

Making Network Operation Smarter

ONEVision Probes

High-performance Probe Appliances

for Real-time Packet Capture and Analysis on 4G/5G Networks

ONEVision Probes provide network operators with a unique data record, which is called xDR(eXtended Data Record) in real time. Our xDRs are utilized as a powerful data source in variety of applications, such as 4G/5G Service Assurance, CEM(Customer Experience Management), and so on.

- Real-time collection of traffic packets from 4G LTE or 5G network
- Correlates packet data on a per-call basis and analyzes from the end-to-end perspective
- Provides per-call xDR including detailed traffic and quality information

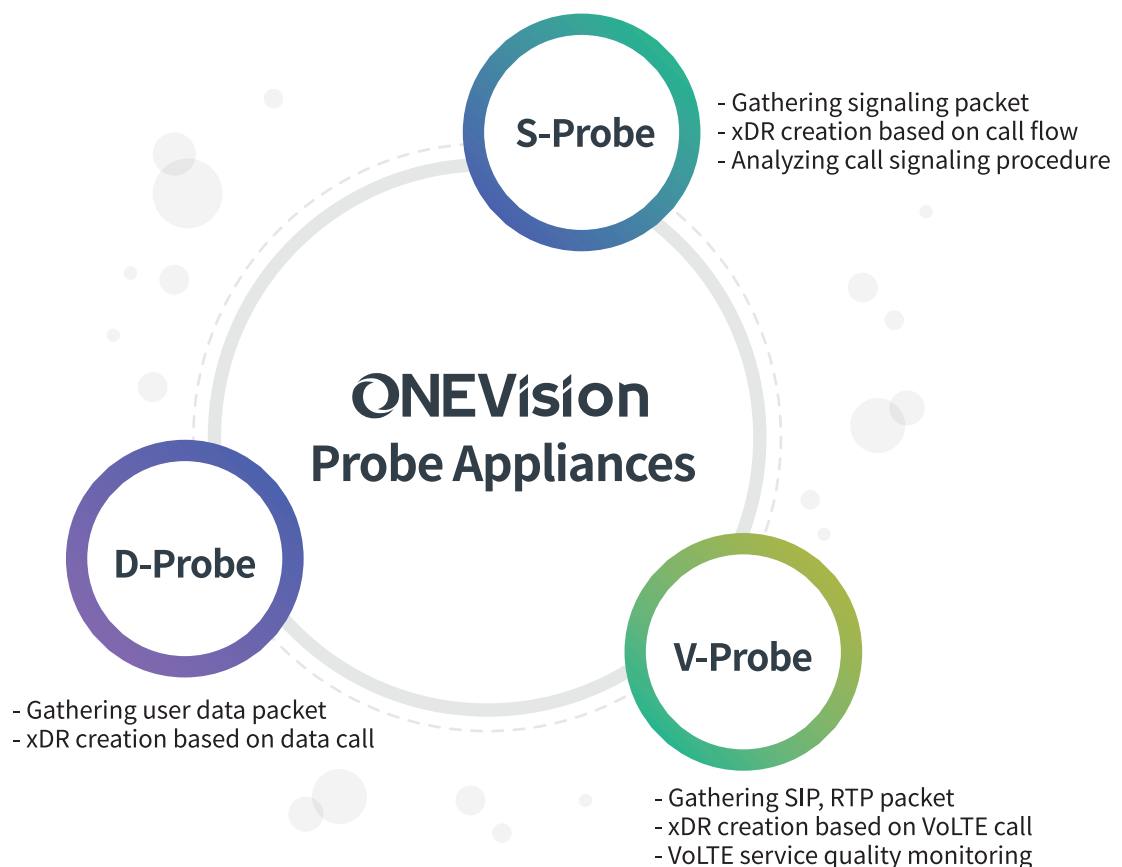
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Dedicated Probes Optimized for Packet Data Analytics

The collection of packet data and its processing procedures may vary depending on the application's purpose. Thus, Mobigen's Probe portfolio consists of different types of probes that optimized capacity and performance depending on each purpose of packet data.

