

# Services in the basic fee Infrastructure

### **▶** Network connectivity

SURFinternet eduroam eduroam Visitor Access

### ► Security, trust & identity

Cybersave Yourself
SURFconext
SURFcert
SURF Research Access Management
SURFaudit
Cybercrisis exercise OZON

# **▶** Data services

<u>SURFfilesender</u> <u>edubadges</u>

#### **▶** Digital platforms

SURFdashboard

# ► Expertise, advice and training

<u>SURFacademy</u>

# Services in the basic fee Procurement and Digital Platforms

#### ► Agreements with market parties

ICT-purchasing
Content
Distribution of hard- and software

# **▶** Data services

**SURFsharekit** 

# **▶** Digital platforms

Auteursrechten.nl

# Additional services

#### **▶** Computeservices

National Supercomputer Cartesius
National Compute cluster Lisa
High-performance Dataprocessing
MS4
Custom Cloud Solutions (CCS)
Jupyter Notebook Hub

#### Network connectivity

SURFinternet upgrade
Connecting third parties to the
SURF network
Connecting other locations
SURFinternetpinnen
SURFdomeinen
SURFfirewall
SURFlichtpaden
SURFwireless
SURFopzichter

#### Security, trust & identity

SURFmailfilter
SURFcertificaten
eduVPN
SURFsecureID
SURF Research Access Management
SURFsoc

# Data services edubadges

SURFdrive SURFsharekit Research Drive Object Store

dCache

<u>Data Archive</u> <u>Persistent Identifiers (PID)</u>

iRODS Hosting

RDM Storage Scale-out

**SURF Data Repository** 

#### laaS

SURFcumulus HPC Cloud

# **▶** Digital platforms

edusources
HBO Kennisbank
SURF Research Cloud
SURFspot customized functionaliteit
Kies Op Maat

# ► Expertise, advice and training

<u>SURF Consultancy</u> Training courses for research

# Index

This brochure lists the rates for the services provided by SURF. These are the **rates that members pay** for SURF services. Non-members pay different rates in some cases. The brochure is divided up as follows:

- services covered by the basic fee Infrastructure
- services covered by the basic fee Procurement and Digital Platforms
- additional services, for which you pay a separate rate

#### More information

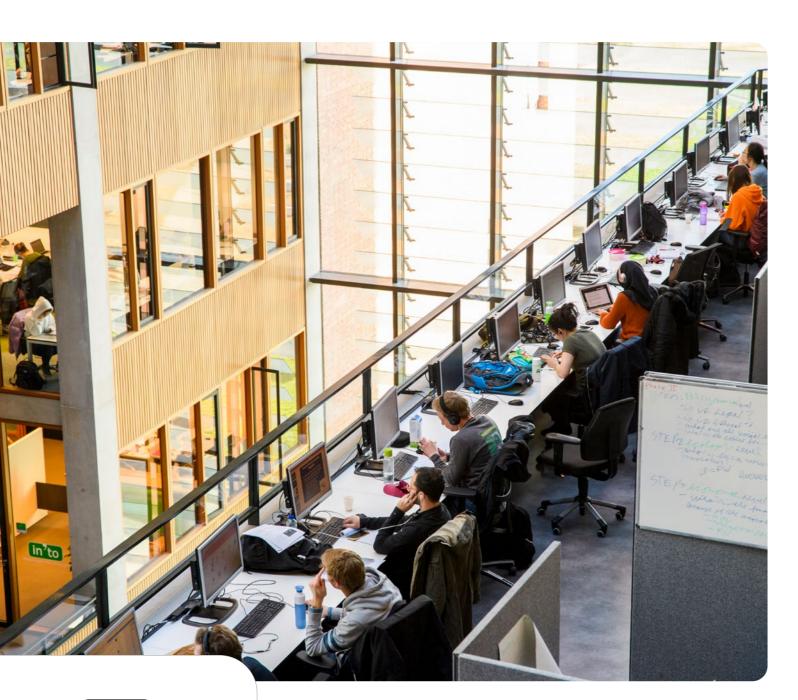
Do you have any questions or would you like more information? Then contact your relationship manager at SURF. Or go to www.surf.nl/en/services.

All rates are **exclusive of VAT** and subject to change and typing errors.





# Services in the basic fee Infrastructure



If you pay the basic fee Infrastructure, you are free to use the following services:

# **Network connectivity**

# **SURFinternet**

SURFinternet offers Dutch education and research institutions a fast and reliable Internet connection of 1 to 100 Gbit/s. With SURFinternet, all users in the education and research communities are connected to each other and can collaborate nationally and internationally.

www.surf.nl/en/surfinternet →

# eduroam

eduroam gives students, lecturers, staff and researchers quick and easy access to the fixed and wireless networks at their own institution and at other institutions that offer this service. At more than 30.000 locations in more than 100 countries.

www.surf.nl/en/eduroam →

# eduroam Visitor Access

You can use eduroam Visitor Access to create temporary eduroam-accounts and assign them to your institution's visitors. This allows visitors to use the same safe and reliable Wi-Fi network as students, researchers, lecturers and staff.

www.surf.nl/en/eva →

# Security, trust & identity

# Cybersave Yourself

Do you want to make employees and students more aware of the dangers of the Internet? Then make use of Cybersave Yourself, a campaign that increases the awareness of your staff and students with regard to security and privacy in an entertaining manner. The campaign consists of a website and an online toolkit with ready-made material.

www.surf.nl/en/cybersaveyourself →

# SURFconext

Let your users log in with 1 username and password to all cloud services your institution uses. Both for services that everyone uses and for services for small specialist teams. Secure, easy and privacy friendly.

www.surf.nl/en/surfconext →

# **SURFcert**

SURFcert provides your institute with security incident support 24 hours a day, 7 days a week. SURFcert also provides you with tools to optimise security within your institute yourself. For example, SURFcert is continuously minimising the nuisance of DDoS attacks.

www.surf.nl/en/surfcert →



# SURF Research Access Management

Research services are sometimes very specific, with a small user group per institution. Researchers often spend a lot of time arranging secure access to the systems they need for their research. SURF Research Access Management provides research collaborations with fast, easy, and secure access.

