

General Terms and Conditions for renting computational resources on the computational systems for high performance computing

Renting of computational resources is a service that IT4Innovations National Supercomputing Center commercially provides for research and innovation activities to those entities that cannot use Open Access approaches, also operated by IT4Innovations. These General Terms and Conditions (hereinafter also referred to as "GTC") govern the relations between the Client and the Provider (hereinafter also collectively referred to as the "Parties") in renting (providing) computational resources on a computer system for high performance computing). Provider means the VSB – Technical University of Ostrava, IT4Innovations National Supercomputing Center, with registered offices at 17. listopadu 2172/15, 708 00 Ostrava – Poruba, Czech Republic, ID no.: 61989100. Client means any entity to which computational resources on the Provider's computational systems have been rented pursuant to the contractual relationship. For the purposes of the GTC, the Project means a period of time during which the Client is provided with services by the Provider, including, for example, but not exclusively, access to the Provider's computational resources and storage capacity, within the scope specified in the Contract on the Use of the Computational Resources (hereinafter referred to as the "Contract"; hereinafter referred to as the "Project"). The time period of the Project also includes the period during which the Client is to perform calculations on the Provider's computational resources (dynamic and static allocation within the meaning of Article II(2) of the GTC). After the expiry of this period, the Client is no longer entitled to perform calculations on the Provider's computational systems. However, as long as the Project lasts, the Client is entitled to use the Provider's data capacity or other services provided by the Provider.

I. ACCESS TO THE CLUSTER

1. The Client's access to the computational systems will be implemented remotely through access servers. A user account will be created for the Client on the computational systems' access and compute servers (a non-privileged/non-administrator Linux account).
2. Computational resource allocation, and job execution and management are done through the PBS Professional workload manager system, hereinafter the "PBS System" or "PBS".
3. The detailed procedures for creating the settings for access to the computational system, including the technical and other requirements for the Client, is available at the web pages of the Provider (<https://docs.it4i.cz>). By starting to use the computational resources rented, the Client agrees that the Client has carefully read and understood these procedures at the above Internet link, agrees to any changes made by the Provider, if applicable, and agrees to continuously monitor these procedures for any updates. Any updates and changes to the above procedures are communicated to the Client through publication at the above Internet link, and the Client is obliged to monitor changes of the procedures and adhere to those changes.
4. The settings of access to the computer systems for the purposes of renting computational resources will be created within three (3) working days from the effective date of conclusion of the contractual relationship for rent of computational resources, unless a different time period is agreed by the Parties. The creation of access to the computational systems within the time limit specified in this paragraph of these GTC is dependent on the Client providing any necessary cooperation.
5. By providing computational resources on the computational systems, no rights to the computational systems configurations, software or technical equipment are being transferred to the Client. This is without prejudice to the Client's copyright and proprietary rights to software and data stored in data storage devices that are provided to the Client.

