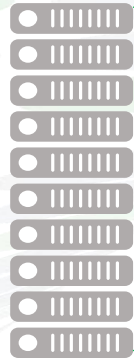


# **Bending the Rules of Reality for Faster Data Analytics**

Andy Flesch, Regional Account Manager

# Compute Density and Data Sets Explode

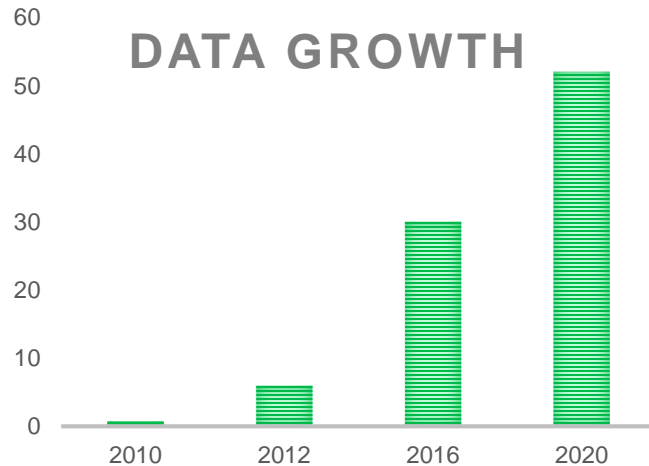
10 CPU-Only Servers



1 GPU Accelerated Server



GPUs have shrunk compute infrastructure by 10x

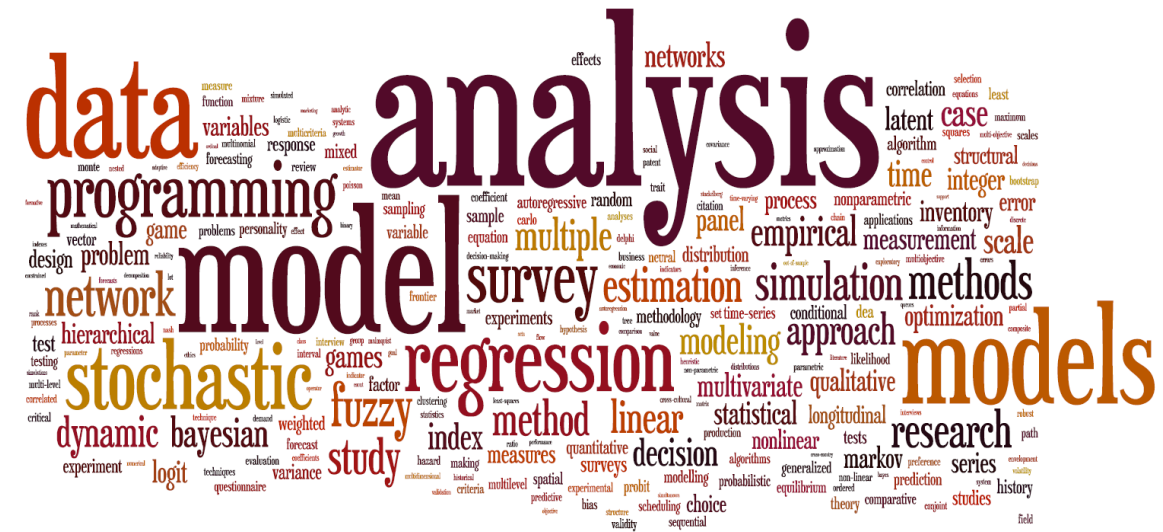


But the data that needs processing has grown 50x

Industry is faced with an I/O nightmare

# Storage to Meet Changing Data Analysis Requirements

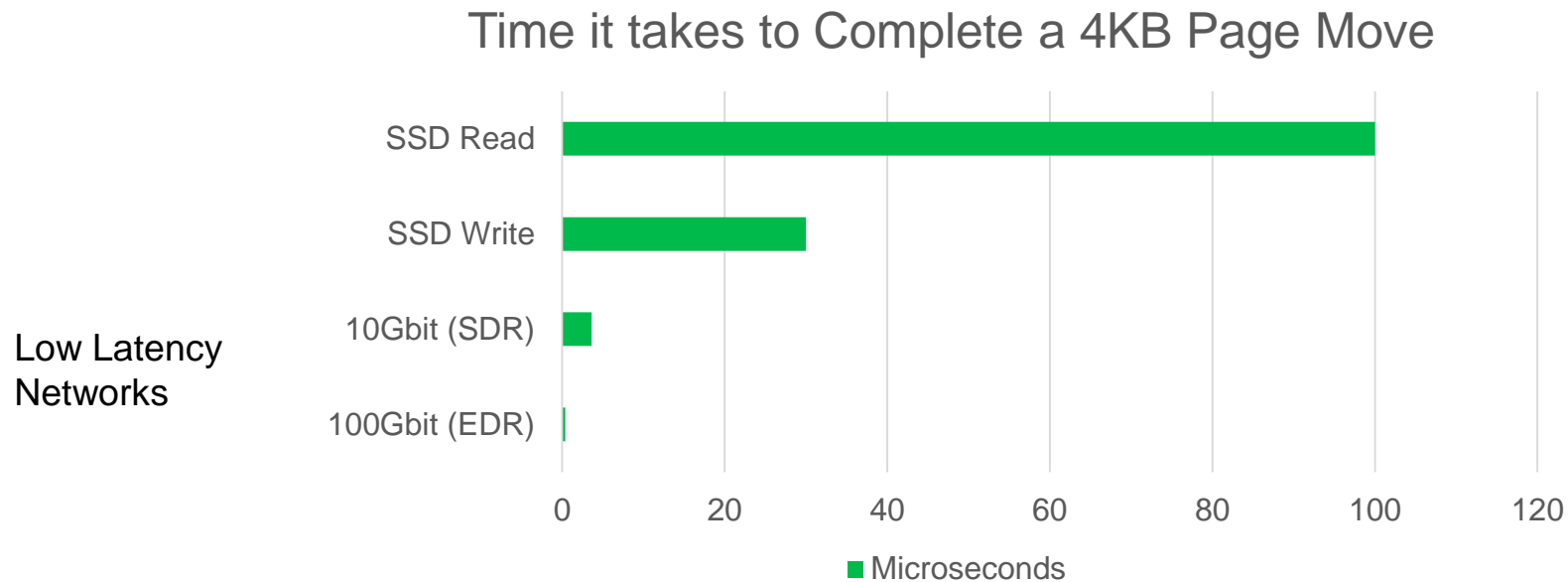
- New analytical tools and challenges
  - Algorithmic trading
  - Market data ingest and back testing
  - AI / machine learning
- Changing infrastructure requirements
  - On-demand / cloud
  - Collaboration / data sharing
  - Standardized data formats and metadata
  - Different processors - GPUs, TPUs, FPGAs
- Software based storage to bend the rules of reality



# Bending the Rules of Reality: Data Locality is Irrelevant

Data is heavy – Locate it near compute

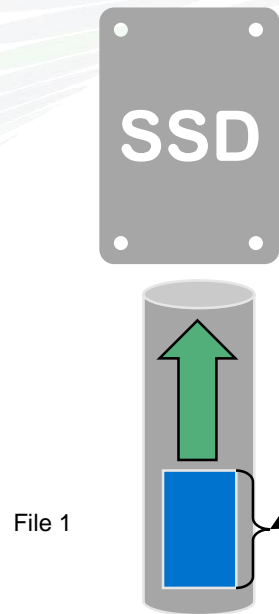
- Most NAS were developed when 1GbitE and HDDs were standard
- Modern networks on 10Gbit Ethernet are 10x faster than SSD