For HBO, WO and UMC, SURF Research Access Management is in the basic fee Infrastructure, for other sectors it is an additional service.

www.surf.nl/en/sram →

# **SURFaudit**

Has your institution organised the security and continuity of its company data, and the privacy of its students and staff? Have your business partners done so? SURFaudit shows you what you should take care of at a minimum for information security and privacy. Determine how your institution is doing and compare with other institutions.

www.surf.nl/en/surfaudit →

# Cyber crisis exercise OZON

OZON is a large-scale national cyber crisis exercise that takes place every two years. During the OZON exercise, you will practice how to react to a cyber crisis and find out whether you are already well prepared for a cyber crisis as an institution.

www.surf.nl/en/ozon →



# **Data services**

# **SURFfilesender**

Want to send and receive files quickly, securely and easily? With SURFfilesender, you can send large files, such as research data. The files are stored in the Netherlands. Encryption provides added security.

www.surf.nl/en/surffilesender →

# edubadges

edubadges is the digital certificates platform for the Dutch education community. edubadges enable you to award students or workers with evidence of knowledge and skills they have acquired. An edubadge is issued electronically within a secure and trusted SURF platform.

For HBO and WO, edubadges is in the basic fee Infrastructure, for MBO it is an additional service.

www.surf.nl/en/edubadges →

# **Digital platforms**

# **SURFdashboard**

SURFdashboard offers an overview of a large number of infrastructure services. Institution's contact persons can sign up for services and change contact persons. You can also view monthly reports on the services that your institution utilises.

www.surf.nl/en/surfdashboard →

# **Expertise, advice** and training

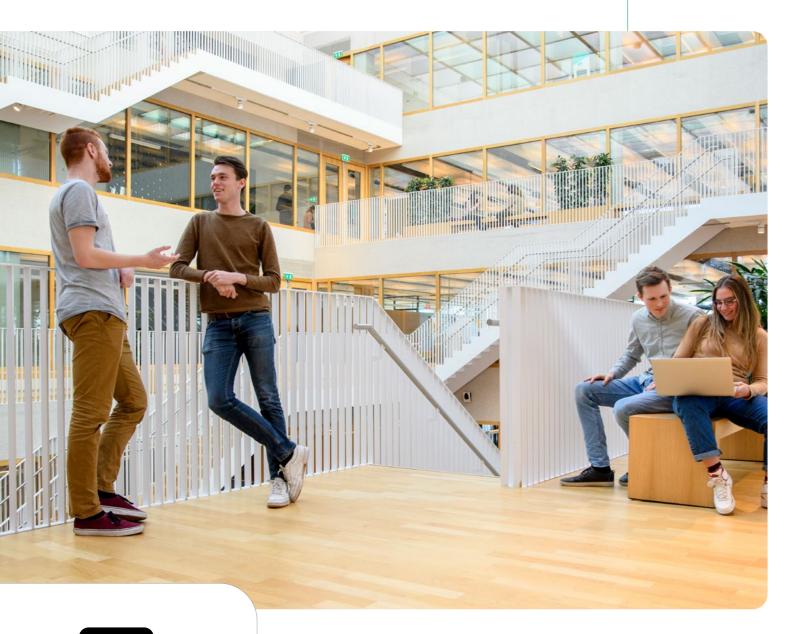
# **SURFacademy**

SURFacademy offers professionalisation meetings on current ICT themes for staff working in education and research. We organise these meetings together with the Dutch educational and research institutions.

www.surf.nl/en/surfacademy →



# Services in the basic fee Procurement and Digital Platforms



If you pay the basic fee Procurement and Digital Platforms, you are free to use the following services:

# Agreements with market parties

# ICT purchasing

You will benefit from agreements that SURF concludes with suppliers. These are all agreements that appear on the joint purchasing calendar that SURF has coordinated with its members. This service covers purchasing, contract management, licence desk support, finance, and relationship management.

# Content

You benefit from intermediary agreements with publishers of academic and other content. This service includes procurement, contract management, license desk support, finance and relationship management.

# Distribution of hardware and software

Via MijnSURFmarket and SURFspot.nl, institutions, staff, and students purchase hardware and software that are part of framework and brokerage agreements.

# **Data services**

# **SURFsharekit**

SURFsharekit is a 'repository as a service' for the sustainable storage and sharing of research publications, graduation products, and OER. This makes the material findable and available via various platforms.

For HBO, SURFsharekit is in the basic fee Procurement and Digital Platforms, for other sectors it is an additional service.

www.surf.nl/en/surfsharekit →

# **Digital platforms**

# Auteursrechten.nl

Auteursrechten.nl acts as a single point of reference for education staff, instructors, students and researchers to find reliable information on issues relating to copyright.

www.surf.nl/en/auteursrechten-nl  $\rightarrow$ 

SURF

# Additional services



# **Compute services**

# Rate models

The compute services can be purchased as an individual service or as a component via an RCCS contract. Compute bundles can be purchased in advance and have a validity period of 12 months.

Research Capacity Computing Service RCCS		
Number of credits Ra	ate per 1,000 credits	
0-80,000	EUR 32.27	
80,000-800,000	EUR 29.47	
800,000-4,000,000	EUR 28.63	
4,000,000-8,000,000	EUR 28.34	

Service	Quantity (1)	Credits per TE	B per month
		Home directory (2) (additional)	Project space
Lisa	1.14 credits per SBU	3,050	320
Cartesius	1.14 credits per SBU	3,050	220
HPC Cloud (3)	1.05 credits per CPU hour 18 credits per GPU hour	n/a	HDD storage: 700 SSD storage: 1,550

- (1) The usage on Lisa and Cartesius is measured and reported in SBUs, System Billing Units. For a complete overview of SBUs per compute resource, see: https://userinfo.surfsara.nl/documentation/rccs-credits.
- (2) The quota of home directories of users on Lisa and Cartesius is 200 GB by default. Expansion of a home directory for a user is possible on request and can be paid for with credits.
- (3) The usage on HPC Cloud is measured in core hours and TB per month.

