Glossary

access control list (ACL)

An access control list (ACL) is a list of SIDs and the associated access privileges assigned to each SID. Each object and network resource has an ACL associated with it. *See also* SID.

Accessibility Options

Accessibility Options is a Control Panel application that is used to configure the keyboard, sound, display, and mouse options on a computer to accommodate users that are physically challenged, including persons who have difficulty striking multiple keys simultaneously on a keyboard, persons who are visually or hearing impaired, or persons who have difficulty holding or clicking a mouse.

Active Directory

Active Directory is the directory service used by Windows 2000. It is a core new feature of the Windows 2000 operating system. *See also* Active Directory data store, directory service.

Active Directory data store

The Active Directory data store is the database in Active Directory that contains information about various types of network objects, including printers, shared folders, user accounts, groups, and computers. In a Windows 2000 domain, a read/write copy of the Active Directory data store is physically located on each domain controller in the domain. The Active Directory data store is also called *the directory*. *See also* Active Directory; directory, the; directory service.

Active Directory Users and Computers

Active Directory Users and Computers is the primary administrative tool used to perform management tasks with OUs and other Active Directory objects. By default, this tool is only installed on domain controllers, but you can make it available on any Windows 2000 computer by installing the ADMINPAK.

active partition

The active partition is a primary partition on the first hard disk in a computer that has been marked active by a partitioning program, such as `Fdisk` or Disk Manager. The active partition contains the files necessary to load the operating system. In Windows 2000 terminology, the active partition is also called the system partition. *See also* primary partition.

Add/Remove Hardware

Add/Remove Hardware is a Control Panel application that is a wizard used to add, remove, unplug, and troubleshoot the hardware in a computer.

Add/Remove Programs

Add/Remove Programs is a Control Panel application used to install and remove third-party software and to add and remove optional Windows 2000 components.

administrative shares

Every time you start Windows 2000 on a computer, Windows 2000 automatically creates several hidden shares that only members of the Administrators group (on the local computer) have permissions to access. These shares are referred to as administrative shares because they are used by Administrators to perform administrative tasks.

advanced permissions

Advanced permissions (also called special permissions) are individual NTFS permissions that are combined to form the standard NTFS permissions. Advanced NTFS permissions are assigned by clicking the Advanced command button on the Security tab in a file or folder's Properties dialog box.

Advanced Power Management (APM)

APM is an older power management scheme that Windows 2000 supports only on laptop and other mobile computers. In general, APM is useful on laptop computers that have BIOS support for APM.

application programming interface (API)

An API is a set of operating system functions that can be called by an application running on the computer. Windows 2000 supports the Win32, Win16, POSIX, MS-DOS, and OS/2 1.*x* APIs.

attributes

Attributes are specific properties of Windows 2000 files and folders. Many attributes are assigned by administrators or users to protect files and folders. Other file and folder attributes are automatically applied to system files during the installation of Windows 2000.

area code rules

Area code rules enable you to treat different prefixes within the same area code differently—some as local calls, and some as long distance calls.

auditing

Auditing is a Windows 2000 feature that, when enabled, allows you to collect security-related information concerning the success and failure of specified events, such as file access, printer access, logon and logoff, and security policy changes. Windows 2000 auditing is divided into two areas: system access auditing and object access auditing. Audited events are written to the Security Log in Event Viewer.

backup domain controller (BDC)

A BDC is a Windows NT Server computer that is configured to maintain a backup copy of the Windows NT Server domain directory database (SAM). The BDC receives updates to the domain directory database from the primary domain controller (PDC) via a process called synchronization. *See also* primary domain controller, domain controller.

banner page

A banner page is another term for a separator page. *See also* separator page.

basic disk

A basic disk refers to a hard disk that uses industry-standard partitioning and formatting, and contains primary partitions, extended partitions, or both. *See also* dynamic disk, extended partition, primary partition.

bindings

Bindings are associations between a network service and a protocol, or between a protocol and a network adapter card. Bindings specify three specific properties of a local area connection: which installed client(s) or service(s) the connection uses, which protocol(s) are used by (or *bound* to) each selected client or service, and the order in which selected protocols are used by each associated client or service. *See also* provider order.

blocking inheritance

If you configure an object to *not* inherit permissions from its parent object, this is referred to as blocking inheritance. *See also* inheritance.

browsing

Browsing is the process of viewing a list of computers and their available shared resources, or viewing a list of files and folders on a local or network-connected drive.

built-in groups

Built-in groups are groups with preset characteristics that are automatically created during the installation of Windows 2000.

built-in local groups

Built-in local groups are groups that have the rights and permissions that enable their members to perform specific tasks on the local computer. *See also* built-in groups.

built-in special groups

Built-in special groups are created by Windows 2000 that are used for specific purposes by the operating system. Special groups are sometimes called system groups. *See also* built-in groups.

cache

Cache is a section of memory used to temporarily store files from the hard disk.

card services

Card services is a term used to refer to the device drivers used by CardBus/PCMCIA controllers.

CDFS

CDFS stands for *Compact Disc File System*. CDFS supports access to compact discs, and is only used on CD-ROM devices that read or write compact discs.

certificate

A certificate is a cryptographic tool used for encrypting and decrypting data, digitally signing files and other data, and performing user authentication. A certificate consists of two parts: a public key and a private key.

certificate authority (CA)

An organization that uses a computer to create, issue and manage certificates is called a certification authority (CA). This term is also used for the actual server that performs the task of issuing and managing certificates. In Windows 2000, the server on which Certificate Services is installed is a CA, and is also called a certificate server. The CA receives requests for certificates from other computers on the network, then verifies the credentials in the request, and finally creates and issues the certificate. *See also* certificate, Certificate Services.

Certificate Services

Certificate Services is a Windows 2000 Server service used to create, issue, and manage certificates on a Windows 2000 network. If your network is connected to the Internet, you may need the encryption and other security features that can be provided by certificates and Certificate Services. *See also* certificate, certification authority (CA).

child domain

A child domain is any domain that is below another domain in the domain tree hierarchy. *See also* domain, domain tree, parent domain.

child object

An Active Directory object that is contained in the parent object is referred to as a child object. *See also* parent object.

class

A class is a template that is used to create a specific type of Active Directory object. The specific attributes that an object has are defined by the object's class. There are many classes of Active Directory objects, including: Computer, Contact, Group, Organizational Unit, Domain, Printer, User, and Shared Folder. *See also* Active Directory, object.

client

A client is a computer that is capable of accessing resources on other computers (servers) across a network. Some computers are configured with both client and server software. *See also* server. A client is also a piece of software that enables a computer to access resources on another computer on the network.

cluster

A cluster is a group of computers that, from a client and application point of view, appear as a single computer. *See also* Windows Clustering.

COM+ programs

COM+ programs are applications that are written to the Component Object Model (COM) and to take advantage of Component Services such as load balancing, queuing, and role-based security.

computer name

A computer name is a unique name that Windows 2000 uses to identify a particular computer on the network. The computer name is also used as the computer's NetBIOS name. You can use a computer name that is longer than 15 characters, but Windows 2000 will only use the first 15 characters for the computer's NetBIOS name. No two computers on the same internetwork should have the same computer name.

computer system policy

A computer system policy is a collection of settings that specifies a local computer's configuration. A computer system policy enforces the specified configuration on all users of a particular Windows NT 4.0, Windows 95, or Windows 98 client computer. There are two types of computer system policies: an individual computer policy and the Default Computer policy. *See also* individual computer policy, Default Computer policy, System Policy.

container, container object

A container object (sometimes called a container for short) is any Active Directory object that can contain other objects. An OU is a container object. *See also* organizational unit (OU).

Continuous connection

A Continuous connection is a local HP (DLC) printer configuration that causes the Windows 2000 computer to monopolize all DLC connections to the HP JetDirect adapter, and permits only this Windows 2000 computer to connect to the HP print device using the DLC protocol. *See also* Job Based connection.

Control Panel

Windows 2000 Control Panel is an exhaustive collection of applications, sometimes called applets. These applications, which are automatically installed during installation of Windows 2000, are used to install and configure various components, applications, hardware, protocols, and services.

CSID

CSID stands for *Called Station Identifier*. CSID is used by the fax service to identify itself to other fax machines that send it faxes.

default gateway

A default gateway is a TCP/IP configuration setting that specifies the IP address of the router on the local network segment.

Default Computer policy

The Default Computer policy is created when a System Policy file is initially created. The Default Computer policy applies to a client computer only if the computer does not have an individual computer policy. *See also* computer system policy, individual computer policy, System Policy.

Default User policy

The Default User policy is created when an Administrator initially creates a System Policy file. When initially created, it doesn't contain any settings that restrict users. The Default User policy applies to a user only if the user does not have an individual user policy. *See also* user system policy, System Policy, individual user policy.

demand paging

Demand paging is a process used by the Virtual Memory Manager that involves reading pages of memory from the paging file into RAM, and writing pages of memory from RAM into the paging file as required by the operating system. *See also* paging file.

desktop

The desktop is the screen that is displayed after Windows 2000 boots and you log on.

desktop operating system

A desktop operating system is an operating system that is designed to be used by an individual user on his or her desktop. A desktop operating system is not designed to be used on a network server.

device driver

A device driver is a special type of program that enables an operating system, such as Windows 2000, to recognize and work with a particular hardware device.

