Chapter 7
Network Applications

This chapter provides an overview of possible network applications for the HP ProCurve 9304M, 9308M, and 6208M-SX routing switches and the 6308M-SX switch.

HP ProCurve 9304M and 9308M Applications

Figure 7.1 shows an example application using the 9304M and 9308M. In this example, routing switches are enabled with 802.1q/p VLANs and Selectable Quality of Service (QoS) and distributed in wiring closets. The auto-sensing, auto-negotiating ability of each 10/100 Mbps port ensures seamless interoperability with existing workstations and servers.

The 9304M routing switches are then collapsed into the data center using Gigabit Ethernet down links. This enables the network manager to provide end users with a fully non-blocking, QoS enabled data and multi-media infrastructure. For increased redundancy, trunk groups can be deployed among the down links.

This wiring closet solution delivers ample bandwidth to end-users and servers while eliminating riser bottlenecks. The high Gigabit Ethernet port density and redundancy features of the 9308M make it ideal for the core of the network. The multi-protocol, wire-speed Layer 3 capabilities of the 9308M can be used to provide all the backbone routing. This ensures that high traffic volumes that traverse the backbone do not degrade network performance. In the network shown in Figure 7.1, servers have been consolidated into the data center for easier administration.

Additionally, the explosion of web traffic has created a critical need for improved server performance and management. With a 9308M, servers receive dedicated 100 Mbps or 1 Gbps links. For added bandwidth and redundancy, users can multi-home up to four 100 Mbps links into a single, redundant connection. By using policy-based VLANs, servers can be configured to appear as local to their sub-net, simplifying administration and management.

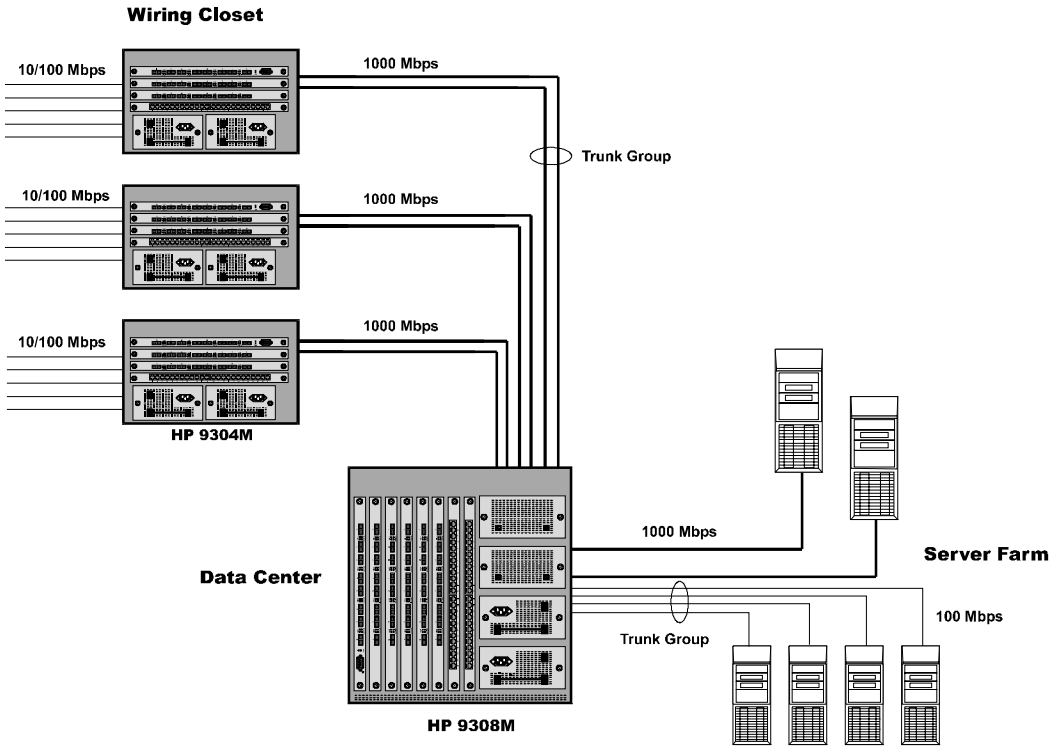

Figure 7.1 HP 9308M and HP 9304M network using trunk groups in a high-speed riser environment

HP ProCurve 6308M-SX Routing Switch Applications

The 6308M-SX routing switch can provide Gigabit capacity to relieve overloaded campus router backbones. In Figure 7.2, a 6308M-SX routing switch is connected to HP Switch 4000s and HP 9304Ms by one-Gigabit (Gbps) links. Devices attached to the switches and routing switches receive dedicated 10 or 100 Mbps connections. Super Servers are connected to the network through dedicated 1 Gbps links, dramatically reducing response times for user requests on the network.

