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NS Artefact Onboarding in Multi-Admin Domain Scenarios

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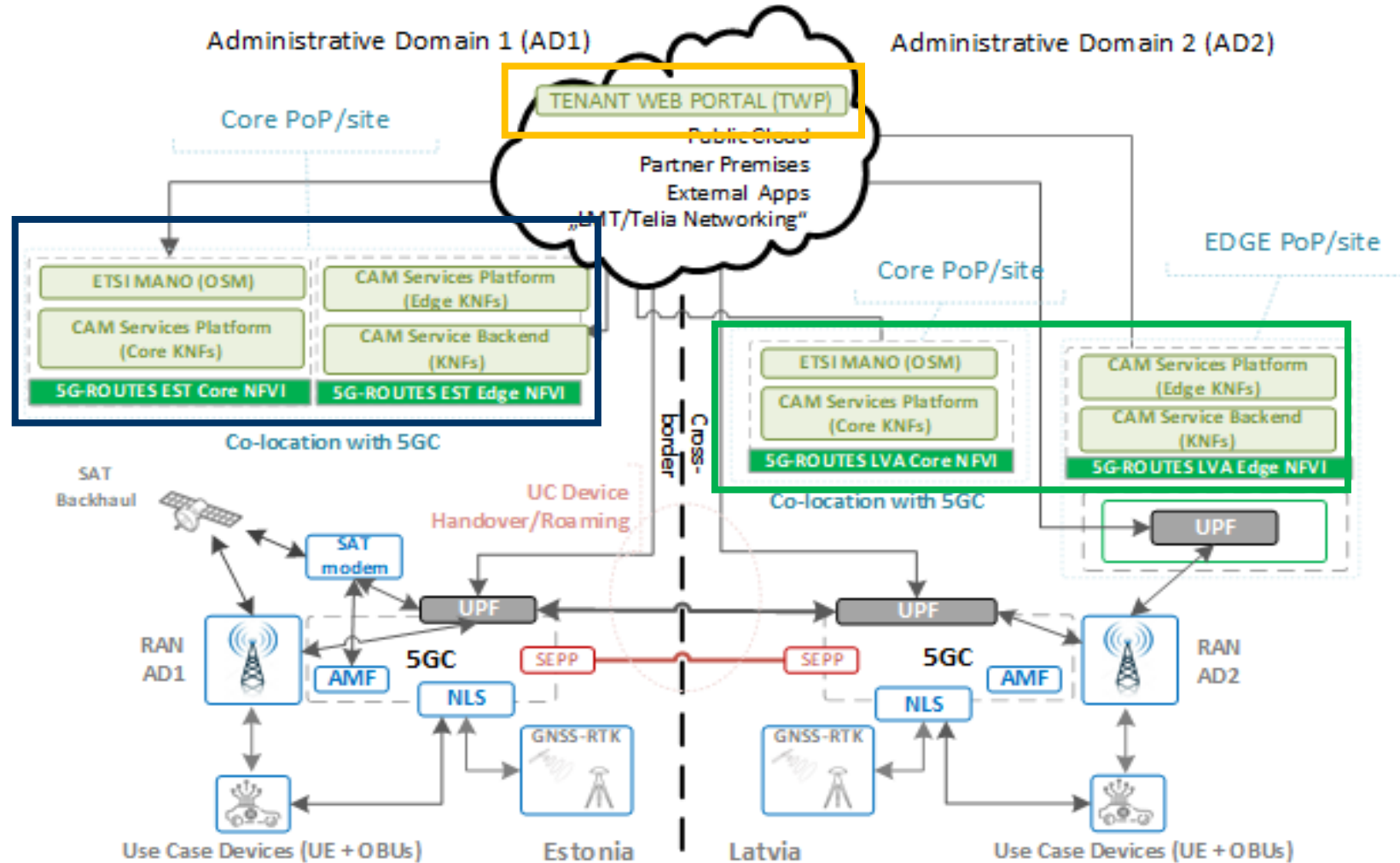
Agenda

- Motivation & Background
- CAM Services Platform Enablers
- Multi-Domain Onboarding Workflow
- Experimental setup
- Demonstration

- **Next generation mobile network** architecture enables flexible and automated MANO procedures based on recent networking paradigms (SDN, NFV) allowing the inclusion of new stakeholders in the mobile ecosystem, the vertical industries. Such stakeholders propose innovative Use Cases (UCs), which derive in new scenarios and business relations.
- In this work, developed in the context of 5G-ROUTES^[1] project, we considered the application of such principles for Connected and Automated Mobility (CAM) UCs targeting cross-border scenarios. In such scenarios, multiple ADs owned by different operators need to have available the Network Service (NS) artefacts.

