

iFeeds

Sandvine's real-time contextual intelligence feeds

KEY BENEFITS

- Provides device-related insights for sales and marketing to use for creating compelling targeted offers
- Gives real-time, contextual intelligence, critical for running and optimizing networks and ensuring good QoE
- Enhances existing use cases with augmented data, which is updated frequently for accuracy and coverage
- Enables Regulatory Compliance use case requiring location
- Simplifies management with a dedicated framework

OVERVIEW

Access or data volume has never been an obstacle for operators. In fact, the issue has always revolved around the relevance, accuracy, and usefulness of data. As networks evolve to new architectures for 5G and cloud deployments, increasing the context of data becomes more critical to make intelligence actionable. With the adoption of more devices, applications, and access types, the need for clear visibility and understanding is imperative to determine the root cause of network congestion, quality, or security issues.

However, many solutions cannot deliver the required context or insights in real time, instead performing this analysis after the fact, rendering them less effective in helping operators confidently make business and network decisions. It also drastically limits the effectiveness of any automation strategy, which requires this information to be constantly available for policy updates.

As a network intelligence leader, Sandvine arms operators with the visibility and contextual awareness required to run world-class networks. Sandvine's network intelligence enhances ANI use cases, making them superior by adding relevant context, including application, device, and location to basic network statistics.

IFEEDS

Sandvine's award-winning ActiveLogic data plane classifies all application traffic. As part of this process, Sandvine can leverage a set of intelligent feeds (iFeeds) to augment and correlate the data with additional actionable attributes. These feeds can be added in real time to drive additional analytics, traffic management, and charging context, enhancing a variety of ANI use cases.

iFeeds is a collection of different data feeds that are integrated into the ANI Classification Engine to deliver a single visibility and enforcement point (**Figure 1**). Each feed has a distinct function and is examined as part of the Sandvine's classification process based on the individual use case requirements (**Table 1**).

IFEEDS DATABASES

ContentLogic

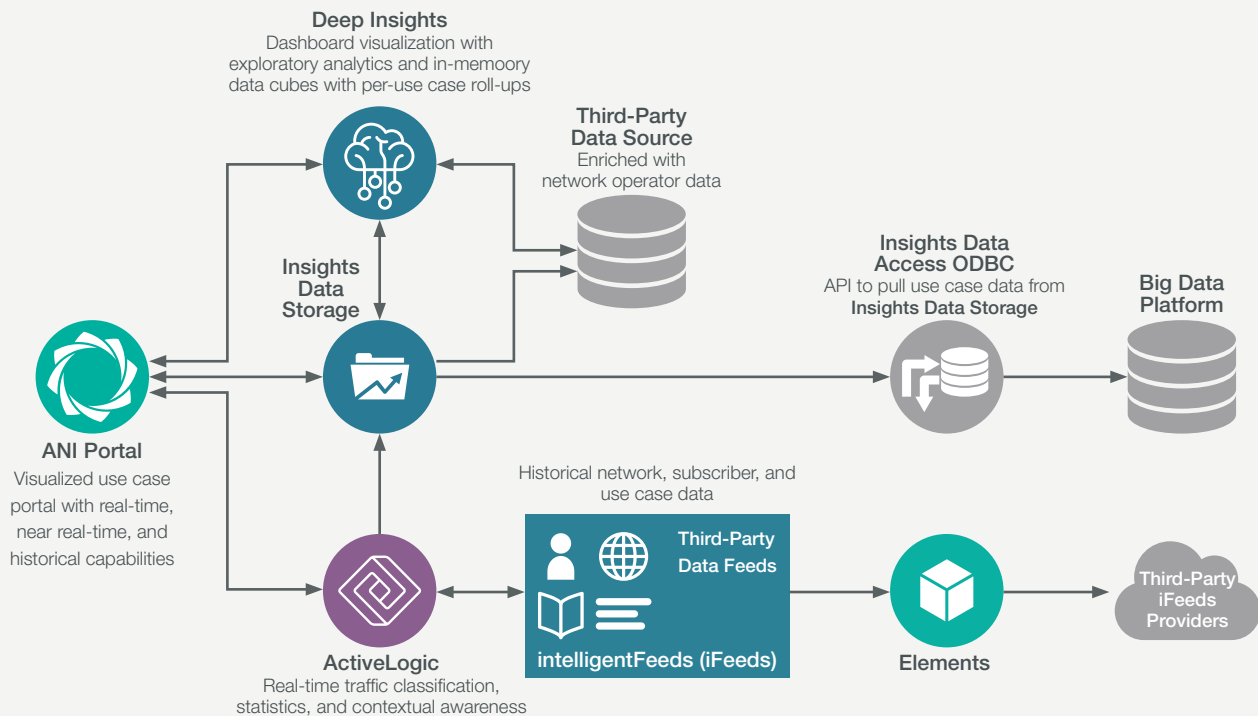
ContentLogic enables flexible content categorization of internet sites, enabling sophisticated policy enforcement or content-based charging.

