



## **SURFcumulus Service Description**

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## Table of contents

<b>1</b>	<b>Introduction .....</b>	<b>4</b>
1.1	What will you find in this service description? .....	4
<b>2</b>	<b>SURFcumulus: service components.....</b>	<b>6</b>
2.1	Cloud providers .....	6
2.2	Tendering and contract management .....	6
2.3	Facilitating onboarding .....	7
2.4	Consulting and support .....	7
2.5	User groups .....	7
2.6	Provider management .....	8
2.7	Single Point of Contact.....	8
2.8	Split billing.....	8
2.9	Professional Services.....	8
2.10	Application Delivery .....	8
2.11	Workshops .....	9
2.12	Training courses .....	9
<b>3</b>	<b>What else you should know about SURFcumulus.....</b>	<b>10</b>
3.1	Technology.....	10
3.2	Security Measures, Privacy and GDPR .....	10
3.3	Security .....	11
3.4	Information packages about providers .....	12
3.5	Adjustment of cloud provider offerings.....	12
3.6	New functions and prioritisation .....	12
3.7	Adjustments to SURFcumulus services and prices.....	12
<b>4</b>	<b>Procuring, modifying and cancelling SURFcumulus .....</b>	<b>13</b>
4.1	Procuring SURFcumulus .....	13
4.2	SURFcumulus initial term agreements.....	13
4.3	Changes.....	13
4.4	Cancelling SURFcumulus .....	13
<b>5</b>	<b>Prices.....</b>	<b>14</b>
5.1	Not-for-profit and Not-for-loss .....	14
5.2	Invoicing.....	15
<b>6</b>	<b>SLS and characteristics.....</b>	<b>16</b>

6.1	General provisions .....	16
6.2	Reporting .....	16
6.3	Availability.....	16
<b>Annex 1: Abbreviations and Terminology.....</b>		<b>17</b>

# 1 Introduction

SURF observes that the Dutch research and education sector is increasingly embracing cloud technology. After all, switching to the cloud is attractive: innovations follow one another very quickly, and the offerings are becoming more and more extensive and represent more and more value for the sector. Almost all SURF cooperative members are now using cloud services via SURFcumulus. SURF is helping institutions to achieve this.

Together with NRENs<sup>1</sup> from other countries and the umbrella GÉANT organisation, SURF executed a European tender<sup>2</sup> for a (public) cloud in 2020. This made available the offerings of no less than thirteen different cloud providers. The SURFcumulus service ensures that the cloud services obtained in this way are made easily available to the institutions. SURF also ensures that institutions have a clear view of the providers' security measures and the extent of their GDPR compliance.

In this way, SURF is emphatically responding to the increasing demand for public cloud services, promoting digital transformation and effectively supporting institutions. As a result, they are able to continue to focus on the quality of education and research, while still being able to utilise state-of-the-art ICT facilities.

## New service

Deploying and managing cloud services requires a different expertise from an ICT organisation than that associated with setting up and managing its own infrastructure. The ICT organisation is undergoing a transformation and is becoming a management organisation. The most important role of such a management organisation is matching customers' demand to market supply. By introducing new services, such as Professional Services and Application Delivery, the SURFcumulus service also satisfies these requirements by selecting the best services from the market and making them available to the institutions.

## 1.1 What will you find in this service description?

This service description is a functional one. It is written for the institutions' ICT manager(s). SURFcumulus is a continuously evolving service, and the service description may be revised yearly to reflect this.

### A brief summary of SURFcumulus

SURFcumulus was developed together with the institutions and offers institutions the opportunity to make lawful use of cloud services without tendering. Additional services are also offered to make the move to the cloud, use and management easier. These include:

- As an intermediary, SURF supports the transition to the cloud and offers its members major benefits. For example, the ordering, supply and maintenance processes are uniform and quite manageable.
- Professional Services: A process for requesting support in the market for implementation and management via the SURFcumulus Dynamic Purchasing System (DAS).
- SURFcumulus Application Delivery: A technical platform on which the Institutions can offer applications to their end users, without limiting access to and use of applications to a particular location, time or device
- Community building: Together with the institutions, SURF ensures the sharing of knowledge and ideas through working groups and workshops.
- Provision of webinars, education and (certified) training
- Provision of information packages per cloud provider and the wiki with additional information

