



आंकड़े प्रक्रिया प्रभाग  
भारत के महारजिस्ट्रार का कार्यालय  
गृह मंत्रालय, भारत सरकार

Data Processing Division  
OFFICE OF THE REGISTRAR GENERAL, INDIA  
Ministry of Home Affairs, Government of India

F.No.35301/2/2019-DPD

Dated: 17<sup>th</sup> June, 2019

**Census of India 2021 - Circular No.5**

**Subject: Tentative workload, distribution of computer hardware equipment, manpower and related guidelines for Data Capture Center renovation/upgradation.**

As part of the preparations for Census of India 2021, the attached statement shows the allocation of workload (approximate) to be handled at your Data Capture Centre (DCC) in respect of House list and Household pertaining to Census of India 2021, distribution of proposed computers & peripherals to be installed and guidelines for renovation/up-gradation of DCC. Based on 2011 experience and changes in technology, D.P. Division has assessed the requirement of minimum space for desktop/workstation, number of LAN nodes and power connections etc. at DCC. All actions should be initiated immediately to ensure that the requisite basic infrastructure/amenities facilities are ready before end of December, 2019.

2. To complete the data processing task in given timeline, nos. of workstations allocated to your DCC has been increased (in comparison to previous census), which will require more space to accommodate. The additional workstations may be adjusted in the DCC or adjacent room/area. Due to compact size of Server system, the extra space so created in Server room may be utilised for installing extra un-manned workstations. Once the work relating to digitization of data for Census of India 2021 is over, these desktops may be utilized for e-office and other work of the Directorate.

3. Controlling officer is advised to nominate an officer (not below the rank of Assistant Director) from the IT/EDP Cadre, as DCC in-charge. In case no IT/EDP officer is available, officer from Statistical Cadre (having sufficient knowledge of computer systems) may be nominated, till the time officer from IT/EDP Cadre is posted in the concerned DCO.

4. On the basis of the tentative workload and equipment proposed, you may start discussions with local authorities (like CPWD/PWD/PSUs etc.) for obtaining estimates for up-gradation of DCC w.r.t. Civil, Electrical, Furniture and other items of basic infrastructure/amenities facilities at the earliest. Estimate obtained from the concerned agencies may be sent by the Controlling Officer of the concerned DCO, alongwith the justification to D.P. Division, **so as to reach at the following address on or before 27/06/2019:**

Technical Director  
National Data Center, ORGI,  
Ministry of Home Affairs,  
8<sup>th</sup> Floor, Block-3, DMRC Delhi IT Park,  
Shastri Park, Delhi – 110053.  
Email Address: edp.rgi@gov.in

*Sanjay*

(SANJAY)  
Deputy Director General

Encl: As above

To,

The Controlling Officers of all DCOs having DCC.

Copy to:

- 1.) PPS to RG&CCI
- 2.) PS to Additional RGI
- 3.) Budget Section
- 4.) Order File

**(A) DCC wise Estimated workload**

Name of DCC handling workload of State/UT	Housing and House list (Estimated number of forms)	Household (Estimated number of forms)
1	2	3
DCC and attached DCOs	To be intimated later on	A2

