



UiO : Universitetet i Oslo

SERVICE AGREEMENT

Service agreement regarding Norwegian internet exchange
(hereafter referred to as the Agreement)

Concluded between:

Norwegian Internet eXchange (NIX)
c/o USIT, University of Oslo

(Hereafter referred to as the Supplier)

and

(Hereafter referred to as the Customer)

Location and date:

Location and date:

..... /

USIT / Lars Oftedal
(Director of Information Technology)

Customer signature

Supplier signature

The Agreement is signed in two copies, one for each party.

Version: 11.9.2018

INTRODUCTORY PROVISIONS

This service agreement («Agreement») applies to the purchasing of those services specified in this signature document and the terms of commission (“Services”). The agreement consists of this signature document and the following appendixes. These documents constitute the entire agreement basis for the Customer’s purchase of the Services.

- Part 1: Terms of commission
- Part 2: Terms of service purchase
- Part 3: Price and terms of payment
- Part 4: Changes and additions to the contractual terms

If there is a conflict between the documents, the documents have the following hierarchy, unless otherwise stated clearly and unequivocally:

1. Signature document
2. Changes and additions to the contractual terms
3. Terms of service purchase
4. Terms of commission
5. Price and terms of payment

THE AGREEMENT’S DURATION AND TERMINATION

Unless otherwise specified in part 4, the Agreement applies on an ongoing basis and may be terminated by either party with a six (6) months’ written notice.

Connection type applicable for this contract	The Service will commence at
c.f. part three	DD/MM/YYYY

PAYMENT INFORMATION

Order reference:

Billing address:

E-mail:

Organization no.:

COMMUNICATIONS

All communications concerning the Agreement shall be directed to:

On behalf of the Customer

Name:

Position:

Telephone:

E-mail:

On behalf of the Supplier:

Name: Petter Bjørbæk

Position: Head of Computer networks
Group

Telephone: +47-22852751

E-mail: petter.bjorbak@usit.uio.no

PART ONE – TERMS OF SERVICE

1. THE PARTIES' OBLIGATIONS

1.1. The duties of the Supplier

The Supplier shall deliver the services described in the signature document and Part 2.

The Supplier is responsible for ensuring that the service fulfils the functions, requirements and characteristics described in Part 2.

The Supplier shall implement measures that are generally recognized in the industry to ensure confidentiality of all data, including, but not limited to, measures to ensure that data is not compromised, and to prevent unauthorized access to and use of data.

The Supplier shall also implement measures that are generally recognized in the industry to prevent unintentional changes and erasure of data, and to ensure against virus attacks and other tortious software.

The Supplier shall, as far as possible, hold the Customer's data logically separated from third party data to eliminate the risk of damage to the data and/or to maintain data confidentiality. By "logically separated", it is understood that the necessary technical measures are implemented and maintained, to protect data against unauthorized alteration and access. Unauthorized alterations and access also includes access from employees of the Supplier or others who have no need for the information in their work for the Customer.

1.2. Subcontractors

If the Supplier hires a subcontractor or the Customer hires a third party to perform work following the Agreement, the party is fully responsible for the execution of these tasks as if it was the party themselves who executed the work.

The Supplier shall, to a reasonable extent, cooperate with the Customer's other suppliers and third parties.

1.3. Limitation of liability

The Supplier is not responsible for any loss or damage caused by using the service. This includes indirect losses, losses or damage inflicted on a third party or loss or damage as a result of data loss or computer viruses.

The Supplier is not responsible for any defects in third party software used in the service.

1.4. The duties of the Customer

The Customer shall facilitate that the suppliers are able to perform their duties according to the Agreement.

The Customer shall, without undue delay, give notice of circumstances, which the Customer understands or should understand, may affect the Agreement's implementation, including, but not limited to, any expected delays.

1.5. New versions

If a new version of the service is available, the Supplier must give notice of this to the Customer within a reasonable time before publication. The Customer is obligated to follow the Supplier's general upgrade cycle.

The Supplier assumes no responsibility if the Customer cannot make use of new versions of the service.

1.6. Mutual obligations

1.6.1. Confidentiality

Information that is known to the parties in conjunction with the Agreement and the implementation of the Agreement shall be kept confidential, and not be made available to outsiders without consent from the other party.

If the Customer or Supplier is an administrative agency, the parties are obliged to follow the Public Administration Act of February 10th, 1967, about the

procedures in administration matters or any equivalent sector-specific regulations.

