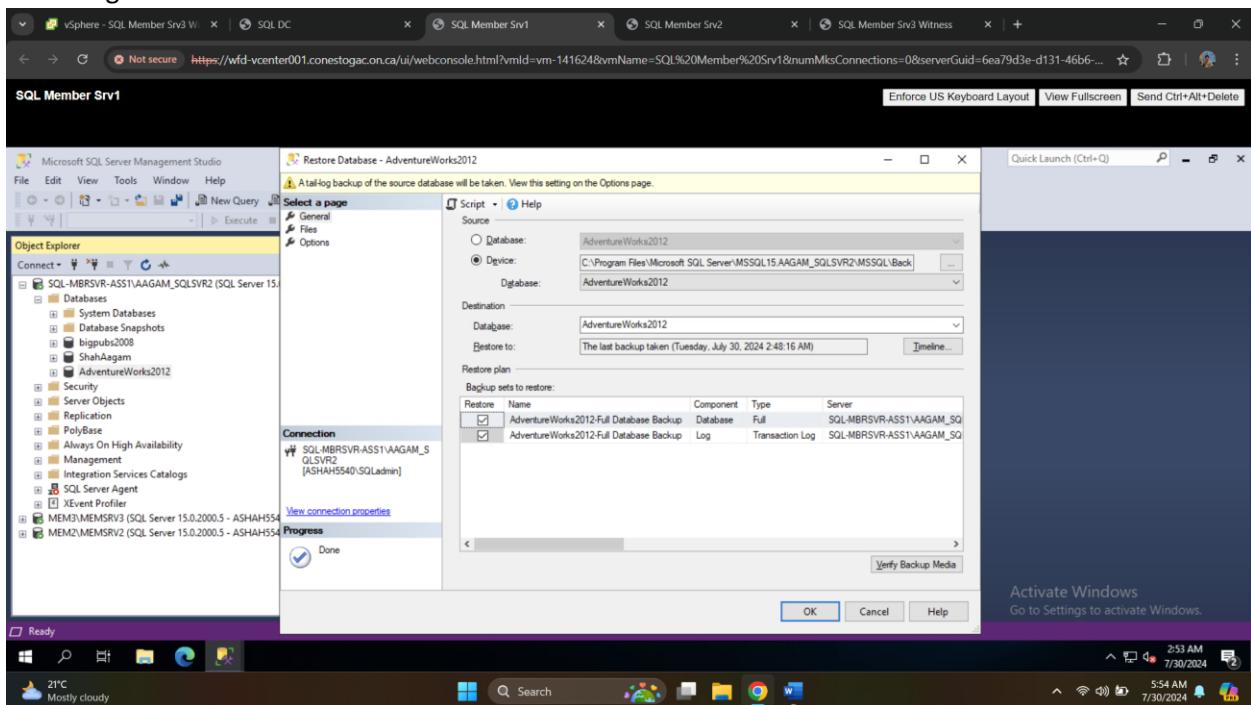


Taking backup type as transaction log successfully.

