



Community Meeting

Customization and
Deployment Stories.



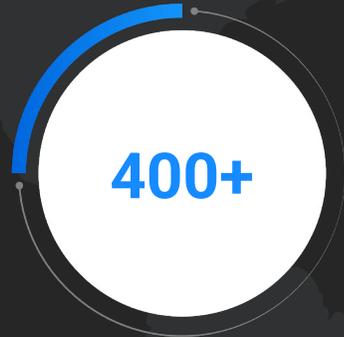
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GS Lab | GAVS in Product Engineering



Years in business



Products/Platforms
engineered



Active
customers
across globe



Technologists



Development centers at
major IT hubs in India
along with numerous
customer locations
globally



Recognized across 11 categories



What we do?



Digital Product Engineering

Technology Consulting

AI-led Infrastructure Management

Performance Engineering

API Management

Product Reselling to Enterprises

User Experience Design

Professional Services

Product Monitoring, Maintenance and Support

Open-source Engineering

Legacy Product Modernization

Industries we cater to



Hi-tech



Telecom



Healthcare



Fintech



Manufacturing



AdTech



Retail

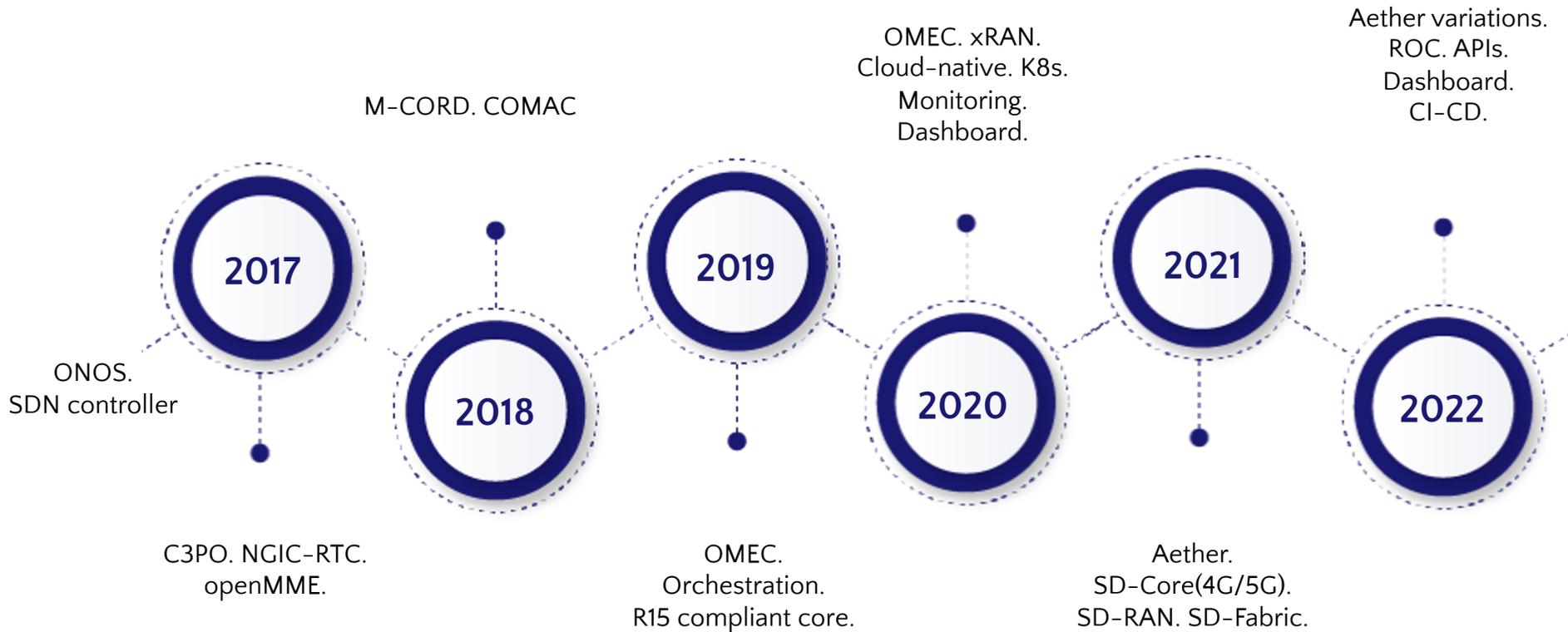


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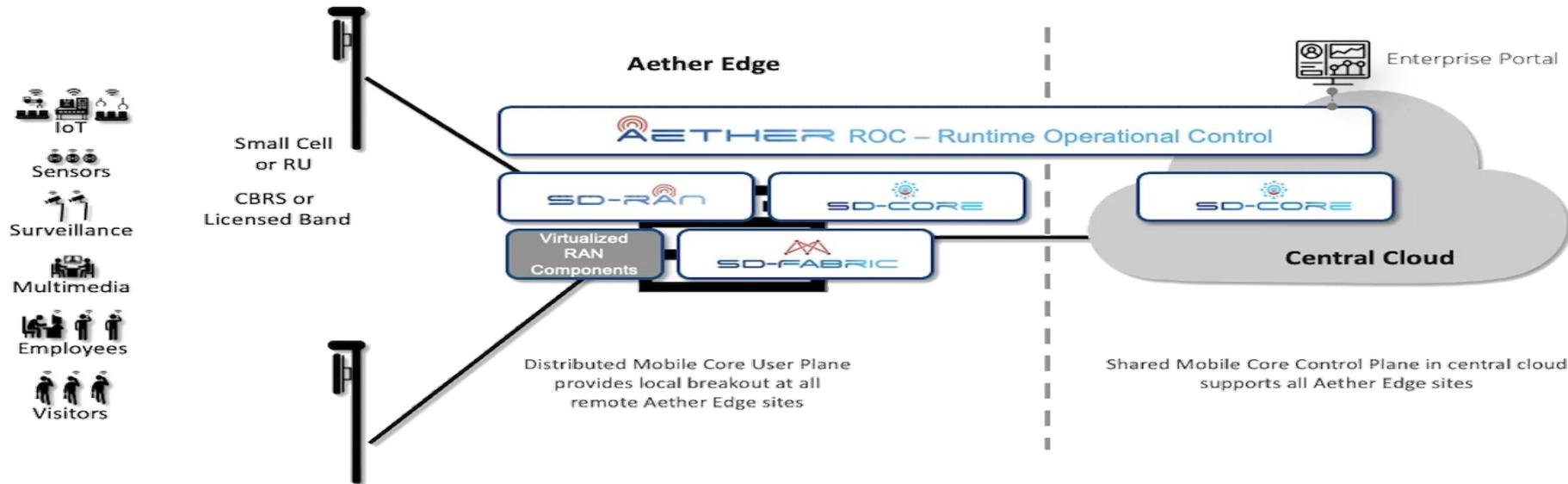


Aether History

Aether Journey



Aether: Design Principals. Adoption support.



Architectural paradigms

- 3gpp
- Infrastructure agnostic – Bare metal, VM, Container, k8s etc.
- Continuous testing with industry standard tools, and 10 + RAN manufacturers.
- Performance and scale guidelines from beginning.

Deployment agility

- Flexibility – From end to end infrastructure, to individual components acceptance.
- Data plane accelerators - AF_Packet, DPDK, FPGA.



CUPS Gateway

Deployment model – Bare metal and VM



Customer profile: MNO

Use case: Deployment for IoT and fixed wireless UEs in field.

Key constraints: 3gpp compliance. Performance. Scale.

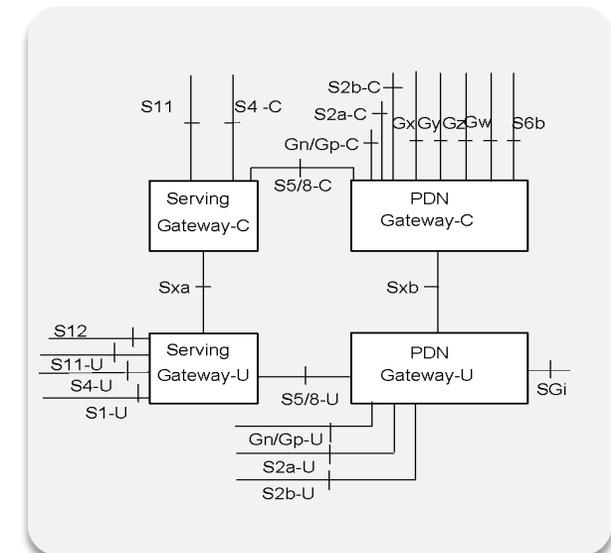
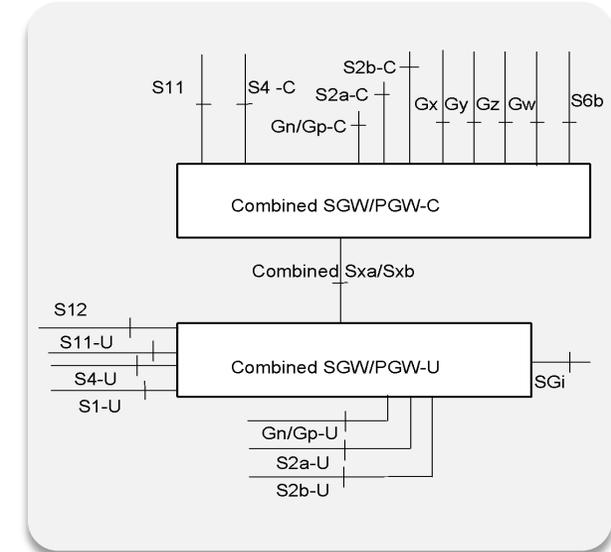
Deployment:

