Insights for Edge Software Developers

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For: everyone

Episode #1 – MEC OpenAPIs
In this episode ...

- We will learn how:
  - ETSI MEC APIs are published and available in open source
  - These MEC RESTful APIs are provided with OpenAPI Specification representations
  - Developers can use APIs for their MEC Apps and for testing

Discover the APIs on forge.etsi.org/rep/mec
Motivation: Validation; Accessibility; Feedback

- Targeting 3rd party developers

API descriptions all publicly available
- Electronic form (machine readable)
- Compliant to the OpenAPI Specification (OAS)
  - Automated compliance checking

OAS offers
- Interactive documentation
- Auto client/server communication stub generation
  - Multiple language support, e.g. Node.js, Java, Go
2 – ETSI Forge OpenAPI RNIS repository example

- OpenAPI compliant descriptions in both JSON and YAML
- Alternative transports: proto buffers (Protobuf)
- Links to Swagger UI and Editor
- BSD-3-Clause License
3 – OpenAPI interactive documentation example

- ETSI Forge hosted “Swagger-UI”:
  - Visualization and interaction with each API’s resources
  - No client / server implementation logic required
  - Facilitates better understanding of MEC APIs
  - Available for each OpenAPI compliant MEC API description
4 – Request / response detail

- Clicking on a method
  - GET .../plmn_info
- Query parameters
- Example response
- Information Model
5 – Client / Server Generation

• ETSI Forge hosted “Swagger-Editor”
  • Generate Client
  • Generate Server
6 – Usage of OpenAPIs for testing and compliance

- OpenAPI representations can be used also in compliance tests
- ETSI is publishing also test suites, implemented in automated languages
- Third parties (e.g. infrastructure owners, certification entities) can utilize MEC Test Suites

General testing framework for MEC Technologies (**MEC 0025**)

API Conformance testing developed for server implementations
- Standardized test suite (**MEC-DEC 032**) Test implementations in **Robot Framework** and **TTCN-3**
- Openly available and released under BSD-3 license
Conclusions and further resources

What we have learnt:

- How you can find open source representations of ETSI MEC APIs
- The use of the OpenAPI Specification and associated tooling
- Further utilisation of the API descriptions for MEC testing and compliance

Interested to learn more?

- Look for yourself at the available MEC APIs at forge.etsi.org/rep/mec
- Also play with them with the MEC Sandbox: https://try-mec.etsi.org/
- Follow also the next episodes of the MEC TECH Series 😊
Enjoy the MEC Tech Series