**(B) Proposed Computers, Peripherals and other basic infrastructure/amenities facilities requirements**

S.No	Particulars/Items	Quantity/ Capacity
1	2	3
1	Servers	B1
2	Total Nos. of Desktops/Workstations	B2
3	Un-manned/Auto Workstations included in S.No.2	B3
4	Scanners	B4
5	Laser Printers	B5
6	Core Switch	B6
7	48 Port Switches for LAN	B7
8	LAN Cabling for nos. of Nodes	B8
9	UPS (KVA)	B9
10	DG Set (KVA)	80 KVA*
11	Nos., Type & Capacity of Air Conditioning units (Cassette/Tower/Split etc.)	As per requirement
12	Automatic Fire Alarm System (Zone wise)	As per requirement
13	Fire Fighting System  a.) Clean Gas based 10 KG Cylinder for Server Room  b.) Clean Gas based 5 KG Cylinder for Scanner Room  c.) Clean Gas based 5 KG Cylinder for Work Station Hall  d.) ABC Type 5 KG Cylinder for Battery Room  e.) ABC Type 5 KG Cylinder for other areas of DCC  f.) Foam Based 50 Litre Cylinder for DG Set Room  g.) Sand Filled Bucket Stand	As per requirement  2*  2*  10*  3*  5*  3*  4*
14	Furniture items (Modular Workstations with keyboard tray, Operator/Officer Chairs, Drawer, Foot Rest etc.)	As per requirement
15	Public Address System (PAS)( including Mike and Speakers)	As per requirement
16	CCTV (1 DVR with 8 Channel) (For Server Room, UPS Room, Battery Room, DG Set Room, DCC Entrance/Exit, SSC Entrance/Exit, Storage Area of SSC)	As per requirement
17	STD Phone facility to DCC In-charge	1
18	LED Light Sets in DCC to ensure proper lighting facilities for better work environment	As per requirement

19	Use of Dark Film Coating and Roller Blinds on Windows in DCC Premises to ensure proper cooling environment	As per requirement
20	Wall Fans in Workstation Hall, if recommended by CPWD/PWD/PSU to ensure proper cooling	As per requirement
21	Thick Rubber Mats in UPS/Battery Room/Electrical Panel Room	As per requirement
22	Rubber Slippers for use in Server Room	As per requirement
23	Amenities for DCC Staff (Hot Case, Tea/Coffee Vending machine, Water Cooler, Locker Cabinets etc.) during 3 Shift operations.	As per requirement
24	Steel Racks with Interlocking facility in SSC, if required	As per requirement

\*-Quantity/Capacity is indicative depending upon actual workload/capacity/requirement of DCC.

Note - For Values of A2, B1 to B9 mentioned in Column 3, please refer to Annexure to the attachment.

#### (C) Guidelines for Data Capture Center (minimum requirement):

1. Scanner : 60 Sq.ft. per Scanner
2. Server room : 100 Sq.ft.  
(300 Sq.ft. for Bengaluru & Bhubaneswar)
3. Desktop/Workstation: 18 Sq.ft. per Desktop/Workstation
4. Pre-scanning area : 400 Sq.ft. per Scanner.
5. AC capacity : 1.5 Ton/100 Sq.ft., Power load for each AC - 2.5 KVA
6. UPS load : 10KVA/Server with 40 clients, 1 Printer, 1 Scanner
7. DG set capacity : Capacity of DG Set should be preferably 1.5 times of Capacity of UPS installed. AC units installed in Server room, Scanner room, UPS room, and 25% of the AC units installed in workstation area should be connected through DG Set. If the existing DG Set is operational and maintainable in good working condition for upto year 2024, then there seems to be no need for its replacement. However, if the output capacity of existing DG Set is insufficient then replacement or installing the additional DG Set for shortfall should be considered. Feasibility of installing additional DG Set may depend upon various factors including availability of extra space, economy/cost & ease/difficulty of maintenance, feasibility of laying extra cables and control panel and other factors. An assessment/report by CPWD in this regard may be relied upon for taking appropriate decision in this regard.
8. All Electrical wiring, MCB, MCCB, Control Panel should be get inspected by authorised electrician from CPWD/PWD/PSU for its worthiness and load bearing capacity, as per existing/proposed electricity load. It has been observed that over the time additional equipments/electrical fixtures have been installed in the DCC premises, without taking into account the total load bearing capacity of internal wiring/electrical cables, MCB, MCCB and electrical control panel. Also ensure for checking of DG Set power supply to nos. of AC units and UPS power supply to specified equipments. Please ensure that DG Set and UPS power supply is connected only to specified points/equipments, within permissible limit load capacity.

