TELNYX | CASE STUDY

First Real-Time Voice Analytics Deployed in the Cloud

About the Organization

PRODUCT

Voice analytics application

PRODUCT FUNCTION

Analyze call media and metadata to programmatically authenticate callers in real time

SCALE

Millions of calls analyzed every week

TYPICAL CUSTOMER

Contact/call centers, support teams and enterprise communications departments

PRODUCT BENEFITS

- Reduced operation costs
- Eliminate points of failure
- Fewer fraud and security issues and improved call experiences

The organization that develops this application has requested anonymity. They will be referred to as "the application" and "the organization."

The Challenge

Voice telephony analysis, available immediately from the cloud.

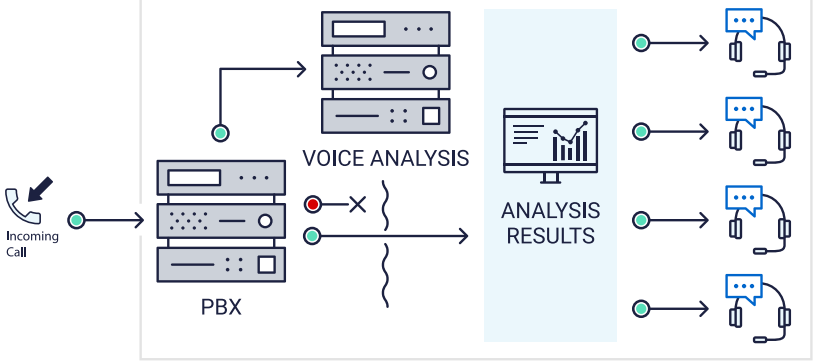
The application discussed in this study has four basic functionality requirements:

1. Consume voice audio to analyze for insights.
2. Use analysis to authenticate callers in seconds.
3. Deliver those insights to call center systems in real time.
4. Avoid any degradation to voice service.

Before leveraging Telnyx's solution, the application required on-premise installation to be close to the call system infrastructure. This was the only way to guarantee the application could access voice media and deliver insights reliably at the speed required. On-premise installation typically took months to implement, extending the sales cycle considerably. In addition to the additional workload required for onsite installation, it also created an additional point of failure in the call flow.

How does this application move to the cloud? How can this company continue to deliver next-generation voice analysis without the extensive, on-premise implementation, without delays in analysis or delivery, without security risks of transporting call media and without becoming a telephony company themselves?

In the following section, we'll describe how Telnyx not only solved these dilemmas but also how our deep integration with local telephony infrastructure improved their caller authentication methods.



TELNYX PRODUCTS USED

Media Forking

Virtual Cross Connects

SIP Trunking

Global Numbers

Telephony Data

The Solution

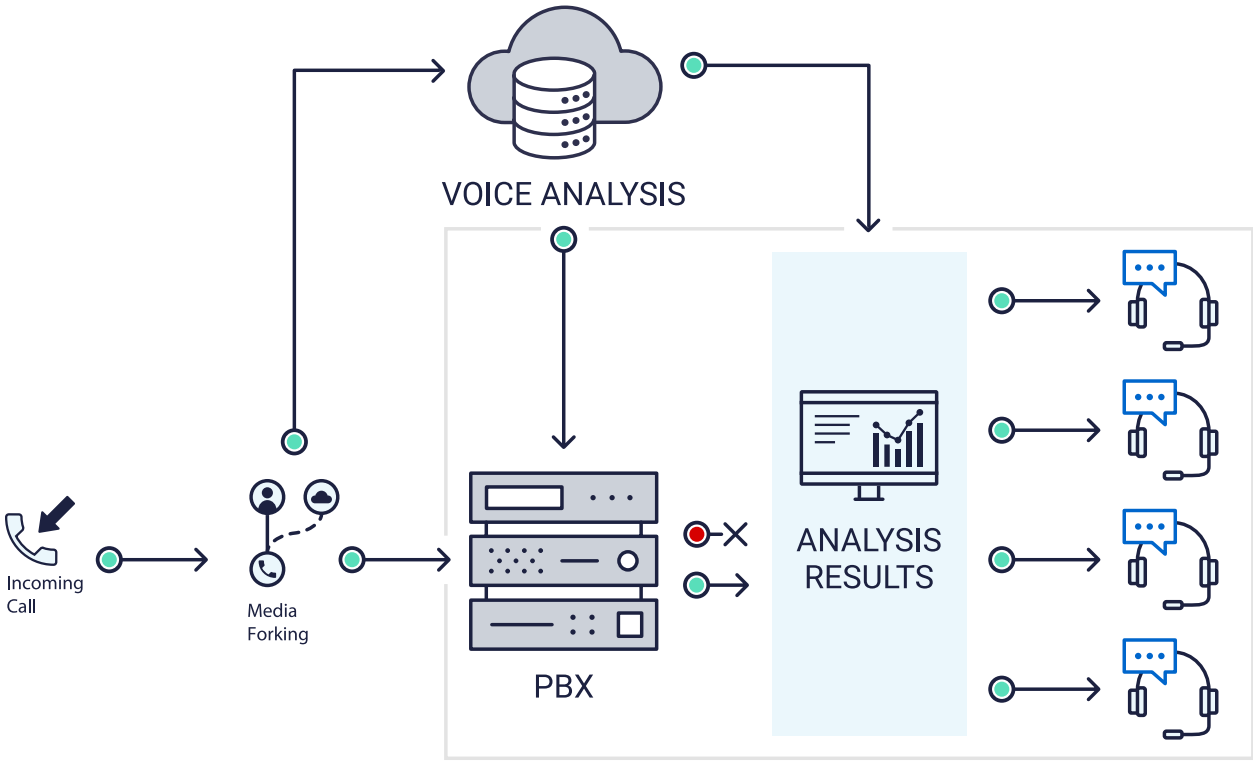
Telnyx cloud communications enables a true SaaS experience.