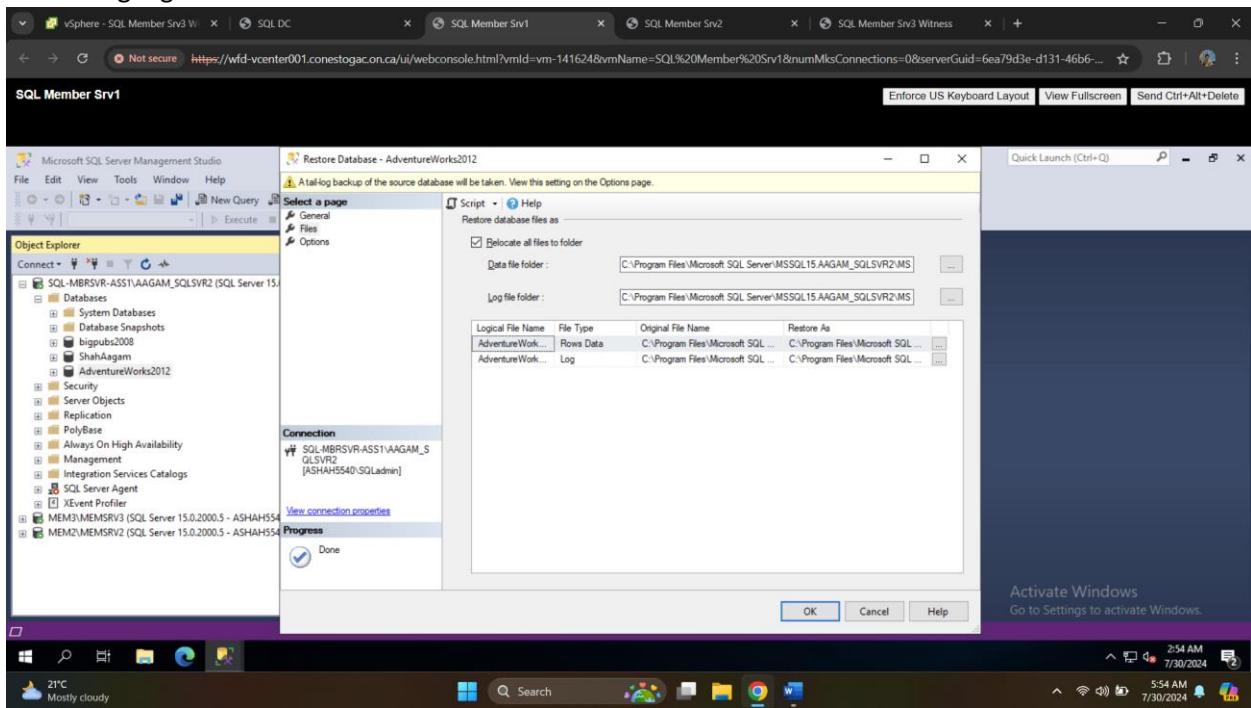


## able to restore

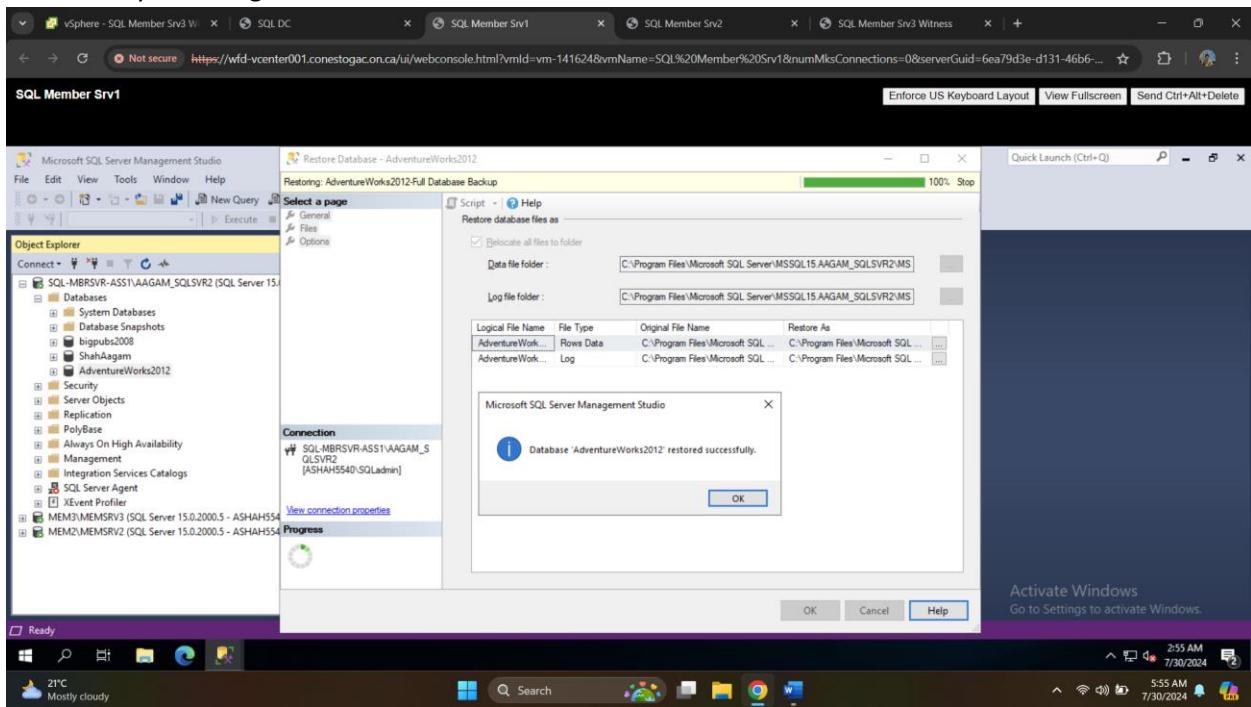
Restoring database



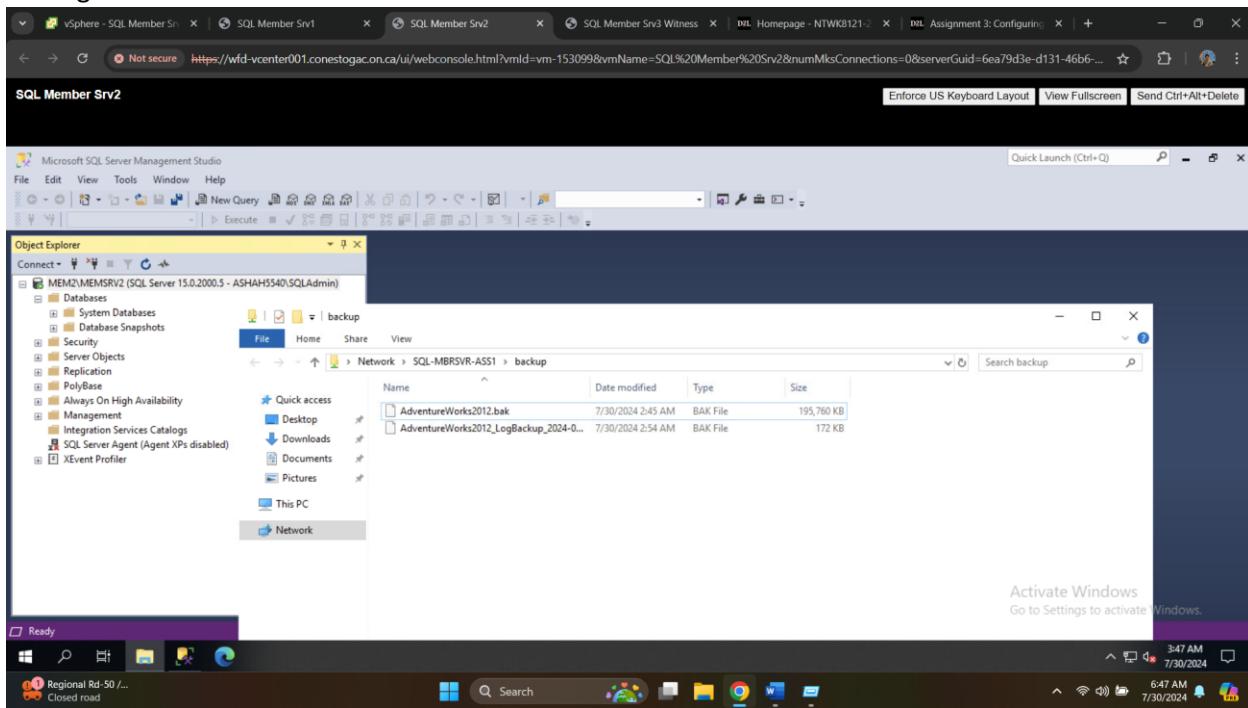
