



5G SBP: Orchestration of OAI Core and Amarisoft gNB with EMC0

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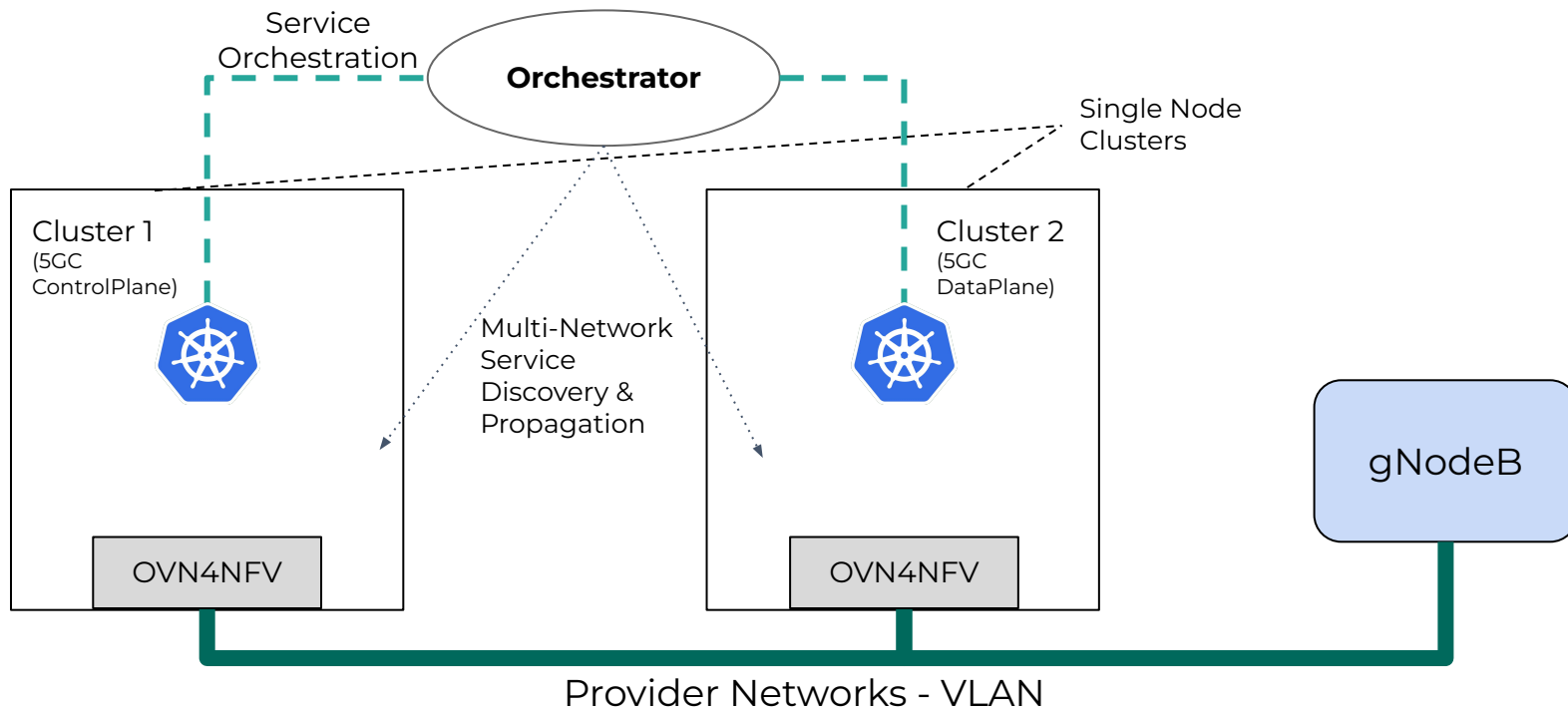
<https://lfnetworking.org>



