
Abnormal communication between Vox and base station

Can fake base station attacks be detected?

For the first time, we systematically study fake base station attacks and their main influencing factors. We use a specification-conform simulation model that lets us analyze fake base station attacks on a large scale, and test detection mechanisms on the generated data.

What is a faulty base station vs a fake base station?

We varied the base station implementation to simulate legitimate vs. faulty but legitimate vs. fake and malicious base stations, where a faulty base station notifies the user of the connectivity disruption and releases the session, while a fake base station continues to hold the session.

What happens if user equipment connects to a fake base station?

Once the benign user equipment connects to the fake base station at the RRC layer, the adversary can launch a protocol downgrade from 5G/4G to 2G (i.e., bidding down) attack ; user equipment device identification attack ; SMS phishing attack [10, 11]; or an attack that drains the user equipment battery [9, 12].

What is a false base station attack?

A false base station attack takes advantage on the common behavior of User Equipment(UE), which tends to connect to the strongest signal available. The exploit involves broadcasting a stronger signal to lure the UE into connecting, after which various active and passive attacks can be initiated .

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, ...

The advancement of cellular communication technology has profoundly transformed human life. People can now watch high-definition videos anytime, anywhere, and ...

Hui-Ming Wang, Senior Member, IEEE Abstract--Fake base station (FBS) attack is a great security challenge to wireless user equipment (UE). During the cell selection stage, ...

Abstract Fake base stations (FBS) -- also known as IMSI catchers and Stingrays -- can identify and track mobile phones and further intercept their communication. They ...

User equipment connects to the remote Internet and services through multiple nodes, the first of which is a base station. To support its mobility, user equipment connects to ...

Base stations and cell towers are critical components of cellular communication systems, serving as the infrastructure that supports seamless mobile connectivity. These ...

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