Compliant 4G LTE infrastructure.

Private deployment model - Baremetal + VM combination.

DPDK based user plane.

Deployment Automation - Terraform, Ansible.





Distributed deployment

Deployment model – Globally distributed CUPS. Public + Private.

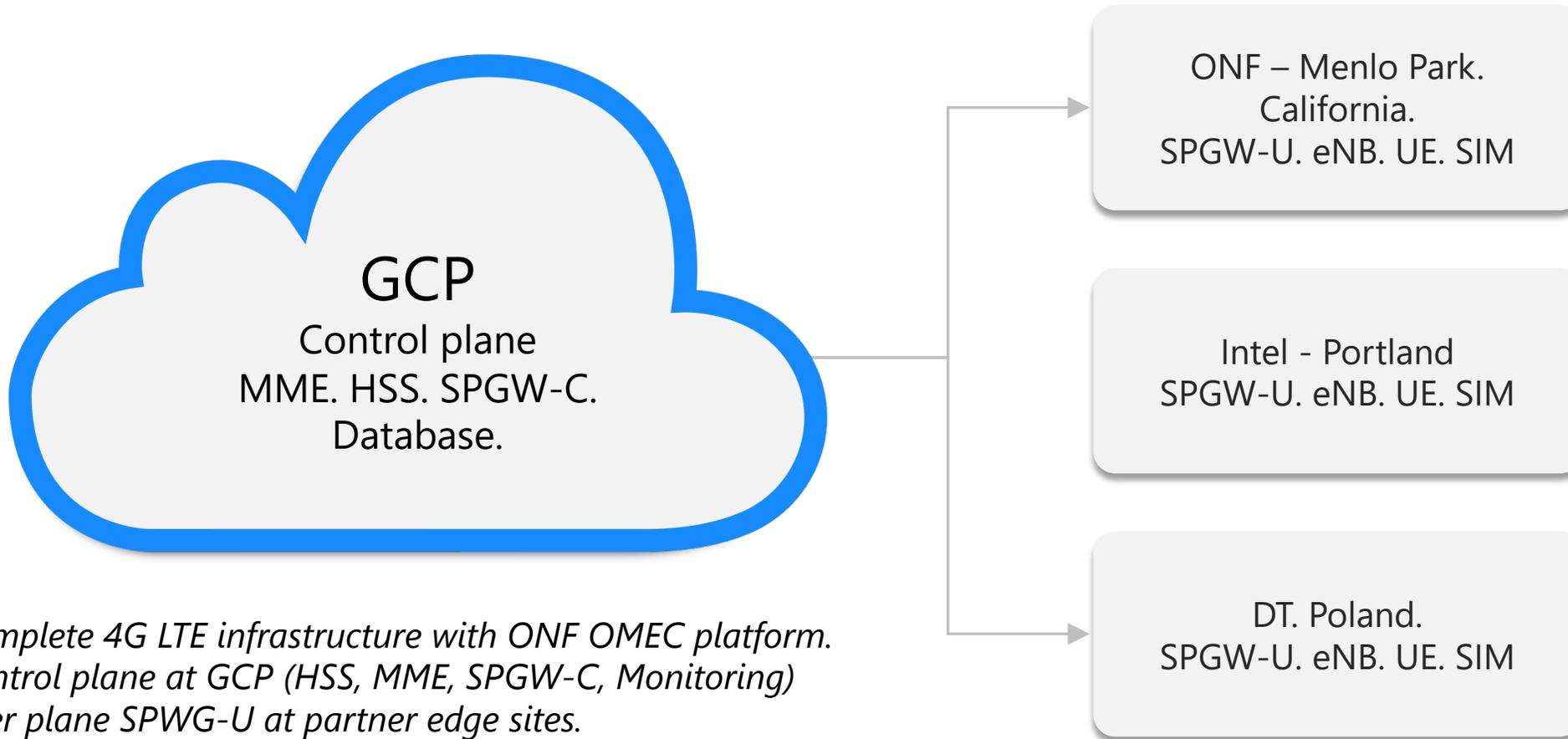


Customer profile: ONF Community and research partners

Use case: Globally distributed deployment in CUPS architecture.



Deployment model – Globally distributed CUPS. Public + Private.