The following ContentLogic databases are available from Sandvine:

- **IWF (Internet Watch Foundation):** Covers IWF feed of illegal child abuse images and websites, which is most suitable for regulatory use cases which mandates these sites to be blocked by all the operators.

Figure 1

ANI Classification Engine with how the databases plug in



- **IFD (Internet Filtering Database):** Covers URL categorization. This database is most suitable for use cases requiring generic URL categorization, including Parental Control and Regulatory Traffic Management. It provides extensive and comprehensive web categorization and threat intelligence with domain, path, and page-level grouping. It gives four updates per day and offers a lighter version, IFD-Lite, which can be used for analytics and rulesets.
- **IAD (Internet Advertising Database):** Covers URL and ad categorization and is suitable for use cases requiring generic URL categorization, including Parental Control, Regulatory Traffic Management. It also provides brand safety and contextual targeting, including subscriber analytics. Categories include: Content, Internet Advertising Bureau Tier1/2, IAB content rating, IAB non-standard and illegal content, Malicious, and whether URL is brand-safe and objectionable.

DeviceLogic

DeviceLogic provides in-depth details of a device used to generate HTTP and HTTPS traffic flows. The device properties or attributes are based on user-agents observed in the traffic flows. Some of the attributes in DeviceLogic are name, manufacturer, hardware type etc.

GeoLogic

GeoLogic enriches Active Network Intelligence data with categorized destination IP addresses mapped to geographic locations (country, region, and city), internet service provider registry details along with latitude/longitude details. This can be very useful for Security and Regulatory Compliance use cases.

Microsoft Office 365 OTT

Microsoft Office 365 OTT enables granular classification of Microsoft Office 365 services. Rather than classifying traffic as simply Office 365, traffic for Exchange, SharePoint, MS Office Common, and Skype can be uniquely identified.

Table 1

Enhanced use cases

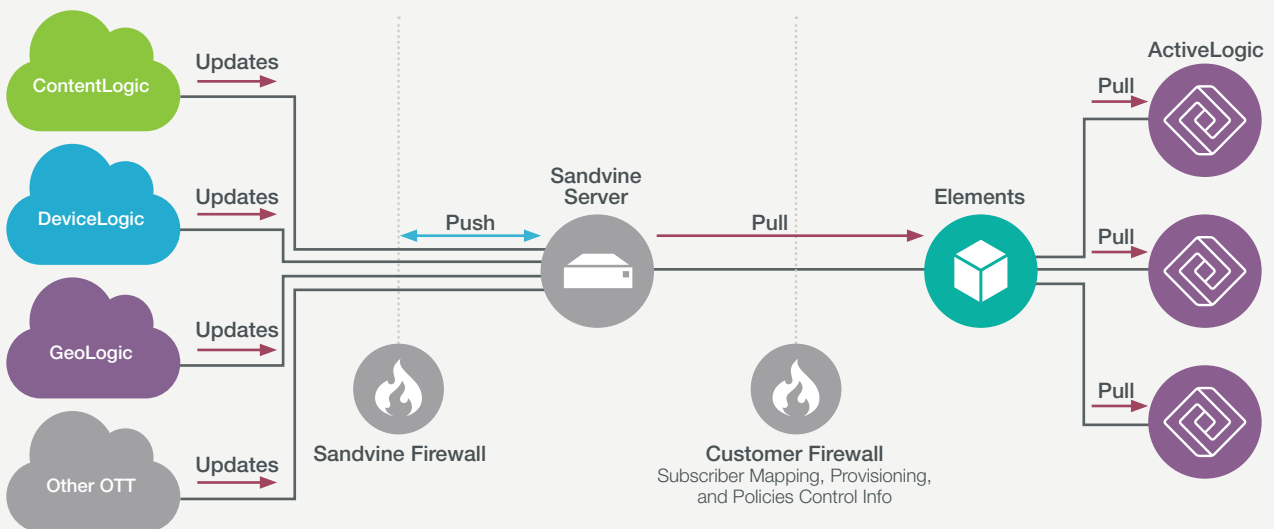
iFeeds	Use Cases	Delivers
ContentLogic	<ul style="list-style-type: none"> • Parental Control • Regulatory Traffic Management • Cyber Threat Analysis 	<ul style="list-style-type: none"> • Parental Control/Analytics /Demographics • Targeted Digital Advertisements • Customer Retention • URL Filtering • Application Control • Time-of-Day Control – e.g., No Social Networking During Homework Time
GeoLogic	<ul style="list-style-type: none"> • Regulatory Traffic Management (with Geo Location) • Cyber Threat Analysis 	<ul style="list-style-type: none"> • Geo-Fencing – e.g., Block Country-Specific Content • Target Online Advertising • Localized Content • Enhanced Cybersecurity
DeviceLogic	User Behavior Demographics	<ul style="list-style-type: none"> • Device Specific Traffic Management • Analytics and Demographics • Venue-Based Advertising
Microsoft Office 365 OTT	Network Performance Monitoring	<ul style="list-style-type: none"> • Classification of Office 365 Traffic <ul style="list-style-type: none"> • Application Control • Office 365 Subscription Management and Plan Status

IFEEDS MANAGEMENT

iFeeds offers a unique framework, which integrates purpose-built databases into Sandvine’s industry-leading classification infrastructure, enabling the ANI Classification Engine to be extensible and flexible when more detailed context is needed on network traffic. It uses an automated, highly scalable file-based distribution infrastructure that is geographically redundant to ensure high availability for mission critical classification feeds (**Figure 2**).

