

CLOUDS AREN'T READY FOR QUANTUM (BUT QUMS ARE)

Why Fixed Pricing Will Save You From Quantum Chaos

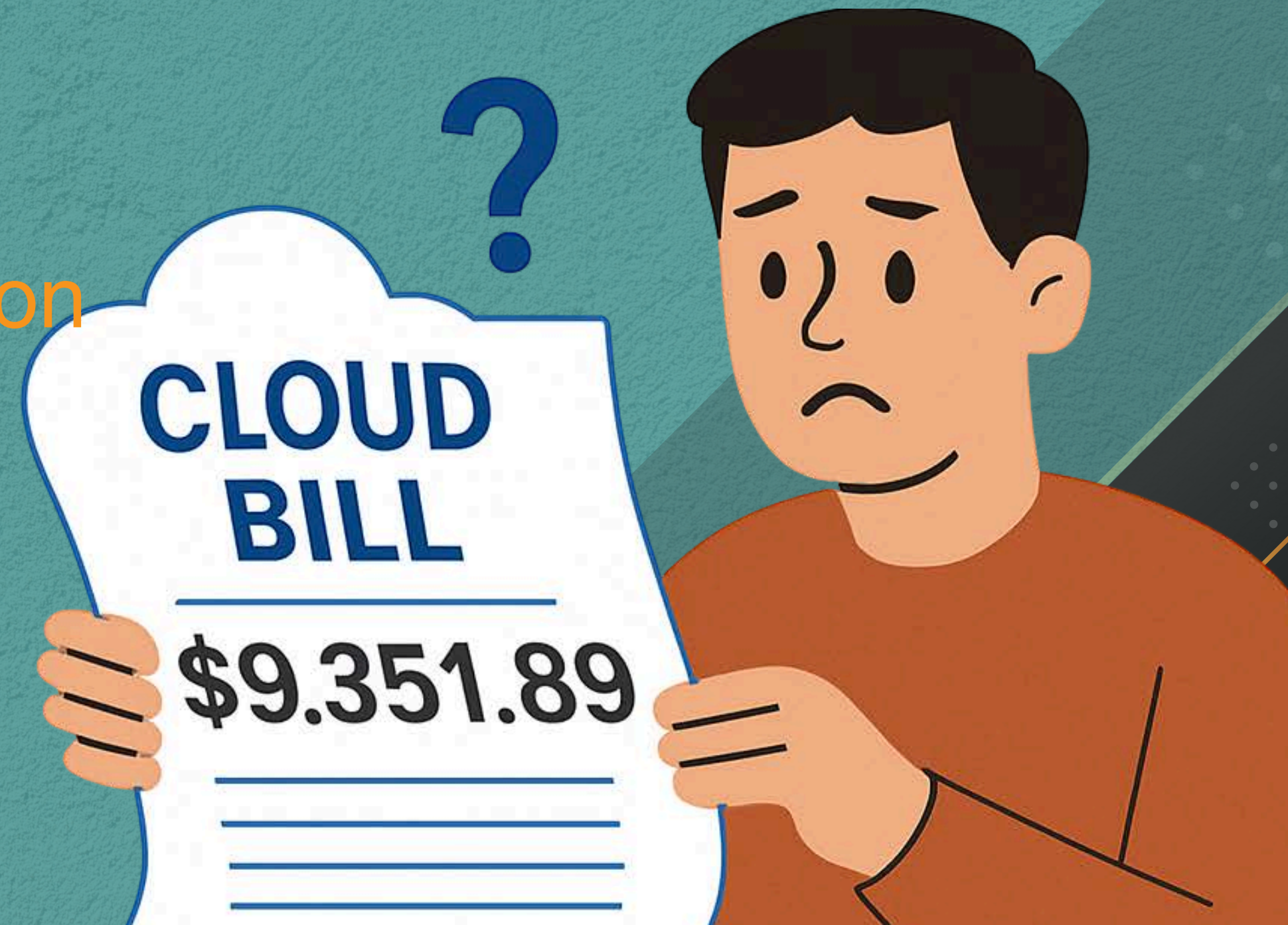
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Devrel @Qumulus



The Bill Horror Story

The Mistake:

- 50 servers instead of 5
- 3 days instead of 2 hours
- One auto-scaling configuration error