II. METHODS OF RENTING, MEASURING AND PAYING FOR COMPUTATIONAL RESOURCES

1. The rental of computational resources will be provided by the Provider to the Client through one of the methods specified in paragraph 2 of this Article of the GTC, and the method of renting computational resources to the Client (including additional details) will be agreed in writing in advance in the Contract. The computational resources are provided by the Provider to the Client together with data (storage) capacity, the size of which is directly proportional to the amount of provided and used computational resources, using the formula specified in Annex 2 of the GTC. At the same time, the Client will be granted additional time by the Provider to move the Client's data from the Client's data capacity after the end of the Client's Allocation, until the end of the Client's Project. The unit of measurement for the use of the rental of computational resources (together with the respective data capacity) for a period of one hour is 1 accounting unit (hereinafter referred to as AU), the unit price of which depends on the type of computational resources, which would be selected by the Client (for more, see Annex 1 of the GTC). For the sake of simplicity, only the terms "computing time", "rental of computational resources", "computational resources" are used hereafter, but they always also include data capacity, unless otherwise stated..
2. Rental methods for the Cluster's computational resources:
 - A. Dynamic allocation arranged for a certain period with a pre-agreed quota
 - i. The rental of computational resources through the Client's shared access to computational systems (time-share) with other active users of the computational system.
 - ii. The Client and the Provider will agree in advance the total number of AU to be allocated to the Client within the Project, hereinafter the "Quota". For the purposes of the GTC, allocation means specifying a fixed amount of AUs for the Client, for which the Provider guarantees to the Client the use and availability of computational systems.
 - iii. The Client and the Provider will agree in advance the duration of the Project, during which the Client has access to the Provider's computational resources and storage capacity (hereinafter referred to as the "Project Duration"), and further agrees with the Provider the duration of the Allocation, during which the Client needs to use up the Quota, (hereinafter referred to as the "Allocation Duration").
 - iv. The use of the rental of computational resources will be measured to the Client for each AU of the agreed Quota, i.e. as wall-time.
 - v. In the case of an even use of the rental of computational resources, the Provider guarantees to the Client the ability to use up the Quota within the Allocation Duration.

- vi. In the case of an uneven use of the rental of computational resources, the Provider does not guarantee to the Client the ability to use up the Quota within the Allocation Duration – any unused Quota AUs are forfeited at the end of the Allocation Duration, i.e. the Client is not entitled to any additional use of such AUs beyond the Allocation Duration.
 - vii. An even use of the rental of computational resources means a suitable distribution of the use of the Quota throughout the Allocation Duration that allows the Quota to be used up by the end of the Allocation Duration; it is especially necessary to start using the Quota in a timely manner, i.e. preferably as early as the first month of the Allocation/Project Duration, as recommended by the Provider. Any other way of using the rental of computational resources is an uneven use.
- B. Static allocation arranged for a certain period**
- i. For an agreed period of time, hereinafter the “Reserved Period”, the Provider guarantees to the Client the exclusive ability to use a pre-agreed number of AUs, hereinafter the “Reserved Quota”.
