

iSecureHL

IP Log Management System (IPLM)

Complete Solution For Generating & Managing Logs For Data Traffic



BUSINESS DRIVERS

For Communication Service Provider

With a tremendous surge in mobile data usage and shift in telecom industry from voice to data, all service providers are moving towards an all IP network that delivers voice, data, video and mobile applications.

Therefore to safeguard public from threats like cyber-crime, cyber bullying, cyber terrorism etc. and to help LEAs with their investigations, Regulatory Authorities across globe have recommend TSPs/ISPs to gather traffic information of their users that may help LEAs with their investigations, when needed.

Tracing IP addresses to their devices and their actual users can be determinantal in investigating & contending modern day crimes. In current scenario, with everyone leaves a digital footprint finding the source IP address, TCP port number, date and time of session can lead to explicit people.

which complies with the Government Norms by gathering approved online logs of the subscribers that built primary block for LEA investigations.

iSecureHL

Introduction

PertSol iSecureHL is a fully automated solution that offers consistent and high-quality IP Logs across various operator's network domains. It is a web-based system which fetches data from various sources like Internet Traffic, GTP traffic, CGNAT Logs, AAA traffic etc. and stores them in the form of MetaData. It helps telecom CSPs and LEAs in protecting the public against cybercrimes by providing crucial IPDRs for investigation.

iSecureHL in combination with PertSol's iNteliProbe deliver the most comprehensive monitoring solutions capable to generate/extract IPDRs from the raw IP Traffic. Packets can be captured via interface deliver the

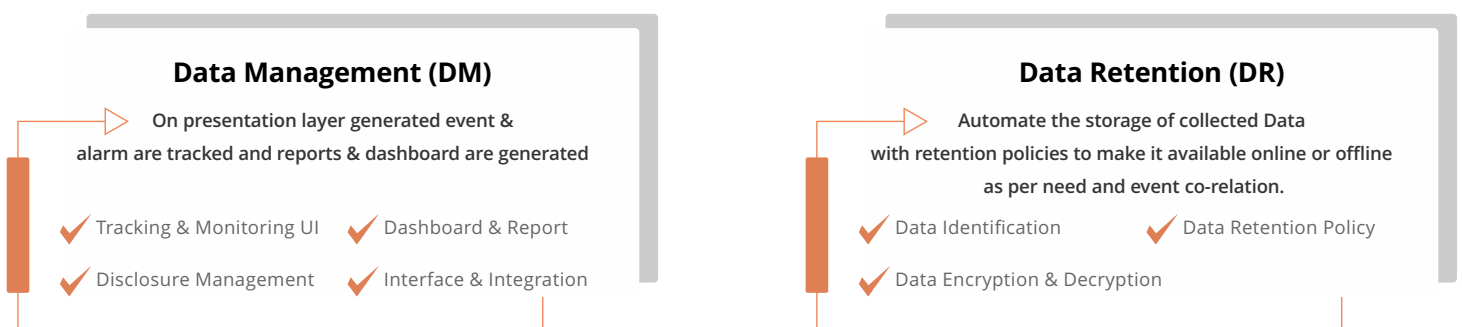
most comprehensive monitoring solution. It can simultaneously monitor Internet Traffic for control plane and User plane. Packets can be captured via interface cards that support 10G, 40G, 100G interfaces. It is also capable of decoding captured traffic from OSI layer 2 to layer 7.

PertSol iSecureHL objective is to meet CSP's/ISP's key regulatory requirements and provide access to users/Law Enforcement Agencies/ Cybercrime cell to analyze its internet traffic by:

- ✓ Generating and storing all IPDRs into a single platform and meet the Regulator's requirements.
- ✓ Capturing details of destination IP address as per Regulator's requirement.
- ✓ Building IPDRs through correlation of NetFlow data along with IP Data Records generated through iNteliProbe.
- ✓ Correlating IPDRs with NAT records and CAF fields of subscribers to provide complete mapping of Source IP Addresses with translated IP Addresses.
- ✓ Extracting IPDRs based on key parameters like MSISDN, IMSI, IMEI, Source IP Address and Destination IP Address etc.
- ✓ Probing and Decoding Layer 2 to Layer 7 Traffic providing info like application used , URLs visited etc.

