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ITAS 141 Lab 2

2022-01-18

In figure 1 we have the creation of all the Virtual Machines within my Hyper-V Virtual Machine

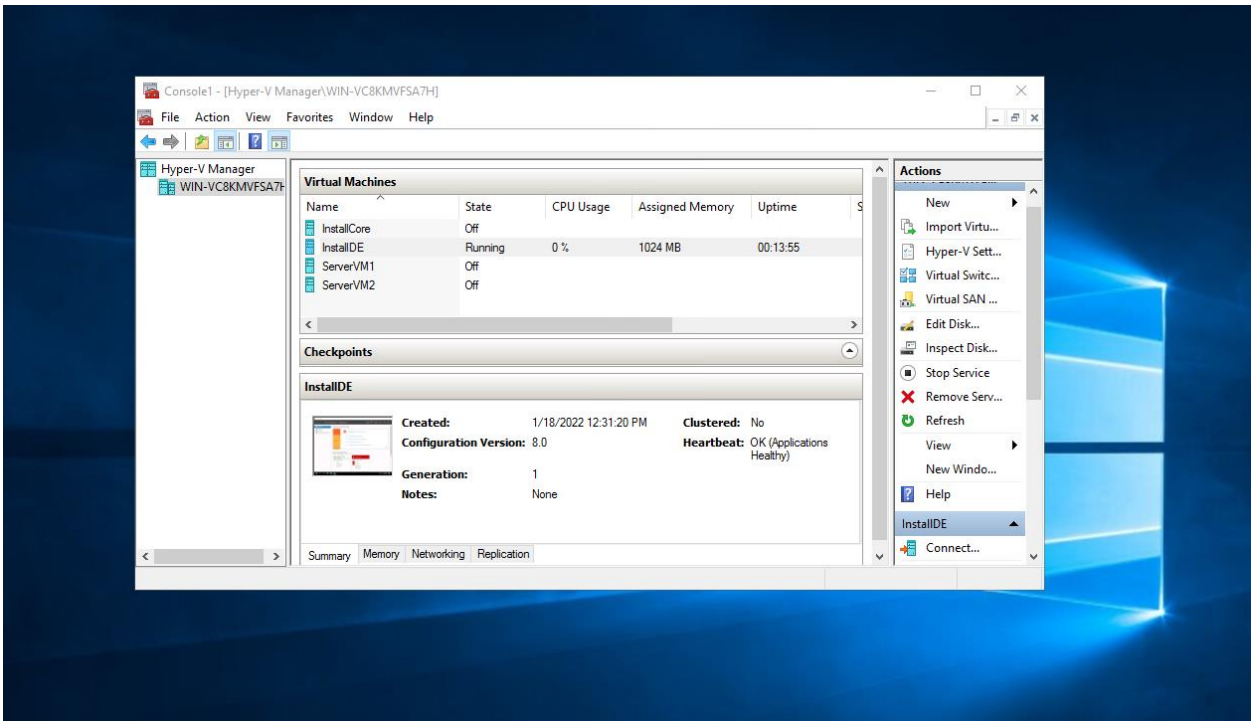

Figure 1: Creation of Virtual Machines on the Hyper-V VM

In the Following figures below, these are the pings for all the Virtual Machines to one another to show connection amongst them.

These 4 are for DC1

```
:\Users\Administrator>ping 192.168.8.26

inging 192.168.8.26 with 32 bytes of data:
eply from 192.168.8.26: bytes=32 time<1ms TTL=128
eply from 192.168.8.26: bytes=32 time<1ms TTL=128
eply from 192.168.8.26: bytes=32 time<1ms TTL=128
eply from 192.168.8.26: bytes=32 time<1ms TTL=128

ing statistics for 192.168.8.26:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
pproximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

:\Users\Administrator>
```

Figure 2: DC1 ping to SA1

```
C:\Users\Administrator>ping 192.168.8.29

Pinging 192.168.8.29 with 32 bytes of data:
Reply from 192.168.8.29: bytes=32 time<1ms TTL=128
Reply from 192.168.8.29: bytes=32 time<1ms TTL=128
Reply from 192.168.8.29: bytes=32 time<1ms TTL=128
Reply from 192.168.8.29: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.8.29:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Administrator>
```

