How to simplify smart energy application development with FI-WARE technology

...and get funded by the European Commission

Smart Grids Stakeholder Group
Graz, 20.05.2014

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FI-Ware Introduction

http://www.youtube.com/watch?v=PkrAxS0HBok
FI-WARE and FI-Lab

Technology

A true open innovation ecosystem
FI-WARE: Targeting developers needs

**What**
- Connect apps to the physical world
- Manage open data at large scale and transform it into knowledge
- Benefit from open innovation (crowd-sourcing, apps composition)
- Reach target users, monetize
- Ensuring Privacy, Security and Trust
- Take the most of infrastructures while keeping costs lower and under control
- access from everywhere, adapt to devices

**How**
- Advanced UI Enablers
- IoT-M2M Enablers
- Data/Context Enablers
- Integration and Composition Enablers
- Business & Delivery Framework (revenue-share, cross-selling, …)
- Security Enablers
- Advanced Cloud Enablers
- Enablers easing interface to Network and Devices

**Built-in APIs & tools**
Where to start: The FI-WARE Catalogue (http://catalogue.fi-ware.org)

Welcome to the FI-WARE Catalogue! The FI-WARE Catalogue is the central place to find and use Generic Enablers of the Innovation Platform. You can find tools and resources to develop applications and services.

Generic Enablers

- BigData Analysis - Cosmos
  - Overview
  - Creating instances
  - Documentation
  - Downloads
  - Instances
  - Terms and conditions

BigData Analysis - Cosmos

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What you get:
Cosmos is an implementation of the Big Data CE, and it is based on Hadoop ecosystem. Current version of Cosmos allows users to:
- Upload big data files to HDFS by means of a FTP/HTTP client.
- Upload and run MapReduce jobs from HDFS.
- Upload files to HDFS using HDFS command line.

Why to get it:
Big data processing is the technology used to process huge amounts of data stored in the various systems. This technology allows you to analyze large amounts of data and generate new insights and results from these data.

Open source:
The Open Source License for Cosmos is GPL.

Please login to be able to subscribe to this CE.
Getting Started: Rolling out your FI Apps

1. DEVELOP YOUR IDEA
2. SELECT ENABLERS
3. ACCES FI-LAB /BUILD INSTANCE
4. DEPLOY YOUR CLOUD VMs
5. DEVELOP YOUR APP
6. INTEGRATION & TESTING
A key concept: FI-WARE Instances

Future Internet Applications run on top of “FI-WARE Instances” that are built by “FI-WARE Instance Providers” upon:

- selection of FI-WARE GEis (products) from the FI-WARE Catalogue
- assembly of selected FI-WARE GEis with proprietary added-value products
Domain-specific platforms = FI-WARE instance + specific enablers
FI-LAB: the meeting point where a new Open Innovation ecosystem will be boosted

Application sponsors (business, cities, etc)
• Connect to entrepreneurs
• Put their data at work
• Visibility, promotion
• Costs saving
• Better service to customers

Entrepreneurs, Developers
• Ability to test with real data
• Ability to run trials with real users
• Visibility, promotion
• Hosting of permanent showcase
• Connection to potential customers
• Acceleration of product development

FI-WARE Technology Providers
• Added value to just the technology
• Connecting to entrepreneurs: Revenue-sharing opportunities

- 100 M€ of funding devoted to entrepreneurs in phase 3 of the FI-PPP
- 16 accelerator projects proving open calls
- Start September 2014 in Munich
„European Conference on the Future Internet (ECFI)“ in Munich at September 17th

- Get an overview about the technical progress of FIWARE and experience pilot applications
- Get all information to participate in the Open Calls of Phase 3

- Main Event (Technical University of Munich)
- Evening Event (Hofbräuhaus)
- Techno Brunch (BMW World)
FINESCE key message:
Smart Energy enabled by FIWARE GEs

Future Internet offers services for:
- (volatile) distributed energy producers
- (flexible) consumers and prosumers
- electric vehicles (as consumers and storage)

Benefits of using FIWARE Technology:
- lower costs for application development
- easy access for new partners
- scalability of applications
- shorter time to market

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FI-PPP Phase I: FINSEN¥‘s 4-Step Approach

1. Scenario description
   Identify use cases and actors (market roles as well as systems & devices) according IntelliGrid method

2. ICT requirements
   Define requirements for communication & information flows as well as services and middleware. Discriminate **Generic** and **Specific** requirements.

3. Functional Architecture
   Identify key functional building blocks and interfaces, specify data models and communication protocols develop ICT architecture based on **Generic** and **Domain Specific** enablers

4. Trial candidates
   Identify trial candidates taking into account relevance, trial setup and reuse of existing trials
FINESCE API Layer Offers Services to Apps

FINESCE Trials

FINESCE API Layer

FI-PPP Phase III

FINESCE Trial System

Device

Sensor

Actor
GE Integration Terni Trial
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Thank you for your attention!

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