

12.1 Introduction

DNP3 (Distributed Network Protocol) is a set of communications protocols used between components in process automation systems. Its main use is in utilities such as electric and water companies. It was developed for communications between various types of data acquisition and control equipment. It plays a crucial role in SCADA systems, where it is used by SCADA Master Stations (a.k.a. Control Centers), Remote Terminal Units (RTUs), and Intelligent Electronic Devices (IEDs). It is primarily used for communications between a master station and RTUs or IEDs. ICCP, the InterControl Center Communications Protocol (a part of IEC-608706), is used for intermaster station communications.

Elseta's DNP3 stack has both Master and Slave protocols implemented. Both of them can serve multiple serial (over physical RS485 line), TCP or TLS (over TCP) connections with high efficiency.

IEEE1815 defines 4 subset levels (14) that consist of the objects and function codes that must be supported by the master and outstation. Levels 13 are supported fully and level 4 is supported partially. To get more information about how DNP3 works and what capabilities are supported one should get a copy of the protocol specification and/or check the Slave Interoperability List/Configuration guides for both Master and Slave protocols.

 To set up TLS connection for both DNP3 Master and Slave, refer to sections Excel configuration and Certificates. All keys and certificates should be provided in the PEM format.

 If no configuration is set up, DNP3 Master and Slave services are not started.

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