Figure 3: DC1 ping to Hyper-V

```
Administrator: Command Prompt

Pinging 192.168.8.27 with 32 bytes of data:
Reply from 192.168.8.27: bytes=32 time=1ms TTL=128
Reply from 192.168.8.27: bytes=32 time<1ms TTL=128
Reply from 192.168.8.27: bytes=32 time<1ms TTL=128
Reply from 192.168.8.27: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.8.27:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\Users\Administrator>192.168.8.26
'192.168.8.26' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\Administrator>ping 192.168.8.26

Pinging 192.168.8.26 with 32 bytes of data:
Reply from 192.168.8.26: bytes=32 time<1ms TTL=128
Reply from 192.168.8.26: bytes=32 time<1ms TTL=128
Reply from 192.168.8.26: bytes=32 time<1ms TTL=128
Reply from 192.168.8.26: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.8.26:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Administrator>
```

Figure 4:DC1 ping to DM1

```
C:\Users\Administrator>ping 192.168.8.28

Pinging 192.168.8.28 with 32 bytes of data:
Reply from 192.168.8.28: bytes=32 time<1ms TTL=128
Reply from 192.168.8.28: bytes=32 time<1ms TTL=128
Reply from 192.168.8.28: bytes=32 time<1ms TTL=128
Reply from 192.168.8.28: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.8.28:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Administrator>
```

