

DIGITAL

# *Annual Report* *2024/2025*

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Net Neutrality in Germany



Bundesnetzagentur

# Net Neutrality in Germany

## Annual Report 2024/2025

Report of the Bundesnetzagentur to the European Commission and BEREC pursuant to  
Article 5(1) Regulation (EU) 2015/2120

Reporting period: May 2024 to April 2025

courtesy translation

**Bundesnetzagentur für Elektrizität, Gas,  
Telekommunikation, Post und Eisenbahnen**

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# 1 Introduction

1. Regulation (EU) 2015/2120 laying down measures concerning open internet access<sup>1</sup> (TSM Regulation) aims to establish common rules to safeguard equal and non-discriminatory treatment of data traffic in the provision of internet access services and related end-users' rights. It aims to protect end-users and simultaneously to guarantee the continued functioning of the internet ecosystem as an engine of innovation.<sup>2</sup>
2. In accordance with Article 5(1), national regulatory authorities (NRAs) must publish reports on an annual basis on their monitoring and findings, and provide these reports to the European Commission and the Body of European Regulators for Electronic Communications (BEREC).
3. BEREC published "Guidelines on the Implementation by National Regulators of European Net Neutrality Rules" on 30 August 2016 in accordance with Article 5(3). The guidelines are designed to provide guidance on implementing the obligations of NRAs and contribute to the consistent application of the Regulation. The guidelines have since been revised twice. The guidelines were first revised in 2020 to reflect the NRAs' practice to date as well as the first judgments by the European Court of Justice (ECJ) on net neutrality. They were then revised again in light of the ECJ judgments of 2 September 2021 on zero-rating options. These revised guidelines were published on 14 June 2022.<sup>3</sup> The Bundesnetzagentur was actively involved in both revision processes.
4. In accordance with the BEREC guidelines (see paragraph 182), NRAs should publish their reports on an annual basis by 30 June. The reports should cover the period from 1 May to 30 April. The present report covers the period from 1 May 2024 to 30 April 2025.
5. By publishing this report, the Bundesnetzagentur fulfils its reporting duty on its monitoring and findings for the ninth year of application of the TSM Regulation. Also by the publication of this report the Bundesnetzagentur simultaneously fulfils its reporting duty under section 55(4) sentence 3 of the Telecommunications Act (TKG).
6. The report focuses on the following issues: the safeguarding of open internet access (Article 3), transparency measures (Article 4), supervision and enforcement (Article 5), and penalties (Article 6).
7. The report covers the most significant activities of the Bundesnetzagentur with respect to the following:
  - domain name system (DNS) blocking because of copyright infringements, the EU Sanctions Regulation prohibiting the broadcasting of certain Russian media, and diverting data to combat specific significant threats (Article 3(3) third subparagraph; see paragraphs 24-27 and paragraphs 21-23);

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<sup>1</sup> Regulation (EU) 2015/2120 of the European Parliament and of the Council of 25 November 2015 laying down measures concerning open internet access and amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services and Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union, Official Journal 2015, L310/1. Any Article without reference to an Act or to a Regulation shall be understood to refer to Regulation (EU) 2015/2120.

<sup>2</sup> See recital 1 of the TSM Regulation.

<sup>3</sup> [https://berec.europa.eu/eng/document\\_register/subject\\_matter/berec/regulatory\\_best\\_practices/guidelines/10280-berec-guidelines-on-the-implementation-of-the-open-internet-regulation](https://berec.europa.eu/eng/document_register/subject_matter/berec/regulatory_best_practices/guidelines/10280-berec-guidelines-on-the-implementation-of-the-open-internet-regulation)

- the investigation of transparency measures (Article 4(1); see paragraphs 34-37), including handling of consumer complaints relating to low data transmission rates (Article 4(1) first sentence point (d) in conjunction with Article 4(4); see paragraphs 46-55);
- the operation of a quality monitoring mechanism (section 55(3) TKG, Article 4(4) and Article 5(1); see paragraphs 45-77);
- processing of complaints from customers relating to suspected infringements of the TSM Regulation.

## 2 Supervision and enforcement of the TSM Regulation on open internet access

### 2.1 Competence

8. In Germany, the Bundesnetzagentur is responsible for enforcing the rules on net neutrality under the TSM Regulation.
9. Depending on the matter at issue, the Bundesnetzagentur may consult with other authorities, for example the Federal Cartel Office (Bundeskartellamt), the state media authorities and the Federal Commissioner for Data Protection and Freedom of Information (BfDI). Data protection falls under the joint responsibility of the Bundesnetzagentur and the BfDI (see paragraphs 29-31).

