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Motivation of enhancement of 5GC based on Cloud Native

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Motivation of enhancement of 5GC based on Cloud Native

- Nowadays, the NFV applied in 5GC can facilitates the deployment of software appliances on commodity hardware in a virtualized environment rather than using physical boxes. However, there are still several issues that needs to be addressed.
  - The redundant stateful management may cause essential fault when the network is overloaded, which may consume additional hardware resources.
  - Vertical may have difficulty to manage the 5G network owned by themselves because of the lack of knowledges. They may need a network service provider to offer flexible network infrastructure, which can simply interact with vertical's local network facility. .
- In order to solve the aforementioned issues, 5GC needs to be further enhanced based on cloud native.

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Motivation of enhancement of 5GC based on Cloud Native

There are several reasons for the enhancement of 5GC based on Cloud Native.

- Further reduction of Capex when deploying 5GC;
- Making 5GC more friendly for IT vendor to deploy and meeting different requirement, e.g. Deployment of 5GC on public cloud and efficient inter-working with the network function delayed locally for vertical applications .

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Proposed objective

1. Study use cases and identify stage 1 requirements to support the enhancement of 5GC based on cloud native, the objective include:

- Use cases of the enhancement of 5GC based on cloud native.
- Service and functional requirements to support the identified use cases, specifically taking into account:
  - Requirements of enhancement of 5GC based on cloud native (e.g. cloud native network functions),
  - Requirements of introducing stateless processing in 5GC,
  - Requirements of signaling protocol enhancement by considering the inter-working between 5GC components deployed in the public cloud and network function delayed locally for vertical applications,

2. Gap analysis between the identified requirements for E5GCN and what is already defined by existing 3GPP requirements.

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Thank you!

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