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Terminato	martedì, 9 gennaio 2024, 18:39
Tempo impiegato	14 min. 23 secondi
Valutazione	14,00 su un massimo di 17,00 (82,35%)

Domanda 1

Risposta errata

Which statement accurately describes the role of Google SafetyNet Attestation in mobile app development?

- ☐ a. Google SafetyNet Attestation ensures the security and integrity of the **device's hardware**.
- ☒ b. Google SafetyNet Attestation ensures the security and integrity of the **device's software**. ✖
- ☐ c. Google SafetyNet Attestation ensures the security and integrity of the **device's software and hardware**.

Risposta errata.

La risposta corretta è:

Google SafetyNet Attestation ensures the security and integrity of the **device's software and hardware**.

Domanda 2

Risposta corretta

Which of the following best describes the purpose of the Android bootloader in the device's boot process?

- ☐ a. The bootloader determines the **order** in which system components are loaded during startup.
- ☐ b. The bootloader is responsible for executing device **drivers** and managing **peripheral devices**.
- ☒ c. The bootloader verifies the **integrity** of the operating system and allows for its secure boot process. ✔

Risposta corretta.

La risposta corretta è:

The bootloader verifies the **integrity** of the operating system and allows for its secure boot process.

Domanda 3

Risposta corretta

[Webmail](#) | [Uniweb](#)

Which one is **NOT** a booting mode for a device?

- ☒ a. Debug mode. ✓
- ☐ b. Recovery mode.
- ☐ c. Normal mode.

Risposta corretta.

La risposta corretta è:
Debug mode.

Domanda 4

Risposta corretta

What is the primary purpose of Android TrustZone in mobile device architecture?

- ☐ a. TrustZone ensures **hardware-based** isolation for secure execution of **sensitive operations**.
- ☒ b. TrustZone ensures **hardware-based** isolation for secure execution of **sensitive operations and data**. ✓
- ☐ c. TrustZone ensures **software-based** isolation for secure execution of **sensitive operations and data**.

Risposta corretta.

La risposta corretta è:
TrustZone ensures **hardware-based** isolation for secure execution of **sensitive operations and data**.

Domanda 5

Risposta errata

Identify which one is an **UNCOMMON** threat model

- ☐ a. Due to the Android OS fragmentation, **older or customized versions may have unpatched vulnerabilities**. Attackers can target specific OS versions or take advantage of inconsistencies across devices.
- ☐ b. **Installation of malicious apps** that are disguised as legitimate applications and may perform activities such as data theft, unauthorized access, or aggressive advertising.
- ☒ c. **Android devices connected to various networks**, including public Wi-Fi networks, which can expose them to network-based attacks. ✗

Risposta errata.

La risposta corretta è:
Due to the Android OS fragmentation, **older or customized versions may have unpatched vulnerabilities**. Attackers can target specific OS versions or take advantage of inconsistencies across devices.

Domanda 6

Risposta corretta

[Webmail](#) | [Uniweb](#)

Which classes of attacker can we have in a threat model?

- ☐ a. Remote, close or local
- ☒ b. Remote, proximal or local ✓
- ☐ c. External, proximal or internal

Risposta corretta.

La risposta corretta è:

Remote, proximal or local

Domanda 7

Risposta corretta

Select the correct statement

- ☒ a. Attackers rely on **security vulnerabilities** to bypass the **technical gap** between the **threat model** and the **attacker's aim**. ✓
- ☐ b. Attackers rely on **security exploits** to bypass the **technical gap** between the **threat model** and the **attacker's aim**.
- ☐ c. Attackers rely on **security vulnerabilities** to bypass the **technical gap** between the **defence model** and the **attacker's aim**.

Risposta corretta.

La risposta corretta è:

Attackers rely on **security vulnerabilities** to bypass the **technical gap** between the **threat model** and the **attacker's aim**.

Domanda 8

Risposta corretta

Which one is **NOT** a vulnerability type?

- ☐ a. Elevation of privilege
- ☐ b. Information disclosure
- ☒ c. OS fragmentation ✓

Risposta corretta.