Dfs link

A Dfs link is a special type of subfolder in a Dfs root that acts as a pointer to a specific shared folder on the network. *See also* Distributed File System (Dfs), Dfs root.

Dfs link replica

A Dfs link replica is an additional pointer attached to a Dfs link. This pointer points to an alternate location where a user can access a copy of the shared folder (that the Dfs link points to) if the server hosting the original shared folder is unavailable. *See also* Dfs link.

Dfs root

A Dfs root is a special type of shared folder that can contain files, folders, Dfs links, and other Dfs roots. To the user, a Dfs root appears in a browse list just like any other shared folder. *See also* Distributed File System (Dfs), Dfs link, stand-alone Dfs root, domain Dfs root.

DHCP

DHCP stands for Dynamic Host Configuration Protocol. The Dynamic Host Configuration Protocol (DHCP) service provides centralized management of IP address assignment. The DHCP service can be installed on any Windows 2000 Server computer that has a manually assigned static IP address for each connection on the computer.

digital signature

A digital signature is a tag appended to a file by its creator. This tag consists of digitally coded information that identifies the file's creator and enables Windows 2000 to verify that the file has not been altered or corrupted (by a virus or other means) since it was created.

directory

A directory is a folder. In Windows 2000 terminology, the terms *directory* and *folder* are synonymous.

directory, the

"The directory" is what the Active Directory data store is commonly referred to as. *See also* Active Directory data store.

directory service

A directory service is a centralized, hierarchical database that contains information about users and resources on a network. *See also* Active Directory, Active Directory data store.

Disk Management

Disk Management is a graphical tool that is a snap-in to the Microsoft Management Console (MMC). You can use Disk Management to: create and format partitions; upgrade a disk from basic to dynamic; revert from a dynamic disk to a basic disk; create and format a simple, spanned, striped, mirrored, or RAID-5 volume; delete volumes; troubleshoot disk configuration problems; and recover from hard disk failures in mirrored and RAID-5 volumes. *See also* Microsoft Management Console (MMC), RAID-5 volume, simple volume, spanned volume, striped volume, mirrored volume.

disk quotas

Disk quotas is a Windows 2000 volume management tool that is enabled on a volume-by-volume basis. Once enabled, disk quotas automatically track disk space usage on a user-by-user basis, and can prevent individual users from exceeding the disk space limitations that they have been assigned by an Administrator.

disk striping

Disk striping is a term associated with striped volumes. Disk striping alludes to the process wherein a file is written, or striped, one block at a time; first to one disk, then to the next disk, and then to the next disk, and so on, until all of the data in the file has been evenly distributed among all of the disks in the striped volume. *See also* striped volume.

distinguished name (DN)

A distinguished name (DN) consists of an object's relative distinguished name (RDN) plus the object's location in Active Directory. The DN supplies the complete path to the object. An object's DN includes its RDN, the name of the organizational unit(s) that contains the object (if any), and the FQDN of the domain. For example, suppose that I create a user named AlanC in an organizational unit called US in a domain named `Exportsinc.com`. The DN of this user would be: `AlanC@US.Exportsinc.com`. *See also* fully qualified domain name (FQDN), organizational unit, relative distinguished name.

Distributed file system (Dfs)

The Distributed file system (Dfs) is a file system that enables an administrator to make shares that are stored on various servers on the network appear to users as though they are stored within a single share on a single server. The use of Dfs makes finding network resources easier for users, because users don't have to know which server physically contains the shared resource they are trying to access. *See also* Dfs root, Dfs link.

distribution groups

Distribution groups are primarily used to send e-mail messages to a specified list of users. You can't assign permissions and user rights to distribution groups. *See also* groups, security groups.

DNS

DNS stands for *Domain Name System*. The primary purpose of DNS, which consists of a set of specified naming rules and implementation standards, is to provide host name resolution. *See also* DNS server, DNS domain namespace.

DNS domain namespace

DNS is implemented as a hierarchical structure often called the DNS domain namespace. The trees and subtrees that make up the DNS domain namespace are called DNS domains. The DNS domain namespace is graphically represented as an inverted tree structure, with the root of the tree at the top. *See also* DNS, root domain.

DNS entries

DNS entries consist of IP address to host name mapping information and other DNS resource records.

DNS server

A DNS server is a computer that has the capability to use DNS to provide host name resolution to client computers. The Windows 2000 DNS Server service (or its equivalent), when installed on a server, is what gives that server the ability to provide host name resolution. *See also* DNS, DNS Server service, host name resolution.

DNS Server service

DNS is implemented in Windows 2000 via the DNS Server service. This service is supported only on Windows 2000 Server and Advanced Server computers—you can't install the DNS Server service on a Windows 2000 Professional computer. *See also* DNS, DNS server.

domain

A domain is a logical grouping of networked computers in which one or more of the computers has one or more shared resources, such as a shared folder or a shared printer, and in which all of the computers share a common central domain directory database that contains user account security information. In Windows 2000, all of the computers in a domain share a common Active Directory data store that contains user account, resource, security, and other information. Domains are the fundamental units that make up the Active Directory. *See also* workgroup.

domain controller

A domain controller is a Windows 2000 Server computer that contains a read/write copy of the Active Directory data store. *See also* Active Directory data store.

domain Dfs root

A domain Dfs root is a type of Dfs root that can be hosted on any Windows 2000 Server computer in the domain. In addition, an object representing the Dfs root is published in Active Directory. You can create a replica of a domain Dfs root on one or more Windows 2000 Server computers on your network to provide load balancing and fault tolerance. If one of the servers that hosts the Dfs root (or its replica) is not available, users can still access the Dfs root on one of the other servers. *See also* Distributed file system (Dfs), Dfs root, stand-alone Dfs root.

domain Dfs root replica

A domain Dfs root replica is a shared folder that is a copy of a domain Dfs root that is stored on a different Windows 2000 Server computer than the original Dfs root. The primary purpose of a domain Dfs root replica is to provide load balancing and fault tolerance, so that if the server that hosts the original domain Dfs root is not available, users can still access the domain Dfs domain root. *See also* domain Dfs root.

domain local groups

Domain local groups are groups that are created and maintained in Active Directory on Windows 2000 domain controllers. Domain local groups are used to control access to resources located on any computer in a Windows 2000 domain.

Domain Name System (DNS)

See DNS.

domain naming master

The domain naming master is one of five operations master roles. The domain naming master is the only domain controller that can add domains to or remove domains from the forest. There can be only one domain naming master in a forest. *See also* flexible single master operation, operations master roles.

domain SID

The domain SID is the portion of a SID that identifies the domain in which the object is created. *See also* SID, relative ID.

domain tree

A domain tree, in Active Directory terminology, is a hierarchical grouping of one or more domains that must have a single root domain, and may have one or more child domains. *See also* Active Directory, domain, parent domain, child domain.

domain user account

A domain user account enables a user to log on to the domain and to access resources in the domain. *See also* local user account.

dual boot

Dual boot refers to the capability of a computer to permit a user to select from more than one operating system during the boot process. (Only one operating system can be selected and run at a time.)

DVD

DVD stands for *digital video disc. See also* UDF.

dynamic disk

A dynamic disk refers to a hard disk that contains Windows 2000 dynamic volume(s). *See also* basic disk, dynamic volume.

dynamic routing

Dynamic routing is intelligent IP routing. In dynamic routing, a router automatically builds and updates its routing table. In a dynamic routing environment, administrators don't have to manually configure the routing table on each individual router. As changes are made to the network, dynamic routers automatically adjust their routing tables to reflect these changes.

dynamic update

This term is used to refer to client computers and servers that can register and update their host names and IP addresses with the DNS server without administrator intervention. The Windows 2000 DNS Server service supports the dynamic update protocol. *See also* DNS, DNS Server service.

dynamic volume

A dynamic volume is a Windows 2000 volume that does not use primary partitions, extended partitions, or logical drives. Dynamic volumes are created by using Disk Management. *See also* Disk Management, extended partition, logical drive, primary partition.

eject(ing)

Ejecting is a term used for the physical disconnecting of a hardware device, particularly a PC Card, from a computer.

Emergency Repair Disk

An Emergency Repair Disk, which you can create by using Backup, is a floppy disk used to repair Windows 2000 system files that become accidentally corrupted or erased due to viruses or other causes. An Emergency Repair Disk is primarily used to repair and restart a Windows 2000 computer that won't boot.

