

WHAT IS A DIFFERENCE BETWEEN PRIMARY AND SECONDARY STORAGE DEVICES?

WHAT ARE STORAGE DEVICES?

Storage devices are used to store data and program permanently. These devices are used to store large volume of data and program. Storage device are also called as

1: PRIMARY STORAGE DEVICES.

2: SECONDARY STORAGE DEVICES.

3: AUXILIARY STORAGE DEVICES.

WHAT IS PRIMARY AND SECONDARY STORAGE DEVICES?

There is no official definition of these two terms, primary storage typically refers to random access memory (RAM), while secondary storage refers to the computer's internal hard drive.)

EXAMPLES OF PRIMARY STORAGE DEVICES:

Following are some examples of primary storage devices.

1: RAM.

2: ROM.

3: Cache MEMORY.

EXAMPLES OF SECONDARY STORAGE DEVICES:

Internal Hard Disk Drive

External hard disk drives

Differentiate between RAM and ROM?

RAM stands for Random Access Memory. It can store information and have new information stored over it later. And it's a physical device you can change it

Types of RAM

DDR (Double Data Rate), DDR2 and SDRAM

ROM stands for Read Only Memory. It can't be written-over

Types of ROM

PROM (Programmable Read-Only Memory) and CD-ROM

What is cache memory?

Cache memory is random access memory (RAM) that a computer microprocessor can access more quickly than it can access regular RAM. As the microprocessor processes data, it looks first in the cache memory and if it finds the data there, it does not have to do the more time-consuming reading of data from larger memory.

What is the difference between 32 bit and 64 bit memory?

The terms 32-bit and 64-bit refer to the way a computer's processor (also called a CPU), handles information. The 64-bit version of Windows handles large amounts of random access memory (RAM) more effectively than a 32-bit system.

What is Virtual Memory?

Virtual memory is storage space on your computer's hard disk that Windows uses in conjunction with random access memory (RAM).

What is NVRAM?

NVRAM (Non-Volatile Random Access Memory) is a type of Random Access Memory (RAM) that retains its information when power is turned off. The NVRAM is a small

24 pin DIP (Dual Inline Package) integrated circuit chip and is thus able to obtain the power needed to keep it running from the CMOS battery installed in your motherboard. It keeps track of various system parameters such as serial number, Ethernet MAC (Media Access Control) address, HOSTID, date of manufacture.

How many logical drives is it possible to fit onto a physical disk?

Maximum of 24 logical drives. The extended partition can only have 23 logical drives

Max of 24 partition from "c" to "z"
primary 4

What is the difference between L1 and L2 cache?

L1 (level 1) cache - L1 cache stores information for use by the processor. L1 cache is extremely quick but also expensive. Most processors have an L1 cache divided into space for data and space for instructions.

L2 (level 2) cache - L2 cache is the next step down from L1 cache. Most processors today have L2 cache, which increases cache performance. Most desktop processors have an L2 Cache of about 256KB, but some high-end processors can have as much as 2MB.

What is BIOS?

BIOS stands for Basic Input/output System, although the full term is used very infrequently. The system BIOS is the lowest-level software in the computer; it acts as an interface between the hardware and the [operating system](#).

What is TCP/IP?

TCP/IP (Transmission Control Protocol/Internet Protocol) is the basic communication language or protocol of the Internet. It can also be used as a communications protocol in a private network.

What is Intranet?

An Intranet is a private network that is contained within an enterprise. It may consists of many interlinked LAN .The main purpose of an intranet is to share company information & computing resources among employees. An intranet can also be used to facilitate working in groups and for teleconferences.

Difference between TCP and UDP

- TCP is a Transmission Control Protocol.

- UDP is a User Datagram Protocol.

- TCP offers error connection and Guaranteed Delivery

- UDP doesn't offer error connection & delivery

- TCP Provides or sends larger packets

- UDP Provides or sends smaller packets.

- TCP is Slower than UDP

- UDP is Faster than TCP

What is Load balancing?

Distributing processing and communications activity evenly across a computer network so that no single device is overwhelmed. Load balancing is especially important for networks where it's difficult to predict the number of requests that will be issued to a server.

What are called Fat clients and Fat servers?

If the bulk of the application runs on the Client side, then it is Fat clients. It is used for decision support and personal software.

If the bulk of the application runs on the Server side, then it is Fat servers. It tries to minimize network interchanges by creating more abstract levels of services.

What is Client/Server?

Client-server computing or networking is a distributed application architecture that partitions tasks or workloads between service providers (servers) and service requesters, called clients

What are the characteristics of Client/Server?

Scalability

A client server system can accommodate growth and network expansions.

Computers can easily be added or replaced .Because a client server system is centralized, servers can easily move files and applications from an old computer to a new one.

Flexibility

Having a centralized management makes the client server system flexible to adapt to changes and new technologies.

Accessibility

A client server system also is more accessible and secure than a peer-to-peer network because servers ensure that everything that goes in and out of the network passes through their stringent security measures.

What are the building blocks of Client/Server?

The building blocks of client/server applications are:

Client

Server

Middleware

The Client Building Block

- Runs the client side of the application
 - It runs on the OS that provides a GUI or an OOUI and that can access distributed services, wherever they may be.
- The client also runs a component of the Distributed System Management (DSM) element.

The Server Building Block

- Runs the server side of the application
 - The server application typically runs on top of some shrink-wrapped server software package.
 - The five contending server platforms for creating the next generation of client/server applications are SQL database servers, TP Monitors, groupware servers, Object servers and the Web server.
 - The server side depends on the OS to interface with the middleware building block.
 - The server also runs DSM component
 - It may be a simple agent or a shared object database etc.

The Middleware Building Block

- Runs on both the client and server sides of an application
- This broken into three category
 - Transport Stacks

- NOS
- Service-specific middleware
- Middleware is the nervous system of the client/server infrastructure

What is an email client? What is difference between email client and web mail?

In most cases, your email account exists on a central server, and not on your personal computer or workstation. An email client is software that allows you to read and send email through your account by connecting to this server. Email clients generally provide a simple interface through which you can access your email account.

Both web mail and email clients use the internet to read and send mail

With web mail, you read or send email through your browser and the web mail interface.

Some examples of web mail are:

Yahoo! Mail

Gmail

Hotmail

An email client is a piece of software on your computer that you use to read and send emails from your computer. The advantage of using an email client is that the emails are stored on your computer and are accessible faster than using a web based email interface.

There are various email client programs available. Some of the more common email clients are:

Outlook Express – This comes with Windows for free.

Outlook – part of the Microsoft Office collection of programs

Thunderbird – comes with the Firefox browser

What are the differences among router, switch, bridge and hub?

Hub

A common connection point for devices in a network. Hubs are commonly used to connect segments of a LAN. A hub contains multiple ports. When a packet arrives at one port, it is copied to the other ports so that all segments of the LAN can see all packets.

Switch

In networks, a device that filters and forwards packets between LAN segments.

Switches operate at the data link layer (layer 2) and sometimes the network layer (layer 3) of the OSI Reference Model .

Router

A device that forwards data packets along networks. A router is connected to at least two networks, commonly two LANs or WANs or a LAN and its ISP.s network.

What is IPsec?

Short for **IP Security**, a set of protocols developed by the IETF to support secure exchange of packets at the IP layer. IPsec has been deployed widely to implement VPNs.

What is the port number of Telnet ,DNS, ftp(data) and ftp?

Telnet = 23 and DNS = 53

ftp(data) = 20 and ftp=21

Differentiate between forward lookup and reverse lookup in DNS?

Forward lookup convert:Host name to IP address.

Reverse lookup convert:IP address to Host name

Which layer of OSI is responsible for end-to-end communication?

End-to-end communication refer to process to process delivery which is done by TRANSPORT LAYER

What is a wide area network?

A wide area network (WAN) is a data network, usually used for connecting computers, that spans a wide geographical area. WANs can be used to connect cities, states, or even countries. WANs are often used by larger corporations or organizations to facilitate the exchange of data

The best example of the WAN is the internet.

What is a metropolitan area network?

Metropolitan area network (MAN) A network intermediate between a local area network (LAN) and a wide area network (WAN);

A network spanning a physical area larger than a LAN but smaller than a WAN, such as a city.

A MAN is typically owned and operated by a single entity such as a government body or large corporation.

What is the difference between "dial-up connecion" and "broadband connection"?

The main difference is speed. Dial up has only 56 KBPS speed and broad band has faster speed like 256 MBPS to 2 MBPS

What is local area network?

A local area network (LAN) is a computer network that connects computers and devices in a limited geographical area such as home, school, computer laboratory or office building.

What is difference between baseband and broadband transmission?

In a baseband transmission, the entire bandwidth of the cable is consumed by a single signal.

In broadband transmission, signals are sent on multiple frequencies, allowing multiple signals to be sent simultaneously.

In base band transmission we transmit digital signal without converting it into analog. here a low pass channel is used.

In broad band transmission we transmit digital signal by converting it into analog. Here a band pass channel is used.

What is PING utility?

PING: Packet Internet Gropper. It's a diagnostic utility, which diagnose connectivity between computers. It use ICMP: Internet Control Messaging protocol to send echo requests (usually 4 packets) and receive echo replies (4 packets)

What is NETBIOS and NETBEUI?

NetBIOS (Network Basic Input/output System) is a program that allows applications on different computers to communicate within a local area network (LAN). Microsoft Windows uses NetBIOS on Ethernet or Token Ring networks.

NetBEUI (NetBIOS Extended User Interface) is a new, extended version of NetBIOS, the program that lets computers communicates within a local area network.

NetBEUI is a fast and efficient protocol that consumes few network resources, provides excellent error correction, and requires little configuration.

What are the different types of networking / internetworking devices?

Modems, repeater, routers, HUB's, switches, and wireless adapters.

What is RAID?

RAID stands for Redundant Array of Independent Disks and it basically involves combining two or more drives together to improve the performance and the fault tolerance

There are number of different RAID levels:

Level 0 -- Striped Disk Array without Fault Tolerance: Provides *data striping*

Level 1 -- Mirroring and Duplexing: Provides disk mirroring.

Level 2 -- Error-Correcting Coding:

Level 3 -- Bit-Interleaved Parity: Provides byte-level striping with a dedicated parity disk.

Level 4 -- Dedicated Parity Drive: provides block-level striping (like Level 0) with a parity disk.

Level 5 -- Block Interleaved Distributed Parity: Provides data striping at the byte level and also stripe error correction information.

Level 6 -- Independent Data Disks with Double Parity: Provides block-level striping with parity data distributed across all disks.

Level 0+1 -- A Mirror of Stripes:

Level 10 -- A Stripe of Mirrors:

Level 7: A trademark of Storage Computer Corporation that adds caching to Levels 3 or 4.

RAID 5: (also called Parity RAID) EMC Corporation's proprietary striped parity RAID system used in its Symmetrix storage systems.

What are 10Base2, 10Base5 and 10BaseT Ethernet LANs?

10Base2 an Ethernet term meaning a maximum transfer rate of 10 Megabits per second that uses baseband signaling, with a contiguous cable segment length of 200 meters (185mts). Known as Thinnet.

10Base5 an Ethernet term meaning a maximum transfer rate of 10 Megabits per second that uses baseband signaling, with a contiguous cable segment length of 500 meters. Known as Thicknet.

10BaseT an Ethernet term meaning a maximum transfer rate of 10 Megabits per

second that uses two pairs of twisted-pair baseband signaling, with a contiguous cable segment length of 100 meters.

What is the difference between physical address and logical address?

Physical Address: It's called as MAC Address

Logical Address: It's Called as Ip Address

What is the difference between tree and forest?

Multiple domain models create logical structures called trees, when they share contiguous DNS names. For example, contoso.com, us.contoso.com, and europe.contoso.com share contiguous DNS namespaces and would together be considered a tree. An Active Directory that consists of multiple trees is naturally called a forest.

What is the Network Time Protocol?

Network Time Protocol (NTP) is a protocol that is used to synchronize computer clock times in a network of computers.

What is ICMP?

ICMP (Internet Control Message Protocol) is a message control and error-reporting protocol between a host server and a gateway to the Internet.

What is SLIP (Serial Line Interface Protocol)?

It is a very simple protocol used for transmission of IP datagrams across a serial line.

What is DHCP, DNS, POP3?

Dynamic Host Configuration Protocol (DHCP) is a client/server protocol that automatically provides an Internet Protocol (IP) host with its IP address and other related configuration information such as the subnet mask and default gateway

Domain Name System (DNS) is an Internet Engineering Task Force (IETF) standard name service that allows your computer to register and resolve domain names, an Internet service that translates *domain names* into IP addresses

POP3 (Post Office Protocol 3) is the most recent version of a standard protocol for receiving e-mail. POP3 is a client/server protocol in which e-mail is received and held for you by your Internet server.

Name three network tools used to determine network connectivity

PING

TRACEROUTE

PATHPING

What is multicast routing?

Multicast routing is done by sending one packet to several destinations

What is the default subnet mask for an ipv6 address?

255.255.255.255.0

What is Kerberos? Which version is currently used by Windows? How does Kerberos work?

Kerberos is a network authentication protocol that verifies both the identity of the user that is requesting authentication as well as the server providing the requested authentication, also known as mutual authentication. The Kerberos authentication mechanism issues tickets for accessing network services. These tickets contain encrypted data, including an encrypted password that confirms the user's identity to the requested service.

The Kerberos version 5 authentication protocols provide a mechanism for authentication and mutual authentication between a client & a server, or between one server and another server.

First, the client contacts the Authentication Server with a request for access to service(s). The authentication Server verifies the client's presence in its database, and sends two messages to the client. The first message is a Client/Ticket-Granting Server session key that is encrypted with the client's secret key. The second message is a Ticket-Granting Ticket, encrypted with the Ticket-Granting Server's secret key. The Ticket-Granting Ticket includes the client's ID, network address, the ticket's validity period, and a copy of the Client/Ticket-Granting Server session key. Next, the client sends two messages to the Ticket-Granting Server. The first of these is the Ticket-Granting Ticket plus the ID of the desired service. The second is called the Authenticator. It is composed of the Client ID and a timestamp, and is encrypted using the session key. The Ticket-Granting Server uses its secret key to decrypt the Ticket-Granting Ticket. It then uses the session key to decrypt the Client ID and timestamp from the Authenticator. The server then sends back to the client a new ticket (Client/Server Ticket) for the requested service, encrypted with the service's secret key, including the client ID, network address, valid time period, and a Client/Server session key.

The client then contacts a server providing the desired service and sends two messages. The first one, as you might guess, is the Client/Server Ticket. Along with this the client sends an Authenticator containing the client ID and a timestamp, encrypted with the Client/Server session key.

The server providing the service decrypts the Client/Server Ticket using its secret key. It then uses the Client/Server session key to decrypt the Authenticator. The server then increments the timestamp, and sends the client a message encrypted with the session key containing the incremented timestamp. On receipt, the client and server are authenticated with each other and the client begins normal client-server service requests and the server provides services.

What is the range of addresses in the classes of internet addresses?

Class A	1.0.0.1 to 126.255.255.254	Supports 16 million hosts on each of 127 networks.
Class B	128.1.0.1 to 191.255.255.254	Supports 65,000 hosts on each of 16,000 networks.
Class C	192.0.1.1 to 223.255.254.254	Supports 254 hosts on each of 2 million networks.
Class D	224.0.0.0 to 239.255.255.255	Reserved for multicast groups.
Class E	240.0.0.0 to 254.255.255.254	Reserved for future use, or Research and Development Purposes.

Ranges 127.x.x.x are reserved for loopback or localhost,

- A 1-126 N.H.H.H
- B 128-191 N.N.H.H
- C 192-223 N.N.N.H
- D 224-239 Not applicable

N=Network H=Host

Note 1: 127.0.0.0 is a class A network, but is reserved for use as a loopback address

(typically 127.0.0.1).

Note 2: The 0.0.0.0 network is reserved for use as the default route.