Figure 2

iFeeds Data Flow



Each ActiveLogic instance connects to the Sandvine iFeeds distribution network. To maximize deployment flexibility, the following topologies are supported:

Single ActiveLogic Node

- Databases are stored on the ActiveLogic server, which is connected to the Sandvine server

Multiple ActiveLogic Nodes

- Elements connected to the Sandvine server and ActiveLogic connected to the Elements as its source
- ActiveLogic downloads the database from Elements
- ActiveLogic has the choice to enable database as per the use case

In practice, one ActiveLogic can support ContentLogic, another ActiveLogic can support GeoLogic, etc.

Figure 3

Typical iFeeds deployment in customer network

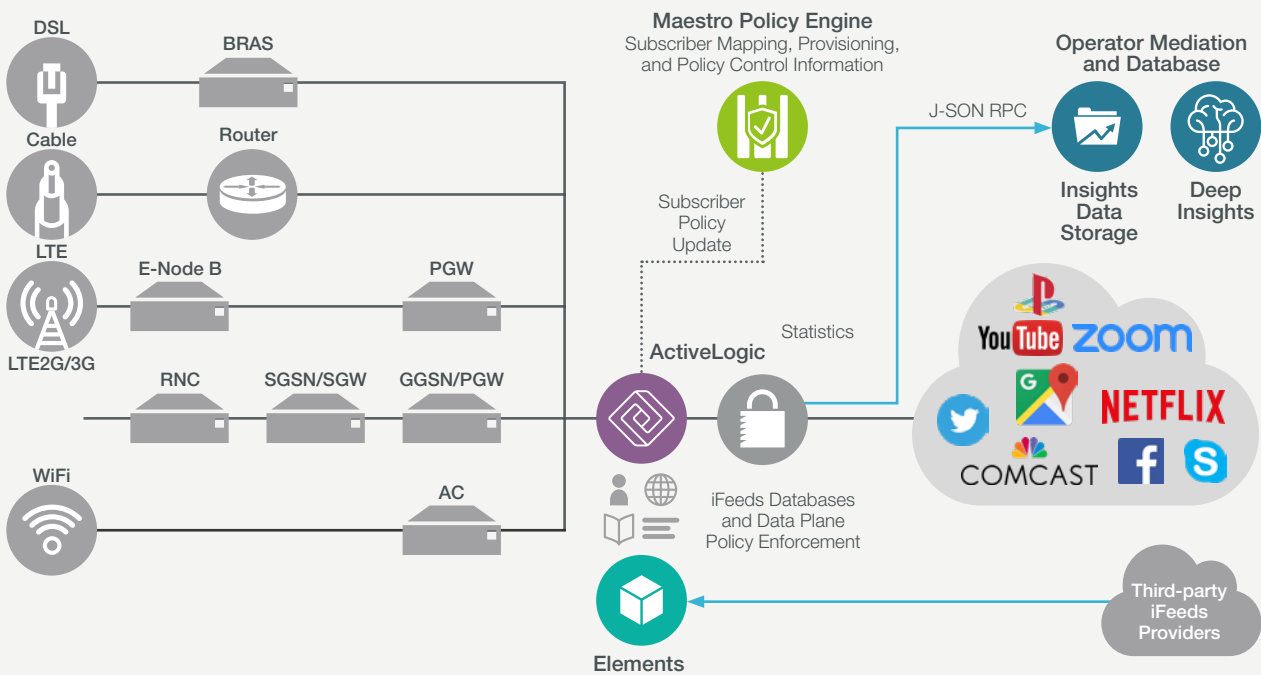


Figure 3 shows the deployment of Sandvine’s iFeeds database for URL categorization, ContentLogic, in a customer network for parental control use case. ContentLogic supports multiple content categories that are most suitable for Parental Control, including frequently updated phishing and malware categories to increase protection from security risks. Using a combination of policies, including content category, application, device and time-of-day, provisioned through standard API, converged operators can offer a compelling network-based parental control offering.

iFeeds equips operators with a relevant, accurate, and useful data feeds to tackle the next era of network challenges. With iFeeds, operators have an ongoing stream of structured data with updates of current information from one or more sources in real time to drive additional context and enhance Sandvine’s ANI use cases.



ABOUT SANDVINE

Sandvine's market-leading, cloudified Service Innovation and Intelligence portfolio helps customers deliver exceptional digital experiences and grow revenues. Our ability to classify over 95% of network traffic across mobile and fixed networks by user, application, device, location and other parameters creates uniquely rich, real-time network and service data. We then apply machine learning-based contextual insights to improve performance and enhance digital services. For more information, visit <http://www.sandvine.com> or follow Sandvine on Twitter @Sandvine.



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