 - ii. Reserved Quota AUs that could not have been used during the Reserved Period due to computational system hardware failure that has not been caused by the Client can be used after the expiry of the agreed rental period.
 - iii. The Client is entitled to terminate the Reserved Period in advance at least 24 hours of a business day at any time, without giving any reason, by a notice sent electronically at address support@it4i.cz and to the Provider’s contact person (in the Contract).
3. The Parties agree that the computational system resources that are used by the Client will be measured through a record in the PBS System. Detailed information on the measurement of AUs use is available at <http://docs.it4i.cz/>; the Client is obliged to carefully read and understand the detailed information on measurement at the above Internet link and agrees to continuously monitor these conditions for any updates. Updates and changes to the above procedures are communicated to the Client through publication at the above Internet link. By starting to use the computational resources rented, the Client agrees to any unilateral changes made to them by the Provider.
4. The Parties agree that the computational resources that have been used by the Client in the rental of computational resources in the manner specified in Article II(2)(A) of these GTC will be charged to the Client by the Provider for the number of AUs included in the Quota, namely:
- a) computational resources amounting to 50% of the Quota (or Quota, if the Contract will be concluded on various computational systems of the Provider) will be charged to the Client regardless of whether the allocated AUs have actually been used by the Client during the Project Duration,
 - b) computational resources amounting to the remaining 50% of the Quota (or Quota, if the Contract will be concluded on various computational systems of the Provider) will be charged to the Client based on the number of AUs that have actually been used by the Client in excess of the 50% of the Quota pursuant to sub-paragraph a) of this paragraph of these GTC during the Project Duration.
5. The Parties agree that when computational resources are used in the manner specified in Article II(2)(B) of these GTC, all the AUs that have been allocated to the Reserved Quota will be charged to the Client by the Provider.
6. In the rental of computational resources in the manner specified in Article II(2)(B) of these GTC, if the Client did not use up the entire Reserved Quota due to allocated computational system hardware failure that had not been caused by the Client, the Client can arrange with the Provider to use the unused Reserved Quota AUs to that extent later or would not be charged by the Provider for the AUs of the Reserved Quota.
7. The Client is entitled to free use of the Provider's data capacity to the extent that it actually uses the Provider's computational resources. If the Client uses more of the Provider's data capacity in total than the amount of the Provider's computational resources (i.e. not allocated within the meaning of this Article of the GTC), the Client shall pay the difference. If the Client exceeds the allocated data capacity for its use, such excess data capacity shall be paid by the Client subsequently, typically at the next invoice term, no later than after the end of the Project Duration. If the Client already knows at the time of negotiation of the Contract of the need for more storage capacity than it will be entitled to under Article II(1) (and Annex 2) of these GTC, the Client may agree with the Provider on a higher storage capacity within the framework of the negotiated Contract.
8. The Client acknowledges that each commenced minute will count towards the computational resources used. Similarly, the Provider will monitor storage capacity usage.
9. The Client is able to monitor the amount of AUs used through the “it4ifree” programme. The Client is also allowed to monitor the amount of used storage capacity by entering a command according to the documentation for the Provider's computational systems.

