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AMA-61850-ServerSim Server-Simulator for IEC 61850

Data Sheet

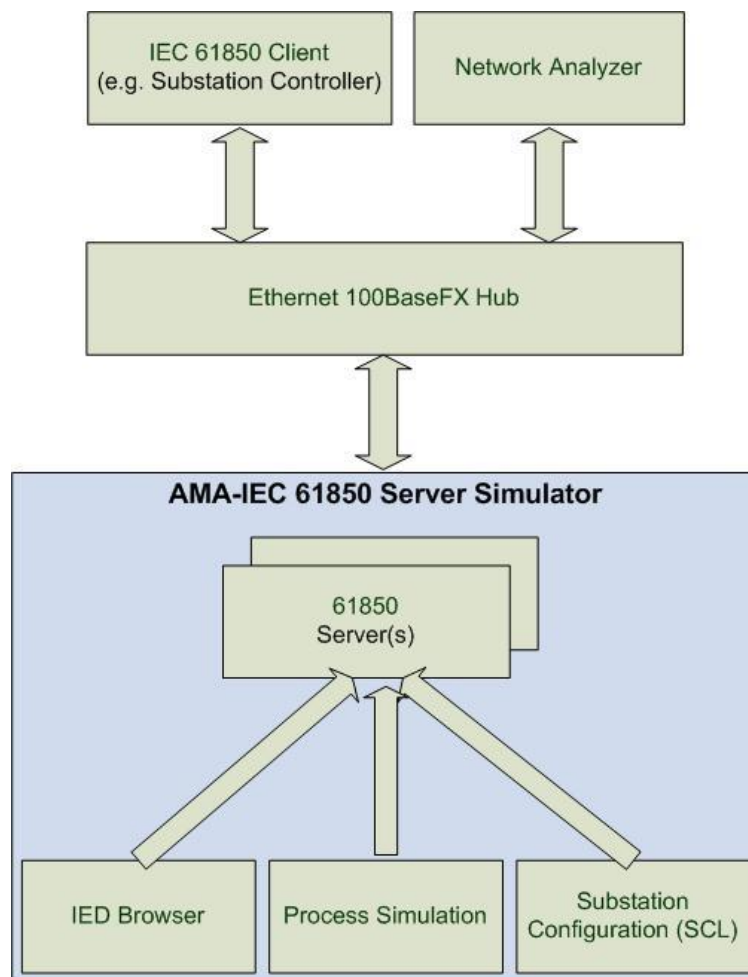
June 2010

1 Introduction

The AMA Server Simulator offers you the capability to test client type systems, like substation HMI or SCADA systems, using IEC 61850 communication. With the AMA-61850-ServerSim software license, you can test clients without the need for real physical IEC 61850 server devices (IEDs). The AMA-61850-ServerSim is able to simulate up to 250 server devices on one computer.

The server’s data model is configured by a separate configuration file for each simulated IEC 61850 server. The configuration file is in SCL format acc. to IEC 61850-6. The SCL file specifies the data model of the server, including data-sets and report-control blocks, and defines Common Data Classes and Logical Nodes acc. to IEC 61850-7-3 and IEC 61850-7-4, resp. The data definition may be easily extended for additional Logical Nodes and Common Data Classes, as specified in companion standards - like IEC 61850-7-410, or IEC 61400-25-2, or according to user-specific definitions. That way you are able to test an HMI/SCADA/gateway communicating with multiple simulated server devices combined with one or more real server devices.

The user may configure the process data simulation using a GUI. Again, the user can perform this configuration for each simulated server separately.



AMA-61850-ServerSim in typical test configuration

2 Features of AMA-61850-ServerSim

- The AMA Server Simulator supports the following IEC 61850-7-2 classes with their associated services - mapping as specified by IEC 61850-8-1:
 - Server
 - Application Association - TPAA
 - Logical Device
 - Logical Node
 - Data
 - Data Set
 - Reports - buffered and unbuffered
 - Control
 - File Transfer