Note 3: Class D addresses are used by groups of hosts or routers that share a common characteristic: e.g. all OSPF devices respond to packets sent to address 224.0.0.2

Note 4: Class E addresses exist (240-248), but are reserved for future use

What is OSPF?

OSPF stands for Open Shortest Path first and it is a link state routing protocol and it is used to find the best possible shortest path to the router in a network

What are the possible ways of data exchange?

Simplex Half-duplex Full-duplex.

What is point-to-point protocol?

In networking, the Point-to-Point Protocol, or PPP, is a data link protocol commonly used in establishing a direct connection between two networking nodes.

What does CIDR stand for?

Classless Inter-Domain Routing (CIDR) is a methodology of allocating IP addresses and routing Internet Protocol packets

What is a Management Information Base (MIB)

Management Information Base, a database of objects that can be monitored by a network management system. Both SNMP and RMON use standardized MIB formats that allow any SNMP and RMON tools to monitor any device defined by a MIB.

What is .ost file?

An OST file (.ost) is an offline folder file in Microsoft Outlook. Offline folders make it possible for the user to work offline and then to synchronize changes with the Exchange server the next time they connect.

What is the difference between POP3 and IMAP Mail Server?

There are two different protocols available to access e-mail: POP3 and IMAP. POP3 is useful when e-mail is checked from only one computer. IMAP is the better choice when you would like to check your mail from multiple computers.

When using POP3, your mail is stored on your PC.

When using IMAP, the mail is stored on the mail server.

POP3

You only check e-mail from one computer.

You want to remove your e-mail from the mail server.

Set to remove mail from server after 30 days.

Don't check more frequently than every 15 minutes.

75 MB is the maximum for POP3 users.

IMAP

Do NOT check all folders for new messages! This slows your e-mail substantially. Use "mail/" (without the quotes) as your IMAP folder directory.

You can set your client to download the mail and to remove the mail from the server, like a POP3 client.

Organize your mail into folders, and archive your older messages. This speeds e-mail retrieval by minimizing the number of messages in the inbox.

Someone asked me what Microsoft subjects i want to learn? And i said that I want to learn Windows and Exchange. So could u tell me what related subjects in windows? And what related subjects in Exchange?

In Windows and Exchange Server are both Microsoft Products .The related Subjects for Windows and Exchange are as below:

Windows Related Subjects are ,OS

Installation,ADS,RAS,DNS,DHCP,HomeDirectory,Profile Management,Technical Issues,Services,System files,OS Performance issues,Backup,Repair of OS

(Windows),Registry Settings and Network between Windows Systems and etc.

Exchange related subjects are Exchange Installation,Exchange BackUp,Outlook Configuration,Exchange Server and Client installtion,Creation of Users,Creation of Profiles,POP3 Service ,SMTP Service

What is the difference between MCP, MCSA and MCSE a brief description?

If u Pass 1 paper of Microsoft than Microsoft awards u with MCP (Microsoft Certified Professional) Certificate. similarly if u Pass 4 papers than u become MCSA (Microsoft Certified Systems Administrator) & after Passing 7 Papers u become MCSE (Microsoft Certified Systems Engineer)

In 2 domain controllers, One has some 3 roles other has 2 roles, Domain controller which has 3 roles went down, will the users can able to login who are created in that domain controller?

Yes, by default that users can able to login as this record is repliated to another DCs.

Since pdc emulator role is handling the Password and lockout policies, if the account is locked out, that user may not be able to login if the down DC handling this role.

If Account lockout or password reset has been done, what is the replication time between domain controllers?

Immediately

What is software?

Computer software, or just software, is a collection of computer programs and related data that provide the instructions telling a computer what to do and how to do it. In other words software is a set of programs, procedures, algorithms and its documentation

What are application partitions? When do I use them?

An application directory partition is a directory partition that is replicated only to specific domain controllers. A domain controller that participates in the replication of a particular application directory partition hosts a replica of that partition. Only domain controllers running Windows Server 2003 can host a replica of an application directory partition.

I have dell laptop, where i have install window vista, and later i have install window 7, but now when i am starting it it's not giving the option which window i want to use, automatically its starting with window 7,also in window 7 it's not accepting any drive-i am unable to transfer data through Bluetooth or card reader, please help in to resolve this problem?

You have to install all compatible software drivers for Bluetooth and card reader for win 7

How to backup/restore Group Policy objects....?

For backup: Expand group policy object and right click on group which you want backup and click on export and provide location.

For restore: expand group policy object and right click on group policy, click import (which you want restore from backup) click restore, provide source location.

What is the difference between NTFS & FAT File Systems?

Operating System

FAT32: 98/NT/2K/XP

FAT16: DOS & All Versions of Windows

NTFS: NT/2K/XP

Limitations

Max Volume Size & Max File Size

FAT32: 2TB

FAT16: 2GB

FAT32: 4GB

FAT16: 2GB

NTFS: 2TB

Compression

FAT32 & FAT16: No

NTFS: Yes

Encryption

NTFS: Yes

FAT32, FAT16: No

Disk Quotas

NTFS: Yes

FAT32, FAT16: No

Built-In Security

NTFS: Yes

FAT32 & FAT16: No

Performance

NTFS: Low on small volumes, High on Large FAT32 & FAT16: High on small volumes, Low on large

Fault Tolerance

NTFS: Max

FAT32: Minimal

FAT16: Average

How to troubleshoot the Replication Issue with the Active Directory?

Explain

Use below 3 tools

1. Repadmin.exe

2. Remplmon

3. Active directory sites and

service

What is difference between Server 2003 vs. 2008?

1)2008 is combination of vista and windows 2003r2. Some new services are introduced in it

1. RODC [Read-only Domain controllers.] new domain controller introduced in it

2. WDS (windows deployment services) instead of RIS in 2003 server

3. shadow copy for each and every folders

4.boot sequence is changed

5.installation is 32 bit where as in 2003 it is 16 as well as 32 bit,

6.services are known as role in it

7. Group policy editor is a separate option in ads

2) The main difference between 2003 and 2008 is Virtualization, management.

2008 has more inbuilt components and updated third party drivers. Windows Server 2008 introduces Hyper-V (V for Virtualization) but only on 64bit versions.

3) In Windows Server 2008, Microsoft is introducing new features and technologies, some of which were not available in Windows Server 2003 with Service Pack 1 (SP1), that will help to reduce the power consumption of server and client operating systems and increase server efficiency. It includes updated support for Advanced Configuration and Power Interface (ACPI) processor power management (PPM) features, including support for processor performance states (P-states) and processor idle sleep states on multiprocessor systems.

Write Hierarchy of ADS

Hierarchy of ADS

Forest
|
Tree
|
Domain
|
Organizational Unit[OU]
|
Group
|
User

Your .pst file got corrupted, your manager wants to check his mails, but it's not getting open, what will you do ?how u will solve this problem

Run the scanpst to solve this issue from the following location

C:\program files\Common Files\System\MSMAPI\1033\SCANPST.EXE

Select the path of the PST, and scan it.

If the PST file is in shared drive, check the authentication for the user. (Permission -from the Security settings), if permission is denied to user, give the permission to parent folder and child folders

What is the ways to infect the system by virus?

1. PEN DRIVES AND INTERNET
- 2.installing 3rd party software's
3. Crack, patch, keygen
4. Connecting in a LAN where other computer's in that network may contain viruses.

What happens if a Schema or Domain naming master goes down, would there be any impact on the end user authentication?

Actually, Schema master and domain naming master are on forest level and Schema master is responsible for schema modification. So if a user going to login and user doesn't modify the schema. finally No impact from schema master. Domain naming master responsible for adding for removing/modify any domain in the forest. So again No impact. Finally if my both server are down so there is no impact of user login.

If RID master is down, can domain user login in domain?

A server that has RID (Relative Identifiers) master role only generates the unique IDs to the newly created objects. Hence if your RID master is down; no new objects could be created however the existing users would keep on getting authenticated as authentication is done via Kerberos v5 in server 2003 that does not include RIS master server.

What is in DNS?

DNS stand for Domain name system it is name resolution service which resolve the human friendly name such as WWW.Microsoft.com into IP address.

What is the DHCP role?

DHCP (Dynamic Host Configuration Protocol) automatically assign IP address to the client machines which are connected to the network. It also configures other network settings like subnet mask, Default gateway and DNS. It reduces the administrative work.

Can I edit Schema....?

Yes, for editing the schema the user must be member of Schema Admin Group.

There are 50 systems, all systems are joined in domain controller, in that one of the pc got disconnected from the domain suddenly, how can u solve the problem, what are the steps do you follow to overcome?

- (1) check logical problems like TCP/IP whether it is configured properly or not.
- (2) check physical problems like cable, rj45 whether it is inserted properly or not.
- (3) Check ICMP in firewall

What are the differences between Windows 2000 Server and Windows Server 2003?

Windows Server 2003 was released as an upgrade to Windows 2000 Server. windows 2003 server support remote desktop feature but in 2000 remote desktop feature was not supported.

Window 2003 server includes IIS server in it.

you can change the domain name at any time with help of ntdsutil command, without rebuilding the domain that is not possible in 2000.

1: Windows 2000 server give only 90 days trial version of Terminal server. but windows server 2003 give 120 days' trial version.

2: Windows server 2003 shared folder at a time only 65767 user access.

1) In Win 2000 server we can apply 620 group policies but in 2003 we can apply nearly 720 so Win2003 server is more secure than win 2000 server.

- 2) In 2000 we cannot rename domain whereas in 2003 we can rename Domain.
- 3) In 2000 it supports of 8 processors and 64 GB RAM (In 2000 Advance Server) whereas in 2003 supports up to 64 processors and max of 512GB RAM.
- 4) 2000 Supports IIS 5.0 and 2003 Supports IIS6.0
- 5) 2000 doesn't support Dot net whereas 2003 Supports Microsoft .NET 2.0
- 6) 2000 has Server and Advance Server editions whereas 2003 has Standard, Enterprise, Datacenter and Web server Editions.
- 7) 2000 doesn't have any 64 bit server operating system whereas 2003 has 64 bit server operating systems (Windows Server 2003 X64 Std and Enterprise Edition)
- 8) 2000 has basic concept of DFS (Distributed File systems) with defined roots whereas 2003 has Enhanced DFS support with multiple roots.
- 9) In 2000 we can create 1 million users and in 2003 we can create 1 billion users.
- 10) In 2000, there is no shadow copy whereas 2003 shadow copy is there.
- 11) In 2000, we can't rename domain name whereas we can change it. In 2003

What is the difference between ddr1 and ddr2 and ddr3?

DDR

DDR stands for Double Data Rate. It can transfer data twice per clock cycle. It does this by using the rising and falling edges of the clock signal, also known as "double pumping" and employing a prefetch buffer capable of accessing two datawords at a time.

DDR2

DDR2 also utilizes the same double pumping technique as DDR. It achieves performance gains by using a prefetch buffer that retrieves four datawords per memory access. This allows it to transfer data four times per clock cycle (compared to twice in the case of DDR).

DDR3

Like all other forms of DDR, DDR3 transfers data twice per clock cycle. However, its prefetch buffer can access eight datawords at a time. It can transfer data eight times per clock cycle.

What are the different technical steps to install windows xp and windows 2000 professional?

- 1- Bootable CD.
- 2- Unattended installation before you have to create an answer file & save it to a floppy disk.
- 3- If you have RIS server you can Boot from network & install.

What is the impact if DNS Server fails?

If your DNS server fails, Active Directory stops working & server stops responding. You can't resolve host names.

What are the AD database types and its flow?

The Active Directory creates and stores four types of log files on the maintenance and management of transactions. These files are stored in %system/NTDS and include

- Transaction log files. The current transaction file is Edb.log, which by default contains information about recent transactions and is limited to 10MB. When this limit is reached, transaction files are automatically created with the name

edbxxxxx.log (where x is a sequential number). Once every 12 hours, old previous transaction files are purged during a process known as garbage collection.

- Checkpoint files. The checkpoint is Edb.chk, and it is used to list transactions that have been committed to the Active Directory
- Reserved log files. The reserved log file can be a number sequence of logs, with a maximum size of 10MB, named res1.log, res2.log, and so on. These logs are used in place of the transaction log when the creation of a new log file is attempted
- Patch files. Patch files (with a .pat suffix) are used during the backup-and-restore process of the Active Directory. Database entries are sometimes divided during backup into what is known as split transactions. The patch files are used to record these splits, and "patch" the transaction back together during restoration.

What is offline defragmentation in AD and how do we do it?

Performing an offline defragmentation creates a new, compacted version of the database file. Depending on how fragmented the original database file was, the new file may be considerably smaller.

To perform offline defragmentation of the Active Directory database:

1. Back up Active Directory
 1. Reboot the domain controller, press F8 & Choose Directory Services Restore Mode and press ENTER. Press ENTER again to start the boot process.
2. Log on using the Administrator account with the password
 1. Click Start, point to Programs, point to Accessories, and then click Command Prompt. At the command prompt, type ntdsutil, and then press ENTER.
3. Type files, and then press ENTER.
 1. Type info, and then press ENTER. This displays current information about the path and size of the Active Directory database and its log files. Note the path.
 2. Establish a location that has enough drive space for the compacted database to be stored.
 3. Type compact to *drive:\directory*, and then press ENTER, where *drive* and *directory* is the path to the location you established in the previous step.
Note You must specify a directory path. If the path contains any spaces, the entire path must be surrounded by quotation marks. For example, type: compact to "c:\new folder"
4. A new database named Ntds.dit is created in the path you specified.
5. Type quit, and then press ENTER. Type quit again to return to the command prompt.
 1. If defragmentation succeeds without errors, follow the Ntdsutil.exe on-screen instructions. Delete all the log files in the log directory by typing the following command:

```
del drive :\ pathToLogFiles \*.log
```

Copy the new Ntds.dit file over the old Ntds.dit file in the current Active Directory database path that you noted in step 6.

Note you do not have delete the Edb.chk file.

Restart the computer normally.

What is Proxy server?

A proxy server is computer that functions as an intermediary between a web browser (such as Internet Explorer) and the Internet. Proxy servers help improve web performance by storing a copy of frequently used WebPages. When a browser requests a webpage stored in the proxy server's collection (its cache), it is provided by the proxy server, which is faster than going to the web. Proxy servers also help improve security by filtering out some web content and malicious software. Proxy servers are used mostly by networks in organizations and companies. Typically, people connecting to the Internet from home will not use a proxy server.

DHCP Process and which Protocol DHCP uses

Dynamic Host Configuration Protocol (DHCP) is a standard protocol defined by RFC 1541 (which is superseded by RFC 2131) that allows a server to dynamically distribute IP addressing and configuration information to clients.

DHCP Process fall into four basic phases:

DHCPDISCOVER

DHCPOFFER

DHCPREQUEST

DHCPACK

Protocol and Port

DHCP uses the same two ports assigned by IANA for BOOTP:

67/UDP for sending data to the server, and 68/UDP for data to the client.

What is the full form of xp

it stands for Experience.

What is the advantages of using Windows XP?

The user interface for IPSecurity (IPSec)

- SNMP
- Simple TCP/IP services
- SAP Agent
- Client Service for NetWare
- Network Monitor
- Multiple Roaming feature

Why the kernel panic error was occurring?

A kernel panic is an action taken by an operating system upon detecting an internal fatal error from which it cannot safely recover. Attempts by the operating system to read an invalid or non-permitted memory address are a common source of kernel panics. A panic may also occur as a result of a hardware failure or a bug in the operating system.

Different types of backups

This article explains different types of backup available in windows (ntbackup.exe). The Backup utility supports five methods of backing up data on your computer or network.

Copy backup

A copy backup copies all selected files but does not mark each file as having been backed up

Daily backup

A daily backup copies all selected files that have been modified the day the daily backup is performed. The backed-up files are not marked as having been backed up

Differential backup

A differential backup copies files created or changed since the last normal or incremental backup. It does not mark files as having been backed up

Incremental backup

An incremental backup backs up only those files created or changed since the last normal or incremental backup. It marks files as having been backed up

Normal backup

A normal backup copies all selected files and marks each file as having been backed up

Strategy : Normal + Incremental

Backing up your data using a combination of normal backups and incremental backups requires the least amount of storage space and is the quickest backup method.

