

Domotics



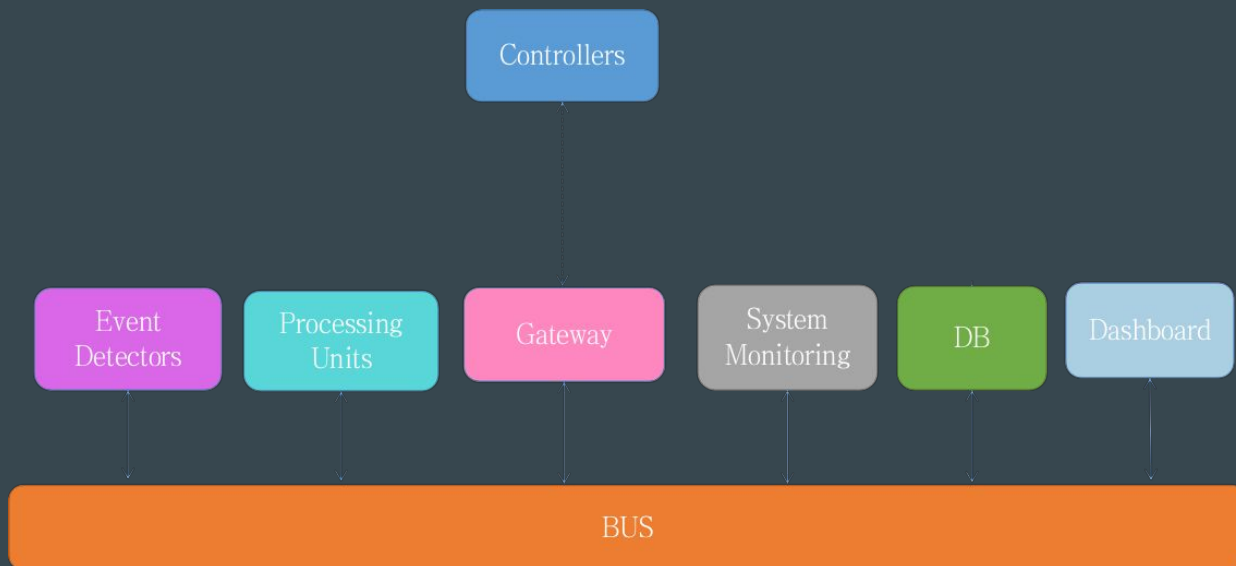
Software Engineering - 2016/2017

Motivation

- Real time data
- Sensors management
- Auto-Deployment
- Tests

Architecture: System

- Sensor data (temperature, humidity, light...)
- Broker is RabbitMQ
- Dashboard(JSF) running on Tomcat
- Connections between Dashboard and Broker via Websockets



Architecture: Deployment

- Docker : Docker compose file
 - Containers: ELK, Tomcat, Postgres, RabbitMQ, Python...
 - Links: communication between containers
- Jenkins :
 - **Pipelined** Strategy
 - Tests (Cucumber & Junit)
 - Docker compose run
 - Maven packaging

Architecture: Auditing

- ELK Monitoring:
 - syslog of all the containers
 - All Java Applications of the project (log4j)
 - Dashboard
 - JPA
 - Gateway



elastic



Demonstration



Lessons Learned

- Tests are very important!
- Auto-Deployment with Jenkins saves time
- JPA
- Brokers
- Docker

Team Related Information

- Nuno Humberto: ~50 horas
- Pedro Matos: ~40 horas
- Tiago Bastos: ~40 horas
- Daniela Sousa: ~45 horas
- Francisco Alves: ~35 horas

Team Related Information

- Nuno Humberto: Dashboard, Websockets, Containers, Gateway, Processing Units, Broker, Data Generation
- Pedro Matos: JSF, Tests, Autonomous Deployment, Documentation
- Tiago Bastos: ELK, Tests, Autonomous Deployment, Documentation
- Daniela Sousa: ELK, Tests, Docker-compose & Containers, Processing Units, Documentation, JPA, DataBase, Broker
- Francisco Alves: Processing Units, Tests, Documentation