### 2.2 Methods of supervision and enforcement

10. Under Article 5(1), the Bundesnetzagentur must closely monitor and ensure compliance with the provisions on the safeguarding of open internet access (Article 3) and on transparency (Article 4). The Bundesnetzagentur is responsible ex officio for enforcing the TSM Regulation. Its main information sources are complaints, public media and other authorities or providers of internet access services who inform the Bundesnetzagentur of a new business model.
11. In many cases the Bundesnetzagentur will take action following a complaint (complaint-based approach). The Bundesnetzagentur will support the complainant if the complainant's concerns seem plausible or justified. By taking this approach, the Bundesnetzagentur is able to identify the main issues from the end-user's perspective and take appropriate measures vis-à-vis the provider concerned if necessary.
12. Providers of internet access services are required to carry out a self-assessment of the compatibility of their contracts with the net neutrality rules set out in the TSM Regulation and must amend their contracts accordingly if necessary. There is no obligation to notify the Bundesnetzagentur, but the authority is willing to discuss or answer questions regarding the design of new business models. Notwithstanding the above, it may intervene if it finds any contracts for internet access services are defective.

### 3 Enforcement activities regarding the TSM Regulation and the findings of monitoring work

13. The Bundesnetzagentur's activities in the reporting period related to various provisions of the TSM Regulation.

#### 3.1 Safeguarding of open internet access

##### 3.1.1 Agreements and commercial practices – Article 3(1) and (2)

###### Article 3(1) and (2) TSM Regulation

(1) End-users shall have the right to access and distribute information and content, use and provide applications and services, and use terminal equipment of their choice, irrespective of the end-user's or provider's location or the location, origin or destination of the information, content, application or service, via their internet access service.

This paragraph is without prejudice to Union law, or national law that complies with Union law, related to the lawfulness of the content, applications or services.

(2) Agreements between providers of internet access services and end-users on commercial and technical conditions and the characteristics of internet access services such as price, data volumes or speed, and any commercial practices conducted by providers of internet access services, shall not limit the exercise of the rights of end-users laid down in paragraph 1.

#### IPv4/IPv6 addresses

14. Individual complaints relating to IPv4/IPv6 addresses were again received in the reporting period. There had been similar cases in the past (see previous annual reports). Most cases related to the availability of public IPv4 addresses for end-users to provide their own services and applications. These cases were solved by the providers in various ways – either by providing a public IPv4 address or with alternative mechanisms, depending on the individual circumstances – without the Bundesnetzagentur needing to take formal action. In one case in this reporting period, an IPv6 address was assigned to the end-user, to whom no public IP address had previously been available.

#### IP interconnection

15. Towards the end of the reporting period the Federation of German Consumer Organisations, the Society for Civil Rights, epicenter.works and Professor Barbara van Schewick (Stanford University) filed an extensive complaint concerning a breach of the net neutrality rules with a view to the dimensioning of the IP interconnection interfaces. The complaint was lodged on behalf of three customers of an internet access provider. During the reporting period the Bundesnetzagentur also received complaints of a similar content from consumers. The Bundesnetzagentur is currently examining the complaint on the subject of IP interconnection by the internet access service provider and, in particular, its potential impact on end-user rights under the TSM Regulation.

16. In accordance with the BEREC guidelines, NRAs may take into account the internet access providers' interconnection practices in so far as they have the effect of limiting the exercise of end-user rights under Article 3(1). This may be relevant for example if the interconnection is implemented in a way that seeks to circumvent the objectives of the Regulation. However, it is only possible to assess this on a case-by-case basis.

### 3.1.2 Traffic management – Article 3(3)

#### Article 3(3) TSM Regulation

Providers of internet access services shall treat all traffic equally, when providing internet access services, without discrimination, restriction or interference, and irrespective of the sender and receiver, the content accessed or distributed, the applications or services used or provided, or the terminal equipment used.

The first subparagraph shall not prevent providers of internet access services from implementing reasonable traffic management measures. In order to be deemed to be reasonable, such measures shall be transparent, non-discriminatory and proportionate, and shall not be based on commercial considerations but on objectively different technical quality of service requirements of specific categories of traffic. Such measures shall not monitor the specific content and shall not be maintained for longer than necessary.

