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Sculpting A New Communication Era For Eurice With **A Custom SBC Solution**

Introduction

Eurice, a leading service provider in France, is renowned for its outstanding communication services, which include telephone reception, diary management, switchboard, customer service, order reception, etc. The distinguished service provider catering to a diverse clientele of health professionals, specialists, entrepreneurs, lawyers, generalists, and SMEs has earned significant recognition. However, Eurice identified the necessity for a reliable, scalable, and secure solution that could seamlessly manage its multimedia communication sessions to maintain its operational excellence.

Challenge

The organization aimed to find a platform to manage multimedia communication sessions efficiently, integrate seamlessly with the existing telephony infrastructure, and provide a flexible and efficient way to manage, monitor, and control these sessions. An additional requirement was the development of APIs for the platform, allowing for smooth interaction with Eurice's backend systems, notably the Calibri Back Office.

Eurice chose Ecosmob for its deep-rooted Voice over IP (VoIP) proficiency and extensive field experience. Ecosmob deployed a core team of experts to develop a comprehensive Session Border Controller (SBC) solution within a challenging 4-5 weeks timeframe.

The Core Team

To ensure the success and precision of the SBC solution, Ecosmob brought together a handpicked ensemble of specialists, constituting four essential

VoIP Developer:
Ensured seamless telecommunication integrations, call routing, signaling, and other related VoIP features.

Web Developer:
Entrusted with integrating user interfaces and enhancing the platform's web components.

DevOps Team:
Ensured smooth deployment and real-time solution optimization by orchestrating the harmonious blend of development and operations.

QA Engineer:
Ensuring the highest level of quality, they meticulously tested every aspect of the solution for flawless performance.

This dedicated task force was pivotal in architecting and implementing the state-of-the-art SBC solution for Eurice.

Key Considerations

System Insight:
Delved into the existing project to gain a comprehensive understanding.

Client Infrastructure Analysis:
Conducted a thorough requirement gathering exercise and the client's existing architecture and systems review to align our strategies seamlessly.

Strategic Planning:
Crafted a detailed project plan encompassing a Work Breakdow Structure (WBS), resource allocation, and a meticulous timeline punctuated with milestones.

Task Segmentation:
During the initial stages, tasks were segmented into manageable units, ensuring precision in execution.

Prototype Design:
Anchored by client requirements, our team devised visual prototypes, setting the stage for the subsequent development phase.

Collaborative Reviews:
Instituted weekly meetings with the client, addressing progress and potential challenges and understanding any change requests.

Rigorous Testing:
Post-development, we started a stringent testing process, spanning functional tests, performance assessments, and User Acceptance Testing (UAT).

System Integration & Documentation:
Following successful validations, components were seamlessly integrated. The system's functionalities were comprehensively documented to ensure ease of use.

Ongoing Engagement:
Beyond deployment, we remained steadfast in monitoring system performance, embracing client feedback, and preemptively addressing potential challenges. Our commitment extended to consistent support

The Solution

The SBC solution developed by Ecosmob amalgamated several crucial features designed to meet the specific needs of Eurice:

- Support for IPv4 and IPv6, and Fail2Ban.
- Topology hiding to ensure the SBC remained in the SIP and media signaling path.
- Support for multiple IP interfaces and IP zones.
- Support for UDP, TCP, and TLS for SIP signaling and RTP & SRTP for media signaling.
- Capacity to convert between two transport protocols if necessary.
- Support for WebRTC to SIP/SIP to WebRTC gateway.
- NAT traversal and SIP registration forwarding.
- Prevention of SIP registration hijack attacks.
- Comprehensive Call Detail Records (CDR) logging.
- Capability to limit simultaneous channels and calls per second.

- IP blacklisting based on source/destination.
- Proxying of all SIP requests and responses.
- Monitoring of connectivity with the SIP application server.
- A user-friendly GUI for control, configuration, and reporting.
- High availability (HA) support.
- Regular email notifications for blocked IPs.
- RTPEngine Media Control.
- Inbound and Outbound Concurrent Limit For Application Server.
- Open for external API integrations.
- SBC Registration on Telecom Provider.
- Role-based access control.
- Peak call count data for historical and daily metrics.
- SIP authentication flexibility using username/password or IP.

The Impact

Implementing Ecosmob's bespoke SBC solution offered Eurice a wealth of benefits.

It provided a secure and reliable platform for managing multimedia communication sessions and improved overall service quality.

The scalable nature of the solution accommodated future growth and increased capability as Eurice's business expanded.

Furthermore, the APIs developed ensured seamless integration with Eurice's backend systems, including the Calibri Back Office, fostering a robust communication environment.

With this new solution, Eurice realized improved call handling capabilities, enhanced security measures, and effective monitoring and control of communication sessions.

The end product led to significant improvements in their telephony infrastructure, equipping them to provide exceptional communication services to their clients and bolstering their reputation as a trusted service provider. In a nutshell, the solution delivered high reliability, security, and flexibility for Eurice's operations.

> Ecosmob's custom SBC solution has enhanced Eurice's operational efficiency and equipped them to embrace future growth. It is a testament to the transformational power of smart communication systems, demonstrating how a scalable, reliable, and robust infrastructure can revolutionize an organization's communication landscape.

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