

AMENDMENT NO. 4 TO THE CONTRACT FOR BUILDING OF A SUPERCOMPUTER – LARGE CLUSTER II

Contracting parties:

Vysoká škola báňská – Technická univerzita Ostrava (VSB – Technical University of Ostrava)

having its registered office at: 17. listopadu 2172/15, 708 00 Ostrava – Poruba, Czech Republic

represented by: prof. RNDr. Václav Snášel, CSc., Rector

corporate ID: 61989100, tax ID: CZ61989100

Bank: ČSOB, a.s., bank account no.: 100954151/0300

(hereinafter “VSB-TUO”)

The European High-Performance Computing Joint Undertaking

having its registered office at: 12, Rue Guillaume J. Croll, L-1882 Luxembourg

represented by: ██████████, Executive Director

(hereinafter “EuroHPC JU”,

VSB-TUO, and EuroHPC JU hereinafter jointly as the “Client”)

and

HEWLETT-PACKARD s.r.o.

having the registered office at: Za Brumlovkou 1559/5, 140 00 Praha 4 – Michle, Czech Republic

represented by: ██████████ Statutory Representative

recorded in the Register of Companies held by Municipal Court in Prague,

File C, Insert 1974

Corporate ID: 17048851, Tax ID: CZ17048851

Bank: Československá obchodní banka, a.s., bank account no.: Bank account 722513/0300 (CZK), Bank account 86641280/0300, IBAN CZ21 0300 1712 8018 0086 6413 (EUR)

(hereinafter the “Supplier”)

concluded this Amendment No. 4 to the Contract for Building of a Supercomputer – Large Cluster II from 2nd October 2020 (hereinafter the “Amendment” and “Contract”, respectively), as follows:

1. SUBJECT MATTER OF THE AMENDMENT

- 1.1 On 2nd October 2020, the contracting parties concluded this Contract for Building of a Supercomputer – Large Cluster II. Now the contracting parties have agreed on a partial change to the Annex 1-1 Basic Technical Specification of the Large Cluster and related additional supplies for the Client.
- 1.2 The subject of this Amendment is the delivery and implementation of new components into the Large Cluster itself instead of components that were to be installed under the Contract, as well as provision of warranty for quality of these new components and their implementation, all according to duly signed Record of Approval of the Request for Change No. 6 as per Art. 5 and Annex No. 8 of the Contract (hereunder as “Record”), which forms Annex No. 1 to this Amendment, as well as the list of former components that are to be replaced. Due to the fact

that the Record is prepared in the Czech language, for the purposes of this Amendment the Record has also been translated into English. For avoidance of doubt, the Work within the meaning of the Contract will therefore also consist of newly delivered components and their implementation in accordance with this Amendment.

- 1.3 For avoidance of doubt, the contracting parties state that neither this Amendment nor the signed Record No. 6 have any effect on the agreed price within the meaning of Article 12 of the Contract, nor on the Time Schedule within the meaning of Article 4 of the Contract.

2. FINAL PROVISIONS

- 2.1 This Amendment is a complete agreement of the contracting parties on the subject matter hereof. The contracting parties note that all remaining provisions of the Agreement, except those not amended by this Amendment, remain in force without change.
- 2.2 This Amendment is prepared as the electronic original of which all the contracting parties receive a copy after the signature.
- 2.3 This Amendment is partially made in Czech and English. In the event of a dispute as to the terms of this Amendment the English version shall prevail.

The contracting parties declare that they have read the Amendment, agree with its content, and in witness thereof they add their signatures.

Client

Supplier

Signed on

Signed on

.....
VSB – Technical University of Ostrava
prof. RNDr. Václav Snášel, CSc., Rector

