Informatics

AN e-GOVERNANCE PUBLICATION FROM NATIONAL INFORMATICS CENTRE

Digital India
Power To Empower
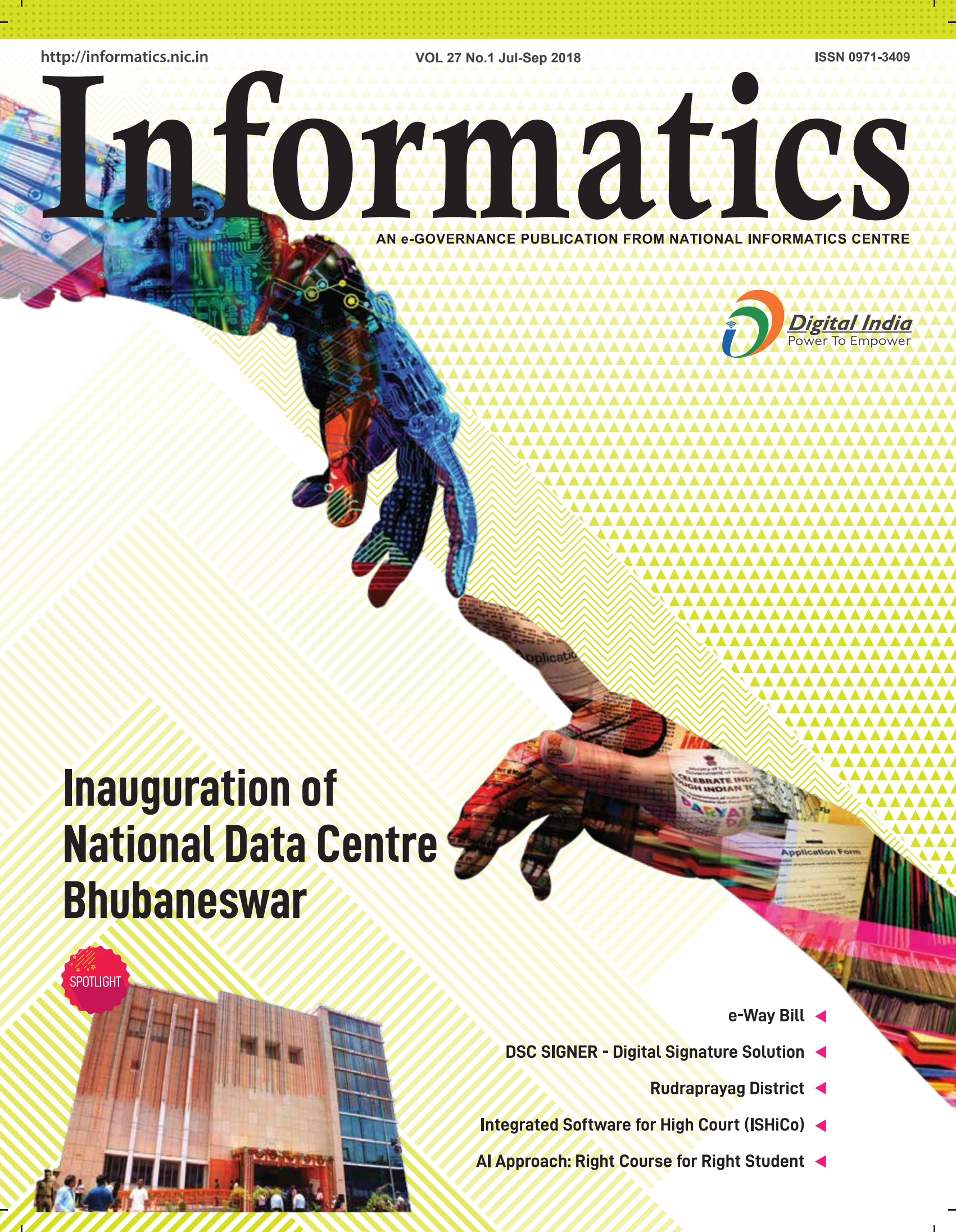
Inauguration of National Data Centre Bhubaneswar

SPOTLIGHT

EDITORIAL

You can improve something only if you can measure it. Data is information that helps with measuring various aspects of a situation, and thus attempting improvement. Data is therefore of prime importance when trying to address the development needs of a nation. Ensuring that data remains protected and available over communication networks becomes core to the purpose of an organization such as NIC that is tasked with supporting and strengthening the government in use of information technology for the nation building process. It is with such intent that NIC launched its fourth data centre in Bhubaneswar, to ensure secure storage and uninterrupted availability of data. The new data centre, thus would strive to facilitate and strengthen eGovernance efforts in the country, in a seamless manner.

Inauguration of the new cloud-enabled National Data Centre at Bhubaneswar is covered in this issue's *Spotlight* section. The section also features the launch of Tripura Grievance Portal, 4th International Day of Yoga, Regional Workshop on PDS computerization & Reforms and X-International IT forum with BRICS & SCO countries. The Rudraprayag of Uttrakhand is featured in the *District Informatics* section. Articles covered in the *e-Gov Products & Services* in this issue are Jharsewa, NIC-CERT, DSC Signer, e-Way Bill, The Union Public Service Commission (UPSC) and Integrated Software for High Court (ISHiCo). *Appscape* showcases 7 prominent and feature-rich Apps developed by NIC. The sections such as *Accolades*, *International e-Gov Update* and *In The News* are here for you as always.

We are continuously making efforts to improve the quality of *Informatics* and value your feedback and suggestions to make the magazine even better. Please do write to us.

Here's wishing you a fabulous season ahead.

Editor

Please propose or suggest interesting articles and features related to ICT, which you feel could delight our readers. Your contributions may be sent to:

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NIC's Fourth Cloud-enabled National Data Centre inaugurated at Bhubaneswar

The Data Centre has the latest of technologies to meet ICT needs of the government

Hon'ble Union Minister of Electronics & Information Technology and Law & Justice, Shri Ravi Shankar Prasad inaugurated a new state-of-the-art software-defined National Data Centre (NDC) at Bhubaneswar on 28th May 2018. The inaugural ceremony was held in the presence of Shri Dharmendra Pradhan, Hon'ble Union Minister of Petroleum & Natural Gas and Skill Development & Entrepreneurship, Shri Chandra Sarathi Behera, Hon'ble Minister of State (Independent Charge), Electronics & IT, Sports & Youth Services, Govt. of Odisha, Shri Ajay Sawhney, Secretary, Ministry of Electronics & IT and Smt. Neeta Verma, Director General, NIC.

NDC, Bhubaneswar has been conceptualised and established as per global standards to meet the increasing requirements for the hosting of mission critical applications, engaged for citizen service delivery in high availability and secure environment.

Speaking on the occasion, Shri Ravi Shankar Prasad stated that NIC is present in 700 Districts of India and it is the backbone of e-Governance and Digital India. The fourth NDC at Bhubaneswar after Delhi, Hyderabad and Pune will play an important role in the Digital India Programme envisaged by the Government. Emphasising the significance of the new NDC, Hon'ble Minister further said that in the IT ecosystem, Data Centre adds to the digital cloud of a state or location and raises its global profile. Hon'ble Minister appreciated the efforts of the District Informatics Officers (DIOs) in migrating all the district portals of Odisha to S3WaaS in Odia language.

Shri Dharmendra Pradhan appreciated the efforts of NIC in establishing the NDC at Bhubaneswar which will provide a platform for growth and use of Digital India in the state of Odisha. The new state-of-the-art cloud-enabled NDC, Bhubaneswar will offer 24x7 operations with secure hosting for e-Governance applications of the government and its departments. The unified and shared infrastructure has a built-up area of over 40,000 sq. ft., with 275 racks. This energy efficient setup is flexible enough to rapidly respond to Infrastructure requirements and also accommodate future technology enhancements. The NDC clearly demonstrates NIC's endeavour to provide latest technology solutions to meet the ICT needs of the government while maintaining the standards.

NDC is equipped with multi-level redundancy, containment based cooling, automated security access controls etc., for 24x7 operations. Some of the other

NDC, Bhubaneswar building decorated florally on the inaugural day

Shri Ravi Shankar Prasad, along with Shri Dharmendra Pradhan and Shri Chandra Sarathi Behera, inaugurating the National Data Centre

Dignitaries, along with other officers, on the occasion

Shri Ravi Shankar Prasad

Shri Dharmendra Pradhan

Shri Ajay Sawhney

Smt. Neeta Verma

Dignitaries releasing the State Project Profile brochure

Delegates and invited guests participating in the inaugural ceremony

security features include Multi-factor Authentication such as smart card swipe and biometric systems. NDC, Bhubaneshwar also provides world-class cold aisle containment based cooling solutions for higher IT power needs.

With the launch of NDC, Bhubaneswar, cloud service offerings of NIC would allow departments to provide infrastructure, add the computing capacity on demand and release them when not required. This elastic nature of the cloud allows departments not only to bring the solution to deployment quickly, but also to scale according to the demand of peak or low loads.

Since 2002, NIC has been setting up Data Centres at various places, which includes a National Data Centre in Delhi and Mini Data Centres in the state capitals, hosting applications of the Central and State governments. The MeghRaj initiative of the Ministry of Electronics and Information Technology envisages the use cloud computing to accelerate delivery of e-Governance services in the country while optimizing ICT spending of the government.

Other Launches

On the occasion, the Hon'ble Union Minister also launched the District Portals of all the the districts of Odisha. These portals are are accessible in English and Odia language, and has been developed in S3WaaS platform of NIC. Odisha began its record 45 days portal migration journey in April 2018, with Cuttack becoming the first district to migrate to S3WaaS, followed by Bhadrak District. Odisha is the first state in the Eastern region to implement and migrate all district portals to S3WaaS.

e-Saubhagya (Bijuli Bati Mobile App) to facilitate last mile connectivity and electricity connections to all remaining un-electrified households in the state of Odisha was also launched during the occasion. The data captured through this mobile application would be synchronised with the central portal of the Saubhagya Scheme. Various analytical reports and graphs are envisaged to be provided through its dashboard.

- With inputs from **MEDIA TEAM, NIC HQ**

Tripura Grievance Portal Launched

Hon'ble CM, Shri Biplab Kumar Deb inaugurated Portal during Civil Service Day 2018 celebration

Lighting of Lamp by Hon'ble Chief Minister, Shri Biplab Kumar Deb along with other dignitaries

The Tripura Grievance Portal, Centralized Public Grievance Redress and Monitoring System, URL: (*https://grievance.tripura.gov.in)* was inaugurated by Hon'ble Chief Minister of Tripura, Shri Biplab Kumar Deb, along with the Chief Secretary, Shri Sanjeev Ranjan, IAS during the Civil Service Day celebration on 27th April, 2018 at Agartala, Tripura. Secretaries of all Departments of the State Government were also present during the occasion.

Speaking on the occasion, Hon'ble Chief Minister emphasised the importance of the Civil Service Day wherein civil servants rededicate themselves to the cause of citizenry and renew their commitment to public service.

Dr. Rakesh Sarwal, IAS, Principal Secretary in GA (AR) Department, demonstrated the Online Grievance Lodging Mechanism, Departmental Monitoring of Pending Grievances and broad functionalities of the grievance portal. He appreciated the commitment demonstrated by NIC in getting the portal deployed expediently.

The CPGRAMS portal of DAR&PG has been customized for localized front-end, simplified registration, auto-forwarding of grievances, grievance status and feedback on disposed grievances. The portal's back-end is being leveraged along with physical/ offline digitization facilities that takes care of the grievances received at the scheduled CM-Citizenry interaction programmes.

By **AVIK RAY, TRIPURA**
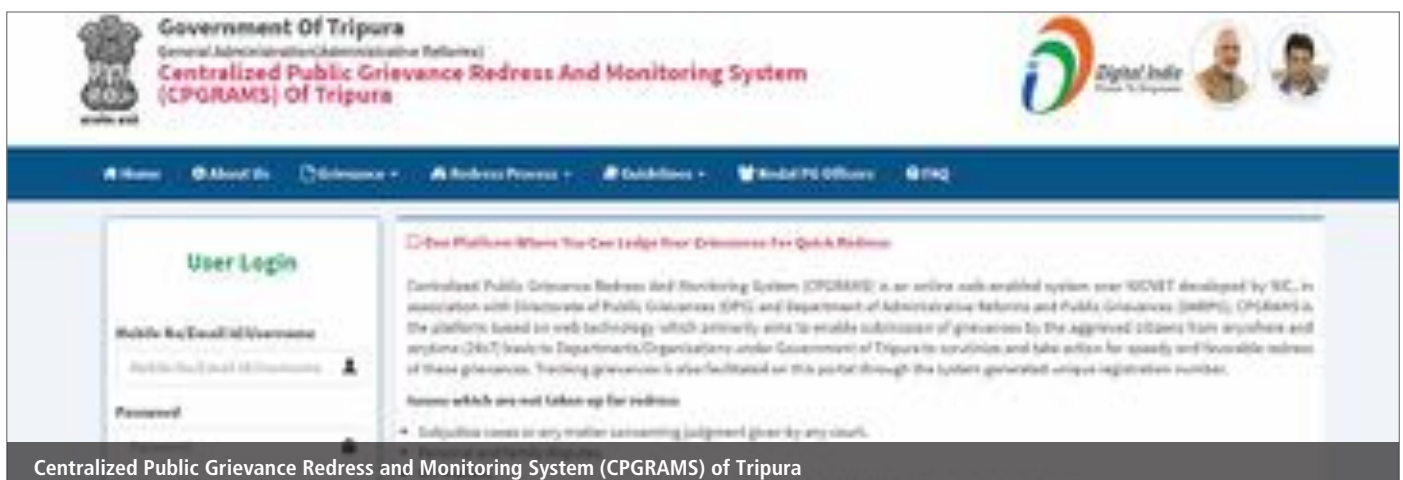
Centralized Public Grievance Redress and Monitoring System (CPGRAMS) of Tripura

Fourth International Day of Yoga
NIC celebrates with a nation-wide observance

Smt. Neeta Verma, DG(NIC) along with officers, taking part in the Yoga workshop at NIC HQ.

NIC Manipur

NIC Guwahati

NIC Haryana

NIC Odisha

Illuminated NIC HQ on Yoga Day,

The International Day of Yoga has been observed every year on 21st June since its inception in the year 2015. This year, The theme of the day was "Yoga for Peace".

Encouraging health awareness among its officers and employees, the National Informatics Centre, in coordination with the Ministry of AYUSH, New Delhi, held nation-wide celebrations through various activities. The Yoga workshop held at NIC HQ, Delhi was enthusiastically participated by the Director General, Smt. Neeta Verma along with NICians.

An expert from the Ministry of AYUSH took the workshop explained the importance of Yoga and has demonstrated various Yoga postures to be practised on regular basis for healthy living.

NIC has made a country-wide coverage of the events through video conferencing and was broadcasted live through webcast services for wider reach and practice.

With inputs from **VK TYAGI, NIC HQ**

Regional Workshop on PDS Computerization and Reforms
Chief Minister inaugurates Two-day Workshop held at Agartala

Hon'ble Chief Minister of Tripura, Shri Biplab Kumar Deb delivering the inaugural speech

A two-day "Regional Workshop on PDS Computerization and Reforms" was organised at Agartala during 17th -18th April, 2018 jointly by the Directorate of Food, Civil Supplies and Consumer Affairs, Govt of Tripura and Department of Food & Public Distribution, Government of India.

The workshop was inaugurated by Shri Biplab Kumar Deb, Chief Minister of Tripura, in the presence of Shri Manoj Kanti Deb, Hon'ble Minister of Food, Sports & Youth Affairs, Shri Yatendra Kumar, Secretary, Food, Civil Supplies & Consumer Affairs, Government of Tripura and Shri Dinesh Kumar Gupta, Joint Secretary (BP&PD), GoI.

The Hon'ble Chief Minister, in his speech, stressed on the rapid adoption of technology and e-Governance to weed out corruption and leakage in the distribution of PDS commodities. He also inaugurated the distribution of food

Inauguration of commodities distribution through POS device

Shri Manoj Kanti Deb, Hon'ble Minister of Food, Sports & Youth Affairs, along with other officers

grains through the e-POS Application adopted from NIC-AP.

