

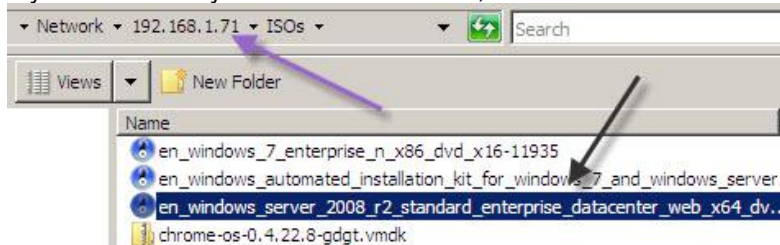
## Lab 3-3 Installing Active Directory

Check off

	Setup ADDC1
	Added AD Role
	Created a new domain in a new forest
	Joined ADDC2 to domain
	Installed AD Role on ADDC2
	Show both DCs in ADDC1
	Answer Questions

### *Before you start:*

1. If you don't have your Server 2008 DVD, be sure to have the ISO available.

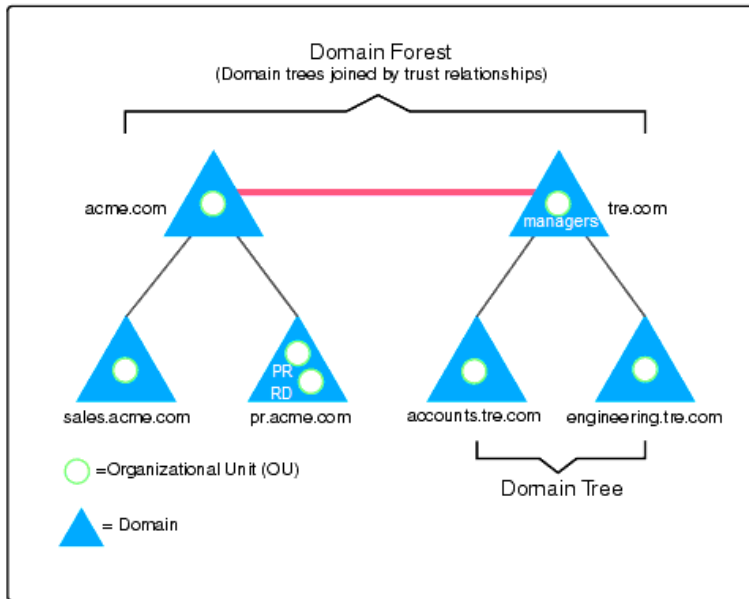


- 2.
3. Check your computer name on both of your ADDC servers. If they are some funky name, change them so it's something easy to spell. NO LEET SPEAK.
4. You're going to install Active Directory on your server. That will turn the server into a Domain Controller, or an Active Directory Domain Controller (which is why we named the virtual servers ADDC1 and ADDC2).
5. Read on about Active Directory so you know what you're doing.

Active directory is a directory that contains information about all of the objects in your network. Objects can be users, computers, shared folders, shared printers, organizational units\*, etc. It also contains information about programs, what services are available and where to find them, security access, permissions, etc. In other words, it knows EVERYTHING about the stuff in your domain and controls access to those things.

AD is REALLY powerful. We're going to do the main Active Directory stuff in this class, but we'll only scratch the surface. You can do some super cool stuff with AD!

The basic building blocks of Active Directory are Domains, Domain Controllers, Trusts, Users, Groups, Forests, Organizational Units, Sites, Replication, and the Global Catalog.



Here we have two forests. A forest is a collection of domains. A domain is a collection of users, organizational units, computers, servers, shares, etc.

We'll learn more as we go along.

## Directions

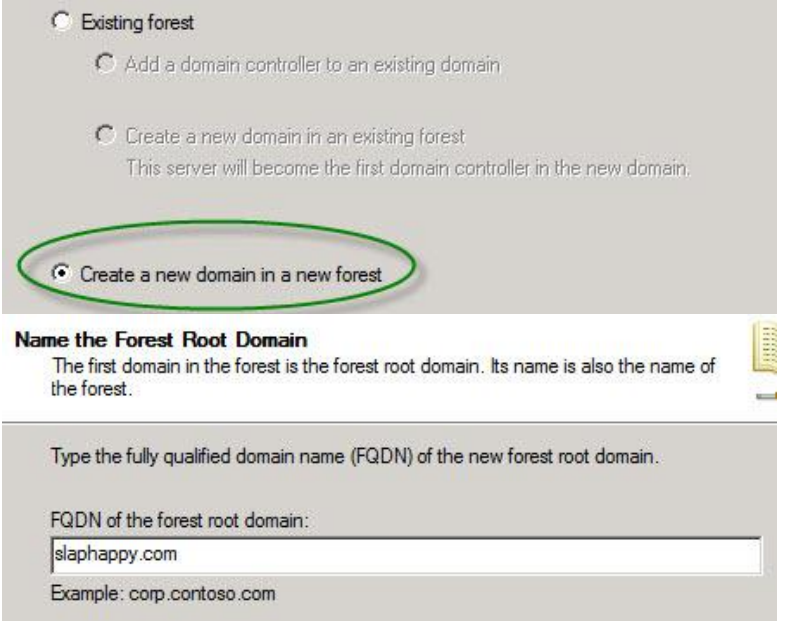
1. Log into your server as an administrator.
2. Hyper V Manager.
3. Start your ADDC1 server and log it in. **Check the computer name.** If it is a funky name, rename it a single, easy to spell word. We'll be using UNC pathnames so you don't want to have to type [\\win-22390ea24](#) when it would be a lot easier to remember [\\snappy](#) and [\\slappy](#) (that's what I named mine). Restart after naming.
4. Under Customize this Server select **Add Roles**
5. Select **Active Directory Domain Services**
6. It will tell you that you have to add the .NET framework, so say **Add Required Features.**
7. Read the Introduction to Active Directory Domain Services and answer the questions to the right.
8. **BEFORE YOU CONTINUE, MAKE SURE YOU ARE NOT DOING THIS ON YOUR ORIGINAL SERVER. IT SHOULD BE ON ADDC1.**
9. Select install. It can take awhile to install. If you didn't answer the questions to the right, you can look up the answers online.
10. Click close when it's finished. Make sure it says "successful" under both items you installed.

