

Abstract

This thesis examines the construction of a secure network in a virtual laboratory from Eve-ng. The analysis of best practices for building networks is performed. Deep analysis of axioms and basics of network technologies. The components of the network used for the full functioning of the network are considered. Functions and available technologies for implementing network communication security. Network design is performed in a virtual laboratory from Eve-ng. The principles of architecture and the life cycle of building a network are considered. The issue of fault tolerance and survivability of the hardware complex used in the virtual environment is taken into account. A test network diagram was created for a medium-sized company. The scheme can be adapted and deployed for many typical medium-sized companies. The Eve-ng virtual lab is deployed in a Windows operating system environment.