

Multi-cluster Migration of MEC Applications

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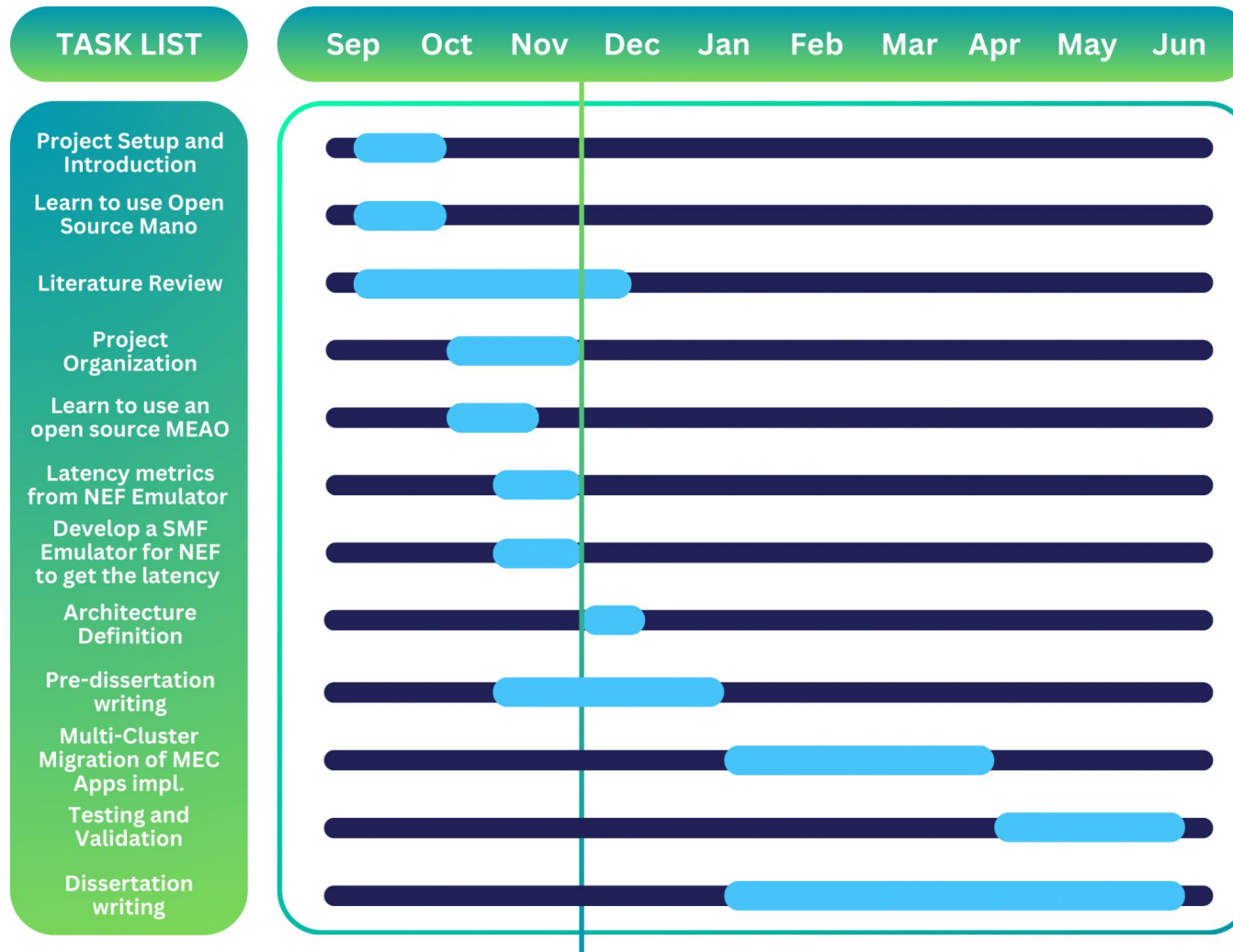
Summary: Nowadays, more and more devices are connected to the internet, generating a lot of data and requiring constant and fast communication with remote servers. This data is usually processed far from the user that consumes it, leading to high latency and low-efficiency problems. **Multi-access Edge Computing (MEC)** aims to improve this by bringing **cloud-like** computation closer to the network's edge. To achieve this, it is being used **Software Defined Networks (SDN)** and **Network Functions Virtualization (NFV)** to push the **development of MEC** as these technologies offer many **reusable features** that can do **MEC workloads**.

The main goal of this work is to introduce new functionalities that improve the **integration of NFV and MEC**, specifically enabling the automatic **migration of MEC applications** between different **MEC clusters**.

Work done / results

- ❖ Designed and implemented a basic **5G SMF (Session Management Function) Emulator**, more precisely, the Event Exposure API and the notifications callbacks.
- ❖ Updated the **5G NEF (Network Exposure Function) Emulator** to a newer release version and integrated it with the 5G SMF Emulator, enabling the simulation and collection of latency metrics while ensuring better compatibility and a more realistic representation of 5G network functionalities.
- ❖ Started writing the pre-dissertation.

Future work / challenges



- ❖ Complete an initial draft of the pre-dissertation, consolidating the project's introduction, state-of-the-art and methodology.
- ❖ Define the project's architecture, methodology, testing framework, and validation approach.