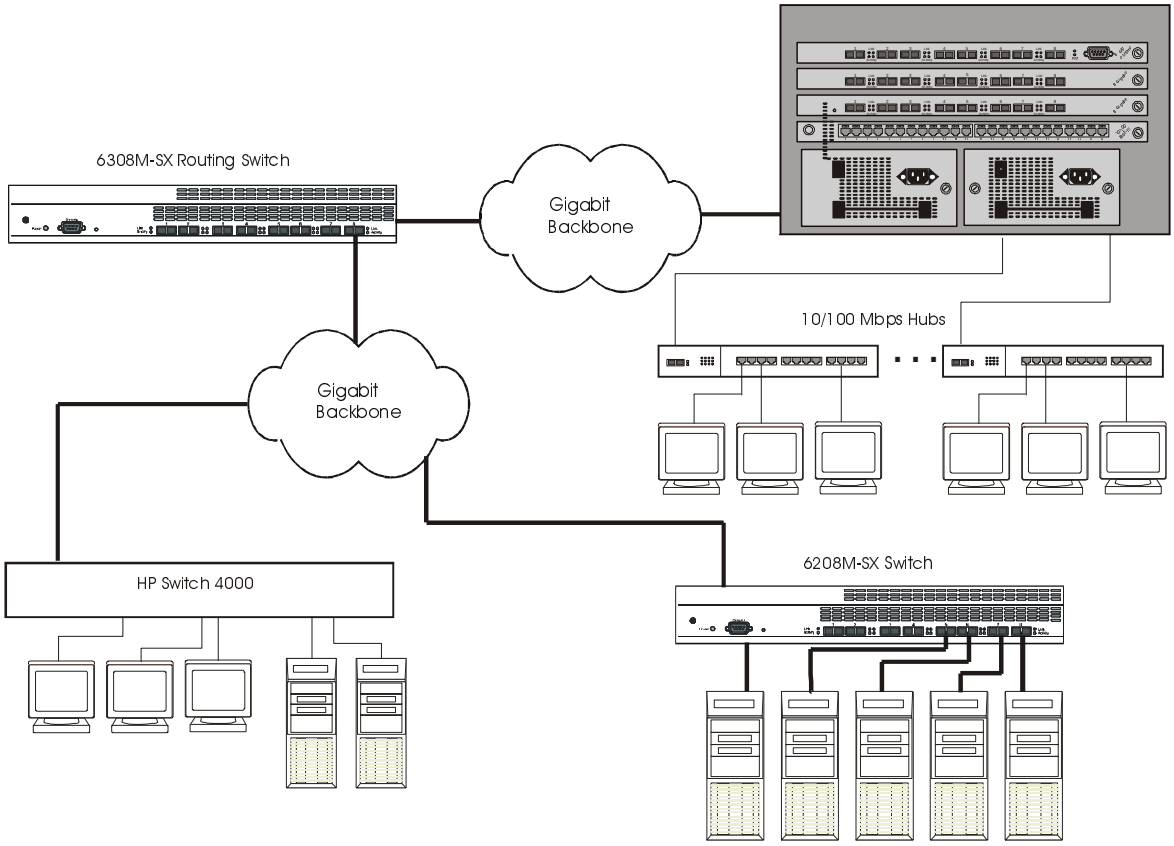

Figure 7.2 HP ProCurve Routing Switches Within a Campus Router Backbone Application

In Figure 7.3, a stack of 6308M-SX routing switches provides exceptionally high-performing, centralized routing. One routing switch interconnects four other routing switches in the data center. A Gigabit link and multiple trunk groups provide extremely high-speed connectivity to the rest of the network through the riser. HP 8000 Backbone switches are attached to the 6308M-SX routing switch with Gigabit links while workgroup switches are attached to HP Switch 8000 Backbone switches by either Gigabit or dedicated 100 Mbps links.