9. UPS, ACs and electrical fittings in DCC premises should be setup in such a way that these equipments get power supply from two sources i.e. direct power supply and DG Set power supply. In case of direct power supply failure, power backup supply from DG Set should go to computer equipment through UPS, and to selected AC units and all specified electrical points
10. Please ensure that Scanners, Servers, PCs, CCTV, AFAS, PAS and few light sets in Server Room & Terminal Room, and one set each in UPS Room, Battery Room, DG Set Room and Entrance/Exit Door of DCC & SSC gets power supply only through UPS.
11. Each Desktop/workstation should have two nos. of 5 Amp and one no. of dual 5/15 Amp sockets. Server room should have at least 3 nos. of 3 pin Industrial Socket installed near the Server Rack area.
12. Arrangement for proper Earthing securing all electrical points/equipments installed in DCC premises must be ensured. Moreover, UPS installed in DCC should have separate dedicated Earthing facilities. If required, concerned vendor of UPS may be consulted in this regard.
13. As per information available at D.P. Division, all the ACs installed in the DCC premises were installed during 2010, and were used extensively in three shift operation during Census 2011, and have outlived its useful life of 5-7 years, therefore, it is advisable to replace all the existing AC units installed in DCC premises.
14. Due to vast changes in Air conditioning technology, latest AC units provide more cooling power with less electricity consumption. It is suggested to consult CPWD/PWD/PSU/Supplier for appropriate Type & Capacity of AC units, which can provide maximum cooling with reasonable electricity consumption at best economical prices, having long & durable life of approx. 7 years, which include high usage of AC units (approx. 18 X 7 operation i.e. 18 hrs per day for 7 days per week) during first two years of installation. **If possible, procure AC units with 5 years of warranty/ comprehensive AMC service.**
15. If possible, please ensure to install False Ceiling in the DCC premises for effective cooling. Install, one extra AC unit in Server Room, UPS Room, Battery Room and 3-6 extra AC units (as per size and requirement of DCC) in Workstation Hall, to ensure that all the AC units are not kept ALWAYS ON, for proper maintenance and longevity of AC units.

#### **D. Civil work:**

1. As far as possible, avoid disturbing the existing cabins, partitions and layout plan, if it is assessed that the existing civil work will sustain till the end of 2024. However, please take into account to accommodate the increased nos. of desktop/workstations allocated to the DCC, in view of project timeline to complete the task of Scanning & ICR processing within 9-10 months.
2. Check the status/condition of existing civil work i.e. vinyl flooring, wall paper/distemper, false ceiling, windows and door etc. Please ensure that there is no water leakage during rainy season from windows/roof of the DCC. Necessary precautions from water leakage should be taken for

Server/UPS/Battery/DG Set Room. If renovation/repair is required, obtain the estimates from the CPWD/PWD/PSUs including state government.

3. If additional space to accommodate the increased number of desktop/workstation in the DCC is available, then obtain the estimate from the CPWD/PWD/PSUs for renovation of that area as per requirement.
4. In case, additional space to accommodate the increased number of PCs is not available, accommodate more than one unmanned desktop/workstation in the existing unmanned eflow stations.
5. Assess the requirement/replacement of DCC furniture e.g. Modular Workstation, Chairs, Drawer, Computer/Printer tables etc. and obtain the estimates. Submit the proposal to Technical Director, D.P. Division.
6. Sufficient space as per the norms must be kept for smooth flow of forms during pre-scanning and scanning process.
7. The pre-scanning and scanning area should preferably be on the ground floor to ease the movement of scan-able forms. These two should be near to each other. In case storage area is below ground level, please take extra precautions to prevent entry of water during flood/rainy season. If storage area is not at ground level, and facility of luggage lift is available, please ensure to get the luggage lift checked by technician, and ensure to maintain the luggage lift in good working condition at least upto year 2022. Necessary coordination with the concerned vendor/ supplier/maintenance agency of the luggage lift may be taken up as per requirement.
8. Scanning area should be located within 60 meters from the server/network switch room if possible.
9. Please check the condition of Steel Racks installed in the Storage area of SSC, and ensure that all the steel racks are interlocked properly. If required, damaged/old steel rack, which could not be used further, should be replaced/repaired accordingly.
10. Necessary fire & safety arrangement must be ensured at storage area.