ONEVision Probe Portfolio

* xDR: eXtended Data Record



Key Benefits

- Provides a capability of analyzing per-call service quality based on the signaling procedure
- Helps operators dramatically reduce time spending for problem analysis, by providing information about the root cause of the call failure and the network section that affected the failure
- Provides a capability of analyzing 3G transition (LTE → 3G) per subscriber for figuring out the weak signal area
- Provides an ability to monitor and analyze the VoLTE service quality the subscriber actually perceived
- Provides cell information increasing NPR(No Paging Response) for improving cell optimization activities
- Provides a capability of analyzing PCAP data based on the 3GPP call procedure
- Provides operators with detailed information(MME Interface, Network Equipment, UE Model, Subscriber, etc.) for service quality analysis

Key Features

Deep Packet Capture

Probe appliances with a self-developed high-performance packet filtering and analysis engine

Multi-network Support

Supports various types of mobile network such as 4G LTE (including VoLTE) and 5G

Packet Data Correlation from E2E Perspective

Provides end-to-end visibility for an individual call by correlating the signaling information and bearer information

Root Cause Analysis

Provides a capability of analyzing root cause of the quality degradation by correlating signaling and user data packet and by showing comprehensive information related with the corresponding call

Real-time Subscriber Intelligence

Provides an ability to analyze service quality that the subscriber actually perceived, in real time

PCAP Analysis

Provides an intuitive analysis environment of an individual call flow based on 3GPP call procedure

xDR Creation

Provides xDRs on a per-call basis for a variety of use case implementations

- E2E Service Assurance
- CEM(Customer Experience Management)
- Analysis of 3G dropping (LTE → 3G)
- Network Optimization

Capabilities

Part	Details
Interface Support	<ul style="list-style-type: none">- Control plane interfaces in 3G, LTE- User plane interfaces in 3G, LTE- Network interfaces related with a VoLTE service
CallType	Attach, Service Request(MO/MT), Extended Service Request, Paging, TAU, S1HO, Detach

An Essential Solution for “Operational Intelligence”

Our customers can implement much more use cases with ONEVision Probes.

Division	AS-IS	TO-BE
Network Operation	<ul style="list-style-type: none"> • Manages service quality based on statistics provided by the system periodically (every 30 minutes or one hour) • More and more difficult in improving quality due to complex network structure • Difficult in post management including cause analysis after VOC is received 	<ul style="list-style-type: none"> • Manages service quality on a subscriber basis • Analyzes service quality based on 3GPP call flow • Proactively resolves a problem prior to customer complaints • Practical Use Cases: <ul style="list-style-type: none"> - Analyzes network impact (e.g. changes on service quality) after a package upgrade or parameter changes - Extracts heavy traffic users and providing data for the call control - Analyzes service quality at the subscriber level and detecting abnormal patterns under operation policy - Monitors traffic and supports the excessive load control at the application level - Analyzes network impact through monitoring newly launched application - Analyzes the apps trying to access the network to eliminate unnecessary network resource occupancy
Network Optimization	<ul style="list-style-type: none"> • Invests in coverage expansion and quality improvement based on the peak hour traffic at the system level 	<ul style="list-style-type: none"> • Much more efficiently invests by analyzing traffic and service quality at the cell unit • Practical Use Cases: <ul style="list-style-type: none"> - Supports for optimization of paging - Improves network transition phenomenon at the boundary between 3G and 4G - Improves CSFB quality between 3G and 4G - Improves the excessive handover phenomenon at the boundary between eNBs or cells
Customer Care	<ul style="list-style-type: none"> • Passively responds to customer based on the information provided by customer - Long delays in handling customer complaints 	<ul style="list-style-type: none"> • Identifies cause of the problem in a rapid and correct manner through the call quality analysis at the customer level and improves the first call resolution rate by responding to VOC rapidly

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