strongSwan - Issue #2227
Integrate always-on VPN functionality on Android
23.01.2017 01:48 - Noel Kuntze

Status: Closed
Priority: Normal
Assignee: Tobias Brunner
Category: android
Affected version:
Resolution: Fixed

Description
I've had several instances where the strongSwan Android app was terminated when it had an established tunnel. That's quite bad, because the network I was in was not trustworthy. I'd like to see the integration of always-on VPN in the Android app for that reason.

Related issues:
Related to Feature #2179: Always-on support in Android Nougat

History
#1 - 23.01.2017 11:21 - Tobias Brunner
- Tracker changed from Feature to Issue
- Status changed from New to Feedback

I've had several instances where the strongSwan Android app was terminated when it had an established tunnel.

Terminated how? If there was a crash check logcat for potential reasons. Otherwise, check the app's log for possible problems e.g. during a rekeying/reauthentication.

I'd like to see the integration of always-on VPN in the Android app for that reason.

That would not help at all as the only thing this does is starting the app (or rather binding the VpnService instance) when the system boots and persisting the permission the user granted. It does not change anything regarding the TUN devices or what happens if the app crashes or the connection is disconnected for other serious reasons.

#2 - 23.01.2017 11:21 - Tobias Brunner
- Related to Feature #2179: Always-on support in Android Nougat added

#3 - 23.01.2017 18:20 - Noel Kuntze
Tobias Brunner wrote:

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Terminated how? If there was a crash check logcat for potential reasons. Otherwise, check the app's log for possible problems e.g. during a rekeying/reauthentication.

If I remember correctly, the logs of the application indicated that it was terminated normally. The IKE_SA and the CHILD_SA were deleted by the app. I don't have logcat logs from that time and acquiring them now is also very difficult, because I have a very recent Android version, which is locked down. I don't have real developer access, as far as I know.

I'd like to see the integration of always-on VPN in the Android app for that reason.

That would not help at all as the only thing this does is starting the app (or rather binding the VpnService instance) when the system boots and persisting the permission the user granted. It does not change anything regarding the TUN devices or what happens if the app crashes or the connection is disconnected for other serious reasons.
Okay, so that would not change anything, I guess. Can something be done about making sure that the VPN is established when an application tries to communicate with the Internet?

#4 - 24.01.2017 10:08 - Tobias Brunner

I've had several instances where the strongSwan Android app was terminated when it had an established tunnel.

Terminated how? If there was a crash check logcat for potential reasons. Otherwise, check the app's log for possible problems e.g. during a rekeying/reauthentication.

If I remember correctly, the logs of the application indicated that it was terminated normally. The IKE_SA and the CHILD_SA were deleted by the app.

That should only happen if the user explicitly disconnects the connection. The app otherwise has no reason to terminate the SAs (unless something serious occurs, I guess, like a rekeying failure). You should check the logs should it happen again.

I don't have logcat logs from that time and acquiring them now is also very difficult, because I have a very recent Android version, which is locked down. I don't have real developer access, as far as I know.

Try with adb logcat from the SDK (not sure if you have to enable the developer settings for this to work, tap 7 times on the Android build number in the settings to do so).

Can something be done about making sure that the VPN is established when an application tries to communicate with the Internet?

Not really (unless you have a rooted phone, I guess, with full access to iptables). But once we do add support for the always-on VPN functionality we'd probably have to change some things regarding the TUN devices anyway. So we could maybe keep one around constantly to make sure no traffic leaves even when no connection is established.

But as I mentioned once connected that should already be the case. That is, the connection should stay up (i.e. get reestablished) until manually disconnected (while a TUN device is always around). So, again, please try to get the logs next time this happens.

#5 - 21.06.2018 15:48 - Tobias Brunner

- Status changed from Feedback to Closed
- Assignee set to Tobias Brunner
- Resolution set to Fixed