

CASE STUDY

INDIA'S TIER-1 TELECOM SERVICE PROVIDER INTEGRATES PERTSOL INTERCEPTOR FOR ITS IPLC NETWORKS

Organization: Tier-1 Telecom Service Provider (TSP)

Industry: Telecom Industry

Country: India

Operation: Country Wide

The main challenges faced by Tier-1 TSP were the need for lawful interception of its IPLC at multiple sites across India, with a focus on compliance with legal requirements and ensuring system scalability for future network capacity upgrades.

PertSol iNterceptor

PertSol's Lawful Interception System is designed to provide a fully compliant lawful interception solution for IPLC networks. It ensures secure, real-time interception, monitoring and data retention across multiple sites, offering a modular and scalable architecture suitable for future network expansions.

About Tier-1 TSP

Tier-1 TSP is a global leader in communications technologies and services. It provides a wide range of services, including international and domestic lease circuits, networking, IT sectors, and more, primarily supporting large Indian and multinational corporations based in the country.

The Challenges

Tier-1 Telecom Service Providers (TSPs) face significant challenges in the lawful interception and monitoring of their International Private Leased Circuits (IPLCs) to meet regulatory requirements & compliance.

The project spanned three strategic locations—Site 1, Site 2, and Site 3—each with distinct network configurations and traffic dynamics. This diversity added layers of complexity to the deployment, necessitating flawless coordination among teams spread across these sites. The aim was to minimize implementation errors and ensure minimal downtime, critical for maintaining network integrity and operational continuity.

A major technical hurdle was the efficient management of high network traffic volumes. The solution required a robust architectural design to process and intercept vast amounts of data seamlessly, without disrupting the normal operations of the network. Achieving high-performance processing and real-time data handling capabilities were paramount to avoid bottlenecks.

Adhering to both Indian regulations and international standards



presented another significant challenge. The system needed not only to integrate seamlessly with existing technologies but also to be flexible and scalable. This adaptability is essential to meet evolving legal requirements and to accommodate future technological advancements and network expansions.

Maintaining the integrity and security of the intercepted data was of utmost importance. The system was enhanced with advanced security features to prevent unauthorized access, ensuring that all data transmissions to law enforcement agencies were secure and tamper-proof. Deploying a solution that met these rigorous demands was crucial for bolstering network security and effectively adhering to legal mandates.

The Objective

The strategic goal for Tier-1 TSP is to implement a new Lawful Interception solution for its International Private Leased Circuits (IPLCs). The company's main aim is to deploy LIS to three different locations, from which it wants to intercept and monitor communications traffic to meet regulatory requirements and ensure compliance."

The Solution

After reviewing the requirements of the Tier-1 Telecommunications Service Provider, PertSol proposed its Lawful Interception System (iNterceptor) for their International Private Leased Circuits (IPLCs). The solution is designed to effectively intercept and monitor IPLCs, ensuring robust compliance with international standards and regulations. This capability ensures comprehensive insight into the nature and specifics of transmitted data, facilitating enhanced monitoring of network traffic.

PertSol has meticulously implemented an advanced interception solution across its IPLC networks, encompassing three strategic locations: Site 1, Site 2, and Site 3. Each site was outfitted with advanced iNteliProbes, integral for mirroring traffic through existing network splitters or newly installed optical taps, ensuring robust data capture and processing with the capability to handle future network expansions.

The solution will help to intercept IPLC traffic by providing access to and delivery of the targeted IPLC's Traffic Content (TC) and the Intercept Related Information (IRI) in near real-time to authorized Law Enforcement Agencies (LEAs). It is capable of monitoring IPLC traffic by providing recorded/stored & post-processed intercepted

data to authorized Central & State Government Law Enforcement Agencies.

Moreover, the system includes a Central Warrant System and multiple iNterceptor Monitors that enable the real-time monitoring and lawful interception of network traffic. These components work in conjunction with the Mediator, which aggregates, processes, & securely transmits the intercepted data to monitoring centers, adhering to ETSI standards. This robust setup ensures that all data handling is both transparent and compliant with legal requirements.

