Ways To Recover In-Memory Data On A Disaster

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Hello!

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IMDG = In-Memory Data Grid
PARTITIONING & REPLICATION
DATA PARTITIONING (aka SHARDING)

Cluster

Single Location
DATA REPLICATION

Primary

Backup
USE-CASE 1: SINGLE NODE CRASH
SINGLE NODE CRASH

Node A

Node B

Node C
Demo Time!
USE-CASE 2: MULTIPLE NODES CRASH
SOLUTION: MULTIPLE BACKUP REPLICAS
Demo Time!
USE-CASE 3: SPLIT-BRAIN SCENARIO
SPLIT-BRAIN SCENARIO

Node A

Node B

Node C

Node D

Node E
SPLIT-BRAIN SCENARIO

Node A

Node B

Node C

Node D

Node E
CAP THEOREM

✓ Consistency
✓ Availability
✓ Partition Tolerance
QUORUMS

For Split-brain Protection
MERGE POLICIES

For Split-brain Recovery
Demo Time!
USE-CASE 4: TOTAL CLUSTER CRASH
TOTAL CLUSTER CRASH
SOLUTION: DATABASE PERSISTENCE
SOLUTION: DATABASE PERSISTENCE

✓ Read-Through
✓ Write-Through
✓ Write-Behind
Demo Time!
SOLUTION: FILE PERSISTENCE

- Node A
- Node B
- Node C
Demo Time!
USE-CASE 5: DATA CENTER CRASH
DATA CENTER CRASH
SOLUTION: REPLICATE THROUGH WAN
WAN REPLICATION

✓ Active - Passive
✓ Active - Active
Demo Time!
Questions?

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