



Company Name: Fijowave Ltd.

Project Title: Enterprise Network Health Check

Funding: Innovation Partnership Programme
(Feasibility Study)



Profile of Company

Fijowave Ltd. develops and provides telecommunications products for carriers in Europe, Australia and America. It offers plug and play wireless machine to machine telecommunication products to control equipment, such as computers, telephone switches, IP gateways and set-top boxes. The company also provides Fijoport, a solution that addresses a host of business-to-business applications, including remote installation, and control and maintenance of PABX/LAN systems. In addition, it offers electronic product design services to companies in various phases of a product development life cycle that range from concept stage through feasibility, design, verification, approvals, trials, product launch, and support. Fijowave Ltd. was incorporated in 2011 and is based in Tallaght, Dublin.



Problem to Be Solved

The mainstay of Fijowave is an IP-device called Fijoport which plugs into a target network, enterprise or field and provides the ability for network service providers to remotely access and configure such networks. The company acting on the suggestions received from their customers such as BT, were interested in how the fijoport's abilities can be broadened to also include the health-check functionality of target network, and the WAN network between their data-center and on-site fijoports.



How Gateway Delivered Solution for Industry

In delivering the solution, TSSG started with a comprehensive state-of-the-art and background review of available technologies and protocols that potentially could assist in solving the problem. A virtual emulated network was built that replicated problem-space network minimally (enterprise VoIP), and included functionality for generating some or all of the monitoring protocols already in place. A simple fijoport health-check application was also built that was the target end-point of those monitoring protocols. The aim of the emulator and the experiments that followed was to showcase to the company how investigated protocols and techniques provided data that can help measure KPIs/metrics at the fijoport (bandwidth, latency, jitter, packet-loss) related to network-health check, and also how they were limited. Graphical reports were generated and presented at each weekly meeting. Weekly meetings were important throughout the project as any fears or doubts Fijowave had with the identified solutions could be noted. In an agile approach, the raised questions were then addressed.



Impact for the Company

As a result of this project, Fijowave gained insights and awareness of the protocols and techniques available to support their desired solution of a network health-check, and their current limitations in using those techniques. Fijowave can now assess the feasibility of their desired solution in 2 ways:

- Can the existing infrastructure they partner or operate with support the investigated monitoring tools and techniques that assist in network health-check?
- What additional services are available from their existing partners? For example, the project helped Fijowave realize that they need assistance with their VoIP provider (Mitel) in gaining access to the call statistics MIB. This contains important information relating to network health-check such as call delay, jitter, drop, etc.