सत्यमेव जयते

Government of India
Ministry of Electronics and information Technology
National Informatics Centre, Himachal Pradesh, Shimla
Technical Presentations by NIC HP Officials: 04-January-2025

The NIC Technical Talk session held on **04 January 2025** followed its standard format insightful presentations. The session featured ten-minute technical presentations by three participants, either from the State Center or districts. The session concluded with a five-minute highlighting the technical news.

The details of the presenters, are as follows:

Sr.No.	Name	Designation	Topic	Rating (5.0)
1.	Sh. Brijender Kumar Dogra	Scientist-E	Edge Computing	4.3
2.	Sh. Mohan Rakesh Aggarwal	Scientist-D	Cyber Security	4.4
3.	Sh. Chander Shekher	Scientific/Technical Assistant-A	Data Lake	4.7
4.	Sh. Sanjay Sharma	Scientist-F	Technical News	4.4

In addition to the presentations, a quiz competition was organized related to technical content delivered. A total of 30 officials participated in the quiz, which was conducted on the Hindi Bodh Mobile App, developed by NIC Himachal Pradesh. The quiz featured 12 multiple-choice questions, all based on the technical presentations delivered by NIC officials.

The result of the quiz competition are as follows:

Position	Participant Name	Designation	Location
1st	Sh. Sandeep Kumar	Sr. Director (IT)	NIC at HP Vidhan Sabha
2nd	Sh. Sanjay Sharma	Sr. Director (IT)	NIC HP State Centre
3rd	Sh. Chander Shekher	Scientific Technical Assistant	NIC HP District Centre, Kinnaur

NIC HP officials attending the technical session

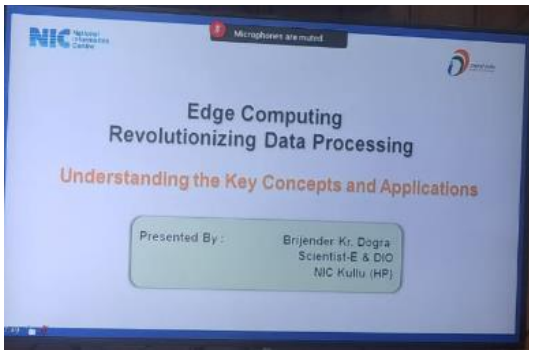
The following officials were present in the technical talk on 04-01-2025

Sr. No	Name of official	Designation	Centre (State/District)
1.	Sh. Ajay Singh Chahal	SIO-Cum-Scientist-G	NIC State Centre
2.	Sh. Lalit Kapoor	Scientist-F	NIC State Centre
3.	Sh Bhupinder Pathak	Scientist-F	NIC State Centre
4.	Sh Sandeep Sood	Scientist-F	NIC State Centre
5.	Sh. Sanjay Sharma	Scientist-F	NIC State Centre
6.	Sh. Vijay Kumar Gupta	Scientist-F	NIC State Centre
7.	Sh Shailender Kaushal	Scientist-F	NIC State Centre
8.	Sh Akhilesh Bharti	Scientist-F	NIC State Centre
9.	Sh. Sanjay Kumar	Scientist-E	NIC State Centre
10.	Sh Ashish Sharma	Scientist D	NIC State Centre
11.	Sh. Mukesh Kumar	Scientist D	NIC State Centre

12.	Sh. Prithvi Raj	Scientist C	NIC State Centre
13.	Smt. Pooja Mann	Scientific/Technical Assistant-A	NIC State Centre
14.	Sh Sanjay Kumar	Scientist-F	NIC HP CGO Complex
15.	Sh. Vinod Kumar Garg	Scientist-F	NIC HP CGO Complex
16.	Sh. Mangal Singh	Scientist-D	NIC HP CGO Complex
17.	Sh Sandeep Kumar	Scientist-F	NIC HP Vidhan Sabha
18.	Sh. Rakesh Kumar	Scientist-D	NIC District Centre, Bilaspur
19.	Sh. Anurag Gupta	Scientist-E	NIC District Centre, Hamirpur
20.	Sh. Akshay Mehta	Scientist-E	NIC District Centre, Kangra
21.	Sh Brijender Dogra	Scientist-E	NIC District Centre, Kullu
22.	Sh. Balwan Singh	Scientist-D	NIC District Centre, Kinnaur
23.	Sh. Chander Shekhar	Scientific/Technical Assistant-A	NIC District Centre, Kinnaur
24.	Sh Jagdeep	Scientific/Technical Assistant-A	NIC District Centre, Lahaul and Spiti
25.	Sh. Ashwani Kumar	Scientist-E	NIC District Centre, Mandi
26.	Sh. Deepak Kumar	Scientist-C	NIC District Centre, Shimla
27.	Sh. Vijay Kumar	Scientist-E	NIC District Centre, Sirmour
28.	Sh. Mohan Rakesh Aggarwal	Scientist-D	NIC District Centre, Sirmour
29.	Sh. Swetansh Shatak	Scientific/Technical Assistant-B	NIC District Centre, Solan
30.	Sh. Bhupinder Singh	Scientist-D	NIC District Centre, Una