- Complete 4G LTE infrastructure with ONF OMEC platform.
- Control plane at GCP (HSS, MME, SPGW-C, Monitoring)
- User plane SPGW-U at partner edge sites.
- Hybrid deployment model – Public. Private. BareMetal. VM.



SGW-C

Integrating open source component with
commercial infrastructure

Deployment model – SGW-C only.



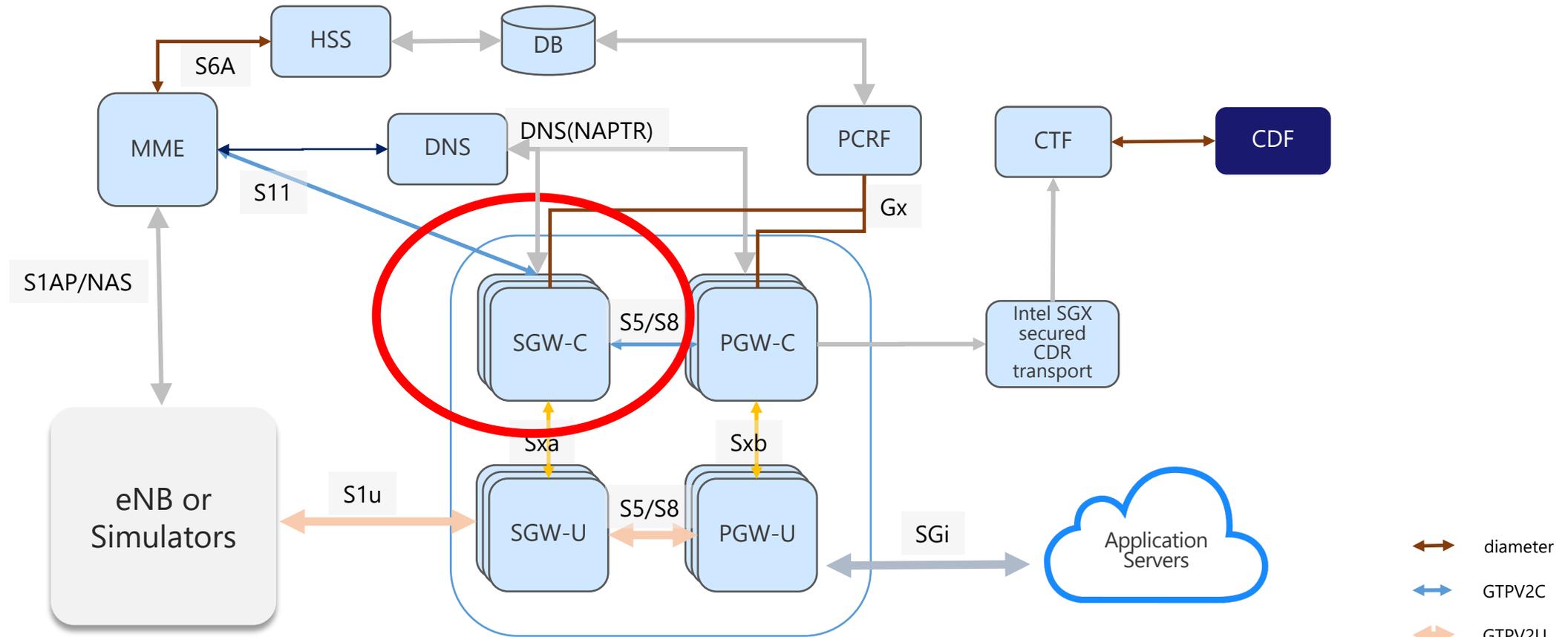
Customer profile: MVNO

Use case: Integration of SGW-C with existing infrastructure.

