



eVolution

Virtual Network Intelligence probe delivering real-time Big Data

EVOLUTION

eVolution is the industry's first purpose-built virtual experience probe based on Active Network Intelligence technology for multi-access broadband operators.

KEY BENEFITS

- Powerful data solution - allowing you to drill down to per subscriber level, in real time to enable your big data systems
- Using the industry's best data foundation of network data traffic through frequent signature updates and machine learning approaches to dealing with encrypted traffic.
- Most complete and enriched view of the subscriber experience with unique QoE and KPIs
- High performance virtualization on Intel-based COTS hardware
- Multi-Access and Multi-Vendor support to simplify integrated network deployments
- Designed for NFV & Orchestration as standards mature

eVolution is an all virtual data enablement solution that empowers fixed, cable, mobile, and WiFi operators to run their networks more efficiently and profitably. eVolution delivers a unique approach to providing structured data that can be used in real-time to enhance the subscriber experience for broadband subscribers.

ENGINEERED FOR YOUR BIG DATA NEEDS

Make your critical investment and planning decisions using the industry's best data foundation that captures the network intelligence that you need. Without network visibility, network operators do not have the inputs they need to determine the optimal network investments or to launch attractive service offerings. At Sandvine we target an aspirational goal of 0% unidentified traffic by providing frequent signature updates and leveraging machine learning approaches to dealing with encrypted traffic. Over half of Sandvine's signatures cover encrypted applications, a key requirement from network operators as encryption becomes pervasive on networks, which limits the effectiveness of current data probes and router/switch-based data feeds.

The eVolution platform can be integrated to provide a more complete view of the network and further enrich network traffic data intelligence by applying context to data. Through multiple integration APIs, we can add subscriber, device, location, service plan, and numerous other attributes to make the intelligence actionable in real-time:

- **Traffic:** Application awareness, including encrypted applications
- **Subscriber:** Mapping of IPs to subscriber or account and subscriber attributes
- **Score:** Scoring of Experience for Web, Video, Social, Voice, Messaging, and UL/DL
- **Route:** Peering visibility at the flow, application and QoE awareness
- **Topology:** Network Topology location and link speed awareness
- **Content:** Content categorization for up to 100M URLs over 100+ categories
- **RAN:** Mobile location awareness integration for real-time subscriber updates
- **Device:** Device-type awareness: Phone, Tablet, or PC for usage insights by type

The eVolution platform can be deployed anywhere in the access, aggregation, core, or peering point to gather the data desired. Multiple tunnel encapsulation technologies are supported across mobile, cable, DSL, WiFi including GTP, MPLS, MobileIP, MPLS, VLAN, IPinIP, L2TP, Teredo, and EoMPLS to gather data where it makes sense for the operator.

The use cases for the eVolution data in real-time include Performance and Operational Monitoring, Service and Subscriber Monitoring, and Security Monitoring. Historical use cases include Capacity Planning Analysis, Performance Analysis, User Behavior and Demographic Analysis, Regulatory Quality Monitoring, Data Fraud Management, Video and Television Fraud Management, Data Revenue Leakage Monitoring, and Regulatory Data Retention.

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PLATFORM

HELPING YOU WITH CLOUD-READY TECHNOLOGY

eVolution is powered by Sandvine's industry-proven application identification technology engineered to run as an individual Virtual Network Function Components (VNFC) as part of an ESTI-defined Virtual Network Function (VNF) environment. eVolution runs on Commercial Off the Shelf (COTS) hardware leveraging Intel processors, and can run on VMware or KVM hypervisors. The eVolution VNF will support NFV orchestration standards as they mature, and includes a VNF License Manager that support creating new instances of eVolution than can be deployed when and where the operator needs data collection.

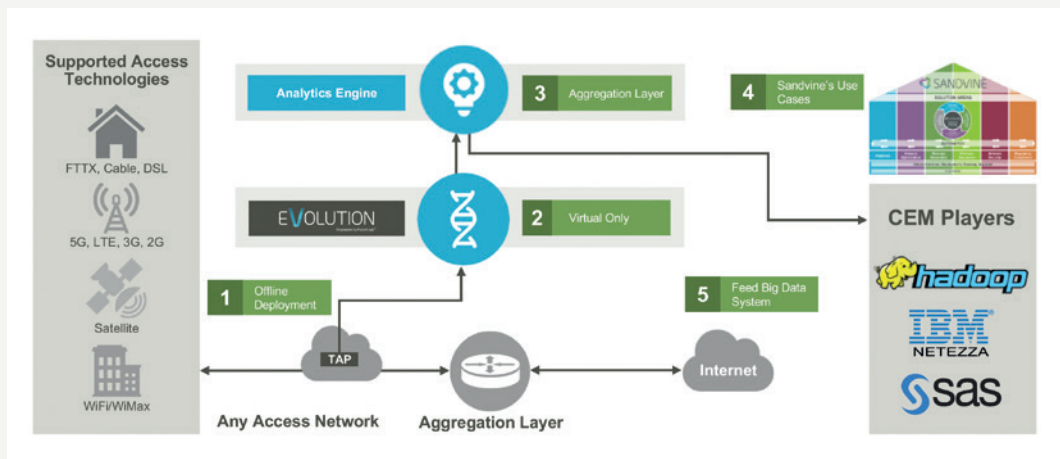
NETWORK DEPLOYMENT & INTEGRATION

Network operators are turning to virtualization in order to reduce hardware dependencies, optimize capital expenditures, and accelerate their ability to deploy new services and generate revenue. eVolution enables network operators to utilize common hardware platforms throughout their infrastructure, simplifying the dynamic deployment of probes when and where they are needed.

The data in eVolution can be accessed through multiple mechanisms depending on the use case for the deployment. Real-time APIs are available to gain insights to live network traffic, with drill down from all network traffic to a single subscriber flow. These APIs can be accessed by OSS/BSS systems for integration into engineering and customer care systems, drastically accelerating the time to repair for any network outages. Industry standard IPFix or FLUME streams can be used to send flow records to mediation systems decorated with valuable enrichment and contextual data structure. The data can also be stored in the Insights Storage system where it can be accessed via ODBC for integration into Hadoop or other large scale Big Data solutions. Any or all of these options are available to network operators to leverage the data provided by eVolution.

Figure 1

TYPICAL EVOLUTION DEPLOYMENT



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ABOUT SANDVINE

Sandvine helps organizations run world-class networks with Active Network Intelligence, leveraging machine learning analytics and closed-loop automation to identify and adapt to network behavior in real-time. With Sandvine, organizations have the power of a highly automated platform from a single vendor that delivers a deep understanding of their network data to drive faster, better decisions. For more information, visit sandvine.com or follow Sandvine on Twitter at @Sandvine.



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