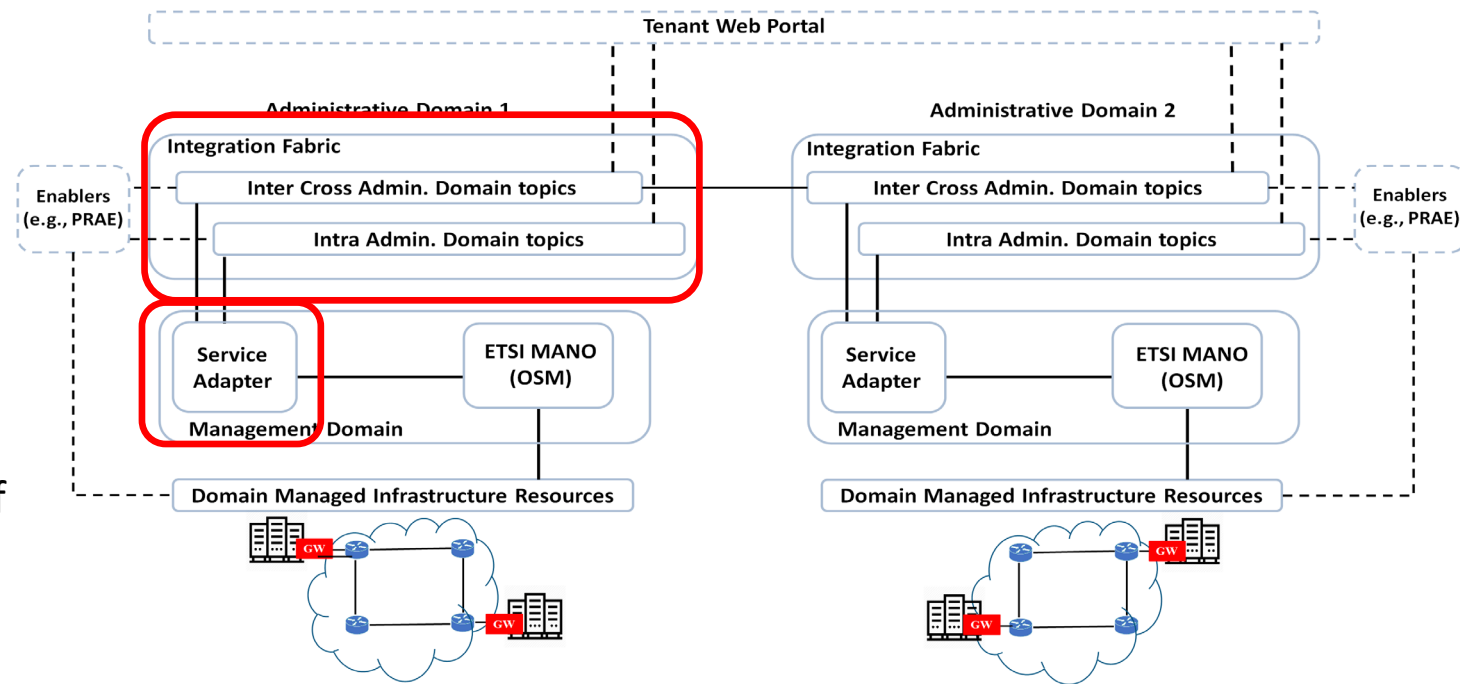
[1] 5G-ROUTES H2020 EU Project, Available at: <https://www.5g-routes.eu/>