Figure 5: DC1 ping to DM2

These 4 are for DM1

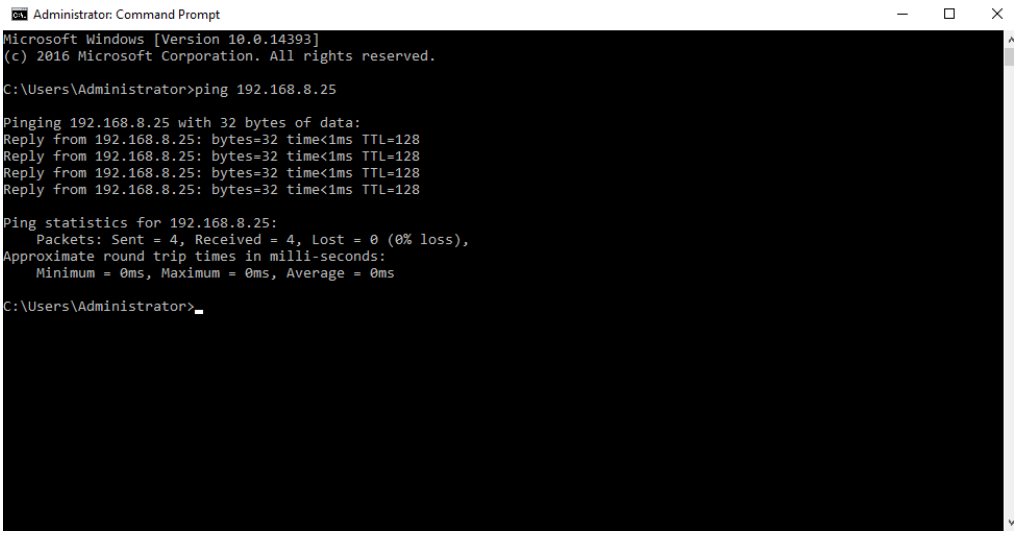

Figure 6: DM1 ping to DC1

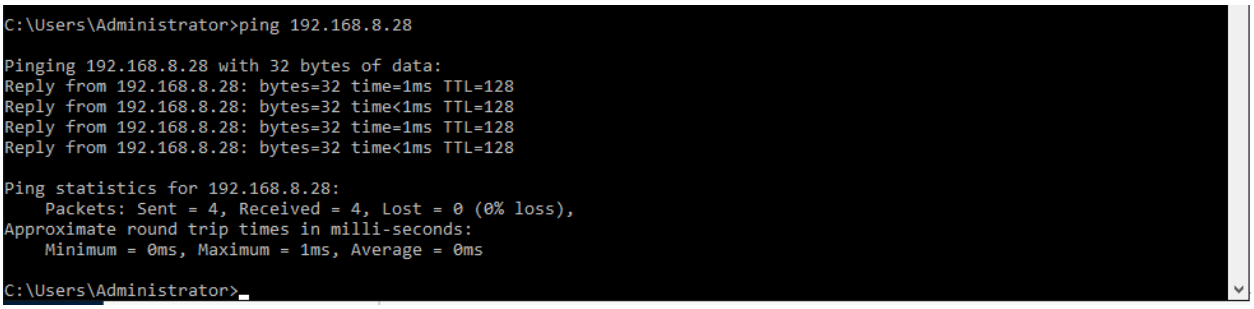

Figure 7: DM1 ping to DM2

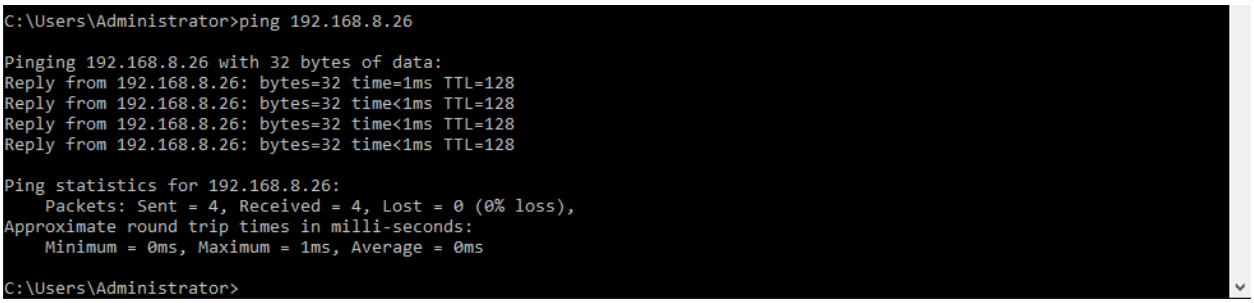

Figure 8: DM1 ping to SA1

```
C:\Users\Administrator>ping 192.168.8.29

Pinging 192.168.8.29 with 32 bytes of data:
Reply from 192.168.8.29: bytes=32 time=1ms TTL=128
Reply from 192.168.8.29: bytes=32 time<1ms TTL=128
Reply from 192.168.8.29: bytes=32 time<1ms TTL=128
Reply from 192.168.8.29: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.8.29:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\Users\Administrator>
```

Figure 9: DM1 ping to Hyper-V

These 4 are for DM2

```
PS C:\Users\Administrator> Set-NetFirewallRule FPS-ICMP4-ERQ-In -Enabled True
PS C:\Users\Administrator> ping 192.168.8.25

Pinging 192.168.8.25 with 32 bytes of data:
Reply from 192.168.8.25: bytes=32 time<1ms TTL=128
Reply from 192.168.8.25: bytes=32 time<1ms TTL=128
Reply from 192.168.8.25: bytes=32 time<1ms TTL=128
Reply from 192.168.8.25: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.8.25:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
PS C:\Users\Administrator>
```

Figure 10: DM2 connecting to DC1

```
Pinging 192.168.8.27 with 32 bytes of data:
Reply from 192.168.8.27: bytes=32 time<1ms TTL=128
Reply from 192.168.8.27: bytes=32 time<1ms TTL=128
Reply from 192.168.8.27: bytes=32 time<1ms TTL=128
Reply from 192.168.8.27: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.8.27:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
PS C:\Users\Administrator>
```

Figure 11: DM2 ping to DM1

```
Pinging 192.168.8.26 with 32 bytes of data:
Reply from 192.168.8.26: bytes=32 time=1ms TTL=128
Reply from 192.168.8.26: bytes=32 time<1ms TTL=128
Reply from 192.168.8.26: bytes=32 time<1ms TTL=128
Reply from 192.168.8.26: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.8.26:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
PS C:\Users\Administrator>
```

Figure 12: DM2 ping to SA1

```
Pinging 192.168.8.29 with 32 bytes of data:
Reply from 192.168.8.29: bytes=32 time=1ms TTL=128
Reply from 192.168.8.29: bytes=32 time<1ms TTL=128
Reply from 192.168.8.29: bytes=32 time<1ms TTL=128
Reply from 192.168.8.29: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.8.29:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
PS C:\Users\Administrator>
```

