



**OUT WITH TAPE,
THROW EVERYTHING INTO THE CLOUD**





George Crump is the founder of Storage Switzerland, the leading storage analyst focused on the subjects of big data, solid state storage, virtualization, cloud computing and data protection.

He is widely recognized for his articles, white papers, and videos on current approaches such as all-flash arrays, deduplication, SSDs, software-defined storage, backup appliances, and storage networking. He has 25 years of experience designing storage solutions for data centers across the US.

WHO IS STORAGE SWITZERLAND?



- Analyst firm focused on storage, cloud and virtualization
- Knowledge of these markets is gained through product testing and interaction with end users and suppliers
- The results of this research can be found in the articles, videos, webinars, product analysis and case studies on our web site:

storageswiss.com



THE STORAGE WARS

DAS vs. Shared

SAN vs. NAS

Tape vs. Disk

All-Flash vs. Hybrid



THE STORAGE WARS

DAS vs. Shared

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Tape vs. Disk

All-Flash vs. Hybrid

Cloud vs. Everything

Tape vs. Flash

Object vs. NAS

Hyperconverged vs. Dedicated



THE STORAGE WARS

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Tape vs. Disk
All-Flash vs. Hybrid

Cloud vs. Everything
Tape vs. Flash
Object vs. NAS
Hyperconverged vs. Dedicated

Moral?—Don't engage in a war over tools

WHY DOES CLOUD STORAGE SEEM TO BE THE ANSWER FOR EVERYTHING?

- Production Storage is a mess
- Secondary Storage is worse



WHAT IS THE CLOUD GOOD FOR?

- Temporal workloads
 - Cloud Bursting
 - New Projects



WHAT IS THE CLOUD GOOD FOR?

- Temporal workloads
- FYI – Backup & Archive have temporary workloads
 - Front-line Recovery
 - Disaster Recovery
 - Analysis of Archived Data



IS THE CLOUD GOOD FOR LONG TERM RETENTION?



- First, why do we retain data?
 - Meet compliance or regulations
 - We are afraid to delete anything
 - Data Privacy

IS CLOUD STORAGE GOOD AT THIS?

- Technically...yes
- Financially...no (maybe)
 - When is it time to own?
 - When is it time to keep renting?



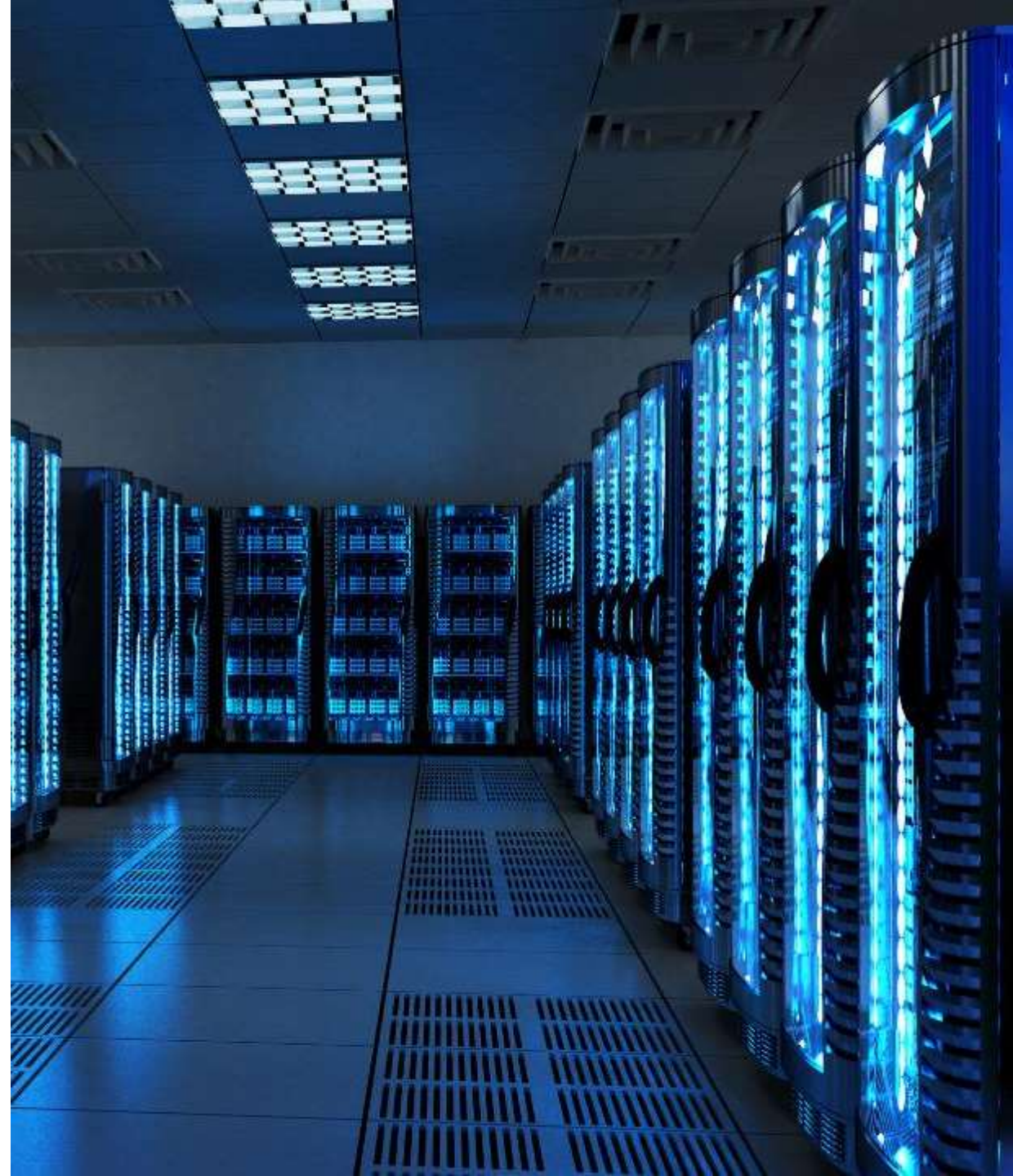
performance

WHEN DOES PERFORMANCE MATTER?

- Rapid Recovery...yes
- Active Analytics...yes
- Long term data retention...no
(within reason)

DESIGNING A SECONDARY STORAGE WE CAN LIVE WITH

- Three Tiered architecture
 - Flash (yes, flash)
 - Disk (high-capacity NAS, object, Cloud)
 - Tape






APPLYING THE THREE TIERED ARCHITECTURE TO USE CASES

HA

Backup

Analytics

Archive



**QUESTIONS
AND
ANSWERS**

THANK YOU



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