IT departments and researchers can focus more on their primary processes, given that with SURFcumulus the use of the cloud will be:

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1. NREN stands for National Research and Education Network – national organisations specialised in the provision of ICT services to Education and Research Institutions. SURF is the NREN for the Netherlands.  
2. <https://www.ocre-project.eu/respond-tender>

- *Simpler* through European tendering. Lawfulness is assured, and institutions do not have to conduct their own tender processes. SURF also maintains the contacts and contracts and you have an overview of your affiliated providers.
- *Lower cost* because we have conducted tender procedures on behalf of 40 countries and 10,000 institutions, through which we obtained substantial discounts.
- *Safer* because the offerings fulfil sector-specific compliance, security and privacy legislation.

SURF acts as an intermediary between providers and institutions, monitors quality, and supports institutions in making choices. With a fixed team with extensive cloud expertise, SURF helps institutions as a trusted adviser in an accessible way on the path to management and control.

## 2 SURFcumulus: service components

**Table 1 Overview of SURFcumulus services**

SURFcumulus service component	
Cloud providers	13
Tendering, contract management, compliance	√
Facilitating onboarding	√
Consulting and support	√
User groups	√
Provider management	√
Single Point of Contact	√
Split billing	√
Professional Services	√
Application Delivery	√
Workshops	√
Training courses	√

### 2.1 Cloud providers

The thirteen cloud providers provide their services via an open European tender. SURF participated in this tender for member institutions. See Table 2 or visit the SURFcumulus website for an overview of the [available cloud providers](#).

### 2.2 Tendering and contract management

Service provision within SURFcumulus is based on three European tenders:

- The services listed in Table 2 were requested by GÉANT in a pan-European tender process in 2020, as part of the [OCRE project](#), in which SURF participated.
- The tender process for Professional Services was conducted in 2020 by the former SURFnet on SURF's behalf.
- SURF conducted the tender process for Application Delivery in 2020.

This tendering method allows institutions to procure the SURFcumulus service without having to conduct a tender process themselves.

All institutions that appear on the [list](#) (xls file) included in the OCRE tender can procure SURFcumulus cloud services through SURFcumulus providers<sup>3</sup>. The use of Professional Services and Application Delivery is limited to members of the SURF cooperative.

A team of experts from various countries manages the GÉANT Framework contracts. SURF is part of this and in this way maintains contacts with the cloud resellers and providers of SURFcumulus services.

3. For institutions affiliated to the SURF cooperative. A specific arrangement applies to institutions that are not members of the cooperative. Contact SURF for more information.

### **Pay-As-You-Go or Reserved Instances**

With SURFcumulus, you are free at any time to select other cloud providers and to procure more or fewer services. You can also completely cease procurement of the services of any of the providers. The costs will also then stop. It is therefore a flexible 'Pay-As-You-Go' model. Naturally, you can opt for services that are always available for a year (Reserved Instances) and gain extra discounts as a result.

## **2.3 Facilitating onboarding**

Once you have chosen one or more cloud providers, this is followed by a process that enables the use of cloud services by defining users and roles in the cloud portal and configuring network connections. This will be arranged by the SURFcumulus team, together with the provider and/or reseller. We will also ensure that the setup is configured such that the provider and/or reseller only has the absolutely necessary access.

## **2.4 Consulting and support**

### **Cloud advisor**

Among other things, the cloud advisor ensures coordination between the institution, other SURF services and SURFcumulus providers. They also guide the institutions through cloud adoption and optimisation and any exit scenarios. Their job responsibilities include information provision, quality management and escalation management. You can also contact them with questions about SURFcumulus services which you do not yet use. More specifically:

- In consultation with the SURF relationship manager, the cloud advisor is responsible for identifying the institution's needs in the cloud at the tactical and strategic level. We periodically examine the institution's cloud technology ambitions and plans, and together we determine how we can contribute to this.
- Gathering knowledge about ICT developments and trends in the R&D sector in order to keep the SURFcumulus service portfolio in line with customer needs through continuous innovation.
- Acting as an independent intermediary between the institutions and providers, where the cloud advisor acts as an escalation point and mediator in the event of disputes.
- For institutions seeking to learn which cloud technology is best suited to their needs, we organise architecture sessions in which a shortlist of providers presents their options.
- The cloud advisor consults with the institutions on the training needs, training courses and workshops and coordinates the offerings with the SURFcumulus training partners.
- Cloud advisors do not have a sales role and/or targets, but instead focus on qualitative value for the institutions.