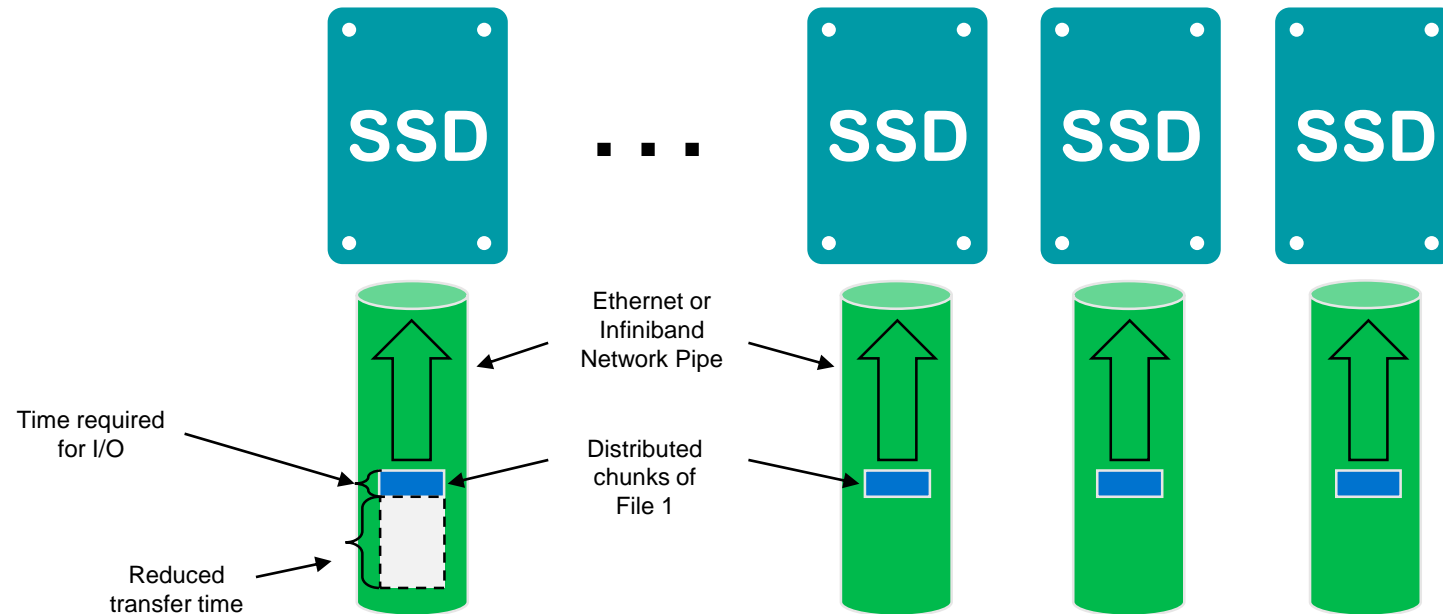
# Bending the Rules of Reality: The Power of Parallelism

