

Please note: This document is a non-binding convenience translation of the German wording of the document „Nichtamtliche Lesefassung der HLRS Entgeltordnung“. The German wording is exclusively legally binding. In case of inconsistencies the German wording shall prevail over the English wording.

Unofficial Version of the HLRS Fee Schedule 2020

This document is based on the HLRS Fee Schedule of April 18, 2016, including changes made on February 27, 2017, which went into effect on January 1, 2017; the second change on March 1, 2018, which went into effect on January 1, 2018; the third change on January 18, 2019, which went into effect on January 1, 2019, as well as the fourth change on 26th June, which went into effect on January 2020.

Fee Schedule for the use of computer systems and peripheral equipment of the High-Performance Computing Center Stuttgart (HLRS) at the University of Stuttgart

From April 18, 2016

Published in the official announcement of the University of Stuttgart No. 9/2016 on April 20, 2016

(https://www.uni-stuttgart.de/universitaet/aktuelles/bekanntmachungen/dokumente/bekanntm_9_2016.pdf)

in the wording of the First Order for the Amendment of the Fee Schedule of February 22, 2017; published in the official notices of the University of Stuttgart No. 08/2017 on February 27, 2017

(https://www.uni-stuttgart.de/universitaet/aktuelles/bekanntmachungen/dokumente/bekanntm_8_2017.pdf),

in the wording of the Second Order for the Amendment of the Fee Schedule of March 1, 2018; published in the official announcement of the University of Stuttgart No. 05/2018 of March 12, 2018

(<https://www.uni-stuttgart.de/universitaet/aktuelles/bekanntmachungen/#id-6ce3897e-0>) in

the wording of the Third Order for the Amendment of the Fee Schedule of January 18, 2019; published in the official notice of the University of Stuttgart No. 05/2019 of January 23, 2019

(https://www.uni-stuttgart.de/universitaet/aktuelles/bekanntmachungen/dokumente/bekanntm_5_2019.pdf) and in

the wording of the Fourth Order for the Amendment of the Fee Schedule of June 26th, 2020; published in the official notice of the University of Stuttgart No. 35/2020 of July 8th, 2020

(https://www.uni-stuttgart.de/universitaet/aktuelles/bekanntmachungen/dokumente/bekanntm_35_2020.pdf).

According to § 1 (4) sentence 3 of the User Regulations for Digital Information Processing and Communication Technology (Benutzungsordnung für die digitale Informationsverarbeitung und Kommunikationstechnik-IuK) at the University of Stuttgart of December 18, 2006 (Official Announcements of the University of Stuttgart No. 179, dated December 27, 2006), the Director of the High-Performance Computing Center Stuttgart (HLRS) on March 29, 2016 enacted the following Fee Schedule for the use of HLRS's computer systems and peripheral equipment at the University of Stuttgart.

The Rectorate of the University of Stuttgart approved this Fee Schedule pursuant to § 1 (4) sentence 1 of the User Regulations for Digital Information Processing and Communication (IuK) at the University of Stuttgart on April 11, 2016.

§ 1 Basis for the calculation and collection of charges

The calculation and collection of fees for the use of HLRS's services is based on the Terms of Use for Digital Information Processing and Communication Technology (luK) at the University of Stuttgart (User Regulations) in the wording that is valid at the particular time, especially § 1 paragraphs 3 and 4 and § 8 of the User Regulations, in conjunction with the terms described in this Fee Schedule. Charges based on agreements pursuant to § 6 LHG or other agreements remain unaffected.

§ 2 Assignment of task groups and fee groups

(1) Charges for the use of HLRS's computer systems and peripheral equipment shall be levied as follows with respect to different task groups:

No.	Task group	Fee
1	Members, associates and facilities of the University of Stuttgart for university use	Fees pursuant to § 1 (4) sentence 1 of the Usage Order and to Appendices 1-3 in this Fee Schedule
2	Employees of the University of Stuttgart within the scope of approved secondary employment or as part of the allowed private conversations according to § 1 (3) of the User Regulations	Fee in accordance with relevant provisions and regulations
3	Members, associates, and facilities of other state universities of the State of Baden-Wuerttemberg for higher education purposes	Research price for higher education purposes as described in Appendices 1-3
4	Members, associates, and facilities of state and federal universities for higher education purposes	Research price for higher education purposes as described in Appendices 1-3
5	Other users	Standard rates in accordance with the agreement

(2) The granting of permission to use computers is not permitted:

1. to countries or persons identified in an EU embargo that prohibits authorization because it would constitute a form of technical assistance
2. if it would facilitate the development or production of atomic, biological, or chemical weapons (ABC weapons), anti-personnel munitions, or cluster munitions
3. if existing contractual obligations prohibit access to the machines.