III. GUARANTEED SERVICE LEVEL

- 1. In the rental of computational resources in the manner specified in Article II(2)(A) and (B) of these GTC, the Provider guarantees to the Client the possibility of using allocated computational resources 24 hours a day.
- 2. In the case of a failure (an outage of a hardware on allocated computational system not caused by the Provider), the failures reported by the Client will be addressed by the Provider within the following time limits that have been set depending on the severity of the failure:

CATEGORY OF FAILURE	DESCRIPTION OF FAILURE	TIME LIMIT FOR REMEDYING FAILURE
A	Total outage of allocated computational system.	No later than two (2) business days of the notification of the failure.
B	Outage of one or more compute servers (nodes).	No later than six (6) business days of the notification of the failure.
C	Other failures that do not prevent the use of allocated computational system(s).	No later than ten (10) business days of the notification of the failure.

- 3. Remedying the problem within the time limit specified in paragraph 2 of this Article of these GTC may be extended, if this is justified by the nature and severity of the failure and the Provider is objectively unable to remedy the failure within the specified time limit. Such a time limit for remedying a failure does not count towards the period of the rental of computational resources, in the case of a

failure the period of the rental of computational resources is extended by the duration of the time limit for remedying the failure, after signature of an amendment.

4. The notification of a failure will be sent by the Client electronically at the following address: support@it4i.cz.

IV. PROVIDER'S USER SUPPORT, MAINTENANCE AND CONSULTING SERVICES

1. In the course of providing computational resources, the Provider will provide to the Client – according to the Client's requests – user support relating to the use of computational resources and the functioning of the connection to the computational resources on the Provider's side, which includes addressing the Client's relevant problems (i.e. through answering and responding to the Client's immediate requests), answering questions during the use of computational resources, and providing general assistance in the use of allocated computational resources. The price of user support is included in the fee for provided computational resources. User support does not include, without limitation, the Client's problems with connection to the allocated computational resources on the Client's side.
2. In the course of providing computational resources, the Provider will provide to the Client – according to the Client's requests – user support relating to the preparation of the allocated computational resources use by the Client including, without limitation:
 - a) installing standard programmes that are fully supported by the Cluster's operating system,
 - b) entering the Client into the IT4Innovations systems,
 - c) adjusting disk and memory quotas.
3. Requests for user support and maintenance services will be sent by the Client to the Provider electronically at the address support@it4i.cz.
4. In the course of providing computational resources, the Provider will provide to the Client – at the Client's request and for a fee – consulting services including expert consultations provided to the Client in order to achieve maximum efficiency in using allocated computational resources. The Parties agree that the price for consulting services will be specified pursuant to the contractual relationship between the Client and the Provider apart from the Contract. Consulting services will be provided by the Provider's experts in areas including, without limitation, the following:
 - a) analysis of the Client's software solution,
 - b) optimisation of the Client's software solution,
 - c) offering alternative solutions,
 - d) implementation of selected solution as to the Client's requirements,
 - e) installing programmes other than those specified in Article IV(2) of these GTC.
5. In the event the Provider has no licence or other authorisation to use the software that has been selected by the Client on the allocated computational resources, the Client is obliged to acquire such a licence at its own expense. In the event the Client uses such acquired licence and installs it on the Provider's allocated computational resources in cooperation with the Provider, the Provider shall not be liable for any outages caused by the licence programs. In the event the Provider has a licence to use the software that has been selected by the Client on the allocated computational resources, the Client will pay to the Provider a fee for using such software, which will be agreed by the Parties in writing.
6. Requests for consulting services will be sent by the Client to the Provider electronically at the address support@it4i.cz. Based on a request sent in the above manner, the Provider will communicate to the Client contact information for the order of consulting services, along with other details concerning the order of consulting services. The decision on whether the Client's request, by its nature, is a request for consulting services pursuant to paragraph 4 of this Article of the GTC or a request for user support relating to the use of allocated computational resources and the functioning of the connection to the allocated computational resources on the Provider's side pursuant to paragraph 2 of this Article of the GTC is up to the Provider. In the event that – according to the Provider's assessment – the Client's request for user support is, by its nature, a request for consulting services, the Provider will notify the Client of that fact and will communicate to the Client contact information for the order of consulting services, along with other details concerning the order of consulting services.
7. User support and consulting services pursuant to this Article of the GTC will be provided by the Provider on working days from 8:00 am to 4:00 pm within time limits that will depend on the complexity of the requested consulting service or user support, and on the Provider's available capacity, unless otherwise agreed by the Parties.

V. PAYMENT TERMS

1. For the purposes of payment for the rental of computational resources, the Parties agree that the Provider is entitled to issue an invoice in accordance with the following conditions:
 - a) the Provider's fee according to option A under Article II(2) of these GTC will be invoiced in case of ordering computational resources over the amount of CZK 500 000 including:
 - (i) in the extent pursuant to Article II(4)(a) of these GTC before the commencement of the Project Duration,
 - (ii) in the extent pursuant to Article II(4)(b) of these GTC after the end of the Allocation Duration,
 - (iii) in the event that the Provider exceeds the storage capacity quota during the Project Duration, such amount shall be invoiced after the Project Duration;
 - b) the Provider's fee according to option B under Article II(2) of these GTC will be invoiced in case of ordering computational resources over the amount of CZK 500 000 including in the extent pursuant to Article II (5) of these GTC before the commencement of the use of reserved period.
2. In the case that the order of computational resources will be in the amount of up to CZK 500 000, the Provider's fee according to Article V(1)(a, b) of these GTC will be invoiced after the Allocation Duration or after the Project Duration (in case of exceeding the storage capacity quota), if not agreed otherwise by the Contracting Parties. In the event that the Parties enter into a Contract for the provision of various computational systems of the Provider, the Provider's remuneration shall be invoiced for the entire Contract. In the event that the Provider exceeds the storage capacity quota, the Provider's remuneration for such additional storage capacity shall be invoiced for the entire Contract.
3. In the event that the number of AUs is increased by the agreement of the Parties, the Parties shall proceed by analogy with the provisions of Article V(1)(a, b).

