



**CUBRO**  
NETWORK VISIBILITY

# DATA ENRICHMENT FOR GEOLOCATION

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CASE STUDY



**Industry » Service Provider**

**Challenge**

The challenge was that network elements were changed to another vendor and these network elements did not deliver the same data in the CDR.

**Solution**

Cubro Probe provided the missing metadata information to the mobile network provider.

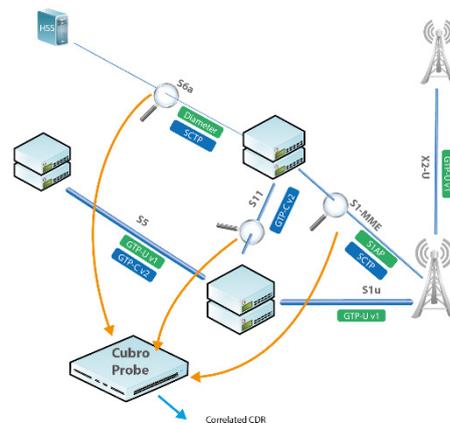
**About Mobile Network Provider**

The provider is a leading company in Europe with more than 40 percent of the market share. It provides convergent communication solutions. The product portfolio includes Fixed line and mobile telephony, internet, IT services, IPTV, wholesale services as well as mobile payment solutions.

**Organizational Challenges**

A key challenge for mobile network provider in today's environment is to retain customers. Every operator struggles to find out their customers' needs and wants. The mobile carrier can benefit by analysing the wealth of data they have and transforming it into useful information which can help them reach their goals.

This customer runs an application to provide location-based customer behaviour analysis. The data for this application comes from network elements such as CDRs. These CDRs are processed and provide a location map and a movement profile of mobile customers. Using this information, the mobile network provider can analyse the services their users use and create targeted marketing campaigns. The data is anonymised and used for marketing purpose.



The challenge was that network elements were changed to another vendor and these network elements did not deliver the same data in the CDR. This means the Geolocation Application was not working anymore and as a result it had a significant impact on the business model of the provider.

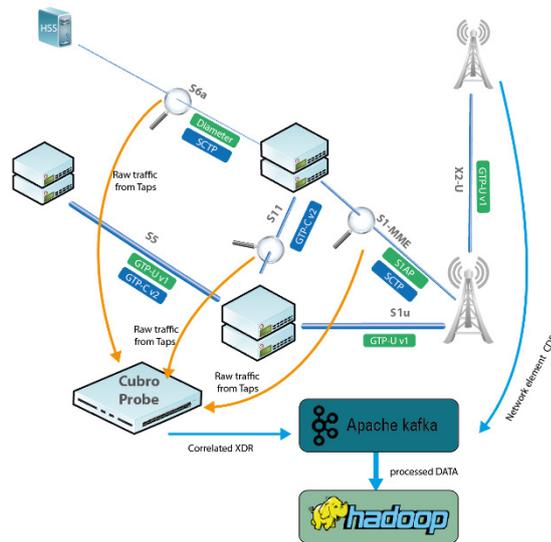
**Business Benefit**

- Provided competitive advantage
- Increased return on investment
- Improved operational efficiency

**Technical Solution**

The Cubro Probe provided the missing metadata information to the mobile network provider. The probe is connected to S6a/S1-MME/S11 interfaces. The probe analyses the traffic from this interface, deciphers the NAS messages and correlates the data to produce a combined XDR.

This XDR is forwarded to a Kafka instance. In the Kafka instance, the XDR from Cubro is correlated with the CDR from the network elements. The output from Kafka is then sent to the Hadoop cluster to produce the analytics.



The usage of the Cubro Probe saves the previous investment in the analytics application, and with the help Cubro, the operator has smooth transition when he is changing the UTRAN hardware to new vendor.

In Kafka, both data sources are correlated by a common identifier. But correlation can be very complicated because often there is no linear correlation possible. In this case, a third source is needed to do a good correlation.

