

Virtualization in cloud computing

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Abstract: This topic focuses on analyzing and proposing solutions for energy optimization in cloud computing systems. The reason for choosing this topic is the rapid development of cloud technology, which has placed increasingly high demands on energy efficiency. The objective of the research is to build a forecasting and management model for energy performance in cloud computing applications, thereby reducing operational costs and contributing to environmental protection. The research method combines theoretical analysis with practical experimental deployment to evaluate the effectiveness of the proposed solution. The significance of the work lies in providing a scientific basis for energy optimization in cloud computing, while also offering a direction for sustainable development in the information technology industry.

Keywords: Cloud computing, Energy optimization, Predictive model, Performance management