

Magma Roadmap

A photograph of two young women sitting at a table in a cafe. The woman on the left is wearing a yellow top and holding a blue object up like a camera lens. The woman on the right is wearing a brown cardigan over a floral shirt. They are both smiling and looking towards the camera. There are drinks on the table, including a red drink with a straw. The background shows a wall with various papers and a potted plant.

Magmamacore.com

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Connect the world to a faster network by enabling service providers to build cost-effective, extensible, and carrier-grade networks.

Magma Roadmap Principles

1. Build what is needed

Deployment and use-case focused with input from our partners and the Magma ecosystem

2. Rapid iteration

Flexible roadmap, quarterly releases following DevOps principles

3. Software delivery

Hitless upgrades, lightweight delivery (containers), independent upgrade paths for Orchestrator and Access Gateway

See Magma documentation and quick start guide [here](#)

Magma Use Cases

Currently available



1

FIXED WIRELESS ACCESS

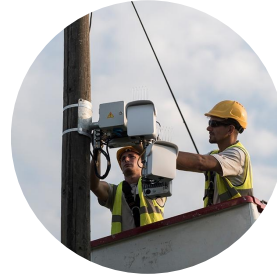
- Offer broadband subscriptions by leveraging existing investments in LTE
- Apply network policies at local break-out points



2

CARRIER Wi-Fi

- Alleviate congestion by offloading cellular traffic to nearby Wi-Fi
- Integrate with existing core
- Easily distribute Wi-Fi profiles on user devices



3

PRIVATE LTE

- Micro EPC cloud-native form factor
- Built-in multi-tenancy
- Distributed EPC with local breakout - ideal for islands of coverage

2021 Roadmap



4

Mobile Broadband

- Mobility & Expansion network to rural and remote areas while protecting the existing core
- Enable rapid adoption of new RAN



5

5G

- Offer LTE / 5G based cellular connectivity
- Apply network policies at local break-out points

LTE Roadmap

Available Features

Pre-v1.3	v1.3 (Durango)	v1.4 (Etna)	v1.5 (Fuji)
EAP-SIM/AKA Auth	Gx, Gy, S6a interface support	Stateless AGW	Inbound roaming
RADIUS AAA Proxy to HSS (SWx) over Diameter/SCTP	SMS delivery via API	High Availability (HA)	Intra-AGW SI mobility
AGW bridged mode	APN correction	Header Enrichment	Ubuntu 20.04 support for AGW
QoS Enforcement	Support for unmanaged eNodeB	Subscriber state view in LTE and	IMEI restriction
Service via CPE & UE	Charging Data Record (CDR) exports	Federated LTE networks	PLMN restriction enhancements
Orch8r in AWS, on-prem (via certified SI support)	NMS enhancements	Call tracing	Unified DB for Orc8r/NMS
Core integrations for HSS & Orc8r	See release notes for more info	NMS usability improvements	See release notes for more info
FeG on-prem (via certified SI support)		Enhanced AGW debugging tools (show-tech)	
NMS redesign with multi-tenancy		See release notes for more info	

Features in flight (available end of June - Rel 1.6)

Improved AGW performance at scale

- Support for 600 UEs per AGW @10 UEs/sec attach/detach rate
- MME
 - State management enhancements
 - State stats/state collection and monitoring
- Pipelined
 - Stats collection improvements
 - Improvements to stats reporting frequency
- GTP offloads

Orc8r and NMS scalability

- Support for 20,000+ subscribers and 500+ AGWs
- APN refactoring

Hybrid/Edge Cloud Containerization and Orchestration

- AWS marketplace availability
- AGW containerization
- Cloud HA and Kubernetes service

Network access restriction

- Tracking Area Code (TAC) restriction

VoLTE

- Emergency attach with IMS integration (VoLTE)

Domain Proxy

- Provides a gateway to the Spectrum Access System (SAS) that transparently routes Citizens Broadband Radio Service Device (CBSD) connections with the SAS and enables rapid CBSD deployment for Citizens Broadband Radio Service (CBRS) use-cases

Regulatory / Compliance

- Lawful Intercept (LI) - Support for X1, X2 and X3 interfaces

IPv6 UE support

Features In Planning

Near Term (Q3 2021 - Rel 1.7)

- Support for NB-IOT
- Metro Area Handoff (Inter-AGW)
- S1 mobility (inter AGW), alpha - 1.7

Longer Term (Q4 2021 and beyond)

- Edge infra integrations - e.g., GCP
- IPv6 (transport)
- Hitless upgrades

5G Roadmap

Magma Roadmap - 5G SA

Note: 5G SA development being led by Wavelabs and Facebook

Q2 2021	Q3 2021	Q4 2021	H1 2022
<p>Basic 5G-SA FWA Data Service</p> <ul style="list-style-type: none">● Register/Deregister● Service via CPE● Idle mode / Paging● 5G Auth (basic)	<p>Idle mode & Paging support</p> <p>5G QoS</p> <ul style="list-style-type: none">● Multiple QoS classes/Session● Network Initiated QoS Classes● UE Initiated QoS depends on demand signal <p>Extensions to Subscriber Data Management</p> <ul style="list-style-type: none">● 5g specific data/auth procedures● No root key on AGW	<p>Slicing foundations</p> <ul style="list-style-type: none">● Slice Instance Onboarding / Policies/Configs● gNB configuration for slicing (managed/unmanaged)	<p>Slicing features</p> <ul style="list-style-type: none">● Service area restrictions for slice instances● Slice instance isolation via containers/pods

Magma Roadmap - 5G NSA (targeting end of May '21)

Note: 5G-NSA Development being led by OpenAirInterface Software Alliance

Support for NSA

- Support for 5G RAN using 4G-LTE Core signalling
- “Option 3x” implementation as defined by GSMA
- Targeting Alpha code complete by end of May for inclusion in R1.6

Thank you

Questions?

Join our Slack channel:
magmacore.slack.com

Visit our [website](#)

