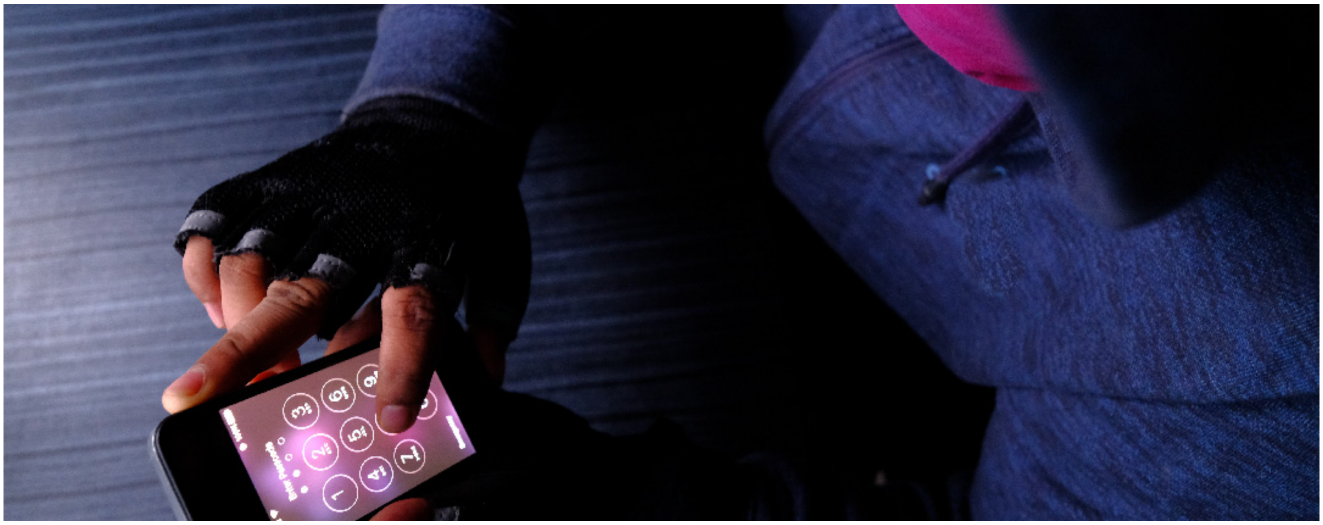
Android Spyware Targeting Tanzania Premier League

zscaler.com/blogs/research/android-spyware-targeting-tanzania-premier-league



The Zscaler ThreatLabZ team is always hunting for malware out in the wild. Recently, there have been endless cases where attackers were targeting mobile users with malware leveraging the COVID-19 pandemic.

Amidst all the COVID-related malware activities, we actually came across some Android malware samples that weren't COVID-19 related. Instead, they were targeting the ongoing Tanzania Mainland Premier League football season. The Tanzania Mainland Premier League is the top-level professional football (or soccer, as it is most commonly known here in the United States) league in Tanzania, Africa.

We came across some of the Android Packages (APKs) that were targeting two of the most famous football clubs in Africa, namely Simba SC and Yanga (Young Africans) SC.

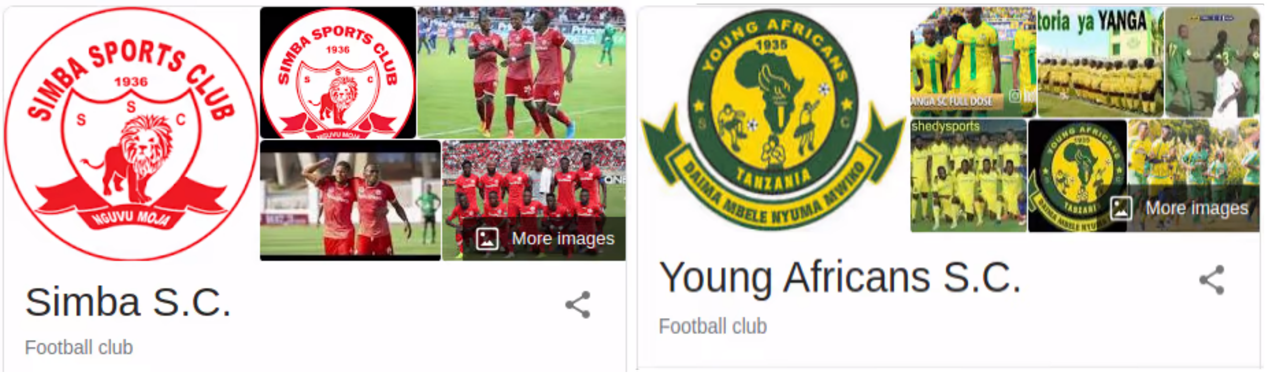


Figure 1: Logos for the Tanzania football clubs targeted in a recent scam.

