Analyst Perspective: Storage Capacity to Store Data; Storage Performance to Deliver Services

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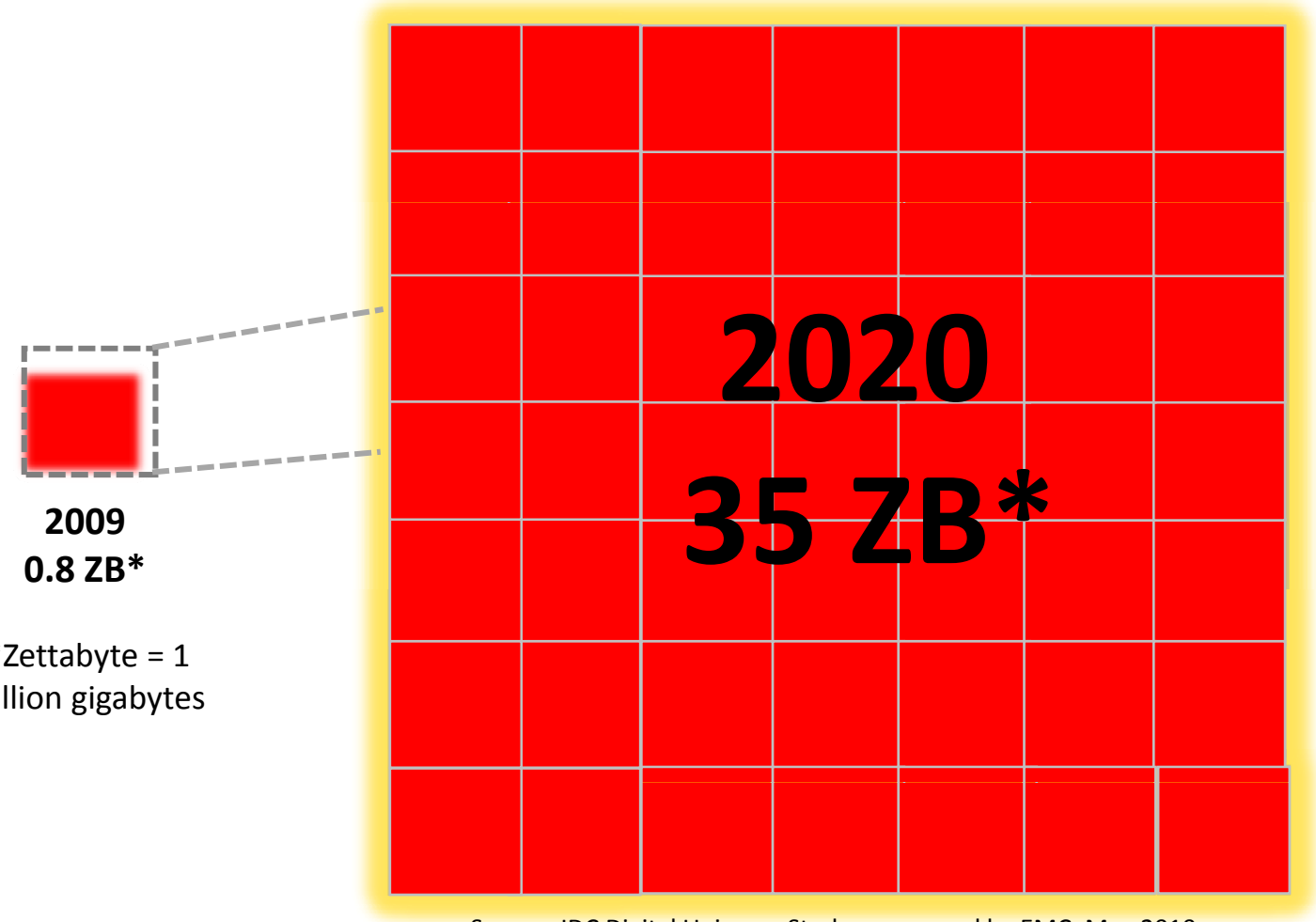
The Premise

- As the way storage purchases are made continues to change, one thing is clear – the cost per raw gigabyte of storage capacity has become a “poor metric” when purchasing performance-based storage systems,

