

A framework for evaluating security, trust, and efficiency of sustainable Cloud Computing for Big Data processing

Título A framework for evaluating security, trust, and efficiency of sustainable Cloud Computing for Big Data processing

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Abstract This thesis establishes a framework relying on the security of the Big Data (BD) over Cloud (BigCloud) architecture to improve security issues. Specifically, its research aims to examine the common features and the security challenges of this integration to provide an architecture relying on the security analysis, evaluation theory, and security by design of the cloud deployment architecture to improve the large-scale data processing security issues. Also, it aims at enhancing the cloud-based BD frameworks security in storage, motion, and process. Implementing best guidelines and practices for managing security related to BD operations over cloud computing technology and updating industry security guidelines, frameworks, and standards are of this thesis concerns. Moreover, this thesis introduces an analytical model for data-intensive use case (i.e., lot-to-cloud data streaming) security measurements, within any cloud-based framework. The thesis aims to fill the existing gap between the statistical representation of quality approaches of software engineering and the analysis of securing BD applications. Also, recommends best practices and measurements when constructing BD systems in both centralized and decentralized clouds. The proposed reference model and framework provides a comprehensive and fundamental basis to optimize the design of BigCloud frameworks regarding security ultimately.

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 Referencia BibTex

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