Encrypting File System (EFS)

The Encrypting File System (EFS) enables you to store files on an NTFS volume in an encrypted format, so that if an unauthorized user removes a hard disk from your computer, that user will be unable to access the sensitive data contained in the encrypted files. EFS provides the capability of the Encrypt attribute.

enhanced metafile (EMF)

A Windows 2000 enhanced metafile (EMF) is an intermediate printing file format created by a Windows 2000 client computer when it prints to a shared network printer on a Windows 2000 computer. An EMF requires less processor time to produce than a RAW file, and is smaller in size than a RAW file for the same print job.

environment subsystems

Environment subsystems, which each include the application programming interface (API) of the operating system they are designed to support, enable applications to run in the Windows 2000 environment as if they were running in the operating system they were designed for. *See also* application programming interface (API).

environment variables

Environment variables are values that specify information about your computer and operating system. Windows 2000 and applications use environment variables to locate certain types of information, such as the location of system files, or the name of the currently logged on user. You can use the System application to configure both user environment variables and system environment variables. *See also* user environment variables and system environment variables.

exabyte

An exabyte is a billion gigabytes (1,152,921,504,606,846,976 bytes).

Executive Services

Executive Services (also called the Windows NT Executive, or the Executive) is a kernel mode component that functions as an interface between user mode and kernel mode. Its purpose is to pass information between user mode subsystems and kernel mode components. In addition, Executive Services is responsible for the transfer of information and instructions between the various kernel mode components. Executive Services can be thought of as the glue that holds Windows 2000 together. *See also* kernel mode, user mode.

explicit permission

An explicit permission is a permission that is directly assigned to an object, as opposed to a permission that is inherited by an object. *See also* inheritance.

extended partition

An extended partition is a partition on a basic disk that can be subdivided into one or more logical drives, but cannot be the active partition. *See also* logical drive, active partition.

extensible

Extensible is a term used when describing the benefits of Active Directory. Active Directory is said to be extensible because new classes of objects can be added. In addition, new attributes can be added to classes of objects already present.

FAT32 file system

The FAT32 file system, which is supported by Windows 2000, Windows 95 OSR2, and Windows 98, but was not supported by earlier versions of Windows NT, allocates disk space in a more efficient manner than pervious versions of the FAT file system. Windows 2000 will format FAT32 partitions up to 32GB in size. In addition, Windows 2000 supports the use of FAT32 partitions larger than 32GB that have been formatted by other operating systems. *See also* file allocation (FAT) file system.

fault tolerance

Fault tolerance refers to the ability of a computer or operating system to continue operations when a severe error or failure occurs, such as the loss of a hard disk or a power outage.

fault tolerance boot disk

A fault tolerance boot disk is a user-created floppy disk that can enable you to boot your computer from the second disk in a mirrored volume should the first hard disk in the mirrored volume fail. *See also* fault tolerance, mirrored volume.

file allocation table (FAT) file system

FAT (sometimes called FAT16) is a type of file system that is used by several operating systems, including Windows 2000. Windows 2000 does not support security or auditing on FAT partitions. The maximum size of a FAT partition on a Windows 2000 (or Windows NT) computer is 4GB. *See also* FAT32 file system.

file association

A file association exists when an application is configured to open files with a specified file extension. For example, files with the `.doc` extension are normally opened, by default, by WordPad. Once Microsoft Word is installed on a computer, the association is changed so that files with the `.doc` extension are opened by Word.

file attributes

File attributes are markers assigned to files that describe properties of the file and limit access to the file. File attributes include Archive, Compress, Hidden, Read-only, and System.

file system

A file system is an overall architecture for naming, storing, and retrieving files on a disk.

FilterKeys

FilterKeys is an Accessibility Options feature that instructs Windows 2000 to ignore quick or repeated keystrokes, or to slow the repeat rate of a key when it is held down. FilterKeys can be helpful when a user's hands tremble while typing, or when a user cannot remove a finger quickly once he or she has pressed a key.

flexible single master operation

When an administrator can choose which domain controller will perform a particular type of restricted single master operation, the operation (task) is referred to as a flexible single master operation. *See also* single master operation, multiple master operation, operations master roles.

flexible single master operations roles

See operations master roles.

folder

A folder is a directory. In Windows 2000 terminology, the terms *folder* and *directory* are synonymous.

forest

A forest is a group of one or more domain trees, linked by transitive trusts, that shares a common schema and global catalog.

forward lookup zone

A forward lookup zone is a zone that contains host name to IP address mappings and information about available services for either a DNS domain or a DNS domain and one or more of its subdomains. *See also* zone, DNS.

fully qualified domain name (FQDN)

An FQDN is a fancy term for the way computers are named and referenced on the Internet. The format for an FQDN is *`server_name.domain_name.root_domain_name`*. For example, a server named `wolf` in the `alancarter` domain in the `com` root domain has a fully qualified domain name of `wolf.alancarter.com`. Fully qualified domain names always use lowercase characters. DNS domain names are FQDNs.

gigabyte (GB)

A gigabyte is 1,024 megabytes (MB), or 1,073,741,824 bytes.

global catalog

A global catalog is a master, searchable database that contains information about every object in every domain in a forest. The global catalog contains a complete replica of all objects in the Active Directory for its host domain, and, in addition, contains a partial replica of all objects in the Active Directory for every other domain in the forest. The global catalog, in conjunction with various search tools, is what enables administrators and users to search for and quickly locate an object, regardless of where the object is located on the network. By default, Windows 2000 automatically creates a global catalog on the first domain controller that is installed in a forest. *See also* Active Directory, domain, forest, global catalog server, and object.

global catalog server

A global catalog server is a domain controller that has an additional duty—it maintains a global catalog. *See also* global catalog.

global groups

Global groups, like domain local groups, are groups that are created and maintained in Active Directory on Windows 2000 domain controllers. Global groups, however, are primarily used to organize users that perform similar tasks or have similar network access requirements. *See also* domain local groups.

Group Policy

Group Policy is a policy that contains rules and settings that are applied to Windows 2000 computers, their users, or both, that are located in a specific part of Active Directory. There are two kinds of Group Policy: Local Group Policy and Group Policy. Group Policy consists of two components: an Active Directory object, called a Group Policy object (GPO), and a series of files and folders that are automatically created when the GPO is created. Each GPO is associated with a specific Active Directory container object, such as a site, a domain, or an organizational unit (OU). *See also* Active Directory, Local Group Policy.

groups

Groups are collections of user accounts. Using groups is a convenient and efficient way to assign user rights and permissions to multiple users.

Group scope

When you select from the three kinds of groups in Active Directory, the Windows 2000 user interface calls this selecting the Group scope. The possible selections for Group scope are domain local group, global group, or universal group. *See also* domain local groups, global groups, universal groups.

group system policy

A group system policy is a policy that applies to a group of users. A group system policy applies to all users that are members of a group (that has a group policy) and that do *not* have individual user policies. Group system policies have the same configurable options as user system policies. *See also* user system policy, System Policy.

GUID

GUID stands for globally unique identifier. A GUID is typically a 32-digit hexadecimal number that uniquely identifies an object within the entire Active Directory.

Hardware Abstraction Layer (HAL)

The HAL is a kernel mode component that is designed to hide the varying characteristics of hardware so that all hardware platforms appear the same to the Microkernel. As a result, only the HAL, and not the entire Microkernel, needs to address each and every hardware platform. The HAL can communicate directly with the computer's hardware. *See also* kernel mode, Microkernel.

Hardware Compatibility List (HCL)

The HCL is a list of hardware that is supported by Windows 2000. The HCL is shipped with Windows 2000. You can also access the latest version of the HCL at `http.//www.microsoft.com/hcl`.

hardware profile

A hardware profile is a list of devices (and settings for each of these devices) that Windows 2000 starts when you boot your computer. The primary reason for creating hardware profiles is to manage the different hardware configurations used by laptop computers.

hertz (Hz)

Hz is a unit of frequency measurement equivalent to one cycle per second.

hierarchical structure

A hierarchical structure refers to a manner of organizing a group of interrelated elements in which the elements are ranked or stacked, one above the other. An example of a hierarchical structure that you are probably familiar with is an organizational chart. The Active Directory has a hierarchical structure.

host

A host is a computer that is connected to a TCP/IP network, such as the Internet.

host name resolution

Host name resolution is the process of resolving a computer's user-friendly host name (such as `www.idgbooks.com`) to the IP address of that computer.

HPFS

HPFS stands for *high performance file system*. This is the file system used by OS/2. Windows 2000 does not support HPFS. Windows NT used to support HPFS, but HPFS support was dropped for Windows NT version 4.0.

IIS

Internet Information Services (IIS) is Windows 2000's Web server. IIS is actually a collection of several services. Some of the most commonly used components of IIS are World Wide Web Server, File Transfer Protocol (FTP) Server, FrontPage 2000 Server Extensions, SMTP Service, and NNTP Service. IIS 5.0 is an integral part of Windows 2000 Professional, Windows 2000 Server, and Windows 2000 Advanced Server.

