



National Blockchain Framework Launched

[Source: PIB](#)

Why in News?

Recently, the **Ministry of Electronics and Information Technology (MeitY)** launched the [National Blockchain Framework \(NBF\)](#).

- **Vishvasya-Blockchain Technology Stack, National Blockchain Framework Lite (NBFLite), Praamaanik** and [National Blockchain Portal](#) were also launched.

What is the National Blockchain Framework?

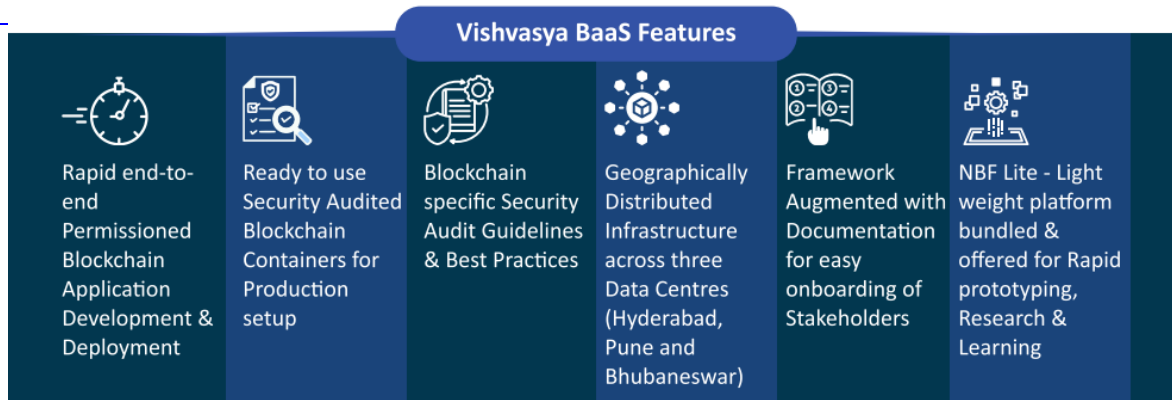
- **About NBF:** It is an online platform that aims to secure **digital governance** with blockchain technology, promising transparency and trust in public service.
- **Other Related Launches:**
 - **Vishvasya-Blockchain Technology Stack:** It offers [Blockchain-as-a-Service](#) with a **geographically distributed infrastructure** designed to support various Blockchain-based applications.
 - **NBFLite (Lightweight Blockchain Platform):** It is a [Blockchain sandbox platform](#) that is designed specifically for startups and academia to enable **rapid prototyping, research, and capacity building** in blockchain applications.
 - **Praamaanik:** It is an innovative blockchain-enabled solution for verifying **mobile app origin**.
 - **National Blockchain Portal:** It was launched to facilitate access and **integration** with various blockchain resources.
- **Benefits of NBF:**
 - **Boosting Security and Transparency:** The NBF aims to enhance **security, trust, and transparency** in delivering citizen-centric services. It aligns with the Government of India's efforts to provide trusted digital service delivery.
 - **Transforming Governance with Blockchain:** MeitY called for scaling the NBF's applications across various states and departments and for exploring **new applications and platforms** to be integrated into the framework.
 - **Addressing Research and Development Challenges:** MeitY explained that the NBF is designed to tackle **several challenges**, including:
 - The need for skilled manpower to build blockchain-based applications.
 - Research challenges related to **security, interoperability, and performance**.

What are the Components of the Vishvasya-Blockchain Technology Stack?

- **Distributed Infrastructure:** It is hosted on geographically distributed [NIC](#) Data Centers (**Bhubaneswar, Pune, Hyderabad**).
- **Core Framework Functionality:** It provides fundamental blockchain operations and services.
- **Smart Contracts & API Gateway:** It facilitates the creation and management of [smart contracts](#) and application interfaces.
- **Security, Privacy & Interoperability:** It focuses on maintaining **data integrity** and secure communication across platforms.

- **Applications Development Offering BaaS:** It supports the development and deployment of blockchain applications with the **BaaS model**.

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What is Blockchain as a Service (BaaS)?

