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# eoPath IMS Insight

**IMS Service Assurance** 

## Introduction

Moving to an all IP network and introducing IMS (IP Multimedia Subsystem) services can be a massive challenge for CSP's (Communication Service Providers). Once implemented - CSP's must focus at the subscribers ability to utilize the new generation of services which requires a Service Assurance solution able to monitor both the network as well as service layer end-to-end in one unified view.

IMS architecture will enable voice and video calling across multi-vendor platforms and multiple access networks, including fixed and mobile. Applications will include multimedia services, presence, messaging and conferencing, with a unified bill, control and management.

Disaggregating the IMS <u>service</u> layer from the access <u>network</u> enables the transmission of any type of service, such as Voice, Messaging, PoC, etc. using any type of access method. So on an IMS network, different services can/rely/be established on the same core network, and multiple network elements are responsible for a fast and successful delivery of a single service.

Anritsu is addressing this fact with a complete solution including two embedded Data Ware Houses:

- 1. eoPath IMS Network Insight monitors the IMS Network elements and support the network operator to recognize slow or failing elements, which have a negative impact on the delivered IMS services.
- eoPath IMS Service Insight is based on end-toend correlated service data records and can based on this, show the service availability on different IMS services and root causes in case of problems. These reports are also including the information about the Media Stream Quality.



### **Benefits**

- Correlates the service and network layers into one database, providing one end-to-end view of your IMS performance
- Future proof supports any IMS service
- Monitor the entire subscriber service delivery, by combining signaling and Mean Opinion Scores (MOS)

#### Features

- Evaluate impact of customer experienced service quality
- Build on latest insight technology including pdf reporting, export etc.
- 24/7 service surveillance including alarms
- Scalable for small and large systems.
- Detect causes of QoS degradation within the IMS
  Network
- MOS (Mean Opinion Scores) for voice calls
- Exact root cause diagnostics

#### Application Overview

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## **IMS Service Assurance**

When the network elements are disaggregated from the service layer in a IMS network, it is paramount that you keep the ability to monitor network and service performance in one holistic view. To ensure high QoS you need to be able to detect how network performance affects you service quality.

eoPath IMS Insight is therefore giving Reports for NOC and Customer Support staff to detect problems in the network and also secure the customer service.

#### **Network monitoring**

The <u>Network</u> Reports will show the Performance of the network elements in different view angles.

The Failing Nodes report will, show top five failing Network elements, so that the problem sources can be detected fast. Moving to reports showing the failing protocols, global title and release causes will help to clarify in more detail, what the reason for the failure could be.

With eoPath Insight it is also possible to identify slow network elements as the service establishment is part of the service experience for the customer. This report are necessary, as it takes care about all network elements not taken care if they are loaded or not. This is needed as today's IMS are often redundant and the service availability might be impacted by two parallel network elements.

#### Service monitoring

<u>Service</u> reports will give the holistic view of the service experienced by the customer. It will include the problems and delays introduced by the network for this particular transaction including measures of the user plane for Calls. This is necessary to be able to find out how problems affect the end customer. A failing node in the network could in today's network have a small or a big impact depending on loadsharing and distribution functions.

The drill down to data records allows finding information about each single transaction in the network and enables operations and customer support to analyze problems down to the lowest level including the information's about User-Agents etc.

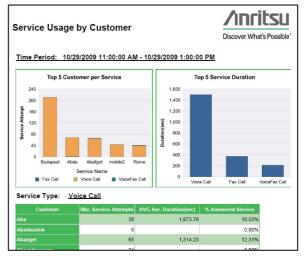


Figure 1: This report shows the IMS service-quality by customer, e.g. top-five customers number of service attemts

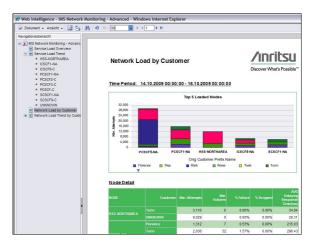


Figure 2: This report shows the performance of the IMS network, e.g. customer load on different network elements



Figure 3: The application has numerous possibilities to make detailed drill-downs, e.g. each data record on individual calls.



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