

OPENET

An Amdocs Company

Data

BUILT FOR STREAM PROCESSING

CONTINUOUS STREAM PROCESSING PLATFORM

Openet Data Fabric (ODF)

a modern, distributed & unbounded stream processing platform supporting business processes and use cases, as events happen

“Openet’s real-time data streaming platforms are designed to ingest data from any source - From new systems, old systems, external systems or organically grown internal systems.”

KEY BENEFITS

Mediation platforms rooted themselves firmly within service provider’s networks from the start, performing the necessary transformation of ‘raw’ call generated records from the switch into a format suitable for billing. Despite serving as a necessary component in the revenue value chain, mediation platforms have conducted the batch processing of huge volumes of data far from the limelight and living a rather dull existence.

The world has changed dramatically since the launch of the mobile phone and over the past 25 years we have witnessed a dramatic change in how communication services are offered and consumed by customers. The solid mediation platform of old, although still performing its thankless task, is beginning to the creek and its limitations are now exposed.

The growing complexity of services and system integrations, the relentless growth of event records to be processed and the sheer difficulty in managing the myriad of data flows through the operator’s environment have necessitated a new architecture for the mediation platform.

Operators today need a platform that can process records, as they are generated. This is necessary because the applications and use cases that depend on this ‘fresh data’ do not suffer latencies nor delays for the information they consume. Think of Tesla, whose Autopilot application relies on the processing of data in real-time.

The pace of business processes and operations now require applications not only to process information as it is created but also to predict and anticipate trends and events even before they occur.



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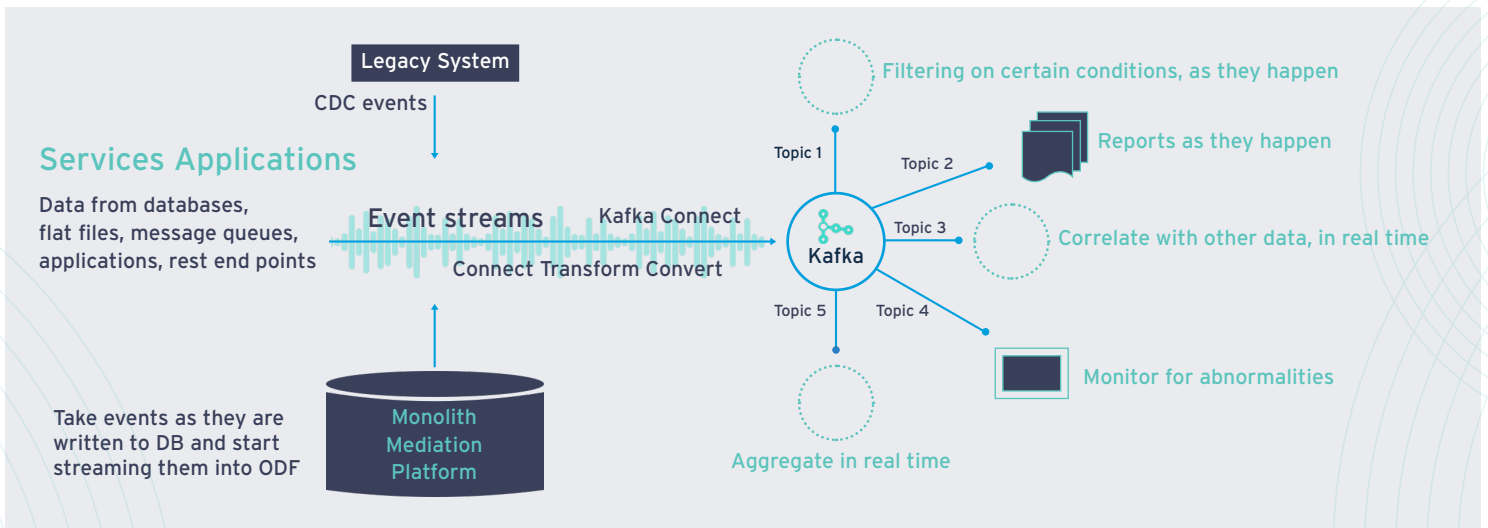
OPENET'S REAL-TIME DATA STREAMING

To deal with this, Openet's real-time data streaming platform is designed to ingest data from any source (new systems, old systems, external systems, organically grown internal systems) and to transform these events into a common format via a streaming messaging bus.

Once transformed, this constant data stream can be tapped into by a variety of service functions (by means of Openet's Service Based Architecture) in order to further refine the data as required by the business processes being served down the line.