Background: CAM Services Platform



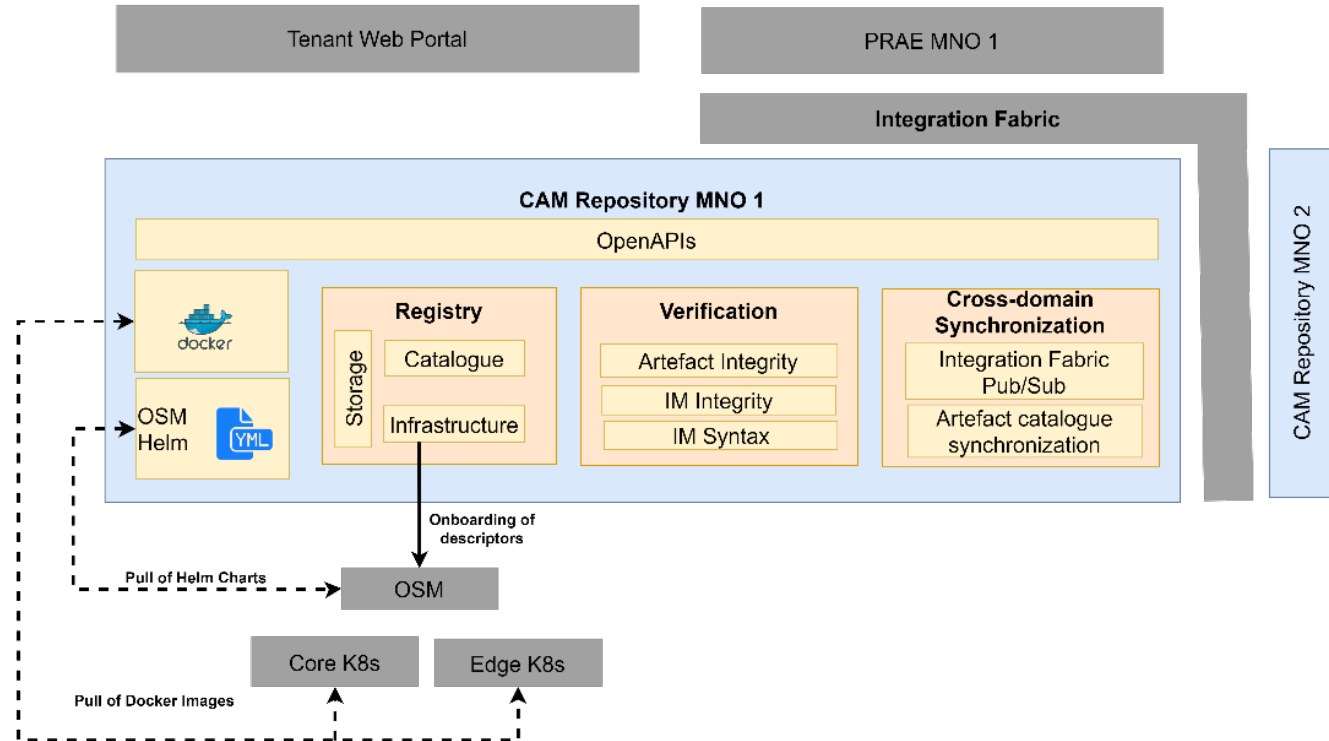
CAM Services Platform Enablers: Integration Fabric

- It enables the exchange of orchestration operations and experiment data across MNOs in the different borders.
- Built as two NSs: MQTT message broker and the Service Adapter (SA) module.
 - The MQTT broker enables asynchronous messaging across associate broker in the different domains following the publish/subscribe pattern.
 - The SA module subscribes to the topics of the broker available to receive orchestration operations and execute them by interacting with OOSM.