Shri Debasish Basu, Additional Secretary & Director, Food, Civil Supplies & Consumer Affairs, Govt. of Tripura, Shri C.K. Dhar, SIO, NIC, Tripura, Shri Guru Prasad, STD, NIC, AP, Shri Muthu Kumaran, STD, NIC, New Delhi, Smt. Annapurna Rao, TD, NIC, AP, and Shri Ravi Gupta, TD, NIC, New Delhi, Shri A.K.De, STD participated in the workshop. CPMU team from DoFPD imparted training to the participants, in addition to the key-note lectures by mem-

bers from NIC HQs. & NIC-AP.

The targeted PDS Computerization project is being steered by the Ministry of CA, Food & PD, Govt. of India, under the 12th Five Year Plan, as a NeGP State MMP. It started during FY 2013-14 for an estimated expenditure of Rs. 884 Crores, with 90:10 sharing pattern between Centre and States for NE Region. The project is to be implemented in parts:

COMPONENT-I

Laying IT based delivery foundation comprising of "Digitization of PDS

Stakeholders data" (Data of Food officers, Food Depots, FPS, Millers, K. Oil Agencies, Transporters etc.), "Digitization of Ration Cards" (digitization of legacy ration cards), "State PDS Portal", "Toll Free Call Centre"(No 1967) for consumer grievance Redressal and "Automation of PDS Supply Chain" (End-to-End Allocation & Supply Chain Management, starting from "Indent Generation for food grains to FCI", "FCI Release Order", "Transportation of Commodities from FCI-to-State Transit and State Transit-State Feeder Go-downs" and "Doorstep

Allocation & Supply Chain Management Portal (https://feasttr.gov.in)

Workshop in progress

delivery up to FPS"). All the stated functionalities have been implemented on the adoption of NIC Central Application Software (CAS) for TPDS computerization. "Ration Card Management" and "Allocation & Supply Chain Management" progress is monitored from the National Dashboards.

COMPONENT -II

IT based delivery to consumers FPS Automation, implemented on the adoption of NIC-AP AePDS Application. In Tripura, 7 FCI Depots and 123 State food Go-downs (located in 63 different locations) have been made online with suitable ICT installations, out of which 88 Go-downs are doing live transactions and

35 are working in deferred mode. Total of 9,25,249 Ration Cards in the state have been digitized (AAY: 1,09,230, PHH: 4,78,889, APL: 3,37,130). 97.72 % of NFSA RCs have been seeded with Aadhaar.

Aadhaar RD 2.0 compliant POS machine have been procured by the state government and installed in all 1,807 Fair Price Shops. Distribution of commodities through POS has been started on Trial basis from December 2017 and in real time mode from April, 2018. 111 FP Shops, located near International Border and beyond network coverage are being targeted with the adoption of offline POS-based software sourced from

NIC-AP.

Tripura has completed the technical requirements for the fulfilment of the "Computerization of TPDS" project and is geared to implement the IMPDS project of the Government of India, during FY 2018-21.

Representatives from the Food Departments of Manipur, Meghalaya, Mizoram and Nagaland participated in the workshop and made field trips to FCI & State Food Go-downs, and Fair Price Shops.

By **AVIK RAY, TRIPURA**

Participants of the workshop

X-International IT forum with BRICS and member states of SCO
Discussed collaboration in the field of IT and Digital Transformation

X-International IT forum with BRICS (Brazil, Russia, India, China and South Africa) and member states of SCO (Shanghai Cooperation Organisation) was held during 5th-6th June 2018 at Khanty Mansiysk, Russia. The IT Forum brought together industry leaders from BRICS and SCO nations as well as other countries to a single platform to interact and discuss collaboration in the field of Information Technology and Digital Transformation. More than 1,500 participants from 55 countries, 43 regions and 26 constituent entities of the Russian Federation participated in the forum, which has established itself as an international venue for discussion of key issues in development and implementation of Digital Economy in the region. The forum was helpful to build strategies for the applicators of Information Technology & e-Governance etc., in the area of digital economy. It was attended by government authorities, professional experts, scientist & business community from various countries.

With the initiative taken by International Cooperation Division of NIC, Shri Prashant Kumar Mittal, Scientist-F (STD) and Shri Dayanand Saha, Scientist-F (STD) were deputed to participate in the IT Forum as official delegates from the Government of India along with representatives from the Embassy of India, Moscow and several industry members from India. During the opening ceremony of the IT Forum, Mr. Alok Raj, Minister (Education), Indian Embassy at Russia highlighted how India is going to be a key market in the future. It will become even more important with growing strategic collaborations in various sectors. He emphasised the importance of strategic partnership between India and Russia.

With an objective to showcase the strength of Indian Information Technology, Start-ups and Electronics Industry, members of Indian delegation also participated as Exhibitors under the India Pavilion coordinated by FICCI at the forum. NIC showcased its various products, platforms and latest initiatives on digital transformation in India from the allocated stall. Live video conferencing with India was also held during the event.

Several sector-specific seminars and B2B sessions were also organised by FICCI at the India pavilion. Several strategic sessions on Smart Cities, Information infrastructure of the digital economy, Tele-medicine and Artificial Intelligence, joint project initiatives in the BRICS and SCO space were also organised at the forum. Shri Prashant Kumar Mittal gave a presentation on "Digital Economy" and Shri Dayanand Saha on "Digital Transformation & Emerging Technologies".

The state authorities including Governor and IT Minister took keen interest in IT products and services showcased there,

Demo of NIC's products/ services to visitors

especially those in open source or could be customised for their use in open source platform. The functionalities of e-Office, GepNIC, NREGASoft, e-Panchayat, e-PDS, Soil Health Card, MCTS were explained to the visitors.

There were stalls dedicatedly focused to make kids aware about the Digital Technology and its use in their life. They were successful in igniting the interest and inquisitiveness of the children by the means of digital games like chess, robotics, 3D printing, interactive robots, they were given a real-life experience of using government digital services related to health, transportation, education etc., making them ready for brighter future. To make it more interesting and binding, the people at stalls were in the dress of children's favourite movie characters.

Her Excellency, The Governor of Khanty-Mansiysk Town, Russia visiting NIC's Stall

By **DAYANAND SAHA & P.K.MITTAL, NIC HQ**

RUDRAPRAYAG District, Uttarakhand
Investment in ICT to amplify efficiency in e-Governance services

The NIC district Rudraprayag is committed to provide technical support for implementing IT initiatives of the government to enable citizens to access government services easily & efficiently. This will enable transparency in the delivery of e-Services and help in gaining faith of citizens in the system.

SANJAY SINGH NEGI
Scientific Officer-SB & DIO
sanjay.negi@nic.in

Edited by
A. K. DADHICHI

Rudraprayag is a small beautiful district surrounded with Himalayan Mountain and natural paradise. It lies at the confluence of two rivers Alakananda and Mandakini. Rudraprayag is one of the Panch Prayags or five confluences of Alaknanda River.

District NIC is playing an important role in implementing ICT services in the district and providing technical support to District Administration for an efficient and smooth running of IT-enabled services.

IMPORTANT DISTRICT LEVEL INITIATIVES

Wireless Local Area Network

Wireless Local Area Network is established by District Administration using point-to-point and point-to-multipoint wireless hopping technique from District Head Quarter to Shri Kedarnath Temple (at elevation of 11,600 ft.) along Shri Kedarnath yatra route, covering all the halting points. The network is established in an extremely difficult topography and high altitude terrain and successfully provides the following services to District Administration, Government/ Non Government Agency, local public and pilgrims:

- 24×7 live surveillance of halting points along yatra route as well as reconstruction work going at Kedar valley.
- Hot line SIP communication to various government agencies deployed and working at Kedar valley.
- Free Wi-Fi and live display of Kedarnath shrine to the pilgrims.
- VC services at all critical locations.
- RFID Tracking of mules and horses

> There has been a lot of contribution made by District NIC Rudraprayag in the implementation of e-Governance Services running in the district. Lakshya Project has been started to improve the quality of education of the district and to increase the success of district in competitive examination.
>
> A "Local Wireless Network" has been established in Kedar valley for the monitoring of Kedarnath yatra and reconstruction work. It has played a significant role in increasing the volume of yatra and strengthening of communication network & other e-services in Kedar valley.
>
> I hope that with the technical support of NIC Rudraprayag, District Administration will increase effectiveness and transparency in other key sectors in the near future.
>
> **MANGESH GHILDIYAL**
> **District Magistrate**
> **Rudraprayag, Uttarakhand**

along yatra route.
- Network Support to Media, News Channels for broadcasting the live feed of

Monitoring of Kedarnath Yatra

Kedarnath Shrine through their TV channels.

- Network support to Telecommunication agencies like BSNL, Airtel and Vodafone for establishing mobile services (voice/ data, 2G, 3G, 4G) at Kedar valley.

- The network is further integrated with SWAN and NKN for enabling surveillance at Chief Secretary Office, Dehradun and SEOC, Dehradun and Prime Minister Office, New Delhi.

- Using drone camera and network services, Hon'ble Prime Minister, Shri Narendra Modi himself monitored the reconstruction work at Kedar Valley.

- Public Address System installed at all the critical points along route for communication and broadcasting important messages to pilgrims.

LAKSHYA

In order to improve the quality of education of the district, the project LAKSHYA is an attempt to improve the quality of education at each level like primary, secondary & higher education.

Lakshya App

Primary & Upper Primary Education

Mobile App and Web Portal have been launched by District Administration with support of NIC, Rudraprayag for subject wise efficiency monitoring of all the students studying in 750 Government Primary and Government Upper Primary Schools of the district. As a teacher logs into the Mobile App, the details of all the students are displayed with the fields of their competencies in each subject. The competencies earned in each month by the students are mapped to the mobile app by the teacher, which can be viewed on the web portal. The competencies acquired by every student of a school in a month can be compared with other students or other schools on the web portal. The school performance is monitored by District Administration on monthly basis and inspection of the targeted school is done by CRC and district level officer. On the basis of their monthly performance and the actual feedback, video of the best performing school is collected and uploaded to the portal. Uploaded video is displayed in the app so that other students and teachers can avail benefits of the subject knowledge and teaching style of the best performing school.
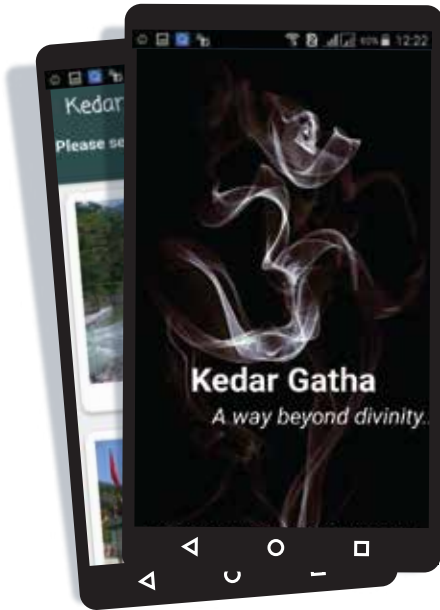
Secondary Education

Further, the wireless local area network is extended to 12 Government Inter Colleges. Offline coaching of the Engineering and Medical Entrance Examination has been started in two main centres of the district. A faculty of enthusiastic and

Monitoring of Reconstruction work from District Emergency Operation Centre

Kedar Gatha App

Kedar Diary

Shri Kedar Rescue App

dedicated teachers of the Department of Education, Kendriya Vidyalaya and Degree College has been formed for the successful implementation of this programme. The network is also used for live classes as per subject and faculty requirement of all the connected schools.

OTHER KEY INITIATIVE

District Website

District website has been migrated to S3WaaS (Secure, Scalable and Sugamya Website As A Service) platform. The S3WaaS platform is a website generating framework based on SaaS (Software as a Service), hosted on the National Cloud of NIC with multilingual support and accessibility features for the physically challenged people.

Arms License

NDAL-ALIS application developed by NIC is running smoothly in the district. The District Licensing Authority is issuing/ renewing arms license via online portal.

Health Services

NIC district unit has provided technical support to health department for the smooth running of health services like Online Registration System for OPD Appointment *(https://ors.gov.in)*, Computerization of Digital Parchi System, CRS (Civil Registration System) for

birth/ death certificate, MCTS etc.

Revenue Services

NIC, Uttarakhand has developed an e-District portal to provide government services to citizens through Common Service Centres (CSC) which are easily accessible. Currently, the delivery of 15 Revenue services has been enabled in the portal, along with employment registration service.

MOBILE APPLICATION FOR SHRI KEDARNATH YATRA

Kedar Gatha App

A Mobile Application has been launched by the District Administration to provide the prerecorded audio information of all the historical places to the pilgrims coming for Kedarnath Yatra. The audio information is available in 21 languages. The audio can be played in manual and automatic modes using the geo location of users.

Kedar Diary

This is an informative App for pilgrims to get information related to Kedarnath Yatra such as the contact list of all the nodal officers deployed by District Administration, list of hotels with contact numbers, Police chauki, helipad, MRP (Medical Relief Post), Temples, ATM, Registration counter and daily weather alert. Pilgrims can also send feedback to District Admin-

istration regarding the yatra.

Shri Kedar Rescue Android App

The App helps pilgrims get information about all the important resources like the location of helipads, relief camps, Police chauki, evacuation routes, important contact numbers etc. It has the feature of an emergency response system by which a user/ needy person can send an emergency SOS at the time of disaster to inform the admin about their location and the help needed. The admin can track the user in admin panel and can respond accordingly.

SUMMARY

The NIC district Rudraprayag is committed to provide technical support for implementing IT initiatives of the government to enable citizens to access government services easily and efficiently. This will enable transparency in the delivery of e-Services and help in gaining faith of citizens in the system.

NIC-CERT (Computer Emergency Response Team)
Driving Cyber Security Response for NIC

NIC-CERT was established with the mandate of collectively leading State Ministries and coordinate with other stake-holders to mitigate cyber threats. The objective of NIC-CERT is to analyse, monitor and respond to cyber incidents on critical Government Cyber Infrastructure. It maintains a knowledge base of cyber incidents and details of their investigation and mitigation.

R S MANI
Dy. Director General & HoG
rsm@nic.in

NAGENDRA KUMAR
Technical Director
nagen@nic.in

Edited by
MOHAN DAS VISWAM

The Government of India has launched several e-gover
rapid
Techno
society
cyberse
immedi
comple
landsca
to build

ensure that citizens are provided with

Deputy Director General & HoG, Shri RS Mani demonstrating the various aspects of NIC-CERT to the Hon'ble

cyber security incident response and co-ordination across NIC. To mark its inception, NIC-CERT was inaugurated by Shri Ravi Shankar Prasad the Hon'ble Minister of Law & Justice and Electronics & IT on 11th December 2017. The dignitaries were briefed by Smt. Neeta Verma (DG, NIC) and Shri. R. S. Mani (Head of Group) about the vision, mission and objectives of NIC-CERT. Shri Ajay Sawhney, Secretary, Ministry of Electronics and Information Technology (MeitY), extolled the work done by NIC-CERT and emphasised the need of a safe and secure government

Capacity Building

Regular training to upskill manpower to maintain pace with the changing cyber landscape

NIC-CERT Core Areas

Leverage Big Data Analytics

Develop capabilities to efficiently analyse vast amounts of critical information to achieve precise real-time results

Provide Guidance & Support

Take leadership in advising the Ministries & State Governments to ensure a coordinated cyber security strategy

Minister and distinguished guests at the Monitoring Station, Shastri Park

Hon'ble Union Minister Shri Ravi Shankar Prasad observing the views of senior officials and participants during the inaugural event

A BRIEF OF NIC-CERT

National Informatics Centre – Computer Emergency Response Team (NIC-CERT) Division, is the nodal arm of National Informatics Centre for managing the cyber security incidents in NIC. NIC-CERT shall act as a single point of contact and co-ordinate with concerned stakeholders for cyber security incidents targeted at NIC Infrastructure.

"The vision of NIC-Cert is to facilitate a safe and secure cyber space environment for users of NIC Services by providing timely cyber threat intelligence, advisory and best practice so as to proactively ward off malicious attacks or threats targeted at National Informatics Centre."

