



# CLUSTER INNOVATION CENTRE (CIC) (UNIVERSITY OF DELHI)

3rd Floor, Rugby Sevens Building, University Stadium  
G. C. Narang Road, University of Delhi, Delhi-110007

## Project Summary

<b>Title of Project</b>	High Performance Computing: Making PC's Cluster
<b>Student's name and course detail</b>	Omkar Chaudhary and Balram Meena B.Tech IT & MI 3rd Year 5th Sem
<b>Institute/Company where pursued</b>	Delhi University Computer Center
<b>Project mentor and address</b>	Dr. Sanjiv Singh, Joint Director, DUCC, University of Delhi
<b>Related fields of study</b>	Operating Systems, Networking, Algorithms
<b>Abstract</b>	<p>We are developing the infrastructure for a software or an operating system that can help to utilize the full and maximum resources of all the CPUs in a network when they are kept idle.</p> <p>To understand and build the main software we first implemented the existing similar projects like the Openstack Infrastructure, Load Balancing Server HAProxy and Database Management MariaDB Maxscale.</p> <p>The main application is still to be designed which will give us a clustered network of the systems allowing us to utilize and share all the resources.</p>
<b>Important outcomes of the project</b>	<ul style="list-style-type: none"><li>● Building Servers from scratch.</li><li>● Learning more about the Openstack clustering Infrastructure.</li><li>● The load balancing server using HAProxy to maintain and see the overall load on a server.</li><li>● How data are transferred between different processes.</li></ul>



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<b>Future prospects</b>	A complete software package or OS for this cluster.
<b>Photographs/ Diagram/Graph/Screen-shots/Table/ Flow-chart/Map/Code etc.</b>	
<b>References</b>	doi:10.2498/iti.2012.0442

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