

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

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Introduction

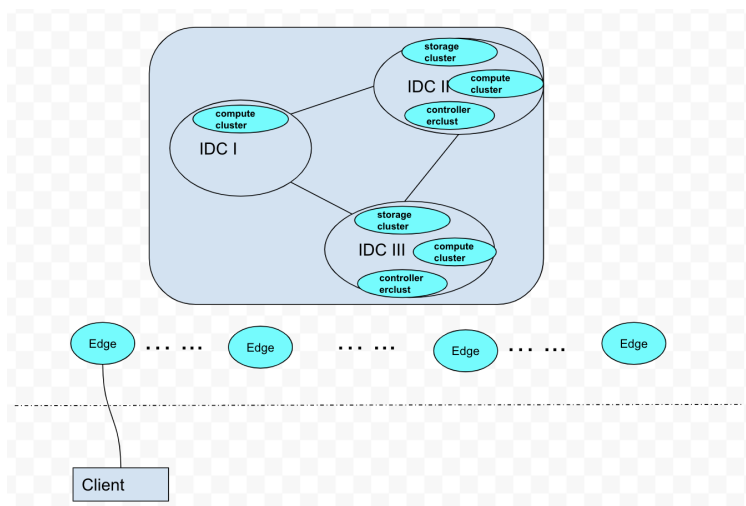
[Integrated Edge Cloud\(IEC\)](#) is an Akraio approved blueprint family and part of Akraio Edge Stack, which intends to develop a fully integrated edge infrastructure solution, and the project is completely focused towards Edge Computing. This open source software stack provides critical infrastructure to enable high performance, reduce latency, improve availability, lower operational overhead, provide scalability, address security needs, and improve fault management.

The first step test mainly focus on the Android system running on edge ARM Cloud environment and make sure the Android system available.

Akraio Test Group Information

Testing Working Group Resources

- **Test Architecture**

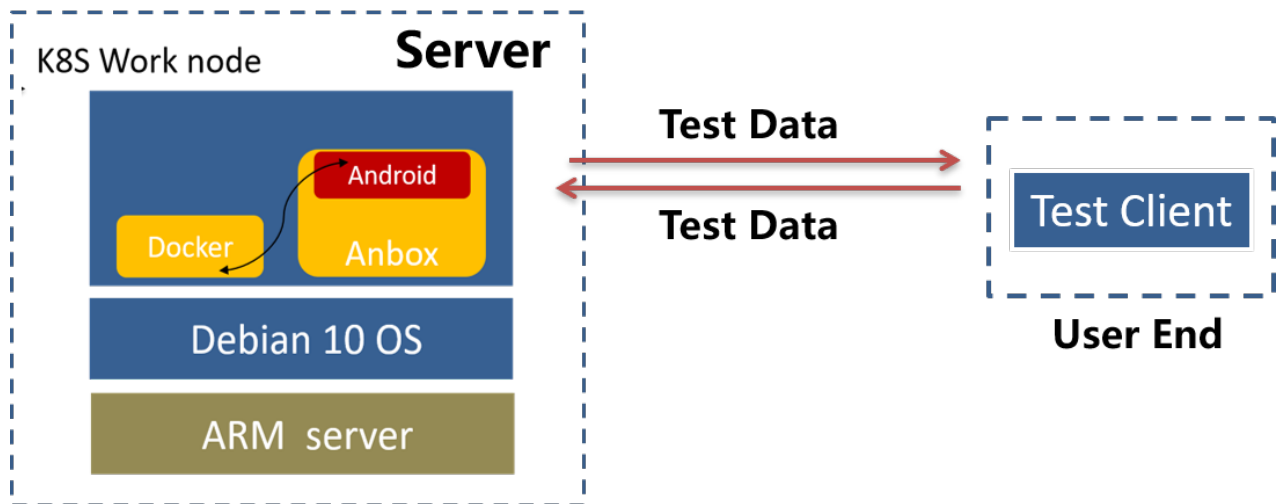


As picture aboved show, an android phone (Client) connect to our Edge Android Cloud. We plan to test the functional completeness and performance:

1. application operation on the client side
2. latency
3. fps

- **Test Bed**

The testbed setup is shown in the below diagram.



• Test Framework

Running application and network monitors.

In this test process, there is nine video test sample to test the functional completeness and performance:

1. application operation on the client side
2. latency
3. fps

The test environment we used:

• Hardware

Processor model	2*Kunpeng 920 processor
RAM	16*DDR4-2933
Storage	10*2.5 inch SAS/SATA/SSD or 8*2.5 inch NVMe SSD
Network	1 onboard network card, each card supports 4*GE port or 4*10GE port or 4*25GE port
Power Supply	Power 100~240V AC240V DC
Scale	447 mm x 490 mm x 86.1 mm

• Software

IEC	Version 1.0	https://gerrit.akraino.org/r/gitweb?p=iec.git;a=tree;f=src/type3_AndroidCloud;h=da39f2d43bacd9771cea346f65a3d96e2a061ade;hb=HEAD
Anbox	V7.1.1	https://github.com/anbox/anbox
Android	Version 9	https://developers.google.cn/android/images?hl=zh_cn#legal

• Traffic Generator

Ping test

Test API description

The test is to evaluate the Android container available.

Thus we currently don't have any Test APIs provided.

Test Dashboards

Single pane view of how the test score looks like for the Blue print.

application	result	comment	latency	info
A1	Failed	EGL Erro		720P/30fps
A2	Pass		203ms	720P/30fps
A3	Failed	Application hang		720P/30fps
A4	Pass		197ms	720P/30fps
A5	Failed	configuration too old		720P/30fps
A6	Pass		200ms	1080P/30fps
A7	Failed	EGL Erro		1080P/30fps
A8	Failed	application exit.		1080P/30fps
A9	Failed	java.lang.RuntimeException: createContext failed		1080P/30fps

Additional Testing

N/A

Bottlenecks/Errata

N/A