## Relocating log and data file



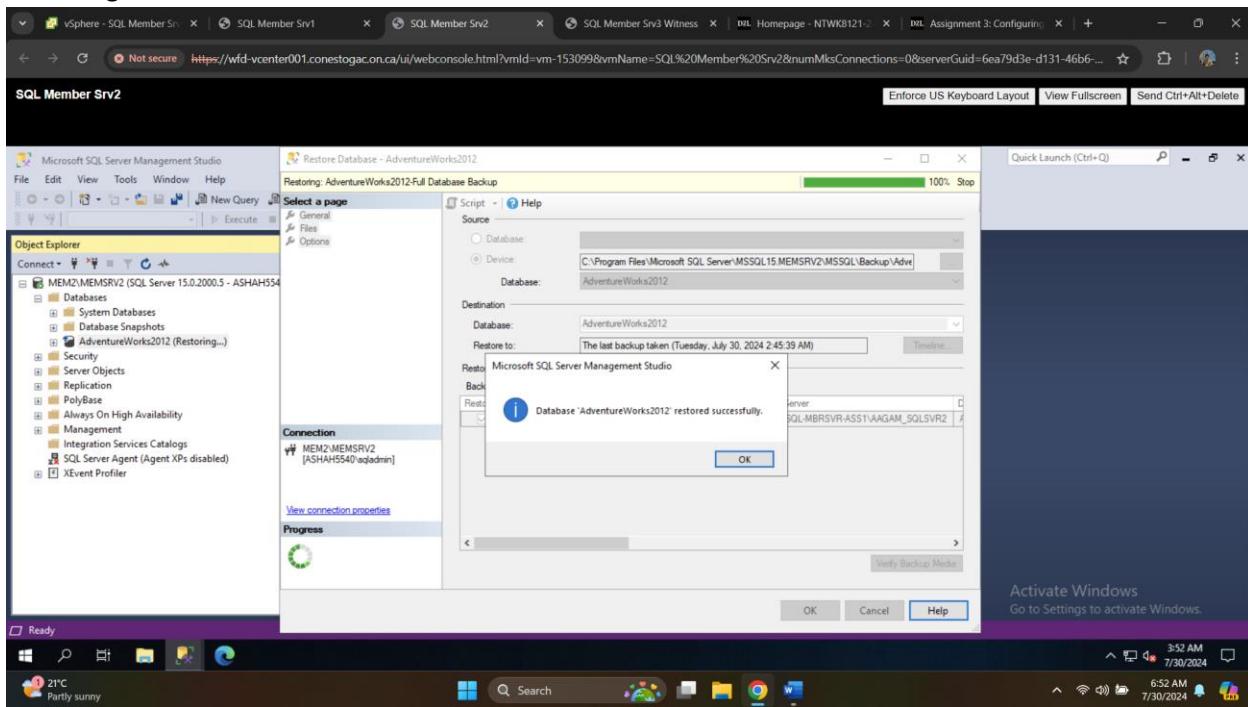
## Successfully restoring the database



## Placing database in share folder

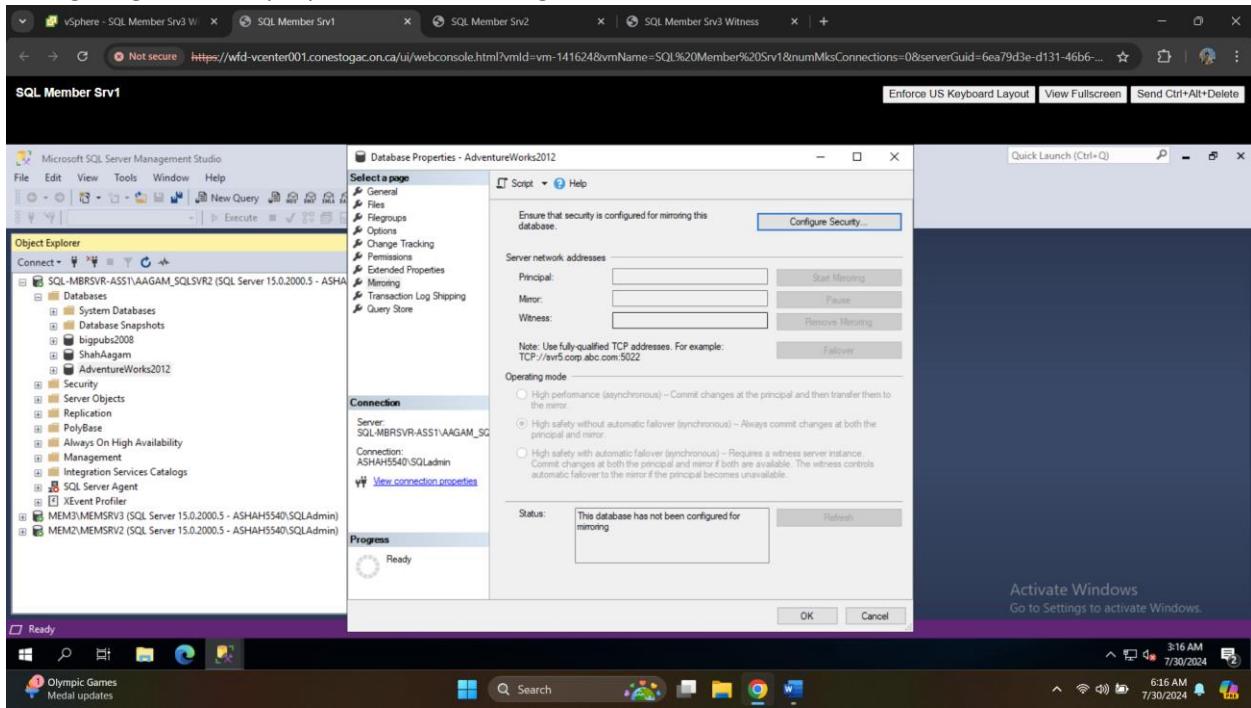


