

R3 Architecture Document of IEC Type 3: Android cloud native applications on Arm servers in edge

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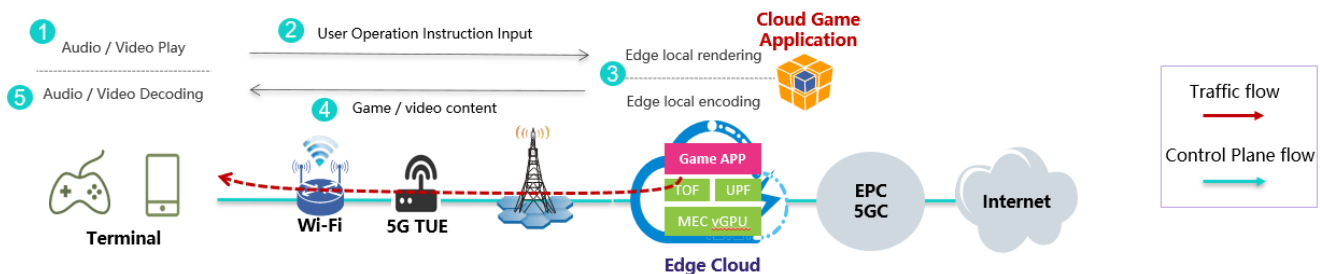
Blueprint overview

Integrated Edge Cloud(IEC) is an Akraino approved blueprint family and part of Akraino Edge Stack, which intends to develop a fully integrated edge infrastructure solution, and the project is completely focused towards Edge Computing. This open source software stack provides critical infrastructure to enable high performance, reduce latency, improve availability, lower operational overhead, provide scalability, address security needs, and improve fault management. The IEC project will address multiple edge use cases and industry, not just Telco Industry. IEC intends to develop solution and support of carrier, provider, and the IoT networks.

IEC Type3 mainly focus on Android Application running on edge ARM Cloud architecture with GPU/ vGPU Management. Also, ARM cloud games need to have the basic features of "cloud", such as flexibility , availability everywhere. Based on cloud infrastructure optimized for android application, providing ARM application services such as Android cloud game and VR/AR live video.

Use Case

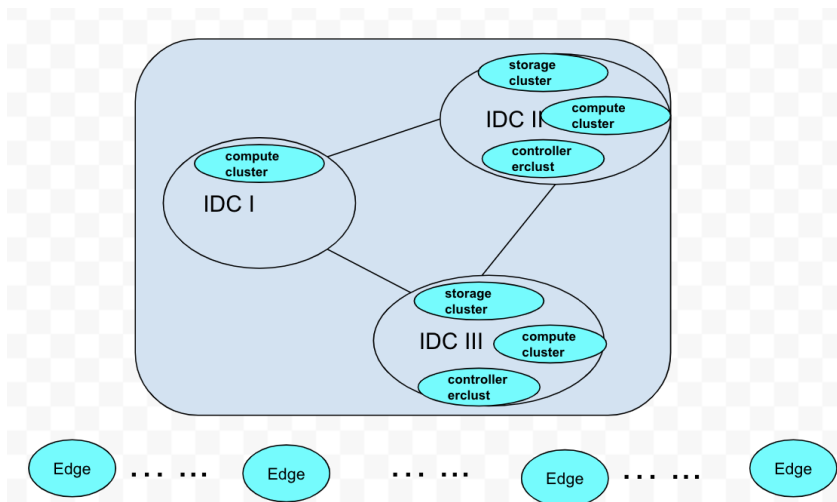
<use case 1: Android Cloud Game>



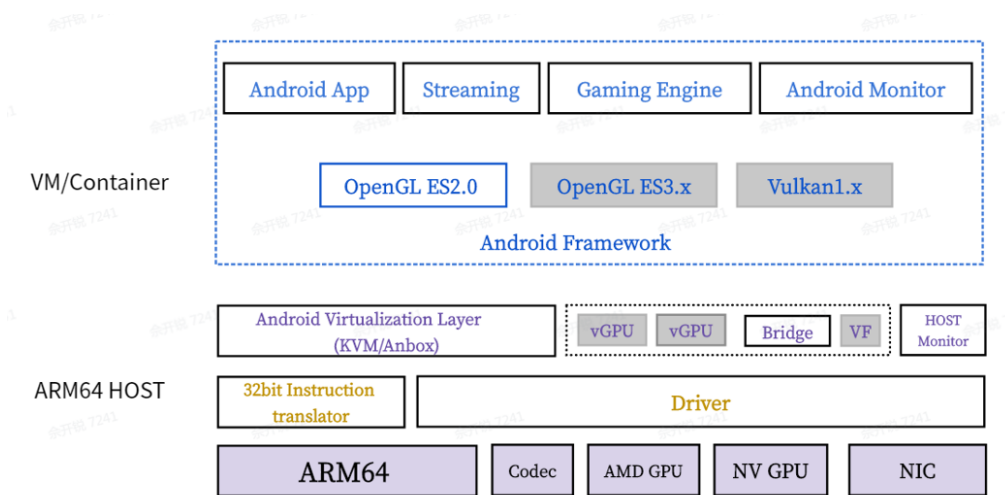
Business Drivers

- Edge cloud requires initiatives for cloud gaming on Android platform
- 5G + edge bring low latency and high-throughput for cloud gaming, which improves user experience
- More and more Android applications will migrate into edge compute platform. Building an android platform is necessary, and it's rigid demand.

Overall Architecture



Platform Architecture



Software Platform Architecture

Please see the diagram above.

APIs

N/A
 API sub-committee has accepted that.

Hardware and Software Management

Licensing

- GNU/common license