Key constraints: 3GPP compliance. Interoperability with third party MME, SGW-U and PGW.



Deployment model – SGW-C only.



- Only selective component out of overall infrastructure
- Private cloud. VM Based.
- Customization for infrastructure specific provisioning, logging and monitoring.



MNO – MVNO Integration

Deployment model – P-LTE - MNO Integration



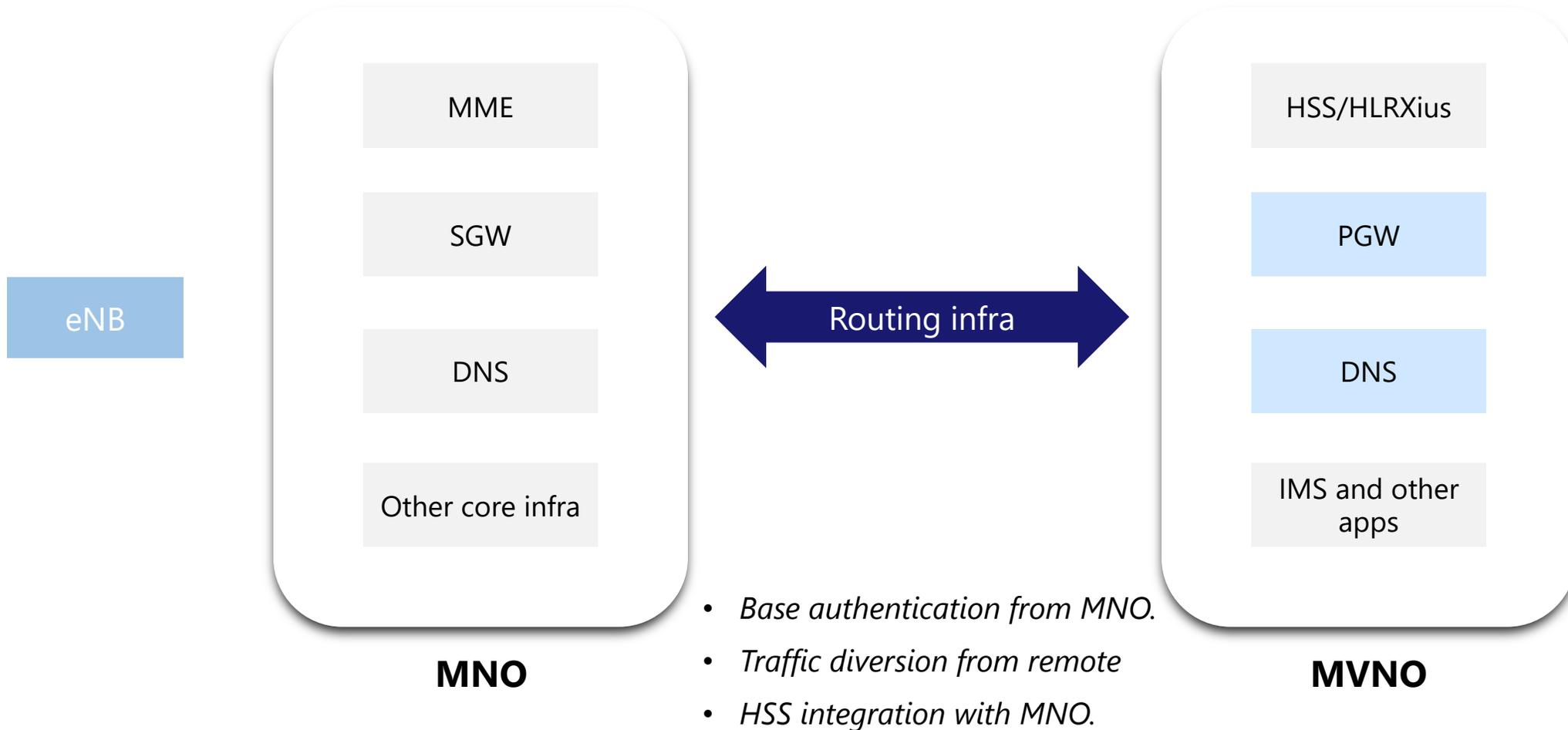
Customer profile: Network provider to remote industry

Use case: Private network deployment for large field industry in remote areas. Integration with MNO for backbone services.