Real-time processing enables activities, such as joining of events, filtering of events, correlation and enrichment of events, as each event enters the system. Once part of the processing stream, data can be manipulated in multiple different ways as data is persisted. It can be replayed, updated, reprocessed and distributed in multiple different forms to various business systems.

This highly flexible architecture is enabled by the decoupling of the ingestion, processing and distribution functions and ensures that data management and processing can continually evolve and grow as the business needs dictate.



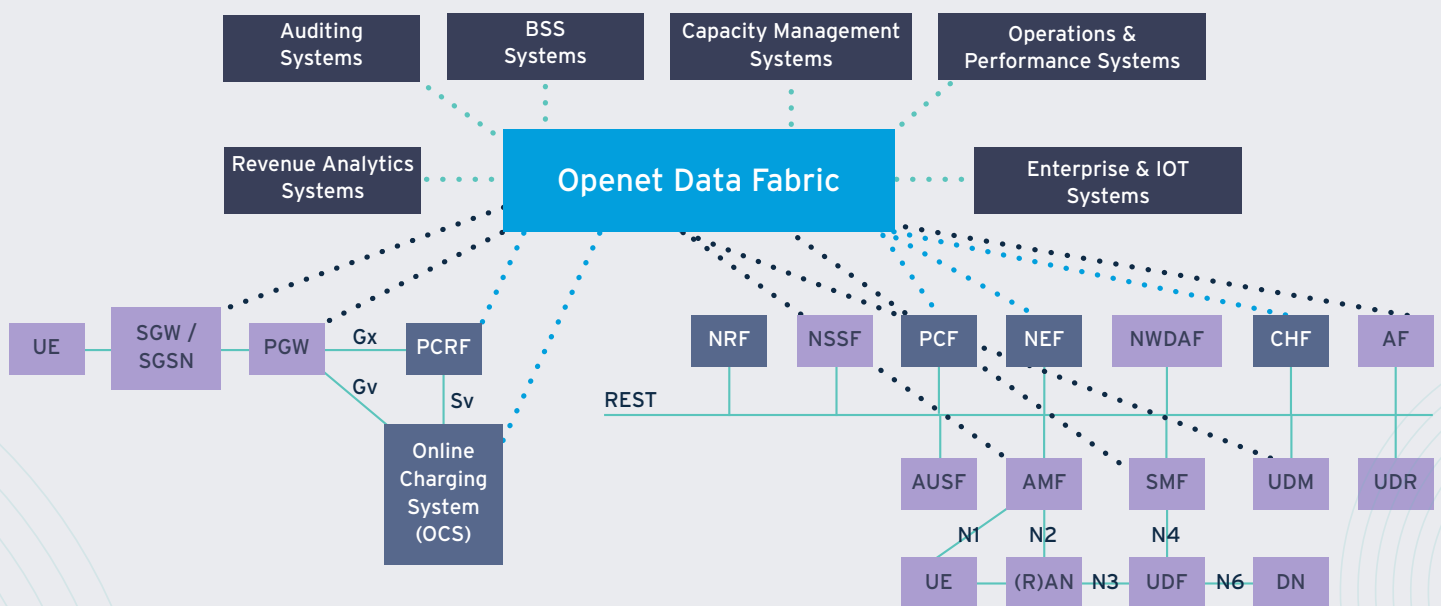
“Openet Data Fabric is carefully engineered to exploit all the benefits of a stream processing architecture, acting as a central hub for all data events.”

OPENET DATA FABRIC (ODF)

Migration to a modernised stream processing platform can be performed easily by tapping into the transaction system of the monolith mediation system, transforming this ‘batch’ feed (or Changed Data Capture feed) into a real-time streaming event feed. Stream processing of this data can be performed, opening up diverse applications, such as filtering, enrichment and correlation with other information streams.

Legacy systems and batch processes use Change Data Capture (CDC) to capture all changes made in database, but this uses a lot of system resources, making it impractical for large data sets. Transforming the CDC feed into a continuous feed results in faster updates and more efficient scaling as more data becomes available.