1. What is the minimum number of Domain Controllers you should have in one network?
2. Why?
3. AD DS will require \_\_\_\_\_ to be installed.
4. What do you do if you don't have that?
5. After you install the role, what do you have to do to make the server a fully functional domain controller?
6. What are three other things AD will install?

- 11. Open Server Manager to ensure that your new role was installed correctly. Ruh Roh! Nothing is going on yet! Why is that? Well you need to actually PROMOTE your server to a Directory Controller. So how do you do that?
- 12. Right click on the CMD program and select **run as an administrator**.
- 13. Type the word **dcpromo** (domain controller promoter) at the command prompt. ONLY an administrator can installed the ADDS so you have to run as an admin.
- 14. Since you're a new user, just click **next**. Do not go into Advanced Mode.



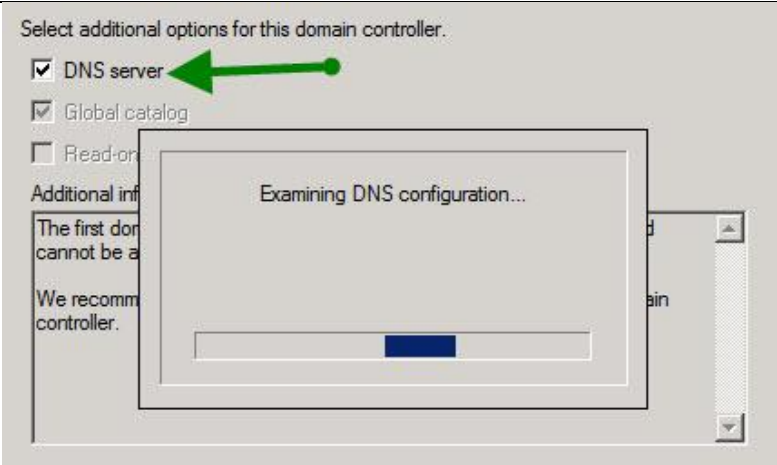
- 15. You're going to get some information about OS compatibility. Read it if you like. Press Next.
- 16. It's going to ask you whether you want a new or existing forest. A forest is a collection of domains. Since this is your **first domain** and your **first domain controller**, you are going to select create a new domain in a new forest.
- 17. A domain is a collection of computers that share the same namespace (example Microsoft.com, Redmond.microsoft.com, Bellevue.microsoft.com).
- 18. Click next. **FQDN=Fully Qualified Domain Name**. You're going to create a *root domain name*. csn.com is OUR domain name, so you can come up with something good...but let's not be childish. And NO LEETSPEAK! Srsly. You'll be in big bad trouble. Go ahead and use .com. (Example, slaphappy.com.) The root is the first domain in your forest.
- 19. Hit next.



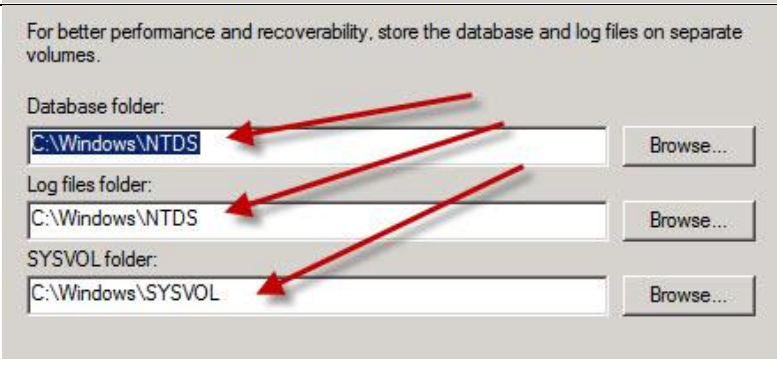
- 20. It's going to ask you if you're all 2008 or have older servers. We may put a 2003 server into our domain, so leave the Forest Functional Level at 2003. What this means if is you have even ONE older server acting as a domain controller in your network, you have to have the FFL down to its level. At native level (2008) it has more options and features.
- 21. You're going to do the same with domain functional level. Same deal, but at a domain level.



