Troubleshooting IP networking problems using F-Link & FIPAT

About this document
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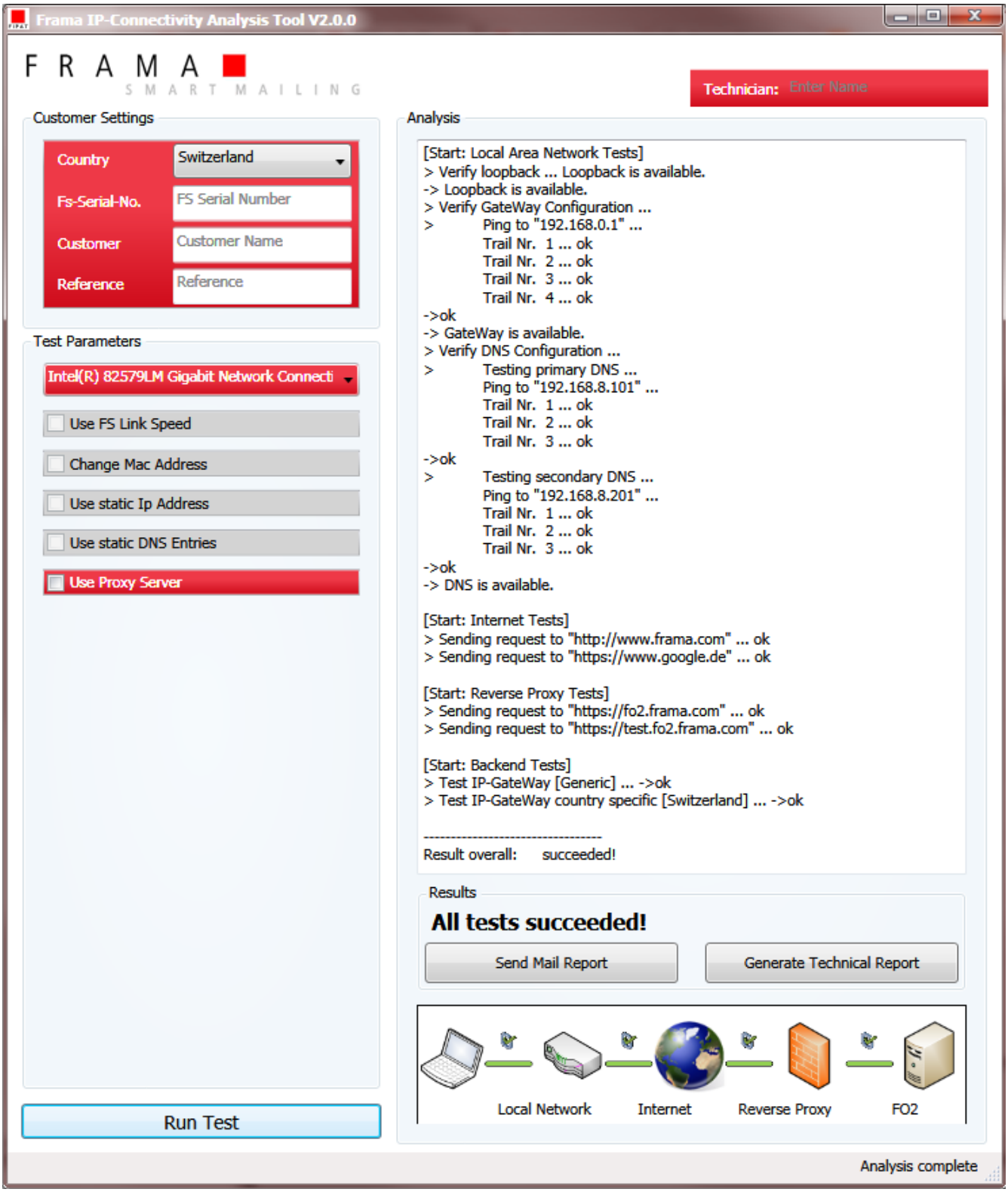
1 - Frama IP-Connectivity Analysis Tool

1.1 - Purpose

The Frama IP connectivity analysis tool (FIPAT) behaves similarly to Frama Matrix F series, analyzing the customer's IT environment and producing a report containing the details of the various connectivity steps from the LAN towards the FO2 server environment. It enables easily finding and solving a common set of typical network errors.