CORE SERVICES OF NIC-CERT

NIC-CERT was established with the mandate of collectively leading state ministries and coordinate with other stake-holders to mitigate cyber threats. It is responsible for maintaining and strengthening the cybersecurity posture of NIC infrastructure. The objective of NIC-CERT is to analyse, monitor and respond to cyber incidents on critical government cyber infrastructure. It maintains a knowledge base of cyber incidents and details of their investigation and mitigation. The core activities carried out by NIC-CERT are :

DDG Shri R.S. Mani delivering a presentation on NIC-CERT

Hon'ble Minister signing the Guest Book

- Co-ordination and response to cyber security attacks aimed at NIC infrastructure

- Detection and mitigation of unusual activities, malware attacks on government systems

- Proactively secure NIC's network and assets by providing intelligence and advisory on threats and vulnerabilities

- Coordination with CERT-In, NCIIPC and other relevant stakeholders regarding cyber security incidents and activities

- Establish and maintain a centralised Log Management system for NIC

- Maintaining a knowledge base of cyber security incidents handled by NIC-CERT

- Development and evolution of Standard Operating Procedures (SOPs) to

handle cyber security incidents

- Undertake capacity building activities to augment in-house cyber capability, skills and expertise

- Development and operation of forensics lab for Windows OS and Mobile devices

- Publish and circulate security advisories and vulnerability notes

2 Million	0.7 Million	52
Cyber Attacks Prevented	Malware/ Trojan Infections Prevented	Advisories Published
91	46000	200+
Threat Intelligence Alerts Published	Malicious Domains Blocked	Vulnerabilities Identified & fixed
	650	
	Govt. websites moved to SSL (https)	

Statistics of NIC-CERT security initiatives and activities

Report
Security Incidents to NIC-CERT.
incident@nic-cert.nic.in,
+91-11-2290-2400
Sms : NICCERT <message>
to 7738299899

Act
On Advisories, Alerts & Guidelines notified by NIC-CERT

Co-Operate
With NIC-CERT, provide logs, evidences, info for investigation

Inform
NIC-CERT on all actions taken for mitigation of security incident

Team NIC-CERT with Hon'ble Minister and DG(NIC)

For latest security advisories and alerts, users can subscribe to NIC-CERT through website:
https://nic-cert.nic.in

For further information, please contact:
R S MANI
Deputy Director General & HoG
NIC(HQ), CGO Complex, Lodhi Road
NEW DELHI-110003
Email: rsm@nic.in
Phone: 011-24361609

JHARSEWA: Bringing revolutionary changes & reforms in the Service Delivery Process in Jharkhand

JharSewa, powered by ServicePlus empowers the users by allowing them to define and configure services on their own. No technical interventions are required. The new approach is based on the standards and principles that apply to all major lifecycle events of a digital service namely, Defining, Realizing, Measuring and Governing Digital Services.

SHAHID AHMAD
Dy. Director General & SIO
s.ahmad@nic.in

MIHIR RANJAN MOHANTY
Technical Director
mr.mohanty@nic.in

ASHUTOSH KUMAR SHERPA
Scientist-B
a.sherpa@nic.in

Edited by
Dr. DIBAKAR RAY

A progressive Government aims at serving its citizens in a user-friendly, transparent and interactive manner. These demands have led to a paradigm shift from traditional to digital methodology. Transition of Governments to the new digital world calls for significant and conscious effort. Jharkhand took a huge stride in harnessing the benefits of e-Governance towards digitally enabled service delivery in the state. The new model is a paradigm shift in conceptualizing a 'new breed of services' which are very close to the current expectations of the people providing them choice and control and participative access to the domain of Governance. JharSewa in Jharkhand has been a major initiative in this direction. Having its structure built on ServicePlus Framework, JharSewa provides future-proof enterprise architectures, state-of-the art infrastructure, new capabilities, and above all, a Business Process Innovation.

e-District is one of the focused key Mission Mode Project (MMP) under National e-Governance Plan (NeGP) to promote the delivery of citizen centric government services electronically. JharSewa – the e-District project was launched on a state-wide scale by the Hon'ble Chief Minister, Jharkhand on 16th June, 2015 with 6 certificate services.

More than 80 lakhs Digital Certificates have been delivered in a span of 2.9 years. This is the highest number of applications processed by any state using ServicePlus. JharSewa provides the largest coverage of services up to the Grass root level. Highest number of Government Workflow players – approx 7,200 are involved in the system.

THE LEGACY SYSTEM

The new initiative reformed the earlier system - 'e-Nagrik Sewa' that was operational state-wide in hybrid mode. Applications were submitted at a Panchayat level CSC (Pragya Kendras) and are used to get forwarded to the concerned Circle/Block Development Officers for processing. In addition, lots of physical touch points existed in the service delivery process. In the legacy system documents used to move physically and ink signed certificates were physically delivered and

State-wide roll-out of JharSewa by Shri Raghubar Das , Hon'ble Chief Minister, Jharkhand (centre), (L-R) - Shri Deepak Chand Mishra, DDG, NIC, Shri R. S. Poddar, Development Commissioner, Hon'ble CM, Shri Sunil Kumar Barnawal, Secretary to CM and Shri Sanjay Kumar, Principal Secretary to CM

physical touch points used to be the weakest of the system. Moreover the hard link between processing offices and the CSCs used to create more hardships for the applicants

JHARSEWA – A NEW APPROACH

The new approach powered by ServicePlus brought about revolutionary changes and reforms in the service delivery process. It empowered users to define and configure services on their own. No technical interventions are required. Dynamic application routing has been applied by creating linkages among work-flow players and coverage locations. Local Government Directory provided a uniform location management tool for the system. e-Payment is made available through CSC wallet wherever applicable and digital signing of output certificates removed the limitations of major physical touch points. A unique feature of the system is no hard linkages between office and location. Anybody could apply from anywhere for any processing office. With features like First-in-first Out (FIFO) and Tatkal stack, Multiple Application channel, Application Tracking and Electronic Service Delivery model, JharSewa has become a robust digital service platform for the government.

PROCESS AT A GLANCE

Services are enabled for submitting applications through a variety of channels viz. online, CSC, Panchayat Swayam Sewaks etc. The application gets automatically routed to the processing office based on the location attribute. Processing then proceeds as per the FIFO or Tatkal stack in the defined work flow. It is recalled by a work flow player or return to citizen facilitating correction before the final approval. Digitally signed Service delivery finally gets available online for the applicant or CSC. Payment gets processed through CSC Wallet – Digital Sewa or CSC Online Portal, wherever applicable. In addition, user profile and user document repository is maintained for online users.

ADMINISTRATIVE STEPS UNDERTAKEN BY GOVT.

Widest Geographical Coverage

Services are configured by the concerned department up to Grass-root level. Link-

ages were established for Village – Panchayat – Halka , Ward – ULB – Halka etc. using Local Government Directory of Panchayati Raj System. Approx 7,200 Govt. Officials are mapped as 'work-flow player' in the system.

Notifications issued

Necessary Notifications are issued by the Jharkhand Government for honouring only the JharSewa issued certificates in the state.

STATE-WIDE ROLLOUT AND CAPACITY BUILDING

After initial test run, Jharkhand Government opted for the state-wide launch of the project. e-District Manager along with an additional technical manpower was posted in all the 24 districts for supporting, implementing and managing the project in coordination with the District Informatics Officers of NIC. Series of state and district level workshops/ awareness programmes were organised for the stake holders - Revenue Karmachari, Panchayat Sewak, Circle Inspector, Circle Officer, Block Development Officers, Block Supervisors, Sub divisional Officers, District level Officers, Panchayat Swayam Sewaks as well as the concerned State level functionaries. Village level Entrepreneurs (VLEs) running CSCs, State Coordinating Agencies for CSCs (SCAs) and Master Trainers located at Blocks and Districts were also trained exhaustively.

MULTI CHANNEL APPLICATIONS

In addition, Government took necessary
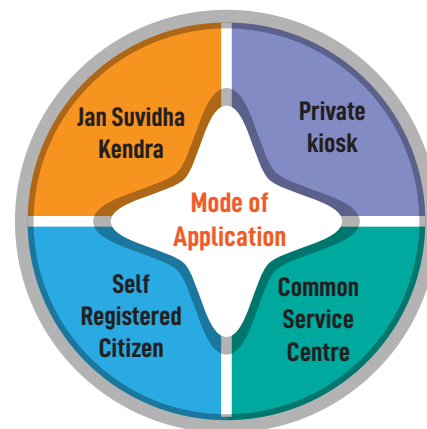
Mode of Application

steps for enhancing the reach to its citizens. Multiple channels of application submission modes were enabled like online submission from panchayat level CSCs and district level Jan Suvidha Kendras were put in place. Jan Suvidha Kendras provide services without any charge. while Panchayat level CSCs charge nominally as per the CSC model. CSC Wallet has been enabled in JharSewa for e-Payments.

GOVERNMENT AT DOOR STEP (SARKAAR AAPKE DWAAR)

Services of Panchayat Swayam Sewaks were made available under the scheme- 'Sarkaar Aapke Dwaar' for doorstep service delivery. More than 15,000 Panchayat Swayam Sewaks are presently providing door to door services in villages of 4,398 panchayats.

Delivery of services through JharSewa by CSC (PRAGYA KENDRA)

Statistics for Issued Certificates

Application Status under JharSewa
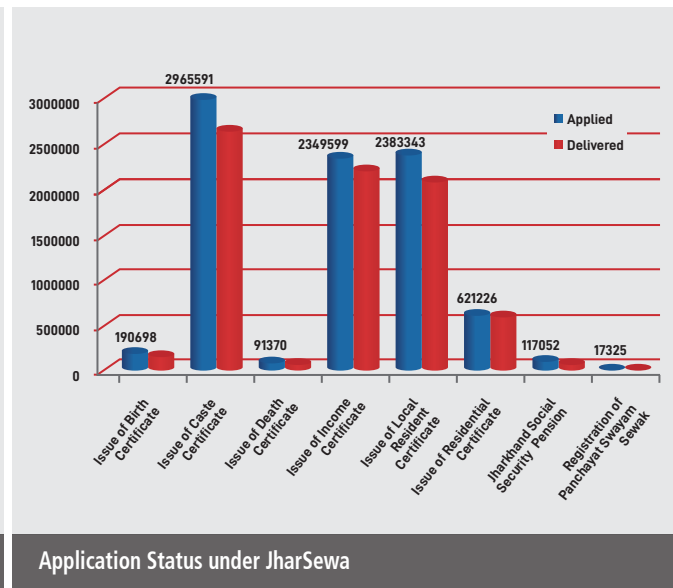
REACH THROUGH PRIVATE CSCs

Further, Jharkhand Government invited potential private players to set up their CSCs under 'Momentum Jharkhand' Programme. More than 850 CSCs have so far been set up under this programme, extending coverage of Service Delivery points extensively.

SPECIAL CAMPAIGNS

Special camps were organised at clusters of 2-3 panchayats for spot application and service delivery. Operators as well as concerned government functionaries participated in the camp with the mission of providing services on the spot.

HIGHLIGHTS

- Minimal need of physical movement
- Online Application & Online Delivery
- Kiosk based Application and kiosk based Delivery
- Apply from anywhere
- Door step application and Door step delivery (Sarkaar Apake Dwaar)
- Services to Physically challenged citizens at doorstep
- Mobile interface for tracking, submitting feedback and service delivery
- Enforcement of FIFO (First-In-First Out)
- Tatkal Sewa
- Online Tracking
- Multiple channels for application submission
- Delivery of digitally signed certificates
- Largest coverage upto grass root level
- Unicode enabled - Local language interface
- QR code on output certificates for authentication
- Integration with Payment Gateways, CSC-Wallet, SMS gateways, email Gateways
- Online Verification facility of the given service / certificates
- Ready reusable document repository
- Integration with DIGITAL LOCKER, RAPID ASSESMENT SYSTEM and E-TAAL
- SMS Alerts/ email Alerts to applicant
- Continuous improvement as per the citizen feedback

CONCLUSION

Jharsewa can be proud for its widest coverage and for the record of being the highest number of certificate delivery model, Backed by powerful wings of ServicePlus with regular innovative additions, Jharsewa is poised to achieve new glories.

STATISTICS

- Average Daily Application Submission 9,500+ (Approx.),
- Average Daily Actions by WFPs- 40,000+ (Approx),
- Highest number of Government Work flow players - 7200 approx,
- Total CSCs (Pragya kendras on JHARSEWA) - 4,700,
- Total Panchayats - 4398,
- Jan Suvidha Kendras - 23,
- Total private Kiosks after Momentum Jharkhand- 853

WIDE COVERAGE

- Panchayat Sewaks - 4398,
- Revenue Karmachari - 1886,
- Blocks Development Officers - 263,
- Circle Officers - 263,
- Circle Inspectors - 45,
- Sub Divisional Officers - 24,
- District Magistrates- 24,
- CSCs - 4700,
- Private Kiosks - 853,
- Revenue villages - 32811,
- Municipal Corporations - 07,
- Municipalities - 19,
- Town Panchayats - 15,
- Notified Area Councils - 02

e-WAY BILL
One Nation - One Tax - One Market - One e-Way Bill

The e-Way Bill System provides multiple modes of e-way Bill generation including web, bulk upload, SMS, Mobile App and API for large Tax Payers/ GST Suvidha Providers (GSPs).

P V BHAT
Dy. Director General
bhat.pv@nic.in

DIPANKAR SEN GUPTA
Sr. Technical Director
dipankar.s@nic.in

H L RAVINDRA
Technical Director
hl-ravindra@nic.in

SUNITA BENNUR
Technical Director
sunita.bennur@nic.in

Edited by
REUBAN K

As a part of the anti-tax evasion measures under the new indirect tax regime, the GST e-Way Bill System was rolled out all over India, initially for Inter-State movement of goods from 1 April, 2018. Gradually, the scope of generation of electronic permits were extended for movement of goods within the states and the final country-wide rollout was completed by June 3, 2018 except Delhi. The complete e-Way Bill System, which includes development of web-based IT Application, hosting IT infrastructure (which includes network, computing and security) and operation & management of the system is the responsibility of National Informatics Centre (NIC).

INTRODUCTION

In the previous VAT regime, one Transit Pass was required for each State through which the truck passes, if the value of goods transported was above the defined amount. For example : If a truck carrying goods from Delhi to Chennai, had to pass through 6 States/ UTs, then it needed to obtain Transit Pass from each one of the six States the truck was passing through. Transit Pass was issued online by 15 States/UTs and rest of the States followed manual process of issuing the Transit Pass. Advent of GST regime presented an opportunity to facilitate creation of a single nation-wide e-Way Bill in self-service mode by the consigners/ consignees/ transporters. The application is accessible through URL **https://ewaybillgst.gov.in.**

e-Way Bill is a document which gives details regarding the movement of goods and has to be carried by transporters for any consignment exceeding Rs 50,000.

OBJECTIVES

- Single and Unified e-Way Bill for Inter and Intra-State movement of goods for the whole country

- Fully online and enabling 'Paperless' movement to track and monitor movement of goods across various States

- Improve service delivery with quick turnaround time for the entire supply chain and to provide anytime anywhere access to data/ services

- Minimal physical interaction with the concerned departments and hassle-free movement of goods

TECHNOLOGY USED

- Front end forms are developed using ASP.Net with C# as the scripting language using framework 4.0

- Backend database is SQL Server 2017

- Redis Enterprise NOSQL for Caching

- APIs using JSON for android/IOS Mobile App and integration with systems of large Tax Payers/ GST Suvidha Providers(GSPs)

- Akamai CDN for distribution of static content such as user manual, FAQs etc.

- PRTG for monitoring of infrastructure

- App Dynamics to monitor Application Performance

MAJOR MODULES CONSIGNER/ CONSIGNEE/ TRANSPORTER

These can be categorized as Tax Payers who are registered on GST common portal and have obtained GSTIN and transporters who are not registered on the GST common portal. As a first step to use the system, the first category of users need to register in application through registration process by providing GSTIN whereas the second category of users need to enroll by providing PAN. After completing these steps, they can use the application to perform various activities.

MAJOR FEATURES
e-Way Bill Process

- Generation

- Cancellation
- Rejection
- Extension of validity
- Change of transporter

Consolidated e-Way Bill

- Generation
- Regeneration

Others

- Update profile from GST common portal
- Register for Mobile App/ API/ SMS
- Register for GSP
- Detention Report
- Reports
- Masters Creation
- User Management

Department officers

- Verification
- Detailed Verification Report
- Reports

MODES OF GENERATION

Application provides multiple modes through which the user can generate e-Way Bills. These include:

Web

Details of goods to be carried, consigner/-consignee, transporter/vehicle etc. can be entered through web form.