Figure 13: DM2 ping to Hyper-V

THese 4 are for SA1

```
C:\Users\Administrator>ping 192.168.8.25

Pinging 192.168.8.25 with 32 bytes of data:
Reply from 192.168.8.25: bytes=32 time<1ms TTL=128
Reply from 192.168.8.25: bytes=32 time<1ms TTL=128
Reply from 192.168.8.25: bytes=32 time<1ms TTL=128
Reply from 192.168.8.25: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.8.25:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Administrator>
```

Figure 14: SA1 ping to DC1

```
C:\Users\Administrator>ping 192.168.8.27

Pinging 192.168.8.27 with 32 bytes of data:
Reply from 192.168.8.27: bytes=32 time<1ms TTL=128
Reply from 192.168.8.27: bytes=32 time<1ms TTL=128
Reply from 192.168.8.27: bytes=32 time<1ms TTL=128
Reply from 192.168.8.27: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.8.27:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\Users\Administrator>
```

Figure 15: SA1 ping to DM1

```
C:\Users\Administrator>ping 192.168.8.28

Pinging 192.168.8.28 with 32 bytes of data:
Reply from 192.168.8.28: bytes=32 time<1ms TTL=128
Reply from 192.168.8.28: bytes=32 time<1ms TTL=128
Reply from 192.168.8.28: bytes=32 time<1ms TTL=128
Reply from 192.168.8.28: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.8.28:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Administrator>
```

Figure 16: SA1 ping to DM2

```
C:\Users\Administrator>ping 192.168.8.29

Pinging 192.168.8.29 with 32 bytes of data:
Reply from 192.168.8.29: bytes=32 time=2ms TTL=128
Reply from 192.168.8.29: bytes=32 time=1ms TTL=128
Reply from 192.168.8.29: bytes=32 time<1ms TTL=128
Reply from 192.168.8.29: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.8.29:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 2ms, Average = 0ms

C:\Users\Administrator>
```

Figure 17: SA1 ping to Hyper-V

These 4 are for the Hyper-V

```
C:\Users\Administrator>Ping 192.168.8.25

Pinging 192.168.8.25 with 32 bytes of data:
Reply from 192.168.8.25: bytes=32 time=1ms TTL=128
Reply from 192.168.8.25: bytes=32 time<1ms TTL=128
Reply from 192.168.8.25: bytes=32 time<1ms TTL=128
Reply from 192.168.8.25: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.8.25:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\Users\Administrator>
```

Figure 18: Hyper-V ping to DC1

```
C:\Users\Administrator>ping 192.168.8.26

Pinging 192.168.8.26 with 32 bytes of data:
Reply from 192.168.8.26: bytes=32 time<1ms TTL=128
Reply from 192.168.8.26: bytes=32 time<1ms TTL=128
Reply from 192.168.8.26: bytes=32 time<1ms TTL=128
Reply from 192.168.8.26: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.8.26:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Administrator>
```

Figure 19: Hyper-V ping to SA1

```
C:\Users\Administrator>ping 192.168.8.27

Pinging 192.168.8.27 with 32 bytes of data:
Reply from 192.168.8.27: bytes=32 time<1ms TTL=128
Reply from 192.168.8.27: bytes=32 time<1ms TTL=128
Reply from 192.168.8.27: bytes=32 time<1ms TTL=128
Reply from 192.168.8.27: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.8.27:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Administrator>
```

Figure 20: Hyper-V ping to DM1

```
C:\Users\Administrator>ping 192.168.8.28

Pinging 192.168.8.28 with 32 bytes of data:
Reply from 192.168.8.28: bytes=32 time<1ms TTL=128
Reply from 192.168.8.28: bytes=32 time=1ms TTL=128
Reply from 192.168.8.28: bytes=32 time=1ms TTL=128
Reply from 192.168.8.28: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.8.28:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\Users\Administrator>
```

