

Master-IT: Project work WS2010/2011

Topic: Tunneling layer 2 protocols over IPSec

Area: Network Security

Start: October 2010
Partner: BMBF Project "SKAT"
Tools: Linux, StrongSwan
Prerequisites: Good knowledge about network protocols

Description

With IPSec there exists a layer 3 protocol to secure IP traffic. To secure protocols which are defined on layer 2 of the ISO/OSI model (like Ethernet based protocols to be used in industrial automation application) the usage of IPSec with a tunneling protocol might be an option.

Goal

The goal of this project work is to evaluate layer 2 tunneling protocols. In particular, in carrying out this project work you should

- identify tunneling protocols which are suitable to be used with IPSec,
- build up a test system to evaluate the operation of these protocols,
- measure the performance overhead introduced by the application of tunneling protocols.

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