

## **Policy for use of Server Room 2 in CC Data Centre by Project PIs and Departments**

**Capacity of Server Room 2: 20 racks (expandable to 24 racks in future)**

### **Policy:**

1. Only clusters with rack-mountable servers (nodes) and switches would be allowed. Nodes/switches should be mountable in 42U 19"-racks of depth 40". Some reasonable flexibility in the depth can be allowed (say 10-15%) but the width must be such that the servers/switches fit into 19" racks.
2. Clusters should be new when they are brought to CC and would be kept in CC for a maximum period of 6 years from their date of purchase order.
3. A one-time relaxation to point #2 can be considered when the server room is populated for the first time after its commissioning in late 2012. For the first-time population of the Data Centre, existing clusters with different PIs/Departments which are not more than four years old, as counted from the date of purchase order, can be kept in the Data Centre.
4. Minimum size of a cluster should be 4 nodes or 8 processors (not cores) and maximum one 42U rack per PI will be allowed. Thus, a PI can keep multiple clusters subject to the total space limit of one rack per PI. For Departmental clusters (not belonging to any individual PI) such as those purchased from DST FIST, DPA etc, maximum two racks can be allowed subject to availability of space.
5. Only standard 19" 42U racks will be allowed. Required cooling per rack should not exceed 10 kW. A document from the OEM/Vendor would be required for this purpose. Also, PIs are encouraged to put foldable TFT monitors in the racks for their optimal use.
6. In order to make cool-pool functional, all racks should be of same height. For this purpose, standard 19" 42U racks would be provided by CC. For the first-time population in late 2012, standard 19" 42U racks from PIs/Departments can be accepted on case-to-case basis. The racks should be fully populated which might require sharing of a rack by two or more groups/Departments. If a PI brings some additional nodes at a future date, efforts will be made to do some relocation of nodes within the limit of maximum one rack per PI.
7. Relocation of nodes/racks or any other rearrangement within the Data Centre may become necessary from time to time due to operational reasons and CC keeps the right to make such relocations/rearrangement as and when they are needed. Also, if a new cluster of a PI/Department will have to be kept in CC Data Centre, the concerned

PI/Department should take clearance from Head CC before issue of the purchase order of the new cluster.

8. All aspects of the maintenance of PI's/Department's clusters kept in CC would be fully the responsibility of PIs/Departments. CC would only provide the space with cooling and UPS power for hosting those clusters. If a cluster is not operational for more than three months, the PI will be requested to take the non-operational cluster/server out of the Data Centre so as to free space for others.
9. For all planned maintenance of the Data Centre, the PIs/Departments would be responsible for shutting down all their clusters by the time line as communicated to them by CC. The PIs/Departments would also be responsible for switching on their clusters after completion of the maintenance work of the Data Centre as communicated to them by CC. In the event of emergency or non-planned maintenance of the Data Centre, CC Engineers would have the right to force-shutdown all such clusters. Additionally, CC keeps the right to ask for access to root password of all clusters kept in CC Data Centre.
10. As per design of the Data Centre, access to all server rooms will be controlled. Access to the Server room 2 will be given to one person per PI/Department as authorized by the PI/HOD. CC security may check the ID of the person entering the server room.
11. PIs/Departments are encouraged to contribute an amount to CC DPA for keeping their clusters in CC Data Centre.
12. For any other matter related to usage of Server room 2 which is not covered in this policy document, Head CC can consult the HPC Advisory cum Management Committee or its Chairman for needful action.
13. The policy will be reviewed as and when required and necessary changes, as deemed fit by the HPC Advisory cum Management Committee, would be made.
14. An undertaking accepting the above points, as given herewith, will have to be signed by the concerned PI/HOD and submitted to Head CC.
15. CC would maintain a separate file with details of all such clusters kept in Server Room 2, like names of the concerned faculty & Department, date of bringing the clusters to the Data Centre, date of expiry of period/date of taking away the servers from Data Centre, contact numbers of all concerned PIs/HODs etc.

See the minutes of the HPC Advisory cum Management Committee meeting held on 26-09-12 for further details ([http://web.iitk.ac.in/cc/meetings\\_hpc.htm](http://web.iitk.ac.in/cc/meetings_hpc.htm)).

## **Undertaking by PI/HOD for keeping Project/Department Clusters in Server Room 2 of CC Data Centre**

To

Head, CC

IIT Kanpur

Date:

I accept the following points for keeping my project/Department Cluster in the Server Room 2 of CC Data Centre. This is as per the decision of the HPC Advisory cum Management Committee taken in its Meeting on September 26, 2012 (see [http://web.iitk.ac.in/cc/meetings\\_hpc.htm](http://web.iitk.ac.in/cc/meetings_hpc.htm)).

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2. Clusters should be new when they are brought to CC and would be kept in CC for a maximum period of 6 years from their date of purchase order.
3. A one-time relaxation to point #2 can be considered by CC when the server room is populated for the first time after its commissioning in late 2012. For the first-time population of the Data Centre, existing clusters which are not more than four years old, as counted from the date of purchase order, can be kept in the Data Centre.
4. Minimum size of a cluster should be 4 nodes or 8 processors (not cores) and maximum one 42U rack per PI will be allowed. Thus, a PI can keep multiple clusters subject to the total space limit of one rack per PI. For Departmental clusters (not belonging to any individual PI) such as those purchased from DST FIST, DPA etc, maximum two racks can be allowed subject to availability of space.
5. Only standard 19" 42U racks will be allowed. Required cooling per rack should not exceed 10 kW. A document from the OEM/Vendor would be provided for this purpose. Also, it is desired to put foldable TFT monitors in the racks for their optimal use.
6. In order to make cool-pool functional, all racks should be of same height. For this purpose, standard 19" 42U racks would be provided by CC. For the first-time population in late 2012, standard 19" 42U racks from PIs/Departments can be accepted by CC on case-to-case basis. The racks should be fully populated which might require sharing of a rack by two or more groups/Departments. If a PI brings some additional nodes at a future date, efforts will be made by CC to do some relocation of nodes within the limit of maximum one rack per PI.

7. Relocation of nodes/racks or any other rearrangement within the Data Centre may become necessary from time to time due to operational reasons and CC keeps the right to make such relocations/rearrangement as and when they are needed. Also, if a new cluster of a PI/Department will have to be kept in CC Data Centre, the concerned PI/Department should take clearance from Head CC before issue of the purchase order of the new cluster.
8. All aspects of the maintenance of PI's/Department's clusters kept in CC would be fully the responsibility of PIs/Departments. CC would only provide the space with cooling and UPS power for hosting those clusters. If a cluster is not operational for more than three months, the PI will be requested by CC to take the non-operational cluster/server out of the Data Centre so as to free space for others.
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12. For any other matter related to usage of Server room 2 which is not covered in this policy document, Head CC can consult the HPC Advisory cum Management Committee or its Chairman for needful action.
13. The policy will be reviewed as and when required and necessary changes, as deemed fit by the HPC Advisory cum Management Committee, would be made.

Signature

Name:

Department

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