Strategy : Normal + Differential

Backing up your data using a combination of normal backups and differential backups is more time-consuming, especially if your data changes frequently, but it is easier to restore

the data because the backup set is usually stored on only a few disks or tapes.

How to host multiple website using IIS 6.0

Every Web site has a descriptive name, and can support one or more host header names. Organizations that host multiple Web sites on a single server often use host headers because this method enables them to create multiple Web site identities without using a unique IP address for each site.

You must be a member of the Administrators group on the local computer

To add a Web site using a host header identifier using the Web Site Creation Wizard

1. In IIS Manager, expand the local computer, right-click the Web Sites directory, point to New, and then click Web Site.
2. Click Next.
3. In the Description box, type the name you have selected for the Web site, and then click Next.
4. In the Enter the IP address to use for this Web site box, click the IP address used by all sites on the server.
5. In the TCP port this Web site should use box, type the port number used by all sites on the server.
6. In the Host Header for this Web site (Default:None) box, type the host header name to identify the Web site. The host header name must contain the full name of the site, for example, www.microsoft.com.
7. If SSL encryption is not enabled on the server, the SSL port box does not appear. If SSL encryption is enabled on the server, type the SSL port number, and then click Next. Note that you cannot use host headers with SSL encryption.
8. In the Path box, type or browse to the path of your Web site home directory.
9. To create a secured or private Web site, clear the Allow anonymous access to this Web site check box, and click Next. (Web sites are configured for anonymous access by default.)
- 1 In the Web Site Access Permissions box, set the permissions for the home
0. directory.
- 1 Click Next, and then click Finish.

1.

Ntldr.exe is missing in win xp os what will you do?

If ntldr is missing , to fix it , insert the Windows XP bootable CD into your CD-drive and

reboot your computer. When your computer prompted a message to press any key to boot from the CD, press the any key. Once in the Windows XP setup menu press the "R" key to repair and now log into your Windows installation by pressing the "1" key then pressing enter. Here Enter the administrator password and then copy the below two files to the root directory

copy e:\i386\ntldr c:\ copy e:\i386\ntdetect.com c:\

Once copy both files, remove the CD and reboot your system.

How to change the windows xp product key if wrongly installed with other product key but you have original product key? What you will do to Make your os as Genuine?

Go to run and type %systemroot%\System32\oobe\msoobe.exe \a
change your product key here

What is the Logical / Physical Structures of the AD Environment?

Physical structure of Active Directory:

The physical structure of Active Directory contains all the physical subnets present in your network like domain controllers and replication between domain controllers.

The physical structure of Active Directory:

Domain Controllers: These computers run Microsoft Windows Server 2003/2000, and Active Directory. Every Domain Controller performs specific functions like replication, storage and authentication

Active Directory Sites: These sites are collection of well-connected computers. The reason why we create site is domain controllers can communicate frequently within the site. It minimizes the latency within site, changes made on one domain controller to be replicated to other domain controllers. The other reason behind creating a site is to optimize bandwidth between domain controllers which are located in different locations.

Active Directory Partitions: Each Domain Controller contains the following active directory partitions:

The Domain Partition contains a copy of all the objects in that domain. Replication in Domain Partition is only to other domain controllers which are in the same domain.

The Schema Partition is forest wide. Every forest has one schema with consistent object class. The Schema and Configuration take part in replication, and get replicated to all domain controllers in a forest.

Application Partition which is optional carries objects which are not related to security and can be used by one or more applications. Application Partition replicates to specific domain controller in the forest.

Logical Structure of an Active Directory:

Components of AD Logical Structure

The logical structure components have relationship with each other so it manage to control access to stored data & finds how the data will be managed bet'n different domains in a forest.

Objects: like a user, computer, group, printer etc...

Organizational Units - like any folder but in control of Active Directory

Domains - Logical boundaries for objects

Trees - Logical boundary for multiple domains

Forests - Logical boundary for multiple trees

What are the roles of FSMO? Which are Forest level roles and Domain level roles?

FSMO Roles

In a forest, there are at least five FSMO roles that are assigned to one or more domain controllers. The five FSMO roles are:

Schema Master: The schema master domain controller controls all updates and modifications to the schema. There can be only one schema master in the whole forest.

Domain naming master: The domain naming master domain controller controls the addition or removal of domains in the forest. There can be only one domain naming master in the whole forest.

Infrastructure Master: The infrastructure is responsible for updating references from objects in its domain to objects in other domains. At any one time, there can be only one domain controller acting as the infrastructure master in each domain.

Relative ID (RID) Master: The RID master is responsible for processing RID pool requests from all domain controllers in a particular domain. At any one time, there can be only one domain controller acting as the RID master in the domain.

PDC Emulator: The PDC emulator is a domain controller that advertises itself as the primary domain controller (PDC) to workstations, member servers, and domain controllers that are running earlier versions of Windows. For example, if the domain contains computers that are not running Microsoft Windows XP Professional or Microsoft Windows 2000 client software, or if it contains Microsoft Windows NT backup domain controllers, the PDC emulator master acts as a Windows NT PDC.

What are the steps taken while moving the FSMO roles?

Windows 2000/2003 Active Directory domains utilize a Single Operation Master method called FSMO (Flexible Single Master Operation)

You can transfer FSMO roles by using the Ntdsutil.exe command-line utility or by using an MMC snap-in tool. Depending on the FSMO role that you want to transfer, you can use one of the following three MMC snap-in tools:

- Active Directory Schema snap-in
- Active Directory Domains and Trusts snap-in
- Active Directory Users and Computers snap-in
- To transfer the FSMO role the administrator must be a member of the following group:

FSMO Role	Administrator must be a member of
Schema	Schema Admins
Domain Naming	Enterprise Admins
RID	Domain Admins
PDC Emulator	
Infrastructure	

To Transfer the Domain-Specific RID Master, PDC Emulator, and Infrastructure Master FSMO Roles:

1. Open the Active Directory Users and Computers snap-in from the Administrative Tools folder.

2. If you are NOT logged onto the target domain controller, in the snap-in, right-click the icon next to Active Directory Users and Computers and press Connect to Domain Controller.
3. Select the domain controller that will be the new role holder, the target, and press OK.
4. Right-click the Active Directory Users and Computers and press Operation Masters.
5. Select the appropriate tab for the role you wish to transfer and press the Change button.
6. Press OK to confirm the change.
7. Press OK all the way out.

To Transfer the Domain Naming Master Role:

1. Open the Active Directory Domains and Trusts snap-in from the Administrative Tools folder.
2. If you are NOT logged onto the target domain controller, in the snap-in, right-click the icon next to Active Directory Domains and Trusts and press Connect to Domain Controller.
3. Select the domain controller that will be the new role holder and press OK.
4. Right-click the Active Directory Domains and Trusts icon again and press Operation Masters.
5. Press the Change button.
6. Press OK to confirm the change.
7. Press OK all the way out.

Transferring the Schema Master Role

1. Click Start, click run, type mmc, and then click OK.
2. On the Console, menu click Add/Remove Snap-in.
3. Click Add.
4. Click Active Directory Schema.
5. Click Add.
6. Click Close to close the Add Standalone Snap-in dialog box.
7. Click OK to add the snap-in to the console.
8. Right-click the Active Directory Schema icon, and then click Change Domain Controller.
9. Click Specify Domain Controller, type the name of the domain controller that will be the new role holder, and then click OK.
10. Right-click Active Directory Schema, and then click Operation Masters.
11. In the Change Schema Master dialog box, click Change.
12. Click OK.
13. Click OK.
14. Click Cancel to close the dialog box.

To transfer the FSMO roles from the Ntdsutil command:

1. On any domain controller, click Start, click Run, type Ntdsutil in the Open box, and then click OK.
1. Type roles, and then press ENTER.
1. Type connections, and then press ENTER.
1. Type connect to server <servername>, where <servername> is the name of the server you want to use, and then press ENTER.
1. At the server connections: prompt, type q, and then press ENTER again.
1. Type transfer <role>. where <role> is the role you want to transfer.

1. You will receive a warning window asking if you want to perform the transfer. Click on Yes.
2. After you transfer the roles, type q and press ENTER until you quit Ntdsutil.exe.
 1. Restart the server and make sure you update your backup.

What is active directory?

Active Directory is a centralized and standardized system that automates network management of user data, security and distributed resources and enables interoperation with other directories. Active Directory is designed especially for distributed networking environments.

Windows Server 2003 Active Directory provides a single reference, called a directory service, to all the objects in a network, including users, groups, computers, printers, policies & permissions.

Active Directory provides a single hierarchical view from which to access and manage all of the network's resources.

What is windows installer?

The Windows Installer is a software component used for the installation, maintenance, and removal of software.

What is the component of bluetooth?

Any Bluetooth solution consists of four major components: antenna/RF component, Bluetooth hardware and firmware (baseband and Link Controller), Bluetooth software protocol stack, and the application itself. Each of these components is a product in itself, and companies exist that have entire business models based around solving only one of these four areas.

I forget the startup password on Windows XP how to remove?

- Insert your Windows XP CD into your CD drive and boot your computer. If you receive the message "press any key to boot from CD," press any key.
- Press "Enter" to set up Windows. After you accept the license agreement, you will be asked if you want start a repair process.
- Press "R" to begin the repair process. Setup will now check your disks and start copying files, which can take several minutes. After this, reboot. Let the computer boot normally (do not press a key to boot from CD).
- Keep your eye on the lower left portion of the screen. When you see the Installing Devices progress bar, press "Shift" and "F10" at the same time. This will open a command line console.
- Type "NUSRMGR.CPL" (without quotes) at the prompt, then press "Enter." This will give you access to User Accounts. Remove or change your password. Write it down. After the repair is finished, you will be able to log on with your new password.

Why .Dll file is missing ? whats the reason for missing ?

A missing or corrupt .dll file can be caused by any of the below possibilities.

1. Another program was uninstalled that removed a .dll file that was required by another program or the operating system.
2. A program was installed that overwrote the .dll file with either an older version or a version that is incompatible with other programs causing .dll errors.
3. A bad installation of a program corrupted one or more files causing the .dll errors.
4. Another user or program maliciously or mistakenly deleted the .dll file or an associated file.
5. A hardware issue exists with the computer, such as a bad hard disk drive, causing the data on the drive to become corrupt, causing the .dll errors.

What are the features of Windows XP?

Enhanced Device Driver Verifier

Windows File Protection

Protects core system files from being overwritten by application installations.

Windows Installer

A system service that helps users install, configure, track, upgrade, and remove software programs correctly.

Encrypting File System (EFS) with Multi-user Support

Encrypts each file with a randomly generated key. In Windows XP Professional, EFS can allow multiple users access to an encrypted document.

IP Security (IPSec)

Helps protect data transmitted across a network.

Kerberos Support

Provides industry-standard and high-strength authentication with fast, single logon to Windows 2000-based enterprise resources.

Integrated CD Burning

Support for burning CDs on CD-R and CD-RW drives is integrated into Windows Explorer.

Remote Desktop

Allows users to create a virtual session onto their desktop computers using Microsoft's Remote Desktop Protocol (RDP).

Synchronization Manager

Lets users compare and update their offline files and folders with those on the network.

Advanced Configuration and Power Interface (ACPI)

Provides the latest in power management and Plug and Play support.

Wireless Networking Support

Provides secured access, as well as performance improvements, for wireless networks.

Remote Assistance

Remote Assistance enables a user to share control of his or her computer with someone on a network or the Internet.

System Restore

The System Restore feature enables users and administrators to restore a computer to a previous state without losing data.

Recovery Console

Provides a command-line console for administrators to perform administrative tasks.

Internet Connection Firewall

A firewall client that can protect small businesses from common Internet attacks.

Network Setup Wizard

Makes it easy for a small business owner to set up and manage a network.

Internet Connection Sharing (ICS)

Connects a small office network to the Internet, using a dial-up or broadband connection.

UserState Migration Tool

Helps administrators to migrate a user's data and application/operating system settings from an old computer to a new Windows XP Professional desktop computer.

System Preparation Tool (SysPrep)

SysPrep helps administrators clone computer configurations, systems, and applications. A single image, which includes the operating system and business applications, can be restored to multiple different machine configurations.

Remote OS Installation**Microsoft Management Console (MMC)**

Provides a centralized and consistent environment for management tools.

What is Marshalling?

The process of gathering data and transforming it into a standard format before it is transmitted over a network so that the data can transcend network boundaries. In order for an object to be moved around a network, it must be converted into a data stream that corresponds with the packet structure of the network transfer protocol. This conversion is known as *data marshalling*.

What are the different file systems in Windows?

Windows supports the FAT16, FAT32, and NTFS file systems.

What is the maximum amount of databases that can be hosted on Exchange 2003 Enterprise?

The standard port numbers are respectively

SMTP 25, POP3 110, IMAP4 143, RPC 135, LDAP 636, GLOBAL CATALOG 3269

What is the maximum amount of databases that can be hosted on Exchange 2003 Enterprise?

16-gigabyte(GB) database limit per database

What 3 types of domain controller does Exchange access?

Global Catalog, Normal Domain Controller, and Configuration Domain Controller

What Exchange process is responsible for communication with AD?

DSACCESS- Directory service access

What must be done to an AD forest before Exchange can be deployed?

Run the following command: -

Setup.exe /forestprep

What are the required components of Windows Server 2003 for installing Exchange 2003?

Exchange 2003 Setup requires that the following components and services be installed and enabled on the server:

.NET Framework ASP.NET Internet Information Services (IIS)
World Wide Web Publishing Service Simple Mail Transfer Protocol (SMTP) service
Network News Transfer Protocol (NNTP) service

If we open CD-ROM drive then the response is "please insert CD into drive" What is the problem? Is it with CD-ROM problem of some services problem? How can we solve this problem?

If we open the CD ROM Drive and then the response is "Please insert the CD into the drive" than the result is that CD ROM drive is asking for the CD ROM we should put a CD ROM into the Drive. If it is asking for the CD ROM even after putting the CD ROM than the problem could be with the CD ROM Drive sensor because it is not sensing the CD ROM into the drive.

Which of the following API is used to hide a window?

- a) Show Window
- b) Enable Window
- c) Move Window
- d) Set Window Placement
- E) None of the above

ANS-Show window

What is Paging? and Segmentation?

Paging:In computer operating systems, paging is one of the memory-management schemes by which a computer can store and retrieve data from secondary storage for use in main memory. In the paging memory-management scheme, the operating system retrieves data from secondary storage in same-size blocks called pages.

Segmentation:In a computer system using segmentation, an instruction operand that refers to a memory location includes a value that identifies a segment and an offset within that segment. A segment has a set of permissions, and a length, associated with it. If the currently running process is allowed by the permissions to make the type of reference to memory that it is attempting to make, and the offset within the segment is within the range specified by the length of the segment, the reference is permitted; otherwise, a hardware exception is raised.

How many types of operating system?

Types of operating system

There are several types of operating system, defined according to whether they can simultaneously manage information measuring 16 bits, 32 bits, 64 bits or more.

System	Programmi ng	Single user	Multi- user	Single task	Multi-task
DOS	16 bits	X		X	
Windows3.1	16/32 bits	X			not pre- emptive
Windows95/98/M e	32 bits	X			cooperative
WindowsNT/2000	32 bits		X		pre-emptive
WindowsXP	32/64 bits		X		pre-emptive

Unix / Linux	32/64 bits	X	pre-emptive
MAC/OS X	32 bits	X	pre-emptive
VMS	32 bits	X	pre-emptive

How many Logical ports are available in OS?

65,535

Differentiate between RAM and ROM?

