

Research article

Industrial Automation utilizing Public Access Networks

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Abstract

Newer applications of industrial automation require functions split over a large area in order to work together. The area on which the devices implementing these functions have to be placed can be so large that fieldbuses, or even local area networks can no longer be used. Whenever this happens, the question on how to connect the different devices with each other arises. If more than one device has to be connected on each site, the use of gateways seems appropriate. In this paper, we show an approach which utilizes gateways to tunnel industrial data over some public networks utilizing virtual private networks (VPN). The gateways utilize redundancy in order to allow a reaction when there are problems in the public network. A web-service based approach using Web Services Distributed Management (WSDM) interfaces is used to configure and monitor the gateways.