### **Cloud Expertise Centre**

There is a need for expertise regarding the deployment and use of cloud services. The Cloud Expertise Centre (CEC) is a collaboration between the institutions, SURF and the cloud providers. There are various expert groups on specific focus areas within the CEC. The SURFcumulus team actively participates in the CEC to ensure proper knowledge sharing concerning the SURFcumulus services. For more information, visit [www.edu.nl/cloud](http://www.edu.nl/cloud).

## **2.5 User groups**

### **Provider-specific user groups**

SURF sets up user groups in consultation with the participating institutions. In these user groups, the SURFcumulus team shares information about technology and implementation and stimulates knowledge sharing.

### **User Advisory Board**

In the User Advisory Board, developments are discussed at a strategic level (both in the market and for the SURFcumulus service).

## 2.6 Provider management

Provider management includes all activities aimed at exploring, starting and maintaining, and further developing optimal collaboration with the cloud providers. Sometimes new, additional services are needed, and in other cases help in interpreting the possibilities offered by specific services may be needed. There may also be a difference of opinion about the quality of a provider's service. In all of these cases, you can approach the cloud advisor within the SURFcumulus team.

## 2.7 Single Point of Contact

The cloud advisor is the first point of contact for tactical and strategic topics. Contact email address: [surfcumulus@surf.nl](mailto:surfcumulus@surf.nl)

You can contact [support@surfcumulus.nl](mailto:support@surfcumulus.nl) for operational or helpdesk-related questions or requests.

## 2.8 Split billing

SURFcumulus offers option of receiving split reports and/or monthly invoices for different stakeholders in your organisation, so that the costs can be directly allocated to the right cost centre. A maximum of five reports and/or monthly invoices are permitted per institution.

## 2.9 Professional Services

We are seeing institutions increasingly outsourcing part or all of the development and management of their information facilities. In addition, institutions are also considering moving elements of their ICT landscape to the cloud. The implementation is typically phased as follows: creation of a vision in relation to the cloud, determination of architectural principles, configuration of programme/project structure, implementation of migration projects, configuration of a cloud competence centre, implementation of cloud governance and operations.

Some institutions are able to do this entirely on their own, whereas others prefer to make use of commercial partners and are therefore often compelled to do so via European tenders. In order to support institutions in this regard, SURF has issued a European tender from which institutions can procure services that support certain parts of this phasing. We use a Dynamic Purchasing System (DAS) which allows an institution to procure the desired assistance from the market by means of a further request, without the need for its own tender process.

The scope of the DAS is as follows:

- Development of a hybrid cloud environment/landing zone.
- Implementation of migration to the cloud.
- Management of services and/or applications in the cloud (such as IaaS, PaaS and SaaS and technical application management of the services of SURFcumulus providers (including support)).

The SURFcumulus cloud advisor will guide institutions wanting to use the DAS by means of workshops to determine their needs and the assessment criteria. Please note: this service is only open to SURF members. Contact [surfcumulus@surf.nl](mailto:surfcumulus@surf.nl) for more information.

## 2.10 Application Delivery

Given the developments in the field of education and the needs of institutions, SURF wants to offer a platform in which the Institutions can provide applications to their end users without limiting access and use of the applications to a specific location, time or device.