HLRS will notify applicants who cannot be approved for access because of these conditions. Access to computers is restricted if the use will be carried out by individuals or legal entities located outside the Federal Republic of Germany and for purposes related to ABC weapons, missile technology, any other military use, or the construction or operation of nuclear facilities. If HLRS becomes aware of such an application of its resources, it is obliged to inform the Federal Office for Economic Affairs and Export Control, which decides on the existence of a compulsory approval of an application as well as the granting or refusal of a necessary approval. Additional restrictions exist for computers from manufacturers that are subject to US export control laws.

Accordingly, nationals of certain countries require a license from the US Department of Commerce to be allowed usage. Applicants for whom this requirement applies will be informed by HLRS. The applicant must submit a license application via the computer manufacturer.

(3) If users and service recipients (signers of a contract with HLRS) are not identical when using services, the fee shall be based on the fee determined for the service recipient (§ 8 (4) of the User Regulations).

§ 3 Usage Rates

(1) Charges for the use of computer systems shall be levied in accordance with Appendix 1 of this Fee Schedule.

(2) If the invoiced amount for services used is lower than the stated minimum amount for the "research price" rate, the latter rate will be invoiced to cover administrative expenses. The prices should be understood not to include any taxes that might be applicable.

(3) If a special fee must be paid to the licensor for the use of licensed software packages, these additional costs shall be borne by the user of that package. The user will be notified about fees required for the use of licensed software programs prior to commencement of use.

(4) For the interactive use of the computer systems referenced in subsection (1) sentence 1, a surcharge of 50% shall be levied on the basic prices specified in the price classes for all task groups.

(5) HLRS determines additional fees for the use of peripheral equipment (such as HPSS) as specified in Appendix 2 of this Fee Schedule. The prices should be understood not to include any taxes that might be applicable.

§ 4 Definition of the basis for charges for use of the computer systems

The basis for calculating the cost of computational services provided using the computing systems in batch and interactive operations referred to in § 3 (1) sentence 1 is the computing time (RT/Time, Resource Time). The algorithms used to calculate computing time are explained in Appendix 3 of this Fee Schedule.

§ 5 Accounting periods

(1) The billing period is the calendar year.

(2) Users described in § 2 (1) no. 1 shall be billed for chargeable services at HLRS in January of the following financial year. The Central Administration will debit funds from the accounts of the institutions and facilities concerned. Computing fees that exceed the value previously approved by the Central Administration will be charged separately.

(3) Chargeable usage of HLRS services shall be invoiced to users described in § 2 (1) nos. 3 to 5 in accordance with separate agreements with the respective users. Charges for computing time accrued in the context of third-party funded projects are typically billed separately on an annual basis. The corresponding university institutions shall pay the respective billed amounts directly to HLRS.

(4) The determination of usage fees for use in the context of approved secondary employment

or permitted private conversations (§ 2 para. 1 no. 2) shall occur in accordance with the relevant provisions (e.g. University Regulations for Secondary Employment (Hochschulneben-tätigkeitsverordnung)) or regulations for private conversations (e.g. telecommunications regulations of the Ministry of Finance (Dienstanschlussvorschrift des Finanzministeriums), or announcements and notifications of the University of Stuttgart (Rundschreiben und Merkblätter der Universität Stuttgart).

§ 6 Terms of payment

(1) The obligation to pay fees becomes effective with the start of computer usage. The fee is due at the time of invoice and must be paid within 14 days after receipt of the invoice unless specified otherwise.

(2) In order to track billing for computing time used, a web-based interface shall be made available to representatives of university institutions. Representatives of university institutions will be responsible for entering their respective budgets in this interface. When 75%, 95%, and 100% of an institution's budget has been reached, the corresponding representative will receive a notification by email. If the budget is exceeded, the representative of the university institution will be notified regularly by email. HLRS cannot typically place a temporary block on an individual project. The university institution is responsible for computing usage in excess of what has been budgeted and is required to bear any additional costs that might be incurred. When 100% of the budget has been reached, the representative of the university institution has the option of increasing the budget in the web interface at any time, provided the university institution has made the appropriate budget available. The respective representative of the university institution is responsible for budget adjustments made in the web interface.

§ 7 Entry into force

This Fee Schedule is effective as of January 1, 2016.¹ Simultaneously, the Fee Schedule dated September 16, 2008 (Official Announcements of the University of Stuttgart No. 47/2008 of September 26, 2008), which was last amended by the Fifth Order for the Amendment of the Fee Schedule on March 20, 2015 (Official Announcements of the University of Stuttgart No. 12/2015 of March 26, 2015), goes out of effect.

