DC Migration

*\*Note: Please see bottom of guide for definition of terms and explanation of what we are talking about.*

**Gather Information: Old DC**

1. Find out your “Domain Functional level” and “Forest Functional Level” for reference.
   1. Active Directory 🡪 Right click your domain name at the top OU 🡪 Take note of this information.
2. Take notes of the current FSMO Roles assigned to your OLD DC.
   1. CMD (Admin): “netdom query fsmo”
3. Health check on your Active Directory.
   1. CMD (Admin): “dcdiag /q”
      1. /q: Adding this silent switch means nothing returns back unless there is errors or issues with your Active Directory.
4. Health check on your DNS.
   1. CMD (Admin): “dcdiag /test:DNS /q”
      1. /q: Adding this silent switch means nothing returns back unless there is errors or issues with your DNS.
      2. If something failed most likely it’s the fact you turned off IPv6 addresses.
5. Tip! If you got any serious errors on your AD/DNS tests, then I would advise you to not migration. First research and fix the errors then migrate.

**Update Active Directory Schema Version**

1. On OLD DC, go to Registry Editor.
   1. Computer🡪HKEY\_LOCAL\_MACHINE🡪SYSTEM🡪CurrentControlSet🡪Services🡪NTDS🡪Parmeters🡪Schema Version
2. Here are the current Schema versions for all Windows Server OS’s.
   1. Windows Server 2008 & R2: 44 | 47
   2. Windows Server 2012 & R2: 56 | 69
   3. Windows Server 2016: 87
   4. Windows Server 2019: 88
3. How to update:
   1. Introduce your most up to date Windows Server OS to into the network and Domain.
      1. Make sure you establish the basics. Give it a name, set static IP address, give DNS IP address, gateway address, and ping back and forth. Join the Domain and reboot.
   2. While on the NEW DC, mount the modern Windows Server OS iso and go to PowerShell.
      1. “cd *driveltter*:\support\adprep”
      2. “.\adprep.exe /forestprep”
      3. Then, press “c” and press enter.
      4. “.\adprep.exe /domainprep”
      5. “.\adprep.exe /domainprep /gpprep”
4. Check the new schema version on the old DC via regedit.

**Promote NEW DC**

1. Go to Server Manager and add the Active Directory Role.
   1. **\*IMPORTANT\*:** Within the wizard make sure that you select “Add a domain controller to an existing domain”.
   2. Make sure that “Domain Name System (DNS) server” and “Global Catalog (GC)” boxes are checked. Then, enter your DSRM password.
   3. Replication options: Make sure to select your old DC from the drop down menu.
   4. Install and reboot!
   5. From this point, you should see your NEW DC in your old Active Directory under “Domain Controllers”.
   6. Also, on your OLD DC input the alternate DNS server ip address of your NEW DC IP address. On your NEW DC input the alternate DNS server ip address of your OLD DC.
2. Replication! Server Manager 🡪 Tools 🡪 Active Directory Sites and Services
   1. This is on your NEW DC, go to Sites🡪Default-First-Site-Name🡪Servers🡪Select your NEW DC🡪NTDS Settings🡪Right Click🡪All tasks🡪Check Replication Topology🡪Refresh page
   2. You should see an entry in middle of the page. Right click it and select “Replicate Now”.
   3. **\*IMPORTANT\*:** Do step 2a and 2b for your OLD DC.
3. **Both of your DC’s are now replicated!**
   1. You can test and see for yourself. Create a user in one dc and look onto the other to see if that use is there.
   2. Also, make sure that your DNS is replicated too. If you launch up DNS on any DC and you go to the “Forward/Reverse Lookup Zone”. You want to check the “Start of Authority (SOA) entry and look in the “Data” column there will be a number. Make sure that number is exactly the same on both DC’s.

**Transfer FSMO Roles**

1. On the NEW DC, start PowerShell as admin.
   1. “ntdsutil” 🡪 “roles” 🡪 “connections” 🡪 “connect to server *NewDCName” 🡪 “quit”*
      1. From this point, enter the following roles on the command line and hit YES!:
      2. Transfer infrastructure master
      3. Transfer naming master
      4. Transfer PDC
      5. Transfer RID
      6. Transfer schema master
      7. Quit
      8. Quit
2. Verify roles!
   1. PowerShell (New DC) 🡪 “netdom query fsmo”
      1. Make sure they are assigned to the NEW DC. You can confirm on the OLD DC.

**Raise To Higher Domain Functional level**

1. On your NEW DC, go to Active Directory.
   1. Right click your Domain Name.
      1. Select “Raise domain Function level”.
   2. \*Note: The highest level you can raise it to is Windows Server 2016 with Windows Server 2019 acting as your new Domain Controller.
2. On your NEW DC, go to Active Directory Domains and Trusts. (You can access this with Server Manager 🡪 Tools)
   1. Right click your Domain Name and select “Raise Domain Functional Level”

**Remove OLD DC**

**\*IMPORTANT\*:** This part is ONLY done after everything is working smoothly to get rid of your OLD DC.

1. Go to Active Directory Sites and Servers on the OLD DC.
   1. Sites🡪Default-First-Site-Name🡪Servers🡪Select your OLD DC🡪NTDS Settings🡪Right Click🡪Properties🡪Uncheck Global Catalog🡪Apply🡪Refresh Page🡪Right click entry🡪Replicate Now.
      1. Go onto the NEW DC Active Directory Users and Computers. Go to Domain Controllers OU. It should take a minute, but looking at your OLD DC in that OU the “DC Type” should change to “DC” and NOT “GC”.
2. On your OLD DC, start “Run” and type in “dcpromo”
   1. Go through the wizard and keep hitting next and enter your admin password then reboot.
      1. \*Note: From this point, your old and now removed server is now a member server under the “Computers” OU in Active Directory.
   2. If you want, you can now remove the AD and DNS roles on the now removed OLD DC.