We also found some legit apps on the Google Play store that are related to these clubs. As seen in Figure 2, the spyware portrays itself as official apps of the above-mentioned teams.

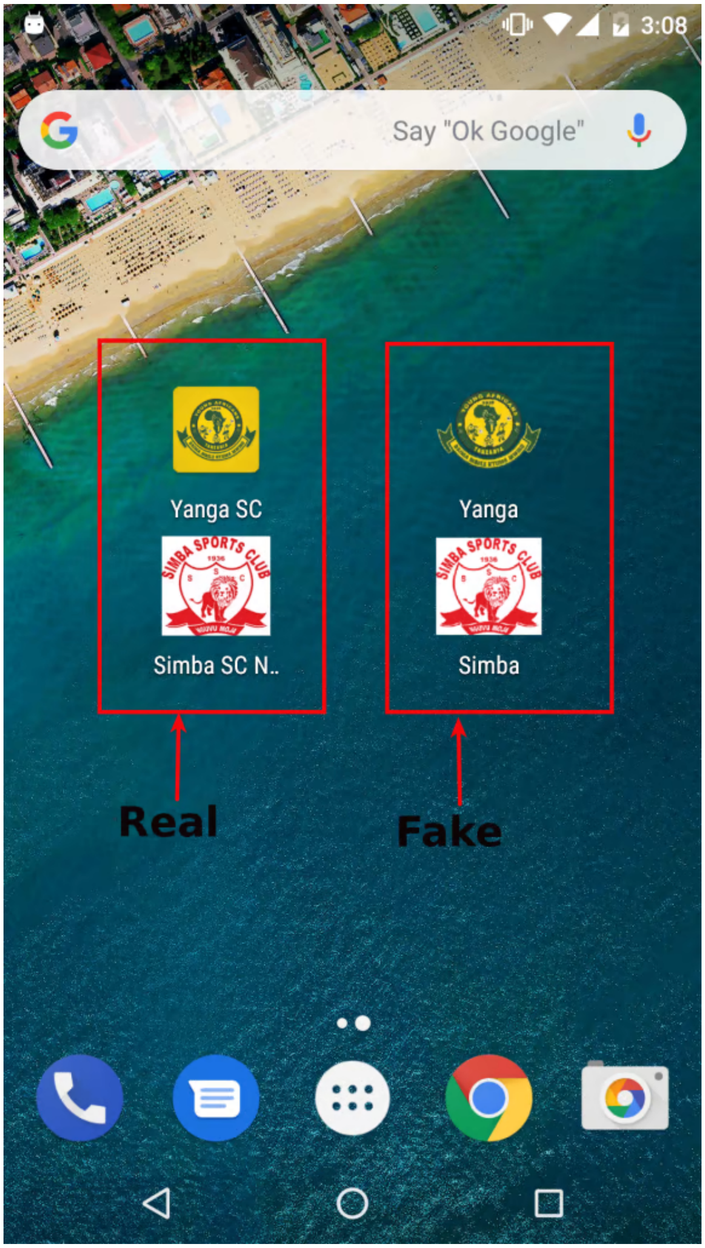


Figure 2: Real vs. fake logos for Simba SC and Yanga SC.

These apps are basically spyware, which include the following capabilities:

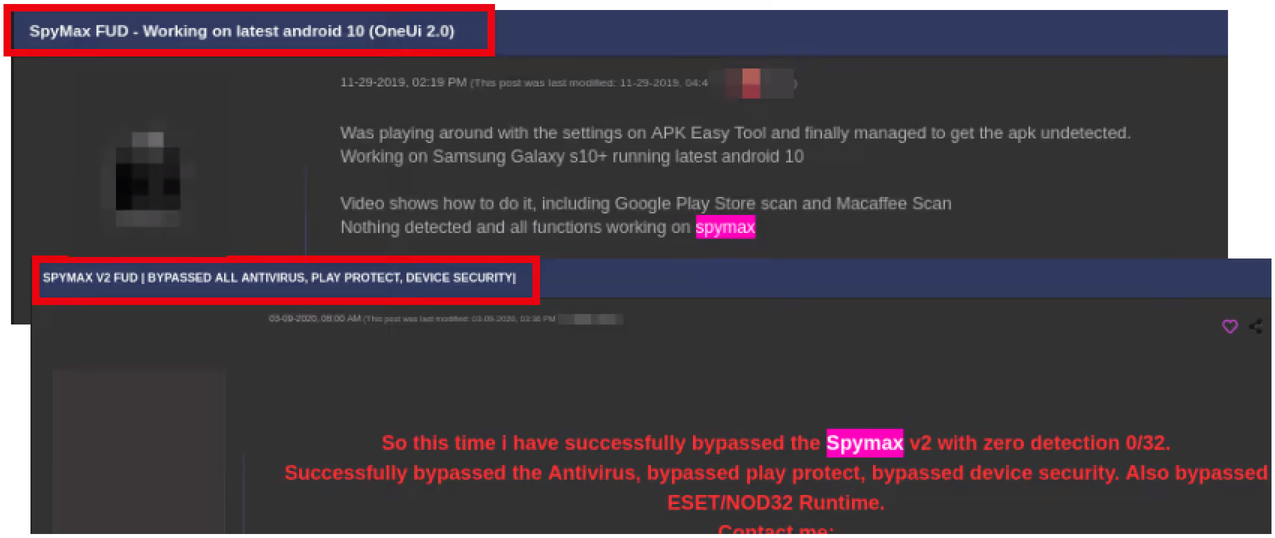
- Read SMS messages
- Fetch contacts
- Record audio
- Calling functionality
- Access real-time location
- Read/write external storage
- Steal photos