Figure 21: Hyper-V ping to DM2

The figures below this, we have the time settings for all the virtual machines

Time settings for DC1

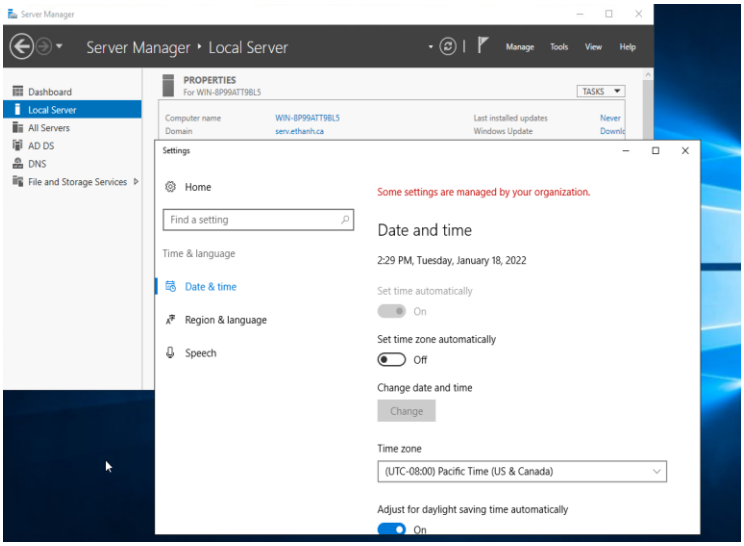

Figure 22: DC1 time settings

