Cloud deployment models: Standard and framework

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Abstract

This chapter provides a comprehensive overview of cloud deployment models, including public, private, hybrid, and community clouds, and their profound impact on modern IT infrastructure and the development of inclusive IoT smart systems. The selection of an appropriate cloud model significantly influences critical aspects such as data sovereignty, scalability, resource utilization, and crucially, the accessibility features for individuals with disabilities. We examine the distinct characteristics, advantages, and disadvantages of each model, highlighting how they cater to diverse organizational needs, from cost optimization and rapid provisioning in public clouds to enhanced security and control in private environments. The discussion also addresses the complexities and benefits of hybrid and community cloud approaches, emphasizing their role in enabling flexible, compliant, and collaborative computing solutions. Understanding these models is essential for

making informed strategic decisions that foster innovation and ensure equitable access to technology.

Indexed keywords

Engineering controlled terms

Cloud security; Distributed cloud

Engineering uncontrolled terms

Cloud deployments; Community clouds; Deployment models; Hybrid clouds; IT infrastructures; Private clouds; Public clouds; Public communities; Public-private; Smart System

Engineering main heading

Clouds

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