ROM (Read Only Memory) and RAM (Random Access Memory) are both vital components to any fast and productive computer. However, contrary to what many believe, the two have almost nothing in common. Here are just a few of the differences between RAM and ROM.

RAM is...

1. RAM is Random Access Memory. This is reusable memory that the computer uses to run programs.

ROM is...

2. ROM is Read Only Memory. This is memory that has data permanently written on it and is usually not reusable.

Types of RAM

3. DDR (Double Data Rate), DDR2 and SDRAM are all types of RAM.

Types of ROM

4. PROM (Programmable Read-Only Memory) and CD-ROM are just two of the many types of ROM.

Similarities

5. While RAM and ROM are quite different, they both have similarities. Both are types of memory and both are vital for your computer to operate properly.

What are called Non-GUI clients, GUI Clients and OOUI Clients?

Non-GUI Client: These are applications, generate server requests with a minimal amount of human interaction.

GUI Clients: These are applications, where occasional requests to the server result from a human interacting with a GUI (Example: Windows 3.x, NT 3.5)

OOUI clients : These are applications, which are highly-iconic, object-oriented user interface that provides seamless access to information in very visual formats. (Example: MAC OS, Windows 95, NT 4.0)

What are the five major technologies that can be used to create Client/Server applications?

Database Servers

TP Monitors

Groupware

Distributed Objects

Intranets.

What is meant by Horizontal scaling and Vertical scaling?

Vertical Scaling means to add more hardware resources to the same machine, generally by adding more processors and memory.

- Expensive

- Easy to implement (generally, no change required in your application)
- Single point of failure (if main server crashes, what do you do?)

Horizontal Scaling means to add more machines into the mix, generally cheap commodity hardware

Cheap(er) - at least more linear expenditures

- Hard to implement (much harder than vertical)
- Many points of failure and therefore can usually handle failures elegantly

The devices found in datalink layer are

Router	Bridge	NIC	Repeater	Memory
		NIC (network interface card)		

What is Networking?

A computer network is any set of computers or devices connected to each other with the ability to exchange data.

Why is it always TCP over IP?

Because the Transmission Control Protocol runs on the Internet Protocol

How can i install active directory in windows 2008?

Install Active Directory Domain Services (AD DS) on a member server that runs Windows Server 2008 or Windows Server 2008 R2 by using the Active Directory Domain Services Installation Wizard (Dcpromo.exe). The member server should be located in the forest root domain. After you install AD DS successfully, the member server will become a domain controller. You can install AD DS on any member server that meets the domain controller hardware requirements.

You can install AD DS using the Windows user interface (UI). The Windows UI provides two wizards that guide you through the installation process for AD DS. One wizard is the Add Roles Wizard, which you can access in Server Manager. The other wizard is the Active Directory Domain Services Installation Wizard (Dcpromo.exe), which you can access in either of the following ways:

- When you complete the steps in the Add Roles Wizard, click the link to start the Active Directory Domain Services Installation Wizard.
- Click **Start**, click **Run**, type **dcpromo.exe**, and then click **OK**.

To install AD DS on a member server by using the Windows interface

1. Click **Start**, and then click **Server Manager**.
2. In **Roles Summary**, click **Add Roles**.
3. If necessary, review the information on the **Before You Begin** page, and then click **Next**.
4. On the **Select Server Roles** page, select the **Active Directory Domain Services** check box, and then click **Next**.
5. If necessary, review the information on the **Active Directory Domain Services** page, and then click **Next**.
6. On the **Confirm Installation Selections** page, click **Install**.
7. On the **Installation Results** page, click **Close this wizard and launch the Active Directory Domain Services Installation Wizard (dcpromo.exe)**.
8. On the **Welcome to the Active Directory Domain Services Installation Wizard** page, click **Next**.

If you want to install from media, identify the source domain controller for AD DS replication, or specify the Password Replication Policy (PRP) for an RODC as part of

the installation of the additional domain controller, click **Use advanced mode installation**.

9. On the **Operating System Compatibility** page, review the warning about the default security settings for Windows Server 2008 domain controllers, and then click **Next**.
10. On the **Choose a Deployment Configuration** page, click **Existing forest**, click **Add a domain controller to an existing domain**, and then click **Next**.
11. On the **Network Credentials** page, type the name of any existing domain in the forest where you plan to install the additional domain controller. Under **Specify the account credentials to use to perform the installation**, click **My current logged on credentials** or click **Alternate credentials**, and then click **Set**. In the **Windows Security** dialog box, provide the user name and password for an account that can install the additional domain controller. To install an additional domain controller, you must be a member of the Enterprise Admins group or the Domain Admins group. When you are finished providing credentials, click **Next**.
12. On the **Select a Domain** page, select the domain of the new domain controller, and then click **Next**.
13. On the **Select a Site** page, select a site from the list or select the option to install the domain controller in the site that corresponds to its IP address, and then click **Next**.
14. On the **Additional Domain Controller Options** page, make the following selections, and then click **Next**:

DNS server: This option is selected by default so that your domain controller can function as a DNS server. If you do not want the domain controller to be a DNS server, clear this option.

Global Catalog: This option is selected by default. It adds the global catalog, read-only directory partitions to the domain controller, and it enables global catalog search functionality.

Read-only domain controller. This option is not selected by default. It makes the additional domain controller read only.

15. If you selected **Use advanced mode installation** on the **Welcome** page, the **Install from Media** page appears. You can provide the location of installation media to be used to create the domain controller and configure AD DS, or you can have all the replication done over the network. Note that some data will be replicated over the network even if you install from media. For information about using this method to install the domain controller, see *Installing AD DS from Media*.
16. If you selected **Use advanced mode installation** on the **Welcome** page, the **Source Domain Controller** page appears. Click **Let the wizard choose an appropriate domain controller** or click **Use this specific domain controller** to specify a domain controller that you want to provide as a source for replication to create the new domain controller, and then click **Next**. If you do not choose to install from media, all data will be replicated from this source domain controller.

17. On the **Location for Database, Log Files, and SYSVOL** page, type or browse to the volume and folder locations for the database file, the directory service log files, and the system volume (SYSVOL) files, and then click **Next**. Windows Server Backup backs up the directory service by volume. For backup and recovery efficiency, store these files on separate volumes that do not contain applications or other nondirectory files.
18. On the **Directory Services Restore Mode Administrator Password** page, type and confirm the restore mode password, and then click **Next**. This password must be used to start AD DS in Directory Service Restore Mode (DSRM) for tasks that must be performed offline.
19. On the **Summary** page, review your selections. Click **Back** to change any selections, if necessary.

To save the settings that you have selected to an answer file that you can use to automate subsequent Active Directory operations, click **Export settings**. Type the name for your answer file, and then click **Save**.

When you are sure that your selections are accurate, click **Next** to install AD DS.

20. On the **Completing the Active Directory Domain Services Installation Wizard** page, click **Finish**.
21. You can either select the **Reboot on completion** check box to have the server restart automatically or you can restart the server to complete the AD DS installation when you are prompted to do so.

What is difference safe mode normal mode?

Safe mode is a troubleshooting option for Windows that starts your computer in a limited state. Only the basic files and drivers necessary to run Windows are started. In normal mode all basic files and drivers are necessary to run windows.

Think about ur college network if three departments where there are 25 computers in each department and if someone ask u to group the computer s, what will be criteria to do that.
with the help of subnetting

What is Firewall and types of firewall?

A firewall is a part of a computer system or network that is designed to block unauthorized access while permitting authorized communications. It is a device or set of devices that is configured to permit or deny network transmissions based upon a set of rules and other criteria.

There are several types of firewall techniques:

1. **Packet filter:** Packet filtering inspects each packet passing through the network and accepts or rejects it based on user-defined rules. Although difficult to configure, it is fairly effective and mostly transparent to its users. It is susceptible to IP spoofing.
2. **Application gateway:** Applies security mechanisms to specific applications, such as FTP and Telnet servers. This is very effective, but can impose a performance degradation.
3. **Circuit-level gateway:** Applies security mechanisms when a TCP or UDP connection is established. Once the connection has been made, packets can flow between the hosts without further checking.
4. **Proxy server:** Intercepts all messages entering and leaving the network. The proxy server effectively hides the true network addresses.

What is troubleshooting?

To isolate the source of a problem and fix it.

What is shadow copy?

Shadow Copy (Volume Snapshot Service / Volume Shadow Copy Service / VSS), is a technology included in Microsoft Windows that allows taking manual or automatic backup copies or snapshots of data. It is implemented as a Windows service called the *Volume Shadow Copy* service.

How do you check whether Active Directory has been installed properly or not?

By checking SRV Records In DNS Server.
check active directory users and computers
active directory domain and trust
active directory site and services
database folder
sysvol folder
log file

What is Web Server, Application Server, Database Server?

A web server can be referred to as either the hardware (the computer) or the software (the computer application) that helps to deliver content that can be accessed through the Internet. A web server is what makes it possible to be able to access content like web pages or other data from anywhere as long as it is connected to the internet.

Application server is a program that handles all application operations between users and an organization's backend business applications or databases.

An application server is typically used for complex transaction-based applications.

A database server is a computer program that provides database services to other computer programs or computers, as defined by the client-server model.

Such a server is accessed either through a "front end" running on the user's computer which displays requested data or the "back end" which runs on the server and handles tasks such as data analysis and storage.

In case DHCP fails in your server then how do you satisfy that problem within some minutes?

You can "Enable NetBIOS over TCP/IP" this will solve the problem within some minutes following the below path:

My Network Places-----right click properties-----select Internet Protocol-----Advanced settings-----Wins-----Enable NetBIOS over TCP/IP and save changes and check for the same.

What is the Protocol?

How is it different than BOOTP or RARP?

DHCP is based on BOOTP and maintains some backward compatibility. The main difference is that BOOTP was designed for manual pre-configuration of the host information in a server database, while DHCP allows for dynamic allocation of network addresses and configurations to newly attached hosts. Additionally, DHCP

allows for recovery and reallocation of network addresses through a leasing mechanism.

RARP is a protocol used by Sun and other vendors that allows a computer to find out its own IP number, which is one of the protocol parameters typically passed to the client system by DHCP or BOOTP. RARP doesn't support other parameters and using it, a server can only serve a single LAN. DHCP and BOOTP are designed so they can be routed.

How to rename domain name in win 2003 server?

To rename a domain controller

Open Command Prompt.

Type:

```
netdom computename CurrentComputerName/add:NewComputerName
```

Ensure the computer account updates and DNS registrations are completed, then type:

```
netdom computename CurrentComputerName /makeprimary:NewComputerName
```

Restart the computer.

From the command prompt, type:

```
netdom computename NewComputerName /remove:OldComputerName
```

- To perform this procedure, you must be a member of the Domain Admins group or the Enterprise Admins group in Active Directory.
- This command-line method requires the Netdom Windows support tool.
- To enumerate the names with which the computer is currently configured, at a command prompt, type:

```
netdom computename ComputerName/enumerate:{AlternateNames |  
PrimaryName | AllNames}
```

To rename a domain controller in a domain that contains a single domain controller
Install a Windows Server 2003 member server in the domain.

On the new server, create an additional domain controller by installing
Active Directory.

After Active Directory is installed, enable the global catalog on the new domain controller.

Transfer the operations master roles from the domain controller that you want to rename to the new domain controller. Note that you must transfer the roles, do not seize them.

Verify that the new domain controller is functioning correctly by doing the following:

Verify authentications and global catalog searches.

Run Dcdiag.exe against the domain controller.

Perform any other appropriate tests to verify that the new domain controller can provide all of the domain functions of the first domain controller.

Verify that the \sysvol and \netlogon drives are shared on the new domain controller by doing the following:

On the new domain controller, open Command Prompt.

Type:

```
Net share
```

In the list that is generated, verify the existence of Sysvol and Netlogon.

Uninstall Active Directory from the domain controller that you want to rename to be a member server.

Rename the member server.

Install Active Directory on the renamed server to create an additional domain controller.

Transfer the operations master roles back to the renamed domain controller.

Enable the global catalog on the renamed domain controller.

What is Wi-Fi? What is the latest version?

The name of a popular wireless networking technology that uses radio waves to provide wireless high-speed Internet and network connections. The Wi-Fi Alliance, the organization that owns the Wi-Fi (registered trademark) term specifically defines Wi-Fi (Wireless Fidelity) as any "wireless local area network (WLAN) products that are based on the Institute of Electrical and Electronics Engineers' (IEEE) 802.11 standards."

What is mean topology and types of topology?

Network topology refers to the way that your computer network is arranged. The network can have a physical or a logical topology. The physical topology describes the layout of computers and where the workstations are positioned. The logical network topology describes how the information flows through the network.

The different kinds of topology are:

- Bus topology
- Star topology
- Ring topology
- Tree topology
- Mesh topology

Bus topology

In bus topology, all computers are linked to the same transmission line by using a cable, usually coaxial. The word "bus" refers to the physical line that joins all the machines on the network.

The advantages of this topology are that it is easy to implement and functions easily; on the other hand, it is highly vulnerable, since if one of the connections is defective, the whole network is affected.

Star topology

In star topology, the network computers are linked to a piece of hardware called a hub. Unlike networks built with bus topology, networks which use star topology are much less vulnerable, as one of the connections can easily be removed by disconnecting it from the hub, without paralyzing the rest of the network. However, a star topology network is bulkier than a bus network, as additional hardware is required (the hub).

Ring topology

A ring topology is a network topology where each node (device on the network) connects to two other nodes. This forms a continuous path for the signal through each device.

This works because data travels from node to node (device to device). In a ring topology (also called a ring network), each node handles the data packets itself, then passes it to the next node, which also handles the packets.

Mesh topology

A mesh topology is made up of a network where each device has a point-to-point connection to every other device on the network. This provides the dedicated capacity of a point-to-point link to each device and significant fault tolerance.

Tree topology

The Tree Topology is a combination of the bus and the Star Topology. The tree like structure allows you to have many servers on the network and you can branch out the network in many ways. This is particularly helpful for colleges, universities and schools so that each of the branches can identify the relevant systems in their own network and yet connect to the big network in some way.

What is a wild card certificate?

A wildcard certificate allows you to secure multiple web sites with a single SSL certificate. Wildcard certificates are a service provided under Certificate Management Service.

How many scopes can create in one dhcp?

You can configure as many scopes on a DHCP server as is required in your network environment.

What is VPN and what are the main advantages?

A virtual private network (VPN) is the extension of a private network that encompasses links across shared or public networks like the Internet. With a VPN, you can send data between two computers or two networks across a shared or public network in a manner that emulates a point-to-point private link. Virtual private networking is the act of creating and configuring a VPN.

- Reduce cost implementation (We don't need to use lease line/ ISDN/ FR, mobile only
need to dial local ISP to connect to branch office)
- Security (VPN provide strong security mechanism through encryption, authentication)
- More Flexible
- Simple Management
- Tunnel topology
- Interoperability of devices from multiple vendors
- Centralized VPN management
- Easy implementation
- Easy usability
- Scalability
- Performance
- Bandwidth management
- High availability
- Protect traffic across internet
- Protect data through hackers

What is dhcp? what is the uses and advantages?

Dynamic Host Configuration Protocol (DHCP) is a standard protocol that allows a server to dynamically distribute IP addressing & configuration information to clients. Benefits of DHCP

In Windows Server 2003, the DHCP Server service provides the following benefits:

- Reliable IP address configuration.
- DHCP minimizes configuration errors caused by manual IP address configuration, such as typographical errors, or address conflicts caused by the assignment of an IP address to more than one computer at the same time.

- Reduced network administration. DHCP includes the following features to reduce network administration:
- Centralized and automated TCP/IP configuration.
- The ability to define TCP/IP configurations from a central location.
- The ability to assign a full range of additional TCP/IP configuration values by means of DHCP options.
- The forwarding of initial DHCP messages by using a DHCP relay agent, thus eliminating the need to have a DHCP server on every subnet.

What is secured socket layer and what is the requirement of its in networking?