SURF

# National Supercomputer Cartesius

The National Supercomputer Cartesius is the largest system in the Netherlands in terms of high-performance computing, fast processors, a very fast internal network, a lot of memory space and the ability to process large data sets.

The tender for the new supercomputer Snellius has been awarded. When Snellius goes live, we will announce the new rates.

www.surf.nl/en/cartesius →

# National Supercomputer Cartesius

Number of CPU core hours	Rate per 1,000 core hours
0-800,000	EUR 34.83
800,000-4,000,000	EUR 31.66
4,000,000-8,000,000	EUR 28.77

# Storage space

The default storage space is 200 GB (homedir).

Additional local storage	Rate per TB per month
Homedir	EUR 86
Droject space	FI ID 11



# National Compute cluster Lisa

With the Lisa Compute Cluster, researchers can easily scale up to a higher level. The Lisa Compute Cluster combines computing power with ease of use. It is already set up with a range of software packages, so that researchers can get started right away.

#### Lisa GPU

The GPU rate is based on the use of the Nvidia 1080Ti. Other GPU cards such as Titan RTX are available; rates are on request.

Pricing is subject to the introduction of, and possible integration with the new supercomputer Snellius. Any new rates will be announced in due course.

www.surf.nl/en/lisa-compute-cluster  $\rightarrow$ 

# Lisa CPU

Number of CPU core hours	Rate per 1,000 core hours
0-800,000	EUR 34.83
800,000-4,000,000	EUR 31.66
4,000,000-8,000,000	EUR 28.77

# Lisa GPU

Number of GPU hours Rate p	er GPU hour
0-80,000	EUR 0.39
80,000-800,000	EUR 0.37
800,000-4,000,000	EUR 0.36
4,000,000-8,000,000	EUR 0.34

Storage space

The default storage space is 200 GB (homedir).

Additional local storage	Rate per TB per month
Homedir	EUR 86
Project space	EUR 11



# High-performance Data processing

Do you want to process and store large volumes of data? Our high-throughput data processing services are suited for projects that require processing of large, structured datasets. Such as instrument data from sensors, DNA sequencers, telescopes, and satellites.

# Grid

The Grid platform offers a limitless potential of compute power and data processing thanks to a chain of international clusters connected by a fast network.

# Tape (double copy)

Rate per 10 TB (double), per 5 years

EUR 624

CPU	
Number of core hours	Rate per 1,000 core hours
0-80,000	EUR 32.48
80,000-800,000	EUR 30.16
800,000-8,000,000	EUR 27.84
> 8,000,000	EUR 25.52

# GPU

Rate per 1,000 GPU hours EUR 526.90

# Disk

In RAID configuration; scalable data throughput in flexible environment supporting many data transport methods; can also be used in combination with other compute systems.

Number of TBs	Rate per TB per month
0-50	EUR 13.34
50-500	EUR 13
500-1,000	EUR 9.95
> 1,000	EUR 7.18

# Spider

Spider is a dynamic, flexible and customisable high throughput platform hosted locally at SURF. It is optimised for collaboration.

www.surf.nl/en/high-performance-dataprocessing →

# CPU

Number of core hours	Rate per 1,000 core hours
0-80,000	EUR 32.48
80,000-800,000	EUR 30.16
800,000-8,000,000	EUR 27.84
> 8,000,000	EUR 25.52

Shared disk storage Scalable network filesystem with 3x internal replication.

Number of TBs		Rate per TB per month
	HDD	SSD
0-50	EUR 19.98	EUR 44.57
50-500	EUR 17.94	EUR 44.57
> 500	EUR 15.95	EUR 44.57

# GPU

Rate per 1,000 GPU hours EUR 526.90





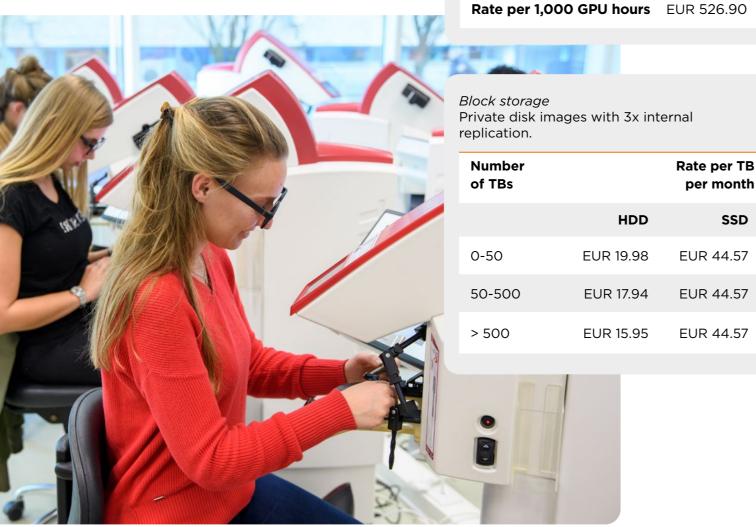
SSD

# MS4

MS4 offers project-based collaboration with and support for research groups in the development or continued development of their custom platforms on SURF's private cloud, for example with regard to design, performance, availability, security, and manageability. MS4 also offers options for long-term operational support from SURF for the developed custom-made solution.

CPU	
Number of core hours	Rate per 1,000 core hours
0-80,000	EUR 32.48
80,000-800,000	EUR 30.16
800,000-8,000,000	EUR 27.84
> 8.000.000	EUR 25,52

GPU



# Custom Cloud Solutions (CCS)

SURF offers researchers the opportunity to jointly build a cloud solution geared to the wishes and requirements of the users. Standard cloud components are used for this purpose and adapted where necessary. SURF has its own cloud infrastructure but can also make use of public clouds such as AWS. A hybrid solution is also possible. The rates given below apply if the SURF infrastructure is used.