Bulk upload

Excel-based utility has been provided to users. This utility can be used to enter data and generate a JSON file which can be uploaded to generate multiple e-Way Bills in one go.

SMS

User has to register his/ her Mobile number for SMS and then e-Way Bill can be generated from the registered Mobile number by using keywords and required parameters.

Mobile App

GApp on Android and IOS platforms are available to facilitate various functions which can be performed through web. User has to register on web to use Mobile App.

API

This option is provided to large Tax

Payers and GSPs to enable system for system integration. After they successfully test the application in sandbox environment, access is provided to production.

KEY INTERVENTIONS

PAN validation through NSDL

At the time of enrolment of transporter, validation of PAN is carried out through NSDL.

Updation of profile of Tax Payers through GST common portal

At the time of registration as well as at anytime subsequently, the user can update his profile by extracting data from GST common portal through APIs.

Caching Tax Payers' data in Redis

Redis NOSQL is used for caching data of entire set of tax payers. Thus, application first connects to the caching layer to obtain data related to tax payers and helps to reduce latency.

My Masters

The Users are provided with option to create their own masters of clients, suppliers, transporters and products to enable them to enter these details by typing their first few characters and this also speeds up the search process.

Databases harding

Database is divided into 8 zones each zone is a group of states. E-way bills are created in the zone corresponding to state of the creator. This facilitates aproximate equal distribution of load across the databases.

Use of a sync database for reporting

As the application has very high level of concurrency, the reporting is carried out from a sync database instead of OLTP database to improve the performance.

Load Testing

As the application has very high level of concurrency, extensive load testing was carried out to tune infrastructure, application and database for good performance.

API

Large Tax Payers and GSPs are encouraged to on-board the system using APIs for system to system integration. These APIs are implemented as Restful Web-Services.

The users test the APIs in sandbox

environment before being provided access to the production server. To enable them to securely access the APIs, a Client ID and Secrect Key is provided to each user and required IPs are whitelisted. As first step to use APIs, user obtains an authentication token which remain valid for six hours through Authenticate API. In order to access other APIs, Client ID, Secret Key, GSTIN of the required user and session token are passed in API request header along with other parameters required by API as request payload.

QR Code

e-Way Bill is generated with a QR code which can be scanned by the Mobile App provided to Departmental Officers for verification.

Data Exchange with GSTN/States

The e-way bill data will be shared with the State and Centre Tax Authorities and GSTN through APIs for further analysis at their end.

Dissemination of static content through CDN

Static content such as user manuals, FAQs, circulars/OMs etc. are deployed on another Sub Domain of the application viz. docs.ewaybillgst.gov.in which is serviced through Akamai CDN thereby reducing traffic to the main e-Way Bill portal.

INFRASTRUCTURE

As 24x7 accessibility is a critical requirement of the application, infrastructure is designed to provide redundancy at multiple levels including firewall, load balancer, switches, racks, virtual machines(web servers), database servers and MPLS links (for connecting to GSTN servers).

Virtual machines for web-servers are created on Hyper-V clusters. 24 VMs are used as front-end (with IIS). Number of other VMs have been created for API, Mobile App, GSTN API and Redis.

Two Availability Groups of four Database Servers, Each are configured to ensure redundancy at the Database level. In each Availability Group, out of four Database Servers, two servers store data of two zones each and sync copies of two other zones whereas the other two servers are async copies of the data of four zones used for reporting purposes.

Hourly e-Way Bills — 30th June, 2018
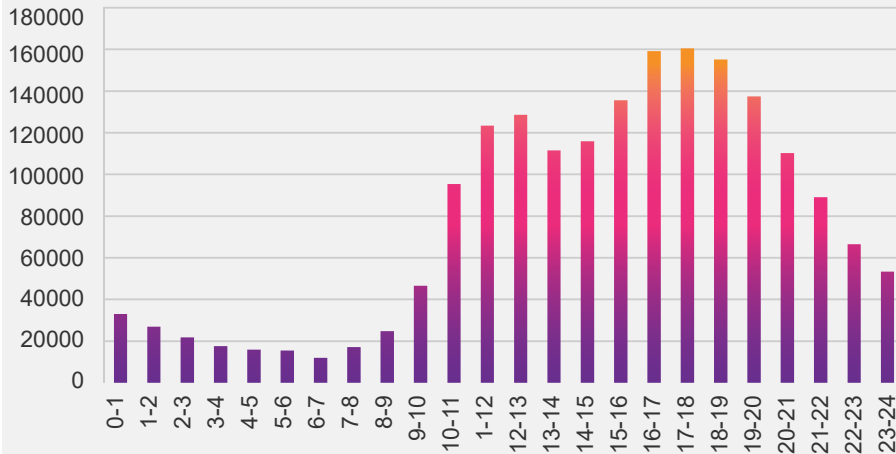
Bar chart depicting Hourly e-Way Bills

The third availability group has two database servers which store session and authentication databases respectively.

HELP-DESK & MONITORING

Considering criticality of the application, 24x7 Help Desk is set up at NIC Centre, Koramangla, Banglore to provide L2 support to the issues forwarded by the GSTN Help Desk. The Help Desk functions 24x7 which enables quick resolution of the issues and closing of tickets forwarded by GSTN Help Desk.

A part from this, the application performance is monitored round the clock. PRTG is configured to monitor the health of the infrastructure i.e. Web VMs, Database Servers, Firewalls etc. The parameters monitored include utilization of processor and memory, ping, HTTP response time etc. Additionally, a Dash-Board is also provided to display State-wise/ Zone-wise e-Way Bills generated in every five minutes. These tools and mechanisms facilitate the team to identify any system or service outage within no time and respond quickly.

IMPLEMENTATION APPROACH

Till April 1, 2018, the Tax Payers were allowed to generate e-Way Bills on trial basis and during this period, the system was tested on all parameters like load, integration and application testing. Numbers of training sessions were conducted for officers of different State Governments who in turn conducted sensitiza-tion sessions for Tax Payers and transporters in respective states.

As recommended by GoM on IT, e-Way Bill was implemented from April 01, 2018, for Inter-State transactions only in the first phase. e-Way Bill portal was made accessible for Intra-State movement after examining the usage pattern and the system performance for Inter-state e-Way Bills for first two weeks. The states were covered in phased manner in groups of 5-6 states at a time.

As of 23rd May2018, 22 states had notified and started e-Way Bills for Intra-State movement of goods and 2 states had started generating e-Way Bill for Intra-State movement on trial basis. These states were generating around 6 Lakh Intra-State e-Way Bills daily. By first week of June, 2018 all the states were covered for generation of Intra-State e-Way Bills also.

KEY STATISTICS

- Average Inter-State e-Way Bills per day: 6.72 Lakh

- Average Intra-State e-Way Bills per day: 5.58 Lakh

- Tax Payers registration till date: 22.22 Lakh

- Unregistered transporters enrolment till date: 28,638

- In April 2018, 279.96 Lakh e-way bills were generated. In that 205.58 Lakh for inter-state and 74.37 Lakh for intra-state movement

- In May 2018, 372.32 Lakh e-Way Bills were generated out of which 211.32 Lakh were for Inter-State and 161.01 Lakh for Intra-State movement.

- In June 2018, 467.65 Lakh e-Way Bills were generated out of which 194.91 Lakh were for Inter-State and 272.74 Lakh for Intra-State movement.
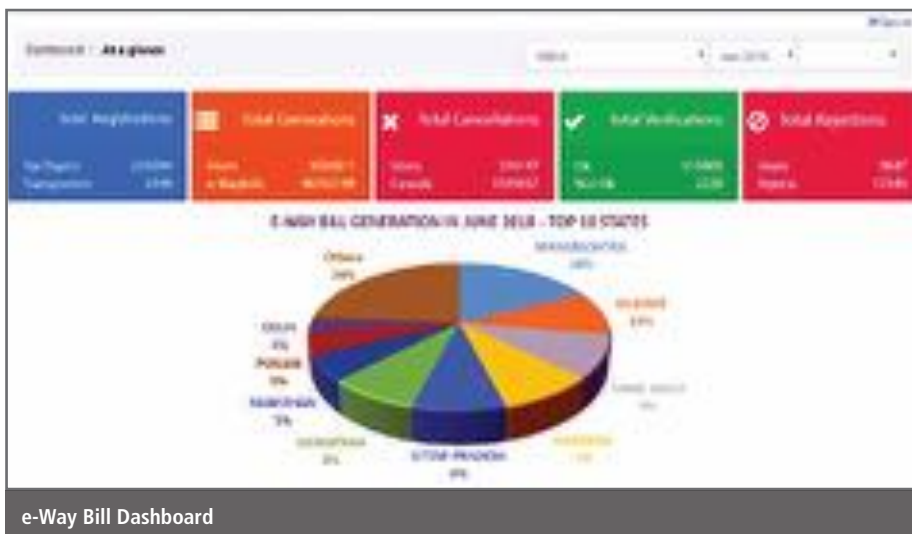
e-Way Bill Dashboard

UPSC's new ICT Infrastructure setup
Designed and Implementated for efficiency improvement and uninterrupted availability

UPSC Projects are mission critical projects with the fixed timelines and these projects have to be implemented successfully on time. This new ICT setup is capable of handling huge load on the UPSC servers smoothly and efficiently. The performance of the system has improved drastically due to the enhanced capacity of servers and the modifications made in the system

K S NAGESH
Sr. Technical Director
ksnagesh@nic.in

ASHUTOSH GUPTA
Technical Director
ashutosh.gupta@nic.in

PUJA KHATTRI
Scientist-B
puja.khattri@nic.in

The Software for various examinations of UPSC such as the prestigious Civil Services Examinations (flagship exam of UPSC), National Defence Academy etc., are handled by UPSC using the software **SOAP** (System of Online Application Processing). The various recruitments in different ministries are handled by UPSC using the software, **ORA** (Online Recruitment Applications). Apart from these two major applications, various software applications like **e-Admit Card(s)**, **e-Summons,** detailed application form**(DAF)**, All India Service **(AIS)** etc., are deployed on the website **https://up-sconline.nic.in.** The physical servers were commissioned in the year 2010. It is observed that there is an annual increase of 15 percent in the number of applications received by UPSC. Hence, the load on the servers has increased considerably over the years since its inception. In order to address the increasing demand of applications on the UPSC servers, NIC along with UPSC Officials has suggested that UPSC should go for the strengthening of UPSC hardware setup. It was suggested that new ICT setup has to be replaced with high capacity servers and different system architecture, both at application layer as well as database layer for better performance of the system. The funding of the project has been entirely by UPSC.

BACKGROUND AND THE OLD ICT SETUP

UPSC Projects are mission critical projects with the fixed timelines and these projects have to be implemented successfully on time. It was observed that in the last few days of the closing date of online applications for any given examination/recruitments, the online traffic is very high, leading to slow response time from the servers, especially during the high candidature examinations for Civil Services Preliminary, National Defence Academy (NDA), Enforcement Officer/Accounts Officer (EPFO) etc. The present system is not able to fully cope up appropriately with the high traffic surge due to high candidature.

UPSC was earlier having five rack mounted servers (Server configuration. - 4 processor with 8 core 2 GHz Intel CPU and 256 GB RAM). There were three application servers, which are connected to load balancer for the distribution of load among three servers. The two database servers were being used in active passive cluster mode. The Redhat Linux Version 6.4 has been installed in all these servers and PostgreSQL 9.4 has been used as database. The different applications of UPSC like SOAP, ORA, e-Admit etc. were running on these servers. There were two application servers and one database server.

NEW ICT SETUP AND SYSTEM ARCHITECTURE

The old architecture was designed in the year 2010 and since then it had been working fine, but as the physical server hardware was seven years old and the number of software applications i.e., load on the server has also increased exponentially, UPSC has decided, in consultation with NIC, to replace the existing servers with the new high-end robust servers having high CPU performance, more CPU core, high memory and other related components etc., with new system architecture. It was proposed to replace the existing hardware (Servers) - ICT setup with new ICT Setup which should have the capacity to cater the future additional demands of UPSC. The candidates traffic is increasing about approximately 15% per year, so, the hardware and system architecture should be designed in such a way that it can take care of the load for at least next five years.

UPSC also has a setup for staging

environment that duplicates the production environment (same hardware, same software and same settings). UPSC now evaluates/ tests their application code before being placed into production.

In the Disaster Recovery **(DR)** site, the Application Servers as well as database servers are replaced with high capacity servers having 4 processors with 10 Core and 512GB RAM/ 1 TB RAM.

TECHNOLOGIES USED IN NEW SYSTEM ARCHITECTURE OF UPSC

APPLICATION SERVER

There are four physical application servers installed which are used for virtualization. These servers are high-end configuration (4 Processors having 10 core with 512 GB RAM). Red Hat Enterprise Virtualization Manager was used to virtualize the servers.

The four physical servers are virtualized to create the **Virtual Machines (VM)** i.e., each application server/ hypervisor is running 3 VMs over it behind the hardware load balancer. Each VM is capable to handle 1000 to 1500 concurrent applications. Twelve virtual machines are connected to Network File System (NFS) server storage to store candidates' details like photos, signatures and documents (in pdf format). All UPSC physical servers have been connected by 10 Gigabit network connectivity with 1 Gigabit network connectivity as a secondary network.

It delivers a centralised management system to administer and control all aspects of a virtualized infrastructure from host and guest management through storage management and high availability. Red Hat virtualization for servers builds upon the Red Hat Enterprise Linux platform and consists of the following two components:

RED HAT VIRTUALIZATION HYPERVISOR

This is the server (or cluster of servers) that runs the virtualization layer, and then runs several virtual server instances on top of it. A hypervisor is a function which abstracts/ isolates operating systems and applications from the underlying computer hardware. This abstraction allows the underlying host machine hardware to independently operate one or more Virtu-

al Machines as guests, allowing multiple guest VMs to effectively share the system's physical computer resources, such as processor cycles, memory space, network bandwidth and so on. It is also referred to as Virtual Machine Monitor.

RED HAT VIRTUALIZATION MANAGER (RHVM)

It is a software tool that provides centralised management over the physical and logical resources available within an environment, virtualized with Red hat Virtualization. This functions as management server for the entire virtual environment. RHVM also includes a comprehensive system dashboard enabling virtualization administrators to see an overview of the environment, and also to drill down into operational and performance details of any VM in the setup.

PostgreSQL DATABASE SERVERS WITH EFM

Three high-end physical servers having server configuration, 4 Processor with 10 core 2.1 GHz Intel CPU and 1TB RAM, is running in the new server setup. The database server is running on Master- Slave mode. As high availability is required, one master and two slave concepts have been implemented. Real-time replication is running in these two slave servers. **EnterpriseDB Failover Manager (EFM)** utility is being used for database servers. EFM monitors the members of a **PostgreSQL** cluster, identifies and verifies database failures quickly and reliably, and if needed, promotes a standby mode to become the cluster master and issues alerts. To handle the peak load/ connections which come during the starting weeks and closing weeks of an examination/ recruitment, connection pooler utility *(PgBouncer)* has been installed on each DB server. The PgBouncer is a lightweight connection pooler for PostgreSQL that dramatically reduces the processing time and resources for maintaining a large number of client connections to one or more databases.

SOLUTION TO THE TECHNICAL CHALLENGES

It has been observed for the last couple of years that during the peak load (first week and the last few days of the closing date of online application filling process) for any important examinations like Civil Services Examinations (Preliminary), NDA etc., the number of applica-

tions received on the servers used to be huge, which creates a heavy load on the UPSC servers, which in turn creates high concurrent connections on the application servers. It has also been observed that sometimes servers start responding very slow and database servers were also unable to respond quickly to the request received from application servers during peak loads.

The new system architecture is designed to address the above mentioned issues which were identified in the UPSC old system setup. The old servers were replaced with the new high capacity servers both at the application level and at the Database level. The Database Server is installed with PostgreSQL and augmented with EnterpriseDB Failover Manager (EFM) utility, which enables database server with one master and two slaves in order to manage the failover of databases. Connection pooling utility (Pgbouncer) has been installed on each database server. It reduces the processing time and resources for maintaining a large number of client connections to one or more databases.

The new ICT setup of UPSC has been put on the production environmentin January 2018. The new ICT setup has successfully handled major examinations of UPSC like Civil Services Examinations (Preliminary) 2018, NDA-I 2018 etc. More than 12 Lakhs candidates (approx) have successfully applied for CSP-2018 exam on the new ICT setup. One lakh (approx) candidates have filled the application forms of the Civil Services Examinations (Preliminary) 2018 on closing days without any problems. The UPSC servers are functioning smoothly and efficiently and are able to handle the peak loads effectively.

