

EUR24_18 - How virtualisation accelerate grid modernization at low cost

Author(s): Yann-Eric Bouffard-Vercelli (Schneider Electric Power System), Bruno André (Schneider Electric Power System)

Abstract:

Connecting and deploying new Protection, Control, Automation and Measurement systems for HV & LV industrial electrical grid has long been a laborious and time-consuming process. It requires a multitude of procedures to ensure safety and compliance with industry standards and utility grid codes. Now, taking benefits of advanced communication capabilities, leveraging advanced virtualization and remote connectivity technologies, new solution of Industrial site electricity management reduces the need for physical visits and significantly reduces installation time and costs.

The paper presents the technical key concerns of implementing Virtualization for LV & HV Electric grid. It also shows how industry will reduce OPEX and CAPEX strongly. The benefits of virtualization in Flexibility, Efficiency, Availability and Asset Management are described with the various alternatives to adapt LV & HV Electric grid virtualization to the various Industry site size. The integration of renewable sources (Solar, fuel cells, wind...) is also simplified by using virtualized solution compared to traditional or Digital ones.

As conclusion, the paper describes the future of virtualization with the concept of Cloud approach.