Integrated Trusted Protection Technologies for Industrial Control Systems

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***Abstract*—Security vulnerabilities in industrial control systems (ICS) and its open interconnected trends lead to security risks escalating. The existed security protection technologies, with poor applicability, are hard to meet the special requests of information security for ICS. In this paper, trusted protection theories and technologies for ICS were studied and an integrated trusted protection model was proposed. The proposed method protected data and system security of ICS from aspects of trusted computing platform, trusted data protection mechanism and trust management network. The trusted protection technologies were deployed on each of the three network layers of ICS according to differentiated resources and security requirements of each layer. Finally, analysis and simulation were performed and the results indicate the effectiveness and superiority of the proposed method. The established trusted protection model assists realizing the systematic information security protection for heterogeneous industrial control systems.**

***Keyword*—industrial control systems; information security; trust; trusted protection; integrated model**

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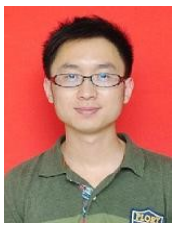

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