

S4-3 The Architecture of Cloud Application for Smart Grid

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Abstract

The technical characteristics of cloud computing satisfy the informational, interactive and intelligent requirements of the Smart Grid which counters the essential problems such as the distributed equipments maintenance, mass data storage, complex computing, and so on. At the same time, cloud computing can also bring the benefits of cost reduction, energy saving et al, which can do great assistance for the smart grid. For the data storage, computing features and QoS requirements of Smart Grid business systems, this paper has constructed the application architecture of Smart Grid, which is based on cloud computing. In addition, our research focuses on the correlative fields, such as the data storage platform, the core computing platform, maintenance management model, service management system, etc. On that basis, the availability of the cloud computing which apply to the Smart Grid was tested and verified by the specific application scenario. Besides advantage to design, development and implement of Smart Grid business application system brought by the cloud computing was also analyzed in this paper.