Duty of secrecy under this provision shall not prevent the disclosure of information required to be disclosed by law or regulation, including, but not limited to, right of access and public information, as required by the Freedom of Information Act of May 19th, 2006. If possible, the other party shall be notified before this kind of information is published or given.

Confidentiality does not prevent information from being used when no legitimate interest suggests that it should be kept secret, for example, when it is public knowledge or it is available in other public settings.

The parties shall take necessary precautions to ensure that unauthorized people are not given access to or being familiarized with confidential information.

Confidentiality applies to all the parties' employees, subcontractors and third parties who are acting on behalf of the parties in connection with the implementation of the Agreement. Parties can only transfer confidential information to subcontractors or third parties to the extent that this exchange is necessary in order to implement the Agreement, assuming that the subcontractors and third parties have a duty of secrecy equivalent to this sub-section, 1.6.1.

The duty of secrecy also applies after the Agreement has ceased. Employees or others, who vacate their service with one of the parties, will still be subject to the duty of secrecy. The confidentiality agreement ceases five (5) years after the last day of delivery, unless otherwise stated in laws or regulations.

1.6.2. Personal data

The Customer must act as a controller for all personal data. The Supplier is the data processor and processes personal data on behalf of the Customer.

Further provisions on how personal data is processed, including, but not limited to,

relevant security measures, requirements for storage and erasure etc., is provided in a separate data processing agreement. Upon conflict, the data processor agreement supersedes this agreement when it comes to processing of personal data.

The Supplier cannot transfer personal data to third parties for storage, processing or erasure without an explicit agreement with the Customer. The Supplier must ensure that any subcontractors who process personal data, and who are used by the Supplier, undertake corresponding obligations to sub-section 1.6.2.

Personal data shall not be transferred to countries outside of the EEA without a written agreement with the Customer prior to transfer.

1.7. External legal requirements

The parties are responsible for following up their duties pursuant to external legal claims (laws, regulations, other regulatory requirements).

Each of the parties will cover their own costs of complying with legal requirements applicable to the party and its activities. When there are changes in legal requirements or regulatory requirements relating to the Customer's business, and that necessitate changes in service after conclusion of the Agreement, the costs associated with such changes and any additional work will be covered by the Customer.

2. CHANGES IN THE SERVICE

The Customer may request an amendment to the agreement/amended agreement if the Customer has a need to change the original agreement after it has been signed. The parties must agree about the amendments in writing, and the Supplier can demand adjustments in both the schedule and the compensation.

3. COMPENSATION AND PAYMENT

3.1. Compensation

All prices and detailed terms for the compensation the Customer must pay for the services of the Supplier, is detailed in Part 3. All prices are excluding VAT, but include customs and any other expenses. All prices are in Norwegian kroner.

3.2. Billing

Payment shall be made according to invoice within 30 (thirty) calendar days from invoicing date. The Customer will be billed as specified in Part 3. The Supplier shall, within reasonable limits, specify and add documentation to the invoice in order for the Customer to examine the invoice.

3.3. Late payment interest fees

The Supplier has the right to collect interest on any outstanding payment, should the Customer not have paid on time, in accordance with the Late Payment Act from December 17th, 1976, number 100.

If any overdue payments, with the addition of late payment interests, are not paid in full within 30 (thirty) calendar days, the Supplier may send the Customer a written warning. This warning shall state that if the payment is not paid in full within 60 (sixty) calendar days after the warning has been received, the Agreement will be terminated.

Termination cannot occur if the Customer pays in full, including late payment interests, before the final deadline.

3.4. Changes in price

The price of the service and the hourly rate may be changed at the end of each year, corresponding with the increase in Statistics Norway's Consumer Price Index for Services where labour dominates, as per August.

The price may change to the extent that rules or resolutions pertaining to public taxes are amended. This may affect the Suppliers' compensation or costs.

4. BREACH OF CONTRACT

4.1. What is regarded as breach of contract?

It is considered a breach of contract if either party fails to fulfil the obligations stipulated in the Agreement, and the breach is not caused by circumstances the other party is responsible for, or force majeure.

4.2. Notification requirements

If one of the parties cannot fulfil their duties as agreed upon, the relevant party is required to give the other party a written notification as soon as possible. The notification must include the reason for the problem, and if possible, when the specific service can be delivered. This also applies if any further delays occur after the first notification is given.

4.3. Defects in service

The Customer must give notice of defect without undue delay if the Customer discovers a defect in the service.

4.4. Sanctions for breach of contract

4.4.1. Withholding benefits

If the Customer breaches the contract, the Supplier may withhold performance.

