UDC 621.39 (043.2)

K.A. Zhukova
(National Aviation University, Ukraine)

Cloud computing in aviation industry. Benefits of cloud technologies in aviation.

The article includes a brief description of cloud computing, as well as a schematic diagram of the principle of data exchange in aviation. The main advantages of using cloud computing by airlines were presented.

Our world is constantly being filled with new technologies that expand our capabilities and develop global industries. With the fast development of a computing system, an efficient and effective provisioning system is necessary to help different companies easily access unlimited computing or storage power.

Cloud computing is the newest trend in corporate computing right now and airline companies should not be slow to take advantage of the opportunity. Cloud technologies are modern IT technologies, the principle of which is to provide access to data centers remotely. We consider it as an environment for storing and processing information, combining hardware, licensed software, communication channels, as well as technical support, which are provided to the user as an Internet service.

Equipping on-board equipment with cloud support will allow equipment manufacturers to quickly update the unit's firmware, update navigation bases and read flight information directly without the help of engineering and technical personnel [5].

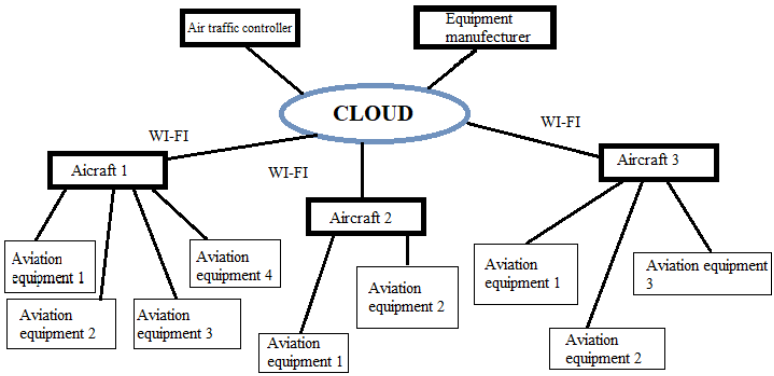

Fig.1 The principle of data exchange using the cloud

The figure 1 shows us the significance of cloud technologies in aviation communication systems.

The equipment manufacturer or air traffic controller uploads the necessary information or software to the cloud for subsequent upload to the aircraft. The aircraft

communicates with the cloud via a wireless communication channel. Each unit on an aircraft is assigned its unique number, which is called an address, so that the manufacturer can selectively change parameters for a specific modification of the aircraft type. It should be noted that for safety reasons, parameter changes or software updates should be carried out only when the aircraft is on the ground and connected to a power source [4 - 5].

Thus, the use of cloud technologies will make it possible to reduce the time of aircraft maintenance by automatically and promptly updating the navigation databases of the built-in software, writing off information from flight recorders and obtaining information about malfunctions in the operation of a particular system [1].

There are some advantages of using cloud computing in aviation industry. Cloud technology will allow us to travel in a different way. Today, about 67% of aviation companies believe that cloud services will change the world for the better, and 37% of organizations already have sufficient funds to introduce technology into workflows [2].

Moreover, cloud technology will save $ 30 billion over 15 years on fuel. The number of flight delays will also decrease and safety on board will increase - life jackets, oxygen masks and the operation of the aircraft will be constantly checked.

Departure, arrival or waiting processes will become more comfortable for passengers. Technologies will introduce the capabilities of automatic identification, smart tickets and smart travel recommendations [3].

I believe that by leveraging cloud services, airlines will be able to lower their total cost of ownership. This means there is no need to buy and maintain on-premises servers and hardware, or hire the appropriate IT team to manage them.

Furthermore, it also enables rapid deployment of apps and services — instead of sending instructions and updates to central ticket agents, airlines can deliver critical information in real time to a booking app that runs continuously on their desktops or mobile devices [1].

Cloud infrastructure also eliminates the need to purchase separate licenses for each workstation, resulting in lower costs and complexity.

It is worth noting that this helps to improve customer service. Airlines are innovating in self-service devices. They can allow their passengers to print their own tickets. Each passenger can independently check-in for the flight.

The disadvantages of cloud technologies include the high costs of creating your own cloud, which is not advisable for new enterprises. But as I previously mentioned, companies buy a service that includes technical support and a place in the cloud.

Conclusion

Cloud technologies will change the way we use things - work efficiency and easy and quick access will become a reality. In the world of such technologies, all existing devices are connected to each other - so, our life becomes easier and more convenient. It can be concluded that cloud computing is rapidly developing and is being used in the aviation industry.

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