CPU	
Number of core hours	Rate per 1,000 core hours
0-80,000	EUR 32.48
80,000-800,000	EUR 30.16
800,000-8,000,000	EUR 27.84
> 8,000,000	EUR 25.52

GPU

**Rate per 1,000 GPU hours** EUR 526.90

Block storage Private disk images with 3x internal replication.

Number of TBs		Rate per TB per month
	HDD	SSD
0-50	EUR 19.98	EUR 44.57
50-500	EUR 17.94	EUR 44.57
> 500	EUR 15.95	EUR 44.57

# Jupyter Notebook Hub

The Jupyter Notebook Hub service is being restructured. The delivery models and underlying infrastructure will be adjusted. The rates for this service are on request.

www.surf.nl/en/jupyter →



# **Network connectivity**

# SURFinternet upgrade

The following options are available in addition to the basic SURFinternet service:

SURFinternet upgrade			
Upgrade to	Rate per month		
10 Gbit/s	EUR 1,134		
40 Gbit/s	EUR 3,170		
100 Gbit/s	EUR 3,170		

# Connecting third parties to the SURF network

If you are connected to the SURF network, you can, under certain conditions, register third parties to use the SURF-internet service connection (network connection). Third parties do not have a user agreement with SURF. This means that they can only use a network connection, and not the additional SURF services.

SURF charges these rates to your institution. You can pass these costs on to the third parties.

wwww.surf.nl/en/connecting-third-parties →

Volume	Rate per month		
	Third party belongs to the SURF target group	Third party does not belong to the SURF target group	
0-25 fte	EUR 0	EUR 0	
26-50 fte	EUR 275	EUR 547	
51-100 fte	EUR 547	EUR 821	

# Connecting other locations

In addition to your primary location, you can also easily connect other locations of your institution to the SURF network. SURF will then create a point of presence (PoP) at these secondary locations. You can then

apply for SURFinternet or SURFlichtpaden to make connections via these fibre optics. Rates for secondary locations connections are on request. Contact your relationship manager at SURF.

www.surf.nl/en/connecting-other-locations >

# SURFinternetpinnen

SURFinternetpinnen makes managing PIN and electronic payment systems easier. Traffic to and from these machines travels over the SURF network, which makes separate connections superfluous.

Rate per month

**EUR 57** 

This is a flat-fee charge: you can connect up as many payment terminals as you wish.

www.surf.nl/en/surfinternetpinnen →

# SURFdomeinen

The online SURFdomeinen service makes it easy for ICT administrators to register and migrate Internet domains and to manage the DNS.

There is no charge for the first domain. Each further domain registration:

DNSSEC-signed domain (only domains .nl, .com, .net, and .org)

EUR 3 per month

Non-DNSSEC-signed domain

EUR 4 per month

This charge is independent of the top-level domain that you select (.nl, .com, .net, .org, .eu, or .info).

www.surf.nl/en/surfdomeinen →

# **SURFfirewall**

SURFfirewall takes care of the procurement, configuration and management of your firewall. For a fixed monthly fee you have a firewall that we manage and that is scalable in capacity and functionality. You don't have to worry about it anymore. You only manage the policies yourself, via our user-friendly portal. In this way you stay in control.

Capacity SURFfirewall	Rate per month, excluding VAT
1 Gbit/s	EUR 1,084
2 Gbit/s	EUR 1,737
3 Gbit/s	EUR 2,391
4 Gbit/s	EUR 3,044
5 Gbit/s	EUR 3,697
6 Gbit/s	EUR 4,351
7 Gbit/s	EUR 5,013

www.surf.nl/en/surffirewall →

One-time connection fee - EUR 1,560

SURF

# SURFlichtpaden

Do you need an ultra-fast, extremely reliable connection to another institution, data centre, service provider or different destination? SURFlichtpaden enables you to create an exclusive and direct connection outside the boundaries of the public Internet. Light paths offer additional security, reliability, and high capacity – guaranteed.

If a light path is connected to an MSP on 1 side, a 50% discount applies.

www.surf.nl/en/surflichtpaden →



National fixe	d light paths			
Light path type		Rate per month		
		Inner-City (ports within the same municipal limits)	Inter-City (ports not within the same municipal limits)	
50 Mbit/s	protected	EUR 43	EUR 75	
	redundant	EUR 53	EUR 78	
250 Mbit/s	protected	EUR 198	EUR 374	
	redundant	EUR 262	EUR 393	
500 Mbit/s	protected	EUR 393	EUR 749	
	redundant	EUR 525	EUR 787	
750 Mbit/s	protected	EUR 592	EUR 1,121	
	redundant	EUR 787	EUR 1,181	
1 Gbit/s	protected	EUR 787	EUR 1,495	
	redundant	EUR 1,049	EUR 1,574	
10 Gbit/s	protected	EUR 1,889	EUR 3,590	
	redundant	EUR 2,519	EUR 3,778	
40 Gbit/s	protected	on request	EUR 5,716	
	redundant	on request	EUR 6,236	
10 Gbit/s	protected	on request	EUR 8,315	
	redundant	on request	EUR 9,354	

# National fixed light paths to NetherLight

The rates below apply for light paths to service providers connected to NetherLight.

More information can be found at www.surf.nl/en/netherlight

# International fixed and on-demand light paths

Rates for these services are on request.

# National fixed light paths to NetherLight

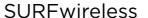
Light path t	ype	Rate p	er month
		Inner-City (ports within the same municipal limits)	Inter-City (ports not within the same municipal limits)
50 Mbit/s	protected	EUR 29	EUR 56
	redundant	EUR 41	EUR 59
250 Mbit/s	protected	EUR 148	EUR 282
	redundant	EUR 198	EUR 295
500 Mbit/s	protected	EUR 295	EUR 560
	redundant	EUR 393	EUR 592
750 Mbit/s	protected	EUR 443	EUR 842
	redundant	EUR 592	EUR 885
1 Gbit/s	protected	EUR 592	EUR 1,121
	redundant	EUR 787	EUR 1,181
10 Gbit/s	protected	EUR 1,417	EUR 2,692
	redundant	EUR 1,889	EUR 2,834



# **Multi Service Port (MSP)**

A Multi Service Port (MSP) is a connection to the SURF network that allows you to set up multiple light paths. You can divide the bandwidth among the light paths, making flexible and efficient use of the available bandwidth. There is no charge for light paths between 2 MSPs within the SURF network or from an MSP to NetherLight.

