

Prelim Bits 24-02-2022 | UPSC Daily Current Affairs

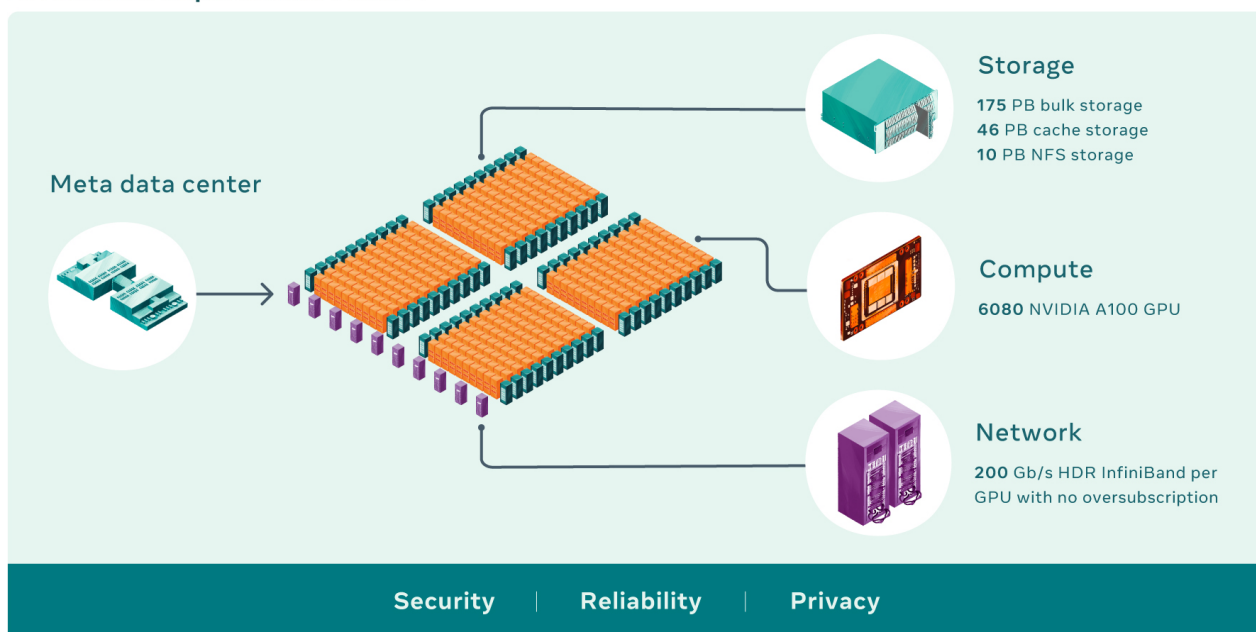
AI Research SuperCluster

Facebook-parent Meta is building an AI supercomputer, the AI Research SuperCluster (RSC).

AI supercomputers are built by combining multiple graphic processing units (GPUs) into compute nodes, which are then connected by a high-performance network fabric to allow fast communication between those GPUs.

- RSC is a powerful supercomputer that can perform tasks like translating text between languages and help identify potentially harmful content on Meta's platform.
- It can run computer vision workflows up to 20 times faster.
- It can train large-scale Natural Language Processing (NLP) models three times faster.
- It can help its researchers build better AI models that can work across different languages, seamlessly analyse text, images and video together.
- It also power real-time voice translations to large groups of people speaking different languages so that they can collaborate on a research project, and develop new augmented reality tools.
- With the pandemic, the demand for data centres of AI and ML among Government and educational entities is witnessing exponential growth which in turn is boosting the demand for supercomputers.
- RSC can keep people safe in the metaverse through its training models that can detect harmful content faster than earlier systems.

AI Research SuperCluster Phase 1



Reference

1. <https://www.thehindu.com/sci-tech/technology/metas-ai-supercomputer/article65073934.ece?homepage=true>
2. <https://ai.facebook.com/blog/ai-rsc/>

Security Printing and Minting Corporation of India

The Delhi headquarters of the Security Printing and Minting Corporation of India has been declared a "prohibited place" under the British-era Official Secrets Act (OSA) by the Ministry of Home Affairs.

- It is a wholly owned Schedule 'A' Miniratna Category-I company of Government of India, incorporated in 2006.
- It comes under the administrative control of Department of Economic Affairs, Ministry of Finance.
- It is India's only currency and bank notes manufacturer, which printed the new series of notes of denomination ₹2,000 and ₹500 in 2016.
- It is also engaged in the production of security paper, non-judicial stamp papers, postal stamps and stationery, passport and visa stickers, security inks, circulation and commemorative coins among others.

