

Problem

How to configure BDNT to use TCP ?

Solution

By default is bulk data NT configured to use UDP (unicast or multi-cast) for sending data from the sender to the receiver(s).

If an user wants to use TCP instead this has to be done:

- by defining a DDS QoS Library profile in the XML file (\$ACSDATA/config/bulkDataNTDefaultQoSProfiles.xml) that enables and configure TCP for sending data. This is **already provided** by the bulkDataNT installation for most XML profile files, so nothing should be done by the user.
- in configuration for the stream and flow should be specified to use DDS [QoS](#) library where TCP is enabled (for the profiles provided by bulkDataNT installation the name of QoS library is: TCPBulkDataQoSLibrary). This can be done using (TM)CDB or API.
 - API: There is a method: setQoSLibrary for ssender/receiver stream/flow configuration object. Here is an example for sender stream and sender flow:

```
//configuration for a (sender)stream
SenderStreamConfiguration scfg;
scfg.setQoSLibrary("TCPBulkDataQoSLibrary");
```

```
//configuration for a (sender)flow
SenderFlowConfiguration fcfg;
fcfg.setQoSLibrary("TCPBulkDataQoSLibrary");
```

- ◦ (TM)CDB: It is possible to set QoS library buy specifying baseQoSLibraryXML attribute in DDSenderFlowQoS= /=DDSReceiverFlowQoS XML element of Sender=/=ReceiverFlow and DDSReceiverStreamQoS=/DDSSenderStreamQoS XML element for =ReceiverStream=/=SenderStream. Here is an example for sender stream/flow:

```
<SenderStream Name="ExampleStream">
  <SenderFlow Name="ExampleDataFlow">
    <DDSSenderFlowQoS baseQoSLibrary="BulkDataQoSLibrary" />
  </SenderFlow>
  <DDSSenderStreamQoS baseQoSLibrary="BulkDataQoSLibrary" />
</SenderStream>
```

IMPORTANT:

- The same QoS library has to be set for the sender and the receiver part. Otherwise the connection will not happen.
- It is not recommended to use TCP for multi-cast data transfer.
- The configuration has to be done for stream and flows of that stream.
- If UDP and TCP are mixed in the same process it is important that a participant per stream is used for the streams that use different protocols.

-- [BogdanJeram](#) - 2013-07-17

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