J　保守体制、チューニング支援体制およびハードウェア、ソフトウェアの迅速な支援体制が整っていること。

K　現有機種から円滑に移行措置が行えること。

L　システムの運用に必要な無停電電源設備、効率的な冷却設備と加湿設備を備えること。

M　システム全体の消費電力は480kVA以下で、設備面積、設置形状、対床面積荷重が現有の施設、設備に収容できること。また、十分な耐震対策を施すこと。

N　性能評価のために行うベンチマークテストの概要は導入説明書に示す。

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29年２月10日17時00分（郵送の場合は必着のこと。）

⑵　提供先　〒980―8577 仙台市青葉区片平２－１－１　東北大学財務部調達課調達第一係長　菊地　宏隆　電話022―217―4869

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28年12月26日から平成29年２月10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29年１月12日10時00分

⑵　開催場所　東北大学金属材料研究所本多記念館３階会議室

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 rent : Supercomputing system 1 Set

⑶　Type of the procurement : Rent

⑷　Basic requirements of the procurement : The system consists of high performance supercomputing system, cloud system, front-end nodes, internet server, storage system, network system, administration system etc of which specifications are summarized as follows.

A　High performance supercomputing system

a　The system consists of multiple nodes and the theoretical peak performance of the entire system must be more than 3 PFLOPS. The system consists of more than 200 nodes and the half of them have accelerator.

b　The capacity of the main memory must be larger than 100 TB.

c　The theoretical peak performance of each node must be larger than 1 TFLOPS and the memory capacity of the node must be larger than 512 GB.

d　The data transfer rate between nodes must be higher than 12.5 GB／sec x two-way.

e　Software specified in item C must be installed.

f　Each computation node should have a high speed capability to access to the storage system described in item F.

B　Cloud system

a　The system consists of multiple nodes and the theoretical peak performance of the entire system must be larger than 100 TFLOPS.

b　The system must be installed with basic software, application software and equipped with server load balancing functions.

c　The system must have functions of data integration, data analysis and visualization.

d　Virtual system(s) should be created with GPU (and CPU).

e　The system is installed with the software specified in item C.

f　Each computation node should have a high speed capability to access to the storage system described in item F.

C　Software

a　Automatic parallelization function which is compatible with CPU and accelerator should be equipped. Fortran and C／C++ compliers which are compatible with OpenMP and OpenACC should be equipped.

b　MPI library (version MPI 3.1 or later version) should be installed.

c　Numerical library for highly parallel computation must be installed.

d　The Operating system must be UNIX (or its variants).

e　The system should be able to configure multiple queues in accordance with the necessary resources and must equip with the fare share scheduling function. Automatic scheduling function by machine learning is desirable.

D　Front-end nodes

Multiple front-end nodes must be equipped since many users will log in at the same time to submit jobs and to attempt file manipulations for high performance supercomputing and cloud systems.

E　Internet server

Internet server should provide functions of User authentication and DNS, and the server consists of redundant configuration.

F　Storage system

a　The total amount of capacity is more than 4 PB. The storage system is equipped with high speed and highly reliable parallel file systems and should be accessed by all the servers with high speed.

b　SSD should be equipped as a high speed file system cache.

G　Network system

The network system should be capable of high speed communication with both Supercomputing system and IMR network system with high security. The redundant configuration against troubles must be equipped.

H　Administration system

Operations of the Supercomputing system, user management and other necessary administration works must be efficiently achieved in a unified system operation.

I　Both hardware and software are highly reliable and stable operation of the system to ensure the 24 hours／365 days service are required.

J　Full time maintenance service and full time program tuning support by staff(s) should be provided.

K　Transition from the present system to the new one must be carried out smoothly and promptly.

L　UPS, humidifier and cooling system necessary for system operation must be included.

M　Power consumption must be smaller than 480kVA ; the equipment's area, shape and specific weight against floor must be accommodated to the existing facilities. Protection against earth quake should be facilitated.

N　The outline of the benchmark test for the performance evaluation is shown in the Introduction manual.

⑸　Time limit for the submission of the requested material : 17 : 00　10　February, 2017

⑹　Contact point for the notice : Hirotaka Kikuchi, Procurement Services Office, Finance Department, Tohoku University, 2―1―1 Katahira Aoba-ku Sendai-shi 980―8577 Japan, TEL 022―217―4869

資料提供招請に関する公表

次のとおり物品の導入を予定していますので、当該導入に関して資料等の提供を招請します。

平成 28 年 12 月 26 日

国立大学法人東京大学総長　五神　　真