



A leading government R&D organization utilized Matrix Multi-location Communication solution to create a unified communication ecosystem.

Case Study

Application:

Unified Communication Solution, Multi-location Communication Solution, VoIP PRI Gateway

Industry:

Government

Partner:

CONSULTTECH

Location:

Kerala

Client Overview:

Our client is a leading regional R&D organization under the Ministry of Electronics and Information Technology (MeitY). Specializing in research and development across IT, electronics, and related fields, the organization has established itself as a key player in advancing national technological capabilities. It focuses on aligning with global trends and adapting to market demands in foundational areas of technology. As a premier institution for high-end R&D, it has been instrumental in driving the IT revolution in India, continually enhancing its expertise in emerging technologies. The organization leverages its skills and innovation to develop and deploy IT products and

solutions across various sectors, in line with the directives of MeitY and in collaboration with funding agencies, partners, and market stakeholders.

Challenges/Requirements:

The project required handling a specific number of emergency calls per hour by routing calls made to 112 to state-wise emergency service agents. The functional area of Matrix lies in providing a VoIP PRI gateway system that caters the VoIP functionality to a third-party server. Most importantly, these functionality had to be served at multiple locations. Their requirement can comprehensively listed as under:

- **Handle atleast 50,000 calls:** The system must be capable of managing a minimum of 50,000 emergency calls per hour.
- **Route calls to state-wise agents:** Whenever a user dials the global emergency number 112, the call will be routed to agents responsible for state-specific emergency services.
- **Third-party integration:** The agents will operate on a third-party server, which needs to be integrated with the Matrix GENX system through SIP trunking.

Solution

Matrix, in partnership with Consulttech, created a solution that greatly improved the organization's operations by enabling efficient call routing. The main aspect of the solution lied in providing a VoIP PRI gateway that enabled them, a PRI to VoIP conversion. The key aspects of this solution can be outlined as follows:

- **Multiple locations:** The system involves multiple locations, each equipped with a Matrix GENX system that connects to the ISP's PRI lines.
- **PRI to VoIP conversion:** At each location, the Matrix GENX converts the calls from PRI lines to VoIP (Voice over Internet Protocol).
- **Emergency call setup:** When a user dials the emergency number 112, the call is routed through the ISP's PRI

(Primary Rate Interface) lines which are connected to the Matrix Gateways. The Gateway is converting the media from PRI to VoIP and passing the call to the ACD (Automatic Call Distributor) server.

- **Central ACD server:** All VoIP calls are then directed to a central ACD (Automatic Call Distributor) server.
- **Agent connectivity:** The ACD server routes these calls to the appropriate agents who are available and ready to respond.
- **Scalability:** The diagram shows multiple locations (up to 28) can be connected to the central ACD server, ensuring that a large number of calls can be managed simultaneously.