Introduction

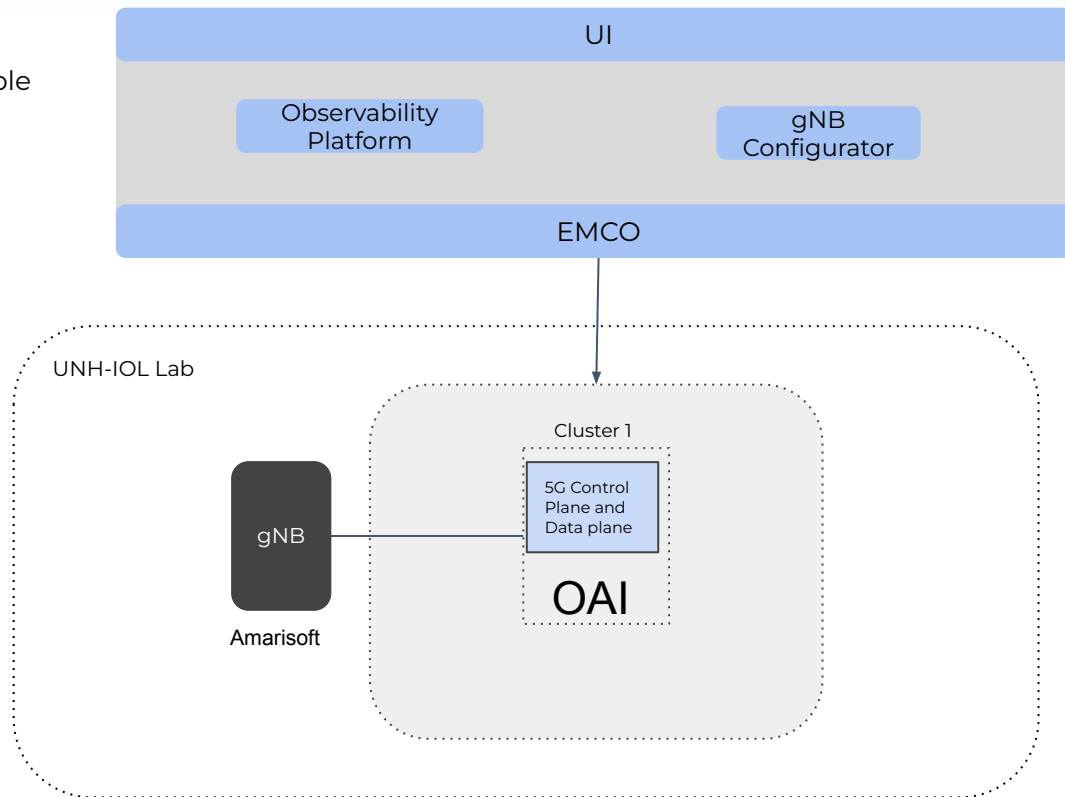
- Deployment and orchestration of OAI Core Network and Amarisoft gNB for 5GS network
- Open Air Interface (OAI) is building RAN and Core technologies and has begun collaborating closely with the O-RAN Alliance Software Community (OSC).
- Amarisoft is a test and measurement equipment supplier, where their gNB is being used within the integration and interop testing