Time settings for DM1

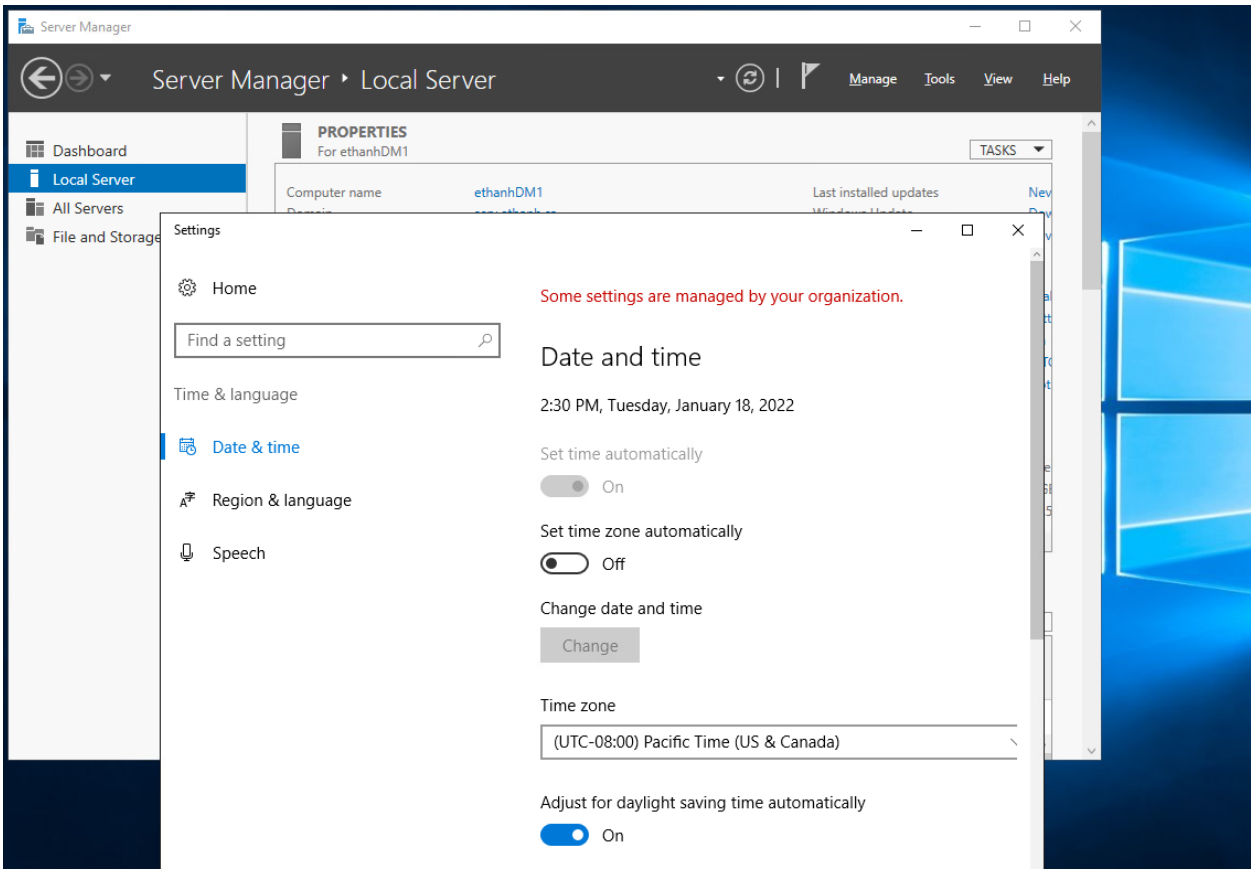

Figure 23: DM1 Time settings

Time settings for DM2

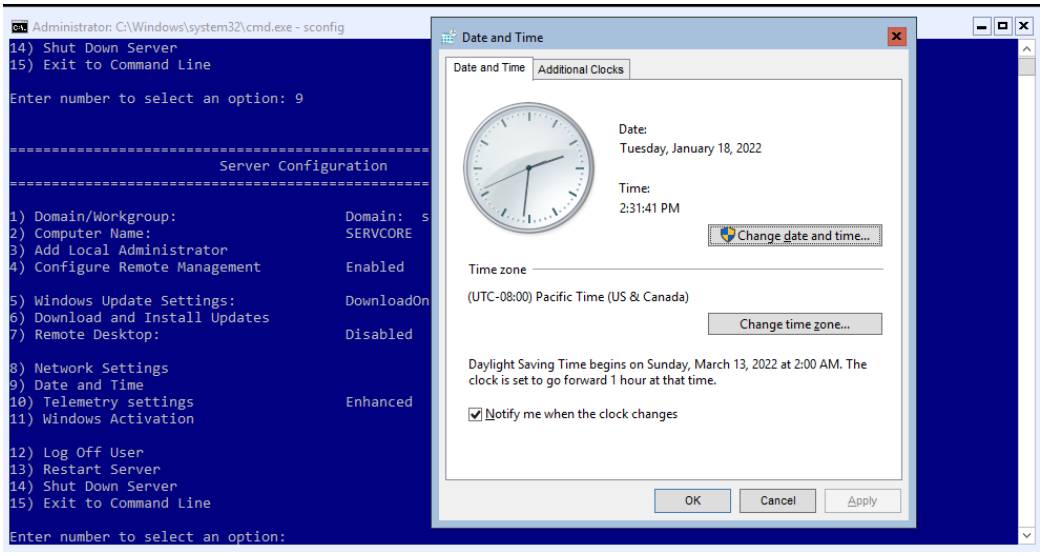

Figure 24: DM2 Time settings

Time settings for SA1