SSL (Secure Sockets Layer) is the standard security technology for establishing an encrypted link between a web server and a browser. This link ensures that all data passed between the web server and browsers remain private and integral.

What is the difference between HTTP and HTTPS where u can use HTTPS?

Http is hyper text transfer protocol which is responsible for transmitting and receiving information across the Internet where as https is secure http, which is used exchanging confidential information with a server, which needs to be secured in order to prevent unauthorized access. HTTP is Hyper Text Transport Protocol and normally use when you are browsing the web, it's not secure.

Hypertext Transfer Protocol Secure (HTTPS) is a combination of the Hypertext Transfer Protocol with the SSL/TLS protocol to provide encrypted communication and secure identification of a network web server. HTTPS is a Web protocol developed by Netscape and built into its browser that encrypts and decrypts user page requests as well as the pages that are returned by the Web server.

What is Peer to peer Network?

Peer to peer is an approach to computer networking where all computers share equivalent responsibility for processing data. Peer-to-peer networking (also known simply as *peer networking*) differs from client-server networking, where certain devices have responsibility for providing or "serving" data and other devices consume or otherwise act as "clients" of those servers.

What is the difference between a Virtual Server and a Dedicated Server?

A dedicated server is a type of Internet hosting in which the client leases an entire server not shared with anyone. This is more flexible than shared hosting, as organizations have full control over the server(s), including choice of operating system, hardware, etc. A dedicated server could also be a computer that manages printer resources. However, that not all servers are dedicated. In some networks, it is possible for a computer to act as a server and perform other functions as well. In the Web hosting business, a dedicated server is typically a rented service. The user rents the server, software and an Internet connection from the Web host.

A server, usually a Web server, that shares computer resources with other virtual servers. Virtual Web servers are a very popular way of providing low-cost web hosting services. Instead of requiring a separate computer for each server, dozens of virtual servers can co-reside on the same computer. In most cases, performance is not affected and each web site behaves as if it is being served by a dedicated server. If too many virtual servers reside on the same computer, or if one virtual server starts hogging resources, Web pages will be delivered more slowly.

What is Antivirus?

Antivirus software is a computer program that detects, prevents, and takes action to disarm or remove malicious software programs, such as viruses and worms.

What are Cold Boot and Warm Boot?

A hard reboot (also known as a cold reboot, cold boot or cold start) is when power to a computer is abruptly turned off, then turned back on.

A soft reboot (also known as a warm reboot) is restarting a computer under software control, without removing power or (directly) triggering a reset line.

What is the type of dsl technologies?

Digital Subscriber Line (DSL) is high-speed Internet access that uses existing copper telephone lines. According to the FCC, the different types of DSL technologies provide transmission speeds ranging from several hundred thousand bits per second to millions of bits per second.

All types of DSL Internet service can be categorized as either asymmetric or symmetric.

ADSL

Asymmetric Digital Subscriber Line (ADSL) is the most widely available type of DSL technology and typically used by homes and small businesses. Asymmetric means that most of the bandwidth is for sending data to the user (downloading) and only a small amount is available for uploading data. ADSL requires a splitter at the user's end to split the Internet data signal from the telephone signal.

DSL Lite (also known as G.Lite) is a slower version of ADSL that doesn't require a splitter at the user's end because the splitting happens remotely at the telephone company.

Rate-Adaptive DSL (RADSL) is an ADSL technology that uses software to determine the rate that a customer phone line can transmit signals and adjusts the delivery rate for that phone line.

SDSL

Symmetrical DSL (SDSL) means that data downloads and uploads at the same speed. Larger businesses often use SDSL. Two types of SDSL are high-data-rate Digital Subscriber Line (HDSL) and very-high-data-rate Digital Subscriber Line (VDSL).

A newer version of HDSL is HDSL2, which transmits data at the same speeds as HDSL but requires only two wires instead of four. Also, the encoding for HDSL2 is more efficient than for **HDSL**.

Another technology, based on HDSL2, is G.SHDSL, which is faster and can optimize performance based on telephone line conditions.

IDSL

ISDN DSL (IDSL) is a hybrid of Integrated Services Digital Network (ISDN) and DSL technologies. IDSL runs over a single pair of wires. Unlike ISDN, IDSL is always on.

How to take backup of Outlook Express explain all the steps in detail.

To back up Outlook Express items

Step 1: Copy message files to a backup folder

Step A: Locate the Store folder

1. Start Outlook Express.
2. Click Tools, and then click Options.
3. On the Maintenance tab, click Store Folder.

4. In the Store Location dialog box, copy the store location. To do this, follow these steps:
 - a. Put the mouse pointer at one end of the box under the Your personal message store is located in the following folder box.
 - b. Press and hold the left mouse button, and then drag the mouse pointer across the Your personal message store is located in the following folder box.
 - c. Press CTRL+C to copy the location.
2. Click Cancel, and then click Cancel again to close the dialog box.

Step B: Copy the contents of the Store folder

1. Click Start, click Run, press CTRL+V, and then click OK.
2. On the Edit menu, click Select All.
3. On the Edit menu, click Copy, and then close the window.

Step C: Create a backup folder

1. Right-click any empty area on your desktop, click New, and then click Folder.
2. Type Mail Backup for the folder name, and then press ENTER.

Step D: Paste the contents of the Store folder into the backup folder

1. Double-click the Mail Backup folder to open it.
2. Right-click inside the Mail Backup folder window, and then click Paste.

Step 2: Export the Address Book to a .csv file

To export the Address Book to a .csv file, follow these steps:

1. On the File menu, click Export, and then click Address Book.
2. Click Text File (Comma Separated Values), and then click Export.
3. Click Browse.
4. Select the Mail Backup folder that you created.
5. In the File Name box, type address book backup, and then click Save.
6. Click Next.
7. Click to select the check boxes for the fields that you want to export & then click Finish.
8. Click OK, and then click Close.

Step 3: Export the mail account to a file

1. On the Tools menu, click Accounts.
2. On the Mail tab, click the mail account that you want to export, and then click Export.
3. In the Save In box, select the Mail Backup folder, and then click Save.
4. Repeat these steps for each mail account that you want to export.
5. Click Close.

Step 4: Export the newsgroup account to a file

1. On the Tools menu, click Accounts.
2. On the News tab, click the news account that you want to export, and then click Export.
3. In the Save In box, select the Mail Backup folder, and then click Save.
4. Repeat these steps for each news account that you want to export.
5. Click Close.

To restore Outlook Express items

Step 1: Import messages from the backup folder

1. On the File menu, point to Import, and then click Messages.
2. In the Select an e-mail program to import from box, click Microsoft Outlook Express 5 or Microsoft Outlook Express 6, and then click Next.
3. Click Import mail from an OE5 store directory or Import mail from an OE6 store directory, and then click OK.

4. Click Browse, and then click the Mail Backup folder.
5. Click OK, and then click Next.
6. Click All folders, click Next, and then click Finish.

Step 2: Import the Address Book file

1. On the File menu, click Import, and then click Other Address Book.
2. Click Text File (Comma Separated Values), and then click Import.
3. Click Browse.
4. Select the Mail Backup folder, click the address book backup.csv file & then click Open.
5. Click Next, and then click Finish.
6. Click OK, and then click Close.

Step 3: Import the mail account file

1. On the Tools menu, click Accounts.
2. On the Mail tab, click Import.
3. In the Look In box, select the Mail Backup folder.
4. Click the mail account that you want to import, and then click Open.
5. Repeat these steps for each mail account that you want to import.
6. Click Close.

Step 4: Import the newsgroup account file

1. On the Tools menu, click Accounts.
2. On the News tab, click Import.
3. In the Look In box, select the Mail Backup folder.
4. Click the news account that you want to import, and then click Open.
5. Repeat these steps for each news account that you want to import.
6. Click Close.

What is folder sharing? Explain hidden sharing and open sharing

Folder sharing is a utility of modern OS, through this we can share the necessary files and documents over the network/within the network for accessing remotely.

Hidden Sharing:--> The hidden sharing means we share the drive with Sign \$ & we can't see the drive in Network.

Open Sharing:--> The Open sharing means we can see the drive in Network.

What is the Difference between Broadcast Domain and Collision Domain and where it is used?

Broadcast Domain:

Broadcast domain is a restricted area in which information can be transmitted for all devices in the domain to receive. More specifically, Ethernet LANs are broadcast domains. Any devices attached to the LAN can transmit frames to any other device because the medium is a shared transmission system. Frames are normally addressed to a specific destination device on the network. While all devices detect the frame transmission on the network, only the device to which the frame is addressed actually receives it.

A repeater is a device that joins two LANs to extend the distance of the LAN. All network traffic is sent across the repeater unaltered.

A bridge is a device that joins two LANs into a single broadcast domain, but isolates them so that problems on one LAN do not propagate to the other LAN. In addition, bridges maintain separate collision domains, so that computers on each segment only contend with other computers on the same segment for access.

Collision Domain:

Ethernet networks use a collision-sensing protocol called CSMA/CD (carrier sense multiple access/collision detection). The protocol allows multiple devices connected to a shared network cable to use that cable by taking turns accessing it. The basic strategy goes like this:

1. A computer listens on the cable to see if another computer is transmitting, which is indicated by a voltage change on the cable. If busy, the computer waits and listens.
2. When the cable is not busy, a computer attempts to transmit.
3. Another computer may attempt to transmit at the same time, which causes a collision.
4. Both computers that attempted to transmit must back off, wait, and then attempt to transmit again.

Computers on the network detect collisions by looking for abnormally changing voltages. Signals from multiple systems overlap and distort one another. Overlapping signals will push the voltage above the allowable limit. This is detected by attached computers, which reject the corrupted frames (called runts).

How do you check the listening ports on a windows box? Command line.

netstat -a : displays ip , listening port ids netstat /? : help

Different types of cables used in lan cabling?

Different types of network cables like Coaxial cable, Optical fiber cable, Twisted Pair cables are used depending on the network's topology, protocol and size

10Base2 Coaxial

10BaseT Cat5

100BaseTX Fast Ethernet Cat5

1000BaseT Cat5e/Cat6/Cat6e

Fiber Optic

UDP means

UDP (User Datagram Protocol) is a communications protocol that offers a limited amount of service when messages are exchanged between computers in a network that uses the Internet Protocol (IP). UDP is an alternative to the Transmission Control Protocol (TCP) and, together with IP, is sometimes referred to as UDP/IP. UDP uses the Internet Protocol to actually get a data unit (called a datagram) from one computer to another. However, UDP does not provide the service of dividing a message into packets (datagrams) and reassembling it at the other end. This means that the application program that uses UDP must be able to make sure that the entire message has arrived and is in the right order. Network applications that want to save processing time because they have very small data units to exchange (and therefore very little message reassembling to do) may prefer UDP to TCP. The Trivial File Transfer Protocol (TFTP) uses UDP instead of TCP.

Explain Application Layer with the help of application layer protocol?

In the Open Systems Interconnection (OSI) communications model, the application layer provides services for an application program to ensure that effective communication with another application program in a network is possible. The application layer is not the application itself that is doing the communication. The protocol that works on application layer are ftp(file transfer protocol)used for transferring files, telnet for remote access,dhcp(dynamic host configuration

protocol)used for assigning ip address automatically, http(hyper text transfer protocol) ,and udp(user datagram protocol)

What is modem and what use of in networking?

A modem is a Modulator and Demodulator. It's like a bridge between computer and ordinary telephone lines. Telephone lines only accept analog signals but computers only accept digital (binary) signals so modems help link them. Routers then emit the digital signal.

A modem is a device that modulates an analog carrier signal to incode digital infomation.

How to connect two hosts with different subnet each other to communicate? How to connect 172.16.0.0 and 172.17.0.0, subnet: 255.255.0.0 connect each other

Through L3 Device (Router or Layer 3 switch)

How to configure SMTP connector in exchange server 2003 for external outgoing mail?

To create and securely configure the SMTP connector follows these steps:

1. Start Exchange System Manager.

Configure System Manager to Display Routing and Administrative Groups.

1. Start the System Manager from the Microsoft Exchange program group.
2. Right click the top-level node and on the shortcut menu, click Properties.
3. In the Properties dialog box, select the Display Routing Groups and Display Administrative Groups check boxes, and then click OK.
4. In the message box that informs you that you need to restart the System Manager, click OK, and then restart System Manager.
5. There should be a container called Administrative Groups in the console tree. Expand the nodes.
6. Click the Members container within the First Routing Group object. Your server is the Master server in the First Routing Group.
2. Expand the Administrative Groups container.
3. Click the administrative group that you want to work with, and then expand it.
4. Expand the Routing Groups container.
5. Click the routing group that you want to work with, and then expand it.
6. Click the **Connectors** container. Right-click the **Connectors** container, & then click **New**.
7. Click **SMTP Connector**.
8. On the **General** tab, provide an appropriate identifying name for the connector.
9. Choose to use DNS or forward to a smart host (if you are relaying through an Internet service provider send-mail server). If you are forwarding to a smart host, use the IP address of the smart host in square brackets.
10. Under **Local Bridgeheads**, click **Add**. Add the server that becomes the bridgehead server for the routing group. Designate an SMTP virtual server as a bridgehead server for the SMTP connector. This can be either the server that you are working on or another server in the same routing group. Alternatively, this duty can be shared by multiple servers.

11. Click the **Address Space** tab. Under **Connector Scope**, click either **Entire Organization** or **Routing Group**. As in earlier versions of Exchange Server, when you configure the Internet Mail Service, click **Add**, click **SMTP**, and then click **OK**. Accept the default (*) unless you require outbound e-mail domain restriction, and leave the cost as 1. If you have accepted the default of (*), you should never click to select the **Allow messages to be relayed to these domains** check box. Clicking to select the **Allow messages to be relayed to these domains** check box would open your server for relay to the world. The **Allow messages to be relayed to these domains** check box should be for secure domain to domain connections only.
12. If you have chosen forward all mail to a smart host, click the **Advanced** tab. Click the **Outbound Security** option, and then select an appropriate authentication method for your relay host. The default is Anonymous Access. Anonymous is the method that must be used if you are forwarding to an ISP, unless you have made prior arrangements with the ISP for another security level. If you are forwarding to your own server or to another server outside your environment, work with the administrator of that server to select the appropriate security level for both servers. You can add more than one smart host .
13. Click **OK** to exit Outbound Security.
14. Click **OK** to exit the **Advanced** tab.
15. Click **OK** to exit the SMTP connector.
16. You must restart the Microsoft Exchange Routing Engine service and the SMTP service for these changes to take effect.

What are two characteristics of clients in data networks?

Initiate data exchanges.

May upload data to servers

What is L1, L2, L3 Support?

Level 1(L1)

This is the initial support level responsible for basic customer issues. The first job of a Tier I specialist is to gather the customer's information and to determine the customer's issue by analyzing the symptoms and figuring out the underlying problem. Technical support specialists in this group typically handle straightforward and simple problems while "possibly using some kind of knowledge management tool." This includes troubleshooting methods such as verifying physical layer issues, resolving username and password problems, uninstalling/reinstalling basic software applications, verification of proper hardware and software set up, and assistance with navigating around application menus.

Level 2(L2)

This is a more in-depth technical support level than Tier I containing experienced and more knowledgeable personnel on a particular product or service. Technicians in this realm of knowledge are responsible for assisting Tier I personnel solve basic technical problems and for investigating elevated issues by confirming the validity of the problem and seeking for known solutions related to these more complex issues. If a problem is new and/or personnel from this group cannot determine a solution, they are responsible for raising this issue to the Tier III technical support group. This may include, but is not limited to onsite installations or replacements of various hardware components, software repair, diagnostic testing, and the

utilization of remote control tools used to take over the user's machine for the sole purpose of troubleshooting and finding a solution to the problem.

Level 3(L3)

This is the highest level of support in a three-tiered technical support model responsible for handling the most difficult or advanced problems. These individuals are experts in their fields and are responsible for not only assisting both Tier I and Tier II personnel, but with the research and development of solutions to new or unknown issues. Note that Tier III technicians have the same responsibility as Tier II technicians in reviewing the work order and assessing the time already spent with the customer so that the work is prioritized and time management is sufficiently utilized.