Indexing Service

The Indexing Service is a Windows 2000 service that indexes Web site content and other documents on a Windows 2000 computer so these items can be searched by users. You can think of the Indexing Service as a Windows 2000 search engine.

individual computer policy

An individual computer policy applies to a single, specific client computer. Normally, an individual computer policy is created only when a client computer requires a unique policy that differs from the Default Computer policy. *See also* Default Computer policy, computer system policy, System Policy.

individual user policy

An *individual user policy* applies to a single, specific user. Normally, an individual user policy is created only when a user requires a unique policy that differs from any existing Default User or group system policy. *See also* Default User policy, user system policy, System Policy.

infrastructure master

The infrastructure master is one of five operations master roles. The infrastructure master is the domain controller in the domain that updates group membership information when group members (who are users from other domains) are renamed or moved. There can be only one infrastructure master in each domain in a forest. *See also* flexible single master operation, operations master roles.

inheritance

Inheritance refers to the permissions an object receives simply because it is contained in another object—in other words, because an object is a child (or grandchild) object of a particular parent object. When an object inherits permissions, it's not because the permissions have been applied specifically to the object in question, but rather because permissions have been set on the parent object that contains the object in question. The concept of inheritance applies to objects in Active Directory, and also to NTFS permissions set on files and folders.

input locale

An input locale consists of an input language and location combination (such as English [United States]), a keyboard layout, and local settings for the presentation of numbers, currency, time, and date.

input/output

See I/O.

interactive logon authentication

Interactive logon authentication is the process of verifying a user's credentials for the purpose of determining whether the user is permitted to log on to a local Windows 2000 computer. *See also* user authentication, network authentication.

Internet connection sharing

Internet connection sharing, when enabled, permits other computers on your local area network to use a specific dial-up (or local area) connection on a computer to connect to the Internet. Internet connection sharing is commonly used in a home or small-office network setting when a single Internet connection must be shared by multiple computers. Internet connection sharing should not be used on networks that have existing routers, DNS servers, or DHCP servers.

Internet Information Services (IIS)

See IIS.

Internet Protocol security (IPSec)

See IPSec.

Internet Explorer 5

Internet Explorer 5 is Microsoft's newest Web browser, and is an integral part of the Windows 2000 operating systems.

internetwork

An internetwork consists of multiple network segments connected by routers or WAN links.

interrupt (IRQ)

An interrupt (or interrupt request) is a unique number between two and fifteen that is assigned to a hardware peripheral in a computer. No two devices in the computer should have the same interrupt, unless the devices are capable of sharing an interrupt, and are correctly configured to do so.

intersite replication

Intersite replication is Active Directory replication that takes place between sites. Unlike intrasite replication, intersite replication is not automatically configured and performed by Windows 2000. An Administrator must manually create and configure sites and other Active Directory components before intersite replication will occur. *See also* intrasite replication, replication, site.

intranetwork

An intranetwork is a TCP/IP internetwork that is not connected to the Internet. For example, a company's multi-city internetwork can be called an intranetwork as long as it is not connected to the Internet. *See also* internetwork.

intransitive trust

An intransitive trust is a trust relationship between two domains that is bounded by the two domains, and does not extend beyond these two domains to other domains. An intransitive trust is a one-way trust. *See also* one-way trust, trust relationship.

intrasite replication

Intrasite replication is Active Directory replication that takes place within a single site. Windows 2000, by default, automatically performs intrasite replication. *See also* intersite replication, replication, site.

I/O

I/O stands for *input/output*.

I/O Manager

The I/O Manager is a kernel mode component that is responsible for all input and output to disk storage subsystems. As it manages input and output, the I/O Manager also serves as a manager and supporter of communications between the various drivers. The I/O Manager can communicate directly with system hardware if it has the appropriate hardware device drivers. Subcomponents of the I/O Manager include a Cache Manager, file system drivers, and device drivers. *See also* kernel mode.

IP address

An IP address is a 32-bit binary number, broken into four 8-bit sections (called octets), that uniquely identifies a computer or other network device on a network that uses TCP/IP. IP addresses must be unique—no two computers or other network devices on an internetwork should have the same IP address. An IP address is normally represented in a dotted decimal format. A sample IP address is 192.168.59.5.

IPSec

IPSec (which is short for Internet Protocol security) is a collection of security protocols and cryptography services that encrypts TCP/IP traffic between two computers, thus preventing unauthorized users who capture network traffic from viewing or modifying sensitive data.

IRQ

IRQ stands for *interrupt request*, which is sometimes shortened to interrupt.

Job Based connection

A Job Based connection is a local HP (DLC) printer configuration that permits all Windows 2000 (and Windows NT 4.0) computers on the network that have the DLC protocol installed to access the HP JetDirect adapter for printing. *See also* Continuous connection.

joining a domain

When a Windows 2000 computer is configured so that it becomes a member of a domain, the process is referred to as *joining a domain*. Each Windows 2000 computer must belong to either a workgroup or a domain.

Kerberos version 5 protocol

The Kerberos version 5 protocol is an Internet standard authentication protocol that provides a higher level of security and faster, more efficient authentication than the Windows NT/LAN Manager protocol.

kernel

A kernel is the core component of an operating system.

kernel mode

Kernel mode refers to a highly privileged mode of operation in Windows 2000. "Highly privileged" means that all code that runs in kernel mode can access the hardware directly, and can access any memory address. A program that runs in kernel mode is always resident in memory—it can't be written to a paging file. *See also* user mode, paging file.

kilobyte (KB)

A kilobyte is 1,024 bytes.

Layer Two Tunneling Protocol (L2TP)

The Layer Two Tunneling Protocol (L2TP), like PPTP, permits a VPN connection between two computers over an existing TCP/IP network connection. The major difference between PPTP and L2TP is that PPTP uses Microsoft Point-to-Point Encryption (MPPE), while L2TP uses IPSec for encryption. In addition, L2TP is rapidly becoming the industry standard tunneling protocol. Currently, only Windows 2000 remote access clients and remote access servers support L2TP. *See also* Point-to-Point Tunneling Protocol (PPTP).

license group

A license group is a group of users that is assigned a specific number of licenses. License groups enable Licensing to correctly track license usage when an organization uses the Per Seat licensing mode *and* has an unequal number of users and computers.

local user account

A local user account enables a user to log on to the local computer and to access that computer's resources. *See also* domain user account.

logging on

Logging on is the process of supplying a user name and password, and having that user name and password authenticated by a Windows 2000 computer. A user is said to "log on" to a Windows 2000 computer.

logical drive

A logical drive is a volume that is created from some or all of the space in an extended partition, and that is assigned a drive letter. The term *logical drive* is also used to refer to any volume or network-connected drive that is assigned a drive letter. *See also* extended partition.

Local Group Policy

Local Group Policy consists of a series of files and folders that are automatically created during the installation of Windows 2000 on the local computer. Local Group Policy files and folders are stored in the *`SystemRoot`*`\System32\GroupPolicy` folder. Local Group Policy applies to the local computer, and to users that log on to the local computer. *See also* Group Policy.

local groups

Local groups are groups that are created and maintained on an individual Windows 2000 computer (that is not a domain controller). Local groups can be created by members of the Administrators, Power Users, and Users groups.

logon rights

Logon rights are a type of user right that determines whether a user is permitted to authenticate (log on) to a Windows 2000 computer, and if so, how that user is permitted to log on. *See also* user rights, privileges.

LPD

LPD stands for line printer daemon, and is the print server software used by UNIX computers. *See also* LPR.

LPR

LPR stands for line printer remote, and is the client software used to access LPD printers. *See also* LPD.

mandatory user profile

A mandatory user profile is a user profile that, when assigned to a user, can't be changed by the user. A user can make changes to desktop and work environment settings during a single logon session, but these changes are *not* saved to the mandatory user profile when the user logs off. Each time the user logs on, the user's desktop and work environment settings revert to those contained in the mandatory user profile. *See also* user profile.

master

A master is a type of DNS server that provides a copy of the zone to a standard secondary DNS server. *See also* slave.

megabyte (MB)

A megabyte is 1,024 kilobytes, or 1,048,576 bytes.

Microkernel

The Microkernel is a kernel mode component that is the very heart of the Windows 2000 operating system. It handles interrupts, schedules threads, and synchronizes processing activity. The Microkernel also communicates with the Hardware Abstraction Layer (HAL). *See also* Hardware Abstraction Layer (HAL), kernel mode.

Microsoft Management Console (MMC)

The MMC is a Windows 2000 feature that hosts administrative tools used to perform administrative tasks on your Windows 2000 computer and network. The MMC is not a management tool itself, but rather is a shell designed to provide a common user interface for the administrative tools, called snap-ins, that it contains. *See also* snap-in.

Microsoft RAS protocol

The Microsoft RAS protocol (also called AsyBEUI) is supported by the Windows 2000 Routing and Remote Access service to enable inbound connections from legacy client computers, including MS-DOS, Windows for Workgroups, and Windows NT 3.1. The only transport protocol that can be used with AsyBEUI is NetBEUI.

million bits per second (Mbps)

Mbps is a measurement of data transmission speed that is used to describe WAN links and other network connections.

mirrored volume

A mirrored volume consists of a simple volume that is exactly duplicated, in its entirety, onto a second dynamic disk. Mirrored volumes are also known as RAID level 1. *See also* dynamic disk, RAID, simple volume.

MouseKeys

MouseKeys is an Accessibility Options feature that enables you to move the cursor by pressing the keys on your keyboard's 10-key pad instead of by using a mouse.

