Authentication Mechanism for Private Cloud of Enterprise

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Abstract

Enterprises need accurate and efficient reaction speed in their business processes. There are diversity information needs in different departments, locations, or offices around the world. When enterprises adopt private cloud and consider the cost condition, SSL VPN (Secure Sockets Layer Virtual Private Network) gateway is a possible solution. Integrating internal enterprise resource planning application to build a private cloud, the external users of company may use mobile device to access control resources at any time and any place, as long as the network. The main purpose of this research is to achieve the authentication for private cloud of enterprise. The proposed approach adopts three-layers authentication, namely (1) using AD/LDAP to authenticate the user id and password (2) using dynamic password generated from MOTP Token to improve authentication (3) using device fingerprint verification to confirm that the mobile device was pre-authenticated. Based on the proposed three-layer authentication, the information security of company could be achieved and further increasing the feasibility of enterprises to adopt enterprise private cloud.

Keyword：Cloud Computing, Authentication, Private Cloud, Secure Sockets Layer Virtual Private Network