Demo: A System for Operating Energy-Aware Cloudlets

Thomas Rausch, Philipp Raith, Padmanabhan Pillai, Schahram Dustdar

Symmetry: Cluster Management & Monitoring

- Clustered hosting of stateless services (e.g., video analytics, image classification)
- System metrics and power monitoring
- Self-adaptive cluster configuration
- Self-adaptive load balancing
- Lightweight microservice architecture
- Programmable: CLI, API, Web UI

Open source: https://git.dsg.tuwien.ac.at/mc2

Galileo: Distributed Load Testing & Experimental Analytics

- Client workload emulation
- Coordinated experiment execution
- Storage and visualization of results

Architecture:

Cluster nodes

Power monitoring

Telemetry Daemon
Service Manager
Dashboard

Cluster Daemon
Policy
REST API

NGINX

Client
Router
rtbl

Galileo Controller

Galileo worker

rtbl:services {s1,s2,..}
rtbl:hosts:s1 [h1,h2]
rtbl:weights:s1 [3,2]

Routing table