Reference

1. <https://www.thehindu.com/news/national/hq-of-bank-note-manufacturer-declared-prohibited-place/article65076982.ece?homepage=true>
2. <https://www.spmcil.com/Interface/AboutUsspmcil.aspx?menue=1>

Digital University

The Ministry of Education and various stakeholders are working to set up the 'digital university', announced in the 2022 Union Budget.

- Digital University can fill the gaps in faculty development, enrollment in SEDGs, employability enhancing skills, quality learning material in regional languages, formal & non-formal (Recognizing Prior Learning) etc.
- The government's plan is to get various universities to come together and form a digital university, which can then enrol students as a single unit.
- This University will offer the whole gamut of qualifications - certificate programmes, diplomas, degrees.
- There won't be any limit on the number of seats, with anyone who has passed class 12 able to enrol.
- University Grants Commission will function as an enabler and not as a watchdog with accountability provisions in reimagining of futuristic teaching learning process w.r.t. Digital education.
- **Related Links** - [One Class-One Channel & PM eVIDYA Initiative](#)

Reference

1. <https://pib.gov.in/PressReleasePage.aspx?PRID=1800295>
2. <https://theprint.in/india/education/what-is-a-digital-university-how-modi-govt-plans-to-set-it-up-and-what-are-the-challenges/841195/>

India-UAE CEPA

India and the UAE have signed a Comprehensive Economic Partnership Agreement (CEPA) with the aim of increasing bilateral merchandise trade to \$100 billion by 2030.

- The India-UAE CEPA is expected to come into effect in the first week of May 2022.
- **Significance** - India-UAE CEPA marks the first trade agreement India has made with a major trading partner in over a decade.
- The last major FTA India signed was with Japan in 2011.
- This CEPA is the first in series of FTAs that India is pursuing to boost exports sharply to 1 trillion dollars each in merchandise and services by 2030.
- Under the agreement, the UAE will **eliminate duties on 80% of its tariff lines** that account for 90% of India's exports to the UAE by value.
- **Zero duty access** for Indian products to the UAE is set to expand over 5-10 years to 97% of UAE tariff lines corresponding to 99% of India's exports by value.
- This CEPA marked the first time India had included a **chapter on digital trade** in an FTA.
- Key domestic sectors that are set to benefit include, gems and jewellery, textiles, leather, footwear, sports goods, engineering goods, automobiles and pharmaceuticals.
- **Exclusion** - India has excluded certain goods from the agreement through a "sensitive list" of products amounting to 10% of tariff lines that are excluded completely from the agreement.
- Dairy, fruits, vegetables, cereals, tea, coffee, sugar, food preparations, tobacco, toys, plastics, scrap of aluminium, copper, etc are excluded.
- Certain other areas where the government is incentivising manufacturing through PLI schemes have also been excluded.
- **Prevent misuse** - This agreement contains strict rules of origin to prevent other countries from using the agreement to reroute the government's exports through UAE to benefit from lower tariffs.
- Most products require a value addition of 40% in the exporting country under this agreement to qualify for lower tariffs under the agreement.
- Aluminium and auto components would require value addition of 45% to qualify as having originating in India or UAE under the agreement.
- This agreement also requires that any raw agricultural products and oilseeds be "wholly obtained" or "produced entirely in the exporting country".
- This will ensure that no third party products in these categories can be exported under the agreement.
- It also has safeguard mechanisms that would be triggered if there was a significant surge in imports of a specific product in either country.

Reference

<https://indianexpress.com/article/explained/india-uae-trade-agreement-explained-7784932/>

Shadow Brokers

- The Shadow Brokers are a group of hackers linked to the 2017 leak of hacked intel belonging to the US National Security Agency (NSA).
- They are, in turn, implicated in that year's WannaCry global ransomware attack that used EternalBlue, an NSA cyber weapon.
- The Shadow Brokers have said they are committed to taking down the NSA, in particular the Equation Group.
- [The Equation Group is an offensive cyberwarfare unit of the NSA Computer Network

Operations (CNO) unit, formerly called the Office of Tailored Access Operations (TAO).]

- The Shadow Brokers appeared around the time of the 2016 Democratic National Committee (DNC), the US presidential candidate selection event held by the organization of the same name.
- **Related Links** - [Petya Ransomware Attack](#)

Reference

1. <https://www.thehindu.com/news/international/us-group-hacked-top-research-institutes-in-india-russia-and-china-says-beijing-cyber-firm/article65079559.ece?homepage=true>
2. <https://www.theatlantic.com/technology/archive/2017/05/shadow-brokers/527778/>
3. <https://www.hypr.com/shadow-brokers/>