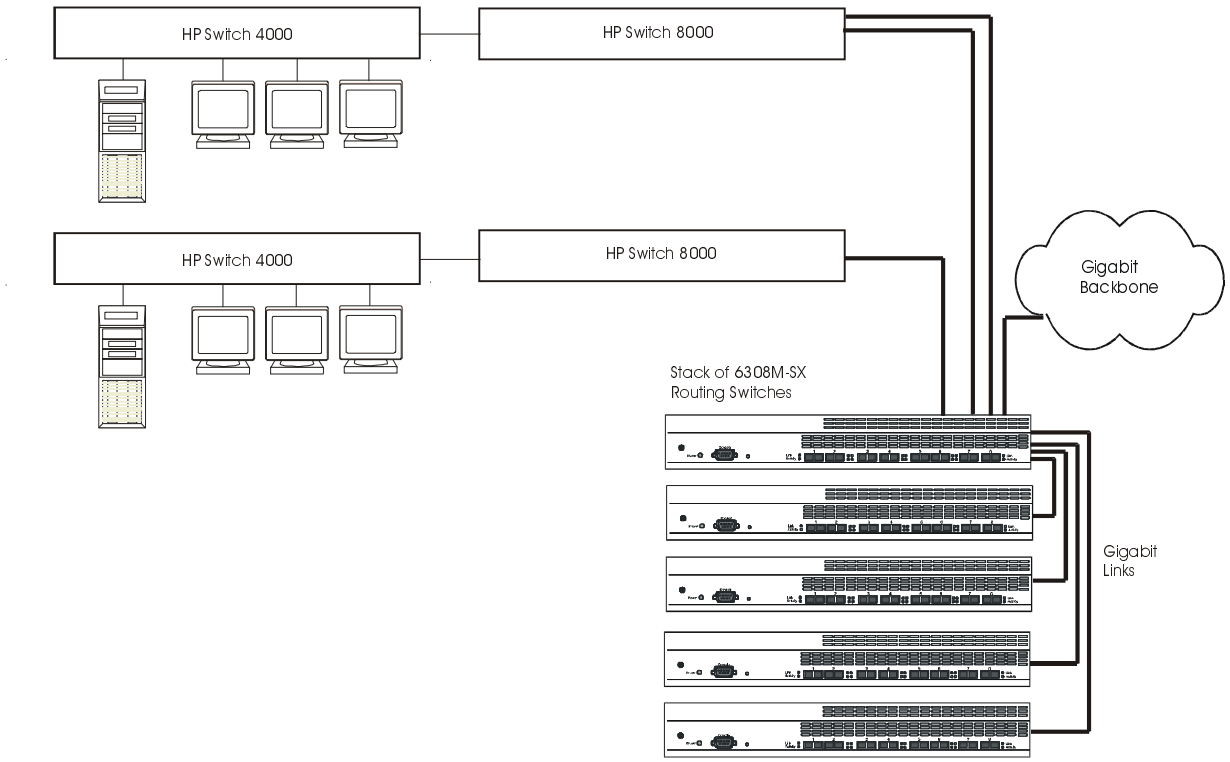

Figure 7.3 6308M-SX Routing Switches Providing All Gigabit Ethernet Processing in a Data Center

HP ProCurve 6208M-SX Switch Applications

The 6208M-SX switch can be used to interconnect a stack of HP Switch 8000 Backbone switches or 6208M-SX switches for high-speed connections to Backbone and Workgroup switches and servers for accelerated performance and consolidation.

In Figure 7.4, a 6208M-SX switch interconnects a stack of HP Switch 8000 Backbone switches with Gigabit links. The HP Switch 8000 Backbone switches are connected to other HP Switch 8000 Backbone switches and HP Switch 4000 switches with multiple 100 Mbps trunk group links—with one HP Switch 8000 switch serving as a server farm concentration point. Each server is provided a dedicated 100 Mbps link and super servers are provided a direct 1 Gbps connection to the 6208M-SX switch.