Classical Computer



vs

Quantum Computer



1. Classical vs Quantum Nightmare



2. Classical Bits vs Quantum Bits

Regular Computers: Bits

Quantum Computers: Qubits



Classical Bit vs Quantum bit

Classical bit



0 or 1

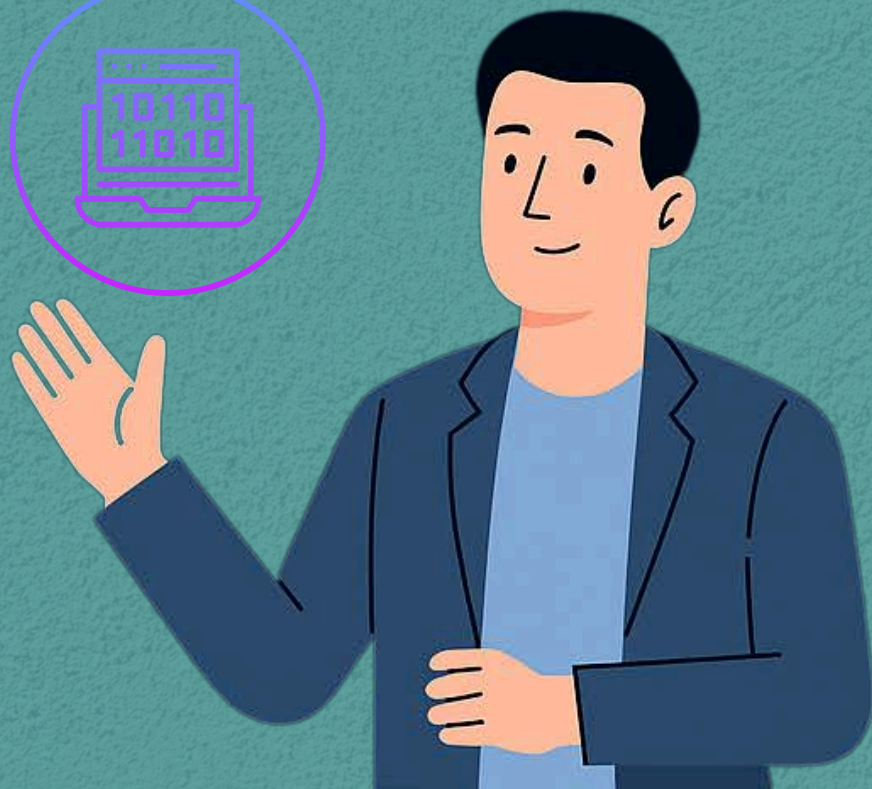
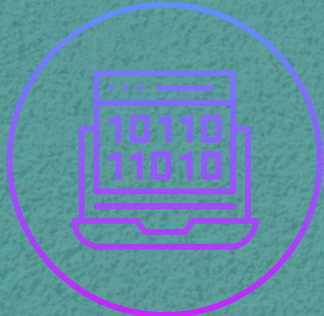
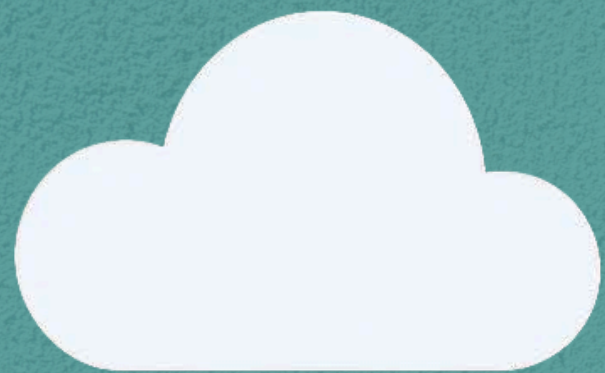
Quantum bit



