Insights for Edge Software Developers

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For: everyone

Episode #10 – MEC federation: Deployment considerations
In this episode ...

- We will learn how:
  - The architectural aspect of MEC federation
  - Business cases for MEC federation
  - Potential deployment options
  - Additional key considerations

- For your information:
  - This episode is based on the ETSI WP No. 49
  - Overview of MEC Federation is introduced in Episode #2
  - Cloud federation overview and essential concepts
  - Phase 3 activities on MEC federation
  - Real-world use cases for MEC federation
ETSI ISG MEC reference architecture variant for MEC federation

2 ref. points and 1 func. are newly defined, which support the following functionalities:

- Registration of MEC system info.
- MEC system discovery
- (optionally) broker capability
- Information exchange
- Application LCM
- Application monitoring
Synergized architectures among GSMA OPG, ETSI MEC & 3GPP

Figure 8: Cross-SDO mapping of the OP architecture (top-down approach).

Although EDGE-3 / Mp1 are not directly exposed to application service providers (ASP), they still have relevance to those ASPs.
Shared Operator Platform scenario in GSMA OPG

OP can be considered as a facilitator of customers’ seamless access to edge applications instantiated within a federation of edge networks.

These scenarios could be starting points for the industry.
Business cases for MEC federation
(As a whole picture)
Potential deployment options
1:1 relation between MEF and MEO

Figure 22: Deployment option of MEC federation in case of 1:1 relation between MEO and MEF.
Potential deployment options
1:n relation between MEF and MEO

Figure 23: Deployment option of MEC federation in case of 1:N relation between MEF and MEO with a single MEFM role.
Potential deployment options
1:N relation between MEO and MEPM

Figure 24: Deployment option of MEC federation in case of 1:N relation between MEO and MEPM.
Potential deployment options
1:N relation between MEF/OSS and MEO

Figure 25: Deployment option of MEC federation in case of 1:N relation between MEF and MEO, corresponding resource is owned by a single operator.
Additional key considerations

• Connection between MEC systems
• Aspects of Multi-domain orchestration
• Security considerations
• Northbound APIs
  • CAPIF
  • CAMARA-OPAG
Conclusions and further resources

What we have learnt:

• The architectural aspect of MEC federation
• Business stories of MEC federation
• Potential deployment options
• Additional key considerations

Interested to learn more?

• Check ETSI white paper No. 49 “MEC federation: deployment considerations”:
• Stay tuned on the forthcoming ETSI MEC standards MEC 040, available in draft form at:
  • https://docbox.etsi.org/isg/mec/open/MEC040%20FederationAPI%20drafts
• Follow also the next episodes of the MEC TECH Series 😊
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