Multi Service Port type	Rate per month
Multi Service Port 1 Gbit/s	EUR 749
Multi Service Port 10 Gbit/s	EUR 1,794
Multi Service Port 40 Gbit/s (special)	EUR 2,859
Multi Service Port 100 Gbit/s	EUR 4,052
Redundant Multi Service Port 1 Gbit/s	EUR 787
Redundant Multi Service Port 10 Gbit/s	EUR 1,889
Redundant Multi Service Port 40 Gbit/s (special)	EUR 3,127
Redundant Multi Service Port 100 Gbit/s	EUR 4,559



# **SURFwireless Managed**

Your users want a fast Wi-Fi network that is available anytime and anywhere. Purchasing and maintaining such a network takes a lot of time and knowledge. SURFwireless offers Wi-Fi as a Service. This provides you with a reliable, high quality Wi-Fi6 network, allowing you to move forward technically for years to come.

# Base rate:

- EUR 26 per month, per indoor access point
- EUR 47 per month, per outdoor access point

A cumulative discount per access point applies to the base rate, depending on the amount of access points you purchase, the total number of access points SURF-wireless manages, and the contract period you choose:

This includes the costs of hardware (replacements), personnel, licences, tendering, and 24x7 monitoring and maintenance.

The minimum contract period is 4 years. The one-time cost per site is EUR 2,026.

#### **SURFwireless Start**

We manage your existing Wi-Fi network while your new SURFwireless network is under construction. The rates are set per project.

www.surf.nl/en/surfwireless →

Number of APs	< 250	250-500	501-760	751-1,000	> 1,000
Discount per AP per month	EUR 0	EUR 1	EUR 2	EUR 3	EUR 4

Total number of APs at SURFwireless	< 4,000	4,001-7,500	> 7,500
Discount per AP per month	EUR 0	EUR 1	EUR 2

Contract period	4 years	5 years
Discount per AP	EUR 0	EUR 1.50



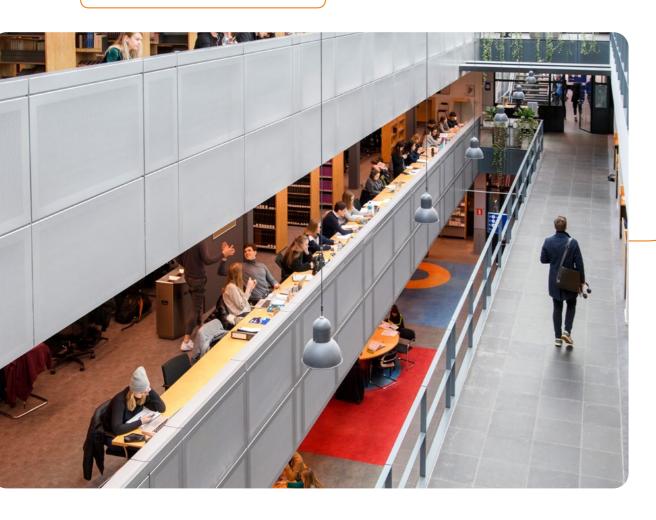
# SURFopzichter

ICT administrators use SURFopzichter ('SURF Supervisor') to monitor – online and in real time – the performance and availability of Internet services, for example websites and e-mail facilities. This online application also allows you to create comprehensive reports and set up checks.

Rate per month

**EUR 109** 

www.surf.nl/en/surfopzichter →



# Security, trust & identity

# SURFmailfilter

SURFmailfilter gives connected institutions an easy way of checking all their incoming and outgoing e-mail and filtering it for viruses, phishing and spam. SURFmailfilter detects at least 95% of spam. SURFmailfilter runs at SURF and is available for IPv4 and IPv6.

Number of students	Rate per month
0-2,500	EUR 340
2,501-5,000	EUR 566
> 5,000	EUR 908

www.surf.nl/en/surfmailfilter  $\rightarrow$ 

# **SURFcertificaten**

SURFcertificaten ('SURFcertificates') provides several types of certificates for users at affiliated institutions. Certificates are essential for ICT-security. They enable encryption of information between computer systems and can provide digital signatures for documents or software code.

Rate per month, irrespective of the number of certificates

EUR 142

www.surf.nl/en/surfcertificaten →

# eduVPN

eduVPN makes untrusted networks secure, by establishing an encrypted connection. This way, students, lecturers and researchers can use the Internet securely everywhere, and you can grant access to your institution's protected systems securely, even if users are using the Internet connection on a train, a square, or at home.

If you use eduVPN to shield institutional services, additional costs for light paths may arise if there is no available MSP capacity.

Number of employees and/or students	Rate per month
0-1,000	EUR 107
1,001-5,000	EUR 536
5,001-15,000	EUR 912
> 15,000	EUR 1,341

www.surf.nl/en/eduvpn →



# **SURFsecureID**

SURFsecureID provides additional security for access to online services through two-factor authentication. The user logs in with a username and password and with a second factor: an SMS, a USB key or the tiqr app. SURFsecureID is particularly important for services involving sensitive data.

Rate is flat fee and includes 500 SMS transactions per month (for more than 500 SMS transactions per month, SURF charges EUR 0.055 per SMS). Rates do not include any costs of tokens. The minimum purchase period is 3 years.

Number of users	Rate per month
0-1,000	EUR 271
1,001-5,000	EUR 486
> 5,000	EUR 1,190

www.surf.nl/en/surfsecureid →

# SURF Research Access Management

Research services are sometimes very specific, with a small user group per institution. Researchers often spend a lot of time arranging secure access to the systems they need for their research. SURF Research Access Management provides research collaborations with fast, easy, and secure access.

