Real-Time Crisis of Cloud Computing

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Abstract: *Cloud computing has become the backbone of modern business operations, yet it remains vulnerable to a range of disruptive crises that can cripple organizations overnight. This research examines the real-world incidents that have affected millions of users globally—from unexpected service outages and security breaches to performance degradation and vendor lock-in scenarios. By analysing the root causes behind these failures, we identify six critical contributing factors: infrastructure vulnerabilities cantered on single points of failure, human error in configuration management, the inherent complexity of interconnected systems, insufficient testing protocols, rapid scaling limitations, and evolving cyber security threats. Rather than dwelling on problems alone, this work presents a practical framework of mitigation strategies that organizations can implement today. These include adopting multi-region and multi-cloud architectures to build resilience, conducting regular security assessments, establishing automated backup and recovery systems, deploying continuous monitoring solutions, embracing zero-trust security principles, and fostering a culture of cloud security awareness through employee training. The research demonstrates that while cloud crises are inevitable, their impact can be significantly reduced through proactive planning, strategic redundancy, and a comprehensive incident response capability*

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