MODULAR Architecture

PertSol iSecureHL is an integrated automated tool for data collection, correlation and data management. Each of its functions are performed separately by the following modules:



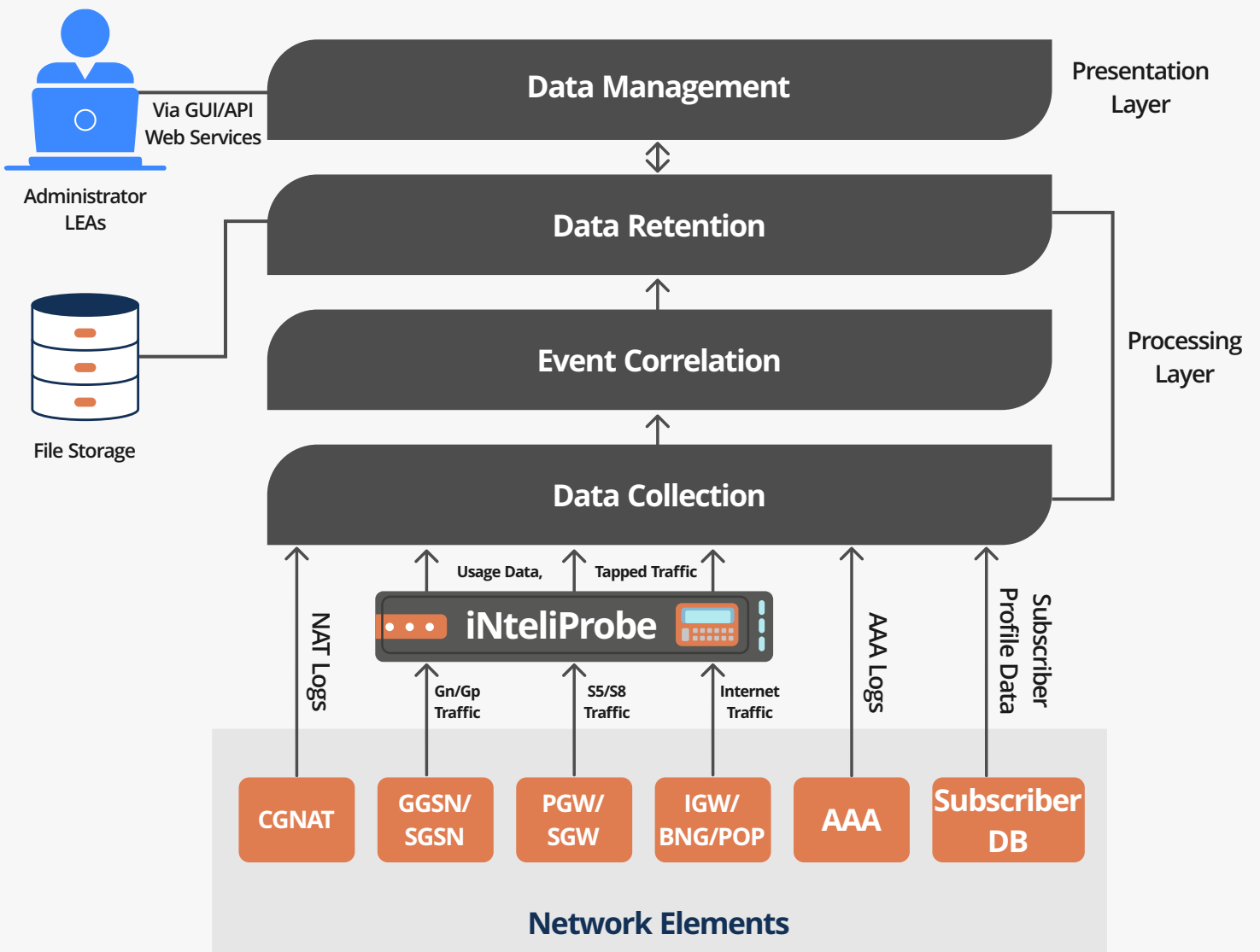
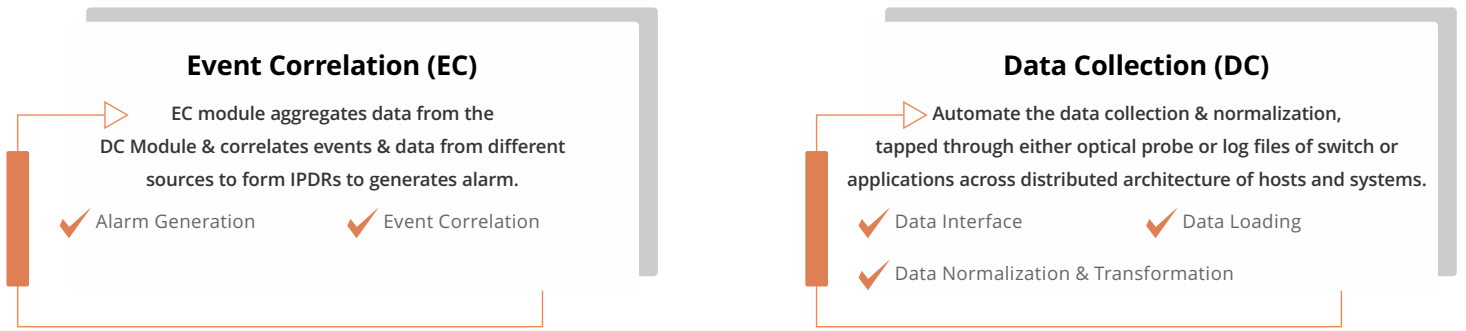