Solution Key Benefits

Regulatory Compliance: PertSol IPLC-LIMS is fully compliant with TEC-GRs, PSTN, PSTN/PLMN, and ETSI regulations, ensuring comprehensive adherence to legal standards for IPLC interception and monitoring. This system is specifically designed to meet stringent regulatory requirements, providing a reliable and effective solution for lawful oversight. With its robust compliance framework, it is structured to facilitate rapid regulatory approval, enabling a swift transition to operational status and ensuring that the system can go live within a short timeframe.

Real-Time IPLC Traffic Interception: The solution ensures timely access to and delivery of targeted IPLC Traffic Content (TC) and Intercept Related Information (IRI) to Authorized Law Enforcement Agencies (LEAs), aligning with specific interception criteria. The system supports a wide range of interfaces, including E1, E3, STM1 to STM64, Ethernet (10Gbe to 100Gbe), and OTN (OTU2 to OTU4), providing flexible and effective traffic interception capabilities.

Scalable Performance: The system ensures high Service Level Agreements (SLAs) by enhancing service availability, performance, and scalability. This robust framework not only supports current operational demands but also facilitates future growth, adapting seamlessly to expanding network needs and traffic volumes.

Cost-Effective Integration: The iNterceptor system leverages existing network infrastructure for deployment, significantly reducing the need for new hardware investments. This strategic utilization minimizes both initial setup costs and ongoing operational expenses, providing a cost-efficient solution that enhances return on investment for Tier-1 TSPs.

Secure Data Transmission and Integrity: The solution ensures that all data transmitted to law enforcement agencies is encrypted and securely delivered. It includes integrity checks to ensure that the data remains unaltered and reliable from capture to delivery, providing law enforcement with dependable evidence for analysis.

The Result

The PertSol iNterceptor solution was fully implemented within just five months, overcoming initial integration challenges with existing Tier-1 TSP networks. This swift deployment across the IPLC networks was facilitated by PertSol's dedicated support, underscoring our commitment to client satisfaction and technological superiority. In line with the stringent regulatory requirements, the system underwent thorough testing by the relevant law enforcement agencies and regulatory bodies. PertSol provided exceptional support throughout this process to ensure that the deployed IPLC system passed all necessary regulatory and law enforcement tests. This comprehensive testing and support enabled the system to meet all compliance standards and go live successfully after a single demonstration.

Significant outcomes have emerged from deploying the iNterceptor system for Tier-1 TSPs, notably enhancing their lawful interception capabilities. The strategic implementation across three key sites—Site 1, Site 2, and Site 3—has not only complied with national and international interception mandates but also elevated the standard of network security and integrity. Key features of the iNterceptor, such as real-time monitoring, secure data handling, and extensive data retention capabilities, have empowered Tier-1 TSP to efficiently manage and scrutinize communication flows. This robust system supports law enforcement and governmental agencies by providing crucial insights that aid in safeguarding public safety and thwarting illegal activities.

About PertSol

PertSol is a leading pioneer in providing next-generation Telecom, Intelligence, and Security Solutions specifically tailored for Intelligence, Regulatory, and Law Enforcement Agencies, Communication Service Providers, and Emergency & Public Warning Service Providers. With over 10+ Years of proven expertise, we have established ourselves as a trusted partner in safeguarding national regulations, security, and public safety by upholding the law with our security products.

Our AI-powered solutions are at the core of our strategy, featuring advanced technologies in Target Lawful Interception, Centralized Monitoring & Analytics, AI-ML Based Location Intelligence, & IP Metadata Interception. These robust platforms empower intelligence, regulatory, and law enforcement agencies to conduct in-depth investigations, gather critical intelligence, and make informed decisions with speed and accuracy. Our solutions deliver actionable insights that significantly enhance operational efficiency and mission success.

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Contact Us

INDIA

720 Midas Sahar Plaza, J.B. Nagar,
Andheri East, Mumbai 400059,
Maharashtra, India

✉ contact@pertsol.com

USA

Pert Telecom Solutions Inc.
6379 Clark Ave. Suite 260
Dublin CA 94568, USA

✉ contact@pertsol.com

DUBAI

Pert Telecom Solutions DMCC
36th Floor Mazaya Tower Dubai,
UAE

✉ contact@pertsol.com

