MODERNIZATION OF THE LOCAL NETWORK ЛОКАЛЬНОЙ CITY AL-DIWANJA

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Modernization of local communication networks in the Republic of Iraq is an extremely important task. The relevance of this work is due to the fact that the ADSL2 + technology used by the population no longer fully satisfies the needs of users both in terms of quality and speed. For this reason, it becomes necessary to introduce a new network, install newer and more reliable equipment, and introduce new technologies. Multiservice networks play a huge role as it is necessary to satisfy the needs of customers in transferring various types of traffic and providing customers with a wide range of services. Meanwhile, data transmission channels suitable for providing one service are not always suitable for providing another. The increase in the volume of services provided forces operators and providers to develop several different networks in parallel. This is costly and often involves significant technical difficulties. The object of implementation was a multiservice local network of one of the districts of the city of Al-Diwaniyah (Iraq). This city is a fairly typical provincial city of Iraq, located in the southern part of the country. The modernization area includes several administrative buildings, a school and a number of residential buildings. The number of apartments in this group of houses is 1728, the expected number of subscribers should be about 50-60%. The projected local multiservice network should provide the ability to provide the following services:
- the interconnection of computers;
- access for users who order this service;
- - broadcasting over a local network - this service works only within the limits of our multiservice network;
- television (iptv) for workstations in the network; - access to file servers.

It has been proposed to use Fast Ethernet and Gigabit Ethernet technologies in the area, which will bring undeniable benefits. The projected multiservice Ethernet network, using a single channel for transmitting data of various types of traffic, allows to reduce the variety of types of equipment, improve the quality and bandwidth of the network, apply uniform standards and a single cabling system, and centrally manage the communication environment to provide the most complete range of services. The above possibilities allow to reduce the cost of designing and implementing a network, simplifies technical implementation, and also allows taking into account the needs of a modern user. The above possibilities allow reducing the cost of designing and implementing a network, simplifying technical implementation, and also allowing to take into account the needs of a modern user. Zyxel switches were chosen as SPD equipment, which made it possible to organize a secure and high-speed transfer. Zyxel switches were chosen as SPD equipment, which made it possible to organize safe and high-speed data transmission within the network, as well as to make reservation of connections at the core and distribution levels. The use of this equipment provided ample opportunities for monitoring, diagnostics, management of various network nodes, as well as automatic signaling in case of any problems in the network. transfer of data within the network, as well as perform reservation of connections at the core and distribution levels. The use of this equipment provided ample opportunities for monitoring, diagnostics, management of various network nodes, as well as automatic signaling in case of any problems in the network.

In conclusion, we can say that the proposed project of a multiservice Ethernet network in the Al Diwaniyah microdistrict will provide users of this network with high-quality, high-speed Internet access, as well as access to a huge volume of media content within the local network.