4. The price for the provided computational resources will be paid on the basis of a tax document – an invoice issued by the Provider.
5. Value added tax will be accounted for in accordance with applicable provisions of Act No 235/2004 Sb., on value added tax, as amended.
6. The invoice must meet the requirements for a tax/accounting document pursuant to Act No 563/1991 Sb., on accounting, as amended, and Act No 235/2004 Sb., on value added tax, as amended.
7. The price is due and payable within 30 days of the delivery of the invoice to the Client. The Parties agree that the obligation to pay the price for the Performance is met on the day of crediting the relevant amount to the Provider's account. If the Client fails to pay the invoice duly and on time, the Provider shall be entitled to claim interest on late payment in accordance with applicable legal regulations.

VI. RIGHTS AND OBLIGATIONS OF THE CLIENT

1. The Client is obliged to comply with the obligations set out in the document entitled "Acceptable Use Policy of HPC Resources at IT4Innovations" (hereinafter the "AUP"). The Client declares that it has carefully read and understood this policy, which is written in the English language, prior to entering into the contract and agrees to comply with the policy. The Provider is entitled to change the AUP unilaterally at any time, however, the Provider is obliged to notify the Client of any such change – it will suffice if the notification of the change is made electronically.
2. The Client acknowledges that access to the allocated computational resources will be granted to each individual designated by the Client (and their access will then be maintained) on the condition that each such individual signs and complies with the AUP. The Client also acknowledges that, in the event of a violation of the AUP by any individual designated by the Client, which occurred based on the Client's instruction, is considered a violation of the AUP by the Client itself with all the resulting consequences.
3. The Client is obliged to inform the Provider of all facts that are material in terms of using the computational resources pursuant to the contractual relationship between the Parties, especially those that might – in any way – affect the use of computational resources or the Client's actual access to the allocated computational resources.

VII. RIGHTS AND OBLIGATIONS OF THE PROVIDER

1. The Provider has the right to suspend the provision of computational resources in the event that:
 - a) the Client has been in default in the payment of any of its financial obligations for more than 14 days, i.e. until all outstanding liabilities of the Client are properly paid,
 - b) the Client has seriously breached any of its obligations or has breached any of the obligations set out in the AUP, i.e. until the situation has been remedied,
 - c) there is an urgent need to use the allocated computational resources on the part of the Czech Republic, territorial self-governing units, government and local government bodies, i.e. until the urgent need ceases to exist.
2. In the event the provision of computational resources is suspended in accordance with this Article of the GTC, and if the computational resource rental method according to options A under Article II(2) of these GTC is used, the Client is not entitled to any compensation for computational resources that were not used within the Project Duration.
3. In the event the provision of computational resources is suspended in accordance with this Article of the GTC, the Client is not entitled to any compensation for damages caused by the suspension of the provision of computational resources, not even to the extent of loss of profit.

VIII. COOPERATION AND MUTUAL COMMUNICATION

1. The Client agrees to provide the Provider with cooperation in providing computational resources, to the necessary extent and at the Provider's request.
2. All notifications between the Parties about the Contract or any other similar contractual relationship must be made in writing and must be delivered to the other party either in person or by registered mail or other form of registered postal service, unless otherwise specified or agreed between the Parties. Unless communication pursuant to the preceding sentence affects the validity and effectiveness of the concluded contractual relationship for the provision of computational resources and/or unless written form is expressly required by the GTC, delivery via e-mail is also permitted.
3. For the purposes of deliveries between the Parties, the provisions of Section 573 of the Civil Code of the Czech Republic on the presumed time of delivery will not apply. In the case of delivery via a postal service provider, an item is deemed delivered upon its receipt by the Party to whom the item is addressed and, if that Party was unavailable during the delivery, the day of delivery is deemed to be the day on which the item was deposited at the postal service provider.
4. In the event of a change in the mailing address or e-mail address of either Party, the Parties agree to inform the other Party within three working days.