Fig: Functional Flow

iSecureHL

Key Differentiators



SUPPORTED

IPDR Fields

iSecureHL is capable of delivering IPDRs with all the fields that are asked by the regulators across the world. It provides more around 39 IPDR fields and does not depend upon any third-party data sets to generate IPDRs. Some of the IP fields that it delivers are:

Name of Person/Organisation	Address	Contact Number
Email Address	MSISDN	User ID
IP Address	Static/Dynamic IP Address Allocation	Source IP Address
Source IP Port	Translated IP Address	Translated IP Port
Destination IP Address	Destination IP Port	Start Time
End Time	Start Date	End Date
MAC Address	IMSI	IMEI
Cell ID	eUTRAN Cell Global Identity	Mobile Country Code (MCC)
Mobile Network Code (MNC)	Location Area Code (LAC)	PGW Address
APN	Browser	OS
URL	Domain	Protocol Used
Roaming Circle	Download Volume	Uplink Volume
Total Volume	Packet Count Uplink (Per Socket)	Packet Count Downlink (Per Socket)

BENEFITS OF iSecureHL

Solution With Excellent Capabilities



Advance Search Query - It provides for search based on MSISDN, IMEI, IMSI, Cell IDs (all that are used in session), Translated IP, Translated Port, Destination IP, Destination Port, Date & time. Multiple inputs are allowed for each of the parameter wherein we support query of multiple MSISDN/IMSI/IMEI, Source IP, Cell-ID, Destination IP, Source Port, Destination Port by entering comma separated values.

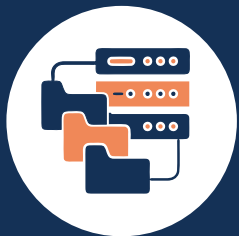
Remote Query Access for LEAs - It has a centralized management system using which all Law enforcement Agencies (LEAs) can query the IPDRs for their investigation. The Lawful Enforcement Agency (Government Agent) can perform Secured. LEAs can run an IPDR query using any of the following methods:

- ✓ E-Warrant XML based Interface
- ✓ API Integration
- ✓ iSecureHL GUI
- ✓ Email
- ✓ SMS
- ✓ CLI



Interoperability & Interfacing - iSecureHL can support interoperability with network elements of all the leading Network Element Providers of the world, to process their CDR records. It supports all the interfaces required by operators for the interoperability of IPDR system with the various third party systems.

Data Compression - iSecureHL compresses IPDR by a factor of 20 before storing them for long term retrieval. It uses multiple level of compressions like Field level de-duplication, Pattern level de-duplication Algorithmic compression and Byte level compression



File System - iSecureHL has an intelligent file system that enables enhanced features for processed file to protect highly sensitive data and supports optimum storage capacity.

Security - All internal workflows are protected by a number of state-of-the-art security measures to assure compliance to privacy laws by means of access control, encryption, integrity checks, and full audit trails. All system data, i.e., CDRs, subscriber data, configuration data, log files, warrants and request details, are kept in encrypted databases. Detailed logging of all user and system events prevent misuse and enable security audits.





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