We aim to achieve the following with Application Delivery:



- A modern, accessible, best-in-class service to offer applications to end users on various devices, both managed and unmanaged.
- A user experience at the level end users expect from modern applications and services.
- The service can handle both the IT services that institutions traditionally offer internally – which are interwoven with the education process – and the modern online tools that end users often use amongst themselves.
- After (any) transition, the institutions have a future-proof service, based on market standards, that is appropriate for their activities.
- Operational management within the service is optimal and is performed by the service provider. This increases the quality of service provided to end users.
- SURF and the Institutions have operating information on the quality and use of the service. This information is based on indisputable, measurable quality performance indicators that reflect the end user's perception of quality and performance.
- A smooth service transition. The continuity and reliability of service provision to end users is the highest priority. Continuity risks are mitigated on time and in full.
- The integrity, confidentiality and availability of information comply with current security guidelines (ISO 27001).
- Application Delivery is expected to become available to institutions in the course of 2022.

### **2.11 Workshops**

SURFcumulus organises periodic workshops for institutions requiring more detailed information. These include lawfulness, compliance, cloud governance and maturity development. These may be given by SURF employees or by independent organisations engaged by SURF. Participating institutions can attend these at no cost. The workshops are announced via the SURFcumulus newsletter and/or on the SURF.nl agenda.

### **2.12 Training courses**

Provider training courses support knowledge building concerning public cloud services. As a result, adoption processes are accelerated and the risk of errors is reduced. Together with its training partners, SURFcumulus organises complete training programmes for member institutions. See [the agenda at SURF.nl](#) and the SURFcumulus newsletter for available courses.

### 3 What else you should know about SURFcumulus

#### 3.1 Technology

##### Linking via SURFinternet or SURFlichtpaden

SURFcumulus can be linked to the institution's network via SURFinternet and via SURFlichtpaden. We recommend the use of SURFlichtpaden. A guaranteed bandwidth is available on a light path connection. The 'normal' Internet traffic is also guaranteed to be separated from the traffic with the cloud providers, and light paths are not susceptible to DDOS attacks. Many institutions have a Multi Service Port (MSP). Multiple light paths can be set up via an MSP. No costs are involved if capacity is still available on the MSP. Connection methods depend on the selected underlying network environment. More information about [SURFlichtpaden](#).

##### Network connections to providers

Costs for network connections with providers vary according to the desired bandwidth and the provider.

##### Public Cloud Provider Technology

The following summary illustrates how public cloud providers are linked, how to access their systems, and which data classification applies to their European data centres.

**Table 2 Overview of SURFcumulus cloud providers**

Cloud provider	Hypervisor	Primary data centre locations
Amazon Web Services	Amazon Web Services	Frankfurt, Dublin, London, Paris
CloudFerro	Openstack, VMware	3x Poland
Equinix	VMware	Amsterdam, Enschede, Zwolle
Google Cloud Platform	Google Cloud Platform	Dublin, Eemshaven, Fredericia, Hamina, St. Ghislain
IBM		Amsterdam, Frankfurt, London, Milan, Oslo, Paris
Ionos	OpenStack	London, Frankfurt
Microsoft Azure	Microsoft Azure	Amsterdam, Dublin
Oracle		Amsterdam, Frankfurt, London, Zurich
Orange	VMware, Openstack	Strasbourg and Amsterdam
Proact	VMware	Amsterdam, Rotterdam, Eindhoven, Brussels, Ghent (total 35 in Europe)
Sentia	VMware	3x Amsterdam, Zaventem, Diegem
T-Systems		Bamber, Bern, Biere, Magdenburg, Munich
Vancis	VMware	2x Netherlands

#### 3.2 Security Measures, Privacy and GDPR

##### Roles and responsibilities

SURF concludes an agreement for the services of the cloud providers, per provider, under which all use by the institutions is procured. Each institutions is given its own environment within its selected providers, to which SURF does not have access. SURF also has no insight into which types of data institutions put into the

environments set up for them. Through the SURFcumulus agreement, institutions undertake to honour the provisions as concluded between SURF and the providers. As a result, SURF cannot be considered to be a processor and does not enter into any processor agreements with the providers.

#### **Insight into the security measures taken by each provider**

Institutions must verify for themselves that the selected provider has taken sufficient security measures. This is an extensive and specialised process that can be better carried out centrally by SURF for reasons of efficiency.

SURF prepares management reports on the measures taken by the providers and the certifications and audits of these providers' European data centres. We do this on the basis of the documents submitted by the providers. If desired, institutions that so wish can view the underlying documents. This can be done at the SURF office or at the provider's office (depending on the agreements made by SURF in this regard).

