ARES: A Next-Generation, Erasure Coded, Shared Distributed Storage System

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What is ARES

- write(v1)
- write(v2)
- read(v1)
- read(v2)

- contention
- congestion
- node failures
- asynchrony
- message loss
- delays
- link failures
- bandwidth limitations
What is ARES

ARES: Distributed Shared Memory

write(foo) → Foo
write(fee) → Fee
read(fee) → Fee
read(foo) → Foo
Nicolas C. Nicolaou, Viveck R. Cadambe, N. Prakash, Kishori M. Konwar, Muriel Médard, Nancy A. Lynch:

**ARES: Adaptive, Reconfigurable, Erasure Coded, Atomic Storage.**
What do we search for

**Scalability**
- Variable Participation
- Throughput Performance
- Various Loads

**Fault-Tolerance**
- Liveness of the service under failures
- Flexibility of the service when nodes join

**Comparison**
- Match performance to similar (commercial) solutions
Who is ARES good for

Next Generation of **Distributed Applications**
Thank you!

Find more:
https://projects.algolysis.com/ares-ngi/