- Access the camera

These capabilities basically sum up a perfectly developed spyware with full-fledged features to spy on anyone.

Upon further analysis, these APKs turned out to be developed using a popular surveillance tool named SpyMax. Its predecessor, SpyNote, was one of the most widely used spyware frameworks. In the past, there were instances where SpyNote was notoriously used to victimise Netflix users and a wide range of other Android users.

SpyMax seems to be *new favorite* among attackers in the underground forums. We found some evidence where SpyMax has been developed in these underground forums with its main focus on the latest Android compatibility and antivirus evasion.



SpyMax FUD - Working on latest android 10 (OneUi 2.0)

11-29-2019, 02:19 PM (This post was last modified: 11-29-2019, 04:4 [redacted])

Was playing around with the settings on APK Easy Tool and finally managed to get the apk undetected.
Working on Samsung Galaxy s10+ running latest android 10

Video shows how to do it, including Google Play Store scan and Macaffee Scan
Nothing detected and all functions working on spymax

SPYMAX V2 FUD | BYPASSED ALL ANTIVIRUS, PLAY PROTECT, DEVICE SECURITY|

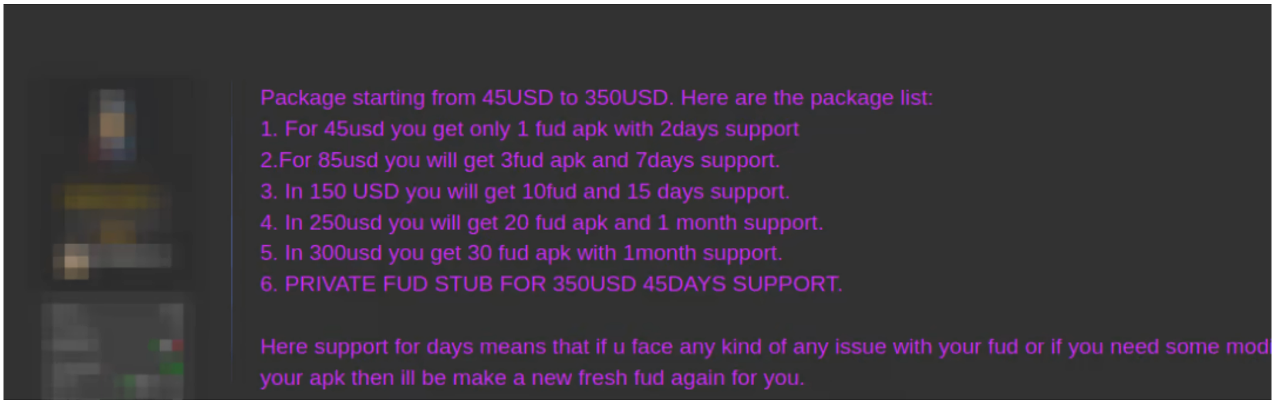
03-09-2020, 08:00 AM (This post was last modified: 03-09-2020, 03:36 PM [redacted]

So this time i have successfully bypassed the Spymax v2 with zero detection 0/32.
Successfully bypassed the Antivirus, bypassed play protect, bypassed device security. Also bypassed
ESET/NOD32 Runtime.
Contact me:

Figure 3: Underground forum discussions about SpyMax.

As seen in Figure 3, many of the discussions are about trying to make SpyMax samples fully undetectable (FUD) from antivirus scans.

Though SpyMax is free in itself, some developers claim to have developed their own versions that are undetected by antivirus software and are selling the samples at rates ranging from $45 to $350 per month. The same user in Figure 3 posted about his or her costs as can be seen in Figure 4.



Package starting from 45USD to 350USD. Here are the package list:
1. For 45usd you get only 1 fud apk with 2days support
2.For 85usd you will get 3fud apk and 7days support.
3. In 150 USD you will get 10fud and 15 days support.
4. In 250usd you will get 20 fud apk and 1 month support.
5. In 300usd you get 30 fud apk with 1month support.
6. PRIVATE FUD STUB FOR 350USD 45DAYS SUPPORT.