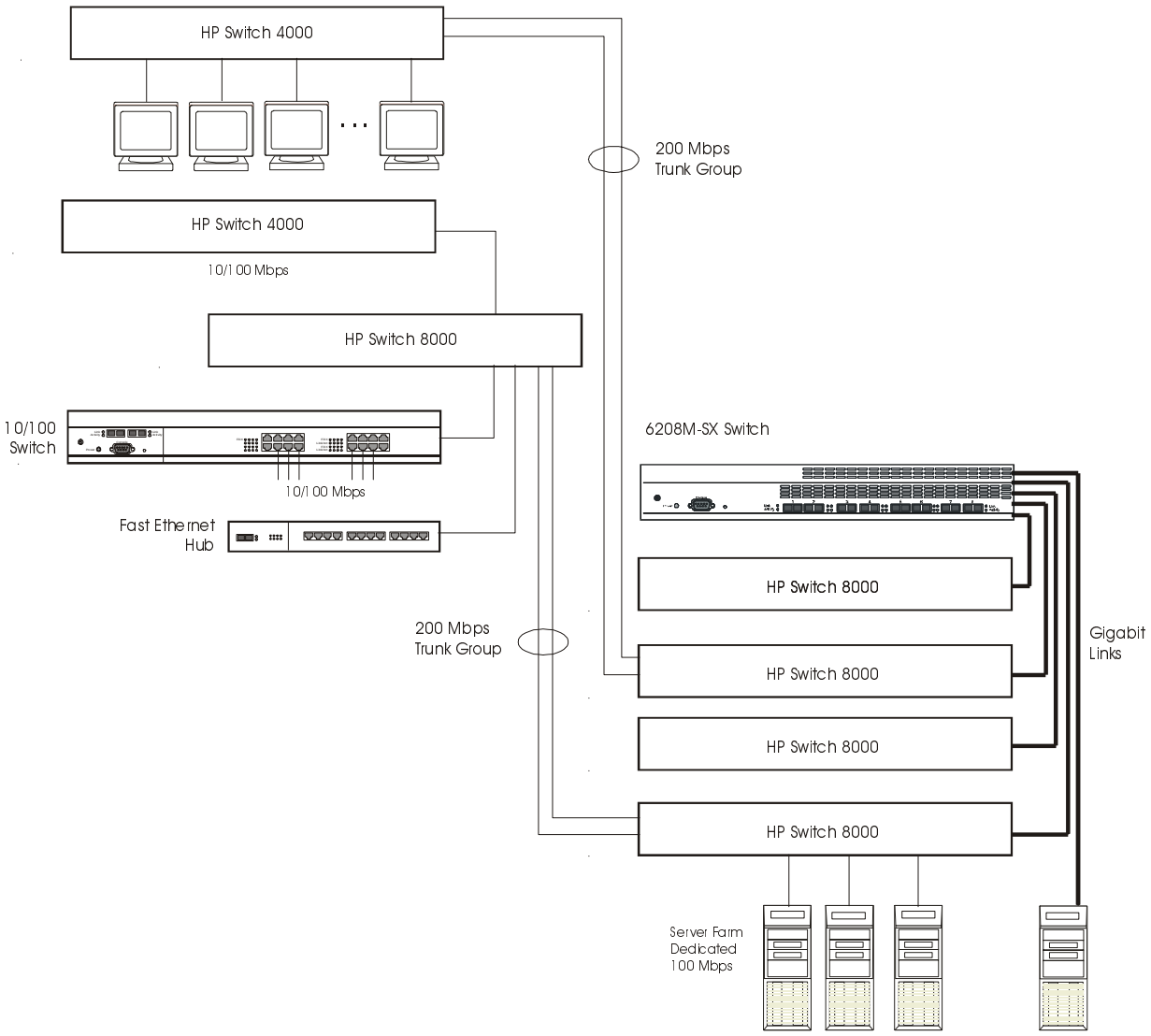

Figure 7.4 6208M-SX Switch Stack Application Providing All Gigabit Ethernet Centralized Processing in a Network Center

In Figure 7.5, a 6208M-SX switch interconnects a stack of 6208M-SX switches in the network center and provides Gigabit links through the riser. A server farm is also located in the network center. Each server is provided with a dedicated 1000 Mbps link for extremely fast response time to user requests within the network.

