IT@Intel

One page summary:
Streaming & Virtual Hosted Desktop

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Benchmarking Study Results

Intel Information Technology compared server and network resource utilization for streamed and virtual hosted desktop (VHD) computing models. An application script designed to simulate a realistic workload was created using standard office applications. The script executed on the same server, client, and network hardware configured for the various software delivery models.

Technical Specs:

- Eight core Intel® Xeon(t) Processor 7100 server
- Twenty clients
- Gigabit Ethernet LAN
- 32GB RAM
- RAID 1+0 Disks

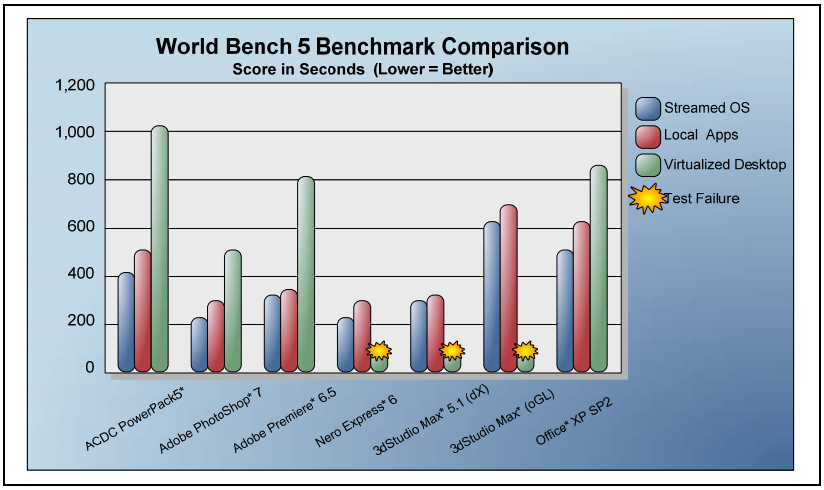
Benchmark Results for 20 Clients	Server Processor Utilization	Network Utilization (per client)	Estimated Single Server Scaling
VHD/Embedded App	45%	.5 mbps	35 Client
VHD/Streamed App	25%	.5 mbps	55 Client
Stream OS/Embedded App	1%	5 mbps	150 Client
Stream OS/Streamed App	1%	.8 mbps	150+ Client

Performance Summary

- Goal was to determine which model makes more efficient use of the server and network
- Virtually hosted desktops are efficient for standardized applications with low screen refresh
- Streaming is efficient over time and can support a wider variety of workloads with excellent user experience

Operating System (OS) and application streaming used less than one percent of the server processor. When the clients were concurrently rebooted, network bandwidth was briefly consumed. Over time, the network utilization decreased as applications were cached locally.

Virtually hosted desktops created consistent load on the network, less than 1 mbps. High server utilization was observed for specific cases like multimedia applications including audio, video, and flash animation. Server capacity was also reached during compute intensive activities, when the number of hosted desktops exceeded the number of cores.



World Bench 5* benchmarks consistently demonstrated faster execution times for embedded applications within a streamed OS than both local applications and virtual hosted desktops. The 3D graphics tests failed to run on virtual hosted desktops.