DEVELOPMENT ENVIRONMENT

The various open source software tools used in the new ICT setup of UPSC both at the application layer as well as database layer are as detailed below:

APPLICATION LAYER
RHV Manager (Version 4.1), **PHP** (Version 5.4), **Java** (Version 1.8), **Apache** (Version 2.4.6)

DATABASE LAYER
Redhat Linux (Version 7.4), **Java**

(Version 1.8), **PostgreSQL** – (Version 9.6), **EnterpriseDB Failover Manager** (Version 3.0)

STATISTICS OF THE EXAMINATIONS & RECRUITMENTS OF UPSC

The statistics of the major examinations conducted by UPSC like CSP and NDA-I are as shown in the Table-1. The statistics of the various recruitments is as shown in Table-2. The Figure-1 shows the graphical representation of the major examinations like NDA-I and CSP conducted by UPSC for the last few years. The new ICT setup of UPSC has successfully handled the peak load on servers as shown in Table-1 and Table-2.

The Figure-2 shows the load balancer connection statistics of UPSC. It has been observed that approximately 30 crores new TCP connections had been success-

SNo.	Year	Examination Name	Candidate Applications
1	2018	Civil Services Examinations (Pre)	~1236382
2	2017	Civil Services Examinations (Pre)	~1097007
3	2016	Civil Services Examinations (Pre)	~1317295
4	2018	NDA-I	~510156
5	2017	NDA-I	~476896
6	2016	NDA-I	~573442

Table-1 - Applications statistics table of CSP and NDA-I examinations

SNo.	Year	Recruitment Advertisement launched	Total no. of cases launched	Candidate Applications
1	2017	~24	~123	~275446
2	2016	~28	~296	~1194859
3	2015	~21	~201	~886073

Table-2 - Application statistics of recruitments

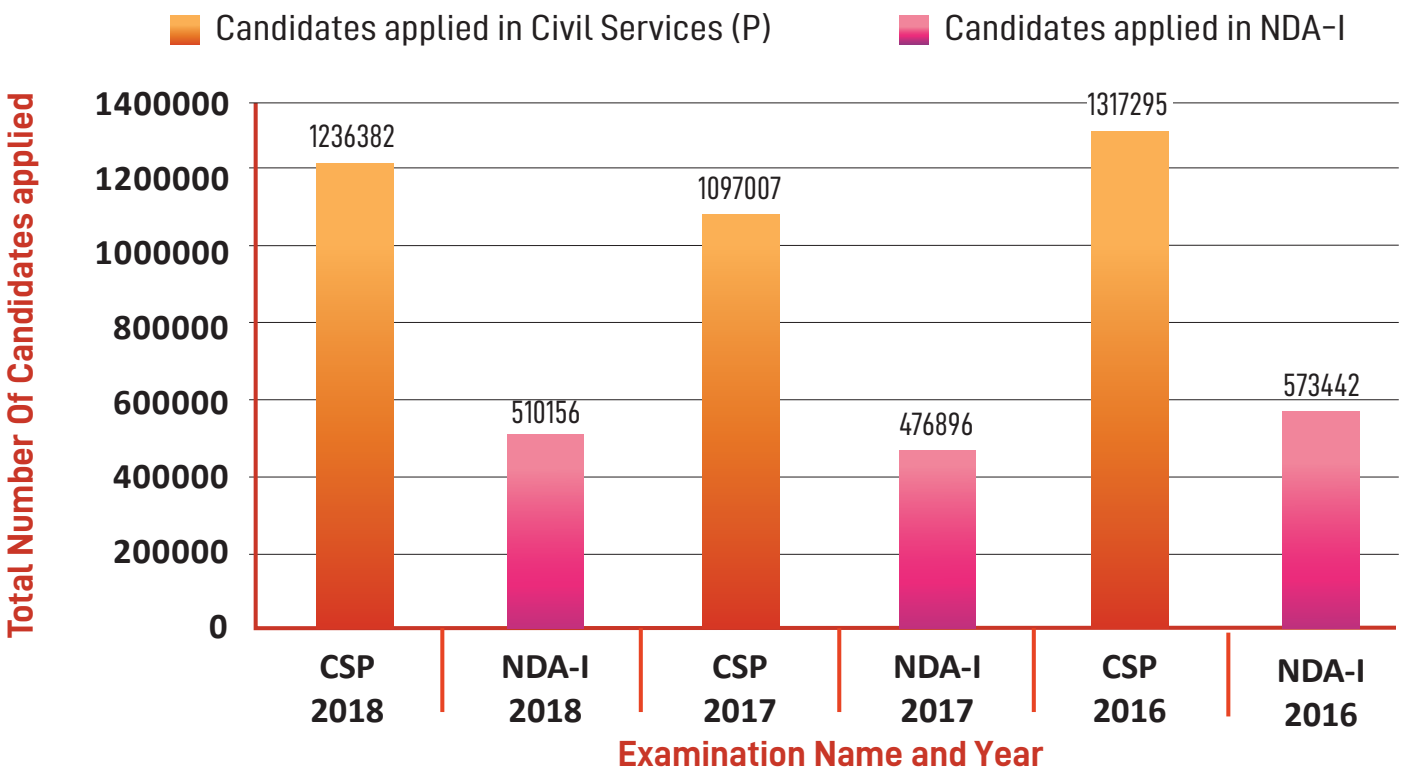## Total Number 0f Candidates applied for Civil Services (P) and NDA-I Exam

Figure 1 - Application statistics graph of CSP and NDA-I examinations

Status	Farm/Server	Kbits		Packets		Connections			TCP Disconnections			New TCP Connections		
		In	Out	In	Out	C	P	T	C	P	T	C	P	T
✔	UPSC-NEW-443	94780k	11557k	10822	5604	207471	220298	305747958	597	1451	306063675	598	1376	306410242
✔	Upsc-new-Svr-1	15983k	1279k	1797	881	27132	27394	38350830	102	169	38391867	103	169	38431213
✔	Upsc-new-Svr-2	9335k	921k	1107	698	26274	28058	38182286	69	179	38221827	68	180	38263642
✔	Upsc-new-Svr-3	8326k	866k	1007	562	25568	27432	38213557	63	210	38251492	66	159	38314717
✔	Upsc-new-Svr-4	13947k	1494k	1512	703	25922	27042	38167808	67	169	38206530	72	166	38244064
✔	Upsc-new-Svr-5	12082k	2125k	1436	822	25045	27539	38179272	83	173	38218327	80	164	38258352
✔	Upsc-new-Svr-6	12791k	2231k	1485	831	26411	27145	38251160	86	174	38291813	88	173	38331629
✖	Upsc-new-Svr-7	0	0	0	0	0	137	439	0	15	438	0	16	442
✔	Upsc-new-Svr-8	10498k	1716k	1183	618	25293	26615	38236470	60	165	38276615	57	163	38325841
✔	Upsc-new-Svr-9	11815k	923k	1296	589	25519	28520	38165673	67	162	38203879	64	157	38239451
✖	Upsc-new-Svr-10	0	0	0	0	0	116	260	0	12	260	0	9	264
✖	Upsc-new-Svr-11	0	0	0	0	0	153	293	0	12	293	0	10	293
✖	Upsc-new-Svr-12	0	0	0	0	0	147	333	0	11	334	0	10	334

✔ Active ⧈ No New Sessions ✖ Not In Service

Figure 2 - Total Number of Connections in UPSC new server setup

fully made on the last day of application filling of Civil Services - Preliminary exam-2018.

CONCLUSION

The new ICT setup of UPSC was implemented successfully within the timeframe given by UPSC. The setup is capable of handling huge load on the UPSC servers smoothly and efficiently. The Multiple Applications of UPSC like SOAP, ORA, e-Admit card, DAF, e-Summons etc., are already running successfully on the new ICT setup. The new servers are able to handle the heavy load coming from different examinations and recruitment advertisements of UPSC with good response. The performance of the system has improved dramatically due to the enhanced capacity of servers and the modifications made in the system architecture at the Application Layer & Database Layer.

The enhanced performance is also due to the fine tuning and optimization of source code of the various UPSC applications like SOAP, ORA etc.

For further information, please contact:

K S NAGESH
Sr. Technical Director & HOD (UPSC & SSC)
NIC HQ, Lodhi Road, CGO Complex
NEW DELHI - 110003

Email: ksnagesh@nic.in
Phone: 011-24305167

Integrated Software for High Court (ISHiCo)
A comprehensive Case Management Tool by National Informatics Centre (NIC)

ISHiCo meets the requirements of all high court staff, advocates, litigants, Advocate General Offices, various state Government departments and public. It also provides inputs to various information dissemination channels such as display boards, touch screen information kiosks, SMS Service and web portal.

DEEPAK BANSAL
Sr. Tech Director & SIO
deepak.bansal@nic.in

YOGENDER KUMAR
Sr. Technical Director
yogender.kumar@nic.in

Edited by
SARBJEET SINGH

The High Court of Punjab started functioning at Chandigarh from its present building with effect from January 17, 1955. A new chapter opened in the history of the High Court in the year 1966. The States Re-organisation Act, 1966, brought another State named Haryana and the Union Territory of Chandigarh into existence from November 1st, 1966. From the date of enforcement of the said Re-organisation Act, the High Court of Punjab was renamed as 'the High Court of Punjab and Haryana'.

The High Court of Punjab and Haryana is working since November 1, 1966 in its present form. It is one of the most beautiful High Courts in India. Its location in the lap of Himalayas beyond the limits of the city, beside Assembly Hall and Sukhna Lake add to its beauty.

Punjab and Haryana High Court started efforts to computerize the records way back in year 1993 with deployment of NIC team. In year 1999, Computer Committee was constituted. In the beginning, effort was made to computerize filing, pendency and disposal of cases. During the year 2010-11 long term efforts started with digitization, state of art servers, issuance of computerized certified copies, display boards, touch screen kiosks, development of static website and Local Area Network. From the year 2014 onwards, consolidation of infrastructure resulted in robust and secured platform to consolidate/ launch various litigant centric services. However, with the persistent efforts, support & guidance of Hon'ble Computer Committee from time to time, the project took off well.

> Integrated Software for High Court (ISHiCo) is running successfully in Punjab & Haryana High Court. It is efficiently providing case related information at the click of mouse. Information is disseminated through various channels i.e. SMS, Web Portal, Touch Screens Kiosks, Display Boards etc. Advocates, Litigants, Departments, Advocate General Offices, Officers and staff of High Court are getting information without any delay.
>
> The features like e-Diary, e-Filing, eNotices, Orders/ Judgements, Paperbook availability facilitate users tremendously. Digitization of Judicial records has taken computerization in this High Court to new heights for more efficiency in justice delivery system. National Portal of India i.e. www.india.gov.in has rated the website of this Court *(www.highcourtchd.gov.in)* as 5 stars. This is the only High Court to get 5 stars for its website.
>
> **RAJESH BINDAL**
> Hon'ble Justice
> Punjab & Haryana High Court
> Chandigarh

ISHiCo-Index Page

ISHiCo (Integrated Software for High Court)

With the change in technology and information requirements, an Integrated Software for High Court (ISHiCo) a complete case management software was developed by NIC High Court Team for Punjab and Haryana High Court. It meets the requirements of all high court staff, advocates, litigants, Advocate General Offices, various state Govt. departments and public. It also provides inputs to various information dissemination channels such as display boards, touch screen information kiosks, SMS Service and web portal. During 2010-11, complete ICT Infrastructure i.e. LAN/ Security/ Desktops/ Servers/ OS/ Database were upgraded.

Key Features of ISHiCo

• Online e-Filing System for filing cases on any where any time basis a step towards paperless Court regime. e-Filed cases are listed on next day of filing while cases filed in hard copy are listed after a gap of one working day. AG Haryana, AG Punjab and UT Administration are filing all cases through e-filing. Till 31-03-2018, 104315 cases filed through online e-filing module available on phhc.gov.in. On an Average 225 cases are being filed daily through e-filing. This system also facilitate case Filing at Counter. Provisions to capture case Details such as FIR, Complaints, lower court case, Land acquisition, Impugned orders, Print Connectivity etc.

• Caveat Filing/Registration/Matching on various parameters like FIR, Complaints, Land Acquisition, Lower Court Cases, Impugned Orders, Improvement Trust case etc.

• Automated, secure and robust case allocation/ listing as per the roster.

• Communication of Case Proceedings to litigants, advocates, departments, AG Offices through SMS, Touch Screens, Digital Display Boards and Web Portal.

• Digitally Signed Orders/Judgments to do away with physical file movement for issuance of certified copies.

• Workflow based delivery system for certified copy and Inspection Branch to facilitate easy certified copy applying process, costing and preparation and delivery. Mechanism for delivery of uncertified copies in pdf format is also developed and running successfully. On the footprints of Copy branch the computerization of the Inspection branch is also done.

• Digitally signed bail orders to lower courts through email to facilitate the release of prisoners in shortest possible time.

• Issuance e-Notices to Government departments Advocate General offices and insurance companies

• e-Diary System: e-Diary system helps advocates, government departments, Advocate General Offices of Punjab and Harayna, universities, Standing Counsel of UT Chandigarh, Union of India etc. to create personalized diary of their cases to track status, daily orders/ judgments, paper book of any decided case and of concerned pending cases. There is a facility to auto-updation of case information in e-Diary system from High Court Database. Till 31-03-2018, 3,734 e-diary accounts (3,173 Advocates and 561 Departments of Punjab, Haryana, U.T. Chandigarh, Union of India and other States) have been created.

• Personnel Information System for Judicial Officers apart from maintaining personal details, qualification, transfers and postings, salary and leave details of judicial officers also displays the proceedings/ judgments given by the Hon'ble High court w.r.t. cases decided by them in lower court and appealed in High Court to improve upon.

• Online Paper Book service provides all the scanned paper books wherein State is party through intranet to AG Punjab, AG Haryana, Union of India, and Standing Counsel for U.T. More than 2 lacs paper-books are available on this server. This is the only High Court which is providing Digitized Paper books to Advocates and Departments through their online e-Diary accounts.

• Comprehensive Audit logs to increase the accountability.

• Only information insert and update is allowed.

Video Conferencing

In the states of Punjab, Haryana and Chandigarh UT, all courts and jails have been provided with VC facility. Punjab and Haryana high Court is the first High Court which has also implemented software based dedicated VC solution (VIDYO) with recording facilities. VC facility is being used for securing the presence of under trials for judicial remand, for recording of evidence of doctors, Judicial Officers, outstation witnesses including NRIs/ foreign citizens and other formal official witnesses etc. This facility has resulted in enormous saving to the state in terms of cost and also man hours of the police officials, doctors and judicial officers etc. apart from saving their time for other official duties. Total amount spent on VC was 10 Crore and total savings on account of travel expenses alone was around 50 Crore. (* Travel expenses of Doctors for

evidence recording and Jail inmates for remand work)

Digitization of Judicial record

Entire Judicial record of the decided and pending cases amounting 14.7 Crore pages of 26.25 Lakh cases has been digitized resulting in vacating about 15,000 sq. feet valuable space in the High Court complex. 232 tonnes of weeded out waste paper was discharged directly in the pulp tank of the paper mill, thereby eliminating any chance of misuse.

Digitization of MLR/ PMR records

The MedLEaPR (Medico-Legal Examination & Post-Mortem Report) System is a workflow based and web based centralized system for preparation of MLR/ PMR, as per legally approved forms related to MLRs and PMRs, which provides requisite access security based on roles & responsibilities of concerned Doctors, Health institutes etc. The software is generic in nature and has been implemented in Haryana, Punjab, Chandigarh UT since 2012. Rajasthan and Madhya Pradesh are also in the process of adopting the same system. All Laboratories (CFSL, FSL, Food Lab, Drug Lab, Chemical Lab, Excise Lab of Punjab, Haryana & Chandigarh) reports have been computerized and linked with MedLEaPR system since 2016. The efforts have been made to integrate Lab reports with CCTNS system and other stakeholders systems.