Where new analyses lead to different outcomes, SURF will actively approach all institutions that use these providers in this regard. You can find these analyses in the provider's information packs; see 3.5.

#### **GDPR and the SURF standards framework**

To help the Institutions find out the extent to which the Cloud providers comply with the GDPR, SURF has translated its model Processor Agreement (based on the GDPR) into a compliance declaration. This compliance declaration breaks down the model processor agreement and compares the provider's data protection conditions to the model processor agreement.

In mini-competitions (Q1 2022), SURF will ask cloud providers to elaborate the aspects included in the declaration of compliance. These will subsequently become an integral part of the agreement between SURF and the cloud provider and will therefore also apply to use by the institutions. Institutions can then employ the methodology used by SURF to quickly see which providers comply with the checked aspects.

If providers accept the requested right to audit and an institution wishes to make use of it, this is only possible via SURF (as a contract party) and costs may be incurred. SURF will make proposals on cost-sharing where several institutions desire an audit.

In order to gain insight into compliance, SURF will periodically draw up an analysis of the security measures of each of the providers on the basis of the submitted audit reports for these providers' European data centres. Where new analyses lead to different results, SURFnet will actively approach all institutions about this. You can find these analyses in the provider information pack; see 3.4.

### **3.3 Security**

SURF and the institutions have joint responsibility to monitor processes and procedures so that the SURFcumulus service can be used securely.

#### **SURF's responsibilities**

SURF gives a great deal of attention to the security of its own service. We follow the [Security Measures Guide](#) pertaining to the [Legal Standards Framework for Cloud Services](#). The audit programme can be found on our [wiki page](#).

#### **Responsibilities of institutions**

##### *Data classification*

The data classification analysis indicates for each provider what the institution needs to adjust or introduce in order to be able to comply with this provider's data classification capabilities.

Information is available on the wiki concerning the division of responsibilities between the SURFcumulus providers and the institutions. This is prepared on the basis of the [Security Measures Guide](#).

### 3.4 Information packages about providers

SURF has prepared an information package about each provider, which provides the institution staff involved in the decision-making process with proper information. It contains:

- The tender documents (lawfulness);
- The documents submitted by the provider;
- The award letter and scores;
- The Framework Agreement with the services and costs;
- The Call-Off Contract (further agreement or COC) that SURF has signed on behalf of the institution in which the results of the mini-competition for GDPR compliance are included.
- The results of the conducted security measures analysis..

Institutions that procure SURFcumulus can download these information packages via [SURFdashboard](#) or request these from the cloud advisors.

### 3.5 Adjustment of cloud provider offerings

Cloud services are continuously developing and institutions want to be able to make use of new features. Providers may add or (after notification) terminate services. GÉANT will assess these kinds of requests on the basis of the definitions of scope in the agreements. New services will then be made available at a national or international level. Only services included in the agreements may be made available to the institutions.

### 3.6 New functions and prioritisation

Together with the institutions in the User Advisory Board, SURF will review which new functionalities and process adaptations offer added value and determine the priority. An up-to-date overview of the roadmap can be found on the [SURFcumulus wiki](#). SURF can adjust the roadmap if several institutions have a substantiated wish for this. SURF actively cooperates with the institutions in determining requirements and prioritising adjustments in the roadmap.

### 3.7 Adjustments to SURFcumulus services and prices

Complex or far-reaching adjustments or further developments and price changes will be submitted to the SURF Portfolio Advisory Board (SPA). Institutions will be informed of this via the SURF pricing letter.

## 4 Procuring, modifying and cancelling SURFcumulus

### 4.1 Procuring SURFcumulus

#### Obtaining information and identifying preferences

Does your institution wish to use SURFcumulus? Please contact one of SURFcumulus' cloud advisors via [info@surfcumulus.nl](mailto:info@surfcumulus.nl) or via [SURFdashboard](#). Then we do the following:

- A written inventory and a meeting with one or more SURF specialists. We identify your wishes and environment.
- Based on this information, we determine how and when SURFcumulus can be delivered to the institution.
- We explain SURFcumulus and tell you about all the possibilities.
- We look at your institution's needs and provide advice about which providers could meet them.
- Upon request, we assist you with internal decision-making.

