Multi-Model Based Incident Prediction and Risk Assessment in Dynamic Cybersecurity Protection for Industrial Control Systems

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Outlines

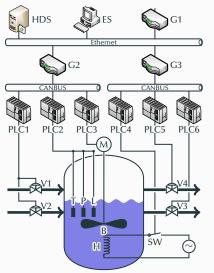
Simulation

- Simulation Platform
- Simulation and Result Analysis



Knowledge Modeling and Simulation Platform

The simulation object is a chemical reactor whose control structure is shown as the following figure.



| _ Legend | |
|----------|-------------------------------|
| HDS | |
| FS | Engineer station |
| G1 | Gateway of Ethernet |
| G2 | Gateway of CANBUS |
| G3 | Gateway of CANBUS |
| PLC1 | Controller of V1 and V2 |
| PLC2 | Data collection of P, T and L |
| PLC3 | Controller of M |
| PLC4 | Controller of SW |
| PLC5 | Controller of V4 |
| PLC6 | Controller of V3 |
| V1 | Valve of material |
| V2 | Valve of another material |
| V3 | Valve of product |
| V4 | Valve of pressure reducing |
| M | Motor of B |
| SW | Switch of H |
| P | Pressure sensor |
| T | Temperature sensor |
| L | Liquid level sensor |
| В | Blender |
| Н | Heater |

Simulation and Result Analysis

