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Servers Chap # 4

Q#1 What servers are used in your enviroments? How many different Vendors are used? Do you consider this to be a lot of Vendors? What Decreasing?

Hardware sold for use a server is qualitatively different from hardware sold for use as an individual workstation. Server hardware has different feature and is engineered to a different economic model. Special procedurce are used to install and support servers. Understanding these different will help you make better purchasing decisions. They typically have maintenance controlled, disk-backup system, OS, better remote access and servers reside in the ~~co~~ controlled environment of a data center, where access to

to server hardware can be limited.

Buy Server Hardware for Servers

System sold as servers are different from system sold to be client or desktop workstations. It is often tempting to "save money" by purchasing desktop hardware and loading it with server software.

Extensibility :-

Servers usually have either more physical space inside for hard ~~ware~~ drivers and more slots for cards and CPUs or are engineered with high-through puts connectors that enable use of specialized peripherals.

More CPU Performace:-

Servers often have multiple CPUs and advanced hardware feacture such as pre-fetch, multi-stage processor checking and the ability to dynamically allocate resources among CPUs. CPUs may be availible in various speeds, each linearly priced with respect to speed.

High performace I/O :-

Servers usually do more I/O than clients. The quantity of I/O is often proportional to the number of clients, which justifies a faster I/O subsystem. That might mean SCSI or FC-AL disk drivers instead of IDE higher-speed internal buses, or network interface that are orders of magnitude faster than the clients.

Upgrade Option:-

Servers are often upgraded, rather than simply replaced; they are designed for growth. Servers generally have the ability to add CPUs or replace individual CPUs with faster ones, without requiring additional hardware changes.

Rack mountable:-

Servers should be rack mountable. In Chapter 6 we discuss the importance of rack mountable servers rather than stacking them. Although nonrackable servers can be put on shelves in racks, doing so wastes space and is inconvenient.

No side-access needs.

A rack-mounted host is easier to repair or perform maintenance on if tasks can be

done, while it remains in the rack. Such tasks must be performed without access to the sides of the machine. All cables should be on the back, and all drive bays should be on the front. Some system, often network equipment require access on only one side.

High-availability options:-

Many server include various high-availability options, such as dual power supplies, RAID, multiple network connections, and hot-swap components.

Maintenence Contracts:-

Vendors offer serves include hardware service contracts that generally include guranteed turnaround times on replacements part.

Management Options:-

Ideally servers should have some capability for remote config management such as serial port access, that can be used to diagnose and fix problems to restore a machine that is down to ~~ser~~ services.

Q#2 Describe your sit's strategy in purchasing maintenance and repair contracts. How could it be improved to be cheaper? How could it be improved to provide better service?

Ans

Consider Maintence Contracts and spare parts:-

When purchasing a server Consider how repairs will be handled. All machines eventually break. Vendors tend to have a variety of maintenance contract option. For example.

One form of maintenance Contracts provides on-site servese with a 4 hour response time, a 12-hour response time or next-day options.

Non-critical server:-

Some hosts are not critical, such as a CPU server that is one of many. In that situation, a maintenance contract with next-day or 2-day response time is reasonable. Or no contract may be needed if the default repair option are sufficient.

Large group of similar Servers:-

Sometime, a site has many of the same type of machine, possibly offering different kinds of services. In this case it may be reasonable to purchase a spares kit is divided over the many hosts.

Controlled introduction:-

Technology improves over time and sites describe in the previous paragraph

eventually need to upgrade to newer models which may be out of scope of the spares kit. At the end of the period you might approve a new model and purchase the appropriate spares kit.

Critical host :-

Sometimes it is too expensive to have a fully stocked spares kit. It may be reasonable to stock spares for parts that commonly fail and otherwise pay for a maintenance contract with same-day response.

Large variety of model from same vendor.

A very large site may adopt a maintenance contract that includes having an on-site may adopt

technician. This option is usally justified having an on-site technician. This option is usually justified only at a site that has an extremely large number number of servers or sites where that ventors servers play a keen role related to vent revenue.

Q#3 What are the major and minor differences between the hosts you install for servers versus clients workstation.

Ans

Servers don't have to run the same OS as their clients. Servers can be completely different, completely the same or the same basic OS but with a different configration to account for the difference in intended. Each is appropriate at different times.

A web server, for example does not need to run the same Os as its clients. The clients and server need only agree on a protocol. Single-function network application often have a mini-OS that contains just enough software to do the one function required, such as being a file server, a web server

or a mail server

Sometimes, a server is required to have all the same software as the clients. Consider the case of a UNIX CPU Servers. The clients should have similar cookie-cutter OS loads, as discussed in chapter 3. The CPU servers should have the same OS load, though it many be tuned differently for a larger number of processes, pseudoterminals, buffers and other parameters.

It is interesting to note that what is appropriate for a server OS is a matter of perspective. When loading Solaris 2.x you can indicate that his host is a server, which means that all the software are loads