Signed on

.....
HEWLETT-PACKARD s.r.o.
[REDACTED] Statutory Representative

.....
**European High-Performance Computing Joint
Undertaking**

[REDACTED], Executive Director



ZÁZNAM O SCHVÁLENÍ ZMĚNOVÉHO POŽADAVKU č. 6

Vysoká škola báňská – Technická univerzita Ostrava, se sídlem Ostrava Poruba, 17. listopadu 2172/15, PSČ 708 00, IČ: 61989100, coby **objednatel Díla ve smyslu SMLOUVY „CONTRACT FOR BUILDING OF A SUPERCOMPUTER – LARGE CLUSTER II“** uzavřené dne 2. 10. 2020 (dále jen „Smlouva“) se společností, **HEWLETT-PACKARD s.r.o.**, se sídlem Za Brumlovkou 1559/5, 140 00 Praha 4 – Michle, IČ: 17048851, coby dodavatelem, **tímto vydávají Záznam o schválení změnového požadavku ve smyslu ustanovení odst. 5.3, 5.4 a přílohy č. 8 předmětné Smlouvy**, (dále také jen „Záznam“), a to na základě následujících skutečností:

1. Identifikace smluvní strany, jež o změnu žádá

Dodavatel:

HEWLETT-PACKARD s.r.o.

Za Brumlovkou 1559/5

140 00 Praha 4 – Michle

IČ: 17048851

2. Datum předložení změnového požadavku

10. 6. 2021

3. Znění změnového požadavku

Posílení konfigurace Accelerated Compute Partition (ACP).

4. Zdůvodnění změnového požadavku

Na základě provedených analýz a měření je cílem posílit konfiguraci akcelerovaných výpočetních uzlů pro dosažení HPL výpočetního výkonu dle smlouvy.

Oproti původní konfiguraci řešení dochází k rozšíření počtu akcelerovaných výpočetních uzlů ze 70 kusů na 72 kusů (2 doplněné uzly budou osazeny do racku č.24). Všechny uzly pak budou nově namísto 512GB osazeny 1TB operační paměti a namísto procesorů AMD EPYC 7452 budou nově osazeny procesory AMD EPYC 7763.

5. Vyjádření dopadu změny na sledovaný parametr projektu.

Změna nemá dopad na sledované parametry projektu.

6. Opravný mechanismus umožňující smluvní straně, jež bude změnový požadavek zpracovávat, od změnového požadavku ustoupit v případě, že



nastanou okolnosti vylučující zpracování změnového požadavku, které nebyly v době schvalování změnového požadavku známy.

Nastanou-li v průběhu zpracování změnového požadavku okolnosti vylučující jeho zpracování, které nebyly v době schvalování změnového požadavku známy, předloží Dodavatel Objednateli nový změnový požadavek řešící nastalý nepříznivý stav. Nebude-li takové řešení objektivně možné, bude Dílo zhotoveno v původní konfiguraci v souladu se Smlouvou.

V ostatním bude postupováno plně v souladu s relevantními ustanoveními dotčené Smlouvy. Změnou nejsou jakkoli narušeny či ohroženy cíle projektu.

V Ostravě,

zástupce objednatele

Potvrzuji správnost a převzetí shora uvedeného Záznamu. Dále též výslovně potvrzuji, že předmětné změny nebudou mít vliv na zvýšení ceny Díla, zhoršení kvality Díla ani prodloužení termínu zhotovení Díla. Předmětnými změnami nejsou jakkoli narušeny či ohroženy cíle projektu.

V Praze,

zástupce dodavatele



Příloha č. 1

Původní HW konfigurace akcelerovaných výpočetních uzlů (70 kusů):

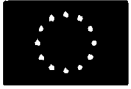
HPE Apollo 6500G10+ XL675d

- 2x AMD EPYC™ 7452
- 512GB = 16x 32GB Dual Rank x4 DDR4-3200 Registered Smart Memory Kit
- NVIDIA A100 HGX x8 GPU Air Cooled Baseboard
- Intel I350-T4 Ethernet 1Gb 4-port BASE-T Adapter
- ILO5
- 4x HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 Adapter
- HPE N+0 SXM Accelerator Power Kit (2x3000W 54V and 1x3000W 12V)

Nová konfigurace akcelerovaných výpočetních uzlů (72 kusů):

HPE Apollo 6500G10+ XL675d

- 2x AMD EPYC™ 7763
- 1TB = 32x 32GB Dual Rank x4 DDR4-3200 Registered Smart Memory Kit
- NVIDIA A100 HGX x8 GPU Air Cooled Baseboard
- Intel I350-T4 Ethernet 1Gb 4-port BASE-T Adapter
- ILO5
- 4x HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 Adapter
- HPE N+0 SXM Accelerator Power Kit (2x3000W 54V and 1x3000W 12V)



