

**Government of India**  
**Ministry of Electronics and information Technology**  
**National Informatics Centre, Himachal Pradesh, Shimla**  
**Technical Presentations by NIC HP Officials: 29-October-2024**

As part of an ongoing series of 10-minute technical talks presented by NIC officials of their choice on a regular basis, the recent technical session held on 29-October-2024.

The details of the presenters, along with their topics are as follows:

S.No.	Name	Designation	Topic	Rating (5.0)
1.	Smt. Vandana Sankhayan	Scientist-C	Effective Meetings	4.8
2.	Sh. Jagdeep	Scientific/Technical Assistant-A	Cloud Computing	4.2
3.	Sh. Chander Shekhar	Scientific/Technical Assistant-A	Encryption	4.5
4.	Sh. Sanjay Sharma	Scientist-F	Group Presentation	4.5
5.	Sh. Ashish Sharma	Scientist-D	Technical News	4.5

### Effective Meetings



*Smt. Vandana Sankhayan giving the presentation on Effective Meeting*

Smt. Vandana Sankhayan has delivered a wonderful presentation on Conducting effective meetings which requires clear objectives, proper preparation, and active participation. Engaging participants through open-ended questions and summarizing action items ensures meetings are productive, focused, and efficient.

- Effective meetings involve clarity of purpose, agenda preparation, and appropriate participant selection.
- Encouraging participation and active listening creates a collaborative atmosphere and fosters engagement.
- Summarizing key takeaways and assigning responsibilities at the end enhances accountability and productivity.

## Encryption

Sh. Chander Shekhar delivered a presentation on Encryption. where Data encryption is essential for protecting sensitive information from unauthorized access, ensuring that data remains secure and unaltered. It involves encoding data to make it unreadable to anyone who does not have the proper authorization.



*Sh. Chander Shekhar giving the presentation on Encryption*

### Types of Encryption

There are two primary types of encryption algorithms: symmetric and asymmetric.

Symmetric encryption uses a shared key for both encryption and decryption. Common algorithms include:

- AES (Advanced Encryption Standard): Offers key sizes of 128, 192, and 256 bits, widely used for securing sensitive files and communications.
- DES (Data Encryption Standard): An older standard with a 56-bit key size, now considered insecure.
- 3DES (Triple DES): Uses a 168-bit key and is still in use for legacy applications.

- Blowfish: A flexible algorithm with variable key sizes, used for file encryption and password hashing.
- RC4: A stream cipher that is now deemed insecure.

#### Pros and Cons of Symmetric Encryption:

- Pros: Fast, efficient, and simple with strong security.
- Cons: Vulnerable to key theft and requires careful key management.

#### Asymmetric Encryption

Asymmetric encryption utilizes a pair of keys: a public key for encryption and a private key for decryption. It is generally slower than symmetric encryption but is crucial for secure key distribution and authentication. Common algorithms include:

- ECC (Elliptic Curve Cryptography): Provides strong security with smaller key sizes.
- DSA (Digital Signature Algorithm): Mainly used for creating digital signatures.

