Subscription supervision

Subscription supervision is an Edition 2 and higher functionality that allows to track the status of GOOSE and Sampled Value Stream subscription. It is implemented as logical nodes in the data model. For GOOSE supervision the logical node `LGOS` and for Sampled Value stream supervision `LSVS`.

Why is this functionality interesting?

It is very easy to test that a GOOSE is properly published in the network using sniffing tools like IEDScout or Wireshark. It is not so easy to test whether a published GOOSE is properly subscribed to the receiving end IED. Without the supervision feature you would have to simulate the GOOSE and change its status and see the reaction of the receiving IED. You could as well tigger the sending device somehow. Np matter how of that implies that you can isolate the receiving IED physically or virtually somehow. With the subscription supervision you can simply let the IED tell you the subscription status.

How can you use the functionality

Connect to the receiving IED and search for LGOS/LSVS logical node. Both the logical nodes offer several data object.

- St: the status of the subscription
- SimSt: Whether the receiving GOOSE or SampledValue is simulated
- ConfRevNum: the expected configuration revision
- GoCBRef/SvCBRef: the object reference of the received GOOSE/SampledValue

Additionally some vendors add other diagnose features as you can see with e.g. SIEMENS. The `DiagErr` is a enumeration that gives you more insight into the issue. E.g. Device is not properly time synchronized.....

How to configure this feature

The tricky thing is that the LGOS has to be created every time you add a new subscription in system configuration tool. This means however you have to manipulate the date model while doing the communication mapping. CoMPAS adds LGOS/LSVS in the background for you, if the vendor allows to do that in the Services section of the IED.