

APPLICATION NOTE

7508S Segmenting Ethernet LANs

One of the largest problems that a IT manager has to face today is rapid network growth.

Over the past decade, corporations have rapidly adopted networks as a means for employees to communicate. As a result, the number of users and networks segments has grown faster than was ever planned for. An unfortunate result of this growth is that the network develops bottlenecks that degrade performance by reducing bandwidth.

The most common means of alleviating such a problem is by segmentation using local bridges and routers. Unfortunately, as the network continues to grow these devices become overloaded and form their own bottlenecks.

One solution to the problem is to repeatedly split segments in half and connect them with additional bridges or routers. But this only puts the problem off. As each new segment grows in size, the bridge or router will once again become the bottleneck.

Another possible solution is to change the network to a higher speed technology. But this approach is not cost effective as it can involve

scrapping entire investments in existing equipment which can be counterproductive.

A more sensible approach to the problem of network growth is to eliminate the possibility of bottlenecks.

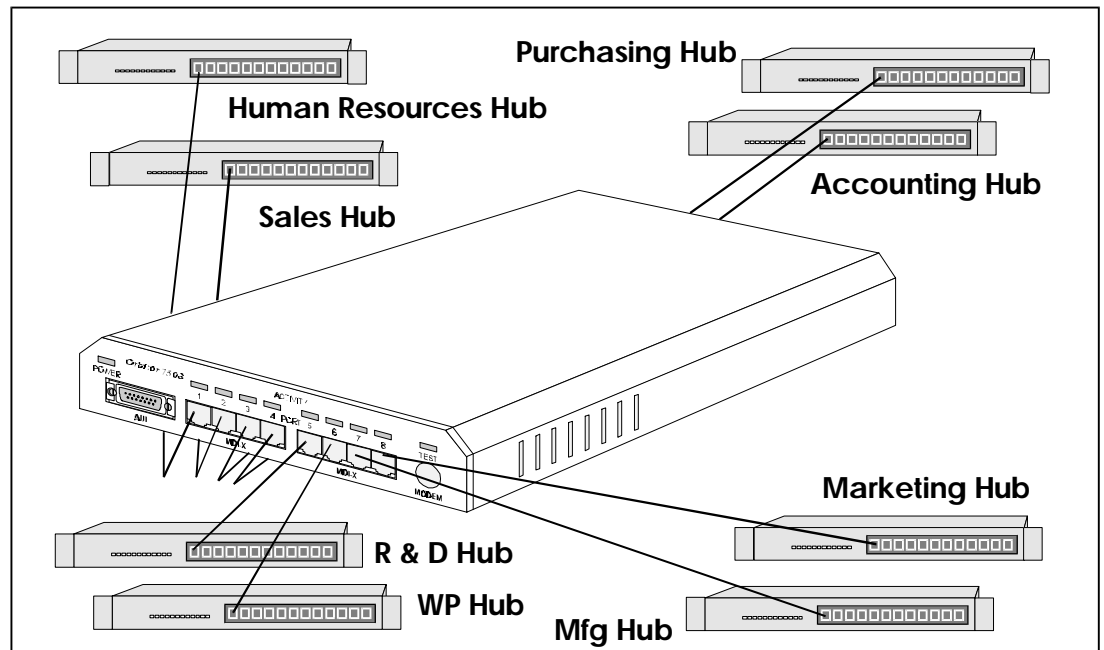
The Orbitor 7508S Ethernet Switch, because it provides fullwire-speed connectivity to each of its ports regardless of load, can never act as a bottleneck. By replacing overloaded bridges or routers with the Orbitor 7508S, the network will run faster and valuable investments in end-station equipment and cabling will not have to be scrapped.

High-use devices like servers can be directly attached to the Orbitor 7508S to insure that they are never competing with other devices for bandwidth. In fact, servers can have multiple attachments to the switch to provide N x 10Mbps of bandwidth.

Since the Orbitor 7508S supports IEEE 802.1D bridging with Spanning Tree protection, and also includes SNMP management; gains in access speed are not made at the expense of functionality.

Segmenting Ethernet LANs Summary

- Orbitor 7508S provides eight full wire-speed switched ports
- Allows networks to be fully segmented at low cost using a standards-based solution
- Protects investments in 10BaseT technology



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