Providers of internet access services shall not engage in traffic management measures going beyond those set out in the second subparagraph, and in particular shall not block, slow down, alter, restrict, interfere with, degrade or discriminate between specific content, applications or services, or specific categories thereof, except as necessary, and only for as long as necessary, in order to:

- (a) comply with Union legislative acts, or national legislation that complies with Union law, to which the provider of internet access services is subject, or with measures that comply with Union law giving effect to such Union legislative acts or national legislation, including with orders by courts or public authorities vested with relevant powers;
- (b) preserve the integrity and security of the network, of services provided via that network, and of the terminal equipment of end-users;
- (c) prevent impending network congestion and mitigate the effects of exceptional or temporary network congestion, provided that equivalent categories of traffic are treated equally.

#### “5G+ Gaming” tariff option

17. A mobile network operator has been offering an additional tariff option for its mobile phone tariffs since mid-October 2024, which is based on network slicing in the 5G stand-alone network. Applications that run in the network are expected to have both lower jitter and lower latency in data transmission, leading to an improved user experience. The Bundesnetzagentur is still looking into whether and to what extent

these tariff options are in line with European net neutrality rules. In general, services based on network slicing can be provided in a way that is compatible with net neutrality rules, regardless of whether the technology is used to provide internet access services or specialised services. In both cases the requirements of the European net neutrality rules must be met.

#### **Clause on deprioritisation of heavy users when a network is congested**

18. Once a certain data volume has been exceeded within a billing month, a mobile network operator invokes a network congestion clause under which data traffic in congested cells from customers with certain “unlimited” tariffs is transported with lower priority than other traffic in the same cell until the end of that month. The Bundesnetzagentur found that this clause violated the general obligation to treat traffic equally (Article 3(3) of Regulation (EU) 2015/2120). The Bundesnetzagentur objected to this clause during the reporting period and the company lodged an appeal against the Bundesnetzagentur’s decision.

#### **M2M usage clause**

19. During the reporting period proceedings were also still underway regarding a clause under which the mobile network operator makes the automated exchange of data between end devices (machine-to-machine), for example for flat rate and volume-based tariffs, subject to approval. The Bundesnetzagentur found that this clause violated the general obligation to treat traffic equally (Article 3(3) of Regulation (EU) 2015/2120). The Bundesnetzagentur objected to this clause during the reporting period and the company lodged an appeal against the Bundesnetzagentur’s decision.

#### **DNS blocking**

20. The Bundesnetzagentur checks that any site blocks implemented by internet access providers, such as DNS blocks, are not in breach of the net neutrality rules. The Bundesnetzagentur does not itself order blocking and cannot implement blocking. Site blocks implemented by internet access providers are essentially in breach of the principle of equal treatment of all data traffic. This principle is that providers of internet access services must not treat data traffic differently and in particular must not block or discriminate against websites, unless there is a reason to justify an exception. One particular reason justifying an exception is set out in Article 3(3) point (a) of Regulation (EU) 2015/2120. According to the provision, unequal treatment of data traffic such as site blocking is justified if necessary, and as long as necessary, to comply with Union or national legislation. A reason for justifying such exceptions may arise from various areas of legislation, including EU sanctions law or copyright law. Courts and authorities with relevant powers can also order the blocking of illegal content. In these cases, the blocking is compatible with the net neutrality rules.

#### **Blocking to implement the EU Sanctions Regulation**

21. The EU adopted sanctions against Russia because of its invasion of Ukraine. The aims of the sanctions include restricting the flow of information within the EU from Russian media participating in propaganda activities. The first broadcasting ban for content from Russia Today and Sputnik was

introduced in the 2021-2022 reporting period and has gradually been extended.<sup>4</sup> In this reporting period, the ban was extended by Regulations (EU) 2024/1428<sup>5</sup> and (EU) 2025/395<sup>6</sup>, to include Voice of Europe, RIA Novosti, Izvestija and Rossiiskaja Gazeta, EADaily / Eurasia Daily, Fondsk, Lenta, NewsFront, RuBaltic, SouthFront, Strategic Culture Foundation, Krasnaya Zvezda / Tsvvezda. A list of bans that have been issued is available on the Bundesnetzagentur's website (in German).<sup>7</sup> Operators are prohibited from broadcasting and from enabling, facilitating or otherwise contributing to broadcast any content by these legal persons, entities or bodies (referred to below as "entities"), including through transmission or distribution by any means such as cable, satellite, internet protocol TV (IPTV), internet service providers, internet video-sharing platforms or applications, whether new or pre-installed. The EU Sanctions Regulation is directly applicable in Germany.