## Restoring database on Member Server 2

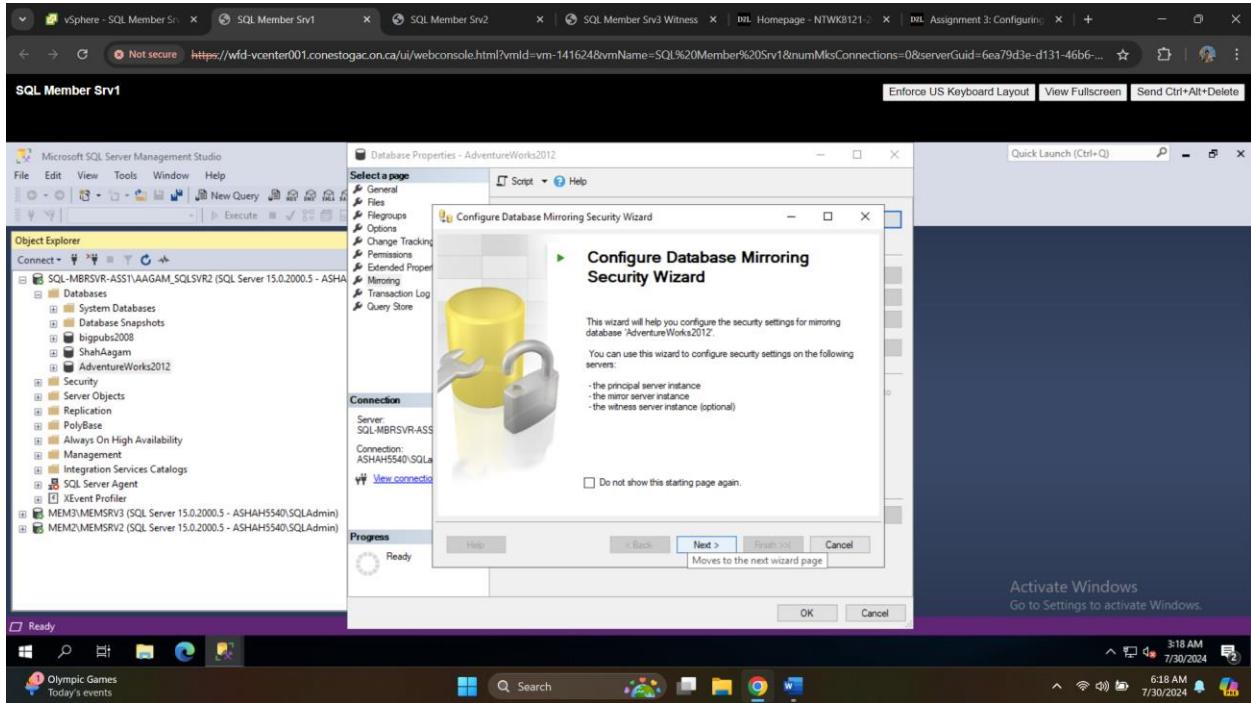


## Mirroring Security Configuration

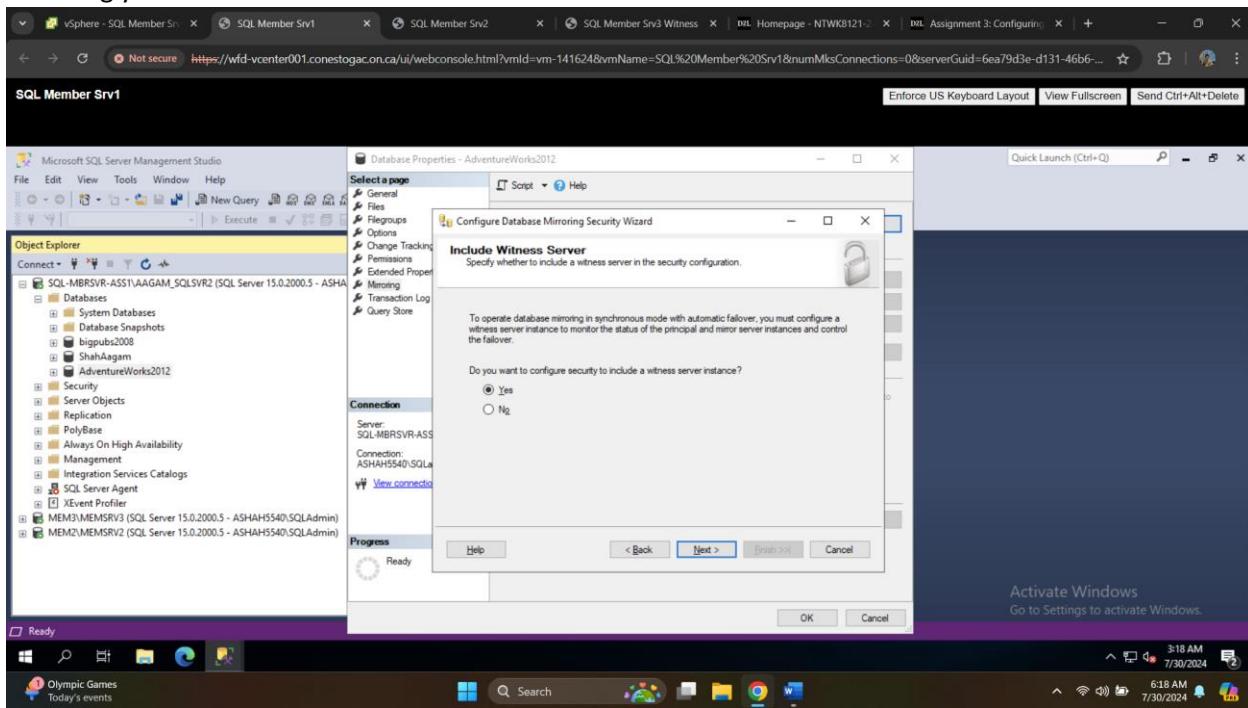
## Configuring database properties for mirroring