Products Offered

- **Matrix ETERNITY GENX12SAC:** VoIP PRI gateway

Results

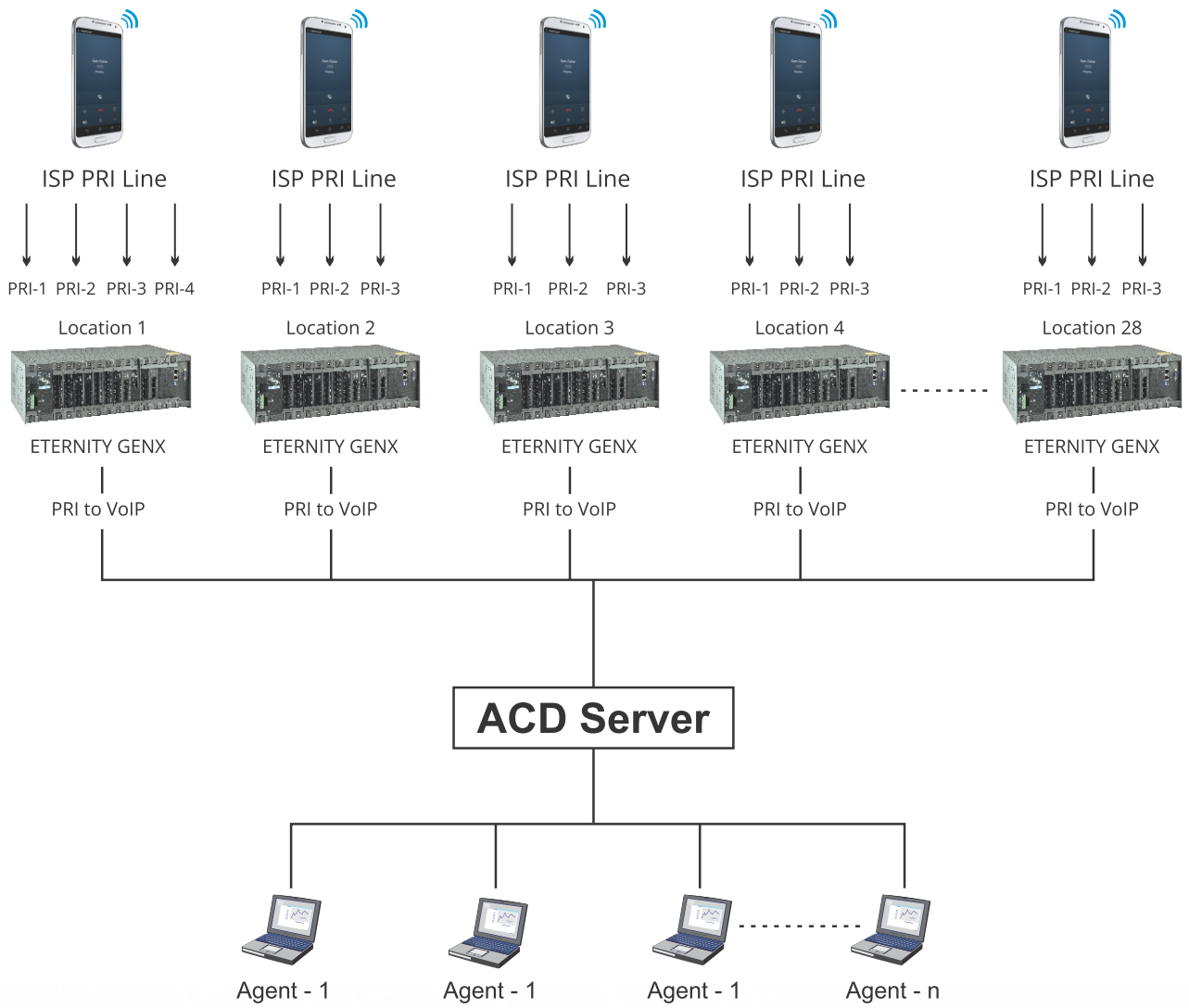
The solution allowed the organization to unify multiple sites under a single communication ecosystem using VoIP PRI gateway. With enhanced capacity to handle thousands of calls in an hour, the call drop ratio was, drastically reduced. The detailed overview of the solution is as follows:

- **Multi-location Solution:** The project has been implemented across various sites in different cities throughout Kerala, thus creating a unified communication ecosystem.
- **Enhanced call handling Capacity:** Each location manages a minimum of 26,000 to 30,000 calls per hour.
- **Drastic reduction in call-drop ratio:** The system handled the call volumes effectively, with practically no call-drops.

The Matrix VoIP PRI gateway enabled them to unify multiple sites across the state. With capacity to handle large call volumes, they were facilitated with a drastic reduction in call-drop ratio.



Solution Diagram



ACD Server:
Automatic Call Distributor Server
ISP: Internet Service Provider



About Matrix

Established in 1991, Matrix is a leader in Security and Telecom solutions for modern businesses and enterprises. As a technology-driven, and customer-focused organization, the company is committed to keeping pace with the revolutions in the Security and Telecom industries.

With around 40% of its human resources dedicated to the development of new products, Matrix has launched cutting-edge products like Video Surveillance Systems – Video Management Systems, Network Video Recorders and IP Camera, Access Control and Time-Attendance Systems as well as Telecom Solutions such as Unified Communications, IP-PBX, Universal Gateways, VoIP and GSM Gateways and Communication Endpoints. These solutions are feature-rich, reliable, and conform to international standards.

Having global footprints in Asia, Europe, North America, South America, and Africa through an extensive network of more than 4000+ channel partners, Matrix ensures that the products serve the needs of its customers faster and longer.

Matrix has ISO 27001: 2013, 20000-1 2018, 14001- 2015, and 9001: 2015 certifications for quality management standards. Matrix has also been awarded ZED Quality Certification, and DSIR Certification for indigenous R&D and Manufacturing. Matrix has gained the trust and admiration of customers representing the entire spectrum of industries.

For further information, please contact:



MATRIX COMSEC

Head Office

394-GIDC, Makarpura, Vadodara-390 010, India.

Ph: +91 265 26137222,

E-mail: Inquiry@MatrixComSec.com

Manufacturing

19-GIDC, Waghodia, Dist. Vadodara-391 760, India.

www.MatrixComSec.com

Call: 1800-258-7747