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D17A-62 * [CC - Experiment - 2] D.O.S

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Aim: Implementation of Host-Based Virtualization using VirtualBox/VMware Workstation (VM Player)

- Test NAT to NAT
- Test Bridged to Bridged
- Test Host-Only Adapter to Host-Only Adapter.

Theory: VMware Workstation provides virtual networking components that let you to create a wide range of configurations, some of the networking configurations that are set up for you automatically when you choose the standard networking options in the New Virtual Machine Wizard or Virtual Machine Control Panel are

(i) Bridged Networking - It connects a virtual machine to a network using the host computers Ethernet adapter. If your host computer is on an Ethernet network, this is often the easiest way to give your virtual machine

→ If you use bridged networking your VM needs to have its own identity on the network. For Eg on a TCP/IP network the virtual machine needs its own IP Address, your network administrator can tell you whether IP addresses are available for your virtual machine & what networking settings you should use in the guest O.S

→ In bridged networking the virtual machine is a full participant in the network. it has access to other machines on the network & can be conducted by other machines on the network. as if it were a physical computer on the network.

(ii) Network Address Translation (NAT) - It gives a virtual machine access to network resources using the host Computer's IP address. If you want to connect to the internet or other TCP/IP network using the host Computer's dial-up networking or broadband connection & you are not able to give your virtual machine an IP address on the external network.

→ It also allows you to connect to a TCP/IP network using a Token Ring adapter on the host computer if you use NAT, your virtual machine does not have its own IP address on the external network & in NAT the virtual machine can use many standard TCP/IP protocols to connect to other machines on the external network.

(iii) Host-only Networking - Host-only networking creates a network that is completely contained within the host computer. Host-only networking provides a network connection between the virtual machine & the host computer, using a virtual Ethernet adapter that is visible to the host operating system. This approach can be useful if you need to set up an isolated virtual network. In host-only networking, your virtual machine & the host virtual adapter are connected to a private TCP/IP network. Addresses on this network are provided by the VMware DHCP server.

Conclusion: We have successfully implemented the Host-based virtualization using VMware workstation.