Information Dissemination Channels

The case status and other relevant information like Judgments, orders, notices, paperbook, adjournments, certified copy status, costing, etc. are disseminated by the high court using following channels:

Website

Complete up-to-date information regarding cases status is available on the web site of this High Court *(https://phhc.gov.in)*. National Portal of India has rated the website of this Court (www.highcourtchd.gov.in) as 5 stars. This is the only High Court to get 5 stars for its website.

Touch Screen kiosks

There are 45 touch screen kiosks installed in the premises of this high court from where the users/ advocates can check the latest status of their cases.

Display Boards

The live status of the current listed case in each court can be found on the display boards. They are installed in every Court Room, outside of every court Room as well as in the corridors.

SMS

All the case status update information e.g. filing objection, case registration, next date, case status, copy apply, copy preparation, copy delivery, inspection file availability is sent to the concerned parties via SMS. Till 31-March, 2018, around 50 Lac SMSs were sent.

Benefits accrued from Automation

• Issuance of certified copies directly from digitized records depository as it is digitally signed.

• Availability of records of decided and pending cases for court reference in soft form

• Facility of inspection of case files in soft copy from DMS (e-Inspection)

• To provide scanned paper books to the offices of Additional Solicitor General of India, Advocates General of Punjab and Haryana, and Senior Standing Counsel, U.T Chandigarh, through 'paperbook server' on intranet.

• To provide paper books to the all e-Diary account holders.

• Use of digitized records for issuance of e-notices by court.

• To send digitally signed bail orders to the courts below and the jails for early release of the prisoners.

• In cases where notices are accepted by the State counsels in court, the officials from concerned department/ districts used to be called to AG Office to collect copies of paper books. With digitization of entire record, copies of paper books are now sent through e-mail

• Any hard copy of paper book, if lost, can be reconstructed without any loss of time, if required.

• Digitization has made paperless court a reality.

• Physical file movement reduced

Online Services to Various Stakeholders

The success of any system depends on the services offered to various stakeholders. In this case the stakeholders are Litigants, Advocates, Departments, Advocate General Offices, Punjab & Haryana High Court staff, Hon'ble Judges. Following services are being offered to various stakeholders

Advocates

• e-Filing, Case Filing, Re-filing, Caveat Filing, Certified Copy, Inspection

• e-Diary, Paperbook Availability

• Status through SMS, Website and Touch Screens

• Cause List for Bar

• Current status of in progress cases through Display Boards

Litigants

• Case Status through SMS, Website and Touch Screens,

• Cause List,

• Current status of in progress cases through Display Boards,

• View orders on website

• Status and Costing of Certified copies

Departments

• e-Diary, Paperbook Availability,

• Case Status through SMS, Website and Touch Screens,

• Cause List,

• Current status of in progress cases through Display Boards,

• View orders on website

• Status and Costing of Certified copies

• e-Notices to Insurance companies

DSC SIGNER
A cross-platform, browser independent plugin-free Digital Signature Solution

DSC Signer is a cross-platform, browser independent solution for digital signature using DSC tokens. The DSC Signer comprises of two components namely a client-based component and server-side API. DSC Signer solution is supported in all the major operating systems viz Windows, Linux and MacOS.

T. MOHAN DHAS
Dy. Director General & SIO
mohandhas.t@nic.in

T. EDWARD SAM
Technical Director
edwardsam@nic.in

ARUN K. VARGHESE
Scientist B
arun.kv@nic.in

Edited by
REUBAN K

At present, most of the government services are provided through online and the certificates are issued electronically as a PDF document to the citizen. Most of these certificates are signed digitally to provide authenticity, integrity and non-repudiation. The digital signature also provides a viable solution for creating legally enforceable electronic records. An applet based digital signature solution was developed and integrated with the web applications developed using various technologies. The support for applet has been withdrawn from JDK 1.9 and major browsers are also not supporting the applet due to security threat.

DATA SIGNATURE
- To protect integrity of records in a database
- Data signatures comply Cryptographic Messaging Standards
- Signature is a combination of the signature bytes and the certificate byte
- Signature is not attached to the signed data (detached)
- Verification service provided at server side to check integrity of data

OVERVIEW
DSC Signer is a cross-platform, browser independent solution for digital signature using DSC tokens. The DSC Signer comprises of two components namely a client-based component and server-side API. The client-based component is installed in the client machine as a background service. The signing of data is carried at the client side and the verification of signature is carried out at the server side. The solution is capable of signing data, PDF and XML documents. The solution is also capable of signing PDF files with visible signature stamping in the document. DSC Signer solution is supported in all the major operating systems viz Windows, Linux and MacOS. The solution can be integrated by applications developed in Java, PHP and .NET etc. The server API can be exclusively used by a project or shared across many projects.

KEY FEATURES
- Browser independent and plug-in free solution
- Supports data, PDF and XML signing
- Supports all major client operating systems like Windows, Linux and macOS.
- Supported by all major browsers like Google Chrome, Mozilla Firefox, Microsoft Internet Explorer and Apple Safari.
- Easily integrated with any application irrespective of the technology.
- Generated in PKCS#7 Cryptographic Messaging Standard, the signature is interoperable across various applications.
- The DSC Server-side API service can be hosted centrally and shared across different applications.
- Certificate Revocation List (CRL) check may be done using daily updated CRL files while registering certificates and during the signing process.
- Supports auto-token-detection and configuration of digital signature certificate tokens on signing attempt.
- Digital signature stamping in the PDF document.
- Wet ink signature placement on last page on all pages.
- Server time is used for PDF signing.
- Time stamping of PDF documents using trusted Time Stamping Authority (TSA).

Process-flow for Digital Signature Solution   Digital Signer Solution Architecture

SOLUTION ARCHITECTURE

The DSC signer solution provides three components namely a client-side tool to carry out the signing process, a set of wrappers that helps the application to access the DSC signer APIs from a browser and a server-side service that enables the registration of DSC prior to signing and verification of a signed content. The server-side component is provided as a war file that can be hosted in a web container. The client component of DSC client tool is provided for Windows, Linux and macOS platforms. The appropriate version of the tool is to be downloaded and installed in the client system depending upon the operating system of the client.

CLIENT SIDE SERVICE

The client-side service is a Java application running on the end-user client machine and facilitates registration of DSC, and signing using a DSC.

The client-side service consists of two components:

DSC SERVICE

It is a background service, which listens for USB device attached or device detached events. When a DSC token is attached, the DSCSigner component will be started and the component will be stopped when the USB token is detached.

DSC SIGNER

It provides REST API based access to the PKCS#11 token stores and facilitates certificate selection and signing operations. It provides basic methods to initial-ize and authorize the PKCS#11 token store, read public key certificate informa-tion, and sign data using the private key after validating the token pin.

CLIENT HELPER LIBRARY

The client-side helper library is a Query based helper library that can be used by the developer to access the DSCSigner APIs from an application running on the client browser. The client helper library can be referenced in web application pages that provide DSC registration and signing functionalities.

SERVER-SIDE API

The server-side API provides the server-side functionalities such as verification of certificate, decryption and verification of a signature content and decryption of a signed PDF file. The server-side API provides a Restful interface which needs to be consumed by applications developed in any platform.

PDF SIGNATURE

- Signature and signing certificates are embedded in the signed document

- Signed PDF is tamper-proof and can be exchanged and trusted by the receiver

- At the time signing, Server time used for signing to ensure the validity of certificate

- Trusted Time Stamping service (TSA) integration to embed a trusted timestamp

- Provision for wet ink signature and digital signature stamping at a given location

- Signature can be verified by any user using popular PDF readers

XML SIGNATURE

- XML is a popular format for data exchange across different applications

- Signature and signing certificates enveloped in the XML document

- Used in secure data exchange and to establish cross application trust

- Verification services are provided for quick verification of signed XML

DSC SIGNER SETUP AND USE

- Install DSC token driver corresponding to your token

- Install DSC Signer client application by running the installation setup

- Plug-in the DSC token

- Verify whether the DSC Signer is running (see tray icon)

- Register certificate with the web application by providing the PIN (one time)

- Signed by providing PIN when requested

Right course for a right student
With a suitable scholarship too – an AI approach

The possibilities are endless with the development of Artificial Intelligence based tool which can help and guide the students in selecting the suitable branch of higher studies in their area of interest to achieve their career objective.

S. DEVARAJAN
Sr. Tech. Director & DIO
s.devarajan@nic.in

P ARUMUGANAINAR
Technical Director & ADIO
arumuganainar@nic.in

With a wide range of educational institutions, multitude of courses with dissimilar course duration, varied culture of Indian cities, complicated admission processes and with plenty of future career options, present day Indian School students are ill-equipped to make the right decision as they often lack relevant and updated information for their easy admission to Institutes for Higher Education. Artificial intelligence (AI) can help the students in navigating this information maze and simplify the process of choosing the right course in a right Institute.

Analysis of primary and high school level data of students along with their social and economic profile will add more value in the AI based course selection in Indian Universities and identification of eligible scholarships for them.

Till the Secondary school level, course or stream selection is much simpler for the students. But when it comes to higher education, the decision making becomes tougher with the availability of plenty of choices in terms of courses and Institutes. Moreover, it is often difficult to change the stream once chosen at the under graduate level. Several factors affect the process of selection of course and institute. They are: Student's area of interest, Scope of the course, Eligibility criteria, Probable career options, Geographical location of the Institute, Reputation of the Institute, Course fee, Counselling and admission procedures etc. The biggest problem for the students looking for higher studies is usually the combination of their complexity and the paucity of time for completion of the entire process. While gathering all the above information, in most of the cases, a student relies on his/her parents, friends, social media, relatives and teachers. But in most of the cases, one does not get a comprehensive and suitable input and advice. Even after performing well in their final qualifying exams, many students fail to get admission in the colleges and courses they deserve due to the lack of proper inputs and confusion during the process.

DATA FACTS

Artificial Intelligence can bridge this information gap and help students in the process of choosing the right course in a right Institute. Artificial Intelligence can also identify the suitable educational financial support from the variety of available scholarships. In the near future, Indian Higher Education System (IHES) would be able to optimise the student admission process using Artificial Intelligence. In order to put the above idea into practice, various data sets need to be designed under the Digital India Programme of Government of India as elucidated below:

STUDENT PROFILE

All students may register their exact profile in a Digital India platform which is to be specially designed for this purpose. The Student profile may contain the details of his/her educational profile, area of interest, future career plan, achievements, socio-economic details of the family, geographical, linguistic and religious details. This student data set is a fact file of a student who is seeking admission for a course in higher education which is suitable with his area of interest and in line with the expected career plan.

EDUCATIONAL INSTITUTES DATA SET

With 700 Indian Universities and more than 35,000 affiliated colleges enrolling more than 2 crores students every year, higher education in India is truly a very large and complex system. A massive data set may be compiled with the details of all nationwide educational institutions, which has the entire details like available courses, eligibility criteria, mode of

admission, fee structures, course duration, specialized subjects taught, hostel details, socio-economic Government welfare schemes in the institute, geo-location of the institute and future career options related to the course. In addition to all the above, feedback provided through social media by students of the institutions will also be collected and all are to be linked to this Data Set.
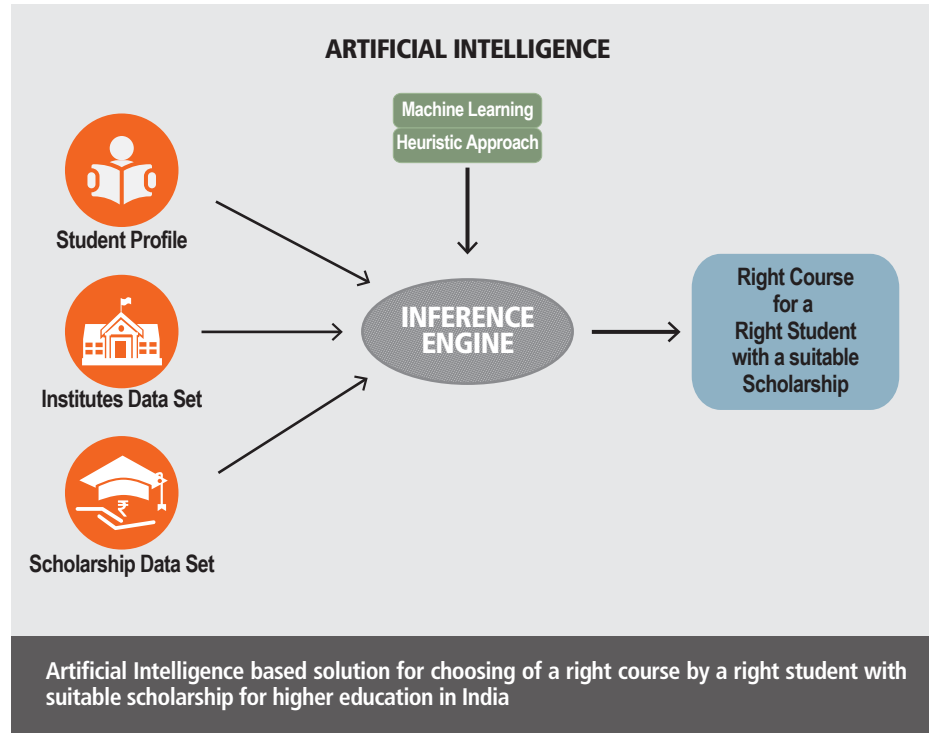
SCHOLARSHIP DATA SET

For the benefit of the students from socially and economically weaker sections, many scholarship schemes are being implemented by Central and all State Governments. But unfortunately, due to lack of awareness, many students are unable to take advantages of the schemes. Hence, another data set may also be designed with social, geographical, linguistic, religious and educational eligibility details, scholarship amount etc. This data set may contain all the Scholarship particulars of both Central and all State Governments of India.

AI BASED ANALYSIS

Keeping the above three different data sets namely Student Profile, Institutions Data Set and the Scholarship Data Set as base files of facts, the AI tool can co-relate to find all possible matching courses from various Institutes and suggest probable scholarship supports with incredible accuracy in an unbiased manner.

Thus, AI can crunch through these three different data sets and figure out which course tends to lead to that outcome that matches a student's profile and provides the best answer without any pre-defined and biased solutions. Heuristic approach is one of the AI techniques which serves as an aid in problem-solving by experimental and especially by trial and error methods. This approach will also be able to find a solution for problems which are too complex in nature. This will be able to find a guaranteed best possible solution for each student. In addition to helping in the process of discovering the right course, such AI-driven systems are much faster and can help save countless hours of effort on the part of students. Based on the educational, social and economic

Artificial Intelligence based solution for choosing of a right course by a right student with suitable scholarship for higher education in India

profile of each student, the heuristic approach will open all eligible possibilities in Indian Institutes and a variety of courses which they have never considered or even heard of. Even AI can guide students on each and every stage of their life, beginning from their school days, by analysing educational, social and economic profile of each student with the available variety of courses in Indian Universities. Along with the selection of the Institute and Course, the same Heuristic approach of AI may also find exact matching of various Government Scholarships which suits both the student and the course.

OTHER SERVICES

With year-wise increasing size of the data sets, AI can contribute to the entire process in a variety of different ways. Machine learning is also an AI technique which can have exposure to various data sets and self-improvement. It can be used for self-developing models to process data and make predictions on choosing the right course for each student. Students can define a career objective or designation they want to attain in the future, and use the system to select the right degree accordingly. In addition to above, some value added services can also be incorpo-

rated for the benefit of the students. Alert SMS and e-Mail can be sent to students on the starting of various admission processes, entrance examination details etc. Above all, this platform may also perform as a career guidance portal for the students, right from their school days based on their fact file from time to time. By continuously analysing the students' data in the background, AI can also lend a hand to students to plan and set a target in terms of activities and scores for the best universities in India right from their school days.

CONCLUSION

The possibilities are endless and the technology is here to stay. Choosing of an accurate course by Indian school students will not be much complex like earlier. AI will pave a new way forward and derive easy methods under Digital India.

Appscape

Along with the innovation in technology, the use of Mobile Applications has increased in e-Governance. Number of Mobile Applications on NIC Mobile Appstore portal (https://egovmobileapps.nic.in) has increased to 333. More and more Mobile Apps are getting uploaded on iTune and Play Store under NIC account. m-Governance is complementing e-Governance by providing more accessible services to G2G, G2C, G2B areas.