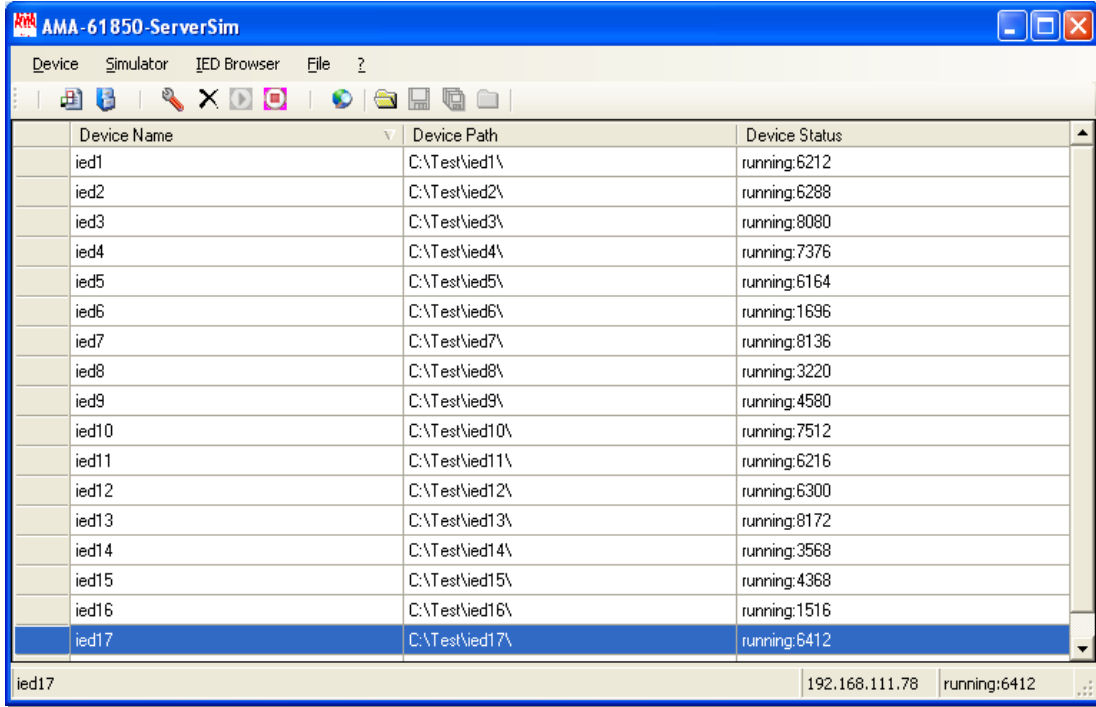
- Easy configuration of data models via configuration file in SCL format. Separate SCL files for each simulated server possible.

- Easy extension of the data model: all Common Data Classes and Logical Nodes as defined in IEC 61850-7-3 and IEC 61850-7-4, resp., are supported and also CDCs and LNs defined in companion standards, as IEC 61400-25, as well as user-specific CDCs and LNs.

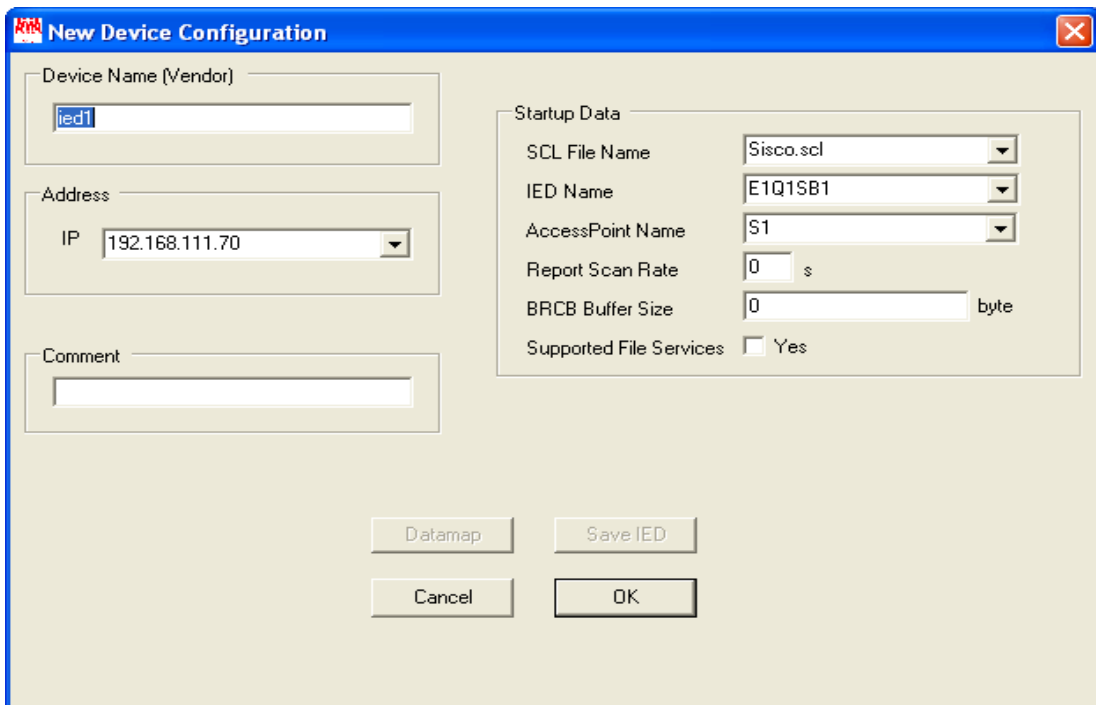
- Easy configuration of process data simulation via file and/or via graphical user interface. Separate configuration for each simulated server possible.

- Easy installation on a computer running MS Windows XP / MS Windows Server 2003.

