Know More About Vulnerability Databases

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In brief

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It is for this that the first vulnerability database began to appear in 1973, which allows diagnosing software risks, as well as classifying them into a single list, giving each of them a code name, and distributing them depending on the level of danger, the severity of consequences and other parameters. The following describes in detail all types of vulnerabilities and also explains how databases are compiled.

Main types of databases of vulnerabilities

As mentioned above, databases of vulnerabilities have existed for many years. Therefore, developers and analysts in the field of progressive IT technologies today will apply the following types of classification data of possible computer risks in case of cyber-attacks:

- ISS X-Force - The vulners cve database was created as one of the first and is still actively replenished and used in practice.
- Symantec/Security Focus BID - It is one of the main products that provide a complete systematization of vulnerabilities.
- OSVDB - The presence of open-source code distinguishes this database.
- NVD - This software product is necessary to create national cyber security after identifying all risks.
- MITER - It is considered one of the newest and most innovative vulnerability databases presented to IT professionals today.

Thus, the platforms listed above are compiled by authoritative expert agnates, are poured with polarity all over the world, are catalytic and reliable, and more than 120 thousand different types of vulnerabilities can be found in information repositories.

What are vulnerability databases for?

All databases of vulnerabilities officially registered on the IT technology market belong to reputable commercial agencies and are one of the main sources of important information for developers of computer security systems based on their analysis. Thus, such databases are designed to produce the following results:

- Collecting basic information about recently reported computer risks.
- Compilation and storage of reliable resources of system catalogs of identified vulnerabilities, assigning each of them a unique numeric or alphabetic code.

- Preparation of letters of recommendation and notices upon individual request or as part of a periodic subscription of interested IT specialists working in the field of cyber security.

- Timely informing the management of large companies and other users about new vulnerabilities, indicating the risks and consequences, in case of ignoring problems or violating plans to fix them.

- After analyzing vulnerabilities databases, IT specialists quickly upgrade software and install special shields in the form of new program codes on intellectual products and information storage. This means that hackers will no longer be able to quickly break into a fully secure system until new risks and problems are identified.

Thus, the databases in question are the main ways for developers to obtain important information, based on which they carry out a complete renovation of program codes, which excludes entire enterprises or government structures from any risks and third-party intrusion.

What parameters allow you to accurately assess the degree of vulnerability of a software or system?

For an accurate and complete assessment of the degree of risk that can lead to negative consequences due to cyber-attacks, the following three important parameters must be taken into account:

Basic - Here, experts evaluate the overall vulnerabilities of the system without reference to time or changing environment. The proper level of cyber security, the reliability of shields that

protect against third-party attacks

, and the quality of encryption of unique codes for each significant cluster are checked. At this stage, experts also identify possible negative consequences that may occur after hacking the system by intruders.

Temporary - Potential hazards that arise over time are assessed at this stage. Thus, a specialist can predict the exact or approximate date for retesting all systems and storing vital information to identify new vulnerabilities.

When the environment changes - This stage is critical because system testing concerns a specific business or structure with important data or complex server equipment. In this case, the global situation in the world of cyber security is also taken into account, as well as its development trends, to promptly offer interested parties the installation of a new release of protective software code.

This means that the creation of a database of vulnerabilities is only the initial stage of risk assessment since periodic monitoring of the emergence of new hazards is required, as well as forecasting their development or mutation in the IT environment.

What are the main categories of computer vulnerabilities?

Creating databases with a classification of vulnerabilities involves taking into account the following risk factors and ways to identify hazards:

- Initial deployment of program codes. This stage of the analysis hides many pitfalls since, at startup, the system can work without visible failures. However, at the program level, irreversible processes occur inside, which can lead to negative consequences.

- SQL injection is one of the most important techniques of IT specialists. It consists of loading a specific file into the program code, which works as an identifier for malicious modules and damaged clusters. Such software diagnostics allow you to quickly identify failures, vulnerabilities, and other complexities that need to be fixed immediately.

- Detection errors in database settings is a very dangerous type of vulnerability since, in large companies, the information storage sizes reach enormously. This suggests checking each cluster to identify the current problem and find the most dangerous vulnerabilities. Unfortunately, attackers often take advantage of users' disregard for such rules and hack database systems.

- The last vulnerability lies in the consequences of poor-quality auditing of program code and clusters for storing information. In such situations, as a rule, large companies resort to attracting several independent auditors at once, after which they summarize all the analysis results into a single report with conclusions and recommendations.

It should be taken into account that every large company or government structure with ample information storage must be reliably protected from third-party attacks, and it is the modern Vulnerability database that allows you to achieve optimal and complete systematization of risks, making decisions on their immediate elimination, in case of identification.

References

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