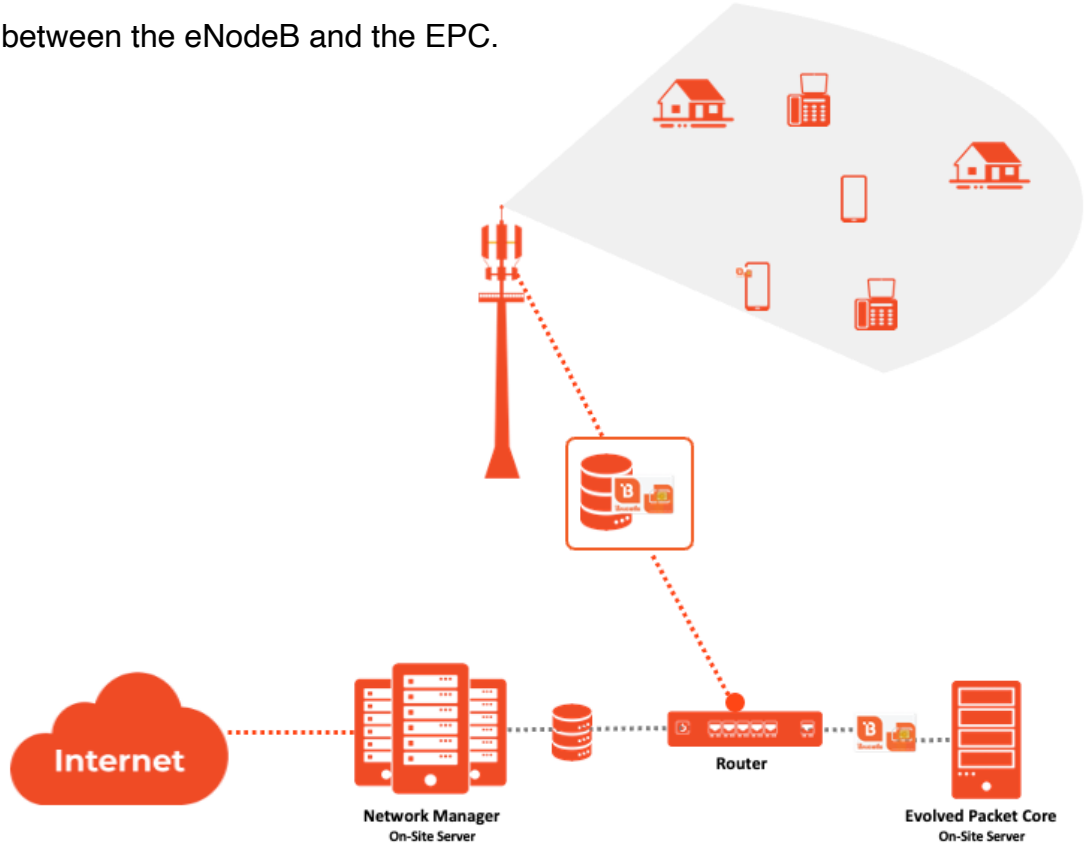
What is Baicells HaloB?

Baicells HaloB is a patented technology developed by Baicells that simplifies the deployment and management of private LTE networks. It works by embedding a "Lite EPC" (Evolved Packet Core) directly into Baicells' eNodeB (eNB) base stations.
Here's a breakdown of what that means and why it's useful:

Traditional LTE Networks:

- **eNodeB:** The base station that communicates with user devices (like phones).
- **EPC:** The core network that handles things like user authentication, data routing, and mobility management. It's usually located in a central data center.
- **Transport Network:** The connection (fiber optic cables, microwave links, etc.) between the eNodeB and the EPC.



Baicells HaloB:

- Eliminates the need for a separate EPC and the associated transport network by integrating core network functions directly into the eNB.
- This makes the network much simpler to deploy, especially in remote locations or where backhaul connectivity is unreliable.
- Reduces latency because critical control signaling happens locally.
- It improves network resilience since there's no single point of failure in a separate EPC.

