

National Supercomputing Mission (NSM)

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National Supercomputing Mission (NSM) Latest News

National Supercomputing Mission: Powering India's Future with Indigenous High-Performance Computing.

About National Supercomputing Mission (NSM)

- The **National Supercomputing Mission (NSM)** is a **flagship initiative** launched in **2015** by the Government of India to strengthen the nation's **High-Performance Computing (HPC)** capabilities.
- It aims to **enhance India's computational capacity** in sectors like **science, technology, academia, research, and industry**, making the country **self-reliant** in supercomputing technologies.
- The mission is **jointly steered** by the **Department of Science and Technology (DST)** and the **Ministry of Electronics and IT (MeitY)**, and is **implemented** by **C-DAC, Pune** and **IISc, Bengaluru**.
- The key goal is to **position India globally** among top nations in supercomputing by enabling **research**, reducing **technological import dependence**, and creating a robust **indigenous HPC ecosystem**.

Indigenisation Milestones

- **“Rudra” HPC servers**, developed indigenously, are the **first HPC-class servers** built in India, matching global standards.
- Supercomputers like **PARAM Rudra** (Pune, Delhi, Kolkata) have been dedicated for **advanced research in physics, cosmology, and earth sciences**.
- The **Trinetra** high-speed network (developed under NSM) boosts **data transfer rates** up to **200 Gbps** and is being rolled out in phases – **PoC, Trinetra-A (100 Gbps)**, and **Trinetra-B (200 Gbps)**.

AI Supercomputing: AIRAWAT

- The **AIRAWAT project** is India’s **AI-focused supercomputing initiative** under NSM, offering a **common AI computing platform** for start-ups, researchers, and innovation hubs.
- The **Proof of Concept (PoC)** system of AIRAWAT features **200 petaflops** of AI processing power, scalable to **790 AI petaflops**.
- **AIRAWAT secured 75th rank** in the **Top 500 Global Supercomputing List** (ISC 2023, Germany), placing India among the **top AI supercomputing nations**.

Institutional Milestones

- **PARAM Shivay** (2019) at **IIT-BHU** was the **first indigenous supercomputer** under NSM.
- **PARAM Pravega** (2022) at **IISc Bengaluru** is among the **largest academic supercomputers** in India, with **3.3 petaflops** processing power.

National Supercomputing Mission (NSM) FAQs

Q1. What is the objective of the National Supercomputing Mission (NSM)?

Ans. The NSM aims to develop a high-performance computing (HPC) ecosystem in India, including indigenous supercomputers and advanced computing facilities.

Q2. Which two bodies jointly implement the NSM?

Ans. The NSM is jointly implemented by C-DAC (Centre for Development of Advanced Computing) and IISc Bengaluru (Indian Institute of Science).

Q3. When was the National Supercomputing Mission launched?

Ans. The NSM was launched in 2015.

Source: **PIB**

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