MS-DOS

MS-DOS is a computer operating system developed by Microsoft. MS-DOS stands for *Microsoft Disk Operating System*.

multiple master operation

When more than one domain controller is able to perform a specific task, that task is referred to as a multiple master operation. *See also* single master operation, flexible single master operations.

multiprocessing

Multiprocessing refers to the capability of an operating system to use more than one processor in a single computer simultaneously.

multithreading

When an application has more than one thread, each thread can be executed independently of the other. This is referred to as multithreading. *See also* thread.

NetBIOS name resolution

When a user attempts to connect to a computer selected from a browse list by the remote computer's NetBIOS name, the user's computer must first obtain the IP address associated with the remote computer's NetBIOS name. This process is called NetBIOS name resolution. Once the user's computer has resolved the remote computer's NetBIOS name to its IP address, it can then establish TCP/IP network communications with the remote computer.

network adapter card

A network adapter is an adapter card in a computer that enables the computer to connect to a network.

network authentication

Network authentication is the process of verifying a user's credentials for the purpose of determining whether the user is permitted to access network resources, such as a shared folder, a shared printer, or a network service. *See also* user authentication, interactive logon authentication.

Network Monitor

Network Monitor is a Windows 2000 Server administrative tool that makes it possible for you to capture, view, and analyze network traffic (packets). Network Monitor doesn't ship with Windows 2000 Professional.

NTFS

See Windows NT file system.

NTFS permissions

NTFS permissions are permissions assigned to individual files and folders on NTFS volumes th at are used to control access to these files and folders. NTFS permissions apply to local users as well as to users who connect to a shared folder over the network. If NTFS permissions are more restrictive than share permissions, the NTFS permissions will be applied. *See also* shared folder permissions.

object

An Active Directory object is a record in the directory that is defined by a distinct set of attributes. There are many classes of objects. *See also* Active Directory, class.

ODBC

ODBC stands for *Open Database Connectivity*. ODBC is a software specification that enables ODBC-enabled applications (such as Microsoft Excel) to connect to databases (such as Microsoft SQL Server and Microsoft Access).

offline files

Offline files are files that are stored on a network server and, in addition, are configured on the local computer so they can be used when the computer is not connected to the network.

one-way trust

A one-way trust means that a single trust relationship exists between two domains. *See also* intransitive trust, trust relationship, two-way trust.

operations master roles

There are five operations master roles: schema master, domain naming master, PDC emulator, relative ID master, and infrastructure master. *See also* flexible single master operation, schema master, domain naming master, PDC emulator, relative ID master, infrastructure master.

organizational unit (OU)

An organizational unit (OU) is a type of Active Directory object. Organizational units, which are sometimes called container objects, can contain objects and other organizational units. An organizational unit is used to organize related objects and other organizational units in the Active Directory in much the same way that a folder is used to organize related files and other folders in a volume. *See also* Active Directory, object.

OS/2 subsystem

The OS/2 subsystem is a user mode subsystem. This subsystem obtains its user interface and screen functions from the Win32 subsystem, and requests Executive Services to perform all other functions for it. *See also* user mode, Win32 subsystem, Executive Services.

owner

The creator of a file or folder is its owner (except that when a member of the Administrators group on the local computer creates a file or folder, the Administrators group—not the user—is the owner of the file or folder). The owner of a file or folder has special status and can always assign or change NTFS permissions to users and groups for that file or folder. Only files and folders on NTFS volumes have owners. *See also* take ownership.

packet

A packet is a group of bytes sent over the network as a block of data.

paging file

A paging file (sometimes called a page file or a swap file) is a file used as a computer's virtual memory. Pages of memory that are not currently in use can be written to a paging file to make room for data currently needed by the processor. *See also* virtual memory.

parent domain

A parent domain is any domain that is above another domain in the domain tree hierarchy. *See also* child domain, domain, domain tree.

parent object

A parent object is an Active Directory container object that contains other objects. *See also* child object.

partition

The space on hard disks is divided into areas called partitions. A partition is a portion of a hard disk that can be formatted with a file system, or combined with other partitions to form a larger logical drive. Partitions are represented by drive letters, for example, C:, D:, and so on. *See also* logical drive.

PDC emulator

The PDC emulator is one of five operations master roles. The PDC emulator either acts like a Windows NT 4.0 PDC, or receives preferential treatment for replication of password changes, depending on whether Active Directory is configured to operate in mixed-mode or native-mode. There can be only one PDC emulator in each domain in a forest. *See also* flexible single master operation, operations master roles.

permissions

Permissions control access to resources, such as shares, files, folders, and printers on a Windows NT computer.

Plug and Play

Plug and Play is a specification that makes it possible for hardware devices to be automatically recognized and configured by the operating system without user intervention.

Point-to-Point Multilink Protocol

The Point-to-Point Multilink Protocol is an extension of PPP. Point-to-Point Multilink Protocol combines the bandwidth from multiple physical connections into a single logical connection. This means that multiple modem, ISDN, digital link, or X.25 connections can be bundled together to form a single logical connection with a much higher bandwidth than a single connection can support.

Point-to-Point Protocol (PPP)

The Point-to-Point Protocol (PPP) is currently the industry standard remote connection protocol. PPP connections support multiple transport protocols, including: TCP/IP, NWLink IPX/SPX/NetBIOS Compatible Transport Protocol, AppleTalk, and NetBEUI.

Point-to-Point Tunneling Protocol (PPTP)

The Point-to-Point Tunneling Protocol (PPTP) permits a virtual private network (VPN) connection between two computers over an existing TCP/IP network connection. The existing TCP/IP network connection can be over the Internet, a local area network, or a remote access TCP/IP connection. All standard transport protocols are supported within the PPTP connection.

POSIX

Portable Operating System Interface for Computing Environments (POSIX) was developed as a set of accepted standards for writing applications for use on various UNIX computers. POSIX environment applications consist of applications developed to meet the POSIX standards. These applications are sometimes referred to as POSIX-compliant applications. Windows 2000 provides support for POSIX-compliant applications via the POSIX subsystem. *See also* POSIX subsystem.

POSIX subsystem

The POSIX subsystem is a user mode subsystem designed to run POSIX 1.*x* compatible applications. This subsystem uses the Win32 subsystem to provide its screen and graphical displays, and requests Executive Services to perform all other functions for it. *See also* POSIX, user mode, Win32 subsystem, Executive Services.

preemptive multitasking

In preemptive multitasking, the operating system allocates processor time between applications. Because Windows 2000, not the application, allocates processor time between multiple applications, one application can be preempted by the operating system, and another application enabled to run. When multiple applications are alternately paused and then allocated processor time, they appear to run simultaneously to the user.

primary domain controller (PDC)

A PDC is a Windows NT Server computer that is configured to maintain the primary copy of the Windows NT Server domain directory database (also called the SAM). The PDC sends domain directory database updates to backup domain controllers (BDCs) via a process called synchronization. *See also* backup domain controller, domain controller.

primary partition

A primary partition is a partition on a basic disk that can be configured as the active partition. A primary partition can only be formatted as a single logical drive. *See also* active partition, logical drive.

print device (or printing device)

In Windows 2000, the term *print* (or *printing*) *device* refers to the physical device that produces printed output—what is more commonly referred to as a "printer."

printer

In Windows 2000, the term *printer* does *not* represent a physical device that produces printed output. Rather, a printer is the software interface between the Windows 2000 operating system and the device that produces the printed output.

printer pool

When a printer has multiple ports (and multiple print devices) assigned to it, this is called a printer pool. Users print to a single printer, and the printer load balances its print jobs between the print devices assigned to it.

print job

A print job is all of the data and commands needed to print a document.

print server

A print server is a computer that hosts a shared printer.

privileges

Privileges are a type of user right that enables a user to perform specific tasks. *See also* user rights, logon rights.

protocol

A protocol is a combination of conventions and rules for communicating on a network.

provider order

Provider order specifies which installed client the local area connection uses first when it attempts to connect to a server or a printer. *See also* bindings.

publishing

When used in connection with Active Directory, publishing refers to the act of creating an Active Directory object for a shared folder, shared printer, or other network resource.

query

A DNS request is called a query. *See also* simple query, recursive query.

RADIUS (Remote Authentication Dial-in User Service)

RADIUS is an industry standard authentication service. It is typically used by ISPs to maintain a centralized user accounts database. RADIUS is often used in an enterprise environment to provide centralized authentication and accounting services for multiple remote access servers.

RAID

RAID stands for *redundant array of inexpensive disks*.

RAID-5 volume

A RAID-5 volume consists of identical-sized areas of formatted disk space located on three or more dynamic disks. In a RAID-5 volume, data is stored, a block at a time, evenly and sequentially, among all of the disks in the volume. In addition to data, parity information is also written across all of the disks in the RAID-5 volume. This parity information enables RAID-5 volumes to provide the fault tolerance that striped volumes can't. *See also* dynamic disk, RAID, striped volume.

RAM

Random access memory, or RAM, is the physical memory installed in a computer.

RAW file

A RAW file is print file that is ready to send to the printer, as is, and no further processing is required.

recovery agent

When used in reference to the Encrypt attribute and the Encrypting File System (EFS), a recovery agent is a user account that is assigned a special key (certificate) that permits it to unencrypt (that is, recover) all encrypted files on the computer. Typically the Administrator account is a recovery agent. *See also* Encrypting File System (EFS).

