

Increase in the Use of Virtualization in IoT: A Comprehensive Analysis

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Abstract: *The Internet of Things (IoT) has revolutionized the way we interact with technology, enabling seamless connectivity and data exchange between physical devices. As the scale and complexity of IoT systems continue to grow, virtualization has emerged as a promising solution to address the challenges associated with device management, resource allocation, and security. This research paper presents a comprehensive analysis of the increasing use of virtualization in IoT, highlighting its benefits, challenges, and potential applications. Through an examination of existing literature, industry trends, and case studies, we explore the impact of virtualization on IoT infrastructure, device management, and security. Furthermore, we discuss the key factors driving the adoption of virtualization in IoT and provide insights into future research directions and potential areas for improvement.*

Keywords: Internet of Things (IoT), virtualization, virtual machines (VMs), containerization, resource optimization, security

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