#### **E. Electrical work:**

1. Obtain the assessment from the CPWD/PWD/PSUs on the status of the existing electrical work i.e. cabling, power/light points/switches and LED bulbs/ tube lights etc. For better electricity flow, it is advised to use copper electrical cables for the computer equipment. CPWD/PWD/PSUs may be asked to assess the health of the existing electrical cabling & fittings, and obtain estimates for the items which need replacement/repair. Install 5% extra power points based on the total client desktop/workstation.
2. Obtain the assessment from the competent agency about the status existing Automatic Fire Alarm System (AFAS) and Fire Fighting Equipment (FFE). Please ensure that these equipments should remain functional in good working condition, at least upto year 2024. Otherwise, obtain the estimates from CPWD/PWD/PSUs for their replacement.
3. It is advisable to install the energy efficient LED bulbs/tube lights in DCC premises. Provide one tube light connection through UPS in the Server, Scanner, pre-scanning, temporary schedule storage, Terminal Room,

PC/Operator rooms, staircase, toilet, Battery/DG Set Room, Entrance/Exit door of DCC and other emergency/critical areas. Alternatively make the provision for emergency lights/invertors.

#### **F. Power Backup Equipment (UPS, DG Set):**

1. On-Line Modular UPS of suitable capacity will be provided through ORGI HQ alongwith Computer hardware & peripherals etc. However, concerned DCO has to ensure that the electrical cabling of suitable capacity/size has been laid down between electrical control panel and UPS/DG Set.
2. All computer hardware and peripherals should get power supply through UPS only. Please ensure that under any circumstance these equipments should not be connected to direct power supply, as during rainy season/storms etc., due to high surge in voltage, these costly equipments may get damaged which will not be covered under warranty/AMC.
3. In addition to normal power supply, UPS and other light/fan points should also get the stabilized power supply through DG set.
4. DCO to ensure proper lighting in DCC/SSC corridor/passage where outsourced contractual manpower will be using the corridor/passage/common areas for 24 X 7 shift duty, during the period June, 2020 to March, 2022.
5. DCO to ensure that the capacity of the existing DG set is in conformity with the proposed power requirement (taking into account the nos. & load requirement of various electrical equipments/devices/electrical fittings). The matter may be taken up with concerned agency/CPWD/PWD/PSUs which is maintaining the DG set, to ensure that it is functional in good working condition. Obtain a written certificate from competent agency that existing DG set will handle the proposed power load requirement and remain functional in good working condition at least upto year 2024.

#### **G. Air conditioning:**

1. Estimate the number of AC units required, with Type & Capacity of AC unit, as per the norms prescribed in the Circular. The critical areas like Server, Scanner and UPS Rooms will be provided with new ACs.
2. Old ACs for which replacement is taken may be deployed elsewhere in the DCO office, if such ACs could be utilised with proper maintenance upto year 2024, on the basis of assessment by CPWD/PWD/PSU.
3. Obtain estimates for new ACs (for procurement and installation) from CPWD/PWD/PSUs. Estimates must be for reputed brand of ACs.
4. All the ACs installed in Server, Scanner and UPS room should be connected to the DG Set Power supply also. In addition to normal power supply, the DG set power supply must also be made available to a few ACs (i.e. one AC for twelve desktops) in Workstation hall.