Here support for days means that if u face any kind of any issue with your fud or if you need some mod
your apk then ill be make a new fresh fud again for you.

Figure 4: A user discussing the costs of a FUD version of SpyMax.

Getting back to the campaign, we unfortunately could not track back to the command and control (C&C) server, as it was not active during our analysis. But we were able to get hold of some more samples that were designed by the same attacker or group of attackers. (Hashes can be found in IOC section at the end of this blog.)

One such sample developed by the attacker using SpyMax was a live streaming app that claimed to stream live football matches from the Tanzania Premier League. The main purpose behind this is likely to reach a wide range of football fans and attack their devices. The icons of the app can be seen in Figure 5 (Live Stream is the first from the left).

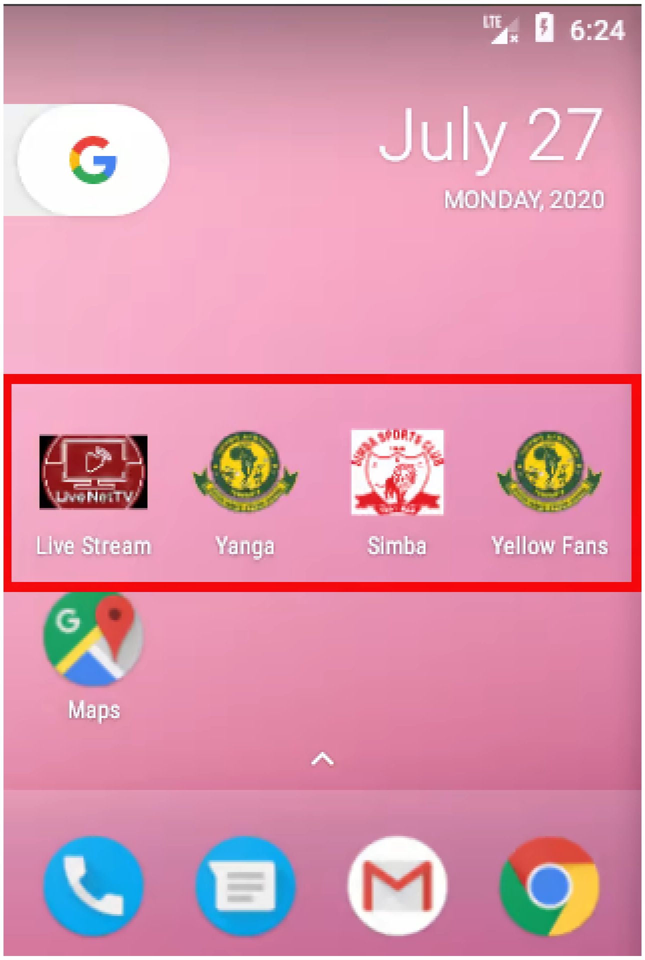


Fig 5: Fake (Spyware) apps

All these apps behave in exact same way. As soon as the victim tries to open the app, it crashes with message saying "App is not installed" before suddenly hiding the icon. This activity makes victim believe that the app might be faulty and got removed implicitly from mobile device. But in reality, the app hides itself from the victim and plays it's hideous activities of spying on the user and sending all the stolen data back to the attacker.

Conclusion

Nowadays, developing high-end surveillance apps (also termed spyware or stalkerware) is as easy as developing a basic Android app with the help of tools, such as SpyMax. Even a novice can develop spyware and attack large number of public. As seen in this case, the attacker used SpyMax to target Android users interested in an ongoing football season. From a user point of view, it's always advisable to take utmost care when online, especially in times when *work-from-home* has become the norm.

The precautions you take online have been covered extensively; even so, we believe this information bears repeating. Please follow these basic precautions during the current crisis —and at all times:

- Install apps only from official stores, such as Google Play.
- Never click on unknown links received through ads, SMS messages, emails, or the like.
- Always keep the "Unknown Sources" option disabled in the Android device. This disallows apps to be installed on your device from unknown sources.

We would also like to mention that if you come across the incident of app hiding it's icon as seen in case above, always try to search for the app in your device settings. (*Settings* -> *Apps* -> *Search for icon that was hidden)*

IOCs

Hash	Package Name
aa67921f19809edc87f1f79237e123e9c5c67019	com.yanga.yanga
2ed2d804754d83aa5de32c27b4ca767d959bf3e8	com.yellowfans.yanga
bea206cf83eea30bf5d0734d94764796d956c4f5	com.livestream.livestream
1cc01da09849e17f83940d9250318d248f7ab77d	com.simba.simba
4c7a41d7b0a225f0fa61fe7dc18695e03c2690c8	com.yellowfans.yanga