Recovery Console

The Recovery Console is a limited version of the Windows 2000 operating system that only has a command-line interface. The Recovery Console is helpful when you need to manually start or stop a service, repair the master boot record, or manually copy files from a floppy disk or compact disc to the computer's hard disk in order to restore a system.

recursive query

A recursive query is a query that a DNS server can't resolve by itself—it must contact one or more additional DNS servers to resolve the query.

refresh

The term *refresh* means to update the display with current information.

relative distinguished name (RDN)

A relative distinguished name (RDN) is the name that is assigned to the object by the administrator when the object is created. For example, when I create a user named AlanC, the RDN of that user is AlanC.

relative ID

The relative ID is the portion of a SID that identifies the object in the domain. The relative ID is unique for each object created in the domain. *See also* SID, domain SID.

relative ID master

The relative ID master (sometimes called the RID master or the relative identifier master) is one of five operations master roles. The relative ID master is the domain controller in the domain that assigns a range of relative IDs to each domain controller in the domain for use in creating SIDs. There can be only one relative ID master in each domain in a forest. *See also* relative ID, SID, flexible single master operation, operations master roles.

remote access

Remote access is a feature that enables client computers to use dial-up and VPN connections to connect to a remote access server. Once a connection with the remote access server is established, the client computer has access to the network the remote access server is connected to. Remote access enables users of remote computers to use the network as though they were directly connected to it. Remote access is implemented in Windows 2000 by the Routing and Remote Access service.

Remote Installation Services (RIS)

Remote Installation Services (RIS) is a Windows 2000 Server service used to deploy Windows 2000 Professional over-the-network to client computers. RIS can only be used on Windows 2000 networks that use DHCP, DNS, and Active Directory. When installed on a Windows 2000 Server computer, the computer is called a RIS server.

replication

Replication, as applied to Active Directory, refers to the process of copying information and information updates from the Active Directory data store on one domain controller to other domain controllers. The purpose of replication is to synchronize Active Directory data among the domain controllers in the domain and forest. *See also* Active Directory, Active Directory data store. As applied to DNS, replication is the process of copying a zone to a standard secondary DNS server. This process is also called a zone transfer.

resource records

A resource record is any entry in a zone. *See also* zone.

reverse lookup zone

A reverse lookup zone is a zone that contains IP address to host name mappings. The mappings in a reverse lookup zone are the opposite of those contained in a forward lookup zone. *See also* forward lookup zone.

RIS

See Remote Installation Services (RIS).

roaming user profile

A roaming user profile is a user profile that is stored on a Windows 2000 Server computer. Because the profile is stored on a server instead of on the local computer, it is available to the user regardless of which Windows 2000 computer on the network the user logs on to. *See also* user profile.

root domain

The DNS domain at the top (or root) of the tree is called the root domain. It is often represented by a period (**.**). *See also* DNS, DNS domain namespace.

root hints

Root hints are server name and IP address combinations that point to root servers located either on the Internet or on your organization's private network.

router

A router is a network device that uses protocol-specific addressing information to forward packets from a source computer on one network segment across one or more routers to a destination computer on another network segment.

routing

Routing is the process of forwarding packets from a source computer on one network segment across one or more routers to a destination computer on another network segment by using protocol-specific addressing information. Devices that perform routing are called routers.

Safe Mode

Safe Mode is a special startup mode of Windows 2000 that uses default settings and the minimum number of files and device drivers required to start Windows 2000. If a Windows 2000 computer won't boot normally, you may be able to boot it in Safe Mode.

scavenging

Scavenging is the process of searching for and deleting stale resource records in zones.

schema

In Active Directory terminology, the schema is a formal definition—a set of rules—of all of the classes of objects and their attributes that are stored in the directory. The schema governs the structure of the directory, including how various objects in the directory fit into the directory's hierarchical structure. *See also* Active Directory, class, hierarchical structure, object.

schema master

The schema master is one of five flexible operations master roles. The schema master is the only domain controller that can make changes to the schema. There can be only one schema master in a forest. *See also* flexible single master operation, operations master roles.

scope

A DHCP scope is a range of IP addresses on a DHCP server that can be assigned to DHCP clients that reside on a single subnet. *See also* DHCP.

script

A script is a text file with a `.bat`, `.js`, or `.vbs` extension that can be used to configure a user's environment, to start programs, to install software, or to perform various other tasks. You can use Group Policy to manage various types of scripts, including startup, shutdown, logon, and logoff scripts.

SCSI

SCSI stands for *Small Computer System Interface*. SCSI is a hardware specification for cables, adapter cards, and the devices that they manage, such as hard disks, CD-ROMs, and scanners.

second-level domain

The DNS domains in the layer under top-level domains are called second-level domains. These domains are subdomains of top-level domains. Many businesses have a second-level domain that is a subdomain of the `com` domain, such as `microsoft.com`. *See also* top-level domain, DNS.

security groups

There are two fundamental types of groups in Windows 2000: security groups and distribution groups. Security groups are primarily used to assign permissions and user rights to multiple users. In addition, security groups can be used by some e-mail programs to send messages to the list of users that are members of the group. *See also* groups, distribution groups.

security principal object

In Active Directory terminology, security principal objects include users, groups, and computers.

Security subsystem

The Security subsystem (sometimes called the Integral subsystem) is a user mode subsystem. This subsystem supports the logon process and also supports and provides security for Active Directory. The Security subsystem obtains its user interface and screen functions from the Win32 subsystem, and requests Executive Services to perform all other functions for it. *See also* Active Directory, user mode, Win32 subsystem, Executive Services.

security template

A security template is a text-based `.inf` file that contains predefined security settings that can be applied to one or more computers. A security template can also be used to compare a computer's existing security configuration against a predefined, standard security configuration. The Security Templates snap-in to the MMC is used to create, edit, and manage security templates.

segment

In network terminology, a segment refers to a network subnet that is not subdivided by a bridge or a router. The term *segment* can also be used as a verb, describing the process of dividing the network into multiple subnets by using a bridge or a router.

separator page

You can configure a printer on a Windows 2000 computer so that a separator page is printed at the beginning of every document. Using separator pages at the beginning of print jobs enables users to locate their print jobs at the print device easily. Separator pages are sometimes called banner pages.

Serial Line Internet Protocol (SLIP)

The Serial Line Internet Protocol (SLIP) is an older connection protocol commonly associated with UNIX computers. SLIP connections are only supported on the client side of the remote access connection—a Windows 2000 remote access server doesn't support incoming SLIP connections. The only transport protocol that SLIP supports is TCP/IP.

server

A server is a computer on a network that is capable of sharing resources with other computers on the network. Many computers are configured as both clients and servers, meaning that they can both access resources located on other computers across-the-network, and they can share their resources with other computers on the network. *See also* client.

service

A service is a program that performs specific tasks for other programs.

service dependencies

Service dependencies are the services and drivers that must be running before the service in question can start.

Setup Manager

The Windows 2000 Setup Manager wizard (called Setup Manager for short) is a tool that enables you to create answer files in order to automate the installation and setup of Windows 2000 Professional and Windows 2000 Server.

share

A share is another name for a shared folder. *See also* shared folder.

share permissions

Share permissions are another name for shared folder permissions. *See also* shared folder permissions.

shared folder

In Windows 2000, folders are shared to enable users to access network resources. A folder can't be accessed by users across the network until it is shared or placed within another folder that is shared. Once a folder is shared, users with the appropriate permissions can access the shared folder (and all subfolders and files that the shared folder contains) over the network.

shared folder permissions

Shared folder permissions control user access to shared folders. Shared folder permissions only apply when users connect to the folder over the network—they do not apply when users access the folder on the local computer. Shared folder permissions apply to the shared folder, its files, and subfolders (in other words, to the entire directory tree under the shared folder).

ShowSounds

ShowSounds is an Accessibility Options feature. When ShowSounds is enabled, applications display captions for the speech and sounds they generate.

SID

SID stands for security identifier. A SID is a unique number created by the Windows 2000 Security subsystem that is assigned to security principal objects when they are created. A SID consists of two parts: a domain SID and a relative ID. Windows 2000 uses SIDs to grant or deny a security principal object access to other objects and network resources. *See also* domain SID, relative ID, security principal object.

simple query

A simple query is a query that a DNS server can resolve without contacting any other DNS servers. *See also* query, DNS server.

simple volume

A simple volume is a volume that consists of formatted disk space on a single hard disk. Simple volumes can only be created on dynamic disks. *See also* dynamic disk, volume.

single master operation

When only one domain controller can perform a specific task, that task is referred to as a single master operation. *See also* multiple master operation, flexible single master operations.

site

A site consists of one or more TCP/IP subnets, which are specified by an administrator. Additionally, if a site contains more than one subnet, the subnets should be connected by high-speed, reliable links. Sites do not correspond to domains—you can have two or more sites within a single domain, or you can have multiple domains in a single site. A site is solely a grouping based on IP addresses. Sites are configured by using Active Directory Sites and Services.

site link

A site link is an object in Active Directory that specifies a list of two or more sites that are connected to each other, the cost associated with the site link, and a replication schedule.

site link bridge

A site link bridge is an Active Directory object that groups two or more site links in order to create a "virtual site link" between all of the sites specified by the grouped site links. The purpose of a site link bridge is to enable replication between sites that use site links but that are *not* directly associated with each other via site links. *See also* site link, intersite replication, replication.

slave

The secondary DNS server receiving a copy of a zone from a master DNS server is sometimes called the slave in this relationship. *See also* master.

smart card

A smart card is a security device that contains a unique, encrypted set of authentication credentials. When used in conjunction with a smart card reader that has been installed on a computer, the use of smart cards eliminates the need for users to transmit user names and passwords across the network when logging on.

snap-in

The tools contained in the Microsoft Management Console (MMC) are referred to as snap-ins. *See also* Microsoft Management Console (MMC).

