Talk2M Keep Alive communication costs

This document will give you an estimation of the quantity of bytes used by the eWON for the VPN connection to the Talk2M server when no data is exchanged over the VPN tunnel.

With this information you should be able to estimate the cost for the GPRS connection used by the eWON.

There are 2 basic types of data that OpenVPN will send over the physical network: control data and tunnel data.

Control data is used to exchange TLS keys and for ping (keepalive) tests.
The TLS negotiation occurs once per hour.

The Ping function will ping over the TCP/UDP control channel if no packets have been sent for at least n seconds. The ping has to be specified on both peers to cause ping packets to be sent in both directions since OpenVPN ping packets are not echoed like IP ping packets.

Talk2MPro and Talk2Mfree use following Keepalive/ping settings: ping 10,ping-exit 40. The Talk2M server pushes these settings into the eWON. So even if specified different in the eWON, these Ping settings will be applied.

Quantity of bytes consumed by the VPN Control Data per hour for a Talk2M connection:

- **When UDP is used:**

Number of bytes used for an OpenVPN ping: 84 bytes
Number of bytes used for a TLS key negotiation: +- 6400 bytes in and 5800 bytes out

Quantity of data used for the maintain of the VPN connection during 1 hour:
Incoming traffic:
    Ping: 60/10 * 60 * 84 = 30240
    TLS negotiation = 6400
    Total = 36640 bytes / hour

Outgoing traffic:
    Ping: 60/10 * 60 * 84 = 30240
    TLS negotiation = 5800
    Total = 36040 bytes / hour

- **When TCP is used:**

Number of bytes used for an OpenVPN ping: 110 bytes for the request and 55 bytes for the Ack
Number of bytes used for a TLS key negotiation: +- 12000 bytes in and 10000 bytes out

Quantity of data used for the maintain of the VPN connection during 1 hour:
Incoming traffic:
    Ping: 60/10 * 60 * (110 + 55) = 59400
    TLS negotiation = 12000
    Total = 71400 bytes / hour

Outgoing traffic:
   Ping: 60/10 * 60 * (110 + 55) = 59400
   TLS negotiation = 10000
   Total = 69400 bytes / hour

Revision

Revision History

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1.0	11/12/2009	Creation of document

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