Setup Overview

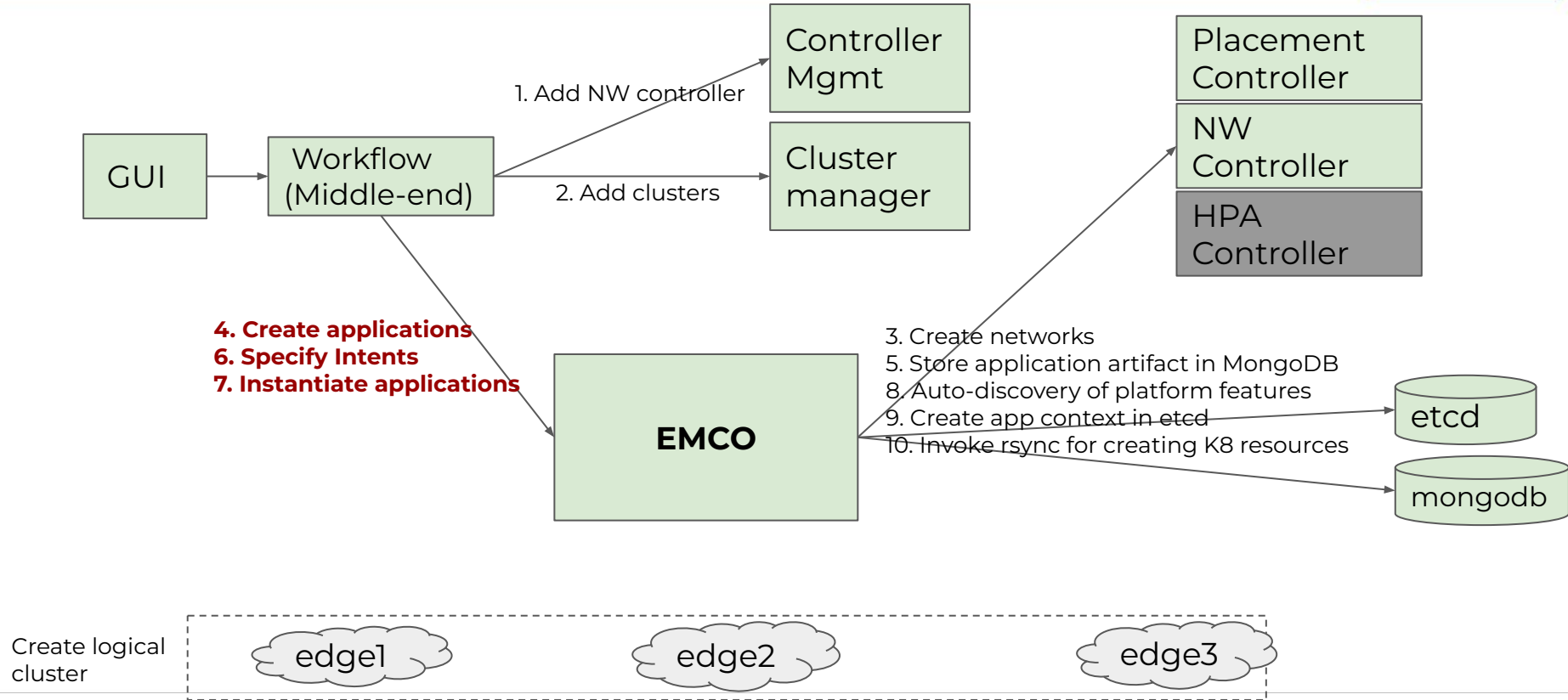


Demo Setup

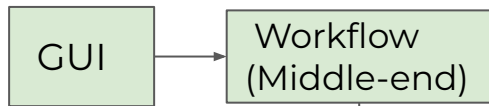
Each enterprise has multiple site; each site has a mix of CNFs and CNAs



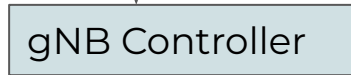
Orchestration & Day-0 Configuration



Orchestration & Day-0 Configuration



In the same orchestration flow, we propose a gNB controller (for Amarisoft) which in the backend will configure the gNB



Amarisoft

Day-0 Config Snippet (Amarisoft)

```
rf_driver: {},  
amf_list: [{amf_addr:  
<10.2.0.16>}],  
gtp_addr: <IPv4 address>,  
gnb_id: 0x12345,  
gnb_id_bits: 28,  
nr_cell_list: [{}],  
nr_cell_default: {},
```

```
nr_cell_list: [{  
  rf_port: <>,  
  cell_id: 0x01,  
  n_id_cell: <>,  
  scell_list: [{cell_id: <>}],  
  band: <>,  
  dl_nr_arfcn: 428000, /* 2140 MHz */,  
  ul_nr_arfcn: 390000, /* 1950 MHz */,  
  bandwidth: 30, /* MHz */,  
  n_antenna_dl: 2,  
  n_antenna_ul: 1,  
  subcarrier_spacing: 15, /* kHz */,  
  tdd_ul_dl_config: {},  
  ssb_pos_bitmap: "1000",  
  prach: {}  
}]
```

```
nr_cell_default: {  
  ssb_period: 20, /* in ms */,  
  plmn_list: [{ tac: 100, plmn: "00101",  
    reserved: false }],  
  sib9: {},  
  si_window_length: 40,  
  cell_barred: false,  
  intra_freq_reselection: true,  
  sr_period: 40,  
  pdccch: {},  
  pdsch: {},  
  csi_rs: {},  
  pucch: {},  
  pusch: {},  
  mac_config: {},  
  cipher_algo_pref: [],  
  integ_algo_pref: [2, 1],  
  inactivity_timer: 10000,  
  drb_config: "drb_nr.cfg"  
}
```



Demo...

Q&A, Thank You