

Network documentation

Oscar TempLog™



Network documentation for Oscar TempLog™

Overview

As the functional premise of the Oscar TempLog™ system is storage of measurement in the cloud, so these can be accessed from anywhere, either on my.oscartemplog.se, through our free apps for Android and iPhones, as well as our API, it is a requirement that the Oscar TempLog™ Gateway can get online, and can communicate with our Cloud services.

Step 1 - Ethernet:

The first thing that needs to be in place is an UTP ethernet 10 or 100 mbps ethernet port.

Step 2 - DHCP:

Secondly the Sensorist Gateway needs to be able to acquire an IP address through DHCP along with information on Default Gateway and one or more Nameservers.

Step 3 Cloud Communication:

Third requirement is that the Gateway must be able to communicate with our Cloud service. The required communication is for security reasons only initiated from inside the local area network and towards our cloud services. This communication consists of Gateway sending data to the cloud after initial connection and on the same, now open and persistent, connection get responses back.

Be aware that the connection to the cloud that Gateway initiates is a **persistent TCP** connection, which means that the gateway doesn't close it, as it is expecting communication back on fx. successful upload of measurement, change in sampling interval and so on.

The gateway will from time to time send a keep-alive packet to make sure that the connection it has opened stays open. Should the connection get terminated, it is the job of the Gateway to open a new connection to the Cloud.

There is **NOT** a requirement of Gateway being able to receive and in-bound connection from the outside.

Ports and hosts:

This outbound communication will happen on either port 443 or port 4321 - the gateway will keep trying and alternating between ports until a connection is established. The destination for this connection are the following hosts:

gk.sensorist.com / gk.sensorist.net

As of January 2018 this corresponds / resolves to two different IP-addresses at random:

54.229.203.190 / 54.229.68.147, but the number can potentially increase at a later date if

load increases to maintain performance. When the Gateway has acquired an IP-address, default Gateway and name-server(s) and is able to connect to the cloud service, the LED on the Gateway will turn from Red to Green.

Debugging

Solid Green LED on the Gateway: Everything is good - Gateway has both IP-addr. and connection to the cloud service.

Solution: Lean back and enjoy your data!

Solid Red LED on the Gateway: The Gateway could not acquire an IP address and are therefore not able to connect to the Cloud.

Solution: Make sure DHCP server is working so Gateway can acquire an IP-address, default gateway and DNS server. The MAC-address of the Gateway can be seen on the bottom of Gateway and can be used when fault-finding the DHCP server. Not a firewall issue but a DHCP issue

Blinking Red LED on the Gateway: The Gateway has acquired IP etc through DHCP, but are not able to connect to the Cloud Service through port 4321/443 towards gk.sensorist.com /gk.sensorist.net.

Solution: Configure firewall so the Gateway can initiate an out-bound connection and are able to receive packets in back on the same connection. Find the IP-address of the Gateway in the DHCP log with the MAC-address that is printed on the bottom of the Gateway. Use the IP to look in firewall logs to see what is being denied / block and allow connection from this IP/MAC towards either port 443/4321 but preferably both. If chose you can also make a rule that only allow this out bound communication to gk.sensorist.com / gk.sensorist.net / 54.229.203.190 / 54.229.68.147 but as this can change over time we recommend just allow any host but only port 443 and port 4321.

Contact us on:

info@oscartemplog.se

+46 303 170 50