Level 4(L4)

While not universally used, a fourth level often represents an escalation point beyond the organization. This is generally a hardware or software vendor. Within a corporate incident management system it is important to continue to track incidents even when they are being actioned by a vendor and the Service Level Agreement (SLA) may have specific provision for this.

What is Spyware and Firmware?

Spyware is a type of malware that can be installed on computers, and which collects small pieces of information about users without their knowledge. The presence of spyware is typically hidden from the user, and can be difficult to detect. Typically, spyware is secretly installed on the user's personal computer.

In electronics and computing, **firmware** is a term often used to denote the fixed, usually rather small, programs and/or data structures that internally control various electronic devices.

Difference between Transmission Control Protocol (TCP) and User Datagram Protocol (UDP)

Transmission Control Protocol (TCP)

- 1) Transmission Control Protocol (TCP) is a connection oriented protocol, which means the devices should open a connection before transmitting data and should close the connection gracefully after transmitting the data.
- 2) Transmission Control Protocol (TCP) assure reliable delivery of data to the destination.
- 3) Transmission Control Protocol (TCP) protocol provides extensive error checking mechanisms such as flow control and acknowledgment of data.
- 4) Sequencing of data is a feature of Transmission Control Protocol (TCP).
- 5) Delivery of data is guaranteed if you are using Transmission Control Protocol (TCP).
- 6) Transmission Control Protocol (TCP) is comparatively slow because of these extensive error checking mechanisms
- 7) Multiplexing and Demultiplexing is possible in Transmission Control Protocol (TCP) using TCP port numbers.
- 8) Retransmission of lost packets is possible in Transmission Control Protocol (TCP).

User Datagram Protocol (UDP)

- 1) User Datagram Protocol (UDP) is Datagram oriented protocol with no overhead for opening, maintaining, and closing a connection.
- 2) User Datagram Protocol (UDP) is efficient for broadcast/multicast transmission.

- 3) User Datagram protocol (UDP) has only the basic error checking mechanism using checksums.
- 4) There is no sequencing of data in User Datagram protocol (UDP) .
- 5) The delivery of data cannot be guaranteed in User Datagram protocol (UDP) .
- 6) User Datagram protocol (UDP) is faster, simpler and more efficient than TCP. However, User Datagram protocol (UDP) it is less robust than TCP
- 7) Multiplexing and Demultiplexing is possible in User Datagram Protocol (UDP) using UDP port numbers.
- 8) There is no retransmission of lost packets in User Datagram Protocol (UDP).

Which is the faster protocol either UDP or TCP?

User Datagram protocol (UDP) is faster, simpler and more efficient than TCP.

What is difference between static ip address and dynamic ip address?

A dynamic IP is one that changes every time you connect to the network & a static IP is one that remains the same no matter how many times you connect and disconnect from the network.

Why LDAP is called light weight?

LDAP (Lightweight Directory Access Protocol) is a protocol for communications between LDAP servers and LDAP clients. LDAP servers store "directories" which are accessed by LDAP clients.

LDAP is called *lightweight* because it is a smaller and easier protocol which was derived from the X.500 DAP (Directory Access Protocol) defined in the OSI network protocol stack.

What's the meaning of ARP & RARP

Address Resolution Protocol, a network layer protocol used to convert an IP address into a physical address. ARP and RARP. The ARP protocol is used to map IP addresses to MAC addresses. RARP, the Reverse ARP Protocol, is used to map MAC addresses to IP addresses.

What is the difference between TFTP and FTP application layer protocols?

FTP depends on TCP, is connection oriented, and provides reliable control. TFTP depends on UDP, requires less overhead, and provides virtually no control.

FTP provides user authentication. TFTP does not.

FTP uses well-known TCP port numbers: 20 for data and 21 for connection dialog.

TFTP uses UDP port number 69 for its file transfer activity.

What is a network management system?

A Network Management System (NMS) is a combination of hardware and software used to monitor and administer a network.

If A sends a message to B with encryption then key is

A public key

How do you double-boot a Win 2003 server box?

The Boot.ini file is set as read-only, system, and hidden to prevent unwanted editing. To change the Boot.ini timeout and default settings, use the System option in Control Panel from the Advanced tab and select Startup.

What do you do if earlier application doesn't run on Windows Server 2003?

When an application that ran on an earlier legacy version of Windows cannot be loaded during the setup function or if it later malfunctions, you must run the compatibility mode function. This is accomplished by right-clicking the application or setup program and selecting Properties -> Compatibility -> selecting the previously supported operating system.

If you uninstall Windows Server 2003, which operating systems can you revert to?

Win ME, Win 98, 2000, XP.

Note, however, that you [cannot upgrade from ME and 98 to Windows Server 2003](#).

How do you get to Internet Firewall settings?

Start -> Control Panel -> Network and Internet Connections -> Network Connections.

What are the Windows Server 2003 keyboard shortcuts?

Winkey opens or closes the Start menu.

Winkey + BREAK displays the System Properties dialog box.

Winkey + TAB moves the focus to the next application in the taskbar.

Winkey + SHIFT + TAB moves the focus to the previous application in the taskbar.

Winkey + B moves the focus to the notification area.

Winkey + D shows the desktop.

Winkey + E opens Windows Explorer showing My Computer.

Winkey + F opens the Search panel.

Winkey + CTRL + F opens the Search panel with Search for Computers module selected.

Winkey + F1 opens Help.

Winkey + M minimizes all.

Winkey + SHIFT+ M undoes minimization.

Winkey + R opens Run dialog.

Winkey + U opens the Utility Manager.

Winkey + L locks the computer.

What is Active Directory?

Active Directory is a network-based object store and service that locates and manages resources, and makes these resources available to authorized users and groups. An underlying principle of the Active Directory is that everything is considered an object—people, servers, workstations, printers, documents, and devices. Each object has certain attributes and its own security access control list (ACL).

Where are the Windows NT Primary Domain Controller (PDC) and its Backup Domain Controller (BDC) in Server 2003?

The Active Directory replaces them. Now all domain controllers share a multimaster peer-to-peer read and write relationship that hosts copies of the Active Directory.

How long does it take for security changes to be replicated among the domain controllers?

Security-related modifications are replicated within a site immediately. These changes include account and individual user lockout policies, changes to password policies, changes to computer account passwords, and modifications to the Local Security Authority (LSA).

What's new in Windows Server 2003 regarding the DNS management?

When DC promotion occurs with an existing forest, the Active Directory Installation Wizard contacts an existing DC to update the directory and replicate from the DC the required portions of the directory. If the wizard fails to locate a DC, it performs debugging and reports what caused the failure and how to fix the problem. In order to be located on a network, every DC must register in DNS DC locator DNS records. The Active Directory Installation Wizard verifies a proper configuration of the DNS infrastructure. All DNS configuration debugging and reporting activity is done with the Active Directory Installation Wizard.

When should you create a forest?

Organizations that operate on radically different bases may require separate trees with distinct namespaces. Unique trade or brand names often give rise to separate DNS identities. Organizations merge or are acquired and naming continuity is desired. Organizations form partnerships and joint ventures. While access to common resources is desired, a separately defined tree can enforce more direct administrative and security restrictions.

How can you authenticate between forests?

Four types of authentication are used across forests:

- (1) Kerberos and NTLM network logon for remote access to a server in another forest;
- (2) Kerberos and NTLM interactive logon for physical logon outside the user's home forest;
- (3) Kerberos delegation to N-tier application in another forest; and
- (4) user principal name (UPN) credentials.

What snap-in administrative tools are available for Active Directory?

Active Directory Domains and Trusts Manager, Active Directory Sites and Services Manager, Active Directory Users and Group Manager, Active Directory Replication (optional, available from the Resource Kit), Active Directory Schema Manager (optional, available from adminpak)

What types of classes exist in Windows Server 2003 Active Directory?

Structural class. The structural class is important to the system administrator in that it is the only type from which new Active Directory objects are created. Structural classes are developed from either the modification of an existing structural type or the use of one or more abstract classes.

Abstract class. Abstract classes are so named because they take the form of templates that actually create other templates (abstracts) and structural and auxiliary classes. Think of abstract classes as frameworks for the defining objects.

Auxiliary class. The auxiliary class is a list of attributes. Rather than apply numerous attributes when creating a structural class, it provides a streamlined alternative by applying a combination of attributes with a single include action.

88 class. The 88 class includes object classes defined prior to 1993, when the 1988 X.500 specification was adopted. This type does not use the structural, abstract, and auxiliary definitions, nor is it in common use for the development of objects in Windows Server 2003 environments.

How do you delete a lingering object?

Windows Server 2003 provides a command called Repadmin that provides the ability to delete lingering objects in the Active Directory.

What is Global Catalog?

The Global Catalog authenticates network user logons and fields inquiries about objects across a forest or tree. Every domain has at least one GC that is hosted on a domain controller. In Windows 2000, there was typically one GC on every site in order to prevent user logon failures across the network.

How is user account security established in Windows Server 2003?

When an account is created, it is given a unique access number known as a security identifier (SID). Every group to which the user belongs has an associated SID. The user and related group SIDs together form the user account's security token, which determines access levels to objects throughout the system and network. SIDs from the security token are mapped to the access control list (ACL) of any object the user attempts to access.

If I delete a user and then create a new account with the same username and password, would the SID and permissions stay the same?

No. If you delete a user account and attempt to recreate it with the same user name and password, the SID will be different.

What do you do with secure sign-ons in an organization with many roaming users?

Credential Management feature of Windows Server 2003 provides a consistent single sign-on experience for users. This can be useful for roaming users who move between computer systems. The Credential Management feature provides a secure store of user credentials that includes passwords and X.509 certificates.

Anything special you should do when adding a user that has a Mac?

"Save password as encrypted clear text" must be selected on User Properties Account Tab Options, since the Macs only store their passwords that way.

What remote access options does Windows Server 2003 support?

Dial-in, VPN, dial-in with callback.

Where are the documents and settings for the roaming profile stored?

All the documents and environmental settings for the roaming user are stored locally on the system, and, when the user logs off, all changes to the locally stored profile are copied to the shared server folder. Therefore, the first time a roaming user logs on to a new system the logon process may take some time, depending on how large his profile folder is.

Where are the settings for all the users stored on a given machine?

\Document and Settings\All Users

What languages can you use for log-on scripts?

JavaScript, VBScript, DOS batch files (.com, .bat, or even .exe)

What's the difference between local, global and universal groups?

Domain local groups assign access permissions to global domain groups for local domain resources. Global groups provide access to resources in other trusted domains. Universal groups grant access to resources in all trusted domains.

I am trying to create a new universal user group. Why can't I?

Universal groups are allowed only in native-mode Windows Server 2003 environments. Native mode requires that all domain controllers be promoted to Windows Server 2003 Active Directory.

What is LSDOU?

It's group policy inheritance model, where the policies are applied to Local machines, Sites, Domains and Organizational Units.

Where are group policies stored?

%SystemRoot%\System32\GroupPolicy

What is GPT and GPC?

Group policy template and group policy container.

Where is GPT stored?

%SystemRoot%\SYSVOL\sysvol\domainname\Policies\GUID

You change the group policies, and now the computer and user settings are in conflict. Which one has the highest priority?

The computer settings take priority.

You want to set up remote installation procedure, but do not want the user to gain access over it. What do you do?

gponame-> User Configuration-> Windows Settings-> Remote Installation Services-> Choice Options is your friend.

What's contained in administrative template conf.adm?

Microsoft NetMeeting policies

How can you restrict running certain applications on a machine?

Via group policy, security settings for the group, then Software Restriction Policies.

You need to automatically install an app, but MSI file is not available.

What do you do?

A .zap text file can be used to add applications using the Software Installer, rather than the Windows Installer.

What's the difference between Software Installer and Windows Installer?

The former has fewer privileges & will probably require user intervention. Plus, it uses .zap files.

What can be restricted on Windows Server 2003 that wasn't there in previous products?

Group Policy in Windows Server 2003 determines a user's right to modify network and dial-up TCP/IP properties. Users may be selectively restricted from modifying their IP address and other network configuration parameters.

How frequently is the client policy refreshed?

90 minutes give or take.

Where is *secedit*?

It's now *gpupdate*.

You want to create a new group policy but do not wish to inherit.

Make sure you check Block inheritance among the options when creating the policy.

What is "tattooing" the Registry?

The user can view and modify user preferences that are not stored in maintained portions of the Registry. If the group policy is removed or changed, the user preference will persist in the Registry.

How do you fight tattooing in NT/2000 installations?

You can't.

How do you fight tattooing in 2003 installations?

User Configuration - Administrative Templates - System - Group Policy - enable - Enforce Show Policies Only.

What does IntelliMirror do?

It helps to reconcile desktop settings, applications, and stored files for users, particularly those who move between workstations or those who must periodically work offline.

What's the major difference between FAT and NTFS on a local machine?

FAT and FAT32 provide no security over locally logged-on users. Only native NTFS provides extensive permission control on both remote and local files.

How do FAT and NTFS differ in approach to user shares?

They don't, both have support for sharing.

Explain the *List Folder Contents* permission on the folder in NTFS.

Same as Read & Execute, but not inherited by files within a folder. However, newly created subfolders will inherit this permission.

I have a file to which the user has access, but he has no folder permission to read it. Can he access it?

It is possible for a user to navigate to a file for which he does not have folder permission. This involves simply knowing the path of the file object. Even if the user

can't drill down the file/folder tree using My Computer, he can still gain access to the file using the Universal Naming Convention (UNC). The best way to start would be to type the full path of a file into Run... window.

For a user in several groups, are Allow permissions restrictive or permissive?

Permissive, if at least one group has Allow permission for the file/folder, user will have the same permission.

For a user in several groups, are Deny permissions restrictive or permissive?

Restrictive, if at least one group has Deny permission for the file/folder, user will be denied access, regardless of other group permissions.

What hidden shares exist on Windows Server 2003 installation?

Admin\$, Drive\$, IPC\$, NETLOGON, print\$ and SYSVOL.

What's the difference between standalone & fault-tolerant DFS (Distributed File System) installations?

The standalone server stores the Dfs directory tree structure or topology locally. Thus, if a shared folder is inaccessible or if the Dfs root server is down, users are left with no link to the shared resources. A fault-tolerant root node stores the Dfs topology in the Active Directory, which is replicated to other domain controllers. Thus, redundant root nodes may include multiple connections to the same data residing in different shared folders.

We're using the DFS fault-tolerant installation, but cannot access it from a Win98 box.

Use the UNC path, not client, only 2000 and 2003 clients can access Server 2003 fault-tolerant shares.

Where exactly do fault-tolerant DFS shares store information in Active Directory?

In Partition Knowledge Table, which is then replicated to other domain controllers.

Can you use Start->Search with DFS shares?

Yes.

What problems can you have with DFS installed?

Two users opening the redundant copies of the file at the same time, with no file-locking involved in DFS, changing the contents and then saving. Only one file will be propagated through DFS.

I run Microsoft Cluster Server and cannot install fault-tolerant DFS.

Yeah, you can't. Install a standalone one.

Is Kerberos encryption symmetric or asymmetric?

Symmetric.

How does Windows 2003 Server try to prevent a middle-man attack on encrypted line?

Time stamp is attached to the initial client request, encrypted with the shared key.

What hashing algorithms are used in Windows 2003 Server?

RSA Data Security's Message Digest 5 (MD5), produces a 128-bit hash, and the Secure Hash Algorithm 1 (SHA-1), produces a 160-bit hash.

What third-party certificate exchange protocols are used by Windows 2003 Server?

Windows Server 2003 uses the industry standard PKCS-10 certificate request and PKCS-7 certificate response to exchange CA certificates with third-party certificate authorities.

What's the number of permitted unsuccessful logons on Administrator account?

Unlimited. Remember, though, that it's the Administrator account, not any account that's part of the Administrators group.