IX. PROTECTION OF INFORMATION

1. The Parties are aware that in the course of performing their obligations:
 - they may, intentionally or by omission, provide each other with information that will be considered confidential (hereinafter "Confidential Information"),
 - their employees and persons in a similar position may gain access to the other Party's confidential information due to a deliberate act or omission by the other Party.
2. The Parties agree that neither of them will disclose to a third party any confidential information obtained from the other Party in performing the contract.
3. The following are not deemed to be third parties:
 - a) the Parties' employees and persons in a similar position,
 - b) the Parties' bodies and their members,
 - c) in relation to the Client's confidential information, the Provider's subcontractors,

- d) in relation to the Provider's confidential information, the Client's external suppliers, assuming that they contribute to performing the contractual relationship or any performance associated therewith, confidential information is disclosed to them solely for that purpose and the disclosure of confidential information is only done to the extent necessary to fulfil its purpose and under the same conditions as those specified for the Parties by the GTC or some other agreement between the Parties.
4. The Parties agree to meet in full the confidentiality obligation and the obligation to protect confidential information arising from the GTC or some other agreement between the Parties and also from the relevant legislation including, without limitation, Act No 110/2019 Coll., on processing of personal data, as amended, and Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of individuals with regard to the processing of personal data and on the free movement of such data and repealing Directive 95/46/EC (General Data Protection Regulation). In this connection, the Parties agree to inform any and all persons who will be contributing to the performance of the contractual relationship on their part about the above obligations of confidentiality and protection of confidential information and they also agree to ensure – in an appropriate manner – that all persons contributing to the performance of the contractual relationship comply with these obligations.
 5. All confidential Information remains the sole property of the disclosing Party, and the receiving Party will make the same effort to protect it and maintain its confidentiality as if the confidential information were its own. Except to the extent that is necessary for performing the contractual relationship, both Parties agree to refrain from duplicating the other Party's confidential information in any way, disclosing it to any third party or their own employees and agents, except for those who need to know it in order to perform the contractual relationship. In addition, both Parties agree not to use the other Party's confidential information in any way other than for the purpose of performing the contractual relationship.
 6. If confidential information is provided in written form or in the form of text files on electronic data storage media, the disclosing Party is obliged to warn the receiving Party about the confidentiality of such material by labelling it as confidential at least on the front page or the front side of the medium. However, the absence of such a warning does not negate the obligation to protect such disclosed information.
 7. Notwithstanding the above provisions, information is not considered confidential if it:
 - a) became publicly known and its disclosure did not violate the receiving Party's obligations or any legislation,
 - b) can be proven to have been legally available to the receiving Party prior to entering into a contractual relationship, unless such information was the subject of another contract on the protection of information that had been entered into between the Parties,
 - c) is, after the conclusion of the contractual relationship, provided to the receiving Party by a third party that is not limited in handling such information.
 8. The termination of the contractual relationship, for whatever reason, does not affect the provisions of this Article.
 9. The provisions of this Article do not apply to the disclosure of information and confidential information to entities authorised to carry out inspection under public law.

X. VALIDITY AND EFFECTIVENESS OF THE CONTRACT, WITHDRAWAL

1. The provider is entitled to terminate the provision of computational resources, if the Client in any way violates any of the obligations set out in the AUP.
2. Upon the early termination of the provision of computational resources, the Client is obliged to pay to the Provider the fee for the rental of computational resources according to the relevant selected option under Article II(2) of the GTC, namely:
 - a) in the case of the fee according to option A under Article II(2) of the GTC, the fee for computational resources amounting to 50% of the Quota (unless already paid by the Client prior to the end of the Contract) plus the fee for the computational resources that had been actually used by the Client in excess of 50% of the Quota by the date of the termination of the provision of allocated computational resources,
 - b) in the case of the fee according to option B under Article II(2) of the GTC, the fee of computational resources according to Article II(6) of these GTC, or for the actually used computational resource, if the Contract was terminated before all the AUs were used.

The fee pursuant to this paragraph of the GTC will be invoiced to the Client as of the date of the termination of the provision of computational resources.