Most of the times, the development of a Mobile Application starts with native technology that is Android or iOS. Hybrid Mobile App development is becoming popular and takes advantage of HTML, CSS and JavaScript for Mobile App development. However, none of the single platform is the best. Based on functional and performance requirements, a suitable technology may be chosen. In case of frequent changes in application where it has to run on multiple platforms, Hybrid Mobile App may be chosen. In cases, where there is a need of rigid access to hardware and other platform specific features are required, we may opt for Native Mobile Application development.

In this issue, Appscape covers Mobile Apps from various sectors such as Rural Development, Transport, Education, District Administration, Agriculture, and Judiciary. GSA 18 is a GPS based Mobile Application developed for tracking and monitoring the activities performed during Gram Swaraj Abhiyan. Khatara Gaadi empowers citizens to identify and report obsolete vehicles to Transport Department. Lakshadweep Course College Information App provides information for courses, colleges and number of seats available for e-Counselling. Delhi Online Registration Information System (DORIS) is for checking the property registered with Revenue Department. E-Litigation Mobile App enables to get real time daily information status of pending court cases of the Government in Meghalaya. MP LandRecords facilitates single window access of land ownership documents along with other departments information. Dairy Farmers Survey App is for Department of Dairy Development (Govt. of Kerala). iExaMS-DHSE-Kerala helps students to get detailed result on their mobile.

- C.J. ANTONY, NIC HQ

For Apps uploading queries:
email: mobileapps-nic@nic.in
Phone: 011- 2430 5494 (Deepak)

Visit the Mobile App Store
**http://egovmobileapps.nic.in**

GSA 2018 Mobile App

The Ministry of Panchayati Raj (MoPR), in coordination with the Ministry of Rural Development, GoI has organised Gram Swaraj Abhiyan(14th April - 5th May, 2018) and extended Gram Swaraj Abhiyan (1st June -15th August 2018) campaign in partnership with various Ministries like M/o Petroleum and Gas, M/o Health & Family Welfare, M/o of Finance, M/o of Power, M/o Skills Development, M/o Social Justice & Empowerment, M/o Agriculture, M/o Women and Child Development. The campaign aims to promote social harmony and saturate the 7 flagship schemes of the Government in appox 65,000+ Villages across India. GPS based Android and iOS Mobile Application GSA 18 is developed to track & monitor the activities during this Abhiyaan.

Among the various features offered by the App, some prominent ones are: GPS based App for auto-detecting location, Image upload captured from conducted activities, User friendly with ease of operation, Auto routing mechanism for image and testimonials moderation/ verification, Geo-tagged and Timestamped captured media, Seamless operation in low internet connectivity areas and Bilingual language support for both English and Hindi. The App has been developed by NIC and is offered under NIC e-Gov Mobile Apps. It already installed for more than 50,000 users. More than 70 lac pictures and approx 1 lac testimonials have been uploaded using this App during GSA 18.

Contact for queries: Prashant Kumar Mittal (pk.mittal@nic.in)

https://play.google.com/store/apps/details?id=rural.gramswarajabhiyan
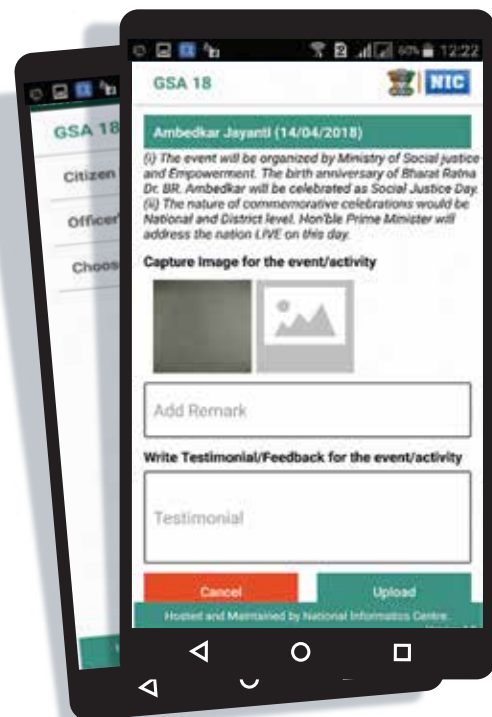
Khatara Gaadi App

Khatara Gaadi App is a joint initiative of e-Transport, NIC and Delhi Transport Department.

"Spotted a junk vehicle in your neighbourhood wasting parking space?" Now people can report it through a mobile application -'Khatara Gaadi'

In Delhi, any petrol vehicle above 15 years age or any diesel vehicle above 10 years age is not allowed to be parked. Many such old, junk vehicles are illegally parked in public spaces or road-side and clutter the city.

The App will empower citizens to identify and report such vehicles in a very easy and effective manner, which will then be towed away by the Transport department/ Civic Body. Citizens will just enter the vehicle registration number and the App will connect them with the back-end National Database and confirm if it is an old vehicle. Users can now click the photograph of the vehicle, which will be sent directly to the control room of the Transport Department. The photos would be geo-tagged, which will help the department to find the location of the vehicle to be towed. Reporting person's identity will be kept confidential. The App is available on both Android and iOS platforms. Through this initiative, citizens will help to make the city clean and clutter-free.

Contact for queries: Joydeep Shome (joydeep@nic.in)

Lakshadweep Course College Information App

The App is developed to provide information of courses, colleges and number of seats available for the courses in a college under a particular university for e-Counselling. Online Seat allotment through e-Counselling is conducted by the Education Department every year at Lakshadweep for allotment of Seats in various colleges for higher studies in mainland, for post SSLC, Post-Plus 2 and PG courses. The process ensures transparency in allotment process. The information of course, college, university and number of seats is available in the e-Counselling site. Due to slow network, it is not very convenient for the islanders to view/ download this information every time from the site. Besides, Mobile Apps are very handy and easy to use. With this purpose, this App has been developed with offline data. Also, the App will provide updated information during the period of Counselling. Students and parents get prepared for counselling and hence, the time taken to select the course and college of their choice can be reduced.

The App was developed with the co-operation of the online counselling team. The application provides details about Universities (available for selection), College details (Colleges under the university), Course details (list of colleges where a particular course is offered) and Seat Availability.

Contact for queries: Reji.S (reji.s@nic.in)

https://play.google.com/store/apps/details?id=com.nic.khataragaadi

https://play.google.com/store/apps/details?id=in.nic.reggie.lakshadweepcoursecollegeapp

DORIS App

Delhi Online Registration Information System (DORIS) is for the users who want to check property registered with Revenue Department, Delhi. Users can search their queries by entering Registration year, Book number, first party name, second party name, property address etc.

DORIS has been developed with the objective to provide Single Window Services, timely registration and transparent & reliable transactions. It is a tool to monitor the revenue generated out of registration. Keeping future trends and requirements in view, DORIS has been designed and developed using user-friendly windows based technologies.

DORIS automates all major activities of Sub-Registrar office and covers deeds (27) of Sale, Mortgage, Will, Adoption, SPA, GPA, Exchange, Pattanama/ Lease, Tatima etc. Major features include token issuance, online capturing, storage, printing of photographs on stamp paper, valuation of property etc. The system is integrated with land record and at present, all agriculture transactions in DORIS are reflected through auto mutation in land record. It has been implemented in all 22 SRO offices in Delhi.

Daily Registration data from all the locations has been saving to State Data Center (SDC) since 1st April, 2017. Deed templates are also available on Revenue Department's website.

Contact for queries: Sumpan Bakshi (bakshig@nic.in)
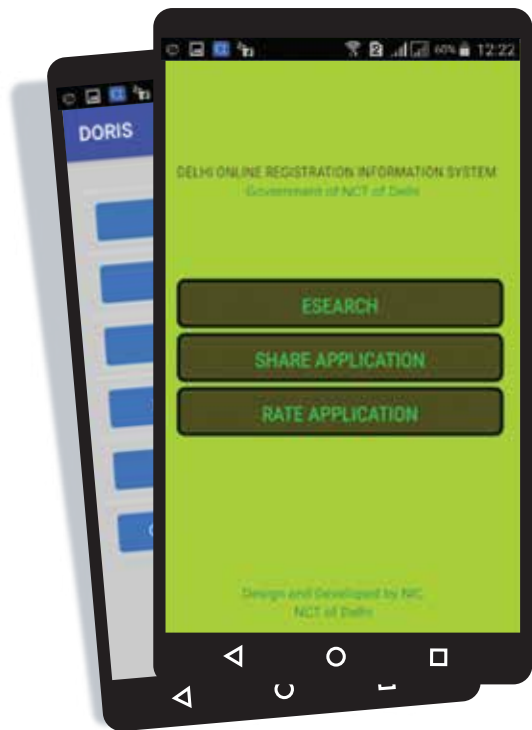
E-Litigation Mobile App

Objective of the Mobile App is to check real-time daily information for Government court cases' statuses that are pending in various departments in Meghalaya. The e-Litigation application is an online Court Case Monitoring System that enables the stakeholders to update the court cases which are pending in the departments. It not only provides a tool to departments to monitor the pending court cases but also streamlines the process of engagement of Government counsels for the cases. The Mobile App has updated information for all pending cases in its database.

Using the App, one can search the status of the case by entering different parameters. User can get the updated details of the case.

App can also be used by the citizens to search any pending cases and get the status, provided they know the case number, party name and name of the counsel engaged by the Government to take up the case. They can have access to information from anywhere. Users are allowed to view the data only, making changes of the data is prohibited. To use the App, the user should have a 3G/ 4G mobile phone connection.

Contact for queries: Benos Lyngskor (benos.lyngskor@nic.in/)

https://play.google.com/store/apps/details?id=com.nic.doris

https://play.google.com/store/apps/details?id=com.elitigation.mobile

MP LandRecords App

'MP LandRecords' has been launched as a citizen centric Mobile App to serve and empower land owners of Madhya Pradesh to deliver excellent grassroot governance. Land records data comprises of 43 million Khasra (Plot/ Survey) and 15 million landowners from 55 thousand villages. The App facilitates single window access of land ownership documents along with other departments information such as office orders, gradation list, exam results and important telephone numbers of Land Record officials.

Earlier, it was difficult to get ROR details if patwari halka or RI circle of a village was not known. To overcome this problem, an option is added in the Android App. With this, users may now click directly on village. Just after the selection of District, users get alphabetic list of Villages. They may directly select village from the list to get details of Khasra, Khatauni & Naksha of the land on their smart device.

The App was launched on 23rd July, 2014 and approx 1.25 Lakhs users installed it. The next version launched on April, 2018 has 9,275 downloads and more than 26 Lakhs hits since release.The App is designed and developed by Land Records Division, Madhya Pradesh for the Commissioner, Land records & Settlement, Madhya Pradesh.

Contact for queries: Rajeev Agrawal (agrawal.rajeev@nic.in)

Dairy Farmers Survey App

'Dairy Farmers Survey App' is an e-Gov App for the Department of Dairy Development (Govt. of Kerala) and Dairy Co-operative Societies. Dairy Survey Questionnaire serves as a primary data collection instrument for the Dairy Department's estimation of Milk Production, Fodder availability, Infrastructure facilities, Land holdings, Location details and Farmers profile etc.

This App can be used by the Department personnel for recording and synchronising the Dairy Farmers details by making face-to-face interactions with them. The geotagged Survey details are recorded in the App while conducting the field level survey and the same is synchronised with the local server periodically or when the survey is completed.

NIC has developed and tested the Mobile App to meet data gathering requirements of the Dairy Department. The offline Survey App is designed for face-to-face interactions with farmers. The data can be used for various analysis and tabular reports.

Services offered by the App include Family Members Details, Land Area, Major Crops, Fodder Types, Drinking Water Resources, Cattle Population, Total Milk Procurement, Cattle Feed Availability, Cattle Shed Modernization, Cow Dung Usage, Photo of Farmer, Photo of Cattle Shed, Photo of Fodder Land and GPS Location of Survey Area.

Contact for queries: E.K. Simon (simon.ek@nic.in)

https://play.google.com/store/apps/details?id=in.gov.mp.landrecords.lrmp

https://play.google.com/store/apps/details?id=org.dairysoftware.dairyfarmers

SKOCH AWARDS

The Skoch Awards are based on the philosophy of spearheading positive socio-economic changes through recognising persons who have contributed immensely to salutary transformations in society and governance by displaying exemplary leadership abilities. These Awards recognises individuals, highlight projects and focus institutions that go the extra mile to make India a better nation.

A. e-Labour Punjab bagged two SKOCH Awards including Gold Award

Award received by Shri Sarbjeet Singh, Sr. Technical Director, Shri Navinder Kumar Sharma, Scientist-B, Shri Satyender Kumar, SIO Punjab.

B. Rythu Bandhu Application developed by NIC, Telangana Bags two SKOCH Platinum Awards

Award received by Shri C. ParthaSarathi, Principal Secretary, Agriculture Department, Telangana State along with Shri N. Suresh Kumar, Technical Director, Shri NCHR Chakravarthy, Scientist-D and Smt. M. Sailaja, Scientist-B

C. Integrated Online Junction on Net for Decentralised District Planning Workflow based System bagged SKOCH Award

Award received by Shri Atul Khunti, DIO, Junagadh (Gujarat)

D. NIC Madhya Pradesh Received SKOCH Gold Awards for the project M.P Cooperative Judicial Management System (MP-CJCMS)

Award received by Shri Musharraf Sultan, Technical Director, NIC Madhya Pradesh

Gems of Digital India Awards 2018

Coeus Age Consulting who have been promoting and encouraging e-Governance initiatives through their Gems of Digital India Awards since 2017, unveiled the 51 Gems of Digital India, 2018 in a glittering ceremony at the Hotel Shangri La- Eros, New Delhi on 13th June 2018. The discovery of the Gems of Digital India is a result of a year-long continuous research process that culminated in felicitating the 51 path breaking e-Governance projects.

Awarded projects were selected by studying numerous projects across the country under Digital India initiatives by leading Analysts.

A case study that documents the success of each of the 51 Gems of Digital India was also launched in the form of a book at the awards function. Some of the members receiving respective project awards are pictured here.

For more details please visit:
http://maximumgovernance.com

A e-PDS Application & Annavitran Portal (Analysts' Choice)

Award received by Shri Gautam Ghosh, DDG, Shri G. Mayil Muthu Kumaran, Scientist-F and Shri BVC Rao, Scientist–F

B S3Waas (Analysts' Choice)

Award received by Smt. Alka Mishra, Sr. Technical Director, Shri DP Misra, Technical Director, Shri Sandeep Gupta, Scientist-C, Shri Sagar Kohali, Scientist-C, and Shri Varun Gupta, Scientist-C

C Road Transport -Haryana (Analysts' Choice)

AAward received by Shri Deepak Bansal, SIO,and Shri Sanjay Sharma, TD, NIC-Haryana

D IFMS/ e-Treasury -Haryana (Analysts' Choice)

Award received by Shri Deepak Bansal, SIO and Shri Jagdeesh Mehendiratta, Scientist-D, NIC-Haryana

E IFMS Rajasthan (Analysts' Choice)

Award received by Shri Tarun Toshniwal, SIO along with NIC-IFMS Development team Rajasthan

F NIC National Cloud (Analysts' Choice)

Award received by Shri Vijay Kumar Vishwakarma, STD & HoD (Web-Hosting and Cloud Services), Shri Ashok Kaul, STD & HoD National Data Centre, Shri Anupam Johri, Technical Director and Shri Hemant Chopra, Scientist-D

G. e-Prisons Suite (Analysts' Choice)

Award received by Shri Vinay Bhushan, Technical Director and Shri Rakesh Kumar Srivastav, Scientist-D

H. Manav Sampada Software - Himachal Pradesh

Award received by Shri Sanjay Kumar, Technical Director and Project Head, Shri Rahul Sharma

I. Soil Health Card Portal (Jury's Choice)

Award received by Smt. Pratibha Ramesh Lokhande, Senior Technical Director (c), Smt. Anju Kapoor, Scientist-D and Smt. Tanu Dhawan

J. K-KISAN, Karnataka (Analysts' Choice)

Award received by Shri S. Karthikeyan, Scientist-D, NIC-KSU (K-KISAN Team), Bangalore

Singapore e-Government to implement skill development programmes in India

The Singapore e-Government Leadership Centre (eGL) at the National University of Singapore's Institute of Systems Science (NUS-ISS) and National Skill Development Corporation (NSDC) under the Ministry of Skill Development and Entrepreneurship, government of India have come together to collaborate with each other on the skilling initiatives for India's workforce.

