QRATOR LABS

DAILYMOTION

Use case — Dailymotion

Qrator.Radar helps Dailymotion ensure high quality of video broadcasts

DAILYMOTION

Founded in 2005, **Dailymotion** is the 3rd largest online video streaming service in the world that connects over 350 million entertainment-seekers to their personal world of news and entertainment.

Built on a clever player, intuitive algorithm, and on carefully-selected recommendations made by experts who really love great videos, **Dailymotion** is the one-stop place for enjoying stories from the best creators around in one heightened video experience. **Dailymotion** is owned by Vivendi and headquartered in Paris with offices in New York, Singapore, Sophia Antipolis and Montpellier.

Dailymotion is available worldwide in 18 languages and 35 localized versions featuring local home pages and local content.

Challenges

Video streaming delivery needs a fast and stable connection through the Internet to the end users, otherwise the quality of video streaming would degrade.

When video codec needs to frequently adapt to an unstable Internet connection, it causes playback freezes, jumps in time and long buffering times. When the Internet transit is unstable, route changes can often occur and some may affect the RTT (Round Trip Time) dynamics, which has a direct negative effect on the quality of a video. The most important task of **Dailymotion** is continuous monitoring of network quality, with a primary focus on controlling and detecting network anomalies that could significantly impact the availability and quality of BGP (Border Gateway Protocol) routing services on a global scale.

Solution

The crucial role in networks reachability and normal functioning on international and national levels is reserved to the Border Gateway Protocol. It makes possible the information exchange about IP address availability between networks of internet service providers (autonomous systems), allowing to choose a route that traffic will follow until it reaches the destination.

However, each ISP selects the route from all the alternatives on its own. Since within the specifications for Border Gateway Protocol, there is no limitation in what the operator could do with the traffic. There is no authentication or verification of incoming routes to networks, preventing traffic management issues between ISPs (routing incidents).

As a result, numerous routing anomalies can occur. These anomalies can be caused by hardware configuration errors as well as the actions of cybercriminals.

Solution

Detecting and troubleshooting routing anomalies once inside a customer's network is challenging. To monitor traffic and detect anomalies just in time, one needs an external professional tool that functions at the cross-domain routing level. Such a solution was used by **Dailymotion**.

To monitor all possible BGP anomalies, **Dailymotion** opted for the **Qrator.Radar**, a global Internet monitoring service, due to a high level of performance and the ability of the system to detect a larger number of routing events.

Qrator.Radar from **Qrator Labs** is a unique platform designed to analyze routing information, detect incidents and changes in network connectivity in real-time. Being the world's largest real-time routing data collector.

Qrator.Radar accumulates and analyzes data from over 850 BGP sessions, including those of the largest global Internet providers, distributed CDNs, and content providers across the globe.

Solution

Qrator.Radar monitors the following types of network anomalies:

- BGP Route Leaks, the redirection of traffic through an autonomous system that should not be on the route, leading to increased network latency (RTT), equipment failures and traffic losses, Man-in-the-Middle attacks.

- BGP Hijacks, an illegitimate prefix announcement (traffic hijacking). This can result in traffic diversion to phishing sites, arranging Man-in-the-Middle attacks, deliberate organization of resources lockouts, DoS due to configuration errors.

- Bogons, an announcement of prefixes and Autonomous System Numbers (ASNs) that should not occur in routing tables. Bogons impact network unavailability due to invalid route filtering, disclosing information about the local network to third parties.

"Data transfer stability and optimal routing are key factors for a nominal video delivery process. Network lags, jitter (variation in the traffic latency due to network congestion), time drifts, or internet routing changes — all of these are potential issues which may cause a degradation of our service", says **Christian De Balorre, Head of Dailymotion IP network engineering**.

Experience

Dailymotion NOC (Network Operations Center) looks after all possible issues that could impact the quality of video delivery over the Internet. It collects information about the prefixes affected by leaks, as well as bogon networks (IP address announcements which normally should not be listed in Internet routing tables) and other routing incidents.

Qrator.Radar provides data that helps to analyze the network in real-time, correlate user issues with routing incidents, and take immediate corrective actions to provide the best video experience to the end users.

Experience

“**Qrator.Radar** is one of the **Qrator Labs'** core products which we have been developing continuously. **Qrator.Radar** helps owners of standalone systems identify the anomalies affecting the quality of network services in real-time and respond quickly to incidents, ensuring better network performance. **Dailymotion** adheres to the highest standards to ensure the continuous availability of its network resources. Our global Internet monitoring system will help **Dailymotion** to provide even much better service to their customers and improve their NOC efficiency”, says **Victor Zyamzin, Global Head of Business Development at Qrator Labs**.

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