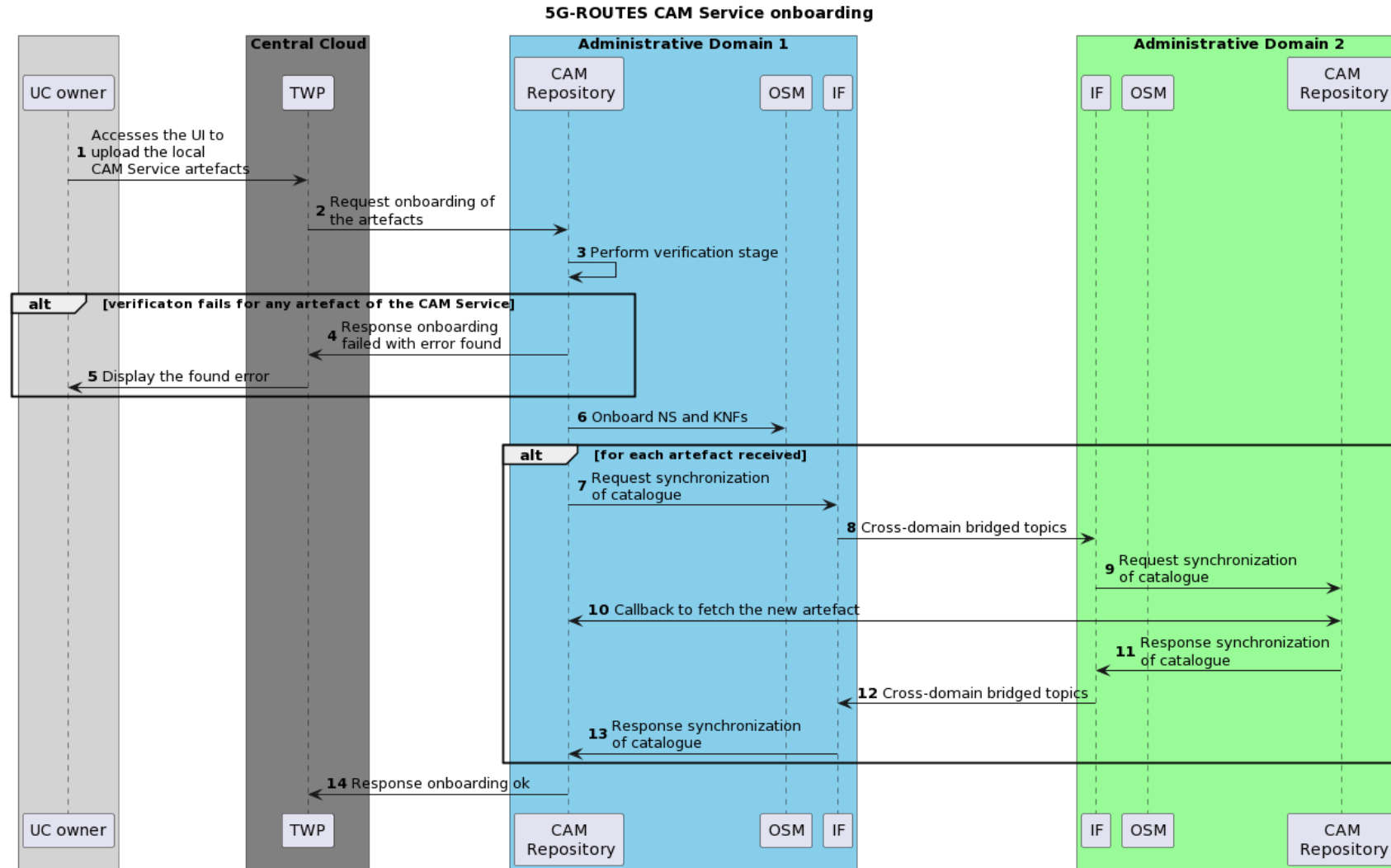


CAM Services Platform Enablers: CAM Repository

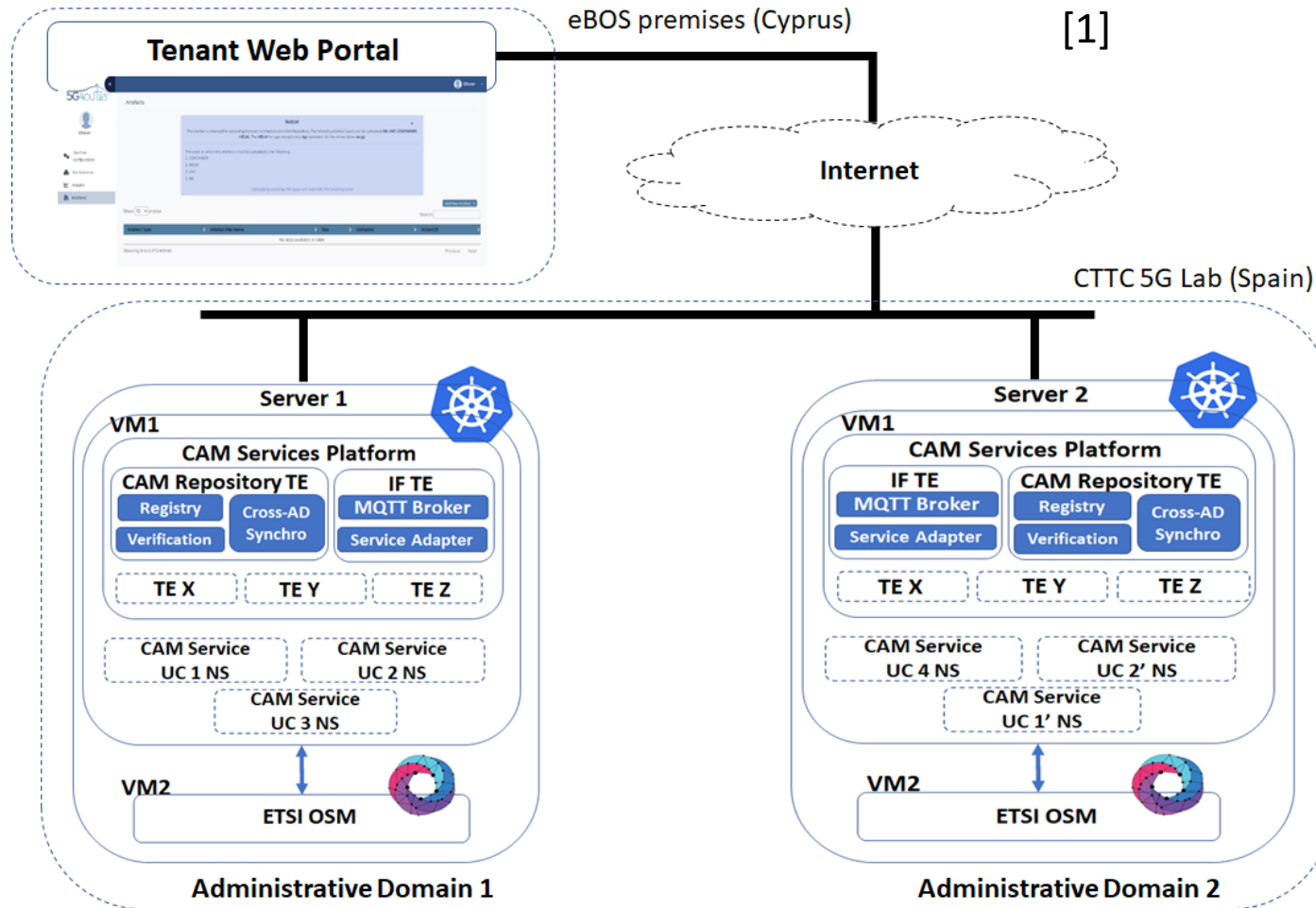
- Storage solution for the artefacts required to instantiate the virtualised CAM NS backends. It will allow UC owners to upload their artefacts in a single action to the 5G infrastructure in a multi-domain scenario by integrating provisioning and distribution mechanism.
- Made up three main modules: Registry, Verification and Cross-Domain Synchronization.