La risposta corretta è:

OS fragmentation

Domanda 9

Risposta corretta

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What is a repackaging attack?

- ☒ a. It is a malicious technique where an attacker **modifies** an **existing** app by adding malicious code and **redistributing** it. ✓
- ☐ b. It is a malicious technique where an attacker **modifies** an **existing** app by adding malicious code at **runtime**.
- ☐ c. It is a malicious technique where an attacker **creates a new** app by adding malicious code and **redistributing** it.

Risposta corretta.

La risposta corretta è:

It is a malicious technique where an attacker **modifies** an **existing** app by adding malicious code and **redistributing** it.

Domanda 10

Risposta corretta

What is symbolic execution?

- ☒ a. Symbolic execution is a method that explores **all possible program paths** by using symbolic values as inputs to **detect program vulnerabilities** or **generate test cases**. ✓
- ☐ b. Symbolic execution is a method that explores **all possible program paths** by using symbolic values as inputs to **cause program crashes**.
- ☐ c. Symbolic execution is a method that explores **all reachable program paths** by using symbolic values as inputs to **launch exploits**.

Risposta corretta.

La risposta corretta è:

Symbolic execution is a method that explores **all possible program paths** by using symbolic values as inputs to **detect program vulnerabilities** or **generate test cases**.

Domanda 11

Risposta corretta

What is the primary purpose of the Android Zygote process?

- ☐ a. It manages the **communication between the Android runtime and the hardware components**.
- ☒ b. It handles the **management of app processes and their life cycles**. ✓
- ☐ c. It is responsible for **compiling and optimizing the Java bytecode** of Android apps.

Risposta corretta.

La risposta corretta è:

It handles the **management of app processes and their life cycles**.

Domanda 12

Risposta corretta

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Which information is **NOT** contained in an Android app certificate?

- ☐ a. The issuer, i.e. the entity that issued the certificate.
- ☐ b. The validity period.
- ☒ c. The developer private key. ✓

Risposta corretta.

La risposta corretta è:

The developer private key.

Domanda 13

Risposta corretta

How does a bound service in Android communicate with components in the application?

- ☐ a. Bound services communicate using **explicit intents**.
- ☐ b. Bound services use **broadcast receivers** for communication.
- ☒ c. Bound services provide an **interface** through which components can bind and communicate. ✓

Risposta corretta.

La risposta corretta è:

Bound services provide an **interface** through which components can bind and communicate.

Domanda 14

Risposta corretta

How does an Android Content Provider facilitate data sharing between different applications?

- ☒ a. Content Providers provide a **structured interface** for accessing and sharing data between applications. ✓
- ☐ b. Content Providers use **implicit intents** to share data between applications.
- ☐ c. Content Providers **expose a set of APIs** for inter-process communication.

Risposta corretta.

La risposta corretta è:

Content Providers provide a **structured interface** for accessing and sharing data between applications.

The Android instrumentation

- ☒ a. provides a framework for running tests on Android applications, automating interactions, and monitoring the application's behavior **during testing and debugging.** ✓
- ☐ b. provides a framework for running tests on Android applications, automating interactions, and monitoring the application's behavior **during the compilation.**
- ☐ c. provides a framework for running tests on Android applications, automating interactions, and monitoring the application's behavior **during the development**

Risposta corretta.

La risposta corretta è:

provides a framework for running tests on Android applications, automating interactions, and monitoring the application's behavior **during testing and debugging.**

What is the purpose of taint analysis?

- ☒ a. to track and identify the **data flow.** ✓
- ☐ b. to help in **optimizing** code execution.
- ☐ c. to identify **memory leaks** in a software application.

Risposta corretta.

La risposta corretta è:

to track and identify the **data flow.**

Which technique is mostly affected by scalability issues?

- ☒ a. Dynamic analysis. ✗
- ☐ b. Taint analysis.
- ☐ c. Static analysis.

Risposta errata.

La risposta corretta è:

Static analysis.