



BUHLE POWER

Home base station communication interception





Overview

Does a fake base station make a connection?

In such attacks, the prerequisite is transmission of the signal at a higher strength than a legitimate base station ; hence, the base station with higher signal strength is always able to lure the user equipment to connect to it. Previous research also specifically studied the threat impacts after a fake base station makes a connection.

Can a fake base station deprive cellular services from a legitimate base station?

Without our defense scheme, the fake base station can deprive the user equipment of cellular services from the legitimate base station for an indefinitely long time, as we describe in Section 4.1. However, with our scheme implemented, the threat impact is significantly less in time duration.

Can mobile networks detect false base stations?

SA3 has described a solid framework based on this information, enabling mobile networks to reliably detect such false base stations. The framework complements other mechanisms introduced in 5G to protect users against false base stations, for example encrypted long-term identifiers and fresh short-term identifiers.

Can a fake base station exploit a randomized selection?

The fake base station cannot exploit the randomized selection to make the user equipment connect to it with 100% 100 % probability. An attacker can attempt to launch a threat beyond just availability and disrupting the connectivity, such as attempting to make the victim user equipment connect to a fake server.



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[Real-Time Rogue Base Stations Detection System in Cellular ...](#)

Apr 10, 2024 · Recently, rogue base station (RBS) attack is growing common. A RBS attack occurs when an attacker uses a fake base station (FBS) to mimic a legitimate base station, ...



[Detecting false base stations in mobile networks](#)

Device-Assisted Network-Based DetectionDevice-Assisted PartNetwork-Based PartExperiments in Our LabRoad AheadThe device-assisted part of the detection framework uses measurement configuration and measurement reporting procedures. The measurement reports from devices are very effective in detecting false base stations, as will be described later. Because the measurement reports already exist in all generations of mobile networks to manage device mobility, See more on ericsson arXiv [PDF]

Precheck Sequence Based False Base Station Detection ...

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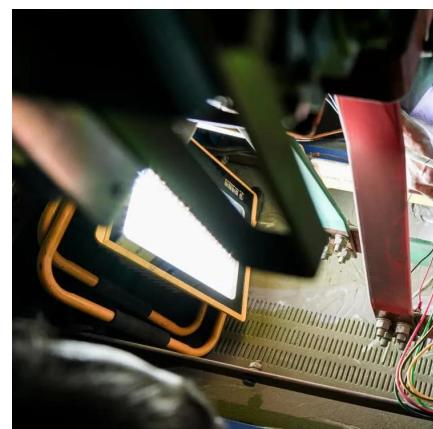
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[Catch You Cause I Can: Busting Rogue Base Stations using ...](#)

(2) Traffic Interception and Manipulation. Base stations offer access to Internet and telephony services. An could be used for Machine-in-the-Middle (MitM) attacks to intercept and ...

[Detecting and Mitigating Rogue Base Stations](#)

Jul 7, 2025 · Implementing end-to-end encryption for voice and data communications can significantly reduce the risk of interception by rogue base stations. Secure communication ...



[Location-Invariant Radio Frequency Fingerprint for Base Station](#)

Jun 7, 2023 · Pseudo base station (BS) is an illegal radio device that exploits the security vulnerabilities of fifth generation (5G) communications and then implements corresponding ...

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