Third-party sotfware installation in senhasegura

senhasegura

Security and Innovation team - SEGi9

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1 Objective

Security and Reliability are two important items in a company's critical security system. This text aims to demonstrate why these two items are so important for the company MT4, developer of the PAM senhasegura application.

2 Security and Reliability

In a mission-critical environment such as senhasegura, where a series of privileged information is stored, security and reliability attributes are a priority. The senhasegura engineering team performs a series of hardenings to ensure the security and reliability of the application.
Subsequent sessions will detail the activities carried out by MT4 to ensure senhasegura security and reliability.

2.1 Auditing

MT4 periodically hires market leaders in the security area to make an audit process on the senhasegura application and on the operating system that hosts it, called pentest. The purpose of this audition is to look for possible security flaws and improvements. From a final report provided by the contracted company, recommendations are applied in the application, whose objective is to make it even safer.

2.2 Hardening

The operating system where senhasegura is hosted undergoes a hardening process, where a thorough and constant analysis of the operating system is carried out in search of services, default settings, and unnecessary logical ports that are disabled so that the application can work correctly and safely.

2.3 Wazuh

Wazuh's EDR (Endpoint Detection and Response) security solution aims to detect threats, intrusion attempts, and unauthorized user actions and provide

security analysis. With this information collected and analyzed, the Wazuh tool creates a series of automated responses to combat a possible attack.

2.4 Firewall

senhasegura has an internal firewall that monitors attempts to login on to the application to detect possible attack attempts. Since the access attempt is classified as an attack, the action's source IP addresses are automatically blocked.

2.5 Reliability

Software reliability is broadly defined as the "probability of fault-free operation of a computer program, in a specified environment, during a specified time". When third-party software is installed alongside an application, it can cause instability.
An example of instability generated by third-party software occurs when the installed software aims to monitor the access traffic to the SQL database server, to avoid an attack of the SQL Injection type, but ends up causing a slowdown or instability in the operation.

2.6 Monitoring

senhasegura has a series of tools and protocols available to the administrator which are used to monitor and maintain the application. Below is a list of available items.

- Zabbix agent, which can integrate into Zabbix server;
- SNMP protocol is used to provide application health information;
- Native integration for SIEM-like applications.

2.7 Supply Chain

To avoid supply chain attacks, senhasegura prohibits the installation of third-party software in the application.
An example of a Supply Chain attack is the SolarWinds case, where cybercriminals gained access to the corporate environment through a compromised

update of the Orion software. After the break-in, the hacker used this access to produce and distribute trojan-laden updates to users of the software, spreading across highly strategic networks. All it took was installing a piece of software to compromise the entire security of the corporate network.

3 Conclusion

At the beginning of this document, the attributes Security and Reliability were mentioned. Given that the PAM senhasegura application deals with sensitive information, such as access credentials to servers and workstations present in the corporate network, the MT4 security team adopts an approach focused on efficiency. Minimizing the number of components in the environment where the PAM senhasegura application is installed results in a more robust security level.

4 Terms and Conditions

The “Software Usage” item of the MT4 Terms and Conditions, described below, specifies the prohibition of installing any third-party software in the senhasegura application.

By installing and using our software, you agree to the following terms and conditions:

- **You are not permitted to install third-party software inside our product’s operating system;**
- **Installing any third-party software without senhasegura’s company authorization could interfere with our product’s performance and stability, cause the product to malfunction, and is not allowed.**

For more information, please consult the following URLs:

- senhasegura EULA
- Terms and Conditions

Documment Control
FSR-1052

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