For HBO, WO and UMC, SURF Research Access Management is in the basic fee Infrastructure, for other sectors it is an additional service.

|--|

www.surf.nl/en/sram →

# **SURFsoc**

SURFsoc gives you a single point of contact for all your infrastructure security issues. SURFsoc monitors cyber threats and possible attacks on the institutional infrastructure, for example via a SIEM system. We share the knowledge that we acquire within SURFsoc with the institutions. That is how we increase information security within education and research.

Rates are at request.

www.surf.nl/en/surfsoc →

# **Data services**

# edubadges

edubadges is the digital certificates platform for the Dutch education community. edubadges enable you to award students or workers with evidence of knowledge and skills they have acquired. An edubadge is issued electronically within a secure and trusted SURF platform.

For MBO edubadges is an additional service. For HBO and WO this service is in the basic fee Infrastructure.

Number of users	Rate per month
0-1,000	EUR 1,013
1,001-5,000	EUR 1,317
5,001-15,000	EUR 1,418
15,001-100,000	EUR 1,520

www.surf.nl/en/edubadges →

# **SURFdrive**

SURFdrive is a personal cloud service for the Dutch education and research. With SURFdrive your users can easily store, synchronise and share files in our secure and reliable community cloud.

There are 2 options. If you choose the option with up to 50 users and at some point you have more than 640 users, you automatically switch to the option with up to 750 users. This is more economical.

# **SURFsharekit**

SURFsharekit is a "repository as a service" for the sustainable storage and sharing of research publications, thesis products, and OER. This makes the materials findable and available via various platforms.

For HBO SURFsharekit is in the basic fee Procurement and Digital Platforms, for other sectors it is an additional service.

The rate is based on the number of employees (FTE) plus students (part-time student counts as 0.5 FTE). The rate per employee/student is EUR 0.79 per year, with a minimum of EUR 1,585 and a maximum of EUR 11,097 per year.

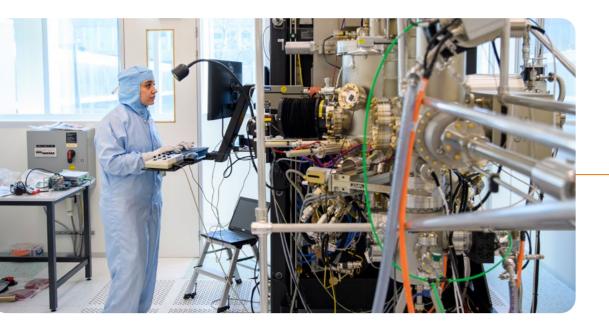
www.surf.nl/en/surfsharekit →

Number of users	Rate per month
Max. 50	EUR 182 + EUR 3.55 per additional user
Max. 750	EUR 2,276 + EUR 1.52 per additional user

We have agreed with universities that they will always purchase the second package.

www.surf.nl/en/surfdrive →





# Research Drive

Does your research team need large storage quotas, and work collaboratively with other educational and governmental institutions or external private parties? Research Drive is a cloud-based shared-storage environment specifically designed for these requirements.

www.surf.nl/en/research-drive →

Option	Rate
Platform use for storage up to 20 TB	EUR 13,000 per year
Platform use for storage above 20 TB	EUR 20,000 per year
Platform use for storage up to 20 TB, Community edition*	EUR 8,000 per year
Storage	See Object Store
Data recovery	See dCache

\* The Community edition is intended for research groups whose institution does not have a central subscription; it offers no option for their own branding.

# **Object Store**

Object Store provides a general purpose online storage service that may be used for storing large quantities of data (and is, among other things, the default storage environment for Research Drive). The service is ideal for storing various types of data, and has the ability to grow without restriction, while the data remains quickly and easily accessible.

This service is available per TB, and you can purchase it per month.

www.surf.nl/en/object-store →

# dCache

dCache is a storage system ideally suited for high-throughput data processing. dCache is accessible via a variety of protocols, including webdav and authentication systems. Our tape archive is accessible from dCache completely transparently.

Data can be moved automatically between dCache and the tape archive.

This service is available per TB and can be purchased per month.

Disk	
Number of TBs	Rate per month
0-50	EUR 13.34
50-500	EUR 13
500-1,000	EUR 9.95
> 1,000	EUR 7.18
Tape (double copy)	

Rate per month

EUR 13.35

EUR 12.39

EUR 11.44

EUR 10.49

**EUR 624** 

**Number of TBs** 

0-5

5-50

50-500

> 500

# Data Archive

The Data Archive is the centralised location for data archiving and (long-term) storage, even in volumes running into the petabytes. The archive provides quick access to SURF's computing facilities.

This service is available per 10 TB and can be purchased per 5 years.

Rate per 10 TB, per 5 years	624 euro

www.surf.nl/en/data-archive  $\rightarrow$ 

Rate per 10 TB (double),

per 5 years



# Persistent Identifiers (PID)

Persistent identifiers (PIDs) ensure the findability of your data, now and always. PIDs are comparable to the ISBN numbers assigned to books. Even if the location or underlying infrastructure changes, the reference path remains intact. SURF offers the PID service in cooperation with the European Persistent Identifier Consortium (EPIC).

Rate
EUR 43 once
EUR 437 per year
EUR 43 per year

www.surf.nl/en/data-persistent-identifier →

# iRODS Hosting

Does your institution want to use iRODS to manage research data without its own management burden? The iRODS Hosting service enables you to make use of the high-quality data management facilities offered by iRODS, such as the secure sharing of data, metadata management, and workflow automation for the implementation of data management

www.surf.nl/en/irods-hosting →

# RDM Storage Scale-out

Does your institution already use iRODS technology and do researchers need additional storage capacity for research data, or need long-term storage? With the RDM Storage Scale-out module for iRODS, they make easy and flexible use of large-scale data storage facilities at SURF such as online storage or Data Archive (other storage services on request). With this service they expand their storage space as needed, for example for storing (very) large data sets or data that is not actively used.