Stuttgart, April 18, 2016

signed.

Prof. Dr.-Ing. Michael Resch
Director of the HLRS

¹ These provisions apply to the entrance into effect of the Fee Schedule in the original wording of April 18, 2016. Appendix 1 of § 3 paragraph 1 and Appendix 3 of paragraph 4 of the Fee Schedule went into effect on January 1, 2019 based on the Third Order for the Amendment of the Fee Schedule dated January 18, 2019.

Appendix 1 to § 3 Paragraph 1 of the Fee Schedule: Pricing for the use of computing resources beginning January 1, 2020.

Research Prices 2020

Research Prices for 2020																	
Research Prices for	Fee for task group no. 1 according to § 2 para. 1 in Euro / RTh																
Computer system	bwuni-cluster**	smp knoten	VISP100, Pre- & Postprocessing 128 GB	Pre- und Postprocessing 256 GB	Pre- und Postprocessing 512 GB	SKL-192GB	Haswell 128 GB	Haswell 256 GB	Cascade lake 384 GB	Graphik-server AMD	Graphik-server NVIDIA	Vektor-knoten Aurora	CS Storm	CS 500 - Spark	URIKA	HAWK 128 GB	HAWK 256 GB
Computing time as flat rate basis for material costs	Node 0,08 €	Node 0,03 €	Node 0,31 €	Node 0,30 €	Node 0,59 €	Node 0,15 €	Node 0,05 €	Node 0,05 €	Node 0,14 €	Node 0,17 €	Node 0,24 €	Node 0,60 €	GPU 0,21 €	Node 0,25 €	Node 0,11 €		
Minimum charge per and billing period	none																
	Individual invoices not issued																
	Research price net for the task groups Nos. 3 and 4 according to § 2 para. 1 in Euro / RTh																
Charge	Batch mode / basic priority																
	Euro / RTh																
Computer system	bwuni-cluster**	smp knoten	VISP100, Pre- & Postprocessing	Pre- und Postprocessing 256 GB	Pre- und Postprocessing 512 GB	SKL-192GB	Haswell 128 GB	Haswell 256 GB	Cascade lake 384 GB	Graphik-server AMD	Graphik-server NVIDIA	Vektor-knoten Aurora	CS Storm	CS 500 - Spark	URIKA	HAWK 128 GB	HAWK 256 GB
Computing time		Node 0,26 €	Node 2,92 €	Node 2,88 €	Node 5,64 €	Node 1,41 €	Node 0,44 €	Node 0,49 €	Node 1,31 €	Node 1,65 €	Node 2,25 €	Node 5,70 €	GPU 2,01 €	Node 2,37 €	Node 1,03 €	Node 1,16 €	Node 1,31 €
Minimum charge per invoice and billing period	none																
	* Only nodes are billed				** Billing is only for information												
	The prices are exclusive of VAT																
Fee for storage management system																	
HPSS	0,01 € /GB/Month																
Quobyte	6,81 € TB/Month																

Appendix 2 to § 3 (5) of the Fee Schedule: Additional charges for the use of peripheral devices (e.g. HPSS)

Memory usage in the HPSS (High-Performance Storage System)

For data storage usage in the HPSS (hard disk cache and tape-based long-term storage) the following rates, not including any applicable taxes, apply: **0.01 Euro per GB per Month**

Appendix 3 to § 4 of the Fee Schedule: calculation of computing time

The calculation of computing time happens as follows:

a) Calculations on the smp node (shared operation)

The calculation time (in core hours) is calculated according to the following formula:

$$\text{Resource Time} = \text{allocated_resources} * \text{allocated_time}$$

Applies to the following systems: hornet-smp, Beetle

b) Calculations on the compute nodes of resources calculated using core hours

The calculation time (in core hours) is calculated according to the following formula:

$$\text{Resource Time} = \text{allocated_nodes} * \text{Cores_Per_Node} * \text{allocated_time}$$

Applies to the following systems:

NEC Laki / Laki2 Cluster (includes NEC Cluster 2009 (Nehalem), Sandy Bridge, Haswell, Graphics Server, LM, LMD)

c) Calculations on the compute nodes of resources, which are calculated using node hours

The calculation time (in node hours) is calculated according to the following formula:

$$\text{Resource Time} = \text{allocated_nodes} * \text{allocated_time}$$

Applies to the following systems:

HazelHen

d) Calculations on pre- and postprocessing resources (dedicated operation)

The calculation time in *node hours* is calculated according to the following formula:

$$\text{Resource Time} = \text{allocated_nodes} * \text{allocated_time}$$

Applies to the following systems: Pre- and Postprocessing Server Hazelhen