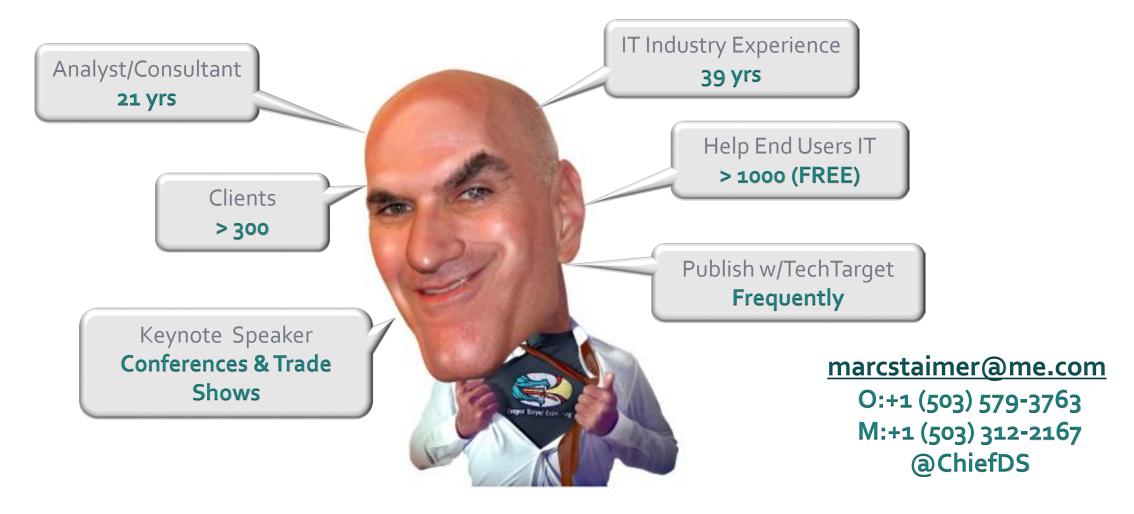


## Top 10 Things About Flash

8 August 2019

## Dragon Slayer Consulting – Marc Staimer CDS





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## Top 10 Things About Flash

- 1. NVMe flash SSDs have pushed performance bottleneck to CPU
  - Providing computational storage momentum
- 2. Application specific flash control/offload
  - Database: OLTP, analytics, DW, AFML
- 3. Japan Korea dispute will reduce NAND & DRAM supplies slowing price declines
- 4. NVMe & fast flash challenging 3D X-point performance
- 5. 200Gbps RDMA fabrics (NVMe-oF) started shipping
- 6. Storage performance density becoming a system issue
- J. Several SCM (a.k.a. PMEM) alternatives to 3D X-point shipping
  - ReRAM, MRAM, STT-RAM, NRAM
- 8. ZNS standardization
- 9. ARM based AFA within 12 mos
- 10. QLC for cold storage achieving acceptable pricing

