

Abstract

With the popularity of the Wireless LAN, mobile workers are able to access various services or resources with seamless roaming, as well as mobile VPN, just via their handheld devices. Not only for the corporations but the Internet Service Providers(ISP), a secure and trusted remote access is required. User identity should be authenticated in advance, and the service providers grant or deny mobile users the access to resources according to their statuses. Besides, a usage-based accounting and billing is crucial to provide commercialized services within WLAN, and to benefit those service providers. As a result, a AAA architecture designed for coordinating the authentication, authorization and accounting between different administrative networks is required with urgent need.

The objective of this research is to provide a context-aware based AAA architecture which adopts context as the design principle to define access control policies. So the system can detect the changing contexts of mobile workers, re-authenticate user identity, adjust dynamically service permissions in the light of context-based access control policies, and bill the user taking into account the contexts efficiently. In this research, we take examples of roaming services and VPN to describe how the architecture works.

Keyword: AAA Architecture, Access control policy, context-aware, Wireless security