If hashing is one-way function and Windows Server uses hashing for storing passwords, how is it possible to attack the password lists, specifically the ones using NTLMv1?

A cracker would launch a dictionary attack by hashing every imaginable term used for password and then compare the hashes.

What's the difference between guest accounts in Server 2003 and other editions?

More restrictive in Windows Server 2003.

How many passwords by default are remembered when you check "Enforce Password History Remembered"?

User's last 6 passwords.

What is presentation layer responsible for in the OSI model?

The presentation layer establishes the data format prior to passing it along to the network application's interface. TCP/IP networks perform this task at the application layer.

Does Windows Server 2003 support IPv6?

Yes, run ipv6.exe from command line to disable it.

Can Windows Server 2003 function as a bridge?

Yes, and it's a new feature for the 2003 product. You can combine several networks and devices connected via several adapters by enabling IP routing.

What's the difference between the basic disk and dynamic disk?

The basic type contains partitions, extended partitions, logical drives, and an assortment of static volumes; the dynamic type does not use partitions but dynamically manages volumes and provides advanced storage options

What's a media pool?

It is any compilation of disks or tapes with the same administrative properties.

How do you install recovery console?

C:\i386\win32 /cmdcons, assuming that your Win server installation is on drive C.

What's new in Terminal Services for Windows 2003 Server?

Supports audio transmissions as well, although prepare for heavy network load.

What scripts ship with IIS 6.0?

iisweb.vsb to create, delete, start, stop, and list Web sites, *iisftp.vsb* to create, delete, start, stop, and list FTP sites, *iisdir.vsb* to create, delete, start, stop, and display virtual directories, *iisftpr.vsb* to create, delete, start, stop, and display virtual directories under an FTP root, *iisconfig.vbs* to export and import IIS configuration to an XML file.

What's the name of the user who connects to the Web site anonymously?

IUSR_computername

What secure authentication and encryption mechanisms are supported by IIS 6.0?

Basic authentication, Digest authentication, Advanced digest authentication, Certificate-based Web transactions that use PKCS #7/PKCS #10, Fortezza, SSL, Server-Gated Cryptography, Transport Layer Security

What's the relation between SSL and TLS?

Transport Layer Security (TLS) extends SSL by providing cryptographic authentication.

What's the role of http.sys in IIS?

It is the point of contact for all incoming HTTP requests. It listens for requests and queues them until they are all processed, no more queues are available, or the Web server is shut down.

Where's ASP cache located on IIS 6.0?

On disk, as opposed to memory, as it used to be in IIS 5.

What is socket pooling?

Non-blocking socket usage, introduced in IIS 6.0. More than one application can use a given socket.

Describe the process of clustering with Windows 2003 Server when a new node is added.

As a node goes online, it searches for other nodes to join by polling the designated internal network. In this way, all nodes are notified of the new node's existence. If other nodes cannot be found on a preexisting cluster, the new node takes control of

the quorum resources residing on the shared disk that contains state and configuration data.

What applications are not capable of performing in Windows 2003 Server clusters?

The ones written exclusively for NetBEUI and IPX.

What's a heartbeat?

Communication processes between the nodes designed to ensure node's health.

What's a threshold in clustered environment?

The number of times a restart is attempted, when the node fails.

You need to change and admin password on a clustered Windows box, but that requires rebooting the cluster, doesn't it?

No, it doesn't. In 2003 environment you can do that via cluster.exe utility which does not require rebooting the entire cluster.

For the document of size 1 MB, what size would you expect the index to be with Indexing Service?

150-300 KB, 15-30% is a reasonable expectation.

Doesn't the Indexing Service introduce a security flaw when allowing access to the index?

No, because users can only view the indices of documents and folders that they have permissions for.

What's the typical size of the index?

Less than 100K documents - up to 128 MB. More than that - 256+ MB.

Which add-on package for Windows 2003 Server would you use to monitor the installed software and license compliance?

SMS (System Management Server).

Which service do you use to set up various alerts?

MOM (Microsoft Operations Manager).

What port does telnet use?

Telnet use port number 23

What is SMTP?

Simple Mail Transfer Protocol, a protocol for sending e-mail messages between servers. Most e-mail systems that send mail over the Internet use SMTP to send messages from one server to another; the messages can then be retrieved with an e-mail client using either POP or IMAP. In addition, SMTP is generally used to send messages from a mail client to a mail server. This is why you need to specify both the POP or IMAP server and the SMTP server when you configure your e-mail application.

How would you troubleshoot a printer?

Printer does not have power indicator

Cables not connected properly
Printer error (orange or blinking light)
No paper or paper jam
Printer drivers

How does traceroute work?

The "traceroute" program uses ICMP messaging and the time to live (TTL) field in the IP header. It works by sending a packet to the intended host with a TTL value of 1. The first router will send back the ICMP "time exceeded" message to the sending host. Then the traceroute program will send a message with a TTL of 2, then 3, etc. This way it will get information about each router using the information received in the ICMP packets. To get information about the receiving host, the message is sent to a port that is not likely to be serviced by that host. A ICMP "port unreachable" error message is generated and sent back.

What is a Global Catalog?

The global catalog is a distributed data repository that contains a searchable, partial representation of every object in every domain in a multidomain Active Directory Domain Services (AD DS) forest. The global catalog is stored on domain controllers that have been designated as global catalog servers and is distributed through multimaster replication. Searches that are directed to the global catalog are faster because they do not involve referrals to different domain controllers.

Explain the function of DNS.

Domain Name System (DNS) is the name resolution protocol for TCP/IP networks, such as the Internet. A DNS server hosts the information that enables client computers to resolve memorable, alphanumeric DNS names to the IP addresses that computers use to communicate with each other.

Explain a "Two-Way Transitive" trust.

One-Way Trust

A one-way trust is a unidirectional authentication path created between two domains (trust flows in one direction, and access flows in the other). This means that in a one-way trust between a trusted domain and a trusting domain, users or computers in the trusted domain can access resources in the trusting domain. However, users in the trusting domain cannot access resources in the trusted domain. Some one-way trusts can be either nontransitive or transitive, depending on the type of trust being created.

Two-Way Trust

A two-way trust can be thought of as a combination of two, opposite-facing one-way trusts, so that, the trusting and trusted domains both trust each other (trust and access flow in both directions). This means that authentication requests can be passed between the two domains in both directions. Some two-way relationships can be either nontransitive or transitive depending on the type of trust being created. All domain trusts in an Active Directory forest are two-way, transitive trusts. When a new child domain is created, a two-way, transitive trust is automatically created between the new child domain and the parent domain.

In speaking about trusts, what does “Transitive & Non-transitive” mean?
Transitive and Nontransitive Trust

A two-way trust relationship is established by creating two one-way trust relationships. Domains can be connected by explicit one-way or two-way trust relationships for the purpose of enabling access to resources, but they are not necessarily related in any other way.

In Windows 2000, domains can be joined to a domain tree or forest, and each child domain has an automatic two-way trust relationship with the parent domain. This trust relationship is also transitive. Transitive trust means that the trust relationship extended to one domain is extended automatically to any other domain that is trusted by that domain. Transitive trust is applied automatically for all domains that are members of the domain tree or forest.

In Windows 2000, transitive trust relationships are always two-way trust relationships.

A nontransitive trust relationship can be created between Windows 2000 domains when a transitive trust relationship is not appropriate, but this trust relationship must be created explicitly. It can be created, for example, between two Windows 2000 domains that are not in the same forest.

A trust relationship between a Windows 2000 domain and a Windows NT 4.0 domain is always a nontransitive trust relationship. If one of these domains is an account domain and the other is a resource domain the trust relationship is usually created as a one-way trust relationship. If there are user accounts in both domains, two one-way trust relationships can be created between them. The trust relationship between two domains — whether one-way or two-way, transitive or nontransitive — is stored as an interdomain trust account object in Active Directory.

How many passwords by default are remembered in an active directory?

User's last 6 passwords

What is a C name record (in DNS)?

A CNAME record or Canonical Name record is a type of resource record in the Domain Name System (DNS) that specifies that the domain name is an alias of another, canonical domain name.

What is a LM host file used for?

The LMHOSTS (LAN Manager Hosts) file is used to enable domain name resolution under Windows when other methods, e.g. WINS, fail. It is used in conjunction with workgroups and domains.

A local hosts file used by Microsoft Wins Clients such as Microsoft Windows 98, Windows NT, Windows XP, and later versions of Windows to provide mappings of IP addresses to NT computer names (NetBIOS names). The lmhosts file is located in either the root Windows directory, the Windows\System32\drivers\etc directory, or Winnt\System32\drivers\etc depending on the version of Windows and is called lmhost.sam.

Explain Active Directory sites and services and linked cost routing?

You can use the Active Directory Sites and Services snap-in to manage the site-specific objects that implement the intersite replication topology. These objects are stored in the Sites container in Active Directory Domain Services (AD DS).

In addition, Active Directory Sites and Services provides a view of the Services container, which you can use to view service-related objects that are published in AD DS.

What is the SYSVOL folder?

The **System Volume** (Sysvol) is a shared directory that stores the server copy of the domain's public files that must be shared for common access and replication throughout a domain. The term SYSVOL refers to a set of files and folders that reside on the local hard disk of each domain controller in a domain and that are replicated by the File Replication service (FRS). Network clients access the contents of the SYSVOL tree by using the NETLOGON and SYSVOL shared folders. Sysvol uses junction points—a physical location on a hard disk that points to data that is located elsewhere on your disk or other storage device—to manage a single instance store.

What are application partitions? How do you create a new application partition.

An application directory partition is a directory partition that is replicated only to specific domain controllers. A domain controller that participates in the replication of a particular application directory partition hosts a replica of that partition. Only domain controllers running Windows Server 2003 can host a replica of an application directory partition.

Applications and services can use application directory partitions to store application-specific data. Application directory partitions can contain any type of object, except security principals. TAPI is an example of a service that stores its application-specific data in an application directory partition.

Application directory partitions are usually created by the applications that will use them to store and replicate data. Members of the Enterprise Admins group can manually create or manage application directory partitions using the Ntdsutil command-line tool.

To create or delete an application directory partition

1. Open Command Prompt.
2. Type: ntdsutil
3. At the ntdsutil command prompt, type: domain management
4. At the domain management command prompt, type: connection
5. At the server connections command prompt, type: connect to server
ServerName
6. At the server connections command prompt, type: quit
7. At the domain management command prompt, do one of the following:
 - To create an application directory partition, type: create nc

ApplicationDirectoryPartition DomainController

- To delete an application directory partition, type: delete nc
ApplicationDirectoryPartition

How do you view replication properties for AD partitions and DCs?

By using replication monitor

go to start > run > type repadmin

go to start > run > type replmon

How do you view all the GCs in the forest?

C:\>repadmin /showreps

domain_controller

OR

You can use Replmon.exe for the same purpose.

OR

AD Sites and Services and nslookup gc._msdcs.

To find the in GC from the command line you can try using DSQUERY command.

dsquery server -isgc to find all the gc's in the forest

you can try dsquery server -forest -isgc.

Why not make all DCs in a large forest as GCs?

Unless you have some really bad connections that may not be able to handle the extra traffic, you should make every DC a GC. In ANY single domain forest, it is recommended and beneficial to make all DCs GCs since it has no replication impact and serves to better distribute query load.

What are the Support Tools? Why do I need them?

Support Tools are the tools that are used for performing the complicated tasks easily. you can use the Windows Support Tools to manage networks and to troubleshoot network problems

Windows Server 2003 SP1 includes updates for the following Support Tools:

- Acldiag.exe
- Adsiedit.msc
- Bitsadmin.exe
- Dcdiag.exe
- Dfsutil.exe
- Dnslint.exe
- Dsacls.exe
- Iadstools.dll
- Ktpass.exe
- Ldp.exe
- Netdiag.exe
- Netdom.exe
- Ntfrsutl.exe
- Portqry.exe
- Repadmin.exe
- Replmon.exe
- Setspn.exe

The Windows Support Tools are not automatically installed when you install Windows Server 2003 SP1. To install the Windows Support Tools on a computer that is running Windows Server 2003, run the Suptools.msi program that is in the Support\Tools folder on the Windows Server 2003 SP1 CD.

What is LDP? What is REPLMON? What is ADSIEDIT? What is NETDOM? What is REPADMIN?

Replmon is the first tool you should use when troubleshooting Active Directory replication issues.

ADSIEdit is a Microsoft Management Console (MMC) snap-in that acts as a low-level editor for Active Directory. It is a Graphical User Interface (GUI) tool. Network administrators can use it for common administrative tasks such as adding, deleting, and moving objects with a directory service.

NETDOM is a command-line tool that allows management of Windows domains and trust relationships. It is used for batch management of trusts, joining computers to domains, verifying trusts, and secure channels.

REPADMIN.EXE is a command line tool used to monitor and troubleshoot replication on a computer running Windows. This is a command line tool that allows you to view the replication topology as seen from the perspective of each domain controller. It performs the following actions:

- Checks replication consistency between replication partners.
- Monitors replication status.
- Displays replication metadata.
- Forces replication events.
- Knowledge Consistency Checker (KCC) recalculation
- Important Usage
 - In order to replicate the new NS record to all the domain controllers, run the REPADMIN /syncall command from the command prompt.
 - To immediately replicate the AD information, choose either of two: From the AD Sites and Services console, select the existing connection objects and force replication. Or, use REPADMIN.EXE to force replication between the site connection objects.
 - Use the REPADMIN tool to synchronize new user information between all sites to enable new users to log on to the domain in a remote site.

What is the KCC?

Within a Site, a Windows server 2003 service known as the KCC automatically generates a topology for replication among the domain controllers in the domain using a ring structure. The KCC is a built-in process that runs on all domain controllers. The KCC analyzes the replication topology within a site every 15 minutes to ensure that it still works. If you add or remove a domain controller from the network or a site, the KCC reconfigures the topology to reflect the change.

What is the ISTG? Who has that role by default?

For inter-site replication, one domain controller per site has the responsibility of evaluating the inter-site replication topology and creating Active Directory Replication Connection objects for appropriate bridgehead servers within its site. The domain controller in each site that owns this role is referred to as the Inter-Site Topology Generator (ISTG).

What can you do to promote a server to DC if you're in a remote location with slow WAN link?

Take the system state backup of current Global Catalog server
write/burn it on the CD
send the CD to the destination (remote location)
On the new server which needs to be promoted to be DC
type dcpromo/adv on run
then follow the steps.

- click Run, type `dcpromo /adv` to open the Active Directory Installation Wizard with the option to create an additional domain controller from restored backup files.
 - On the Domain Controller Type page, click Additional domain controller for an existing domain, and then click Next.
 - On the Copying Domain Information page, can do any of the following steps:
 - o Click From these restored backup files, and type or Browse to locate the restored files, and then click Next.
 - On the Network Credentials page, type the user name, password, and user domain of the user account you want to use for this operation, and then click Next. The user account must be a member of the Domain Admins group for the target domain.
 - On the Database and Log Folders page, type the location in which you want to install the database and log folders, or click Browse to choose a location, and then click Next.
 - On the Shared System Volume page, type the location in which you want to install the Sysvol folder, or click Browse to choose a location, and then click Next.
 - On the Directory Services Restore Mode Administrator Password page, type and confirm the password that you want to assign to the Administrator account for this server, and then click Next.
- Use this password when starting the computer in Directory Services Restore Mode. Restart the computer.

How can you forcibly remove AD from a server, and what do you do later? Can I get user passwords from the AD database?

Demote the server using `dcpromo /forceremoval`, then remove the metadata from Active directory using `ntdsutil`. There is no way to get user passwords from AD
Another way out too Restart the DC is DSRM mode

- Locate the following registry subkey:
`HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\ProductOptions`
- In the right-pane, double-click ProductType.
- Type ServerNT in the Value data box, and then click OK.