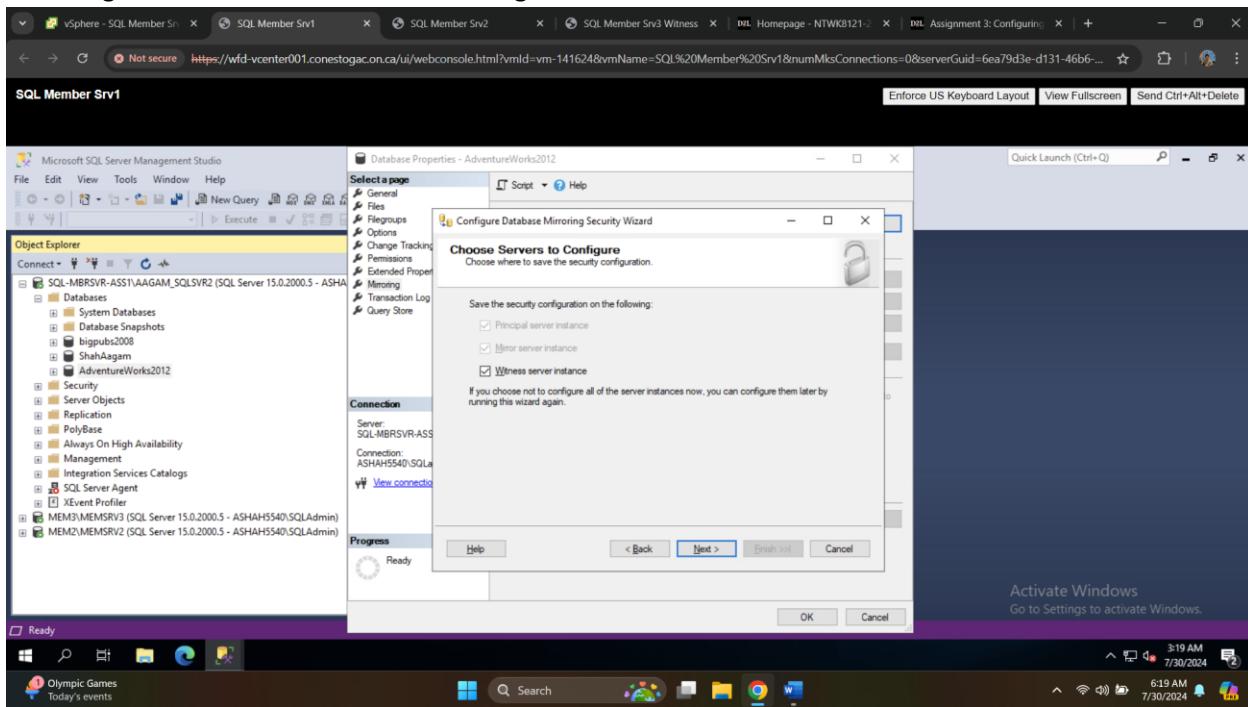
## Configuring security settings for mirroring