SoundSentry

SoundSentry is an Accessibility Options feature. When SoundSentry is enabled, Windows 2000 displays a visual warning when the computer makes a sound.

source-compatible

Applications are sometimes said to be "source-compatible" across hardware platforms. This means that the application must be recompiled for each hardware platform that you want to run it on.

spanned volume

A spanned volume consists of formatted disk space on more than one hard disk that is treated as a single volume. Spanned volumes can only be created on dynamic disks. *See also* dynamic disk.

special permissions

Special permissions (also called advanced permissions) are individual NTFS permissions that are combined to form the standard NTFS permissions. Special NTFS permissions are assigned by clicking the Advanced command button on the Security tab in a file or folder's Properties dialog box.

stand-alone Dfs root

A stand-alone Dfs root is a type of Dfs root that can be hosted on any individual Windows 2000 Server computer. A stand-alone Dfs root is not published in Active Directory. In addition, you can't create a replica of a stand-alone Dfs root for load balancing or fault tolerance purposes. If the server that hosts a stand-alone Dfs root isn't available, the Dfs root is not available to users. *See also* Distributed file system (Dfs), Dfs root, domain Dfs root.

Standby

Standby is a low power usage state where all unnecessary devices, such as monitors and hard disks, are turned off.

static routing

Static routing is basic, no-frills IP routing. No additional software is necessary to implement static routing in multihomed Windows 2000 Server computers. Static routers are not capable of automatically building a routing table. In a static routing environment, administrators must manually configure the routing table on each individual router. If the network layout changes, the network administrator must manually update the routing tables to reflect the changes.

StickyKeys

StickyKeys is an Accessibility Options feature that enables a user to execute keyboard commands that normally require striking two or more keys simultaneously by striking one key at a time.

striped volume

A striped volume consists of identical-sized areas of formatted disk space located on two or more dynamic disks. In a striped volume, data is stored, a block at a time, evenly and sequentially, among all of the disks in the striped volume. Striped volumes are also known as RAID level 0, and are sometimes referred to as disk striping. *See also* disk striping, dynamic disk, RAID.

subfolder

A subfolder is a folder that is located within another folder. Subfolders can contain other subfolders, as well as files.

subnet mask

A subnet mask specifies which portion of an IP address represents the network ID and which portion represents the host ID. A subnet mask enables TCP/IP to correctly determine whether network traffic destined for a given IP address should be transmitted on the local subnet, or whether it should be routed to a remote subnet. A subnet mask should be the same for all computers and other network devices on a given network segment. A subnet mask is a 32-bit binary number, broken into four 8-bit sections (octets), that is normally represented in a dotted decimal format. A common subnet mask is 255.255.255.0. This particular subnet mask specifies that TCP/IP will use the first three octets of an IP address as the network ID, and use the last octet as the host ID.

symmetric multiprocessing

Symmetric multiprocessing is an efficient type of multiprocessing in which system processes and applications can be run on any available processor. *See also* multiprocessing.

synchronization

Synchronization is a process performed by the NetLogon service on a Windows NT Server computer. In this process, domain user and group account update information is periodically copied from the Primary Domain Controller (PDC) to each backup domain controller (BDC) in the domain.

Sysprep

Sysprep (`sysprep.exe`) is a Windows 2000 deployment tool designed for large organizations and OEMs. Sysprep prepares a Windows 2000 computer's hard disk for duplication, thus making it possible for that computer's hard disk to be copied to other computers. Sysprep can be used on either Windows 2000 Professional or Windows 2000 Server computers, but can't be used on a Windows 2000 Server domain controller. Sysprep requires the use of third-party disk duplication software.

System Monitor

System Monitor is a Windows 2000 tool that is used to monitor and chart the performance of system components in a Windows 2000 computer. System Monitor replaces Windows NT 4.0's Performance Monitor. System Monitor functions as an MMC snap-in.

System Policy

System Policy is a collection of Administrator-created user, group, and computer system policies that enable an administrator to manage non-Windows 2000 client computers (and their users) on a Windows 2000 network.

system environment variables

System environment variables are environment variables that apply to all users and to the operating system. *See also* environment variables and user environment variables.

system groups

System groups is another term for built-in special groups. *See also* built-in groups, built-in special groups.

~~*SystemRoot*~~

Throughout this book, I use the term *`SystemRoot`* to refer to the folder that Windows 2000 is installed in. The default installation folder for Windows 2000 is `C:\Winnt`.

System State data

System State data includes various critical operating system files, folders, and databases. The actual components of System State data vary depending on the Windows 2000 operating system you're using and the services installed on that operating system. For all Windows 2000 computers, System State data includes the operating system boot files, the registry, and the COM+ Class Registration database. On a Windows 2000 Server computer that has Certificate Services installed, System State data also includes the Certificate Services database. Finally, on a Windows 2000 Server that is a domain controller, System State data also includes the Active Directory data store and the contents of the `SYSVOL` folder. *See also* user data.

take ownership

Each file or folder on an NTFS volume has an owner. If you need to change or assign NTFS permissions to a file or folder, but don't have the Full Control NTFS permission (or the Change Permissions special NTFS permission) to the file or folder, the only way you can change or assign permissions is to take ownership of the file or folder. Taking ownership of a file or folder is done by using Windows Explorer. *See also* owner.

Task Scheduler

The `Scheduled Tasks` folder, sometimes called the Scheduled Task tool or the Task Scheduler, is a tool used to schedule a program, command, script, document, or batch file to run at a specified time.

TCP/IP

The *Transmission Control Protocol/Internet Protocol* (TCP/IP) is a widely used transport protocol that provides robust capabilities for Windows 2000 networking. TCP/IP is a fast, routable enterprise protocol. TCP/IP is the protocol used on the Internet. TCP/IP is supported by many other operating systems, including: Windows NT, Windows 95, Windows 98, NetWare, Macintosh, UNIX, MS-DOS, and IBM mainframes. TCP/IP is typically the recommended protocol for large, heterogeneous networks.

TCP/IP packet filtering

TCP/IP packet filtering (sometimes called TCP/IP filtering) is a Windows 2000 TCP/IP security feature. You can use this feature to control the type of TCP/IP packets that a Windows 2000 computer on your network will receive. You can also use TCP/IP filtering to control the type of TCP/IP packets that each routing interface on your Windows 2000 Server computer (when it's functioning as a router) will receive, forward, or both.

TechNet

Microsoft TechNet is an invaluable knowledge base and troubleshooting resource. *TechNet* is published monthly by Microsoft on multiple compact discs. *TechNet* includes a complete set of all Microsoft operating system Resource Kits (currently in a help file format), the entire Microsoft Knowledge Base, and supplemental compact discs full of patches, fixes, and drivers (so you don't have to spend time downloading them).

terabyte (TB)

A terabyte is 1,024 gigabytes, or 1,099,511,627,776 bytes.

Terminal server

Terminal server is a term commonly used to refer to the Windows 2000 Server computer on which Terminal Services is installed. A Terminal server is also sometimes called a Terminal Services server. *See also* Terminal Services.

Terminal Services

Terminal Services is a Windows 2000 Server component that provides terminal emulation to network clients. Terminal Services enables users of client computers to remotely perform processor-intensive and network-intensive tasks from their client computers. The application runs on the server running Terminal Services, so the user can take advantage of the processing power and network connectivity of the server, while fully controlling the application from the client computer's keyboard and monitor. *See also* Terminal server.

terminate-and-stay-resident (TSR) program

A terminate-and-stay-resident program is an MS-DOS program that stays loaded in memory, even when it is not running.

thread

A thread is the smallest unit of processing that can be scheduled by the Windows 2000 kernel. All applications require at least one thread. *See also* multithreading.

