FH
MONITOR

Artiza Networks

Accelerate O-RU debugging with fronthaul packet capture and analysis

Spectrum Analyzer /Signal Generator — RF — O-RU — Open fronthaul → O-DU Simulator

DUT

FH MONITOR

Overview

As technology has advanced, the transformation of radio units from simple signal converters to intricate processing devices has revolutionized interconnectivity and flexible network configurations. However, for RF developers, this evolution poses challenges. The integration of complex network processing makes it difficult for developers to test the radio characteristics of their devices.

This has been a persistent issue, and intentionally reproducing failures has proven challenging. Even when the conditions leading to a failure are known, detecting subtle anomalies within the vast amount of processed data is extremely complex. Packet capture, while possible, does not simplify the analysis of the fronthaul IQ signal. This complexity arises because data is split, compressed into packets, and transmitted in close coordination with the C-Plane and M-Plane.

Enter FH MONITOR – the ultimate solution to address these challenges and streamline O-RU debugging.

Features

Extended duration FH packet capture

Acquire evidence for every test seamlessly, without concern for lengthy capture times. FH Monitor captures even unexpected issues in full without omissions, eliminating time-consuming efforts to reproduce glitches and boosting testing efficiency.

Abnormality detection and analysis

FH Monitor empowers users to effortlessly detect and analyze anomalies in the open fronthaul. Detecting anomalies can feel like searching for a needle in a haystack, relying on visual inspection or self-made scripts. With FH Monitor, users are free to remove such tedious tasks from their workflow. This comprehensive solution, housed on a single server, eliminates the need to shuttle massive capture files back and forth with peripheral systems.

Background

1. Escalating network complexity
The advent of O-RAN has driven increased network complexity, making interoperability testing and debugging a more significant process than ever before.
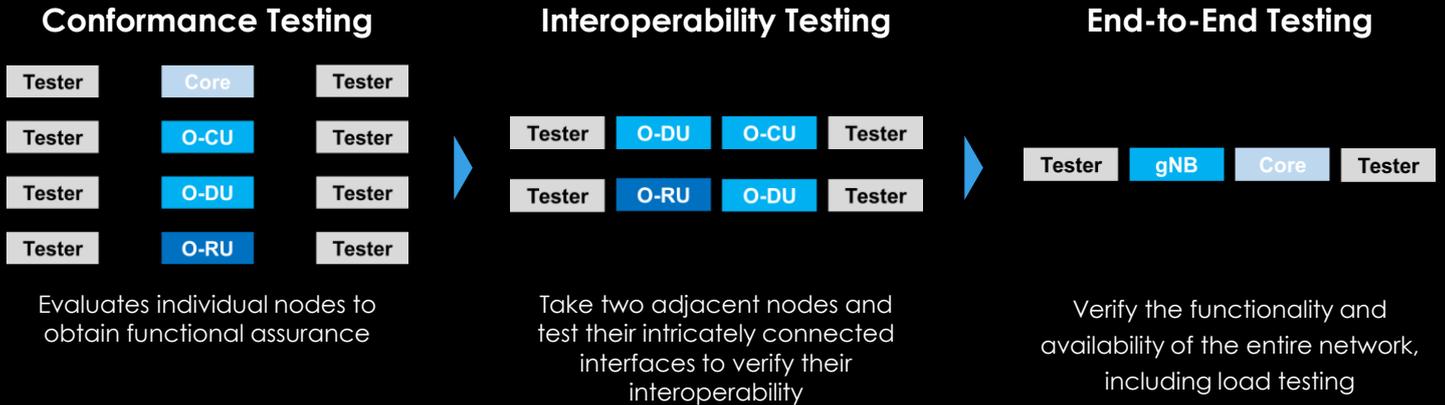
2. Interoperability in multi-vendor network environments
Testing the interoperability of components and interfaces from different vendors is becoming non-negotiable.

3. Strategic approach to testing
Network troubleshooting and problem-solving pose challenges, underscoring the importance of testing strategies and the development of effective debugging tools.

To resolve these issues, testing should be performed in the three steps outlined below, where each step plays a crucial role in the overall process.

Conformance Testing

Tester	Core	Tester
Tester	O-CU	Tester
Tester	O-DU	Tester
Tester	O-RU	Tester

Evaluates individual nodes to obtain functional assurance

Interoperability Testing

| Tester | O-DU | O-CU | Tester |
| Tester | O-RU | O-DU | Tester |

Take two adjacent nodes and test their intricately connected interfaces to verify their interoperability

End-to-End Testing

| Tester | gNB | Core | Tester |

Verify the functionality and availability of the entire network, including load testing

Specifications

Model	FH MONITOR
Configuration	1U
Number of ports	10 GbE x 4 ports or 25 GbE x 2 ports or 40 GbE x 2 ports (option) or 100 GbE x 2 ports (option)
Capture interface	10G Base-SR/LR 25G Base-SR/LR 40G Base-SR4/LR4 100G Base-SR4/LR4
Capture performance	50 Gbps
Capture packet	64 byte – 9600 byte
Capture resolution	1 ns
Effective storage capacity	60 TB
RAID configuration	RAID 5
OS	Linux
Power consumption	550 W
Dimensions (W×H×D)	437 x 43 x 597 (mm) 17.2 x 1.7 x 23.5 (in.)
Weight	15 kg 33.1 lbs

Artiza Networks, Inc.

Email: sales@artiza.co.jp
Phone: +81-42-529-3494

www.artizanetworks.com