Multi-Domain Onboarding Workflow

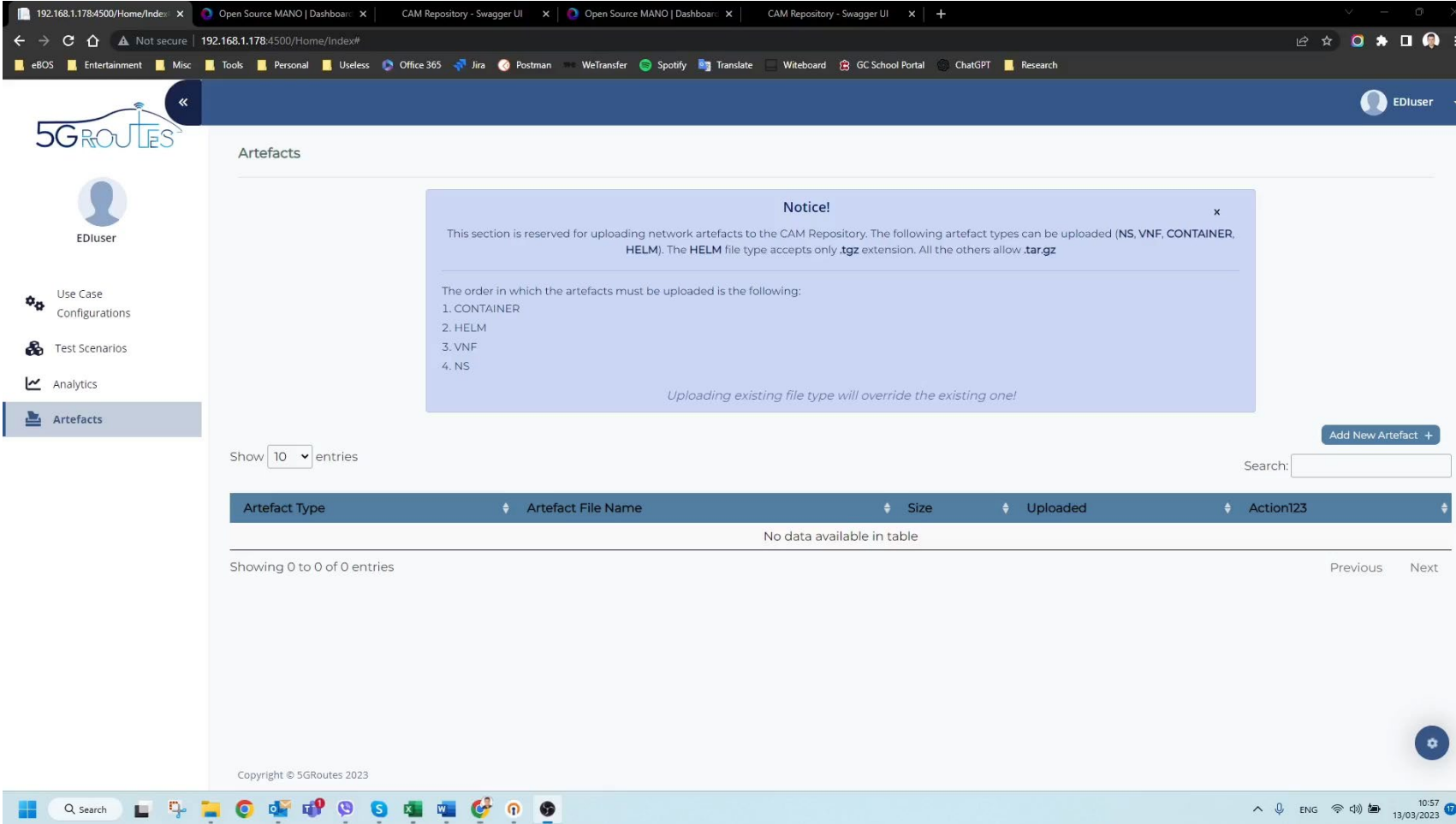


Experimental Setup



[1] J. Baranda et al., “Multi-administrative Domain Service Onboarding in a ZSM-based Orchestration Architecture”, IEEE SECON’23, Sept 2023

Demonstration



5GROUTES

EDluser

- Use Case Configurations
- Test Scenarios
- Analytics
- Artefacts**

Notice!

This section is reserved for uploading network artefacts to the CAM Repository. The following artefact types can be uploaded (NS, VNF, CONTAINER, HELM). The HELM file type accepts only .tgz extension. All the others allow .tar.gz

The order in which the artefacts must be uploaded is the following:

1. CONTAINER
2. HELM
3. VNF
4. NS

Uploading existing file type will override the existing one!

Show 10 entries

Add New Artefact +

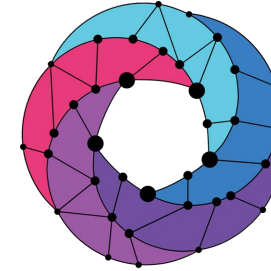
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Artefact Type	Artefact File Name	Size	Uploaded	Action123
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Thank You!

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