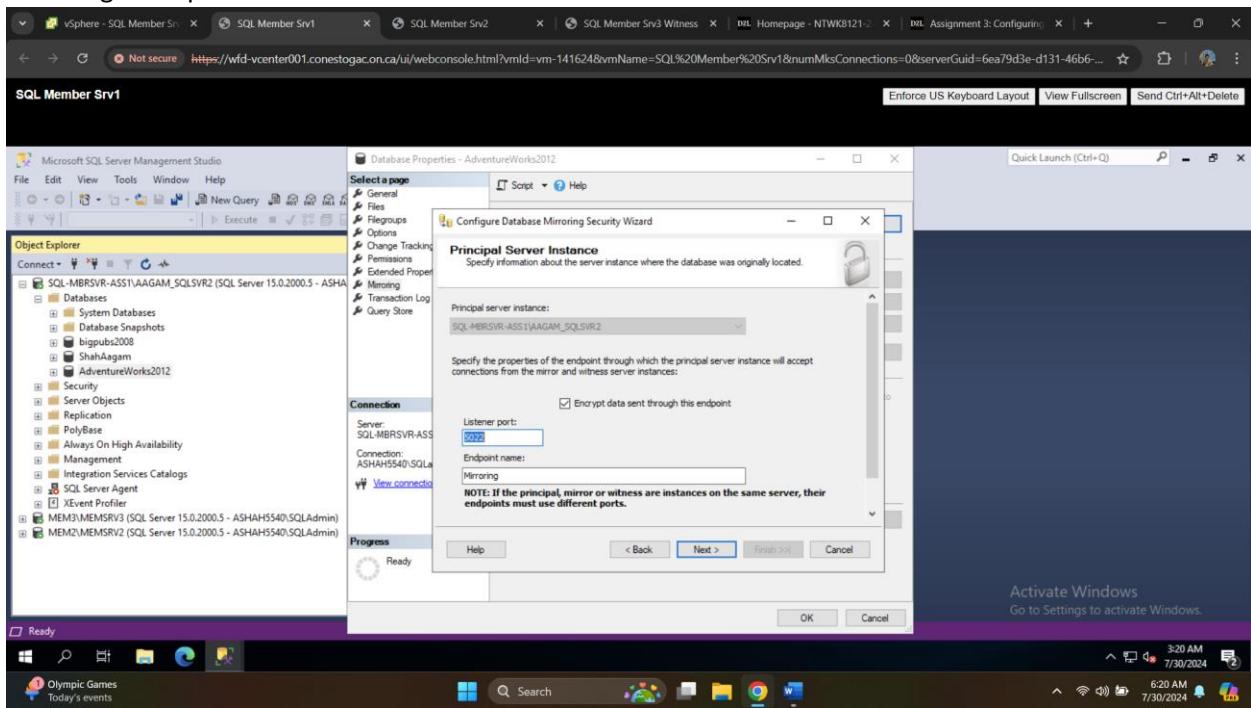
## Selecting yes for witness server interface.



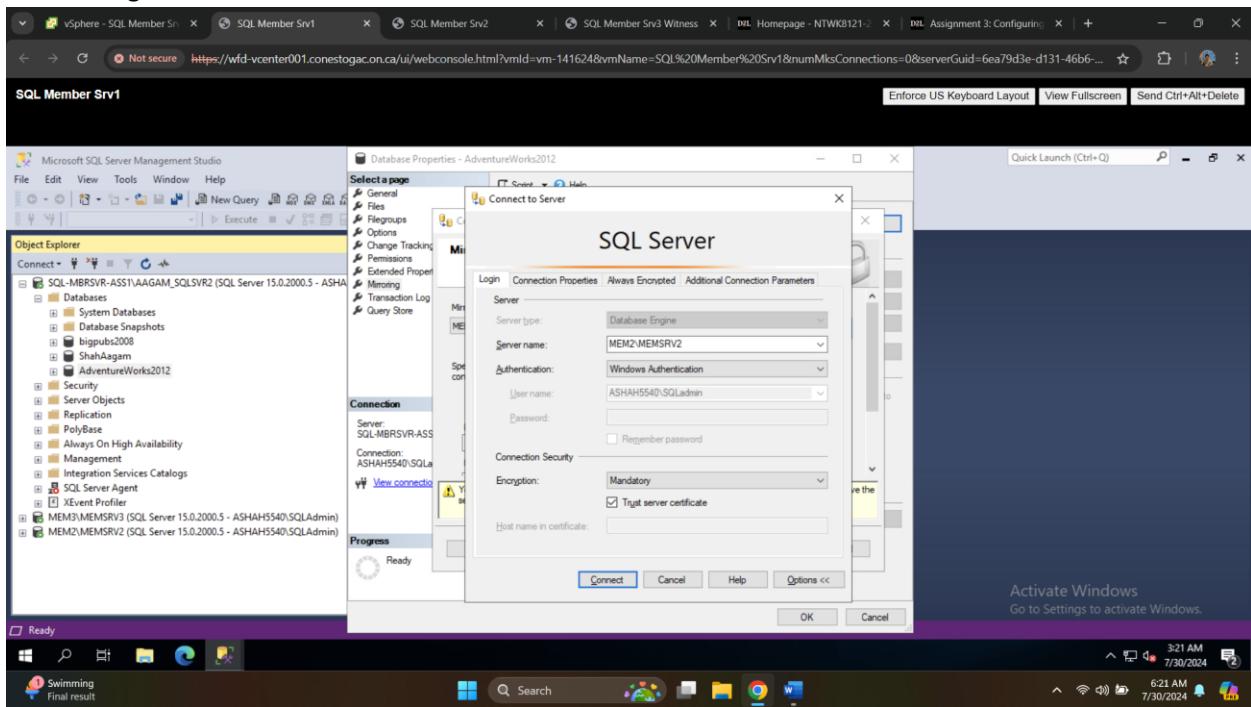
## Choosing witness server interface for configuration



