d　ＯＳはRed Hat Enterprise Linux 6あるいはSUSE Linux Enterprise Server 11相当以上の64ビットアドレス対応のLinuxであること。

e　ジョブスケジューラは、センターシステムのジョブスケジューラ（IBM Platform LSF）と同一のユーザインタフェースを備え、かつ同等以上のジョブ管理機能を備えたものであること。

C　ログインサーバおよび管理サーバ：並列計算サーバのログインサーバおよび管理サーバとして機能する、以下の要求要件を満たすサーバを２台備えること。

a　Intel Xeon E―2670相当以上の８コア以上のプロセッサを２基有すること。

b　主記憶容量は64GiByte以上であり、主記憶アクセスバンド幅は100GByte／秒以上であること。

c　ハードウェアＲＡＩＤ―１構成が可能な、物理容量２TByte以上のディスクドライブ群を備えること。

d　InfiniBand ４x FDRのインタフェースを１ポート有すること。

e　転送速度10Gbit／秒のEthernetインタフェースを１ポート、転送速度１Gbit／秒のEthernetインタフェースを２ポート、それぞれ備えること。

f　ＯＳは、Red Hat Enterprise Linux ６あるいはSUSE Linux Enterprise Server 11相当以上の64ビットアドレス対応のLinuxであること。

２　資料及びコメントの提供方法　上記１⑵の物品に関する一般的な参考資料及び同⑹の要求要件等に関するコメント並びに提供可能なライブラリーに関する資料等の提供を招請する。

⑴　資料等の提供期限　平成25年４月15日17時00分（郵送の場合は必着のこと。）

⑵　提供先　〒615―8530 京都市西京区京都大学桂　京都大学工学研究科事務部経理事務センター　野村眞由美　電話075―383―2017

３　説明書の交付　本公表に基づき応募する供給者に対して導入説明書を交付する。

⑴　交付期間　平成25年３月１日から平成25年４月15日まで。

⑵　交付場所　上記２⑵に同じ。

４　説明会の開催　本公表に基づく導入説明会を開催する。

⑴　開催日時　平成25年３月６日13時00分

⑵　開催場所　京都大学工学部物理系校舎２階214号ゼミ室

５　その他　この導入計画の詳細は導入説明書による。なお、本公表内容は予定であり、変更することがあり得る。

６　Summary

⑴　Classification of the products to be procured : 14

⑵　Nature and quantity of the products to be purchased : Parallel Computational Server 1 Set

⑶　Type of the procurement : Purchase

⑷　Basic requirements of the procurement : This procurement aims to build a high-performance and highly-parallel computational environment for scientific research in Kyoto University. The system to be procured will work for a wide range of parallel computations to understand fundamental issues of plastic deformation and fracture of structure materials. The system consists of the hardware and software of the parallel computing server and other hardware and software components for stable and efficient operation of the server itself and of the existent supercomputer system, working in the Academic Center for Computing and Media Studies (ACCMS) in the university, with which the server will be coupled.

A　Parallel Computational Server Hardware

a　The parallel computational server must be a highly-parallel supercomputer composed of multiple computational nodes. Hereafter, the computational node, or the node in short, is defined as a computer system which is composed of two processors having 8 or more CPU cores for each and main memory shared by the processors.

b　The theoretical peak performance on double-precision floating point of each multi-core processor must be 200 GFLOPS or higher, that of each node must be 400 FLOPS or higher, and the total sum of them in all nodes of the server must be 200 TFLOPS or higher.

c　The CPU core of the multi-core processor should have the 64-bit IA32 instruction set architecture.

d　Each node must have a main memory of 64 GiByte or larger.

e　The aggregate peak bandwidth of main memory access of each node must be 100 GByte／sec or higher.

f　Each node must have one or more ports of InfiniBand 4x FDR for the interconnection of nodes. The inter-node interconnect must be configured so that it achieves full-bisection bandwidth.

g　Each node must have a hardware management mechanism and a software system for monitoring the hardware operating status.

h　The switch or switch complex of the inter-node interconnect must be connected with the storage subsystem of the supercomputer system in ACCMS by 4 or more links of InfiniBand 4x QDR.

i　The server must operate with peak load consuming 75 kW electric power or less.

B　Parallel Computational Server Software

a　Automatic parallelizing compilers for Fortran2003, C99, and C＋＋2003 must be provided. Each compiler must be available for 5 or more simultaneous uses.

b　The communication library MPI version 2.0 or later must be provided.

c　An interactive debugger and a performance tuning tool including a performance profiler and being capable of graphical performance analysis must be provided. Each tool must be available for 5 or more simultaneous uses.

d　The operating system of login／management servers must be 64-bit Linux equivalent to or superior to Red Hat Enterprise Linux 6 or SUSE Linux Enterprise Server 11.

e　The job scheduler must have the interface same as that of the supercomputer system in ACCMS being IBM Platform LSF, and must have job management functionalities equivalent to or superior to the LSF job scheduler.

C　Login／Management Servers : The system to be procured must have two servers, which satisfy the following requirements, so that they work as login servers or management servers.

a　Each login／management server must have two 8-core processors equivalent to or superior to Intel Xeon E-2670.

b　Each login／management server must have a main memory of 64 GiByte or larger. The aggregate peak bandwidth of main memory access must be 100 GByte／sec or higher.

c　Each login／management server must have hard-disk drives whose total capacity is 2 TByte or larger. With these drives, it must be capable to configure hardware-based RAID-1 storage.

d　Each login／management server must have one InfiniBand FDR ports.

e　Each login／management server must have one Ethernet port of 10 Gbit／sec transfer rate and two Ethernet port of 1 Gbit／sec transfer rate.

f　The operating system of login／management servers must be 64-bit Linux equivalent to or superior to Red Hat Enterprise Linux 6 or SUSE Linux Enterprise Server 11.