APPLICATIONS OF CLOUD COMPUTING FOR POWER SYSTEMS

Abstract:

In the past power system is evolved through different restructuring and policy changes at different periods. From the early stage of state owned monopoly energy providing service to smart grid driven customer and third party aggregators' participation in order to cope up to the ever growing energy demand in terms of capacity as well as the dynamics of end user consumption, demand side management, different energy generation systems and demand response. In this process information communication and computation systems are playing a major role in monitoring, controlling and improving the energy delivery system. In smart grid a vast amount of data is collected from every corner of the energy delivery network, from customer energy meters, energy generation units in the customer premises and third party players. This bi-directional information flow needs appropriate communication ways and the collected vast amount of data has to be processed in a reliable, distributed, parallel and scalable computing resources. On the other hand, the power system is lacking such computing capacity to address this requirement. Researchers suggest that cloud computing may be used to address this problem. In this paper the application of cloud computing for power system application is analysed. The feasibility study of the available cloud computing tools for smart grid is conducted.

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