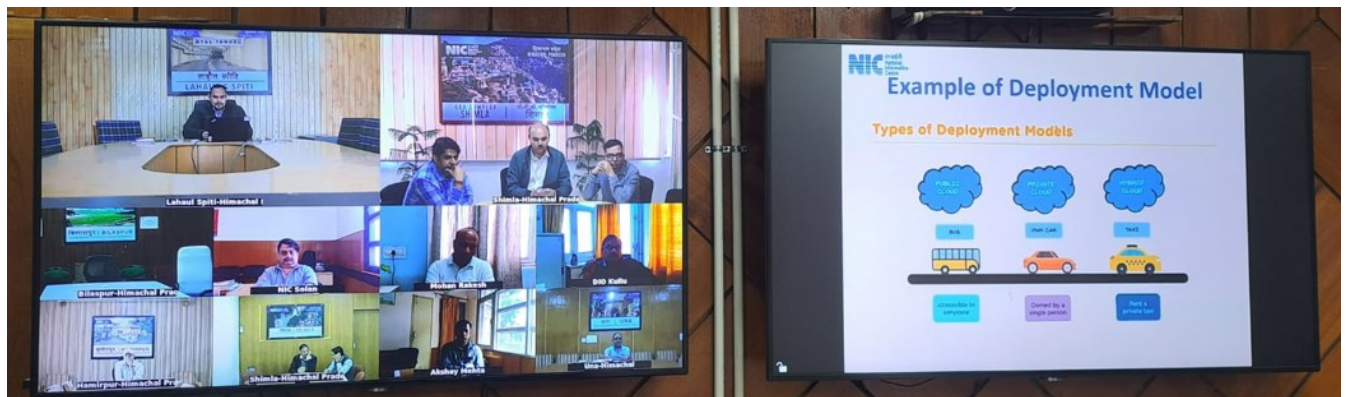
#### Pros and Cons of Asymmetric Encryption:

- Pros: Secure key distribution and authentication.
- Cons: Slower and more resource-intensive, requiring a Public Key Infrastructure (PKI).

Data encryption should be employed in various scenarios to protect sensitive information. However, it is important to note that no encryption method is 100% safe. The estimated breakage times for various algorithms indicate that while AES-128 and AES-256 are practically infeasible to break with current technology, older methods like DES can be compromised in minutes to hours.

Developing strong public speaking skills enhances communication and helps in professional and personal settings. Ultimately, effective public speaking is not merely about conveying information; it is about inspiring, motivating, and connecting with the audience.

## Cloud Computing



*Sh. Jagdeep giving presentation on Cloud Computing*

Sh. Jagdeep delivered a presentation on Cloud Computing which is a technology that allows users to store, manage, and process data on remote servers, accessed via the internet, rather than on a local computer or server. It offers several advantages:

1. Scalability: Cloud services can be scaled up or down based on demand, making it ideal for businesses with fluctuating workloads.



2. **Cost Efficiency:** Users pay only for the resources they use, reducing the need for upfront investment in hardware and infrastructure.
3. **Accessibility:** Data and applications can be accessed from anywhere with an internet connection, promoting remote work and collaboration.
4. **Reliability and Security:** Cloud providers often offer high levels of data security, backup, and recovery, making it easier to protect data and maintain uptime.

**Cloud computing services are often categorized into three main types:**

- **IaaS (Infrastructure as a Service):** Provides virtualized computing resources over the internet, such as storage and servers.
- **PaaS (Platform as a Service):** Offers a platform allowing customers to develop, run, and manage applications.
- **SaaS (Software as a Service):** Delivers software applications over the internet on a subscription basis.

Examples of cloud computing providers include Amazon Web Services (AWS), Microsoft Azure, and Google Cloud Platform.

## Technical News



**Sh. Ashish Sharma giving the Technical News**

Sh. Ashish Sharma presented the fortnightly technical news. The main news covered:

- *Elon Musk launched the Tesla Cybercab, a self-driving robotaxi marking a significant transportation innovation.*
- *Meta reintroduced facial recognition technology aimed at protecting celebrities from scams and online fraud.*

- *India advances in tech with Infosys establishing an AI lab in London and new AI Centers.*
- *Maharashtra is set to establish cutting-edge Centers of Excellence in AI, Robotics, IoT*
- *Punjab State Election Commission has launched the Local Bodies Poll Activity Monitoring System*
- *DARPG organized a workshop on CyberSecurity on 7th October in Collaboration with NIC*

## Group Presentation



*Sh. Sanjay Sharma, Scientist-F giving the Group presentation*

Sh. Sanjay Sharma, delivered a group presentation updating about the projects being looked after by him and his group members. He provided details on the ongoing projects. He elaborated current activities managed by his groups and their future plans.