Key constraints: MME. PGW. HSS from MNO.



Deployment model – P-LTE - MNO Integration





Private-LTE/5G

Cloud Native Custom Infrastructure

Deployment model – Custom CUPS and platform integration



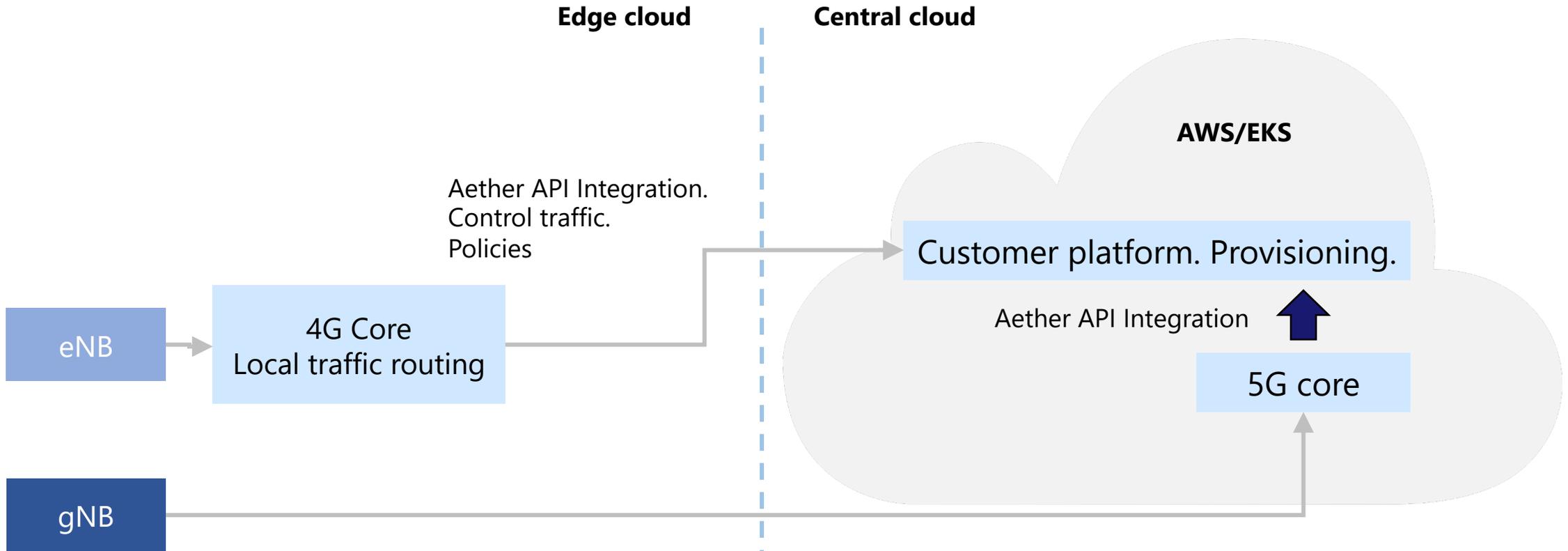
Customer profile: Private-4G/5G provider

Use case: Edge deployment of 4G/5G Gateways(S/PGW. UPF) and MME. API integration with customer orchestration platform in public cloud.

Key constraints: API Integration. Provisioning through platform. Integration with Radio units.



Deployment model – Custom CUPS and platform integration



- *Only selective component out of overall infrastructure.*
- *Integration with customer 4G/5G components. API integration with the customer Private network platform.*



Private-LTE/5G

Hybrid(Edge cloud + public cloud)

