

Online Session on "ShaktiDB: An Indigenous Database Ecosystem"

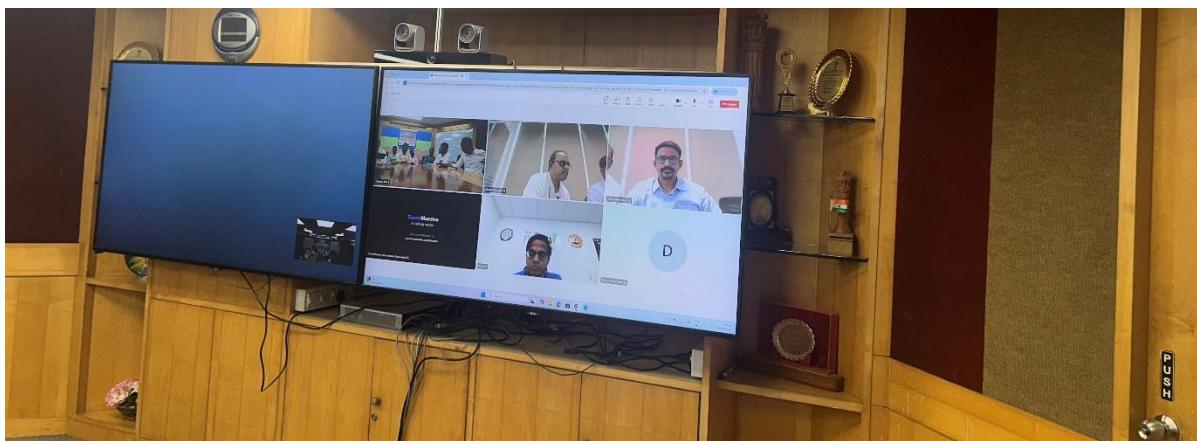
Date: 20th August 2025

Introduction

The National Informatics Centre (NIC) Tamil Nadu organized an exclusive online session on "ShaktiDB: An Indigenous Database Ecosystem" on 20th August 2025. This technical session was designed to benefit officials from NIC Tamil Nadu and enhance their understanding of cutting-edge indigenous database technologies.



The session was expertly conducted by IITM Pravartak Technologies Foundation, the Technology Innovation Hub hosted by IIT Madras, Chennai. IITM Pravartak Technologies Foundation is recognized as a leading technology innovation hub that focuses on developing indigenous technological solutions.



The State Informatics Officer (SIO) extended a warm welcome to Shri. Vasan, Chief Project officer and the Shakti DB team Shri.Balaji, Shri. Balaji Krishna Swamy from IITM Pravartak. The SIO encouraged all NIC officers to actively engage in the session, emphasizing the critical importance of learning new technologies in today's rapidly evolving digital landscape.

The session witnessed excellent participation from Heads of Groups (HOGs) and Senior Officers from NIC Tamil Nadu State Centre, all personnel from NIC TNSC, and District NIC officers from across Tamil Nadu who joined through video conference.

Technical Focus: ShaktiDB/BharatDB

The core focus of the session was on **ShaktiDB** (also known as **BharatDB**), an innovative indigenous database engine. Key highlights of the presentation included:

Product Overview

The ShaktiDB initiative was launched a year ago to build an indigenous RDBMS alternative with multiple vendors. The main objective is to focus on security, performance, and functionalities.

Key Technical Details:

- **Base Technology:** Customized database engine based on a fork of Community PostgreSQL.
- **Funded** by the Ministry of Electronics and Information Technology (MeitY).
- **Technology Partnership:** Executed by IITM Pravartak Technologies Foundation in collaboration with IIT Madras and engineering partnership with Centre for Development of Advanced Computing (CDAC).

The comprehensive presentation covered:

Core Features: ShaktiDB is built over community PostgreSQL 17.4 as the base with additional functionalities and features. The first version of ShaktiDB was released in June 2025, which was adopted by closed user groups. Feature comparisons with other RDBMS like EDB PostgreSQL were explained during the session.

Vulnerability Management: How the system addresses potential security vulnerabilities

Continuous Support: Ongoing maintenance and support mechanisms include:

- Comprehensive support tailored to user needs
- Professional product support and Professional services for consulting and migration support
- Different level of SLA-driven support with Premium/Standard support options

Success Stories: Real-world implementation examples and case studies were discussed with the showcasing the implementation of **Next-Gen Data Warehousing in Banking - City Union Bank and Powering the Future of ERP of iCube- ERP.**

A significant portion of the session was dedicated to interactive engagement, allowing participants to:

- Raise technical queries about ShaktiDB implementation
- Clarify doubts regarding system features and capabilities
- Discussed Hardening, Backup and performance tuning also discussed about the dashboard for monitoring the database.

Conclusion

The session concluded with positive feedback from participants, who gained valuable insights into indigenous database technology solutions. The SIO extended heartfelt gratitude to the ShaktiDB team from IITM Pravartak for delivering such an insightful and informative session.

This initiative aligns with the Government of India's vision - Make in India of promoting indigenous technology solutions and reducing dependency on foreign database systems, marking a significant step towards technological self-reliance in the database management domain.