Impacts

European Business

Increased competitiveness for SMEs in business market, and emergence of innovative business by introducing the mF2C Fog-to-Cloud platform.

Increased competitiveness for SMEs in business market, and emergence of innovative business.

Service Provider

Availability of platforms to integrate IoT and Cloud and develop added value solutions and services on top.

Cloud Provider

Improve the competitive position of the European Cloud sector.

Expanding current portfolio of services with Fog and Edge functionality or creating new business by incorporation of multiple heterogeneous Cloud, Fog and Edge providers.

Professional services to be offered on the extended scenario.

Technology Provider

Increased request of IoT and Fog devices, with boost in revenues.

Request for next generation improved devices, R&D opportunities.

Contact

Ana Juan (ATOS)
ana.juan@atos.net

Twitter: @mF2C_project
LinkedIn: mF2C Project
YouTube: mF2C Project
GitHub: github.com/mF2C

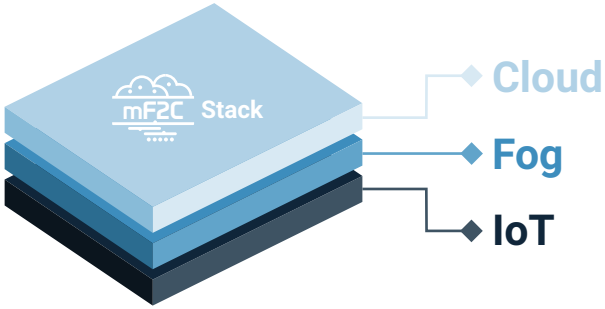
www.mf2c-project.eu **www.mf2c-project.eu/product**

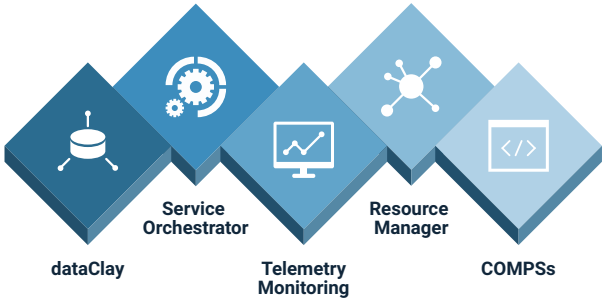
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 730929. Any dissemination of results here presented reflects only the consortium view. The Research Executive Agency is not responsible for any use that may be made of the information it contains.

Towards an Open, Secure, Decentralized and Coordinated Fog-to-Cloud Management Ecosystem

Driving through the Edge

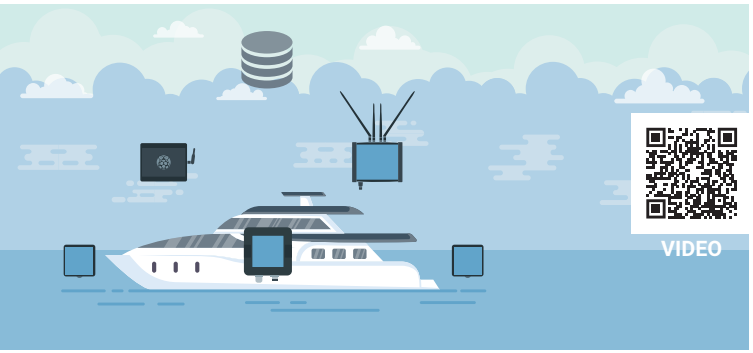
mF2C Architecture





Emergency Situation Management in Smart Cities (EMS)

The Emergency Situation Management applies to the infrastructure construction and monitoring in Smart Cities. It will analyze the flows of assets within smart infrastructures to provide useful information to infrastructure operators, detect potential emergency scenarios in a real-time approach and decrease the necessary resources in terms of energy, latency, etc. to efficiently respond to these situations in accordance to the applications' requirements. mF2C will increase the reliability by 30% and the Quality of Service by 10% while decreasing delays by 30% and OPEX by 10%.



Smart Boat Service

SmartBoat services primarily provide owners and users an insight into the status of the boat, available on an Android device either locally or connected through a fog or cloud available on the sea. In addition, a vast amount of innovative services are included such as an anonymous docking reservation system and emergency call alternative. The mF2C platforms ease the development and improvements of SmartBoat application. mF2C provides an environment for managing fog and cloud communication, interactive deployment of SmartBoat sub-services upon a user's request and lowers product cost using general purpose hardware.

Smart Fog-Hub Service (SFHS)

Fog Hub for airport optimizes users experience while staying at the airport and gives a chance to sellers to increase their revenues. Proximity marketing and traveler's adviser, based on Machine Learning, drives the value proposition according to specific position (airport area), specific destination (flight) and preferences for shops and services. It can cover extensive area leveraging the mF2C capability to manage processing between all fog nodes or cloud. In general terms the mF2C provides a superior Quality of Experience to all users compared with the traditional IoT and cloud stack, resulted in reduced latency and response time.

Functionalities

Deployment of heterogeneous applications

Open ecosystem of networked cloud, fog and edge heterogeneous mobile computing applications including those involving Internet of Things (IoT), smart end-user devices, as well as wearables and sensors/actuators.

Offloading the computation

Computation offloading between fog and cloud computing systems, transparently and optimally to applications, reallocating both resources and services, as well as executing services in parallel.

Resource management

Efficient use of heterogeneous resources among edge and cloud set-ups, extending the use of cloud computing to critical IoT applications and environments where existing specific cloud services are not usable due to latency.

Telemetry monitoring

An extensible telemetry framework which allows arbitrarily flexible collection, processing, and persistence of monitoring data. It includes the Analytics Engine for the analysis of service performance and Recommender for the optimal Service recipe configuration, based on past executions.