**Active Directory Super Basic Guide**

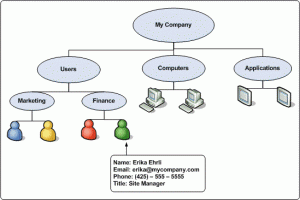
By: Thomas Nhan

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**Generalization of AD**

Active directory is Microsoft directory service for “Windows domain networks”. It is a repository of computers and users. Essentially it is a way to organize computer systems. The system is structured as a hierarchy with the “forest” the highest level of logical container. Which then branches out to domains, which can branch to subdomains, which then branches off to organization units (OUs). They can communicate and share to each other through “trust”. A machine/server running Active Directory Domain Service is called a domain controller and these things set up, organize, and implement changes with various tools to AD.

Here is an example of a system:  
  


*Image used by :* [*https://heresjaken.com/active-directory/*](https://heresjaken.com/active-directory/)

In this example it is 1 forest with 1 domain.  
Forest has a domain named my company

OU’s are Users, Computers, Applications

The Users OU is broken further into Marketing and Finance.

The reason for having multiple domains could be to separate regions such as an international company with a US domain, and a China domain.

The better organized the system, the easier it is to make changes. Instead of making changes on individual computers, one can implement changes to an OU or group. One method is using something called Group Policy Objects (GPO).

There are three level of changes:

* Global: affects a specific to a domain
* Domain: can affect other domain
* Universal: affects whole domain

There are other tools the DCs have, but other methods of making changes include: powershell scripts, and Group Policy Security.

**General Procedure of AD creation**

1. Download your Virtual Machine App (VMWare, Hyper-V)
2. Create a Machine with a Windows Server (ISO) using the VM
3. Once created, promote to a Domain Controller (DC)
   1. Add features such as
      1. Server manager
      2. Roles
      3. Ad domain services
4. Create a forest
5. Repeat step 2-3 for other DC(s)

*\*Note: It is better to have multiple DC’s incase the one DC crashes then the whole system crashes*

*\*Note: It is important to figure out how you want to set up the network IP addresses, sites, recommended for DCs to have static IP addresses so connection is stable. Machines can have Dynamic IP addresses which means their Ip changes, however if the DC IP changes, then machines won’t know where to connect to.*

1. Join the new DC(s) to the forest or as a child domain. (Child domain are lower level then the root)

*\*Note: There are 5 flexible single master operator (FSMO) roles.*

* *2 forest*
  + *Schema*
  + *DNS*
* *3 domain*
  + *Infrastructure*
  + *RID*
  + *PDC*

1. When you create a machine, you can add those to the domain after setting up.

*\*Note: If using Windows, cannot be home edition, if using linux systems, must use 3rd party app to connect to AD*

1. When you create a machine, it is best to clone them, create an image and duplicate on other computers.