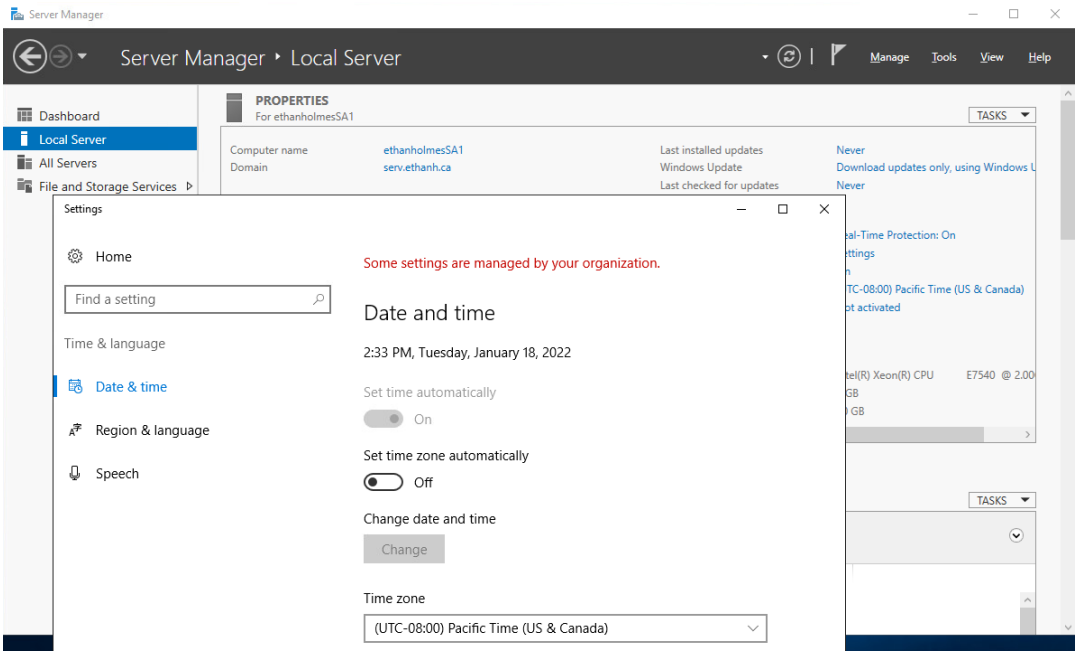

Figure 25: SA1 Time settings

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Time Settings for Hyper-V

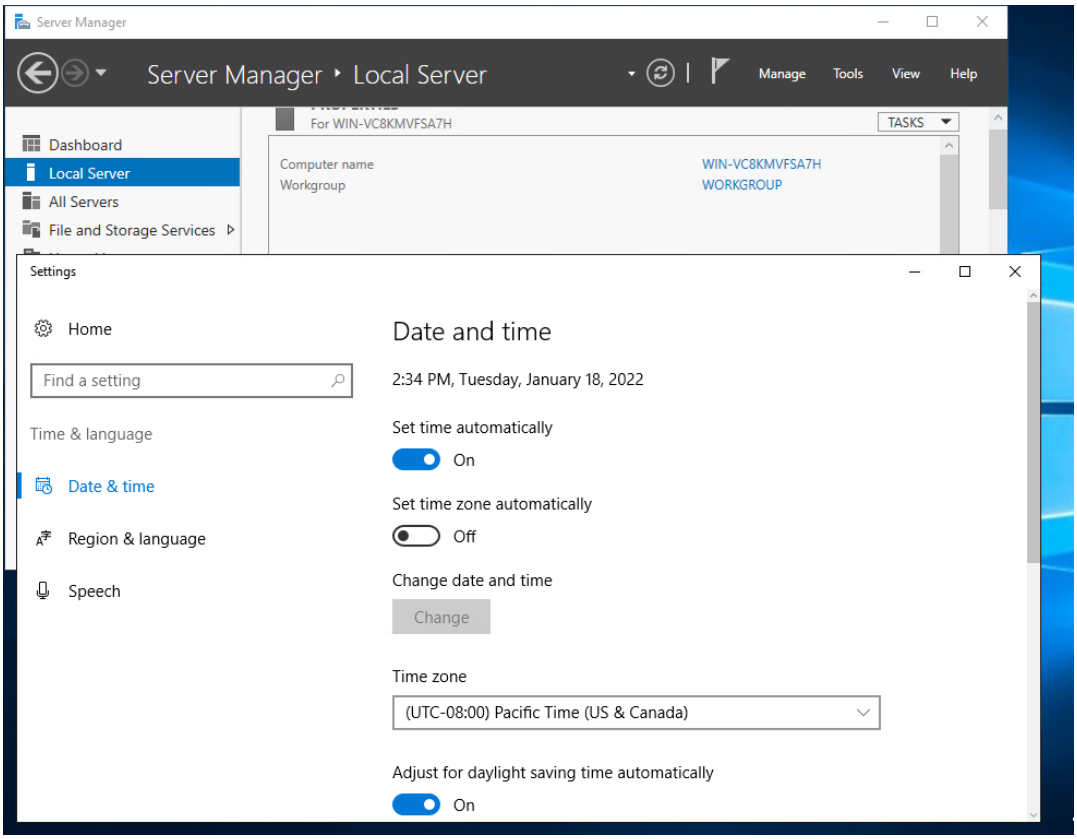

Figure 26: Hyper-V Time settings