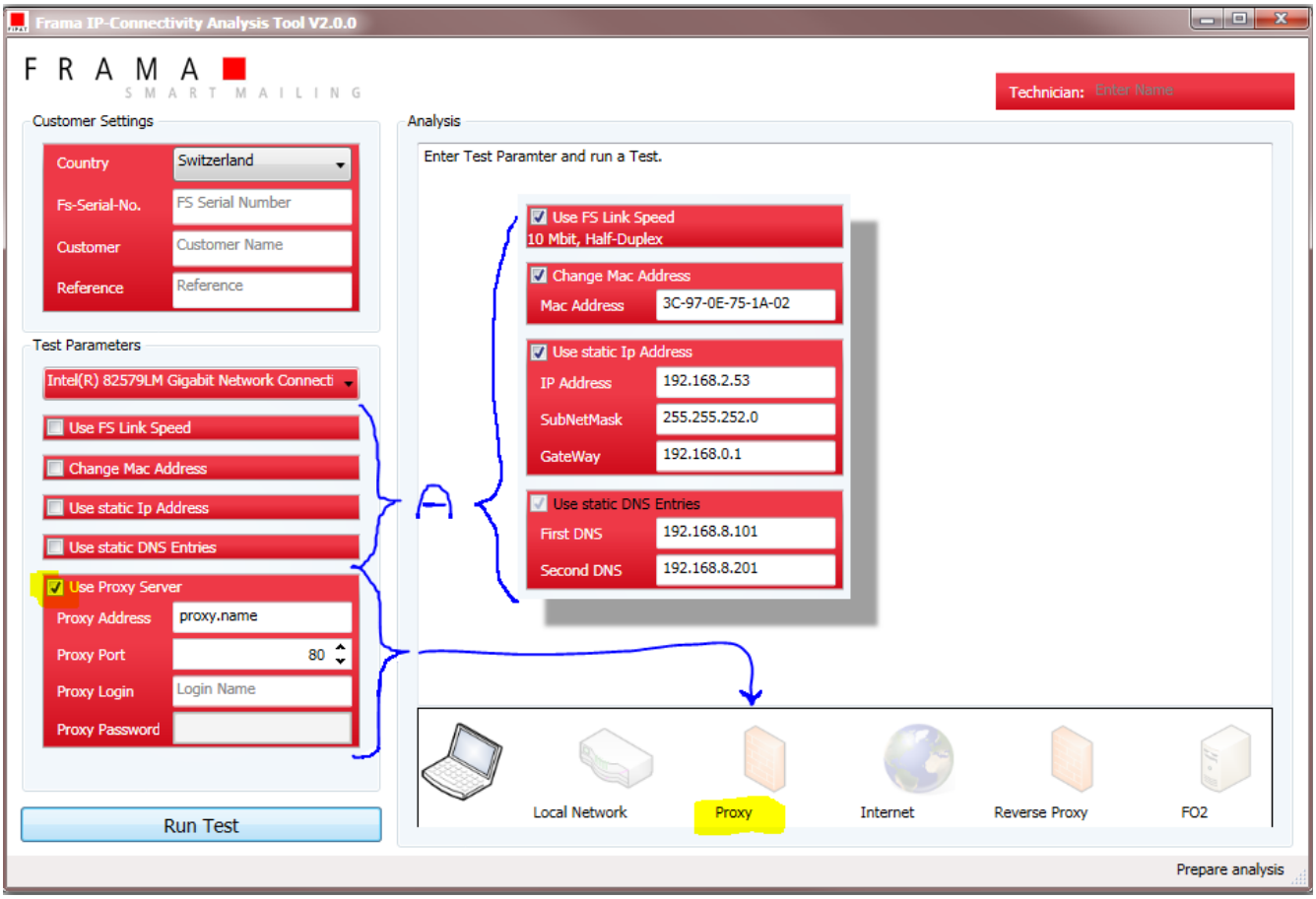


1.2 - Result

If all four links (*LAN, Internet, Reverse Proxy, FO2*) are declared ok (*green with check mark*) then the probability that a connection from a franking system will be successful is very high. What the FIPAT cannot check is whether the SSL certificate can be verified through the established link; that is something which can only be done using a franking system or a F-Link as detailed in the next section.

1.3 - Advanced Functions

Upon running the application with local administrative rights a new set of parameters become available (**A**). Also the presence of a proxy server can be tested.