If the Supplier breaches the contract, the Customer may withhold payment, but not clearly more than what is necessary to secure the Customer's claim caused by the breach.

4.4.2. Remedial measures

The Supplier shall begin, and also complete the effort to remedy the breach within a reasonable time after the error has been reported to the Supplier.

4.4.3. Cancellation

If there is a material breach of contract from one party, the other party may cancel the Agreement effective immediately, after giving the defaulting party written notification and a reasonable deadline to cure the breach.

4.4.4. Damages and compensation

Damages and limitation of damages is pursuant to the underlying legal regime

Overall damages in the Agreement period are limited to an amount, which is equivalent to the Agreement's total yearly compensation, excluding VAT.

4.4.5. Third party software

If the service is lacking because of errors or deficiencies with third party software, the Supplier is only obligated to report the error to the software producer. They shall also seek a higher priority troubleshooting, keep the Customer informed and make the corrected version available when the software producer has corrected the error.

The Customer cannot assert other breach sanctions if the breach was caused by errors in third party software.

5. RIGHT OF USE

5.1. Limited right of use

The Customer has limited right of use of the service, the software and the documentation of the service. Right of use includes the necessary rights for the Customer to use the service as agreed.

The right of use lasts from the Agreement is signed until the Agreement is terminated.

The Customer cannot give access to the service, the software or the documentation to a third party without written consent from the Supplier.

5.2. Copyrights and ownership

Ownership, copyrights and other material and immaterial rights to the service belongs to the Supplier.

Both parties may use general knowledge (know-how) that they have learned in connection to the Agreement as long as it is not confidential.

6. TERMINATION OF THE AGREEMENT

Upon termination of the Agreement, no matter the cause, the Supplier shall, with reasonable measures, facilitate the transfer of the service to a new Supplier. The Supplier shall, within a reasonable extent, assist with transferring of the following to the Customer:

- The Customer's data
- Any licenses that the Supplier have managed on the Customers behalf when the Customer is the licensee
- Any list of external and internal users linked to the Customer's solution, which the Supplier has been maintaining for the customer.

If the Customer has further needs of assistance than the aforementioned, the parties may agree upon further assistance through a separate agreement.

The Customer is obliged to pay for the benefits mentioned above according to the Supplier's hourly rate indicated in Part 3. If no hourly rate has been agreed upon, the Supplier shall pay the market price for these services.

The Supplier is not obligated to assist if such assistance could mean that the Supplier disclose or publish trade secrets.

7. OTHER PROVISIONS

7.1. Force majeure

If an extraordinary situation, which is out of either parties' control, should occur, and makes it impossible to fulfil the Agreement and which, according to Norwegian law, is considered as force majeure, the counterpart shall be informed as soon as possible. The afflicted party's obligations are suspended for the duration of the extraordinary situation. The counterpart's obligations are also suspended in the same time frame.

In force majeure situations, the counterpart may only terminate the contract with the other party's consent, or if the situation lasts or is expected to last

more than ninety (90) calendar days from the date the situation arises, and then only with fifteen (15) calendar days' notice.

In the event of force majeure situations, the parties have a mutual obligation to inform each other of all matters presumed to be significant for the other party. This kind of information should be given as soon as possible.

7.2. Risk

Risk of hardware, infrastructure or software lie with the party who physically holds the equipment or software, or who has it under their control.

8. DISPUTES

8.1. Negotiation and mediation

The rights and obligations under this agreement shall in their entirety be governed by Norwegian law.

In the event of a disagreement between the parties regarding the interpretation or legal effects of the Agreement, the parties shall first seek to reach an agreement through negotiation and/or mediation.

8.2. Resolving disputes

8.2.1. Adjudication or arbitration

If a dispute cannot be resolved by negotiation or mediation, either party may require that the dispute is resolved with final effect before the Norwegian courts.

The parties may alternatively agree that the dispute shall be resolved with final effect through arbitration.

8.2.2. Dispute settlement before the Director for The University of Oslo

If the parties do not reach an agreement through negotiation and/or mediation, the dispute shall be resolved with final effects by the director at The University of Oslo.

8.2.3. Dispute settlement before the Ministry of Education

If the parties do not reach an agreement through negotiation and/or mediation, the dispute shall be resolved with final effects by the Ministry of Education.

PART TWO – TERMS OF COMMISSION

1. SCOPE OF THE AGREEMENT

1.1. Purpose of the Agreement

In order to realise open IP traffic exchange in Norway, a set of neutral IP exchange-points (IXPs) have been established. Organizations who want to exchange IP traffic can connect their equipment to a neutral medium at one or more of these IXPs, as long as they fulfil the requirements in this contract.

