

Objective

Enhance robotic software for robotic arm control and EV charging operations with web server capabilities, enabling communication via a REST interface with other system applications.

CASE STUDY

Scope

- Understand the communication architecture
- Define JSON structure for data exchange
- Publishing the messages to other threads inside the application

Solution

- ✓ Implemented a web server within a thread in the robotic software to handle internal and external communication.
- ✓ Designed and implemented REST endpoints to receive commands from client applications and provide responses.
- ✓ Enabled modifications of robot operation parameters and provided status updates through these endpoints.
- ✓ Established a JSON-based data exchange format and utilized Linux message queues to pass commands to other threads for execution.

Value Added

- **Remote Operation Capability:** Enabled real-time remote execution of robot protocols via REST APIs, facilitating development and testing from remote locations.
- **Technology Agnosticism and Scalability:** Delivered a language-agnostic and scalable solution, ensuring compatibility and ease of integration within diverse systems.

Frameworks & Tools

