Date: May 5, 2014, 2014

Expression of Interest

Pre-amble:

There is a growing recognition worldwide, that Information Technology, and in particular the high performance computing (HPC) for computational simulation and modelling, is the key technology resource for economic growth, environmental understanding, scientific and engineering research breakthroughs, and for sustaining competitiveness in strategic areas. Consequently, several nations are taking initiatives to provide high-end computing resources for their scientists and engineers for high-end educational and research purposes. Worldwide initiatives are also on for making supercomputing resources available as a utility to the end-user through the development and deployment of Grid environments.

The HPC thus is recognized as a strategic resource that every country wishes to possess. Fast technological developments have led to a situation that building very high-end computing resources are dependent on availability of high technical skills and financial resources, and are advantageously used by several countries to capacity building for addressing their key economic sectors' requirements. Thus building awareness about their importance and use and creating development strengths in associated technologies assume importance for every country.

Initiative by C-DAC:

Centre for Development of Advanced Computing (C-DAC), a scientific society under the administrative control of Ministry of Communications and Information Technology, Government of India, has today established itself as a premier R&D institution in the field of High Performance Computing (HPC). As a part of HPC mission, C-DAC plans to introduce a concept of "Supercomputer in a box" and has developed an innovative compact HPC solution.

Supercomputer in a box is a supercomputer that can be placed on office workspace. Basically these systems are meant for research organizations/ academic institutions that are in the verge of adopting HPC culture in their institutions/organizations. This low cost system comes with a handful of value additions from C-DAC viz. indigenously developed software in addition to most of the features that can be found in a full-fledged HPC cluster like job schedulers, compilers, parallel libraries, mpi, resource managers etc.

The system consists of two numbers of processors (10 cores each) along with accelerator cards. The entire configuration shall be available in a single server of about 5U form factor table top model. Regardless to the traditional HPC systems/supercomputers, this system need not require specific support infrastructure like precision air-conditioned environment, controlled humidity etc. Also, the accepted sound level shall be very less when compared to the traditional servers.

Objectives:

1. Establishment of a Linux based Supercomputer in a box.
2. Facilitate use of this Supercomputer for various scientific applications.
3. Create a pool of skilled professionals for pursuing research and development in the area of High Performance Computing (HPC) and promote use of HPC systems and parallel programming in several application domain areas.
4. Develop Linux / Open-source adoption skills in HPC applications and systems.

Technical Specifications of the table top server

- Processor: Dual socket Intel Xeon E5-2600 v2 series/ AMD Opteron 6300 series with 10 cores each with minimum 2.2 GHz or better clock speed with min. specfp2006_rate of 580,
- RAM: 64 GB ECC DDR3 1866 MHz RAM in balanced configuration,
- Accelerator: 1 or 2 numbers

- Slots / Ports: 2 x16 PCI-E Gen3 slots for GPU/Co-processors, Two 1GbE network ports,
- Drives: One number internal DVD RW/DVD combo,
- HDD: 2 x 600GB SAS drives
- RAID: Support for Hardware RAID 0, 1, IPMI 2.0 or equivalent Support with KVM and Media over LAN features with additional licenses if any,
- OS: Fully certified with RHEL5.x, RHEL6.x, SUSE Linux Operating system,
- PS: Redundant and hot pluggable, 80 Watt Plus or better certified power supply and Power cables,
- Tower/Rack Mount (max. 5U) convertible,
- Keyboard, Mouse and 19'' TFT Monitor

The servers should have:

- Low Noise (rating to be given) at full load
- Less power Consumption
- Does not have any extra/special Cooling requirements
- Form Factor shall be 5U or better

Invitation of EoI:

With this background, C-DAC invites the “Expression of Interest” from the principal manufacturers for supply of servers, on the following terms and conditions:

1. The principal manufacturer of servers needs to submit their proposal directly.
2. The server model offered should be from the existing product range of the manufacturer.
3. The details of offered model should be available on the official website of the manufacturer.
4. The manufacturer must undertake to manufacture and supply the same model with same specifications for a period of at least 5 years.

5. The manufacturer should provide server of the offered model for detailed technical evaluation for a minimum of 2(two) months free of cost. The servers should be provided along with the proposal.

6. The finalized supercomputer in a box will carry C-DAC's logo.

7. The manufacturers, whose proposals are technically & qualitatively acceptable, will be requested to submit formal commercial proposals for the servers.

8. C-DAC may enter into a contract with the lowest quoted principal manufacturer for purchase of servers on 'as & when required' basis.

9. The manufacturers may supply the required servers directly or through their authorized distributor/ dealer. The name of distributor/ dealer (if applicable) should be mentioned in the proposal towards 'Expression of Interest'.

10. The servers may be offered in USD or INR.

11. The detailed commercial terms and conditions will be communicated while inviting financial offers.

Documents to be submitted along with the EoI:

1. The relevant document showing that the entity submitting the proposal is a 'Principal Manufacturer' of servers.

2. The technical catalog/brochure/datasheets pertaining to the offered model of server.

Address for submission of EoI:

Manager(Purchase)
Centre for Development of Advanced Computing (C-DAC)
Pune University Campus, Pune – 411007.

Last Date for Submission of EoI:

May 15, 2014, 1500 Hrs.

The queries, if any may be sent to: mmg@cadc.in