RECORD OF APPROVAL OF THE REQUEST FOR CHANGE NO. 6

VSB – Technical University of Ostrava, Registered Office: 17. listopadu 2172/15, Ostrava-Poruba, 708 00, Company Reg. No.: 61989100, as the **Client within the meaning of the "CONTRACT FOR BUILDING OF A SUPERCOMPUTER – LARGE CLUSTER II"** concluded on 2nd October 2020 (hereinafter referred to as the "Contract") with company **HEWLETT-PACKARD s.r.o.**, Registered Office: Za Brumlovkou 1559/5, Praha 4 – Michle, 140 00, Company Reg. No.: 17048851, as the **Supplier, hereby issue the Record of Approval of the Request for Change within the meaning of the provisions of Article 5.3, 5.4 and Annex No. 8 of the Contract**, (hereinafter referred to as the "Record"), on the basis of the following facts:

1. Identification of the Contracting Party requesting the change

Supplier:
HEWLETT-PACKARD s.r.o.
Za Brumlovkou 1559/5
140 00 Praha 4 – Michle
Company Reg. No.: 17048851

2. Date of submission of the Request for Change

10th June 2021

3. Wording of the Request for Change

Boosting the Accelerated Compute Partition (ACP) configuration.

4. Justification of the Request for Change

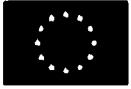
Based on the performed analyses and measurements, the goal is to boost the configuration of accelerated computing nodes to achieve HPL computing power according to the Contract.

Compared to the original configuration of the solution, the number of accelerated computing nodes is being expanded from 70 pieces to 72 pieces (2 added nodes will be installed in rack no. 24). All nodes will then be newly equipped with 1TB of RAM instead of 512GB and instead of AMD EPYC 7452 processors will be newly equipped with AMD EPYC 7763 processors.

5. Addressing the impact of the change on the monitored parameters of the project

The change has no impact on the monitored parameters of the project.

6. A corrective mechanism allowing the Contracting Party incorporating the Request for Change to withdraw from it if circumstances precluding



incorporation of the Request for Change that were unknown at the time of approval of the Request for Change arise.

Where circumstances precluding incorporation of the Request for Change during its processing that were not known at the time of its approval arise, the Supplier shall provide the Client with a new Request for Change addressing the respective unfavourable situation. If such a solution is not objectively possible, the Work will be delivered in its original configuration in accordance with the Contract.

For the rest, it will be dealt with in full compliance with the relevant provisions of the Contract concerned. The changes do not in any way disrupt or jeopardise the objectives of the project.

In Ostrava,

[Redacted Signature]

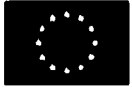
Representative of the Client

I confirm the accuracy and receipt of the above Record. I also expressly confirm that the changes in question will not cause an increase in the price of the Work, the deterioration of the quality of the Work, or prolongation of the Work's delivery date. The changes in question do not in any way disrupt or jeopardise the objectives of the project.

In Prague,

[Redacted Signature]

Representative of the Supplier



Annex No. 1

Original HW configuration of accelerated computing nodes (70 pieces):

HPE Apollo 6500G10+ XL675d

- 2x AMD EPYC™ 7452
- 512GB = 16x 32GB Dual Rank x4 DDR4-3200 Registered Smart Memory Kit
- NVIDIA A100 HGX x8 GPU Air Cooled Baseboard
- Intel I350-T4 Ethernet 1Gb 4-port BASE-T Adapter
- ILO5
- 4x HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 Adapter
- HPE N+0 SXM Accelerator Power Kit (2x3000W 54V and 1x3000W 12V)

New HW configuration of accelerated computing nodes (72 pieces):

HPE Apollo 6500G10+ XL675d

- 2x AMD EPYC™ 7763
- 1TB = 32x 32GB Dual Rank x4 DDR4-3200 Registered Smart Memory Kit
- NVIDIA A100 HGX x8 GPU Air Cooled Baseboard
- Intel I350-T4 Ethernet 1Gb 4-port BASE-T Adapter
- ILO5
- 4x HPE InfiniBand HDR/Ethernet 200Gb 1-port QSFP56 PCIe4 x16 Adapter
- HPE N+0 SXM Accelerator Power Kit (2x3000W 54V and 1x3000W 12V)