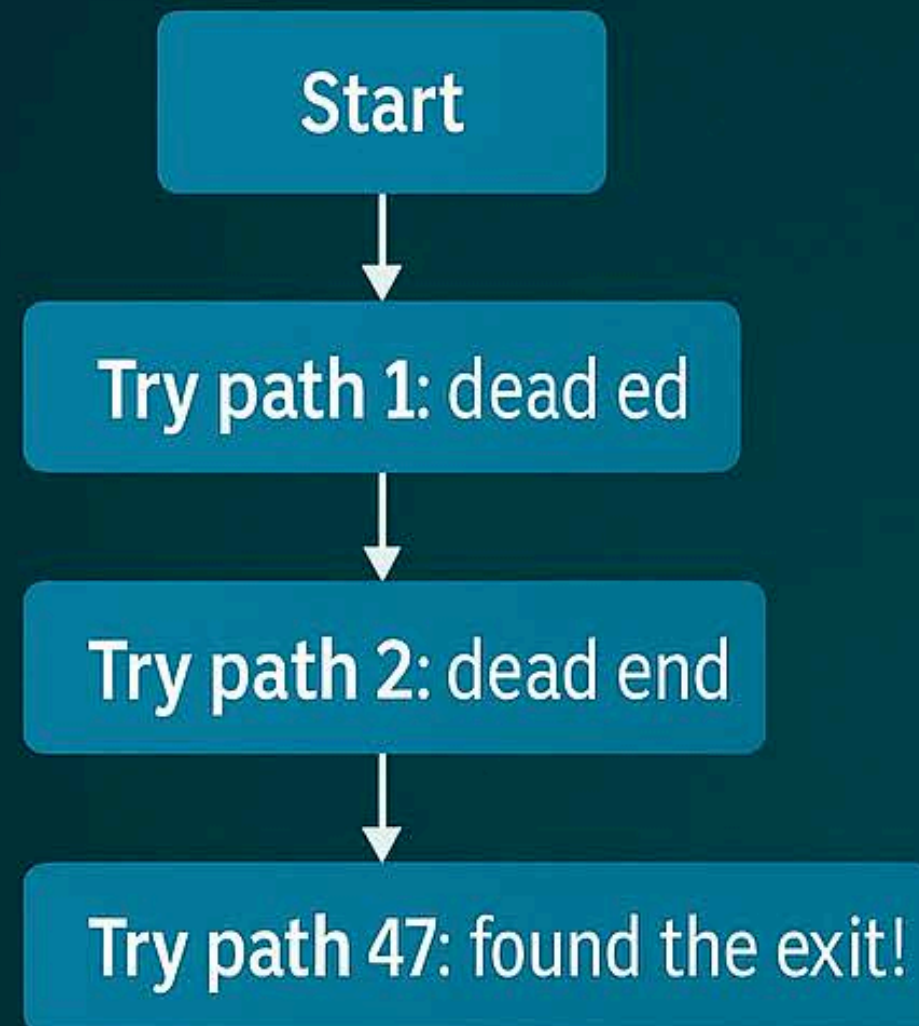
Superposition

0, 1, or both
0 AND 1 at the same time

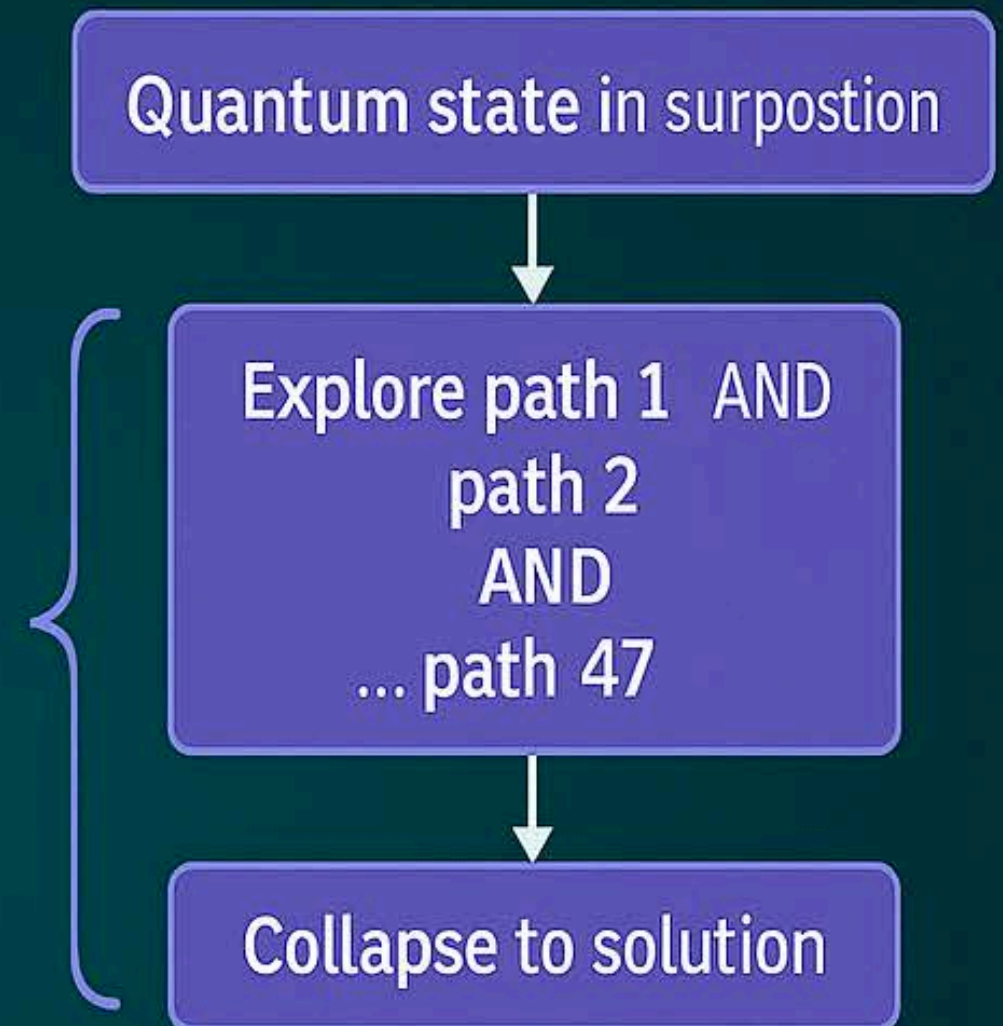
Maze Problem – Classical vs Quantum



Classical computer



Quantum computer



Result

QUANTUM CLOUD BILL - MARCH 2025

Quantum Processing Units: 47.3 hours @ \$50/hour = \$2,365
Quantum Error Correction: 147,000 operations @ \$0.01 = \$1,470