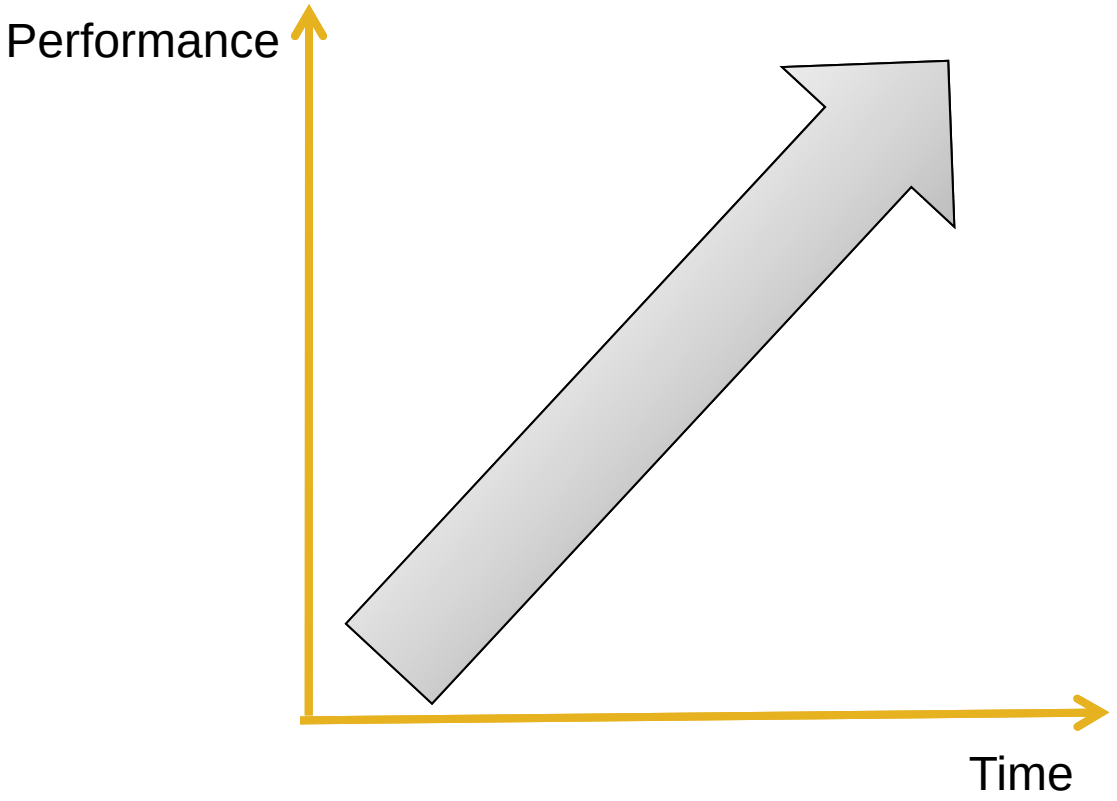
Capacity – Is this new?