Deployment model – Distributed edge with public cloud provider



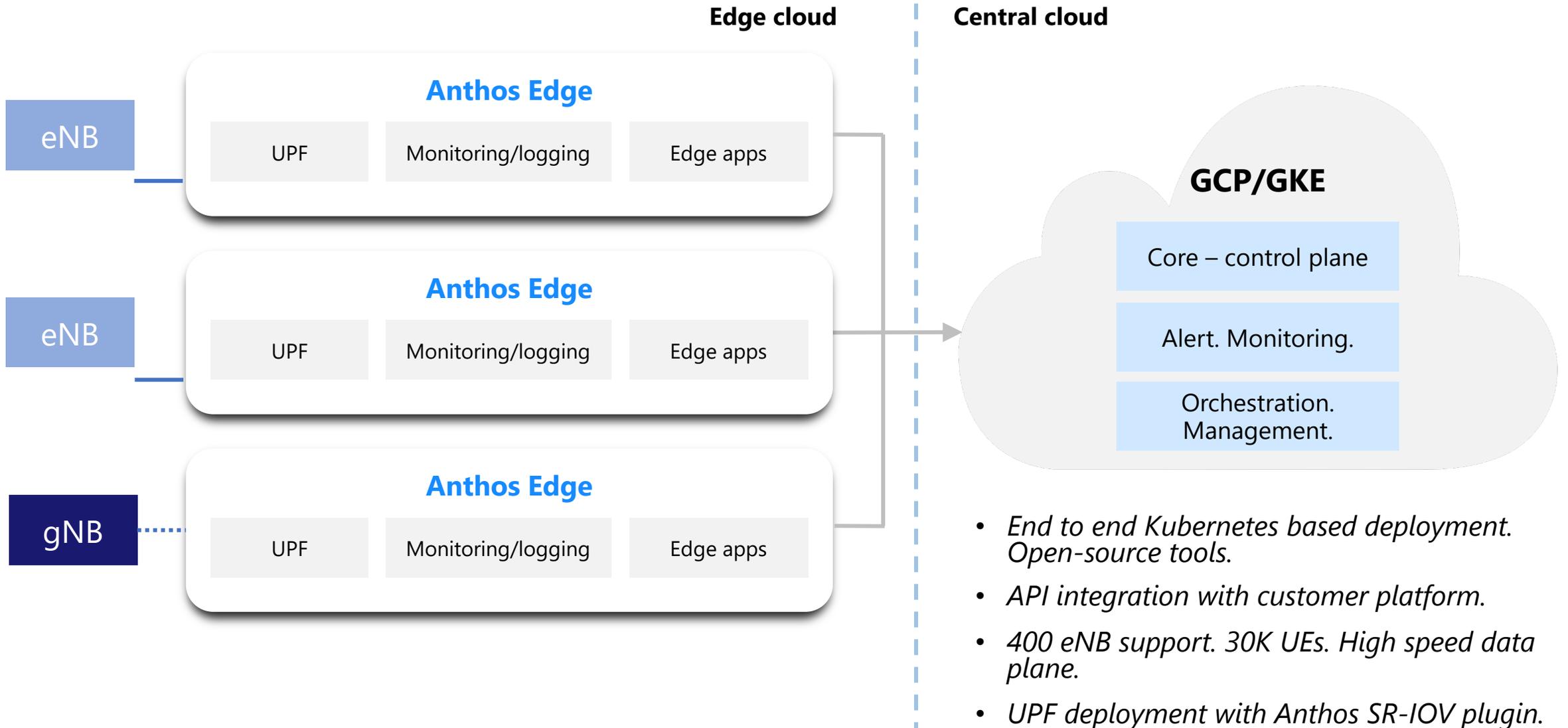
Customer profile: Connectivity service provider.

Use case: Distributed CUPS with end-to-end public cloud infrastructure.

Key constraints: API Integration. High scalable architecture. Cloud provider's edge deployment.



Deployment model – Distributed edge with public cloud provider



Closing Notes



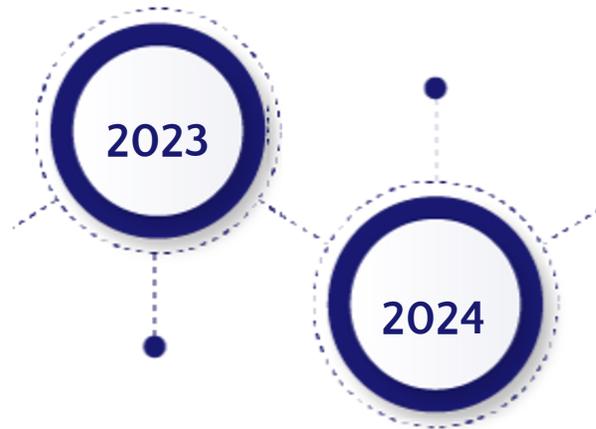
Other Success Stories

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Community and partner support

- GS Lab as research partner with ONF.
- Partner to accelerate and smoothen the open-source adoption and success.

ONF:



Sustainability.
Power optimization.
All dimensional scale.
R-17. URLLC.
NB-IoT. Online billing.



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