Quantum State Preparation: 500 initializations @ \$2 = \$1,000
Decoherence Recovery: 89 failures @ \$15 = \$1,335 Quantum-
Classical Interface: 15.7 GB @ \$0.50/GB = \$7.85 Quantum
Entanglement Maintenance: \$450 Cosmic Ray Interference
Mitigation: \$275 TOTAL: \$6,902.85

Classical Cloud Billing:

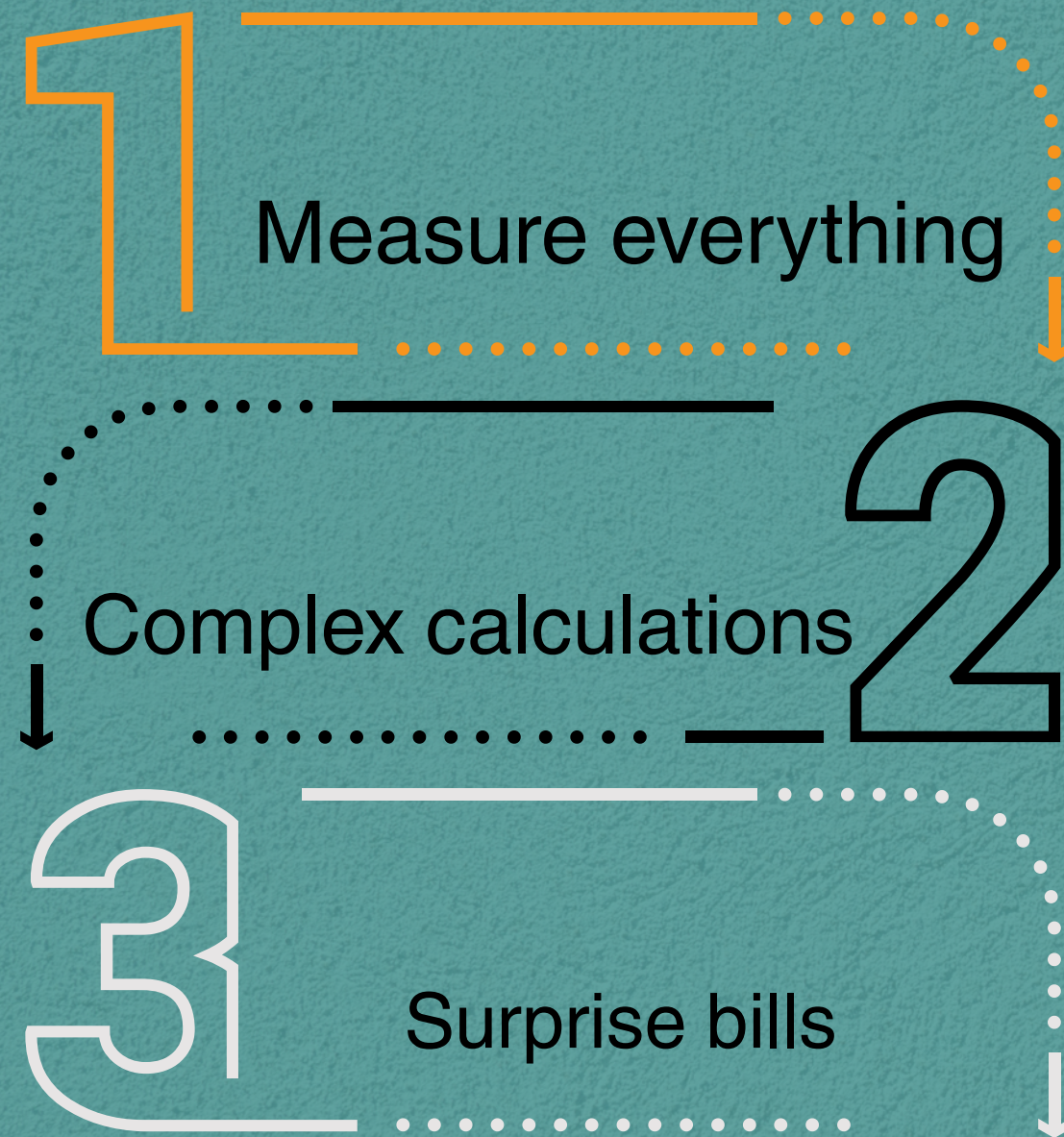
Known CPU + Known Memory + Known Storage = Predictable Cost