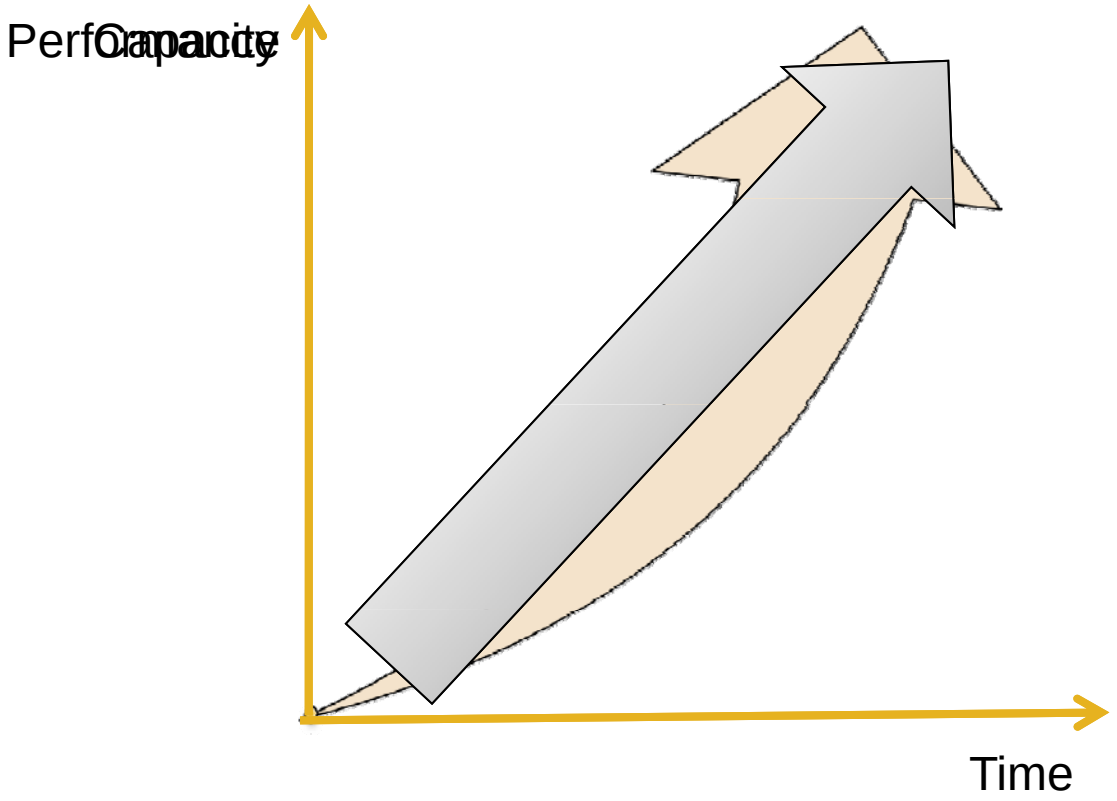
*Zettabyte = 1 trillion gigabytes

Source: IDC Digital Universe Study, sponsored by EMC, May 2010

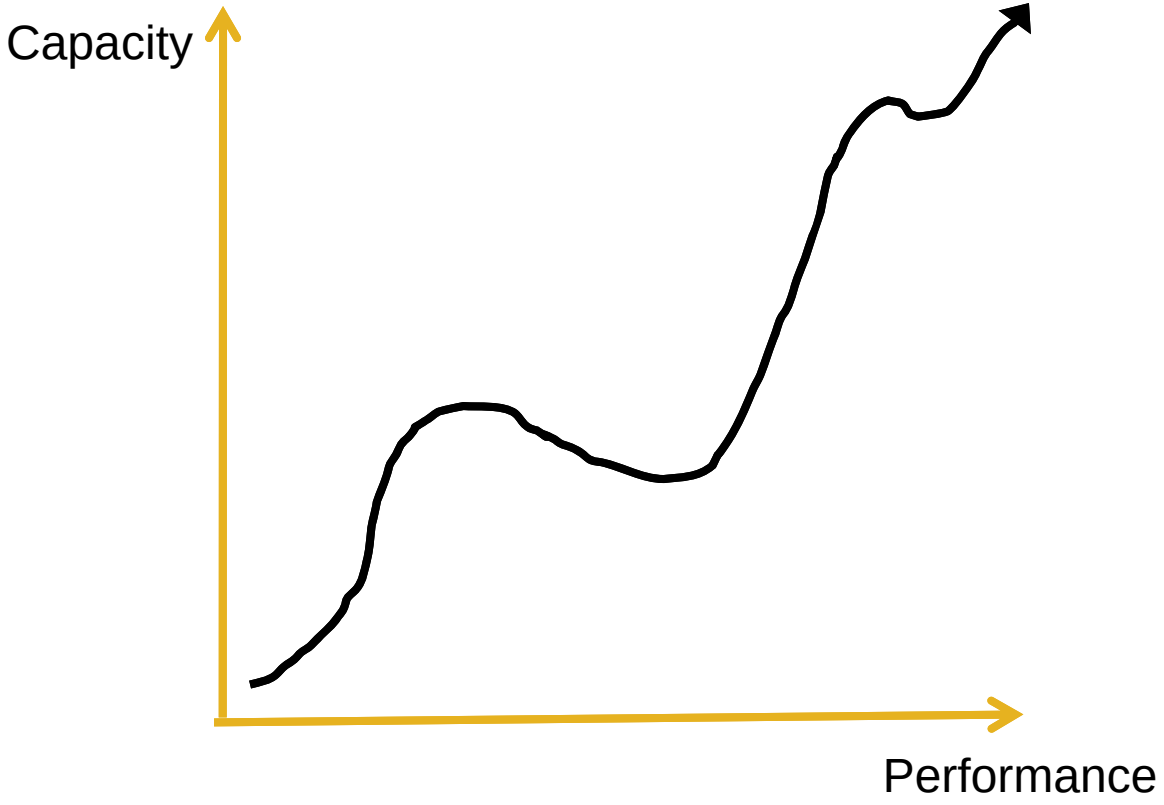
Performance – Is this new?



Combining Capacity with Performance



Reality of capacity to performance ratio



Creating a balance

The Solution

- **Buy what you need, pay for what you get**
  - $/GB is inaccurate

What about
- IOPS
- Throughput
- Reliability
- P&C
- Manageability
- Scalability

- **System A**
  - 20TB, costs $60k
    - $3k/TB
- **System B**
  - 30TB, costs $60k
    - $2k/TB

The Reality

- System A
  - Included SSD
- System B
  - FC only

System A has a lower $/IOP

What media should you use?

Media Type	Performance
SSD's	>10,000 IOPS
15k RPM HDD	~170 IOPS
10k RPM HDD	~120 IOPS
7200 RPM HDD	~80 IOPS
5400 RPM HDD	~50 IOPS
Cloud	~25 "IOPS" (T1 line)

Cloud?

- Yes, cloud!
- Leverage cloud for data that needs to be distributed
- Leverage cloud providers that provide dedupe to lower usage costs → better $/GB/month opex

Essential Guidance

- “Hot” capacity is roughly 2-5% of total storage
  - Use SSD’s
- The other 95%?
  - Use low cost, high capacity drives
- Leverage tiering software
  - Make sure it’s automated!!

Questions? Shoot me an email

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