

GOVERNMENT OF INDIA
MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY
RAJYA SABHA
UNSTARRED DIARY NO. 1194
TO BE ANSWERED ON: 11.02.2022

**PROMOTION OF CLOUD COMPUTING, MACHINE LEARNING
AND ARTIFICIAL INTELLIGENCE**

1194. SHRI M. MOHAMED ABDULLA:

Will the Minister of ELECTRONICS AND INFORMATION TECHNOLOGY be pleased to state:

- (a) whether the Central Government has any special programmes or schemes to promote cloud computing, machine learning and Artificial Intelligence in the country, the details thereof;
- (b) if not, the reasons therefor.
- (c) the effective steps taken by Government to enhance and facilitate the use of cloud computing in Government services, the details thereof; and
- (d) the amount of funds allocated, utilized and disbursed from the year 2017 for the same?

ANSWER

MINISTER OF STATE FOR ELECTRONICS AND INFORMATION TECHNOLOGY
(SHRI RAJEEV CHANDRASEKHAR)

(a): Yes, Sir. Emerging Technologies like Cloud computing, machine learning and Artificial Intelligence are important objectives of the Government's Digital India Programme. Government of India has taken several administrative and policy steps to promote the investments and innovations in Cloud computing, machine learning and Artificial Intelligence. Following are the details:

- i. Government of India (GOI) is providing the Cloud services as part of the Digital Government under "GI Cloud" named as "MeghRaj". The focus of this initiative is to accelerate delivery of all Cloud based e-services to various Ministries/Departments. GOI has also empanelled the Cloud service offerings of private Cloud Service Providers (CSPs) to meet the Cloud requirements of the end user Departments. The details of the empanelled CSPs is available at <https://www.meity.gov.in/content/gi-cloud-meghraj>
- ii. Ministry of Electronics & IT (MeitY)& NASSCOM has jointly initiated a programme titled **FutureSkills PRIME** (www.futureskillsprime.in), a B2C framework for re-skilling/ up-skilling of IT professionals in 10 Emerging area including Cloud Computing and Artificial Intelligence. Under this programme so far, 5.63 Lakh candidates have signed-up on the FutureSkills PRIME Portal, out of which 1,08,436 candidates have completed their course. In addition, 524 Trainers and 4074 Government Officials have been trained on these technologies by NIELIT/C-DAC Resource Centres, and around

- 73,206 unique learners have collectively earned 4,64,951 'badges' in recognition of having completed bite-sized digital fluency content.
- iii. Government has launched '**National AI Portal**' (<https://indiaai.gov.in/>) which is a repository of Artificial Intelligence (AI) based initiatives in the country at a single place. As on date, there are 966 national and international articles, 623 news, 194 videos, 84 research reports, 279 startups, 107 Government initiatives listed at National AI Portal.
 - iv. To foster innovation through research, government has created several '**Centres of Excellence**' on various Emerging Technologies including Artificial Intelligence. These centres connect various entities such as startups, enterprises, venture capitalists, government and academia to look into problem statements and develop innovative solutions.
 - v. **National Programme on Responsible Use of AI for Youth:** With the objective to empower the youth to become AI ready and help reduce the skill gap, government along with Industry partner has started this initiative to promote AI awareness among Government school going children. In Phase I, 50,666 students and 2536 teachers from 2252 schools from 35 States and UTs attended orientation sessions on AI. In Phase II, 100 teams have been short listed and have undergone extensive mentoring by AI experts. In Phase-III, Top 20 students have demonstrated their solutions in the national conference.
 - vi. Department of Science & Technology is implementing the National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS) to promote R&D, Human Resource Development (HRD), Technology Development, Entrepreneurship Development, International Collaboration etc. As part of the Mission implementation, 25 Technology Innovation Hubs (TIHs) have been established in reputed institutes across the country in advanced technologies including Machine Learning and Artificial Intelligence.
- (b): Does not arise.
- (c): MeitY has taken several initiatives to enhance and facilitate the use of Cloud computing as mentioned below:
- i. National Informatics Centre had launched its National Cloud services in the year 2014 and number of e-Governance applications and Websites are hosted on this Cloud.
 - ii. MeitY has empanelled the Cloud service offerings of private Cloud Service providers. So far eighteen Cloud Service Providers have been empanelled to meet the Cloud requirements of the Government departments.
 - iii. A Cloud Management Office (CMO) has been set up in the Ministry in 2018 which has published several guidelines to facilitate the adoption of Cloud services by Ministries/Departments. These guidelines are related to best practices on Cloud security, disaster recovery, procurement, Cloud migration, GI Cloud reference architecture etc. that are available at <https://www.meity.gov.in/content/gi-cloud-meghraj>
 - iv. For the ease of procurement of cloud services, by Government Departments, the Cloud services offerings of the Cloud Service Providers have been made available on Government e-Market Place (GeM).

(d): The details of the amount of funds allocated, utilized and disbursed is mentioned below:

Year	National Informatics Centre (NIC)		Cloud Management Office (CMO)	
	Fund Allocated (in Cr.)	Expenditure Incurred (in Cr.)	Fund Allocated (in Cr.)	Expenditure Incurred (in Cr.)
2017-18	-	-	-	-
2018-19	40.81	40.81	0.91	0.91
2019-20	57.69	57.69	2.24	2.24
2020-21	138.50	138.50	1.25	1.25
2021-22	122.00	74.69 (Uptill 07.02.2022)	1.59	0.84 (Uptill 07.02.2022)