ToggleKeys

ToggleKeys is an Accessibility Options feature that causes Windows 2000 to play a tone every time the Caps Lock, Num Lock, and Scroll Lock keys are pressed. A high tone is played when the key is first pressed, and a lower tone is played when Caps Lock, Num Lock, or Scroll Lock is pressed again (and turned off). This feature is helpful for visually impaired users.

top-level domain

The DNS domains directly under the root domain are called top-level domains. Common top-level DNS domains include `com`, `edu`, `net`, `org`, and so on. *See also* root domain, DNS.

transitive trust

A transitive trust is a trust relationship between two Windows 2000 domains in the same domain tree (or forest) that can extend beyond these two domains to other trusted domains within the same domain tree (or forest). A transitive trust is always a two-way trust. By default, all Windows 2000 trusts within a domain tree (or forest) are transitive trusts. *See also* domain, domain tree, forest, trust relationship, two-way trust.

tree

See domain tree.

trust relationship, trust

A trust relationship, or trust, is an agreement between two domains that enables users in one domain to be authenticated by a domain controller in another domain, and therefore to access shared resources in the other domain. *See also* trusted domain, trusting domain.

trusted domain

The trusted domain is the domain that contains the user accounts that want to access the shared resources in the trusting domain. The trusted domain is trusted by the trusting domain. *See also* trust relationship, trusting domain.

trusting domain

The trusting domain is the domain that has resources to share with users accounts in the trusted domain. The trusting domain trusts the trusted domain. *See also* trust relationship, trusted domain.

TSID

TSID stands for *Transmitting Station Identifier*. TSID is used by the fax service to identify itself to fax machines that this computer sends faxes to.

TTL

TTL stands for *Time-To-Live*. TTL is often used by protocols such as TCP/IP and IPX/SPX to determine the number of routers a packet can cross before it is discarded (killed).

two-way trust

In a two-way trust relationship, two domains trust each other. *See also* intransitive trust, one-way trust, transitive trust, trust relationship.

UDF

UDF stands for *Universal Disk Format*. UDF is a file system used to access read-only DVD discs. Like CDFS, this file system is not used on a computer's hard disk, but only on DVD-ROM devices. *See also* DVD, CDFS.

uninstall(ing)

Sometimes you may want to completely remove all drivers associated with a hardware device. Windows 2000 refers to this process as "uninstalling."

universal groups

Universal groups, like domain local groups and global groups, are groups that are created and maintained in Active Directory on Windows 2000 domain controllers. Universal groups, however, are used to organize users from multiple domains that perform similar job tasks or have similar network access requirements, or to control access to shared resources in multiple domains. *See also* domain local groups, global groups.

universal naming convention (UNC)

UNC is a naming convention. A UNC name consists of a server name and a shared resource name in the following format: `\\Server_name\Share_name`. In this format, *Server_name* represents the name of the server that the shared folder is located on, and *Share_name* represents the name of the shared folder.

UPS

UPS stands for *uninterruptible power supply*. A UPS is a fault-tolerance device that enables a computer to continue operations for a short period of time after a power outage.

user account

A user account is a record that contains unique user information, such as user name, password, and any logon restrictions. User accounts enable users to log on to Windows 2000 computers, and to access resources on the network.

user authentication

User authentication is the process of verifying a user's credentials for the purpose of determining whether the user is permitted to access a local computer or a network resource, such as a shared folder or shared printer. In Windows 2000, user authentication is performed by either the local computer (if the user logs on by using a local user account) or by a domain controller (if the user logs on by using a domain user account).

user data

User data is a broad category that includes application files and folders, operating system files and folders, and user-created files and folders. In short, user data includes all files and folders on the Windows 2000 computer that aren't held open at all times by Windows 2000. *See also* System State data.

user environment variables

User environment variables apply only to a specific user. *See also* environment variables and system environment variables.

user logon name

A user logon name is the term Active Directory Users and Computers uses to refer to a user name.

user mode

Within the Windows 2000 architecture, user mode is referred to as a less privileged processor mode because it does not have direct access to hardware. Applications and their subsystems run in user mode. User mode applications are limited to assigned memory address spaces and can't directly access other memory address spaces. User mode uses specific application programming interfaces (API's) to request system services from a kernel mode component. *See also* application programming interface (API), kernel mode.

user principal name (UPN)

A user principal name (UPN) is a shortened version of the distinguished name (DN) that is typically used for logon and e-mail purposes. A UPN consists of the relative distinguished name (RDN) plus the FQDN of the domain. Another way you can think of a UPN is as a DN stripped of all organizational unit references. *See also* distinguished name, fully qualified domain name (FQDN), relative distinguished name.

user profile

A user profile is a folder that contains a collection of settings, options, and files that specify a user's desktop and all other user-definable settings for a user's work environment. You can use the User Profiles tab in the System application to copy, delete, and change the type of user profiles.

user rights

User rights authorize users and groups to perform specific tasks on a Windows 2000 computer or in a Windows 2000 domain. User rights are *not* the same as permissions: user rights enable users to perform tasks, whereas permissions enable users to access objects, such as files, folders, printers, and Active Directory objects.

user system policy

A user system policy is a collection of settings that restrict a user's program and network options and can enforce a specified configuration on the user's work environment. There are two types of user system policies: an individual user policy and the Default User policy. *See also* individual system policy, Default User policy, System Policy.

verbose mode

Verbose mode refers to running an application in such a way that the application returns the maximum amount of information and detail to the user. The verbose mode is initiated on many applications by using the `/v` switch.

virtual directory

A virtual directory is a child Web site that doesn't contain Web content. Rather, it is a pointer to an actual folder that contains its Web content. A virtual directory is created on a Windows 2000 Web server. The folder containing the Web content can be located either on the Windows 2000 Web server, or on any other computer on the network that is a member of the domain to which the Web server belongs.

Virtual DOS Machine (VDM)

A VDM is a Win32 application that emulates an Intel 486 computer running the MS-DOS operating system.

virtual memory

Virtual memory is the physical space on a hard disk that Windows 2000 treats as though it was RAM. Virtual memory is implemented in Windows 2000 by the use of paging files. *See also* paging file.

virtual private network (VPN)

A VPN is a private, encrypted connection across a public network. A VPN connection is a private, encrypted connection between two computers (or networks) that can already communicate with each other by using TCP/IP.

virtual server

A virtual server is a pseudo WWW server with its own unique fully qualified domain name (FQDN). To the Internet user accessing the virtual server, a virtual server appears to be a separate server; but in reality, a virtual server is *not* a separate server, but more like an extra shared folder on the Windows 2000 Server Web server that is accessed by specifying a different FQDN.

volume

A volume is an area of disk space (often called a partition) on one or more hard disks that has been formatted with a file system.

Win32 subsystem

The Win32 subsystem is a user mode subsystem. All 32-bit Windows applications run in this subsystem. The Win32 subsystem provides its own screen and keyboard functions, and requests Executive Services to perform all other functions for it. This subsystem also provides screen and keyboard functions for all of the other user mode subsystems. *See also* user mode, Executive Services.

Window Manager

Window Manager is a kernel mode component that is responsible for providing the graphical user interface. Window Manager communicates directly with the graphics device drivers, which in turn communicate directly with the hardware. *See also* kernel mode.

Windows 2000 Advanced Server

Microsoft Windows 2000 Advanced Server is a powerful 32-bit operating system that is optimized for servers in an enterprise network environment. This operating system is often a good intermediate choice for a heavily-used server, such as a SQL server, when you need a more powerful hardware platform than Windows 2000 Server supports, but don't need the capabilities (or the added hardware and software expense) associated with Windows 2000 Datacenter Server.

Windows 2000 Datacenter Server

Microsoft Windows 2000 Datacenter Server is the most powerful of the Windows 2000 operating systems. It is a 32-bit operating system optimized for enterprise applications, such as extremely large databases and realtime online transaction processing, or other industrial applications that require phenomenal amounts of processor power.

Windows 2000 Professional

Microsoft Windows 2000 Professional is a 32-bit operating system that is optimized for use on desktop computers. It contains not only the features and functionality of Windows NT Workstation 4.0, but also the best features of Windows 98 as well.

Windows 2000 Server

Microsoft Windows 2000 Server is a powerful 32-bit operating system that is optimized for network file, print, application, and Web servers. Windows 2000 Server is the next generation of Windows NT Server 4.0, and is the operating system of choice for most business server applications.

Windows Clustering

Windows Clustering is a technology which, when implemented on 2 to 32 Windows 2000 Advanced Server computers, provides high availability and load balancing. Windows Clustering is implemented on Windows 2000 Advanced Server by installing the Cluster Service. *See also* cluster.

Windows NT File System (NTFS)

NTFS is a file system supported only by Windows 2000 and Windows NT. NTFS is the most powerful file system supported by Windows 2000. Advantages of using NTFS include extended attributes, file-level security, and ability to use partitions larger than 32GB.

WINS

Windows Internet Name Service (WINS) is a Windows 2000 Server service that provides NetBIOS name resolution services to client computers. *See also* NetBIOS name resolution.

workgroup

A workgroup is a logical grouping of networked computers in which one or more of the computers has one or more shared resources, such as a shared folder or a shared printer. *See also* domain.

zone

A zone is a storage database for either a DNS domain or for a DNS domain and one or more of its subdomains. *See also* zone file.

zone file

A zone is often implemented as a special text file, called a zone file. The terms *zone* and *zone file* are often used interchangeably. *See also* zone.

zone transfer

The process of copying a zone to a standard secondary DNS server is called a zone transfer. Microsoft sometimes calls this process replication.