## Quiz Competition on Mobile App

A quiz competition was also organized based on the technical presentations delivered by NIC Officials. A total of 30 officials participated in the quiz competition which was held on the Hindi Bodh Mobile App developed by NIC HP. 15 multiple-choice questions based on the technical content delivered by the officers were asked in the quiz competition.



## The result of the quiz competition was as follows:

Position	Participant Name	Designation	Place of Posting
1 <sup>st</sup>	Sh. Sandeep Kumar	Scientist-F	NIC HP Vidhan Sabha
2 <sup>nd</sup>	Sh. Sarvjeet Kumar	Scientist-C	NIC HP State Centre
3 <sup>rd</sup>	Sh. Ajay Singh Chahal	SIO-Cum-Scientist-G	NIC HP State Centre



*NIC HP officials attending the technical session*

As agreed that the following NIC officials will present a technical talk on the topic of their choice during the upcoming meeting scheduled for Saturday, 16-November-2024.

S.No.	Participant Name	Designation	Place of Posting
1.	Sh. Rakesh Kumar	Scientist-D	NIC Distt Centre Bilaspur
2.	Sh. Balwan Singh	Scientist-D	NIC Distt Centre Kinnaur
3.	Sh. Jitender Sharma	Scientist-B	NIC HP High Court

Additionally, Sh. Shailender Kaushal from NIC HP State Centre will deliver a Projects based presentation and 5-minute technical news update will be given by Sh. Sanjay Kumar, Scientist-E on the day of the Technical Talk Session.

The following officials were present in the technical talk on 29-10-2024:

<b>NIC HP State Centre</b>		
1	Sh. Ajay Singh Chahal	SIO-Cum-Scientist-G
2	Sh. Lalit Kapoor	Scientist-F
3	Sh. Bhupinder Pathak	Scientist-F
4	Sh. Sanjay Kumar	Scientist-F
5	Sh. Pankaj Gupta	Scientist-F
6	Sh. Sanjay Sharma	Scientist-F
7	Sh. Vijay Kumar Gupta	Scientist-F
8	Sh. Vimal Kumar Sharma	Scientist-F
9	Sh. Shailender Kaushal	Scientist-F
10	Sh. Vinod Kumar Garg	Scientist-F
11	Sh. Sandeep Kumar	Scientist-F
12	Sh. Daljeet Singh Rana	Scientist-E
13	Sh. Sanjay Thakur	Scientist-E
14	Sh. Ashish Sharma	Scientist-D
15	Sh. Mangal Singh	Scientist-D
16	Sh. Sarvjeet Kumar	Scientist-C
17	Smt. Vandana Sankhayan	Scientist-C
18	Sh. Mukesh Kumar	Scientist-D
19	Sh. Prithvi Raj	Scientist-C
20	Sh. Jitender Sharma	Scientific-B
21	Smt. Pooja Mann	Scientific/Technical Assistant-A
22	Sh. Chander Shekhar	Scientific/Technical Assistant-A
<b>District Centre Hamirpur</b>		
23	Sh. Anurag Gupta	Scientist-E
<b>District Centre Kangra</b>		
24	Sh. Akshay Mehta	Scientist-E
<b>District Centre Kinnaur</b>		
25	Sh. Balwan Singh	Scientist-D
<b>District Centre Kullu</b>		
26	Sh. Brijender Kumar Dogra	Scientist-E
<b>District Centre Lahual &amp; Spiti</b>		
27	Sh. Jagdeep	Scientific/Technical Assistant-A
<b>District Centre Shimla</b>		
28	Sh. Deepak Kumar	Scientist-C

<b>District Centre Sirmour</b>		
29	Sh. Mohan Rakesh Aggarwal	Scientist-D
<b>District Centre Solan</b>		
30	Sh. Sanjeev Kumar	Scientist-C
<b>District Centre Una</b>		
31	Sh. Bhupinder Singh	Scientist-D