2. SERVICE DESCRIPTION

2.1. Terminology

For the purpose of this agreement, the following terms shall have the following meanings:

2.1.1. NIX

"Norwegian Internet eXchange" (NIX) consists of six IXPs

- NIX1 in Gaustadalleen 23B, HMG9 and Digiplex, Oslo
- NIX2 in St.Olavs plass 5, Oslo
- BIX in Bergen
- TRDIX in Trondheim
- TIX in Tromsø
- SIX in Stavanger

If nothing else is specified in this document, the term NIX refers to all of the six IXPs.

2.1.2. NIX manager

The local organization in charge of technical management of an IXP.

- NIX1 University of Oslo
- NIX2 University of Oslo
- BIX University of Bergen
- TRDIX Norwegian University of Science and Technology
- TIX University of Tromsø
- SIX Green Mountain DC1

All contact between the NIX customers and the NIX managers should go through the Supplier.

2.1.3. NIX customer

Organization that fulfills the obligations and establishes IP traffic-exchange at NIX, as described in this agreement.

Various types of organizations can connect to NIX:

- Traditional ISPs
- Carriers
- Content providers

- Web hosters
- Mobile operators
- VoIP providers
- Other IP centric organizations, such as: E.g. Google, Akamai Technologies Inc., root-servers, Domain Registry System etc.

2.1.4. Obligations of a NIX customer:

- LIR status by RIPE (or other RIR)
- AS-number given by RIPE (or other RIR)
- Announcement of this AS-number at one or more other IXPs on the Internet
- An operational NOC (Network Operation Center) that can respond to e-mail from the Supplier, NIX managers and other NIX customers within 4 working hours

The following are NOT qualified as NIX customers in this context:

- Companies running an internal IP service to connect themselves to the Internet
- IP network providers running isolated networks that are not connected to the Internet.

2.2. Detailed description of the Service

An organization can become a NIX customer and connect to NIX IXPs in order to realize IP traffic-exchange if the following conditions are fulfilled:

- The organization fulfils the requirements for a NIX customer, as described in section "Terminology"
- The organization has given the Supplier the following information:
 - Invoice address
 - E-mail address (a mailing list) for administrative and technical information from the Supplier, the NIX managers and other NIX customers
 - A URL to a web-page with contact-information for the organization (NOC, peering and other issues/problems) and other relevant information for the Supplier, NIX managers and other NIX customers
 - AS-number to be announced, with information regarding where it is announced on the Internet
 - Desired physical interface at each of the NIX IXPs
 - Type of connection and name of connection-supplier at each of the NIX IXPs
 - Time schedule for each connection
- This agreement is signed by the organization and the Supplier.

Routing on NIX is done with BGP4. Routing with other routing protocols or "default routing" is not allowed.

Each NIX customer must take proper actions to limit the number of unnecessary packets broadcasted or flooded on the IXPs. NIX customers not conforming to this will be warned, and eventually disconnected.

NIX is based on ethernet-switch technology. The following available interface technologies are detailed in part three – prices and terms of payment.

When using 1000BaseLX or 10GBaseLR optics, NIX will supply the optics in the NIX-switches (included in connection fee). If these conditions are not met, the customer must supply the optics.

NIX customers are encouraged to use vendor-supplied optics, but must choose vendor-compatible optics. The Supplier can refuse to install incompatible optics if it creates problems for the operation of the IXP in any way. More technical details can be found at www.nix.no.

2.3. Obligations of the Supplier and the NIX managers

The Supplier and the NIX managers shall:

- Provide and maintain internet exchange through NIX.
- Provide traffic statistics for everyone connected. ISPs who distribute this statistics information outside their own organization will lose their access to the statistics. Accumulated traffic statistics (all the traffic through each NIX IXP, and the grand total) will be publicly available.
- Ensure that there is no unauthorized tapping of the traffic.
- Report operational problems, if discovered, to the NIX customers' operation centers via the nix-ops@usit.uio.no mailing list.

2.4. Obligations of the NIX customers

Every NIX customer shall:

- Ensure that the connection to NIX is in accordance with technical specifications (2.2)
- Establish at its expense the necessary connection to each NIX IXP. Information regarding connection-orders must be sent to the Supplier, at latest 5 working days before the connection-supplier starts the installation. Suppliers showing up without prior notice will not be admitted.
- Allow statistics collection from all the NIX IXPs as described above.
- Provide updated contact information at portal.nix.no

2.5. Starting up

The Service will commence at _____ / 20____.
Remuneration is payable from startup date.