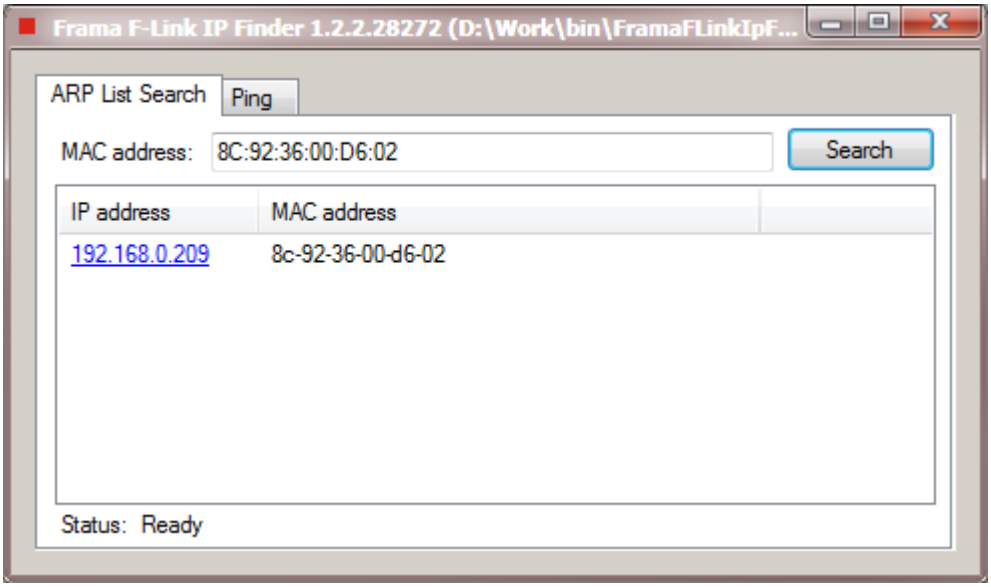


2 - Using the F-Link

Unlike the FIPAT software application which only runs in the context of a PC, using a F-Link device enables to verify the reverse proxy SSL certificate used by Frama AG. This is made thanks to the hard-coded certificate present in the firmware of the F-Link. In order to use the F-Link you will need knowing its MAC address. For example here for the LAN module we have **8C:92:36:01:E9:2E**

2.1 - F-Link Finder Tool

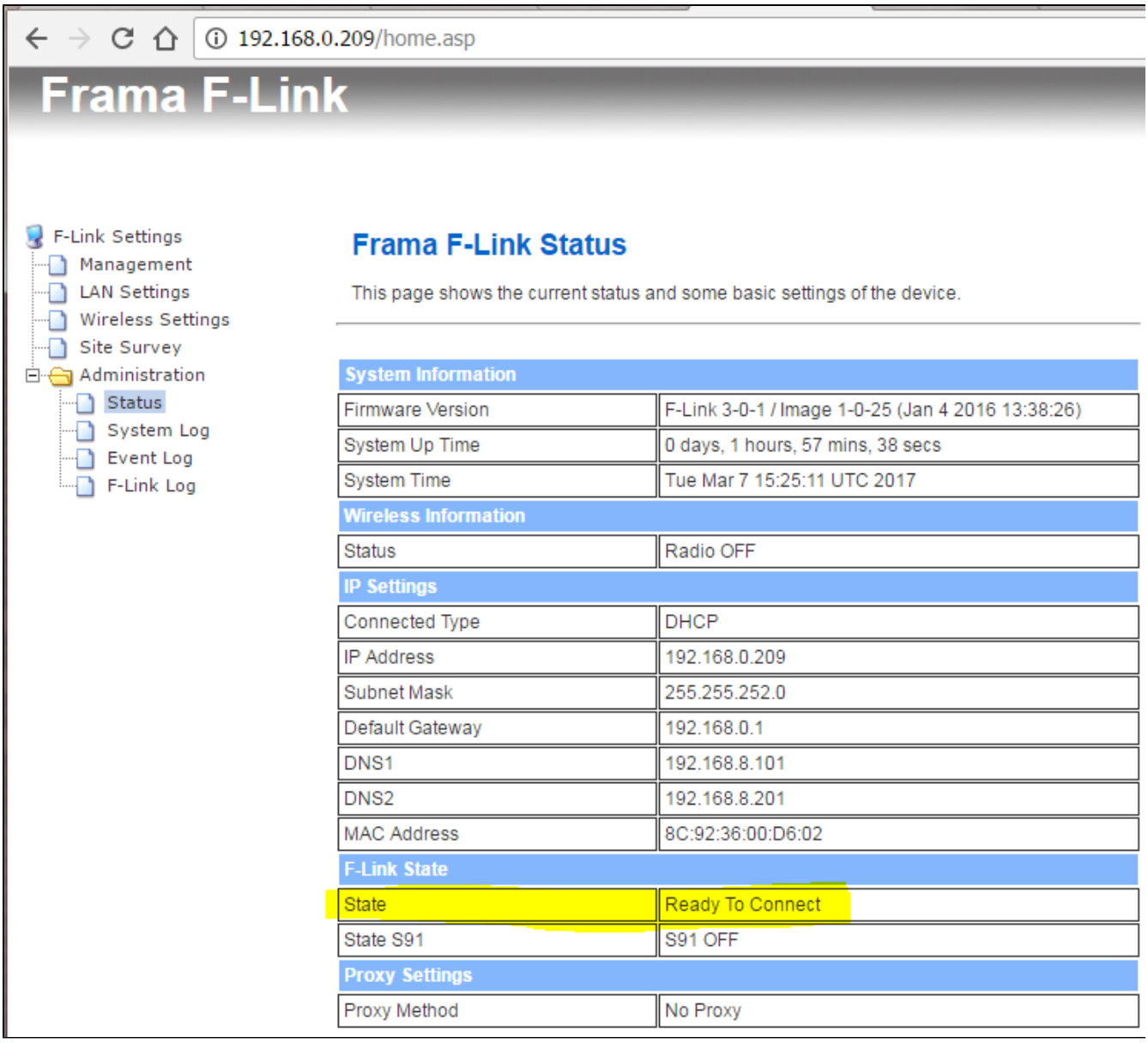
The F-Link finder application (Links on www.frama.com: doc, bin) makes it easier to find the IP address of any F-Link device connected on the same LAN and address range to where the F-Link finder Windows application is running. When the MAC address is known searching is quicker.



