

# **Windows File Copy Speeds Part 2**

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# Agenda

- Review of factors to consider in measuring file copy performance
- Results from Demartek test lab
- Conclusions
- Other interesting things to test

# Factors

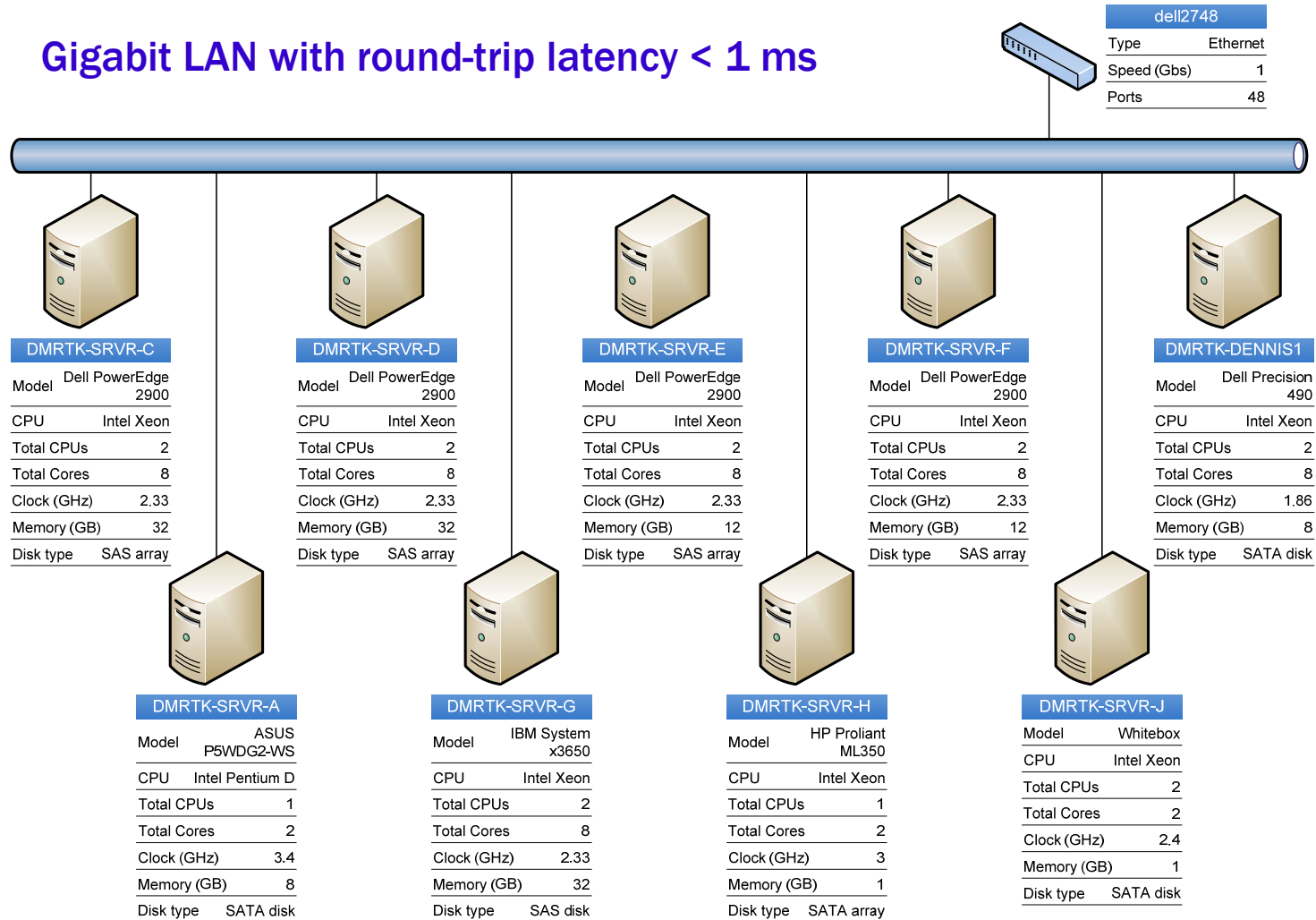
- **Hardware factors in source and target**
  - Number of processors and cores
  - Memory in system (affects file system cache)
  - NIC cards and features
  - Disk storage access speeds
- **Network Factors**
  - Latency of network
  - Number of hops between switches
- **Software and file system factors**
  - Number of files
  - Size of files

# SMB Versions

- **SMB 1.0**
  - MS-DOS, Windows 3.x, 95, 98, Me
  - Windows NT, 2000, XP, 2003
- **SMB 2.0**
  - Windows Vista RTM
- **SMB 2.0 + SP1 improvements**
  - Windows Vista SP1
  - Windows Server 2008

# Test Configuration – LAN

Gigabit LAN with round-trip latency < 1 ms



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# Results

Link to spreadsheet:  
[Demartek\\_FileCopyTests-results-2008-07.xlsx](#)

# Conclusions

- Vista SP1 and Server 2008 give better performance than previous Windows versions
- 64-bit and large memory allows for larger file system cache, improving performance
- Disk storage matters
  - SAS (and Fibre Channel) disks are much faster than SATA disks
  - Striping across many disks (spindles) is better

# **Other Interesting Tests (for a future presentation)**

- **Compare network file copy speed with Jumbo Frames enabled/disabled in switches and NICs**
- **Compare performance of various server-class NICs and desktop NICs**
- **Compare XP to XP with Vista to Vista on same hardware**
- **Run same tests over WAN connection**
- **Run same tests on 10-Gigabit network**



# Contact me

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