Component	Rate
Subscription for hosting, management & support	EUR 6,594 per year
Online storage	See Object Store
Long-term storage	See Data Archive

www.surf.nl/en/rdm-storage-scale-out →

policies. In addition, iRODS Hosting offers access to various (online and offline) data storage facilities offered by SURF.

Component	Rate
Subscription for hosting, management & support	EUR 11,720 per year
Online storage	See Object Store and MS4
Long-term storage	See Data Archive

# SURF Data Repository

SURF Data Repository focuses on the secure storage, accessibility and retrieval of large datasets. Users can create new publications themselves via the website or have datasets annotated and published in a partially automated manner.

wwww.surf.nl/surf-data-repository →

This service is available per 10 TB and can be purchased per 5 years.

Rate per 10 TB, per 5 years EUR 1,250

# laaS

# **SURFcumulus**

If you want to make lawful and secure use of cloud services provided by top suppliers, then make use of SURFcumulus. SURF has issued the tenders, allowing your institution to use these services pay-as-you-go. We also continually monitor quality, security, and legislation, and organise education and training courses.

### **Consumption costs**

You pay the costs charged by the provider for the virtual machines used. The maximum amount of these costs is EUR 100,000 per institution per year. In addition to these charges, you will pay a service contribution to SURF to cover administrative costs.

# **Subscription costs**

You pay subscription costs for the Cloud Management Portal (CMP).

www.surf.nl/en/surfcumulus →

Consumption cos	sts
Service level	Service contri- bution on the consumption costs
SURFcumulus	7%
SURFcumulus Profes- sional Services 5%	
Subscription cos	ts
Number of resources	CMP subscription per resource per month
0-250	EUR 3
251-1,000	EUR 2



# **HPC Cloud**

With HPC Cloud, researchers have complete control over their computing infrastructure, for themselves or their project team. The research infrastructure can range from a single workstation to an entire cluster and is expandable as needed. Researchers can use their own operating systems and analysis software. HPC Cloud is housed in our own data centre.

You can purchase this service through an RCCS contract. Computing bundles can be purchased in advance and are valid for 12 months.

www.surf.nl/en/hpc-cloud →

CPU			
Number of core hours	Rate per 1,000 core hours		
0-80,000	EUR 32.48		
80,000-800,000	EUR 30.16		
800,000-8,000,000	EUR 27.84		
> 8,000,000	EUR 25.52		

GPU

**Rate per 1,000 GPU hours** EUR 526.90

Number of core hours	Rate per 1,000 core hours
0-80,000	EUR 32.48
80,000-800,000	EUR 30.16
800,000-8,000,000	EUR 27.84
> 8,000,000	EUR 25.52

# Block Storage Private disk images with 3x internal replication.

TBs	Rate per TB per month		
	HDD	SSD	
0-50	EUR 19.98	EUR 44.57	
50-500	EUR 17.94	EUR 44.57	
> 500	EUR 15.95	EUR 44.57	

# **Digital platforms**

# edusources

edusources is the platform for digital (open) educational resources for Dutch education. With edusources, instructors, librarians and students have access in one place to a diverse range of digital educational resources. Educational resources are stored and made available within SURF's safe and reliable platform.

The use of edusources requires a repository. If you use our own repository service SURFsharekit for that, you pay a combined charge for edusources and SURFsharekit.

www.surf.nl/en/edusources →



# Collaboration license Service Rate per month

edusources	EUR 466
edusources + SURFsharekit	EUR 550

Campus license		
Number of students		Rate per month
	edusources	edusources + SURFsharekit
0-1,000	EUR 466	EUR 550
1,001-5,000	EUR 608	EUR 777
5,001-15,000	EUR 861	EUR 1,283
15,001-100,000	EUR 962	EUR 1,553



# HBO Kennisbank

HBO Kennisbank ('HBO Knowledge Bank') contains more than 60,000 publications by professors, teacher-researchers and students at universities of applied sciences. They can be reused to improve one's own research or education. Users can also upload their own work in order to inspire others. HBO Kennisbank is a service for and by universities of applied sciences.

The fee is based on the number of employees (FTE) plus students (part-time students count as 0.5 FTE). The fee per employee/student is EUR 0.47 per year, with a minimum of EUR 1,039 and a maximum of EUR 12,472 per year.

www.surf.nl/en/hbo-kennisbank →

# SURF Research Cloud

SURF Research Cloud is a portal in which researchers can easily build a virtual research environment. They can use preconfigured workspaces and datasets or add these themselves. Institutions, research communities, and suppliers can contribute to the functionality and catalogue of the Research Cloud by integrating their compute and data services.

You purchase SURF Research Cloud for a minimum of 2 years. This is extended annually.

www.surf.nl/en/surf-research-cloud →

# SURFspot customized functionality

As an institution, you can make use of SURFspot credit for a group of employees and/or students via SURFspot. The users themselves order on SURFspot.nl with the credit that is linked to their account. SURFspot arranges the delivery and, as an institution, you will receive one invoice for all employees and/or students.

Rates are available on request.

www.surfspot.nl/surfspot-tegoed →

The SURF Research Cloud includes public clouds via SURF cumulus or the SURF private cloud HPC Cloud. For rates, see the respective services.

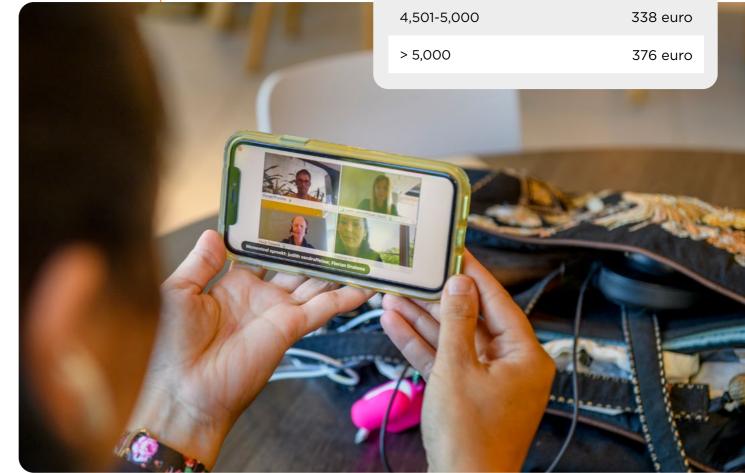
Sector		Subscription per year
WO, UMC, institutions		EUR 33,000
НВО		EUR 22,000
МВО	The first year is free for MBO - this is an exploratory year.	