For real time event capture and processing to support business systems



3G/4G Network

- Broadband speed, Streaming
- Offline and Online Charging
- Quote-based Usage Management
- QoS and Policy Management
- Real-time Notifications

5G Core Network Advances

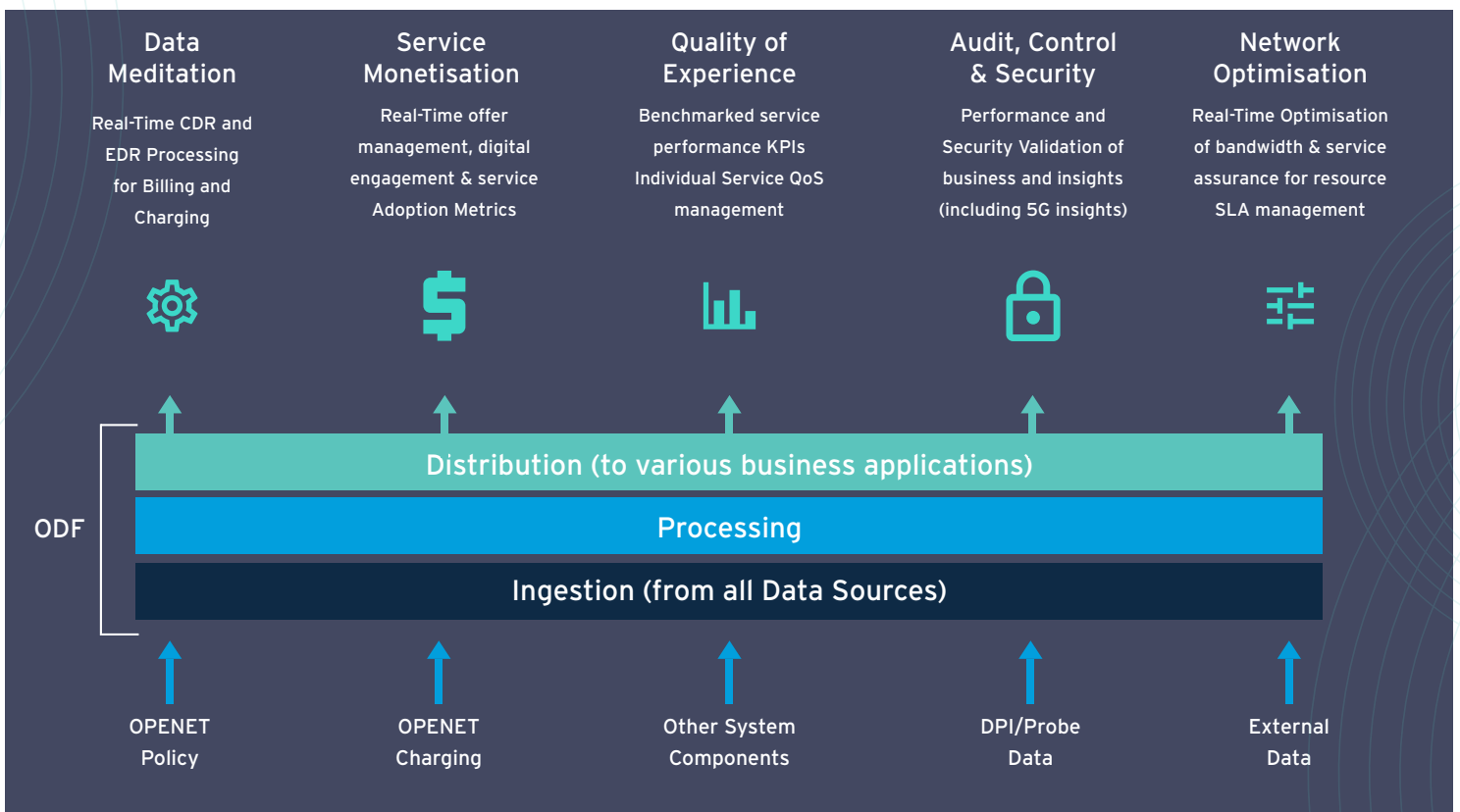
- Separation of Data and Control Plane
- Network Slices
- Service Based Architecture
- Increased Centralization of State
- Harmonized Protocols
- Flow-Based QoS

- VENDOR EDRs/Events (via CCS)
- OPENET EDRs/Events
- ODF PROCESSED DATA

Openet Data Fabric is carefully engineered to exploit all the benefits of a stream processing architecture, acting as a central hub for all data events to help serve all the business applications and processes that require real-time processing of events. It can collect event records from the vendor-agnostic 3G/4G network and from 5G components as well as external components to support business systems.

In addition to mediation and billing, examples of the business applications that depend on this real-time capture of events include:

- Monetisation (Real-time offer management, next best action, real-time customer satisfaction response, contextual marketing).
- Audit and Control (Revenue and Fraud Assurance, QoE and QoS and customer experience management, customer care support).
- Insights (customer adoption trends, anomalies, profile analysis, sampling of service types, discovery, reporting).
- Service Assurance (operational monitoring, network and service SLA adherence, service degradation analysis).
- Network Optimisation (network and system resource management, tuning of services to optimise resource utilisation, cost efficiency and experience).