3. SERVICE REQUIREMENTS

3.1. Availability requirements

The Supplier and the NIX managers aim for maximum uptime of every NIX IXP.

3.2. Planned downtime

Planned maintenance shall be announced at least 5 working days in advance.

3.2.1. Other planned downtime

Unscheduled work should be announced as soon as possible.

3.2.2. Response time

The following demands for response time apply:

Category	Goal to start troubleshooting within	Correcting the errors
Critical errors	2 hours during work hours	Will run in the Supplier's working hours until the error is corrected.
Serious errors	1 work day	Will run in the Supplier's working hours until the error is corrected.

Less serious errors	10 work days	No specific demands
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The following definitions of errors apply:

Level	Category	Description
A	Critical	<ul style="list-style-type: none"> - The whole Service, or important parts of it, is unavailable. - Errors that may lead to the Service stopping, loss of data or other functions, which after an objective assessment are critical for the Customer, not working as agreed. - The documentation is incomplete or misleading to the degree that the Customer, after an objective assessment, cannot use the Service or critical parts of it.
B	Serious	<ul style="list-style-type: none"> - Some critical parts of the Service do not work. - Errors that may lead to functions that, which after an objective assessment is important to the Customer, are not working as agreed and are time consuming and costly to circumvent. - The documentation is incomplete or misleading, to the degree that the Customer cannot use functions which is, after an objective assessment, important to the Customer.
C	Less serious	<ul style="list-style-type: none"> - Errors that lead to individual functions not working as agreed upon, but are easy for the Customer to circumvent. - The documentation is incomplete or misleading.

Downtime caused by internal circumstances will be fixed within 30 days unless other agreements are made.

3.3. Other Service demands

NIX customers causing problems or performance degradation can be temporarily disconnected without prior notice. Notice of the disconnection should however be given as soon as possible to the relevant parties.

4. POINT OF CONTACT

The Supplier, USIT under the University of Oslo, is the organization that manages the neutral media that realize the IXPs described in this agreement, all contracts and all contact with the NIX customers.

All inquiries can be directed to:

Email: nix-drift (at) usit.uio.no (08-16 CET)

Phone: +47 22840004 (08-19 CET)

<http://www.nix.no/contact/>

5. OTHER ASPECTS OF THE SERVICE

5.1. Application for membership and connection of new ISPs

The NIX IXPs are open to all organizations who wish to have open IP traffic-exchange and who fulfil the rules for connecting to NIX.

Every NIX customer who wants to connect to a NIX IXP, can be connected after signing this agreement together with the Supplier.

The Supplier and the NIX managers coordinate the practical work.

PART THREE – PRICES AND TERMS OF PAYMENT

1. PRICES FOR ALL SITES

Prices are also described here: <http://www.nix.no/pricing/>

In order to connect to a NIX IXP, you must pay a one-time connection fee per connection and an annual fee for each connection. Prices are ex. VAT.

Invoice yearly in October.

Connection type**	Connection fee*	Annual fee	IXPs
1GE	NOK 10 000	NOK 30 000	NIX1 and NIX2
10GE first port	NOK 10 000	NOK 30 000	NIX1 and NIX2
10GE additional port**	NOK 10 000	NOK 20 000	NIX1 and NIX2
25G	NOK 10 000	NOK 50 000	NIX1 and NIX2
100G	NOK 10 000	NOK 200 000	NIX1 and NIX2
1GE regional	NOK 0	NOK 20 000	BIX, TRDIX, TIX, SIX
10GE regional	NOK 0	NOK 20 000	SIX

* Connection fee is charged when a new fiber in to the IXP is deployed. This fee also applies when moving location, e.g. moving from Digiplex to HMG9.

**Applies when adding a port to the same IXP.

**** Connection type applicable for this contract**

PART FOUR – CHANGES AND ADDITIONS TO THE CONTRACTUAL TERMS

The dispute settlement described in the paragraph indicated below applies for this agreement. The dispute settlements not chosen in the table below does not apply for this agreement.

Chosen dispute settlement for the Agreement
8.2.1. Adjudication or arbitration

If any changes or additions are to be made to the existing agreement text in Part 2-4, these should be indicated in the table below:

Part	Paragraph	Existing text	Replaced with or added to

If any changes or additions are to be made in the terms of agreement in Part 1, these should be indicated in the table below:

Paragraph	Existing text	Replaced with or added to
1.3		Added: Any liability is at all times limited to an amount of NOK 50,000 pr. NIX-contract pr. year.
1.6.2		Does not apply