

PROJECT / Serv-CPS: Server-based Real-Time Ethernet Communication Architecture for Cyber-Physical Systems

Serv-CPS

Main Objective:

The objective of this project is developing a network framework, based on switched Ethernet, suitable to support CPS, by including an explicit and efficient support to component-oriented design methodologies. The framework shall support:

- Heterogeneous traffic classes with temporal isolation;
- Partitioning and virtualization mechanisms;
- Hierarchical multi-level server composition;
- Dynamic adaptation and reconfiguration of servers with temporal guarantees;
- Analytical tools for supporting the design of CPS;
- Middleware for service management;

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