

The background features a dark blue field with a series of curved, glowing lines that create a sense of depth and movement. On the right side, there is a grid-like pattern of light blue lines that recedes into the distance, suggesting a digital or network environment.

# **kardan University**

## **BCS Faculty**

# **Data Communication and Computers Networks**

# Outline

- **Introduction to the course and its objectives**
- **What we need to know before we start**
- **Active directory**
- **Domain**
- **DC**
- **Forest**

# Terminology

- Network
  - System administration
  - Network administration
- OS
  - Server OS,
  - Client OS
- Active Directory
- DC & DNS
- Domain & DC

# Active Directory (AD)

- Active Directory Domain Services (ADDS):
  - It's the brain of a windows server network.
  - Its actually the database that stores information about objects (Computers, Users, Printers ...) and provides a centralized way to manage them.

# Domain

- We can say that domain is the namespace like google.com
- Domain is a logical group of computers running windows OS that share a central Directory database.
- Domain Name: Uniquename.suffix
- FQDN (Fully Qualified Domain Name)
- ComputerName.DomainName
- client1.flashbits.af

# Domain



## Big word: "Namespace"

- A Windows Server domain is a logical group of computers running versions of the Microsoft Windows operating system that share a central directory database.
- The machines are all named with part of a Domain name like globomantics.com (also called a "suffix") and are registered in the Active Directory Database so they can be managed.



CL1.globomantics.com



CL2.globomantics.com



CL2.globomantics.com

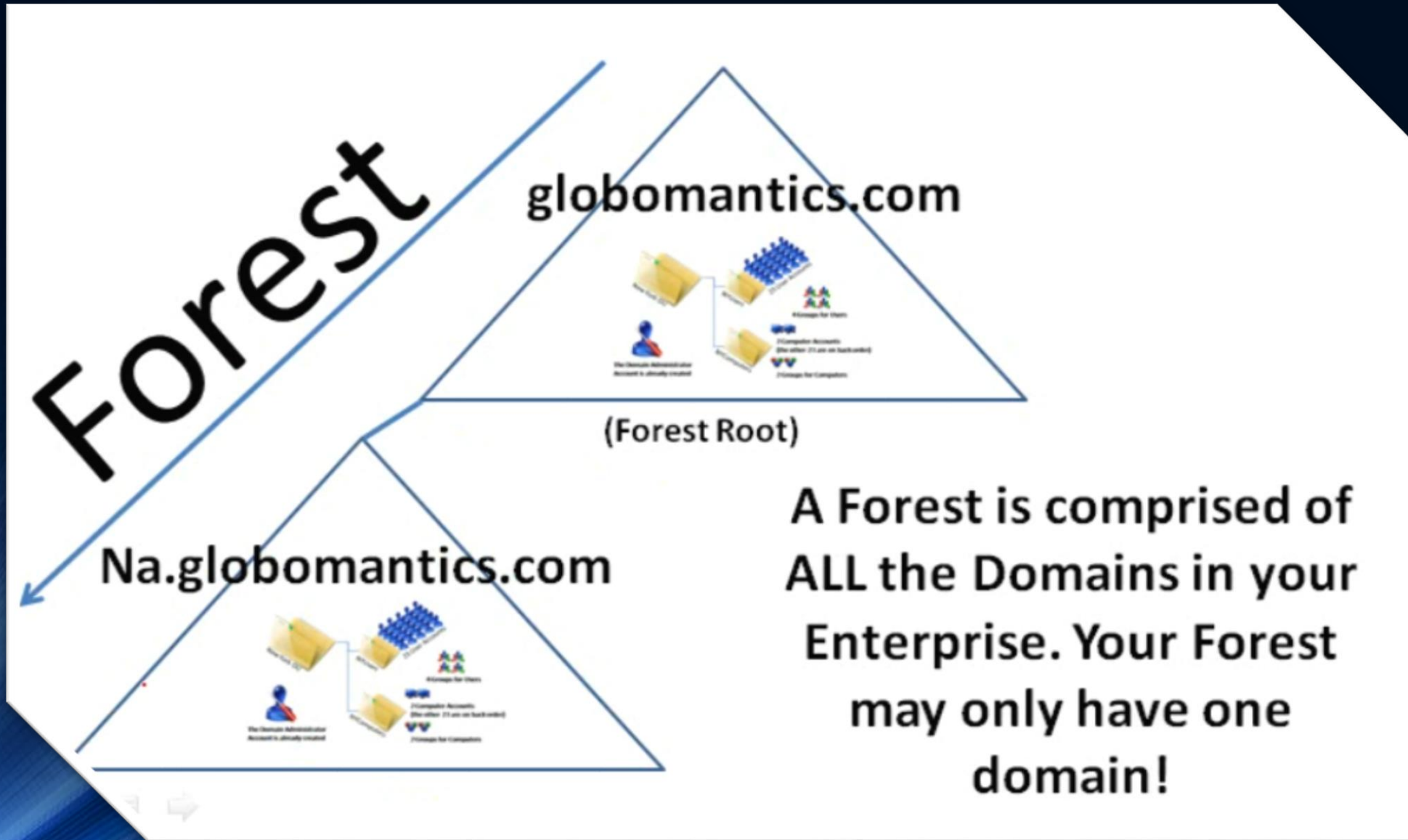


Globomantics.com  
Domain Controller  
NY-DC1.globomantics.com

# Domain Controller (DC)

- Domain controller is a Windows Server machine that runs the Active Directory Domain Services.
- You can have multiple DCs which keep the copies of the same Active Directory Database
- These DCs exchange the information through a process called replication
- Cmd → repadmin /syncall

# Forest



A Forest is comprised of ALL the Domains in your Enterprise. Your Forest may only have one domain!

# User Logon Request

Every time you log in to a corporate network, you're using Active Directory



# User Logon Request

Every time you log in to a corporate network, you're using Active Directory



Ok, I see your User Account, it's valid, and it has these permissions. Here ya go!

Domain Controller



Active Directory Database

# User Logon Request

Every time you log in to a corporate network, you're using Active Directory



# References

- <https://www.cbtnuggets.com/blog/certifications/microsoft/road-map-to-success-mcsa-windows-server-2019>

THANK YOU