Upon clicking on the above link (*192.168.0.209 in this example*) you will be asked to enter a user and password (*factory defaults are: admin, admin*)

2.2 - F-Link Status Page

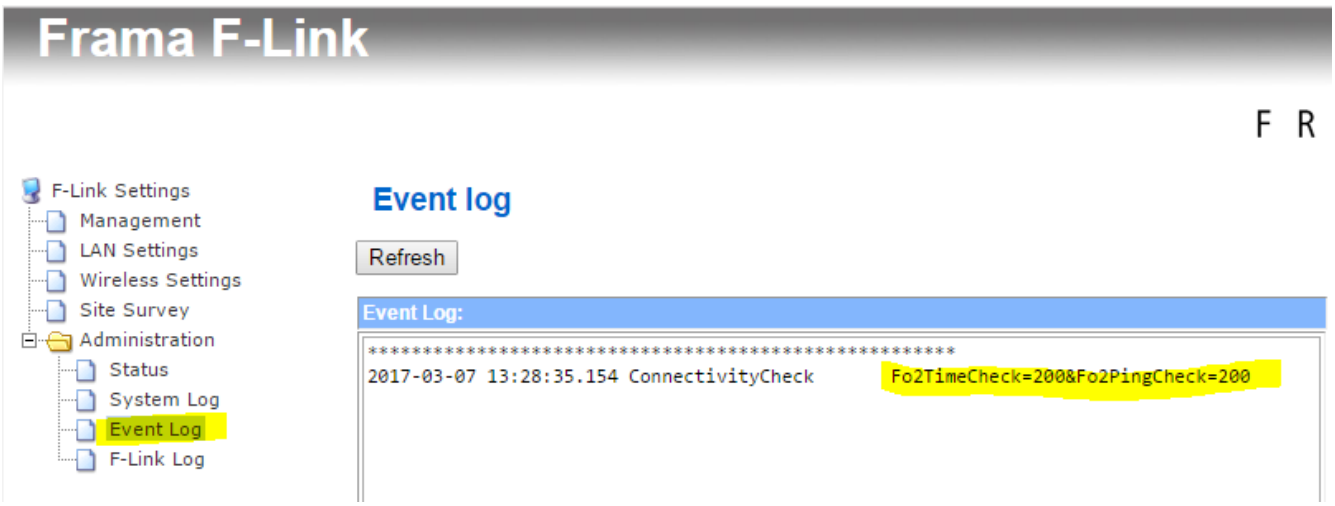
After login the Management website will appear in your web browser as default. The status page can be obtained by navigating the "F-Link Settings" tree of links on the left side:



IMPORTANT! Proxy servers using SSL-interception require a specific rule in order to allow a transparent communication (franking system via F-Link to FramaOnline2) via https port 443. That specific rule is to allow a correct identification of FramaOnline2 (https certificate) for the franking system.

2.3 - F-Link Webpage Event Log

2017-03-07 13:28:35.154 ConnectivityCheck Fo2TimeCheck=200&Fo2PingCheck=200



2.4 - Results

The presence of "**Read To Connect**" in the F-Link status page or of "**ConnectivityCheck Fo2TimeCheck=200&Fo2PingCheck=200**" in the F-Link event log page is a proof that all network conditions required for a successful connection using a F-Link. The franking systems of the Matrix range are slightly different than F-Link with regard to TCP/IP so a successful connection using a F-Link will be a very useful indication, but not a final proof.