The two parties signed a Memorandum of Understanding (MoU) to enhance the skills in India's workforce during India Prime Minister Narendra Modi's visit to Singapore from 31st May to 2nd June 2018.They will work together to develop and implement skill development programmes across emerging technology areas like Data Analytics, Artificial Intelligence and Robotics. They will also cooperate and collaborate further especially in the areas of vocational training on new-age technologies, training of trainers and assessors, and promoting life-long learning.

NUS-ISS through its e-Government Leadership Centre will provide advisory to NSDC and industry driven bodies known as Sector Skill Councils (SSCs), and develop strategies for incorporating emerging technologies into existing skill training programmes in India. For job roles in the area of emerging technologies where national occupational standards and courses have yet to be developed, eGL will guide NSDC and SSCs to develop standards, courses and certification opportunities for these job roles. The aim is to equip Indian workforce with Future Skills and secure employment in these emerging areas. Speaking on the partnership Mr. Manish Kumar, MD &CEO,

NSDC said, "NSDC endeavours to work closely with leading institutions like NUS to identify the future of skills and develop the required competencies in India. Currently there is a large demand for new age skills, which serves as a huge opportunity for our youth. I am sure that through this collaboration with NUS-ISS, we would create training opportunities that could fulfill the aspirations of our youth and help us keep pace with the technological changes in the world."

India's vision to be the skill capital of the world Championing the Skill India mission is the Government of India through the Ministry of Skill Development and Entrepreneurship formed in November 2014. Over the next 3 years, it is estimated that more than 25 million youths will be skilled and certified through various programmes under the Ministry, training Indian youths and professionals on International Standards and develop quality assurance framework.

Source: https://economictimes.indiatimes.com

ESCAP launches its new online platform on social protection for Asia-Pacific countries

An innovative online platform that supports countries to build inclusive social protection systems through dynamic and interactive functions was launched on 9th April, 2018 in Bangkok by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP).

The user-friendly, Social Protection Toolbox, identifies national coverage gaps and provides countries with over 100 good practices for inspiration and cross-country learning. The Toolbox also features capacity and knowledge building, in-depth studies, learning modules, videos, as well as a quiz. The aim of the Toolbox is to support countries in Asia and the Pacific to better realize the potential social protection plays in achieving the Sustainable Development Goals (SDGs). In simple and easy-to-understand ways, it explains the basic principles of social protection and the impact it can have on poverty reduction, social cohesion, economic growth and the environment.

The Toolbox also features two new e-learning modules, developed together with Development Pathways, showing how investing in inclusive social protection can accelerate progress towards the SDGs, why universal schemes are better at reaching the poor than targeted schemes, and what policy options to consider when designing inclusive schemes.

A series of additional tools are planned throughout the year such as two new e-learning tools on how to administer and finance social protection and how to advance social protection for persons with disabilities.

Source: http://www.unescap.org

Hon'ble CM, Himachal Pradesh, launched JAN-MANCH Program, interacted with citizens

S hri Jai Ram Thakur, Hon'ble Chief Minister of Himachal Pradesh, launched a new program "Jan-Manch" on 26th May, 2018. The program aims to provide various services to common citizen at the field level by organizing monthly camps in remote areas.

Hon'ble Chief Minister interacted with few applicants who had lodged complaints in e-Samadhan (online Redressal of Public Grievances System) and their complaints have been disposed. These were selected randomly by the administration. The Hon'ble CM wanted to have first hand feedback from the applicants to know the quality of disposal in e-Samadhan. The CM office wanted that participants should interact with CM from their respective locations instead of visiting NIC studios. The objective was achieved by using VIDYO portal, a desktop-based Video Conferencing system of NIC. All the applicants were guided to install Vidyo Desktop App on their smart phones to participate.

The Hon'ble CM also launched two schemes namely; Mukhya Mantri Swavlambhan Yojna and Himachal Grihni Suvidha Yojna on the occasion. The other dignitaries present on the dais were his cabinet colleagues, MPs from Hamirpur, Shimla and Mandi constituency, Ex Chief Minister, Himachal Pradesh. A majority of the MLAs also attended the launch. PRI representa-

Shri Jai Ram Thakur, Hon'ble CM, HP interacting with Smt. Broniya Sharma, an applicant in e-Samadhan, attending from her Smart Phone using VidyoDesktop

tives were also among other invited guests.

The Chief Secretary, HP and Administrative Secretaries, HoDs of Departments and Deputy Commissioners also attended the launch function. Shri R.N. Batta gave a brief presentation on JAN-MANCH program. A small video clip prepared by NIC Himachal Pradesh, giving an introduction of JAN-MANCH program, was also played on the occasion. NIC Himachal Pradesh is also developing a software to monitor the activities of JAN-MANCH program which is likely to be held on the first Sunday of every month at 12 places across the state, covering 12 Districts and 12 Assembly Constituencies.

- SANDEEP SOOD, HIMACHAL PRADESH

Hon'ble Union Minister, Law & Justice and E & IT, Shri Ravi Shankar Prasad launched District website of Muzaffarpur, Bihar

H on'ble Minister of Law & Justice and E & IT Shri Ravi Shankar Prasad visited Muzaffarpur on 2nd June 2018 to review the action taken by District Administration to achieve targets under Aspirational District Scheme of Muzaffarpur. The review meeting was focused on the parameters which have been identified by NITI Aayog. On this occasion, the Hon'ble Minister launched the district website of Muzaffarpur (*https://muzaffarpur.nic.in* and *https://muzaffarpur.bih.nic.in*) on SWaaS and dedicated it to the people of Muzaffarpur.

He advised District Administration to incorporate the historical places and prominent person of the district by which people residing outside the country will be able to know the history of the district and contribution made by them in the development of the district and use the website as tools to move towards Digital India.

Hon'ble Union Minister addressing District Officials

During the interaction with Hon'ble Minister, District Magistrate, Muzaffarpur, Md. Sohail informed that e-Mandi for Muzaffarpur is to be launched soon which will provide a platform to farmers to get maximum value of their yield.

Shri Rajesh Kumar Singh, SIO Bihar and Shri P. K. Srivastava, Additional Secretary, Ministry of Home Affairs participated through Video Conferencing. Shri Navin Suman, DIO Muzaffarpur and Shri Praveen Kumar Jha, ADIO Muzaffarpur organized this event and it was concluded successfully. The Hon'ble Minister extended his thanks to all the officers.

- RAJIV RANJAN, BIHAR

Hon'ble Minister of Health and Medical Education, J&K Government, reviewed e-Hospital@NIC

Hon'ble Minister for Health and Medical Education, J&K Government, Dr. Devinder Kumar Manyal, chaired the maiden meeting of Health Department and also reviewed the functioning of e-Hospital@NIC project running at Govt Hospital Gandhi Nagar Jammu as well as at 02 District Hospitals, 04 sub-district Hospitals and 10 Primary Health Centres in J&K.

The Hon'ble Minister evinced keen interest during the demonstration on various e-Hospitals modules such as New Patient Registration, Follow-up, Revisit, Admission, Discharge, Scheduling, Laboratory, Blood Bank, Pharmaceutical/ General Stores, New Born Baby and recently developed and implemented a Partograph module. The workflow of Partograph module in e-Hospital matches the procedural steps being followed, in case a pregnant woman wells from her LMP stage to the delivery.

Hon'ble Minister reviewing e-Hospital presented NIC TEAM

The Hon'ble Minister appreciated excellent team work responsible for successful implementation of e-Hospital project in J&K and issued necessary instructions to work out possibilities for the replication of the solution in Govt Medical College Jammu/ Kashmir, along with other Health Institutes in J&K.

The Hon'ble Minister was accompanied by the Finance Secretary, Director Health Services, Jammu, along with senior officers of e-Hospital team from NIC in J&K.

- JIT RAJ, JAMMU AND KASHMIR

Hon'ble Chief Minister, Himachal Pradesh, launched S3WaaS Website of District Kullu and iOS Mobile App

Shri Jai Ram Thakur, Hon'ble Chief Minister of Himachal Pradesh launched the newly developed website of District Kullu on S3WaaS platform and the iOS (Apple) based mobile app of Rohtang Pass Permits at a function in Manali, District Kullu. The website has been redeveloped as part of NIC's national effort to shift all sites on the Secure, Scalable and Sugamaya Website As A Service platform. These sites have the advantage of adhering to GIGW and WCAG guidelines along with the hosting on secure https protocol.

As per the directive of Shri Ravi Shankar Prasad, Hon'ble Union Minister of Electronics and IT, GoI, Himachal Pradesh is the leading State in the country in converting the existing District Administration sites on the S3WaaS platform.

The NIC Hqrs has developed the S3WaaS platform for meeting the objective of secure, scalable, bilingual, GIGW compliant District websites.

On this occasion, Hon'ble MP Shri Ram Swaroop Sharma, Hon'ble Minister of Transport & Forest Shri Govind Singh Thakur, Hon'ble MLA Banjar Constituency Shri Surender

Shri Jai Ram Thakur, Hon'ble Chief Minister, launching the District Kullu Website

Shourie, Deputy Commissioner Kullu Shri Yunus, DIO-NIC Kullu Brijender Kumar Dogra, and District Heads of many Departments were present. The iOS App has been developed by Competency Centre for Mobile Apps, Shimla. Earlier, it was available on Android platform. The App will help tourists check the availablity of permits for a selected date, Permit Status, Validity of the Permit, Permit Download and FAQs.

For the S3WaaS website, Shri Vinod Garg, DIO Hamirpur and Shri Vijay Kumar, DIO Sirmaur guided, advised and are coordinating the entire effort in Himachal Pradesh.

-AJAY SINGH CHAHAL, HIMACHAL PRADESH

Hon'ble Chief Minister of Haryana launched 181 Antyodya Schemes of 14 Departments

Aligning with vision of the Hon'ble CM to ensure smooth and trouble free delivery of schemes to the Antyodaya (Rise of the last person) population, NIC Haryana, using ServicePlus framework, developed 181 schemes of 14 departments online, along with backend process flow for delivery through designated. Antyodaya Bhawan is located in different parts of Haryana. This would ensure that concerned people are benefitted on time. The delivery of benefit to the citizens is trackable online and the same will be ensured by the corresponding departments.

These schemes have been classified into 8 broad domains, Farmers, Women, Students, Unemployed, Labour, Health, Social Security and Financial Assistance. These schemes will be displayed through boards and banners in Antyodaya Bhawans so that citizens can become aware about the schemes for which they are eligible.

Haryana CM, Shri Manohar Lal inaugurating Antyodaya Bhawans in seven districts of the State through NIC Video Conferencing at District Kurukshetra

On reaching Antyodya Helpdesk with the help of an operator, the eligibility of a citizen for schemes will be ascertained by asking a few details. If the citizen decides to apply for a particular scheme, she/ he will need to take a token from the helpdesk and proceed to the scheme delivery area "Antyodaya Sewa Kendra". After completion of the application, the citizen will have the facility to track the status of application at a later date. Service charge per scheme is Rs. 10/. Antyodaya Bhawans will act as single stop center for the marginalised sections of the society.

– DEEPAK SAWANT, HARYANA

Pensioners ID Card Project inaugurated by Hon'ble Deputy Chief Minister, Tamil Nadu, Shri O. Panneerselvam

The 'Pensioners ID Card' Project has been inaugurated by Hon'ble Deputy Chief Minister, Tamil Nadu, Shri O. Panneerselvam, at a function held at Integrated Office Complex for Finance Department, Chennai on 16th April, 2018. Additional Chief Secretary (Finance), Commissioner/ Principal Secretary – Teasuries & Accounts Department, SIO&DDG (NIC) – TNSC and other officers from State Government and NIC attended the function.

NIC, Tamil Nadu State Centre has developed the 'Pensioners ID Card' module under ePension Software for collecting the additional details of Pensioners required for Pensioner ID Card viz Blood Group, Telephone Number, E-Mail Id etc., and this service has been integrated by Tamil Nadu Arasu Cable TV Corporation(TACTV) in eSevai Centers (Common Service Centres) operated by them. Pensioners can visit eSevai Centre and get the Pensioner's ID Card.

Commissioner/ Principal Secretary (Treasuries & Accounts Department), during his speech, appreciated NIC's efforts in the development and implementation of various software applications for Treasuries and Accounts Department.

Pensioners ID Card Project Inauguration by Hon'ble Deputy Chief Minister, Tamil Nadu, Shri O. Panneerselvam

e-Pension Software, developed and successfully implemented by NIC, TNSC since September 2013 for Treasuries and Accounts Department, Government of Tamil Nadu, covers all Pension related activities of the Department, covering around 7 Lakh Pensioners and is implemented in 32 District Treasuries including 240 Sub Treasuries.

Monthly Pension and related transactions like commutation, revision and arrears are paid through NPCI Payment System. A provision has been made for Annual Mustering of Pensioners through Jeevan Pramaan.

– R.GAYATRI, TAMIL NADU

Hon'ble Chief Minister of Himachal Pradesh, launched DARPAN CM Dashboard

S hri Jai Ram Thakur, Hon'ble Chief Minister, Himachal Pradesh, launched the DARPAN Chief Minister Dashboard, on 3rd April, 2018 at Shimla in a program organized jointly by the Department of IT, HP Government and NIC to launch 3 ICT initiatives.

Hon'ble Chief Minister, Himachal Pradesh, launching the CM Dashboard

The Hon'ble Ministers from H.P., Dr. Ram Lal Markanda (Agri-culture, IT), Shri Virender Kanwar (Rural Development & Panchayati Raj Cooperation), and Dr. Rajiv Saizal (Social Justice & Empowerment, Cooperation), were present on the occasion. Many Administrative Secretaries and all HoDs, NIC HP officers, Department of IT, GoHP officers were also present there. Shri Jagdish Chander, Principal Secretary (IT) Govern-ment of Himachal Pradesh welcomed the Hon'ble Ministers and Officers of the Government and briefed them about the CM Dashboard, DBT schemes and Aanganwadi Mobile Apps.

The Hon'ble Chief Minister, in his speech, encouraged the remaining departments to automate their back-end processes so that these are integrated in online mode with the CM Dashboard for better and effective monitoring of development works, grievances, announcements etc. He said that the usage of ICT in the Governance process is a must and that all Departments must ensure maximum usage of technology in their work processes.

A movie prepared by NIC Himachal Pradesh, highlighting the salient features of the CM Dashboard of about 3 minutes was run during the inaugural program. Presently, 18 Projects of the State Government integrated in online mode with CM Dash-board and about 21 other Departments are entering their KPIs directly in the software.

The initiative has been coordinated by Shri Shailender Kaushal, TD with active support from Shri Lalit Kapoor, Shri Sandeep Sood, Shri Vijay Kumar Gupta, Shri Sanjay Kumar, Shri Sanjay Sharma, Shri Sarvjeet Kumar, Shri Akhilesh Bharti, Shri Ashish Sharma, Shri Parveen Kumar, Shri Mukesh and Shri C.L.

-AJAY SINGH CHAHAL, HIMACHAL PRADESH

Hon'ble Chief Minister of Jammu and Kashmir, inaugurated Online and SMS Services of Funds Organization

H on'ble Chief Minister, Jammu and Kashmir, Smt. Mehbooba Mufti, launched the Web based application "GENPROFIT" and SMS services (***http://jkfunds.nic.in***) for the State Govt. Employees (G.P. Fund Account holders) on 28th March, 2018, in presence of the Hon'ble Minister of Finance, J&K, the Chief Secretary, the Principal Secretary, Finance, the Principal Secretary to the CM, the Director General, Accounts & Treasuries/ Funds Organisation, J&K & senior officers of NIC, J&K. These services will facilitate easy access to information for GPF subscribers regarding monthly contributions and withdrawals as well as yearly details of their balances on account of G.P. Fund. The Directorate of J&K Funds Organization, with the active support of NIC, has made all out efforts to bring the 27 G.P. Fund offices of the State online within a very short time period

Hon'ble Chief Minister, J&K, along with Finance Minister, inaugurating the GPF application in the presence of NIC Officers

of three months.

The launch of web based GPF services and SMS has been achieved due to an active collaboration and technical support from J&K Team of the National Informatics Centre (NIC). During the inauguration, the Hon'ble Chief Minister and the Hon'ble Finance Minister lavishly praised the efforts of the Funds Organization and NIC(J&K) for making this happen within a short span of time.

-JIT RAJ, JAMMU AND KASHMIR