3 Simulator GUI

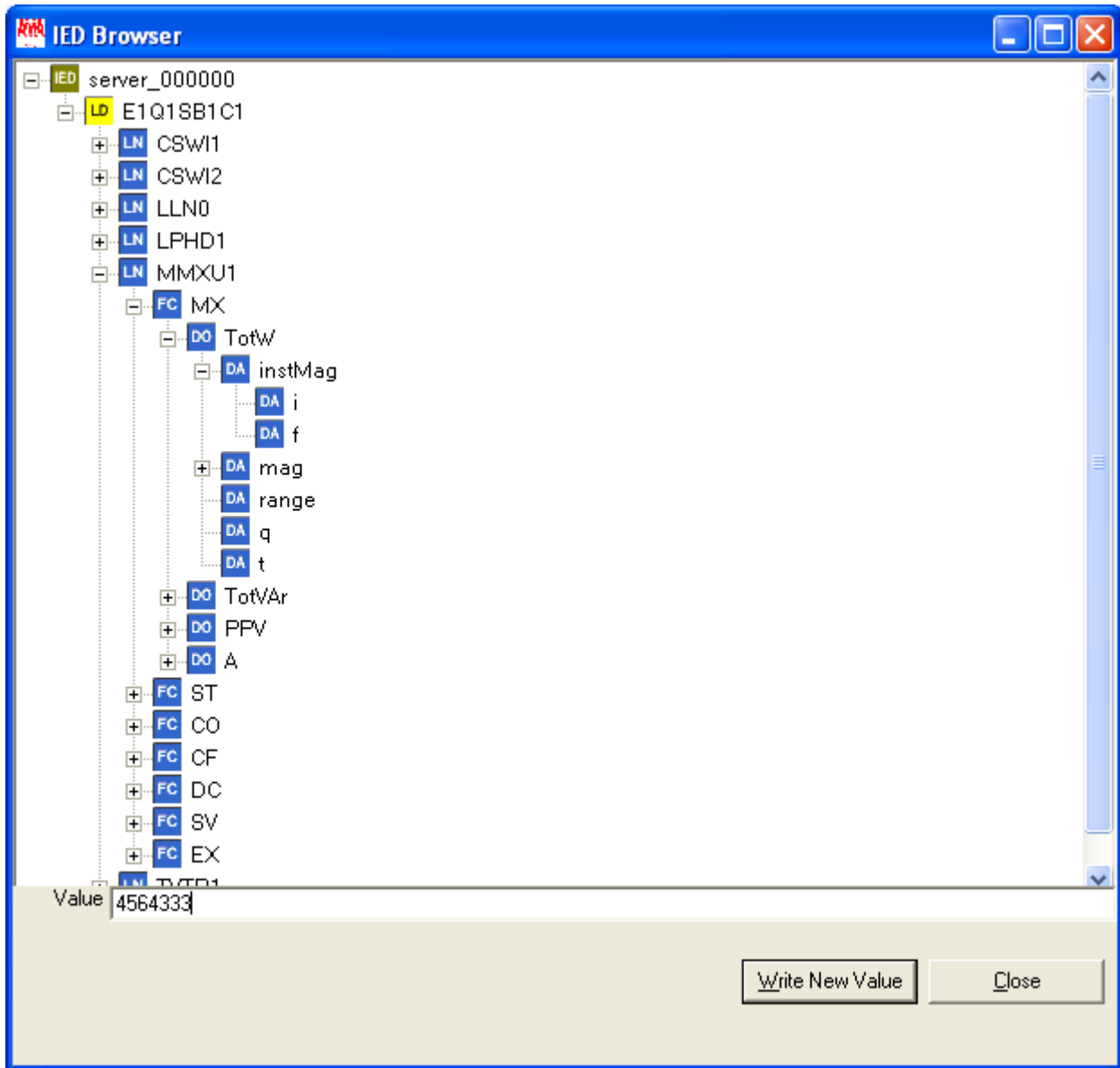


AMA-61850-ServerSim: main dialogue window



AMA-61850-ServerSim: window “New Device Configuration”

4 IED Browser



AMA-61850-ServerSim: Window “IED Browser”

The IED browser displays the IED’s data model for any of the configured IEDs. In addition, the IED browser enables the user to select a data attribute from the data model and to write a new value to it - e.g., to trigger the sending of an IEC 61850 report due to data changes.

5 System Requirements and Support

5.1 System Requirements

Computer with operating system MS Windows XP / MS Windows Server 2003 with at least 1 GB RAM and one Ethernet network interface card. In addition, a USB port is required for the copy protection dongle.

The actual required hardware resources (CPU, RAM, ...) depend on the number of server devices to be simulated, the volume of the data models, and the actual configuration of the process data simulation.

5.2 Technical Support

For technical support a 12-months-support contract has to be agreed upon. If training is ordered, the technical support is included in the license price within the first 12 months after purchase.

Software updates by separate CD are also included in the Maintenance & Support contract.

Support renewal for M&S is available for 12 months.