Overview of Technical Presentations

Edge Computing:



Sh. Brijender Kr. Dogra presenting on Edge Computing

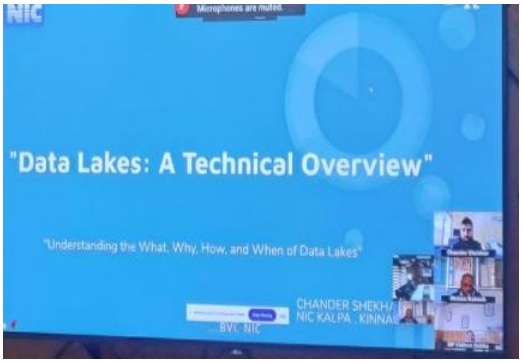
Sh Brijender Kr. Dogra delivered the presentation on Edge Computing. Edge computing is a distributed computing paradigm that processes data closer to its source, such as IoT devices or local servers, rather than relying solely on centralized cloud systems. This approach reduces latency, enhances performance, and manages the growing data from IoT devices efficiently. Key features include localized data processing, low latency, reduced bandwidth usage, and scalability. It enables faster decision-making, improved data security, and reliability, with applications spanning IoT, autonomous vehicles, industrial IoT, healthcare, and smart cities. Despite its benefits, challenges such as security risks, device management complexity, and limited computational capacity need to be addressed for its effective implementation.

Cyber Security Frameworks and Threats:

Sh. Mohan Rakesh Aggrawal presenting on Cybersecurity Framework and Threats

Sh. Mohan Rakesh Aggrawal delivered a presentation on Cybersecurity Framework and Threats. India has faced a significant rise in cyber threats, reporting 370 million malware attacks and over one million ransomware incidents, with major breaches affecting BSNL, Boat India, and Polycab India. The healthcare sector is especially vulnerable due to outdated technology, limited funding, and the critical nature of its operations. To combat these risks, a structured cybersecurity framework—focusing on governance, threat identification, protection measures, real-time detection, incident response, and recovery—offers a comprehensive strategy. As digital adoption increases, a vigilant and proactive approach to cybersecurity is essential to mitigate risks and build a resilient defense system.

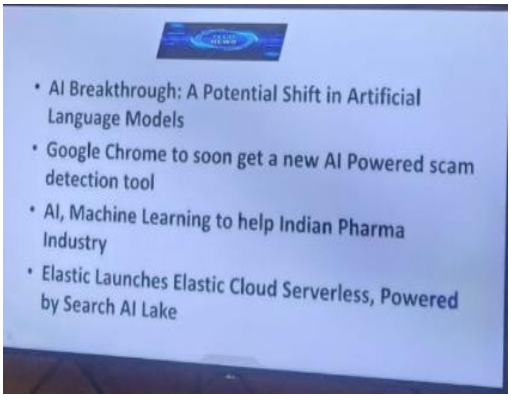
Data Lake:



Sh. Chander Shekher presenting on Data Lake

Sh. Chander Shekher delivered a presentation on Data Lake. A data lake is a centralized repository designed to store structured, semi-structured, and unstructured data at any scale, characterized by schema-on-read, raw data storage, and scalability. Its architecture typically includes components like data ingestion (batch and stream), scalable storage (e.g., Hadoop, AWS S3), processing frameworks (e.g., Spark, Presto), and analytics layers (e.g., BI tools, AI/ML tools). Prominent platforms like AWS, Azure, and Google Cloud offer data lake services. Data lakes are ideal for diverse data storage, advanced analytics, and hybrid uses, complementing data warehouses with cost-effective scalability. However, challenges such as ensuring data security, quality, governance, and avoiding a "data swamp" must be addressed. In conclusion, data lakes are powerful tools for organizations aiming to unlock insights from massive data volumes, provided their implementation is well-managed.

Technical News:



Sh. Sanjay Sharma, Scientist-F presenting the Technical News

Sh. Sanjay Sharma presented the technical news. The main news covered:

OpenAI GPT-5 Release: Advanced natural language understanding and reasoning redefines generative AI.
AI-Powered Scam Detection: Google Chrome develops AI tool to enhance user security.
Infosys and Google Cloud Collaboration: Launch of Generative AI Centre of Excellence for enterprise innovation.
AI in Indian Pharma: Accelerated drug discovery and diagnostics with government-backed support.
Elastic Cloud Serverless Launch: Real-time, scalable, cost-efficient search on AWS, Azure, and Google Cloud.
Digital Education Initiatives: 900 Kendriya Vidyalaya websites launched to enhance accessibility