# Kies Op Maat

Students want tailor-made solutions when it comes to their studies, and studying outside their own institution makes this possible. Kies Op Maat ('Tailor-made Choice') offers a wide range of education from 27 universities of applied sciences and 4 universities. Students can easily register for a minor or course at another education institution.

www.surf.nl/en/kies-op-maat →

Number of students	Rate per month
0-1,000	EUR 37
1,001-1,500	EUR 75
1,501-2,000	EUR 112
2,001-2,500	EUR 150
2,501-3,000	EUR 188
3,001-3,500	EUR 226
3,501-4,000	EUR 263
4,001-4,500	EUR 301
4,501-5,000	338 euro
> 5,000	376 euro





# Expertise, advice and training

# **SURF** Consultancy

Researchers and ICT managers can draw on our wealth of experience in ICT solutions for research and ICT infrastructure. We help you develop or improve your research application, data visualisation, machine learning projects or with the optimal set-up of your data or network infrastructure.

# **Rate 1: standard technical support**

This concerns operational activities that fall within the standard services per service, such as support with setting up Virtual Machines on the HPC Cloud, optimising batch scripts on Lisa and Cartesius and basic support with visualisation and machine learning.

Rate per hour EUR 103

# Rate 2: substantive support and expert consultancy

This concerns work for which specific expertise is required. These include software parallelisation for High Performance Computing (including GPU/accelerator parallelisation), code optimisation, iRODS consultancy, larger visualisation and machine-learning projects, consultancy for the introduction of a core network with MPLS and support for the introduction of two-factor authentication for students.

Rate per hour

**EUR 114** 

# Training courses for research

SURF regularly organises hands-on system training courses for researchers and research support staff at our offices in Utrecht and Amsterdam or at your educational or research institution. You can also include the training courses in the curriculum of your institution.

The full list of training courses can be found at <a href="https://www.surf.nl/en/training-courses-for-research">www.surf.nl/en/training-courses-for-research</a>

Customised training courses are available on request.

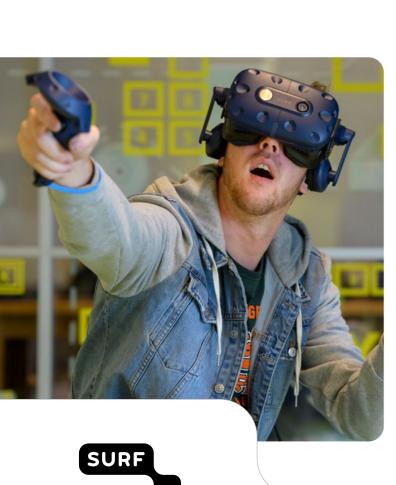


Length	1-12 participants	13-24 participants	25-37 participants	38-50 participants
2 hours	EUR 310	EUR 517	EUR 723	EUR 930
half a day	EUR 620	EUR 1,033	EUR 1,447	EUR 1,860
1 day	EUR 1,137	EUR 1,963	EUR 2,790	EUR 3,616
2 days	EUR 2,067	EUR 3,720	EUR 5,374	EUR 7,026





# Index



► Auteursrechten.nl

C

Α

► Connecting other locations

► Connecting third parties to the SURF network

▶ Content

► Custom Cloud Solutions (CCS)

▶ Cyber crisis exercise OZON

► Cybersave Yourself

D

▶ Data Archive

▶ dCache

▶ Distribution of hardware and software

Ε

► <u>edubadges - additional service</u>

► <u>edubadges - basic fee</u>

eduroam

► eduroam Visitor Access

edusources

▶ eduVPN

Η

► <u>High-Performance Data Processing</u>

► HPC Cloud

1

▶ ICT purchasing

▶ <u>iRODS Hosting</u>

J

▶ Jupyter Notebook Hub

K

▶ Kies Op Maat

Μ

► MS4

Ν

▶ National compute cluster Lisa

▶ National Supercomputer Cartesius

Ο

▶ Object Store

Ρ

► Persistent Identifiers (PID)

R

► RDM Storage Scale-out

► Research Drive

S

► SURF Consultancy

► SURF Data Repository

► <u>SURF Research Access Management</u>

- additional service

► <u>SURF Research Access Management</u>

- basic fee

► SURF Research Cloud

► <u>SURFacademy</u>

► <u>SURFaudit</u>

▶ SURFcert

► <u>SURFcertificaten</u>

► SURFconext

► SURFcumulus

► SURFdashboard

**►** SURFdomeinen

► SURFdrive

► SURFfilesender

SURFfirewall

▶ SURFinternet

► SURFinternetpinnen

► <u>SURFlichtpaden</u>

**▶** SURFmailfilter

► SURFopzichter

► <u>SURFsecureID</u>

▶ SURFsharekit - additional service

► <u>SURFsharekit - basic fee</u>

► SURFsoc

► SURFspot customized functionality

▶ SURFwireless

-

► Trainingen courses for research



# **SURF Cooperation**

Driving innovation together

In SURF, educational and research institutions work together on ICT facilities and innovation in order to make full use of the opportunities offered by digitisation. Together, we make better and more flexible education and research possible.

# **SURF Utrecht**

Hoog Overborch Office Building (Hoog Catharijne) Moreelsepark 48 3511 EP Utrecht +31 88 787 30 00

# **SURF Amsterdam**

Science Park 140 1098 XG Amsterdam +31 88 787 30 00

info@surf.nl www.surf.nl/en