Managing Mobile Devices in an Organization

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Abstract. *Questions regarding the use of Mobile Device Management systems in the organization are considered. The main areas of application of MDM technology are considered, an analysis of advantages and disadvantages, problematic issues of implementation is carried out. A consistent and clear approach in the implementation and configuration of MDM policies that meet the business goals of the organization will allow solving problems when using mobile devices.*

Keywords: *data protection, Mobile Device, Mobile Device Management, MDM, security policies.*

I. Introduction and Problem statement

Currently, mobile remote work of employees of an organization is becoming increasingly popular. Employees can work a variable number of days in the office, at home, on the train, on the customer's premises, using various mobile devices - smartphones, tablets and laptops. At the same time, the number of endpoints and operating systems in the organization's information system increases, the number of information security threats grows, which makes the task of protecting critical data quite complex.

The task of ensuring security, setting up and managing devices from anywhere and at any time is solved on the basis of Mobile Device Management (MDM) systems.

Mobile Device Management (MDM) is a software solution used to secure, monitor, manage, and support mobile devices in an organization. It enables the implementation of policies and security measures to ensure the protection of corporate data and provides administrators with complete control over mobile devices, applications, and content regardless of the operating system [1, 2].

The growing adoption of mobile devices, combined with more people working remotely, highlights the need for MDM solutions that protect user data regardless of where they connect to networks and what device they use. Therefore, an urgent task is to review the main areas of stagnation of MDM technology, analyze the advantages and shortcomings, problematic power supply.

II. Problem solution and Results

Along with MDM, EMM or UEM systems are often used, which differ in the scope of functions performed. Until about 2012, MDM systems were used exclusively for managing mobile devices. Later, manufacturers began to add functions to their solutions such as managing mobile applications, mobile content, and mobile security tools. Systems with such functionality were called Enterprise Mobility Management (EMM). The transfer of these systems to managing stationary devices was called Unified Endpoint Management (UEM). To designate narrower varieties of MDM, the names Mobile Application Management (MAM) and Mobile Content Management (MCM) are used [2-4].

At the moment, there are two options for the MDM solution to work: either locally, on the organization's servers, or as a cloud service on the provider's servers. Access to the MDM application is provided through the administrator console on the Internet.

The analysis showed that the main functions of MDM systems include:

- Continuous monitoring and the ability to obtain remote access to the system;
- Cloud technologies for automating all processes;
- Data recovery and backup;
- Password protection of important files, the presence of white and black lists, encryption, vulnerability patching, protection of the system from data leakage;
- Reporting in the log.

The main advantage of MDM solutions is that the organization gets an overview of all mobile devices, applications and data access used. This allows not only to manage mobile devices more efficiently, automate administration processes and work with lower costs, but is also a decisive factor in security. The disadvantage of MDM systems is the complexity of choice due to the wide range of solutions, as well as the complexity of deploying these systems in the organization.

Let's look at the main challenges of mobile device management. When employees use their own devices, the organization's confidential information becomes more vulnerable. Also, when implementing MDM, it is necessary to ensure that the user interface is minimally affected when defining configuration policies. Administrators should primarily focus on user interaction, because this will help to better configure mobile devices. In addition, the organization needs to implement special policies for lost/stolen devices. This is quite a difficult task, especially if the MDM solution used does not support remote blocking/wiping of lost/stolen devices. When organizing MDM, special attention should be paid to the implementation of strict policies for managing mobile applications. Without proper control, third-party applications can easily gain access to the organization's confidential data. The deployed MDM tool should offer support for synchronization with the existing device infrastructure in the organization.

III. Conclusions

The analysis showed that a consistent and clear approach to the implementation and well-established MDM policies, which correspond to the business goals of the organization, will help resolve problems with the use of mobile phones. they will be built and ensure the safety of their data.

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