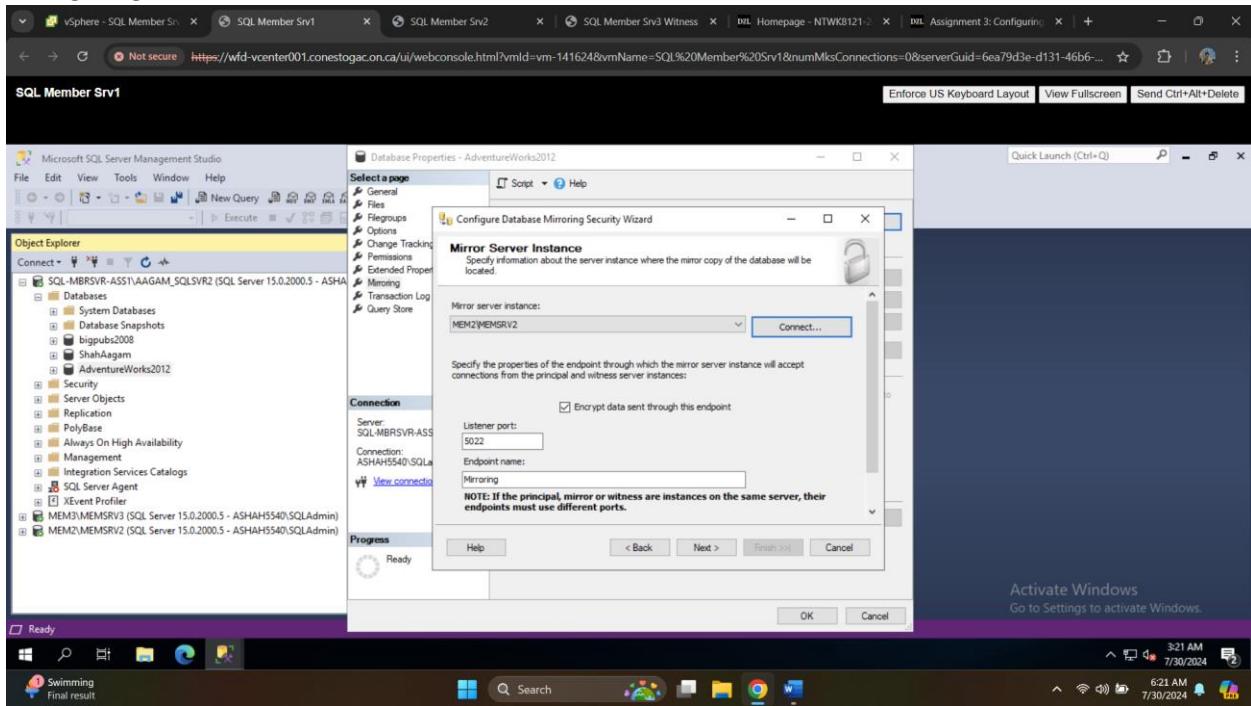
## Selecting Principal server instance



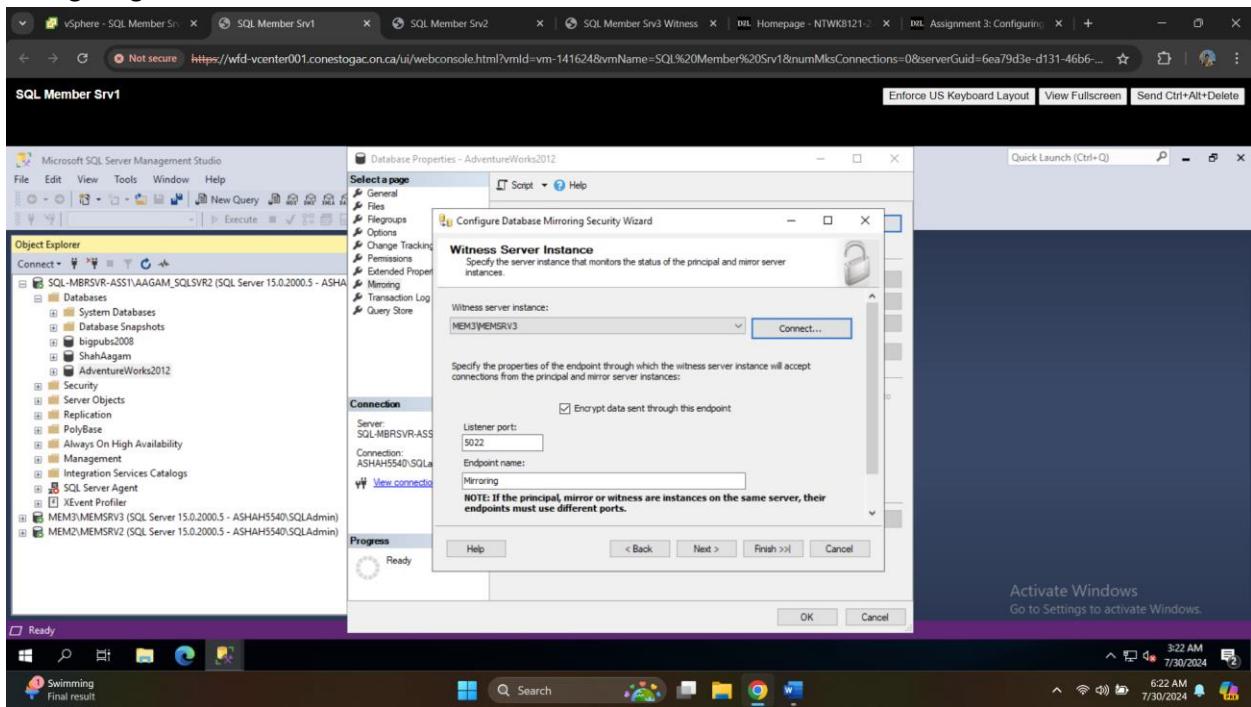
## Connecting mirror member server



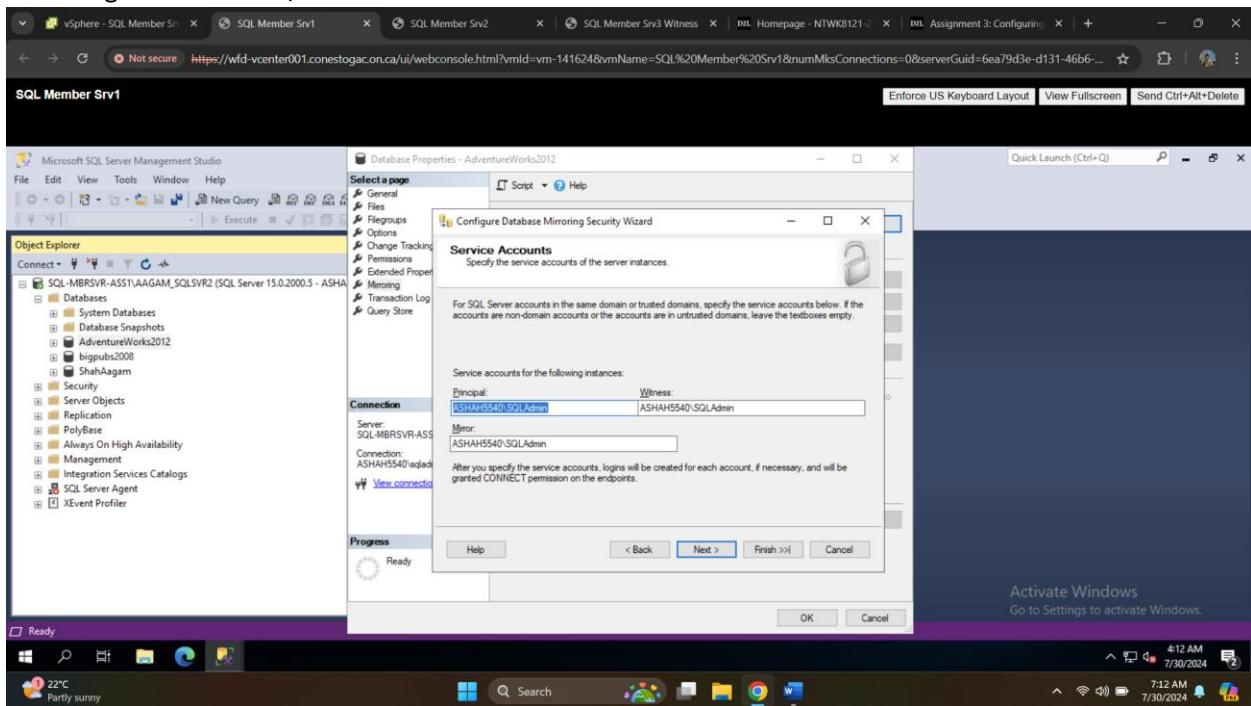
## Configuring member server 2 for mirror server