

Web Servers

Apache HTTP Server

Microsoft® Internet Information Services

The resolution of Web server performance issues can be a complex task. A broad range of factors – both hardware and software – influence Web server performance. When attempting to resolve these issues, hardware solutions are generally the more expensive route. Before considering costly hardware solutions, first give careful consideration to other areas of the Web site and Web applications, and the improvements that may be realized there.

Preliminary considerations

Source code optimization, HTTP compression and browser caching are three areas of Web site performance that merit immediate attention. Their use results in reduced transfer sizes and rates, permitting significantly larger server loads to be carried with the same hardware resources, and without impinging on performance.

The disk I/O bottleneck

Once the aforementioned areas have been addressed, if server performance is still degraded, attention should be given to identifying a likely hardware bottleneck. Generally, this will be found in the network infrastructure, or in the storage subsystem, or both. Performance monitoring utilities can help isolate the location of the bottlenecks. Web sites handling high volumes of large content, are especially dependent on the performance of the storage subsystem.

Use processor and memory resources to improve Web server performance

SuperVolume and RamDisk Plus provide cost-effective solutions for Web servers bottlenecked by their storage subsystems. Installing SuperVolume on the storage volume containing the HTTP service (typically the OS volume) yields accelerated server application performance with the required data persistence. Temporary or read-only files, including Web content and streaming data, may be stored on a RAM disk.

It is important to note that both SuperVolume and RamDisk Plus are effective only when processor and memory resources are underutilized and disk I/O is constraining server performance. To reduce or eliminate storage access latencies, these two system resources must be available. With sufficient resources available, overall server performance will improve significantly, especially under heavy loads.