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Socially-Aware Management of New Overlay Applications Traffic - The Optimization Potentials of the SmartenIT Approach — Source link

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Abstract: Today's overlay-based mobile cloud applications determine a challenge to operators and cloud providers in terms of increasing traffic demands and energy costs. The social-aware management of overlay traffic is a promising optimization approach, which shows potential for improvements by exploiting social information. This paper identifies key stakeholders and their roles in the service provisioning value chain and outlines major markets and optimization potentials. Accordingly, two scenarios are developed: the end user focused scenario aiming at increased QoE for end users, and the operator focused scenario targeting at the highest operating efficiency in terms of low cost and high revenue for the operator. The energy efficiency plays a major role as a key performance metric in both scenarios. SmartenIT's socially-aware management approach is illustrated based on two example mechanisms for traffic optimization: the home router sharing mechanism (HORST) on the end user side, as well as the dynamic traffic management mechanism (DTM) on the operator side. The paper is concluded by a first sketch of SmartenIT's architecture and its mapping to the two scenarios

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Keywords

Application-layer traffic optimization Economic traffic management Social networks QoE Energy efficiency Inter-cloud communications

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