XI. COMMON AND FINAL PROVISIONS

1. The Parties expressly declare that they do not wish for any rights or obligations to be derived – beyond the express provisions of the contractual relationship between the Parties – from existing or future practices established between the Parties or any customary practices that are established generally or within the sector relating to the subject-matter of the contractual relationship, unless the Parties have expressly agreed otherwise. In addition to the above, the Parties confirm that, as at the date of the commencement of the provision of computational resources, they are not aware of any business custom or practice established between them.
2. Pursuant to the provisions of Section 1765 of the Civil Code, both Parties have assumed the risk of a change of circumstances.
3. The provision of Section 557 of the Civil Code to the effect that if any expression used permits multiple interpretations, in case of doubt it will be interpreted to the detriment of the party who used the expression first, does not apply.
4. For the avoidance of doubt, it is hereby stated that the provisions on disproportionate shortening pursuant to Section 1793 of the Civil Code and provisions on usury pursuant to Section 1796 of the Civil Code do not apply to Contract.
5. The Parties' rights and obligations that are not regulated are governed by the laws of the Czech Republic including, without limitation, Act No 89/2012 Coll., the Civil Code, as amended.
6. Should any provision of the GTC prove to be invalid or unenforceable, or should it become invalid or unenforceable after the conclusion of the contractual relationship between the Provider and the Client, such a fact does not cause the remaining provisions of the GTC to become invalid or unenforceable, unless otherwise required by the enforcement provisions of legal regulations.
7. Any dispute between the Parties arising out of or in connection with the rental of computational resources on the Provider's computational systems will always primarily be resolved amicably by mutual agreement. If amicable settlement is not reached within a reasonable period of time, either of the Parties will be entitled to submit the matter in dispute to a court of local jurisdiction. In

accordance with Section 89a of Act No 99/1963 Coll., the code of civil procedure, as amended, the Provider's general court is hereby declared to be the court of local jurisdiction to hear disputes arising from the rental of computational resources.

In Ostrava, on the date of the signature

doc. Mgr. Vít Vondrák, Ph.D.
Managing Director of IT4Innovations

Annex 1 Accounting units within the meaning of the Provider’s computational resources

Within the meaning of Article II(1) of the GTC, an accounting unit is a computational resource of the Provider (i.e. a certain part of the computational system or the entire computational system of the Provider) provided to the Client for a period of one (1) hour. The Provider's computational resources are as follows:

	COMPUTATIONAL RESOURCE TYPE	NUMBER OF COMPUTATIONAL RESOURCES	LINK
KAROLINA CPU	Compute Nodes Without Accelerators	720	https://docs.it4i.cz/karolina/compute-nodes/
KAROLINA GPU	Compute Nodes With a GPU Accelerator	72	https://docs.it4i.cz/karolina/compute-nodes/
KAROLINA DATA ANALYTICS	Data Analytics Compute Node	1	https://docs.it4i.cz/karolina/compute-nodes/
BARBORA CPU	Compute Nodes Without Accelerators	192	https://docs.it4i.cz/barbora/compute-nodes/
BARBORA GPU	Compute Nodes With a GPU Accelerator	8	https://docs.it4i.cz/barbora/compute-nodes/
BARBORA DATA ANALYTICS	Fat Compute Node	1	https://docs.it4i.cz/barbora/compute-nodes/
NVIDIA DGX-2	Entire computational system	1	https://docs.it4i.cz/dgx2/introduction/

Annex 2

The Client is entitled to the Provider's data storage capacity in proportion to the ordered and actually used amount of accounting units on the given system. In case the Client orders computational resources on (more) various systems of the Provider, the individual storage capacity entitlements shall be aggregated.

The amount of storage capacity (SC) is calculated as the number of accounting units (AUs) on a given system of the Provider in product with the coefficient (c) of the Provider's system. The result is the amount of TB of storage capacity to which the Client is entitled. The coefficient can be understood as the number of TB per node of a given system for one hour (TBh).

