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Incident Response and Disaster Recovery in Cloud Computing

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Cloud computing has transformed IT service delivery with a pay-as-you-go model that simplifies software creation, deployment, and maintenance. It has also reshaped how businesses address security challenges, particularly in Incident Response (IR) and Disaster Recovery (DR). IR is a proactive approach to detecting, containing, and mitigating security risks, while DR focuses on restoring systems after failures caused by cyberattacks, system errors, or natural disasters. Unlike traditional on-premises IT environments, where organizations have full control, cloud-based environments rely on third-party providers, introducing new processes and responsibilities for managing IR and DR. Cloud security is now a shared responsibility between providers and customers, requiring close collaboration to ensure effective protection. This paper analyzes how cloud security management differs from traditional approaches, focusing on key principles and best practices for incident response and disaster recovery from a business perspective. It also examines a real-world cloud security breach to highlight the challenges businesses face in responding to incidents and recovering from disruptions. Additionally, it explores the latest advancements in automated disaster recovery, which enhance resilience and reliability. By understanding these concepts, businesses can strengthen their security posture, improve response strategies, and ensure seamless business continuity.