instance



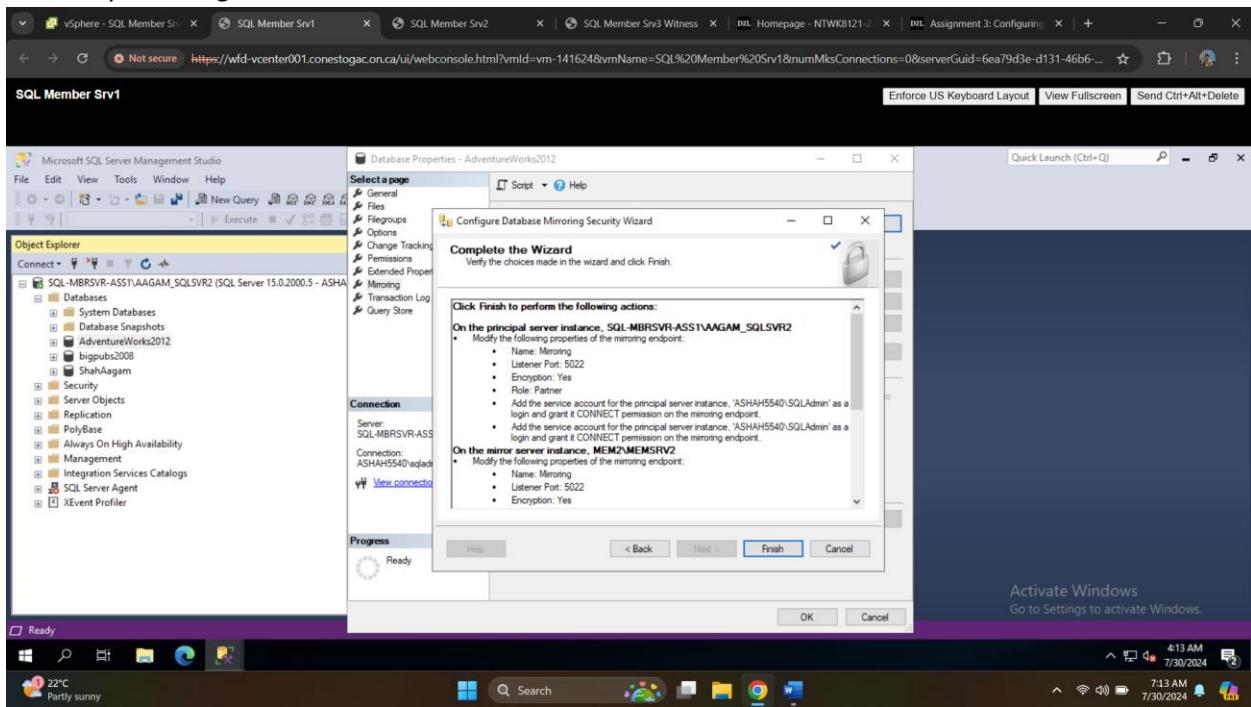
## Configuring Member Server 3 for witness server instance



## Providing "ASHAH5540\SQLAdmin" as service account to connect



## Summary of configuration



## Successfully configuring the endpoint