- The ODF platform is built on a foundation of scalable, highly available and highly performant data processing technologies.
- It can scale to any size, addressing even the most demanding workloads.
- The platform is inherently highly available, providing service providers with the assurances they need that billable and event data will not be lost.

- It presents out of the box modular functionality. Configuration hook points allow operators to address any specific data processing required.
- The solution is distributed but provides a centralised view of all activity including log viewers and graphical dashboards.
- Customised reports can be generated as required.
- Observability features enable operational and performance validation of the system.
- End-to-end configuration GUI guides the creation and management of data flows to assist the complexity of multiple integrations and data streams.
- Significant TCO reduction on monolith mediation platforms due to reductions in footprint, configuration and operational maintenance effort built on open source software and no reliance on expensive SAN storage costs.

KEY ODF FEATURES

FEATURE	DESCRIPTION	FEATURE	DESCRIPTION
Usability	End-to-End Data Flows are created and managed through an intuitive GUI interface.	Fault-Tolerant	The highly redundant solution, with data persistence to ensure data is never lost.
Cloud Native	Containerised, Deployed with Kubernetes and optimised for the cloud environment.	Open Source	Kafka cluster, Brokers and Zookeeper Kafka Connect With custom connect modules Schema Registry Microservices.
Modular	Product modules (all standard mediation functions) available out-of-the-box with the ability to configure as required for specific use case applications.	Observability	Ability to interrogate data streams in real-time, Distributed Tracing, Data Lineage, Stats and Metrics Monitoring.
TCO	Massive Reductions on infrastructure, person-days for configuration and maintenance, license costs.	Error Correction	Ability to identify, reprocess and replay error records.

ABOUT OPENET:

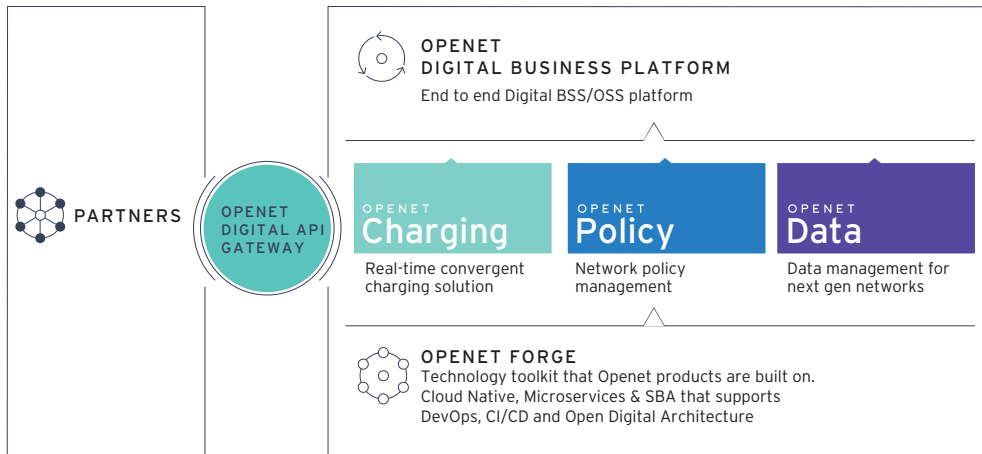
Openet, an Amdocs company, is a leading software and services provider to communications companies. Our deep domain expertise & understanding of complex systems, underpinned by the tenacity and determination of our people, enable us to radically transform how our customers do business, providing best in class digital and 5G business support systems.

In an industry where the only constant is change, our open and innovative technology is built for change. For the last 20 years we have helped the world's most innovative communications companies manage and monetise their business and evolve from communications companies to digital service providers. This gives our customers the power to enter new markets, open new revenue streams and increase profitability.

Openet. Built for Change

www.openet.com

OPENET PORTFOLIO



OPENET PRODUCTS:

Openet Charging:

Real-time convergent charging for digital and 5G services.

Openet Policy:

Network policy control for next gen fixed, mobile and converged networks.

Openet Data:

Data management, data processing and data governance solution designed to collect and manage data at 5G volumes in real-time.

Openet Digital Platform:

End to end Digital BSS/OSS stack containing Openet & our partners' products.

Openet Forge:

The digital enablement toolkit which contains Openet's library of microservices, upon which all Openet products are built.

DELIVERING BUSINESS VALUE:

RESULTS REALISED BY OPENET CUSTOMERS

40%

Reduction in time to market for new offer creation

28%

Uplift in offer uptake

11%

Increase in mobile data ARPU

41%

Increase in mobile data revenues

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OUR CUSTOMERS



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