22. It'll now exam your DNS. You don't have a DNS so it will tell you that and give you the option of either installing DNS or accessing another computer's DNS. For this server, we will install a DNS. So just allow it to install DNS (where it says additional options for domain controller).
23. Notice that Global catalog is also going to install. The reason is, your root domain always holds the global catalog.
24. The global catalog is like a catalog that has every single item indexed in it that is a part of the entire forest. It's like Dex, but cooler and not bald.
25. Ruh Roh, there is no delegation for our DNS server! That's because this is our first one. When you have a delegation, that means that you have another DNS that has all the files for all of the computers in the domain. Go ahead and say yes to continue because this will become the Zone Authority.



26. The next screen will ask where you want to store your log files and your SYSVOL folders. Go ahead and it store in C:\
27. Create a STRONG PASSWORD! We'll use P@ssword.
28. Review your summary. Does everything look correct? If so, click install.
29. Note that it will "talk" about what it is doing. This can take awhile, and you can't turn off your computer while it's doing it.
30. Nor can you install ADDC on your other domain controller because it's going to be a backup domain controller. Sorry.
31. Click "Reboot on completion" and answer the questions below.
32. Note, when it reboots it takes a LONG time to restart to the point where you can log in. This only happens the first time as it sets up all the new services so don't panic.

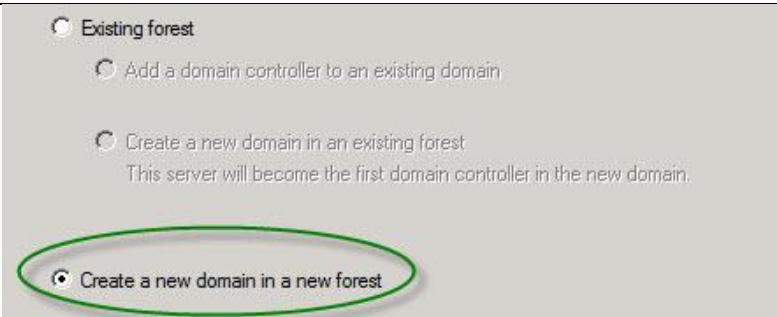


33. Once you have completed ADDC1 start up both ADDC1 and ADDC2. Log both in.

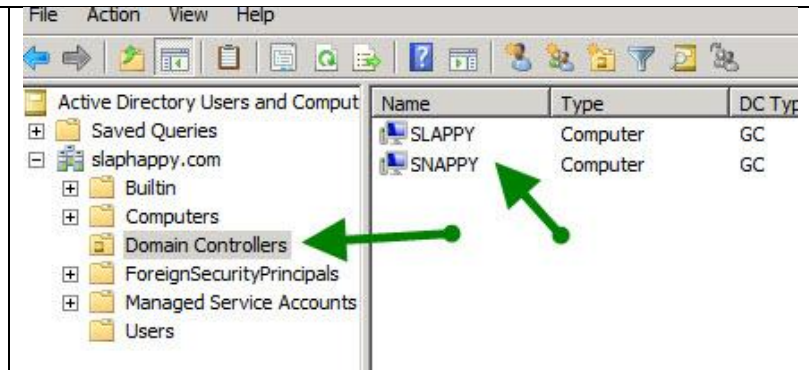
34. Make sure ADDC2 has an easy name. If not, rename it.

35. Open the RUN command in ADDC2 and type DCPROMO. This is the command line prompt for starting Active Directory Installer/Promoter.

36. This time you are going to select **Existing Forest**.
37. Type in the name of your domain (the one you set up on ADDC1. Mine is slaphappy.com).
38. Type in the username and password for an administrator on ADDC1 (so it will let you join the domain).
39. If it doesn't work the first time, try taking the .COM off the end of the domain name.
40. The rest is the same... install and restart.
41. To ensure it is in there, go to ADDC1 and open up Administrative Tools→Active Directory Users and Computers.



42. Click on Domain Controllers.
43. You should be both of your servers in there by name.
44. Mine are SLAPPY and SNAPPY.
45. Note that DC type is GC. That stands for Global Catalog.
46. Shut down ADDC2 so you only have ADDC1 on and open up your Server 2012.



### Questions

1. What is Active Directory?
2. What things are the building blocks of Active Directory?
3. What server did you install AD on?
4. What is DCPromo?
5. Why put the forest functional level at server 2003?

6. If you have one server that is 2003, and three that are 2008 and all are ADDCs (Active Directory Domain Controllers), what Domain Functional Level do you set it at?
  
7. What is a forest?
  
8. What is a domain?
  
9. What is your root domain?
  
10. What did you name it?
11. What three roles are you installing on your server?
  
12. What is a global catalog?
  
13. What domain holds the global catalog?

