

This paper focused on smart substation as a crucial part of the distribution network in the Smart Grid. The paper provides extensive analysis of Smart Grid protocols with close focus on ...

Vulnerability and Impact Analysis of the IEC 61850 GOOSE Protocol in the Smart Grid Haftu Tasew Reda 1, Biplob Ray 2, Pejman Peidaee 3, Adnan Anwar 4, Abdun Mahmood 1, Akhtar Kalam 3 and Nahina Islam 2,*
... IEC 61850 is vulnerable to a number of attacks, including password cracking, Denial of Service (DoS), and eavesdropping [12]. Similarly ...

In order for the PLC program to work with IEC 61850, we need to pass the values of the IEC 61850 data attributes to the PLC program so that it can execute its logic. Thus, to achieve IEC 61850 support, the values of the IEC 61850 data attributes is passed to the PLC program and vice versa by reading from/writing into these arrays.

Three of the main standards that are especially needed for smart grid and protection automation are the IEC 61850 series, the IEC 61970 and the IEC 61968 series (Andren et al., 2013, Buchholz et al., 2010). A closer look at these three standards is given in the following chapters to show the basic concepts and the different approaches that they ...

Resumo--Este artigo apresenta uma análise de uma rede Smart Grid baseada na norma IEC 61850 e em dados obtidos a partir de medições de parâmetros de equipamentos utilizados na ...

IEC 61850 was launched in 2003 as a standard for digital substations and it is widely used in such applications. In principle, however, the Smart Grid is just a regionally distributed system of ...

According to IEC, the IEC 61850 standard is a core standard of the smart grid. In this context, IEC 61850 substations serve as crucial reference points for the entire smart grid ...

Simulating GOOSE communication between Intelligent Electronic Devices (IEDs) in response to substation events in a Smart Distribution Grid using the IEC 61850 Protocol and Virtual Machines. - camaison/blockchain-security-layer-in-smart-grid.

In this study, a systematic review of the current state-of-the-art of IoE and IEC 61850 has been presented, and it has identified the research gaps and opportunities for future ...

OpenPLC is a software widely used for emulating PLCs, but unfortunately it does not support IEC 61850 standard, which is the globally adopted standard for substation automation in smart power grid ...

Resumo--Este artigo apresenta uma análise de uma rede Smart Grid baseada na norma IEC 61850 e em dados obtidos a partir de medições de parâmetros de equipamentos utilizados na rede. O objetivo é explorar os limites operativos da rede, ie, determinar a latência e casos de congestionamento que afetem a confiabilidade da mesma, através de ...

Le smart grid 3. La norma IEC 61850. 1 Indice 2 1. Introduzione 3 2. IEC 61850: il concetto e la struttura 5 2.1 L'approccio base delle IEC 61850 5 2.2 Il modello dati object-oriented 7 2.3 I servizi previsti per il modello dati 8 2.4 Requisiti di prestazione 9 2.5 Stack di comunicazione e ...

IEC 61850 is one of the most prominent communication standards adopted by the smart grid community due to its high scalability, multi-vendor interoperability, and support for several input/output ...

Moxa announced a new series of high-performance IEC 61850-3 certified computers with PRP/HSR connectivity. ... Versatile to Fit Smart Grid Transformation Needs. For transmission system operators (TSOs) in brownfield substation modernization projects, a smooth migration involves collecting and displaying data from both legacy and new equipment ...

The functionality provided by the SmartGridware®; IEC 61850 IED Simulator is implemented in compliance with the following standards (click to view): IEC 61850 Standards. IEC 61850-7-1: Principles and models; IEC 61850-7-2: Abstract Communication Service Interface (ACSI)

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