Quantum Cloud Billing:

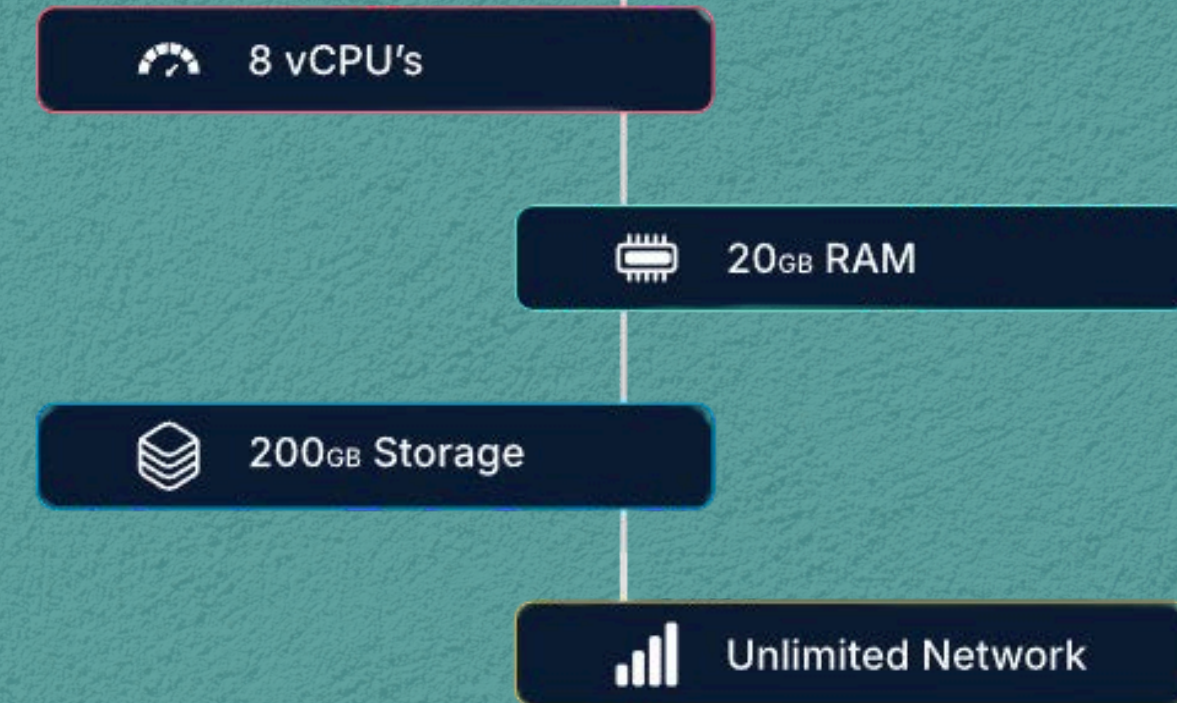
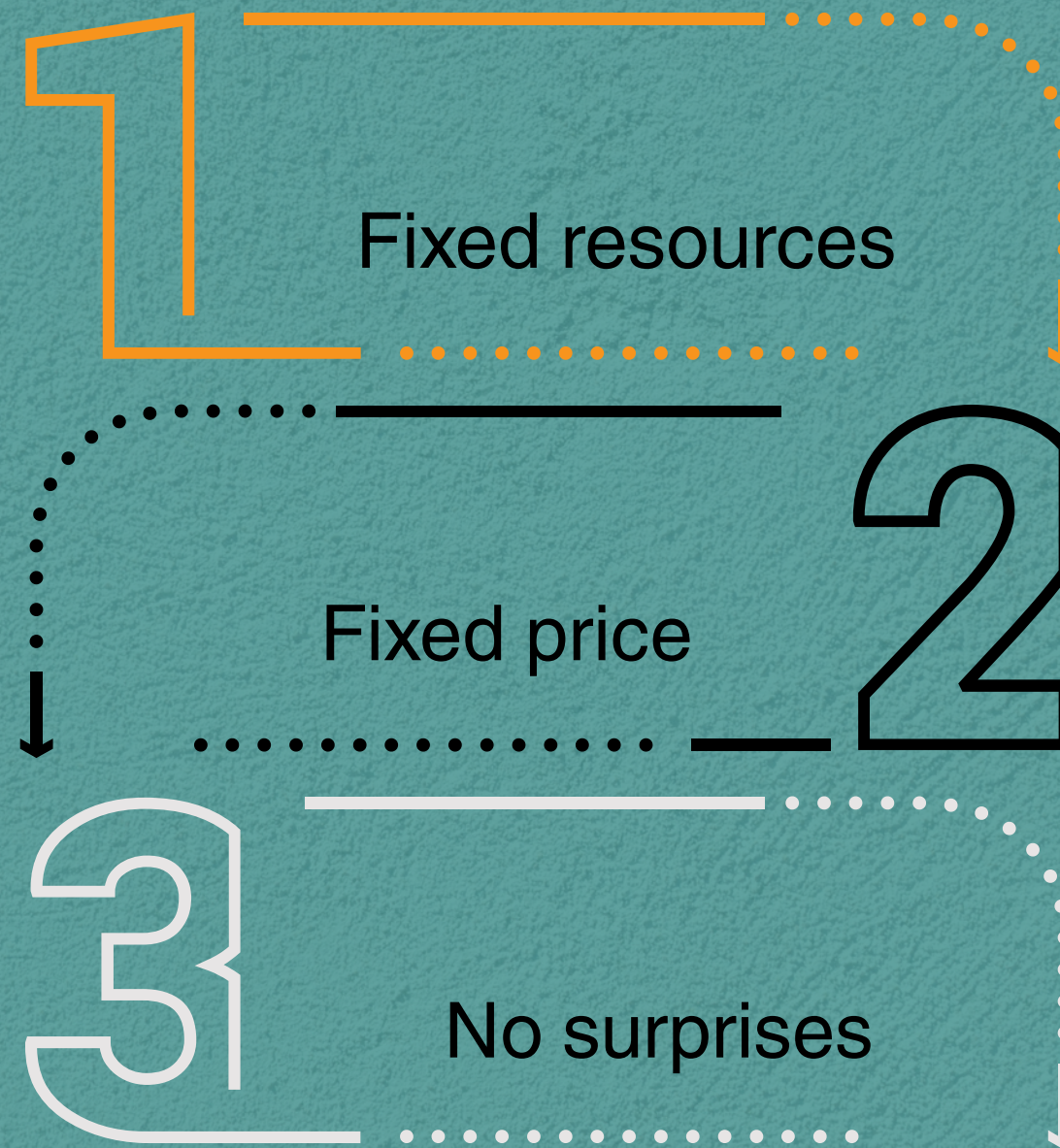
Unknown Time × Unknown Errors × Unknown Retries = ??? Cost

Meet Qumulus: The Company That Said 'What if we just... don't

Traditional Cloud Approach



Qumulus Approach



Meet Qumulus: The Company That Said 'What if we just... don't

BEFORE (AWS):

- Monthly bill: Somewhere between \$800 - \$4,200
- Time spent on cost optimization: 20% of engineering time
- Sleep quality: Terrible
- Ability to experiment: Limited by fear of costs
- Innovation rate: Slow

AFTER (Qumulus):

- Monthly bill: Predefined
- Time spent on cost optimization: 0%
- Sleep quality: Good
- Ability to experiment: Unlimited within resources
- Innovation rate: 3x faster

THANK YOU



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