OMEC - Architectural Challenges

Road Ahead

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OMEC architecture

- **MME**
  - S11 to **SAEG W-C**
  - S1AP/NAS to **SAEG W-U**

- **HSS**
  - S6A to **SAEG W-C**

- **DB**
  - DB to **MME**

- **PCRF**
  - Gx to **PGW-C**
  - Gx to **PGW-U**

- **CTF**
  - **Intel SGX secured CDR transport**

- **CDF**

- **Application Servers**

**Network Protocols**:
- **Freediameter**
- **GTPV2C**
- **GTPV2U**
- **PFCP**

**Network Interfaces**:
- **S1u**
- **S11**
- **S558**
- **Sxa**
- **Sxb**
- **SGi**
- **SGi**

**Other Notes**:
- eNB (simulators NG4T, Spirents, Polaris, il_trafficgen)
Gateways: Architectural Challenges
Gateways: Architectural challenges

- SAEGW-C/U, SGW-C/U, PGW-C/U
- 3GPP standards challenges
  - Combined SGW, PGW. CUPS.
  - 23.401, 23.214
  - Gx, Sx, S11, S5S8
- Deployment cases, readiness
- Rules handling and rules engine
Gateways : Road Ahead
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Scalability Dynamic
Gateways: Road Ahead

CLI
Statistics

Interface vs implementation
Lawful interception
In all combinations
Gateways : Road Ahead

Framework
Gateways: Road Ahead

Conformance
5G readiness
Gateways: Road Ahead

Backward compatibility

3G, 2.5G
MME : Architecture Story
OpenMME: Architectural Considerations

- Architectural considerations
- Framework completion
- Compliance challenges
OMEC : 5G Migration
OMEC Components 5G Migration

Gateways

- SMF - Combined SGW, PGW on control plane
  - UPF selection
  - Sxa, Sxb, Sxa/Sxb
  - Session Management
- UPF - Combined SGW & PGW on data plane

AMF

- OpenMME/AMF – Mobility, Registration
- AUSF – Authentication
- Namf. Step by step migration.
OMEC 5GC Migration : Proposed phase 1 - MME to AMF

Approach to end state:
1. Implement Namf REST interface on top of openMME
2. Keep S1-MME/S1AP,S11 unchanged
3. Next phase : implement N1/N2 - NGAP
**Approach to End State:**

1. Implement N1/N2 NGAP (SCTP) in openMME
2. Keep S1-MME/S1AP,S11 unchanged
Thank you!

Follow Up Links:
www.gslab.com
https://github.com/omec-project