Assignment-3

Write a note on windows NT/20XX

History

- Windows NT (short for new technology), which was released in 1993. NT wasn't a simple upgrade from Windows for Workgroups, however; instead, it was a true 32-bit operating system designed for networked organizations. (The consumer versions of Windows remained 16-bit operating systems.)

- Windows NT was an offshoot of Microsoft's joint development of the OS/2 operating system with IBM. When the IBM/Microsoft partnership fell apart, IBM continued with OS/2, and Microsoft changed the name of its version of OS/2 to Windows NT.

- Catering to the corporate customer, Windows NT was available in two versions: Workstation and Server. NT Workstation was for individual PCs on the corporate network, while NT Server ran the mothership to which all those PCs were connected.

- With improved networking capability and a near-bulletproof operation, NT became the primary operating system for corporate servers and workstations worldwide. It was also the basis for the Windows XP operating system, which joined the Windows' separate consumer and corporate paths into a single operating system in 2001.

Technical features of Windows NT

Interface

Contains the Windows 95 interface and features like the

- Start button
- Taskbar
- Explorer
- Network Neighborhood
- Briefcase

Networking

- NetWare client and login script support
- Enhanced meta-file (EMF) spooling for improved network printing speed
- Support for 15 network protocols
- Peer-to-peer and FTP server capabilities
- Client software for both telnet and FTP services

Messaging Capabilities

- Windows Messaging Subsystem
- Microsoft Exchange and Microsoft Schedule+ included
- WINCHAT, NET MESSAGE, or NetDDET

Remote Management

Remote management utilities such as

- Event Viewer
- Performance Monitor
- Service Controller
- Registry Editor
- Dial-out capability to remote servers
- Remote dial-in capability

Remote Access Services (RAS)

Internet access to Windows NT Server and DNS names for resource connections

- Dial-out capability to remote servers, including Internet services
- Remote dial-in ability to any workstation
- Full network functionality over remote links using NetBEUI, IPX/SPX, and TCP/IP protocols
- Dial-in capability to remote NetWare servers using RAS
- Multi-link capability for channel aggregation of multiple modem connections

Security

- Per-file and per-directory security with the NT file system (NTFS)
- Local desktop security; user ID and password required for access
- Account lockout capabilities to prevent unlimited login attempts
- Network security with single network login using challenge/response protocol
- Government C-2 level certifiable security

Application Support

- Native support for all applications based on Windows 95, Win32, 16-bit Windows, 16-bit MS-DOS, 16-bit OS/2, and POSIX 1003.1
- Separate memory spaces for 16-bit applications (multiple virtual MS-DOS machines)
- Preemptive multitasking for 16-bit and 32-bit applications
- 486 emulator allows 386-enhanced 16-bit applications to run on RISC machines
- OLE support between all 16-bit and 32-bit Windows based applications
- Asynchronous I/O queue for improved responsiveness
- Structured exception handling for easy troubleshooting

Graphics and Multimedia

Significant performance gains for graphic intensive applications
OpenGL APIs for high-performance three-dimensional color graphics
16-bit and 32-bit API support for the Video for Windows 1.1 feature set

Utilities

- File compression with NTFS
- User Manager for configuration and security
- Disk Administrator for graphical disk configuration
- Diagnostics utility that details basic system information
- Performance Monitor for local and remote troubleshooting
- Tape backup
- Event Viewer and logging utility for local and remote troubleshooting
- Long filename support on FAT and NTFS
- Configuration details managed in registry database

Hardware Support

Multiple hardware configuration; you can specify a hardware profile at start time, including services, devices, and video resolutions

- Intel
- Alpha AXP
- MIPS
- PowerPC platforms
- Symmetric multiprocessing (SMP) support

Resource management in Windows:

- You can use Windows System Resource Manager to allocate processor and memory resources to applications, users, Remote Desktop Services sessions, and Internet Information Services (IIS) application pools.

- With Windows System Resource Manager for the Windows Server® 2012 operating system, you can manage server processor and memory usage with standard or custom resource policies. Managing your resources can help ensure that all the services provided by a single server are available on an equal basis or that your resources will always be available to high-priority applications, services, or users.

- Windows System Resource Manager only manages processor resources when the combined processor load is greater than 70 percent. This means that it does not actively limit the resources that can be used by each consumer when processor load is low. When there is contention for processor resources, resource allocation policies help ensure minimum resource availability based on the management profile that you define.

Role/Feature description

You can use Windows System Resource Manager to:

- Manage system resources (processor and memory) with preconfigured policies, or create custom policies that allocate resources per process, per user, per Remote Desktop Services session, or per Internet Information Services (IIS) application pool.

- Use calendar rules to apply different policies at different times without manual intervention or reconfiguration.

- Automatically select resource policies that are based on server properties and events (such as cluster events or conditions) or changes to installed physical memory or number of processors.

- Collect resource usage data locally or in a custom SQL database. Resource usage data from multiple servers can be consolidated on a single computer running Windows System Resource Manager.

- Create a computer group to help organize Remote Desktop Session Host servers that you want to manage. Policies can easily be exported or modified for an entire computer group.