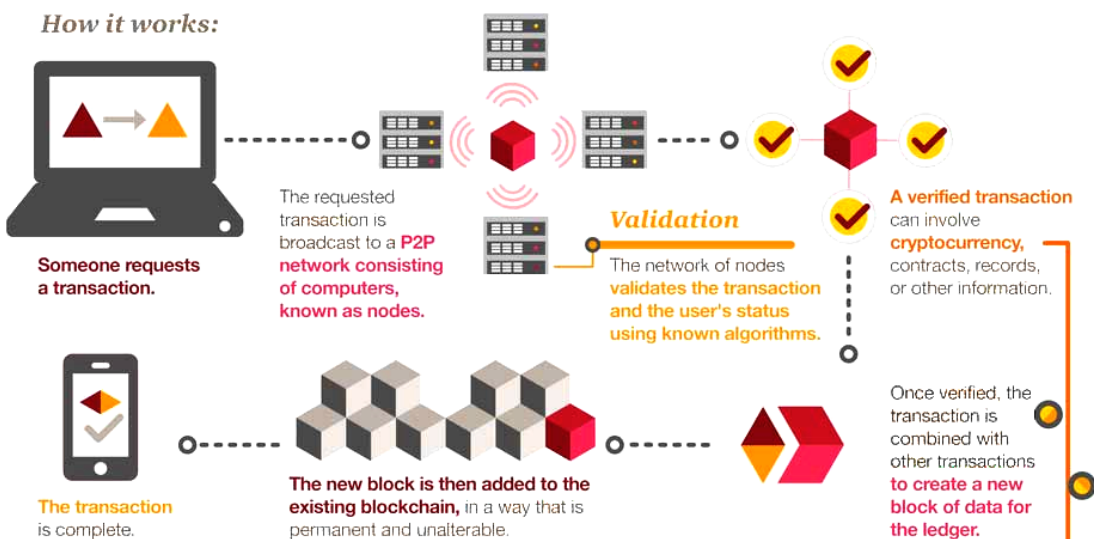
- **About BaaS:** Blockchain-as-a-service (BaaS) refers to **third-party cloud-based infrastructure** and management for companies **building and operating blockchain apps**.
- **Benefits of BaaS:**
 - **Simplification of Task:** Companies can use the **BaaS platform** to swiftly create and **deploy blockchain apps** without managing complex infrastructure.
 - **Cost Saving:** It enables **cost-effective and efficient blockchain use**, fostering **secure and transparent innovation** and service improvement.
 - **Operational Agility and Scalability:** BaaS ensures blockchain infrastructure is flexible and scalable to meet evolving application and user needs.

A look at *blockchain technology*

What is it?

The **blockchain** is a decentralized ledger of all transactions across a peer-to-peer network. Using this technology, participants can confirm transactions without the need for a central certifying authority. Potential applications include fund transfers, settling trades, voting, and many other uses.

How it works:



Read more: [Open Source Software Platform](#)

UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims

Q. With reference to “Blockchain Technology”, consider the following statements: (2020)

1. It is a public ledger that everyone can inspect, but which no single user controls.
2. The structure and design of blockchain is such that all the data in it are about cryptocurrency only.
3. Applications that depend on basic features of blockchain can be developed without anybody’s permission.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 1 and 2 only
- (c) 2 only
- (d) 1 and 3 only

Ans: (d)

Q. In India, the term “Public Key Infrastructure” is used in the context of (2020)

- (a) Digital security infrastructure
- (b) Food security infrastructure
- (c) Health care and education infrastructure
- (d) Telecommunication and transportation infrastructure

Ans: (a)

Q. With reference to ‘Bitcoins’, sometimes seen in the news which of the following statements is/are correct? (2016)

1. Bitcoins are tracked by the Central Banks of the countries.
2. Anyone with a Bitcoin address can send and receive Bitcoins from anyone else with a Bitcoin address.
3. Online payments can be sent without either side knowing the identity of the other.

Select the correct answer using the code given below:

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 3 only
- (d) 1, 2 and 3

Ans: (b)

