

# Network neutrality

## *Guidelines for Internet neutrality*

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Post- og teletilsynet

## The guidelines in general

These network neutrality guidelines have been drawn up by the Norwegian Post and Telecommunications Authority (NPT) in collaboration with various industry players, such as Internet service providers (ISPs), industry organisations, content providers and consumer protection agencies. The guidelines are intended to ensure that the Internet remains an open and non-discriminatory platform for all types of communication and content distribution.

NPT has sought to establish principles for network neutrality that as many parties as possible can endorse and comply with. These principles will not have any formal legal status, nor will NPT be able to issue sanctions on the basis thereof.

Three basic principles of network neutrality have been identified. To explore these principles in depth and give them substance, each one is explained in a dedicated section. In a number of cases, the explanations will support one another across principles. That is why when evaluating these principles it is necessary to look at the big picture and not only individual principles.

The guidelines may be updated as needed.

## Principles of network neutrality

The main objective of network neutrality is to ensure that the Internet remains an open and non-discriminatory platform for all types of communication and content distribution.

Principles of network neutrality:

1. Internet users are entitled to an Internet connection with a predefined capacity and quality.<sup>1</sup>
2. Internet users are entitled to an Internet connection that enables them to
  - send and receive content of their choice
  - use services and run applications of their choice
  - connect hardware and use software of their choice that do not harm the network.<sup>2</sup>
3. Internet users are entitled to an Internet connection that is free of discrimination with regard to type of application, service or content or based on sender or receiver address.<sup>3</sup>

Principle 1 states that the characteristics of the Internet connection are to be contracted in advance, also with a view to cases where Internet access is provided together with other services on the same physical connection. Principle 2 states qualitatively that the Internet connection must be able to be used as the user wants. And Principle 3 states that traffic over the Internet connection is to be transferred in a non-discriminatory manner.

These principles are expanded on in detail in the following sections.

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<sup>1</sup> This first principle is inspired by the Annenberg Center Principles for Network Neutrality, 27 March 2006

<sup>2</sup> The three sub-points of this principle are inspired by the FCC Policy Statement of 23 September 2005

<sup>3</sup> This principle is in line with the Report on Network Neutrality from the Japanese Ministry of Internal Affairs and Communications, September 2007

# 1. Basic Internet connection

## **Principle 1**

**Internet users are entitled to an Internet connection with a predefined capacity and quality.**

This means that

- The capacity and quality of the Internet connection is to be clearly specified.
- If the physical connection is shared with other services, it must be stated clearly how the capacity is shared between Internet traffic and the other services.

### **A.**

**The capacity and quality of the Internet connection is to be clearly specified.**

This principle states that Internet users are to be given sufficient information about the characteristics of the Internet connection, so that they know what resource is being provided for communication with the Internet in the form this has traditionally had. This is normally referred to as “best effort” Internet. It is how this resource is managed that is described in Principles 2 and 3.

### **B.**

**If the connection is shared with other services, it must be stated clearly how the capacity is shared between Internet traffic and the other services.**

The connection service that a customer subscribes to from a provider shall have as its primary function – or one of its primary functions – to provide the end user with access to the Internet. If other services are provided to the user in addition to the Internet connection, the subscription terms must state how the use of the other services will affect the Internet access capacity.

# 2. Internet user’s right to freely use the connection

## **Principle 2**

**Internet users are entitled to an Internet connection that enables them to**

- **send and receive content of their choice**
- **use services and run applications of their choice**
- **connect hardware and use software of their choice that do not harm the network.**

- However, this does not mean that the principle can be used to legitimise unlawful or harmful actions.

This principle states that the user shall have free use of the basic Internet connection. An important characteristic of Internet technology is that it can be used for all forms of communication, which is why it is important that this characteristic is not degraded by the provider.

### **A.**

**This principle may not be used to legitimise unlawful or harmful actions.**

The principle of network neutrality shall not be interpreted in a manner at variance with current law. For example, the unlawful distribution of copyrighted content with the aid of P2P file sharing would still be an illegal act by the user. Furthermore, the current practice of ISPs to block child pornography will not infringe this principle. The same may be said regarding spam filters and measures to counteract denial-of-service attacks and infected PCs. It will be in the interest of all users for the ISP to protect the network through which its users communicate. The ISPs are to publish as well as inform all users of all measures of this type.

### 3. Non-discrimination of Internet traffic

#### **Principle 3**

**Internet users are entitled to an Internet connection that is free of discrimination with regard to type of application, service or content or based on sender or receiver address.**

- This means that there shall be no discrimination among individual data streams that use the basic Internet service.
- But it does not mean that the principle precludes traffic management efforts on an operator's own network to block activities that harm the network, comply with orders from the authorities, ensure the quality of service for specific applications that require this, deal with special situations of temporary network overload or prioritise traffic on an individual user's connection according to the user's wishes.

Principle 3 expands on the more qualitative approach we find in Principle 2 by specifying how this is to be understood quantitatively.

#### **A.**

**There shall be no discrimination among individual data streams that use the basic Internet service.**

This principle states that the sharing of capacity among users shall be done in the fairest and most efficient manner that ensures a functional Internet. This is a matter that is difficult to define precisely. Since different users (on both ends of the various communication sessions) can be connected to the network at different bandwidths, it is reasonable that they will experience different capacity for end-to-end communication.

As the competition for bandwidth will typically occur on particular places on the network, either network internal connections, external peering/transit connections and the actual access connection, the principle should apply to all types of communication lines within the framework that the connection contracts (subscription contracts, peering/transit contracts, SLAs, etc.) set. An absolutely fair sharing of bandwidth for all Internet users applied to all communication lines would be difficult to achieve in practice. Inherent in the principle, however, is that there must be no unreasonable manipulation or degradation of traffic for individual data streams.

#### **B.**

**However, this principle does not preclude traffic management efforts on an operator's own network to block activities that harm the network, comply with orders from the authorities, ensure the quality of service for specific applications that require this, deal with special situations of temporary network overload or prioritise traffic on an individual user's connection according to the user's wishes.**

If it becomes necessary to manage traffic streams on the network for these reasons, the operator must be able to account for how this management complies with the principle. Examples of legitimate blocking of harmful activities are measures to combat denial-of-service attacks and spam (cf. Principle 2). An example of orders from the authorities is the requirements of the Electronic Communications Act to give priority to functions critical to society in crisis or emergency situations. Examples of application types whose quality of service may require special handling are telephony and video.

In special situations of temporary network overload it is also deemed to be a reasonable measure to ensure that network resources are used as efficiently as possible. However, such measures must always be carried out in a non-discriminatory manner that does not give priority to selected users or content/service providers.

There must be a distinction between giving priority to traffic without the user's consent and prioritising that is done on the user's own Internet connection according to the user's wishes. Some users may need help from the provider to prioritise the traffic on their own connection when the amount of traffic exceeds total capacity. In principle it is not at variance with network neutrality when this is done for an individual user in isolation. This requires, however, that the users have a real opportunity to choose an Internet connection without prioritising.

The methods for measures of this type shall be published and disclosed to users.