Local area network - LAN: Reference model OSI - Part IV

In the past, in the 1980s, the need to use the network exploded in the world in terms of the number and size of the network. But each network is designed and developed by a different manufacturer of hardware and software, which leads to the situation that networks are not compatible with each other and that networks from different manufacturers are not able to contact. together

In the past, in the 1980s, the need to use the network exploded in the world in terms of the number and size of the network. But each network is designed and developed by a different manufacturer of hardware and software, which leads to the situation that networks are not compatible with each other and that networks from different manufacturers are not able to contact. together. To address this issue, ISO - International Organization for Standardization studied various network models and in 1984 launched the OSI repository model to help different manufacturers rely on it. export devices (hardware and software) that can communicate and work together. ISO is rolled out to a 7-layer model (layers,) for the network, called the OSI (Open System Interconnection Reference Model) repository model.

Picture 1 of Local area network - LAN: Reference model OSI - Part IV

• **Layer 1: The Physical (Physical layer) layer This** class has issued technical standards for electricity, c, functions to form and maintain physical connection in the system. The specific characteristics of this class are: voltage level, voltage level transfer time, physical transfer rate, maximum distance, connections . The essence of this layer is the connection Network elements into a system with physical connections, at this level, there are procedures to enable the operational requirements to create physical transmission lines for information bit chains. • **Layer 2: Data link Layer (Data Link Layer) Data** connection layer provides data transfer capability through a physical connection. This class provides information about: physical address, network structure, method of accessing physical connections, error messages and traffic management on the network. • **Level 3: Network Layer (Network Layer)** The network layer that provides connectivity and the choice of path between two workstations can be located on two different networks. In the network layer data packets can be transmitted in different ways to reach the destination. Therefore, at this level it is not possible to show which path the data can go and which path is prohibited at that time. • **Level 4: The Transport Layer (Transport Layer)** The **Transport layer** splits data from the transmitting station and restores it to the original data at the receiving station and determines how the network handles the errors that arise when transmitting data. . This layer receives information from the contact layer, dividing them into small data points and passing them to the network layer. It is responsible for measuring the reliability of communication between two machines, setting, maintaining and disconnecting the circuit o. • **Level 5: Session (Session Layer)** Session class has the task of establishing, managing, and ending a session between two machines. This class provides services for Presentation class. It synchronizes the communication process between two computers and handles data exchange. • **Level 6: Presentation (Presentation Layer)** Class Presentation class uses the Application layer of one machine to read exactly the information that another computer sends. It is responsible for reformat the correct data required by the application in the upper layer. Functions that compress data, encode . belong to this class. • **Level 7: Application Layer (Application Layer)** The application layer works directly with the user and it provides

network services for user applications but does not provide services to other classes. This class establishes the ability to communicate between users, synchronize and set up error handling procedures and boast data integrity.