TELNYX UNIVERSAL SERVICE

This voice analysis application needed unfettered access to phone calls without becoming a telephony company. That is, introducing SIP or another technology into their stack would be a large undertaking and complicate the delivery of their service.

They needed access to calls and telephony data in real time, without building a cloud communications service of their own. So, the organization leveraged Telnyx's global network and cloud infrastructure to deliver high-quality voice authentication without the legacy on-premise installation.

Cloud voice analysis was made possible by Telnyx's key innovation: media forking calls in real-time.



The World's First Real-Time Voice Analysis in the Cloud.

CALL MEDIA FORKING

Media forking is a feature available to Telnyx clients that is unique to Telnyx SIP trunking. Call media is duplicated, encrypted and delivered to multiple locations via Telnyx's private IP network. Media is duplicated and delivered in real time, so the application's analysis servers can process the call while the call center receives and routes the call simultaneously.

Not only does Call Media Forking deliver the audio in real-time, but it does so outside of the call path. This means that the application does not become another point of failure for their customers' calls.

VIRTUAL CROSS CONNECT (VXC)

Telnyx implemented direct connections with the application's cloud servers via Virtual Cross Connects. These provision private virtual pathways over IP to bypass the public internet and improve reliability and security. By reducing hops, VXCs protect sensitive call media from malicious actors or degraded service as it travels between Telnyx, the application and the call center.

NUMBERS

All active call center numbers were ported to Telnyx. Telnyx provided full feature parity as the previous carrier at reduced, wholesale rates. Existing routing schemas were preserved.

GRANULAR PSTN INTEROPERABILITY

In order to authenticate callers, this voice analysis application requires a robust, 360-degree view of the caller, which includes caller metadata from both the customer and the originating telephony environment. Unlike other SIP providers, Telnyx preserves the call metadata that accompany calls from the Public Switched Telephone Network, such as ISUP headers, and grants access to actual call media and RTCP data. The application then enriches its caller profile with other telephony data like caller ID name, location routing numbers and other information associated with the core switch—data provided by Telnyx.

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API Docs

Review Docs

The Benefits

New cloud delivery improves customer satisfaction, increases revenue and unlocks new markets.

FLEXIBILITY AND SCALABILITY

Before building Telnyx into its solution, this application required long implementations, complex on-premise integrations and substantially more resources to add new customers. Further, on-premise implementations limit the organization's agility in developing and improving their application, because of the need to update each individual instance with backward compatible changes.

Now, implementations are substantially shorter with far fewer resources required. The application can deliver a cloud service that scales dynamically, can utilize agile development and puts no geographic constraints on service delivery.

IMPROVED RELIABILITY AND SECURITY

Introducing new software solutions and applications to a telephony environment creates new points of failure. For call centers, banks, 24/7 support teams and other critical communication environments, organizations must balance the need for sophisticated call systems and analytics with the risk those additional layers of software pose to their operation.

The introduction of call forking, however, improved the reliability of this application's implementations, because it removed the application from the call center technology stack. Telnyx media forking removes the secondary call recipient from the call flow entirely, meaning there is no risk of call degradation or dropped calls. If the analysis application fails, calling continues unaffected.

Additionally, moving their clients to the Telnyx service allows them to take advantage of Telnyx's low latency communications environment that bypasses the public internet. The VXC between Telnyx and the application's cloud servers eliminates the security risks of touching the public internet because the forked call is only a single hop from its destination.

EASIER MAINTENANCE AND BETTER SATISFIED CUSTOMERS

Moving the application's functionality to the cloud gives the organization better control over the application. So, they can fix bugs on demand and roll out updates remotely. This makes for better customer service, an application that will mature more quickly and ultimately make for better customer satisfaction.

FASTER SALES CYCLES

Shorter implementations mean faster sales cycles. And, because the application now operates from the cloud with dynamic scalability and with access to new markets, there are far fewer constraints on the application's and the organization's growth. The application should grow and—along with it—revenue.

OPENS UP NEW MARKETS

With Telnyx as a technology partner with global infrastructure, moving this application to the cloud opens access to any market addressable via the Telnyx IP network and telephony ecosystem. With international numbering available in more than 60 countries and an IP network that spans North America, Europe, Asia and Australia, the application has widely expanded their addressable market with very little investment in new infrastructure.

In addition to new geographies, the new simplified cloud delivery model opens up new industries and customer types. Because it reduced implementation time, cost and complexity, introducing Telnyx into their solution enables this application to target new industries or prospects that are less tolerant of expensive or resource-intensive transformation.

SHORTER, STREAMLINED IMPLEMENTATIONS

As mentioned above, implementation and onboarding were shortened by months, now require fewer resources and reduces costs to the organization per new customer.

About Telnyx

Telnyx delivers voice, messaging and more for applications and next-generation communications companies. Telnyx is a communications platform and partner that provides global carrier-grade services. Telnyx maintains an international, private IP network and grants its customers unprecedented control over their communications through its innovative portal and RESTful API.

Telnyx products include voice (elastic SIP trunking, global number search and telephony data), programmatic messaging, embedded communications (WebRTC) and automated networking. Customers provision services a la carte and pay by usage for scalable, on-demand communications.

Every Telnyx customer has access to 24/7 engineering support and dedicated customer success teams, and Telnyx continues to offer complimentary enterprise services like configuration management, enterprise security and fraud detection.