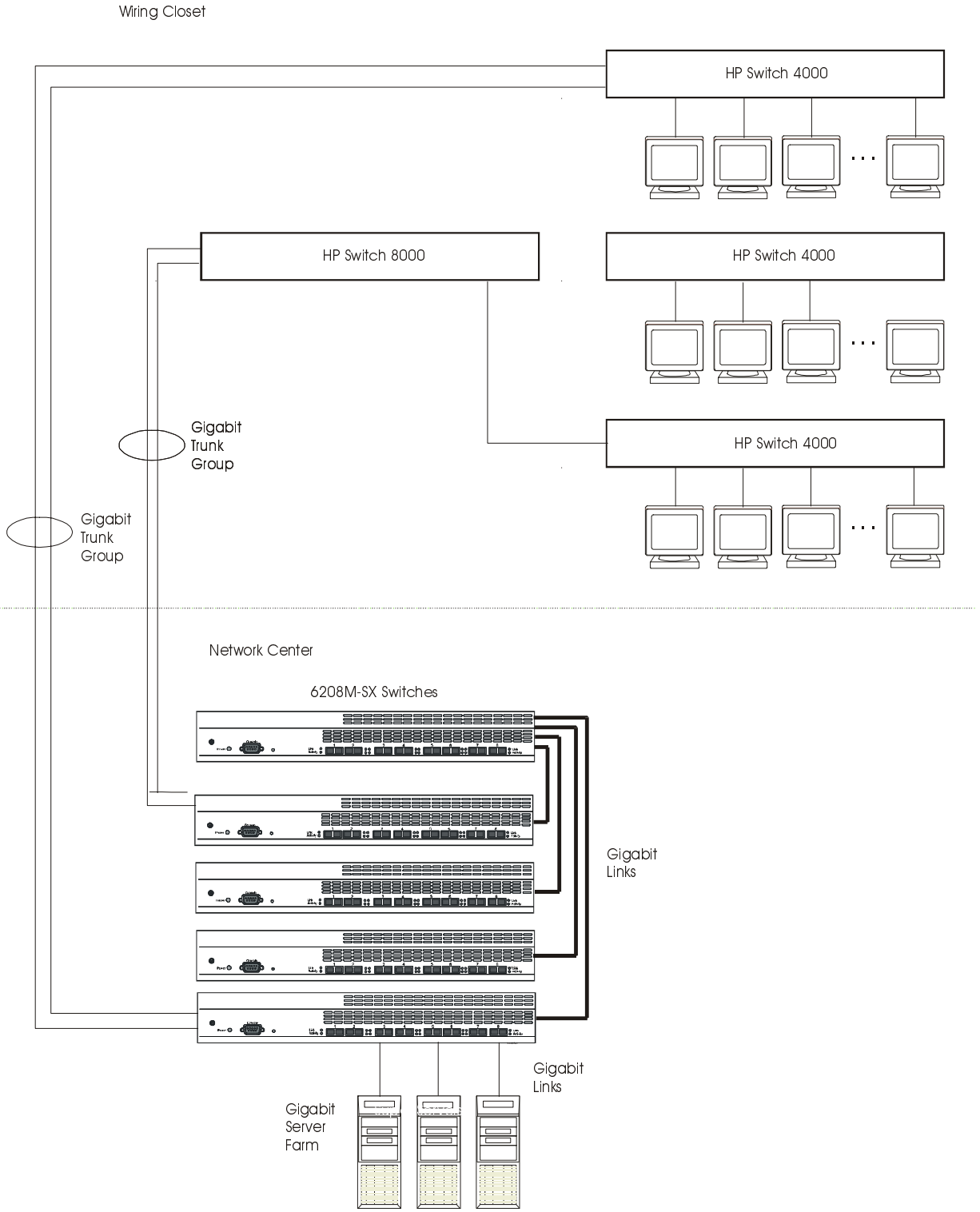

Figure 7.5 6208M-SX Switch Stack Application Providing All Gigabit Ethernet Centralized Processing in a Network Center