#### **H. Automatic Fire Alarm System and Fire Fighting System:** It is better to get services of Fire Service Department of concerned area. The visit of Fire Officer will

provide necessary type & capacity and nos. of fire fighting equipments/systems required to be installed in the DCC/SSC at various places. The condition/status of existing equipments e.g. Clean Gas based Cylinders, ABC Type, Foam based and Sand Filled Bucket Stand needs to be checked by authorised technician of CPWD/PWD/PSU or the OEM of these equipments. Taking into account the useful life of these equipments, necessary action for repair/replacement may be initiated, taking into account the technology advancement made in this field. In case of procurement of new equipments of Automatic Fire Alarm System and Clean Gas based Cylinders, please try to **get Warranty/Comprehensive AMC of 5 years on these equipment.**

- I. **LAN cabling work:** It should preferably be entrusted to reputed company specializing in handling LAN cabling work. It should be understood that LAN cabling is different from electrical cabling. LAN cabling should be entrusted to CPWD/PWD/PSU after ensuring that it will handles LAN cabling work properly, alongwith 5 year maintenance of LAN cabling from same agency or any other agency to be decided by DCO.
- J. For various activities pertaining to procurement/repair of items installed in DCC/SSC or renovation/upgradation of DCC/SSC, if any committee is constituted, then DCC In-charge should invariably be one of the member of such committee. In case, of his/her unavailability in the office due to any reason, another officer/official from the DCC be nominated as member of such committee.
- K. DCO may please ensure that the items for which CPWD/PWD/PSUs submits estimates is done taking into account the capacity, make, model and useful life of the concerned item/device/equipment. All the estimates of the above mentioned items must be examined by the concerned DCO In-charge in consultation with DCC In-charge, and **must reach D. P. Division on or before 27/06/2019**, alongwith supporting justification/ comments/suggestions of DCO In-charge, for each point, as per requirement of the proposal.

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### Estimated allocation of Computer Hardware for Digitization of Census of India 2021

S.No.	Location	Estimated schedules for Population Enumeration	Servers	Total Nos. of Desktops/ Workstations	Nos. of Un-manned/ Auto Workstations (included in B2)	Scanner function printer one per 50 Clients	Multi function printer (Core) with redundancy	Number of Layer 3 Switch (with 1Gbps Ports)	48 Port Switch with 1Gbps Ports	LAN Points & CAT 6A Cabling	Modular UPS in KVA	
			A2	B1	B2	B3	B4	B5	B6	B7	B8	B9
1	<b>Bangalore</b>	1,93,66,328	14	170	47	2	4	2	5	219	60	
2	<b>Bhopal</b>	2,40,32,264	3	208	58	3	5	1	6	249	70	
3	<b>Bhubaneshwar</b>	1,31,85,229	14	117	32	2	3	2	4	161	50	
4	<b>Chandigarh</b>	2,13,32,871	3	187	52	2	4	1	5	226	60	
5	<b>Chennai</b>	2,57,59,041	3	223	62	3	5	1	6	266	70	
6	<b>Delhi</b>	2,16,25,149	3	190	53	3	4	1	5	229	60	
7	<b>Gandhinagar</b>	1,79,91,188	3	158	44	2	4	1	5	194	50	
8	<b>Guwahati</b>	1,42,95,626	3	128	35	2	3	1	4	161	50	
9	<b>Hyderabad</b>	2,91,38,370	3	252	70	3	6	1	7	297	80	
10	<b>Jaipur</b>	2,04,28,773	3	179	50	2	4	1	5	217	60	
11	<b>Kolkata</b>	2,93,44,558	3	254	71	3	6	1	7	300	80	
12	<b>Lucknow</b>	2,77,61,038	3	239	66	3	5	1	6	283	80	
13	<b>Mumbai</b>	3,41,15,929	3	294	83	4	6	1	8	344	90	
14	<b>Patna</b>	3,13,08,296	3	272	76	3	6	1	7	319	80	
15	<b>Thiruvananthapuram</b>	1,25,34,948	3	113	31	2	3	1	4	145	40	
16	<b>Ranchi</b>	94,99,871	3	86	24	1	2	1	3	115	30	
17	<b>Raipur</b>	87,68,774	3	79	22	1	2	1	3	107	30	
18	<b>Dehradun</b>	1,41,15,614	3	126	36	2	3	1	4	159	40	