Restart the server in normal mode

its a member server now but AD entries are still there. Promote teh server to a fake [domain](#) say ABC.com and then remove gracefully using DCpromo. Else after restart you can also use `ntdsutil` to do metadata as told in teh earlier post

What are the DS* commands?

Active Directory Domain Services (AD DS) command-line tools , they are available if you have the AD DS or Active Directory Lightweight Directory Services (AD LDS) server role installed. To use these tools, you must run them from an elevated command prompt. To open an elevated command prompt, click Start, right-click Command Prompt, and then click Run as administrator.

Command	Description
Adprep	Extends the Active Directory schema and updates permissions as necessary to prepare a forest and domain for a domain controller that runs the Windows Server 2008 operating system.
Csvde	Imports and exports data from Active Directory using files that store data in the comma-separated value (CSV) format. You can also support batch operations based on the CSV file format standard.

Dcdiag	Analyzes the state of domain controllers in a forest or enterprise and reports any problems to help in troubleshooting.
Dcpromo	Installs and removes Active Directory Domain Services (AD DS).
Dsacls	Displays and changes permissions (access control entries) in the access control list (ACL) of objects in AD DS.
Dsadd	Adds specific types of objects to the directory.
Dsamain	Exposes Active Directory data that is stored in a snapshot or backup as a Lightweight Directory Access Protocol (LDAP) server.
Dsdbutil	Provides database utilities for Active Directory Lightweight Directory Services (AD LDS).
Dsget	Displays the selected properties of a specific object in the directory.
Dsmgmt	Provides management facilities for Active Directory Lightweight Directory Services (AD LDS).
Dsmode	Modifies an existing object of a specific type in the directory.
Dsmove	Moves a single object in a domain from its current location in the directory to a new location or renames a single object without moving it in the directory tree.
Dsquery	Queries AD DS according to specified criteria.
Dsrms	Deletes an object of a specific type or any general object from the directory.
Ldifde	Creates, modifies, and deletes directory objects on computers running Windows Server 2003 or Windows XP Professional operating systems.
Ldp	Makes it possible for users to perform operations against an LDAP-compatible directory, such as AD DS. These operations include connect, bind, search, modify, add, and delete.
Netdom	Makes it possible for administrators to manage Windows Server 2003 and Windows 2000 domains and trust relationships from a command prompt.
Net computer	Adds or deletes a computer from a domain database.
Net group	Adds, displays, or modifies global groups in domains.
Net user	Adds or modifies user accounts, or displays user account information.
Nltest	Performs network administrative tasks.
Ntdsutil	Provides management facilities for AD DS.
Redircmp	Redirects the default container for newly created computers to a specified target organizational unit (OU) so that newly created computer objects are created in the specific target OU instead of in CN=Computers.
Redirusr	Redirects the default container for newly created users to a specified target OU so that newly created user objects are created in the specific target OU instead of in CN=Users.
Repadmin	Makes it possible for administrators to diagnose Active Directory replication problems between domain controllers running Windows operating systems.
Setspn	Makes it possible for administrators to read, modify, and delete the Service Principal Names (SPN) directory property for an Active Directory service account.

What's the difference between LDIFDE and CSVDE? Usage considerations?

Ldifde

Ldifde creates, modifies, and deletes directory objects on computers running Windows Server 2003 operating systems or Windows XP Professional.

You can also use Ldifde to extend the schema, export Active Directory user and group information to other applications or services, and populate Active Directory with data from other directory services.

The LDAP Data Interchange Format (LDIF) is a draft Internet standard for a file format that may be used for performing batch operations against directories that conform to the LDAP standards.

LDIF can be used to export and import data, allowing batch operations such as add, create, and modify to be performed against the Active Directory.

A utility program called LDIFDE is included in Windows 2000 to support batch operations based on the LDIF file format standard.

Csvde

Imports and exports data from Active Directory Domain Services (AD DS) using files that store data in the comma-separated value (CSV) format. You can also support batch operations based on the CSV file format standard.

Csvde is a command-line tool that is built into Windows Server 2008 in the/system32 folder. It is available if you have the AD DS or Active Directory Lightweight Directory Services (AD LDS) server role installed. To use csvde, you must run the csvde command from an elevated command prompt. To open an elevated command prompt, click Start, right-click Command Prompt, and then click Run as administrator.

Csvde.exe is a command-line utility that is located in the SystemRoot\System32 folder after you install Windows 2000. Csvde.exe is similar to Ldifde.exe, but it extracts information in a comma-separated value (CSV) format. You can use Csvde to import and export Active Directory data that uses the comma-separated value format. Use a spreadsheet program such as Microsoft Excel to open this .csv file and view the header and value information.

Although Csvde is similar to Ldifde, Csvde has a significant limitation: it can only import and export Active Directory data by using a comma-separated format (.csv). Microsoft recommends that you use the Ldifde utility for Modify or Delete operations.

I want to look at the RID allocation table for a DC. What do I do?

- 1.install support tools from OS disk(OS Inst: Disk=>support=>tools=>suptools.msi)
- 2.In Command prompt type dcdiag /test:ridmanager /s:system1 /v (system1 is the name of our DC)

Why can't you restore a DC that was backed up 4 months ago?

Because of the tombstone life which is set to only 60 days

What are GPOs?

Group Policy gives you administrative control over users and computers in your network. By using Group Policy, you can define the state of a user's work environment once, and then rely on Windows Server 2003 to continually force the Group Policy settings that you apply across an entire organization or to specific groups of users and computers.

Group Policy Advantages :-

You can assign group policy in domains, sites and organizational units.

All users and computers get reflected by group policy settings in domain, site and organizational unit.

No one in network has rights to change the settings of Group policy; by default only administrator has full privilege to change, so it is very secure.

Policy settings can be removed and can further rewrite the changes.

Group Policy objects store their Group Policy information in two locations:

- **Group Policy Container:** The GPC is an Active Directory object that contains GPO status, version information, WMI filter information, and a list of components that have settings in the GPO. Computers can access the GPC to locate Group Policy templates, and domain controller does not have the most recent version of the GPO, replication occurs to obtain the latest version of the GPO.
- **Group Policy Template:** The GPT is a folder hierarchy in the shared SYSVOL folder on a domain controller. When you create GPO, Windows Server 2003 creates the corresponding GPT which contains all Group Policy settings and information, including administrative templates, security, software installation, scripts, and folder redirection settings. Computers connect to the SYSVOL folder to obtain the settings.

The name of the GPT folder is the Globally Unique Identifier (GUID) of the GPO that you created. It is identical to the GUID that Active Directory uses to identify the GPO in the GPC. The path to the GPT on a domain controller is systemroot\SYSVOL\sysvol.

Name a few benefits of using GPMC.

Microsoft released the Group Policy Management Console (GPMC) years ago, which is an amazing innovation in Group Policy management. The tool provides control over Group Policy in the following manner:

- Easy administration of all GPOs across the entire Active Directory Forest
- View of all GPOs in one single list
- Reporting of GPO settings, security, filters, delegation, etc.
- Control of GPO inheritance with Block Inheritance, Enforce, and Security Filtering
- Delegation model
- Backup and restore of GPOs
- Migration of GPOs across different domains and forests

With all of these benefits, there are still negatives in using the GPMC alone.

Granted, the GPMC is needed and should be used by everyone for what it is ideal for. However, it does fall a bit short when you want to protect the GPOs from the following:

- Role based delegation of GPO management
- Being edited in production, potentially causing damage to desktops and servers
- Forgetting to back up a GPO after it has been modified
- Change management of each modification to every GPO

What are the GPC and the GPT? Where can I find them?

GPOs store group policy settings in two locations: a Group Policy container (GPC) (preferred) and a Group Policy template (GPT). The GPC is an Active Directory object that stores version information, status information, and other policy information (for example, application objects).

The GPT is used for file-based data and stores software policy, script, and deployment information. The GPT is located on the system volume folder of the domain controller. A GPO can be associated with one or more Active Directory containers, such as a site, domain, or organizational unit. Multiple containers can be associated with the same GPO, and a single container can have more than one associated GPO.

What are GPO links? What special things can I do to them?

To apply the settings of a GPO to the users and computers of a domain, site, or OU, you need to add a link to that GPO. You can add one or more GPO links to each domain, site, or OU by using GPMC. Keep in mind that creating and linking GPOs is a sensitive privilege that should be delegated only to administrators who are trusted and understand Group Policy.

How can you determine what GPO was and was not applied for a user? Name a few ways to do that.

Simply use the Group Policy Management Console created by MS for that very purpose, allows you to run simulated policies on computers or users to determine what policies are enforced. Link in sources

Name some GPO settings in the computer and user parts.

Group Policy Object (GPO) computer=Computer Configuration, User=User Configuration
Name some GPO settings in the computer and user parts.

What are administrative templates?

Administrative templates, (or .adm files), enable administrators to control registry settings using Group Policy. These settings appear under the Administrative Templates folder for both user configuration and computer configuration in the console tree of the Group Policy Object Editor, and in HTML reports produced by GPMC.

The .adm file is simply a template file (implemented as text file with an .adm extension) that provides the friendly name for the setting and an explanation. This template file is used to populate the user interface. The settings that are deployed to clients are contained in the registry.pol file inside the GPO. On Windows XP and Windows Server 2003, each registry setting contains a "Supported on" tag that indicates which operating system versions support that policy setting. If a setting is specified and deployed to a client operating system that does not support that setting, the settings are ignored. These .adm files are stored in two locations by default: inside GPOs, and in the %windir%\inf folder on the local computer.

What's the difference between software publishing and assigning?

Publishing Software

When you publish software to users, you provide them with the options of downloading and using it if they need it, or removing it if they no longer have a use for it.

Assigning Software

When you assign software, users must download and install the software. Even if they change computers, the task to download and install the software will follow

them. If the software is assigned to the computer, the software will download automatically on the user's next login. It cannot be installed by the user.

What is Active Directory schema?

Active Directory® Schema is a Microsoft Management Console (MMC) snap-in that you can use to view and manage the Active Directory Domain Services (AD DS) schema & Active Directory Lightweight Directory Services (AD LDS) schema objects. The schema contains formal definitions of every object class that can be created in an Active Directory forest. The schema also contains formal definitions of every attribute that can or must exist in an Active Directory object.

The Active Directory Schema snap-in includes two containers: the **Classes** container and the **Attributes** container. These containers store the class and attribute definitions. These definitions take the form of classSchema objects, which you can view in the **Classes** container, and attributeSchema objects, which you can view in the **Attributes** container.

What are the domain functional level in Windows Server 2003?

Windows Server 2003 Domain Functional Level

Windows Server 2003 domain functional level is the highest level that can be specified for a domain. All domain controllers in the domain are running Windows Server 2003. This basically means that Windows NT 4 and Windows 2000 domain controllers are not supported these domains. Once the domain level is set as Windows Server 2003 domain functional level, it cannot be lowered to any of the previous domain functional levels.

All Active Directory domain features *are available* in Windows Server 2003 domain functional level:

- Local and Global groups
- Distribution Groups
- Distribution group nesting
- Security group nesting
- universal Groups
- Group conversion between Security Groups and Distribution Groups
- Global Catalog support
- SID History
- Up to 1,000,000 domain objects are supported
- Renaming domain controllers
- Update logon timestamp
- Users/Computers container redirection
- Constrained delegation
- User password support on the InetOrgPerson object

How to check which domain function level is set for the domain

1. Open the Active Directory Domains And Trusts console
2. Right-click the particular domain whose functional level you want verify, and select Raise Domain Functional Level from the shortcut menu.
3. The Raise Domain Functional Level dialog box opens
4. You can view the existing domain functional level for the domain in Current domain functional level.

How to raise the domain functional level to the Windows 2000 native domain functional level or Windows Server 2003 domain functional level

Before you can raise the domain functional level to Windows Server 2003 domain functional level, each domain controller in the domain has to be running Windows Server 2003.

To raise the domain functional level for a domain,

1. Open the Active Directory Domains And Trusts console
2. Right-click the particular domain whose functional level you want to raise, and select Raise Domain Functional Level from the shortcut menu.
3. The Raise Domain Functional Level dialog box opens.
4. Use the Select An Available Domain Functional Level list to choose the domain functional level for the domain.
5. Click Raise
6. Click OK

What are the forest functional level in Windows Server 2003? Windows Server 2003 Forest Functional Level

All domain controllers in the forest have to be running Windows Server 2003 in order for the forest functional level to be raised to the Windows Server 2003 forest functional level. In the Windows Server 2003 forest functional level, all forest-wide Active Directory features are available, including the following:

- Domain renaming
- Forest Trust
- Defunct schema objects
- Dynamic auxiliary classes
- Application groups
- Universal Group caching
- Application directory partitions
- Global Catalog replication enhancements
- Installations from backups
- The Active Directory quota feature
- SIS for system access control lists (SACL)
- Improved Knowledge Consistency Checker (KCC) replication algorithms
- Linked value replication
- InetOrgPerson objectClass
- NTDS.DIT size reduction

How to check which forest functional level is set for the forest

1. Open the Active Directory Domains And Trusts console
2. Right-click Active Directory Domains and Trusts in the console tree, and select Raise Forest Functional Level from the shortcut menu.
3. The Raise Forest Functional Level dialog box opens
4. You can view the existing domain functional level for the domain in Current forest functional level.

How to raise the forest functional level to Windows Server 2003 forest functional level

Each domain controller in the forest has to be running Windows Server 2003 before you can change the forest functional level to Windows Server 2003. When you raise the forest functional level, all domains in the forest will automatically have their domain functional level raised to Windows Server 2003.

To raise the forest functional level for a forest,

1. Open the Active Directory Domains And Trusts console
2. Right-click Active Directory Domains And Trusts in the console tree, and select Raise forest Functional Level from the shortcut menu.
3. The Raise Domain Functional Level dialog box opens
4. Click Raise
5. Click OK

What is IPv6?

IPv6 (*Internet Protocol Version 6*) is also called IPng (*Internet Protocol next generation*) and it is the newest version of the Internet Protocol (IP) reviewed in the IETF standards committees to replace the current version of IPv4 (*Internet Protocol Version 4*).

The official name of IPng is IPv6, where IP stands for *Internet Protocol* and v6 stands for *version 6*.

IPv6 is designed to allow the Internet to grow steadily, both in terms of the number of hosts connected and the total amount of data traffic transmitted.

IPv6 is an Internet Protocol (IP) for packet-switched internetworking that specifies the format of packets (also called datagrams) and the addressing scheme across multiple IP networks. In comparing the two protocols IPv6 expands upon the addressing and routing capabilities of IPv4 in a number of ways including:

- In IPv6 the IP address size is increased from 32 bits to 128 bits
- IPv6 supports a greater number of addressable nodes
- IPv6 provides more levels of addressing hierarchy
- IPv6 offers simpler auto-configuration of addresses
- Ipv6 also supports simplified header format

The biggest benefit of IPv6 is that it will replace the IPv4 32-bit address scheme with a much longer 128-bit address scheme. The IPv4 32-bit address scheme allows for a total of 2^{32} addresses while IPv6 allows for 2^{128} total addresses.

What is the file that's responsible for keep all Active Directory database?

The Active Directory Database is Stored in %SYSTEM ROOT%\NDTS folder.

The file is called as ntds.dit.

Along with this file there are other files also present in this folder.

List of files and use of those files are listed below

1. ntds.dit : This is the main database file for active directory.
2. edb.log : When a transaction performed to ad database, like writing some data first the data will be stored to this file. And after that it will be sent to database. So the system performance will be depends on how this data from edb.log file will be written to ntds.dit
3. res1.log : Used as reserve space in the case when drive had low space. It is basically 10MB in size and cted when we run dcpromo.
4. res2.log : Same as res1.log. It is also 10MB in size and the purpose also same.
5. edb.chk : This file records the transactions committed to ad database. During shutdown, shutdown statement is written to this file. If it is not found when the system rebooted, the ad database tries to check with edb.log for the updated information.

Edb corruption or Edb active directory corruption is really serious. However you can get this repaired by using edb repair tool.