Benefits:

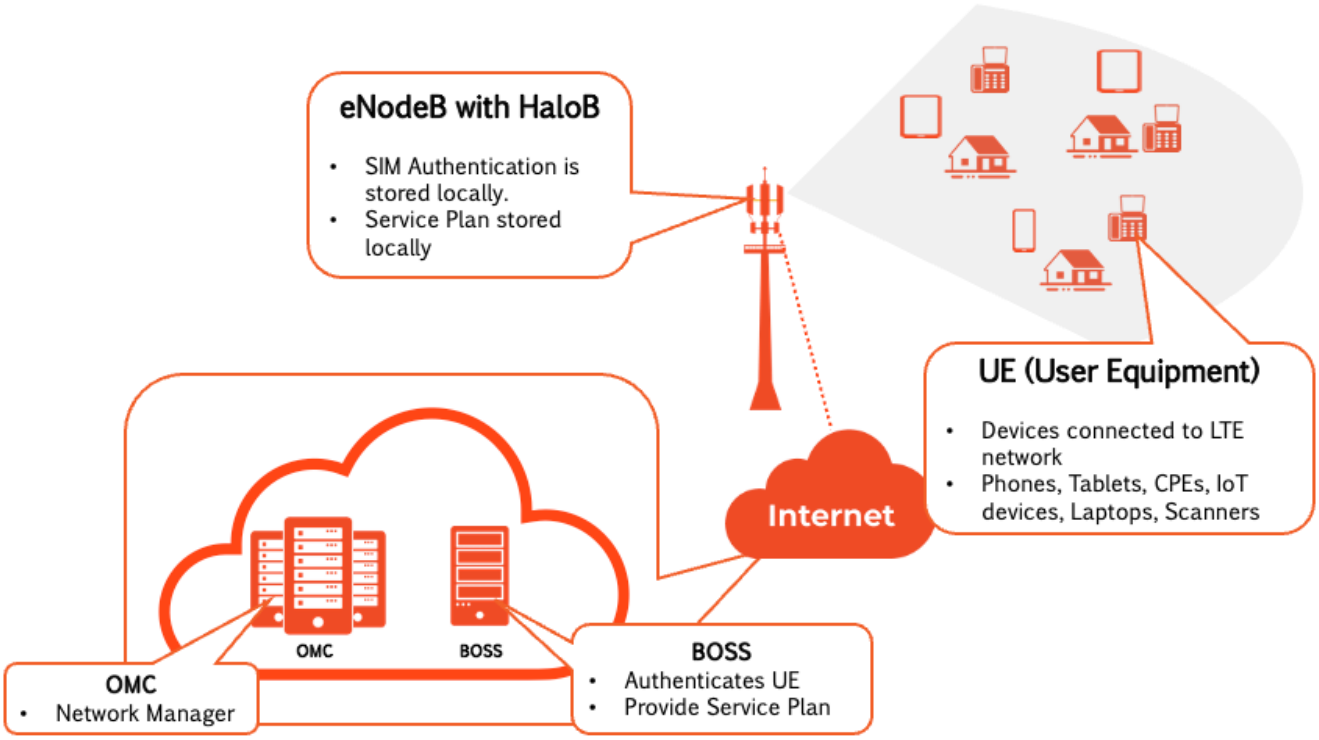
- **Simplified Deployment:** Easier and faster to set up, especially in challenging locations.
- **Reduced Costs:** Lower equipment and operational expenses due to the elimination of the EPC and transport network.
- **Improved Reliability:** Less susceptible to outages caused by transport network issues.
- **Increased Performance:** Lower latency for faster data speeds and better responsiveness.

Use Cases:

- **Industrial IoT:** Connecting sensors, machines, and other devices in factories, mines, and other industrial settings.
- **Remote Locations:** Providing connectivity in areas with limited or no access to traditional infrastructure.
- **Private LTE Networks:** Building dedicated networks for businesses, campuses, or other organizations.
- **Disaster Relief:** Quickly deploying temporary networks in emergency situations.
- **Education:** HaloB enables consistent access to online learning platforms, digital resources, and video conferencing, fostering engaging and interactive learning experiences.

How it Works:

1. **UE (User Equipment) Attachment:** When a device tries to connect to the HaloB eNB, the eNB contacts the BOSS (Baicells Operations Support System) to authenticate the device and get its service plan.
2. **Local Storage:** This information is stored locally on the eNB.
3. **Direct Communication:** The device can then communicate directly with the eNB without needing to go through a separate EPC



Key Features:

- **Integrated EPC:** Core network functions built into the eNB.
- **BOSS Integration:** Centralized management and authentication through the BOSS system.
- **Local Data Storage:** User information is stored on the eNB for faster reconnections.

If you're considering a private LTE network or need a solution for providing connectivity in a challenging environment, Baicells HaloB is definitely worth exploring.