Use local storage for highest performance

Local Filesystem w/SSD



Matrix Distributed Filesystem

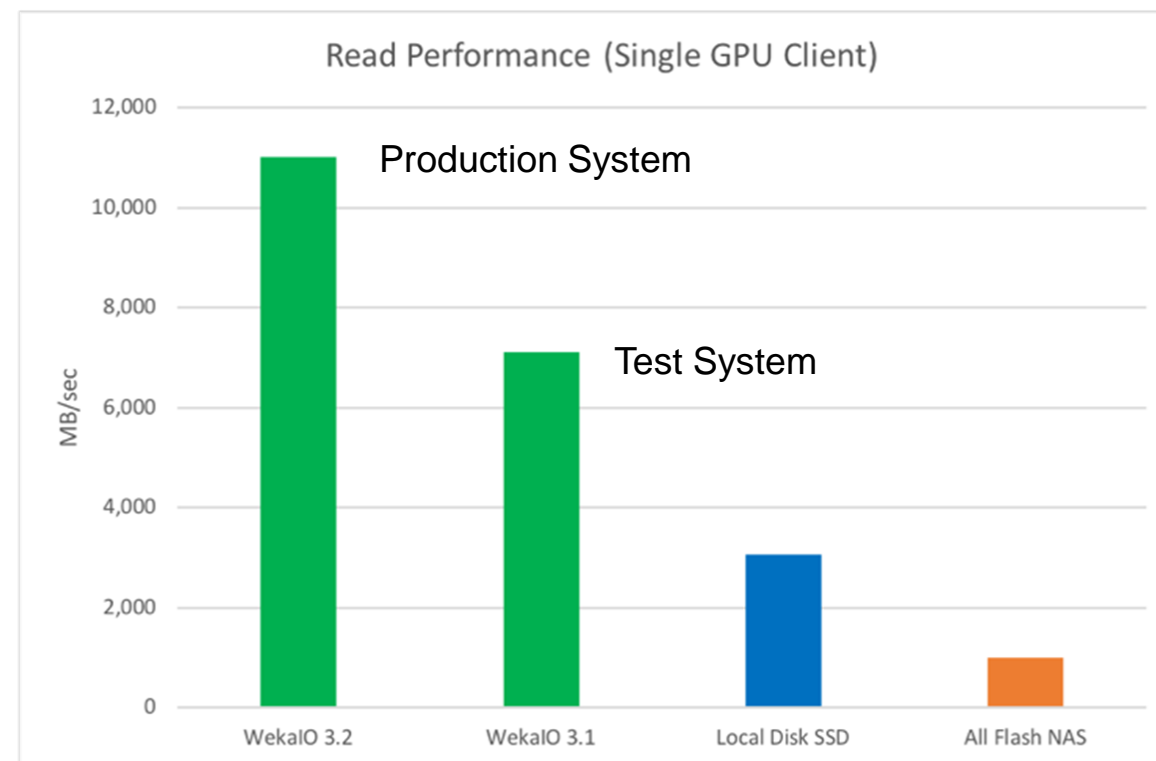


# Analytics Cluster Results to Single GPU Client

Actual measured data on an AI/ML GPU Cluster

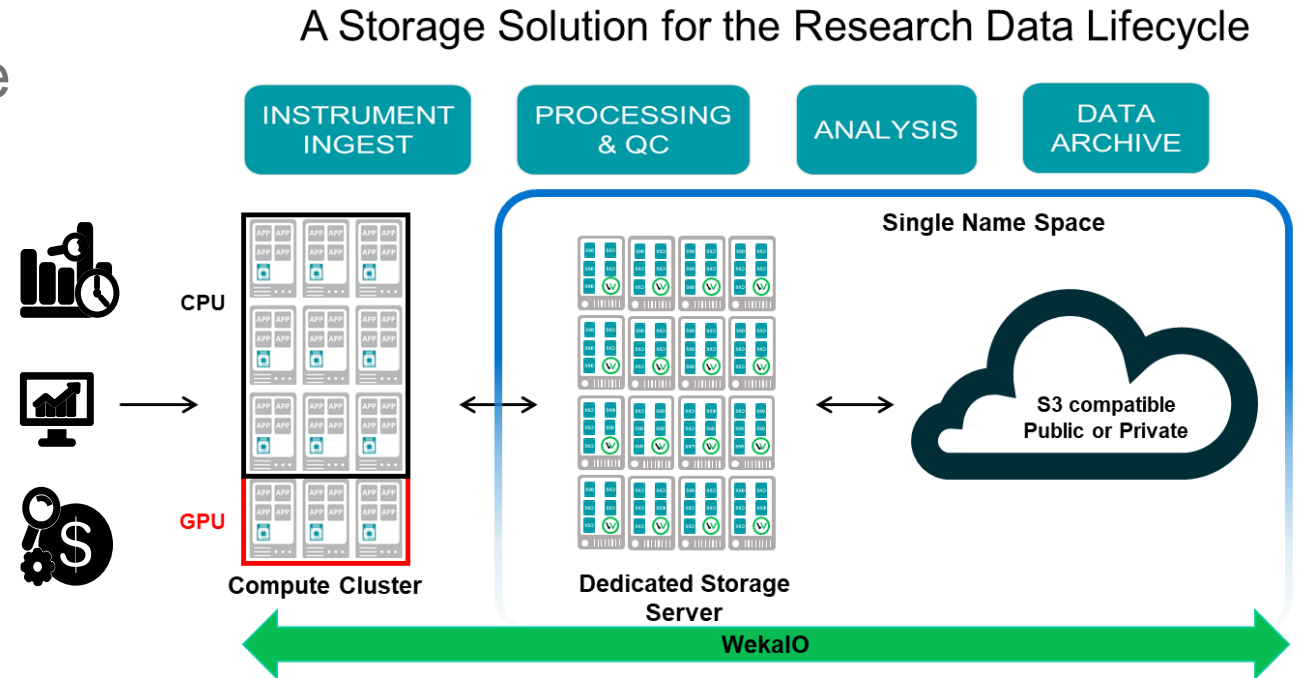
- **Problem:** Could provide data fast enough to GPU cluster
- **Pain Point:** Wasted cycle time (\$\$\$\$) on very expensive GPU clusters
- **Results:**
  - 3x reduction in training times
  - More productive Data Scientists
  - More efficient infrastructure usage

Over 10x Faster than NFS All Flash NAS



# Supporting Tomorrow's Analytics Applications

- Think Differently About Storage
  - Software bends the rules
  - Supports *AI at Scale*
  - Runs on standard hardware
  - Supports any workload
  - Ingest to Archive
  - Proven technology



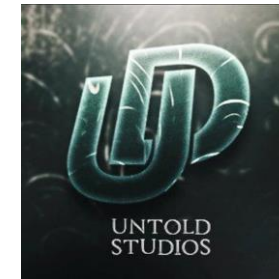


# Customer Proven

## On Premises



## Cloud







# Thank You

Andy@Weka.IO

Start.Weka.IO