Institutions that wish to procure SURFcumulus should take the following steps:

- Go through the providers' information packages via [SURFdashboard](#) or request them from the cloud advisors.
- Complete the application form.
- Sign the SURFcumulus Agreement and the annex.

### 4.2 SURFcumulus initial term agreements

If you wish to procure SURFcumulus, you will receive an initial agreement that will run until the end of the calendar year. After that, the agreement will be tacitly renewed for one year until its expiry.

### 4.3 Changes

For changes such as using new cloud providers, contact your cloud advisor.

### 4.4 Cancelling SURFcumulus

Your institution may cancel SURFcumulus in writing, subject to a term of notice of 1 month. However, you must have removed all services from the cloud provider(s) before the end of that term and cleaned up the environment (and any connections).

## 5 Prices

SURFcumulus does not have a subscription structure. Usage costs are charged monthly with a service fee.

### 5.1 Not-for-profit and Not-for-loss

SURFcumulus is regarded within SURF as an operational service. This means that SURF does not use innovation funds to maintain the service. We analyse the balance sheet in terms of income and expenditure on an annual basis, and the prices are adjusted if necessary.

A service contribution of 7% applies to all cloud services you use. For Professional Services and Application Platform, this service contribution is 5%. This is to cover administrative costs, such as product management, procurement, legal support, audits, contract management, offered workshops and training courses, invoicing, etc.

The contracts between GÉANT and the providers stipulate that usage costs may only be adjusted downwards, unless significant exchange rate variations occur for parties whose prices are based on currencies other than the euro.

You will be notified of changes to the service contribution via the standard prices letter (no later than 1 September).

Category	Service contribution*
Cloud consumption	7%
Professional Services	5%
Application Delivery	5%

\* There is a maximum contribution of EUR 100,000 per year per category per institution.

**Supplier costs and discounts**

The costs for the use of resources and services from providers are charged on an actual use basis. Current provider prices and discounts can be found in the provider information packs at [SURFdashboard](#). A more concise summary of the discounts offered by the various cloud providers can be found on the [Wiki](#). Due to their commercially confidential nature, these are only available after the SURFconext login. If you are not able to log in to SURFconext, please contact one of the cloud advisors.

**VAT**

Prices do not include VAT.

**5.2 Invoicing**

Invoicing is carried out monthly in arrears, based on the use of services of the providers.

## 6 SLS and characteristics

### 6.1 General provisions

The general provisions of the [SURFnet Service Level Specification](#) apply to SURFcumulus.

### 6.2 Reporting

We publish reports on the characteristics of SURFcumulus on [SURFdashboard](#). Service-specific statistics, logging, troubleshooting information and reports are made available to the institution via specific SURFcumulus reports.

### 6.3 Availability

The standard maintenance windows for SURFnet services are from 5.00 a.m. to 7.00 a.m. on Tuesdays. SURF will inform institutions in good time when interruptions to service are expected to occur during the maintenance windows.



## Annex 1: Abbreviations and Terminology

Abbreviation/term	Meaning
COC	Call-off Contract (further agreement) via which available services are procured under a Framework Agreement
Contract management	Contract management at a generic level for general aspects regarding lawfulness and procurement
GÉANT	The European collaboration organisation within which centralised procurement of the public IaaS services took place, <a href="https://clouds.geant.org">https://clouds.geant.org</a>
Institution	An institution affiliated to SURF that fulfils the requirements
Providers	Providers of infrastructure services (such as IaaS and PaaS services) contracted from the GÉANT tender
Provider management	Provider management at institution level, which includes reports and updating of the provider's product service catalogue
MSP	Multi Service Port, used to set up SURFlichtpaden
OCRE	Open Clouds for Research Environments <a href="https://www.ocre-project.eu">https://www.ocre-project.eu</a>
SPA	SURF Portfolio Advisory Committee
SPoC	Single Point of Contact
SURFcumulus	The hybrid IaaS+ service as described in this service description