Formula: $SC = AU \times c$

The coefficients of the systems:

	c (TBhour)	GBmonth
KAROLINA CPU	6.41	8.91
KAROLINA GPU	53.31	74.04
KAROLINA DATA ANALYTICS	76.95	106.88
BARBORA CPU	5.77	8.02
BARBORA GPU	21.32	29.62
BARBORA DATA ANALYTICS	76.95	106.88
NVIDIA DGX-2	111,95	155,49

The exact amount of storage capacity to which the Client will be entitled will be specified in the Contract. Storage capacity will be allocated to the Client at the PROJECT repository (see <https://docs.it4i.cz/storage/project-storage/>).

The exact amount of storage capacity to which the Client will be entitled will be specified in the Contract.

Example 1: The Client contracts with the Provider to order 100 AUs on the Karolina CPU system. The maximum storage capacity will therefore be 641 TBhours. Due to the fact that 100 AUs on the Karolina CPU system cost CZK 5,485 excluding VAT, the Parties will not proceed in accordance with Article V(1)(a)(i) and the Client will not pay 50% of the Quota immediately after the commencement of the Project. The Client will only use 60 AUs during the Project Duration. Therefore, the Client

will only be entitled to 384.6 TBhours free of charge. If the Client uses less or the same amount of SC, he will not pay anything extra (as he will already pay this amount as part of the remuneration to the Provider for the used AUs); if the Client uses more SC, they will pay the resulting difference according to the price specified in the Contract.

Example 2: The Client contracts with the Provider to order 1,200 AUs on the Karolina GPU system. The maximum storage capacity will therefore be 63,972 TBhours. Considering the fact that 1,200 AUs on the Karolina GPU system amounts to CZK 547,188 excluding VAT, the Parties shall proceed in accordance with Article V 1(a)(i), and the Client shall pay CZK 273,594 excluding VAT after the commencement of the Project (i.e. 50% of the Quota). Therefore, the Client will have a Guaranteed Storage Capacity of 31,986 TBhours as this amount has already been paid. Further, the Parties will proceed as per Example 1 above.

Annex 3 Variant A – Dynamic allocation agreed for a certain period of time with a pre-agreed quota

Example 1: The Client agrees with the Provider a Quota in the range of 1000 AUs (in this case node hours) allocated on the Karolina CPU system for the Client. If the Client uses 700 of these AUs during the Project Duration, the Provider will charge the Client 500 AUs + 200 AUs. If the Client uses 300 AUs during the Project Duration, the Provider will charge the Client 500 AUs, and if the Client uses 0 AUs during the Project Duration, the Provider will charge the Client again 500 AUs. The Client will thus always pay a minimum remuneration for 50% of the Quota, i.e. 500 AUs.

Example 2: The Client agrees with the Provider a Quota of 1000 AUs (in this case node hours) allocated on the Karolina CPU system and 500 AUs allocated on the Barbora GPU system for the Client. If the Client uses 700 AUs on the Karolina CPU system and 300 AUs on the Barbora GPU system during the Project Duration, the Provider shall charge the Client 500 AUs + 200 AUs, all on the Karolina CPU system, and 250 AUs + 50 AUs, all on the Barbora GPU system. If during the Project Duration the Client uses 300 AUs on the Karolina CPU system and 50 AUs on the Barbora GPU system, the Provider will charge the Client 500 AUs on the Karolina CPU system and 250 AUs on the Barbora GPU system. If during the Project Duration the Client uses 300 AUs on the Karolina CPU system and 0 AUs on the Barbora GPU system, the Provider will again charge the Client 500 AUs on the Karolina CPU system and 250 AUs on the Barbora GPU system. Thus, the Client will always pay at least the remuneration for 50% of the Quota, i.e. 500 AUs on the Karolina CPU system and 250 AUs on the Barbora GPU system, with each allocation of the Provider (as per the Annex/Amendment to the Contract) being considered separately.