

Answers

Ans 1 NEED OF VIRTUALIZATION

1. Virtualisation helps in creating virtual systems for each user by ~~so~~ providing a common hardware platform and allocating resources to each system from the same, using a Virtual Machine Monitor or Hypervisor.
2. It helps in achieving less energy and time as now we need ~~not~~ allocate separate servers to ~~each~~ guest OS, it is achieved on a common platform.
3. It also helps in reducing the costs due to similar reasons of less expenses on separate hardware.
4. Increased efficiency is also achieved as multiple guest OS are catered to at the same location.
5. Since the services are not widespread now, hence the chances of attack ~~are~~ also reduced as the area of network is lesser.
6. Hence, it reduces ~~chances~~^{need} of using extensive firewalls and protection techniques.

Para-virtualization :-

- 1) Para virtualization needs a specific API to be implemented for exchange of instructions between OS and hypervisor to fulfil the requirements.
- 2) This implementation needs alteration or modification of the guest OS, for API to run successfully.
- 3) This is a disadvantage as the OS system providers will not be attracted to such a virtualization technique which alters the OS without consent.
- 4) Also, all the operating systems are not compatible to generate the API calls and hence, are non-functional in this virtualisation technique. eg Microsoft Windows.
- 5) Hence, it is not very advantageous in certain scenarios.

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