22. The Bundesnetzagentur is not responsible for enforcing the EU Sanctions Regulation and therefore does not monitor its implementation. If an internet access provider does not meet the obligations under the Regulation, it is the task of the law enforcement authorities or (in the case of a negligent breach) of the authorities responsible for regulatory offences to take action. It is the responsibility of the offices and authorities for where the company not or not correctly implementing the Regulation is based.
23. The Bundesnetzagentur's task is instead to ensure compliance with the net neutrality provisions of the TSM Regulation. It therefore checks whether a traffic management measure under Article 3(3) third subparagraph of Regulation (EU) 2015/2120 is not in breach of the net neutrality rules by way of exception. The EU Sanctions Regulation referred to in paragraph 21, as amended, provides such a reason justifying an exception under Article 3(3) third subparagraph point (a) of Regulation (EU) 2015/2120. The Bundesnetzagentur therefore considers the internet access providers' blocking of domains distributing content from the above-mentioned entities to be compatible with the net neutrality provisions; BEREC also shares this view.<sup>8</sup> The Bundesnetzagentur informed the internet access providers about this through the industry associations. It also pointed out that the list of domains<sup>9</sup> whose blocking is not in breach of the net neutrality rules is not final and may be changed depending on further developments.

### Blocking because of copyright infringement

24. The Clearing Body for Copyright on the Internet (CUII) is a joint initiative of rights holders from the cultural and creative industry and four major German internet access providers. Its aim is to enable DNS blocks to be implemented in an out-of-court procedure and by all internet access providers involved for

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<sup>4</sup> Council Regulation (EU) 2022/350 of 1 March 2022 amending Regulation (EU) No 833/2014 concerning restrictive measures in view of Russia's actions destabilising the situation in Ukraine (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022R0350>)

<sup>5</sup> Council Regulation (EU) 2024/1428 of 17 May 2024 amending Regulation (EU) No 833/2014 concerning restrictive measures in view of Russia's actions destabilising the situation in Ukraine; <https://eur-lex.europa.eu/legal-content/DE/TXT/?uri=CELEX:32024R1428>

<sup>6</sup> Council Regulation (EU) 2025/395 of 24 February 2025 amending Regulation (EU) No 833/2014 concerning restrictive measures in view of Russia's actions destabilising the situation in Ukraine; [https://eur-lex.europa.eu/legal-content/DE/TXT/HTML/?uri=OJ:L\\_202500395](https://eur-lex.europa.eu/legal-content/DE/TXT/HTML/?uri=OJ:L_202500395)

<sup>7</sup> [https://www.bundesnetzagentur.de/DE/Fachthemen/Digitales/Schutz/Netzneutralitaet/DNSsperren/AnordnungenGesetzlich\\_EU-Sanktionen.pdf?\\_\\_blob=publicationFile&v=9](https://www.bundesnetzagentur.de/DE/Fachthemen/Digitales/Schutz/Netzneutralitaet/DNSsperren/AnordnungenGesetzlich_EU-Sanktionen.pdf?__blob=publicationFile&v=9)

<sup>8</sup> Press release of 4 March 2022: [BEREC: Open Internet Regulation is not an obstacle in implementing EU sanctions to block RT and Sputnik | BEREC \(europa.eu\)](#); press release of 11 March 2022: [BEREC supports ISPs in implementing the EU sanctions to block RT and Sputnik | BEREC \(europa.eu\)](#).

<sup>9</sup> [https://www.bundesnetzagentur.de/DE/Fachthemen/Digitales/Schutz/Netzneutralitaet/DNSsperren/AnordnungenGesetzlich\\_EU-Sanktionen.pdf?\\_\\_blob=publicationFile&v=9](https://www.bundesnetzagentur.de/DE/Fachthemen/Digitales/Schutz/Netzneutralitaet/DNSsperren/AnordnungenGesetzlich_EU-Sanktionen.pdf?__blob=publicationFile&v=9)

websites with business models that are based on publishing copyrighted works without the permission of the rights holders. The amount of legal content on these websites is negligible compared to the amount of illegal content.

25. Rights holders who are members of the CUII can make a blocking request to the CUII; an examination body comprising former Federal Court of Justice judges assesses the request to determine whether the legal requirements enabling a block to be put in place are met. The body bases its assessment on the prerequisites for blocking developed by supreme court case law. Rights holders are able by virtue of section 7(4) of the Telemedia Act (TMG) to request internet access providers to block sites if there is no other way of resolving the infringement and if the blocking is reasonable and proportionate. The CUII's examination body forwards the results of its assessment as a non-binding recommendation to the Bundesnetzagentur.
26. The Bundesnetzagentur checks whether the prerequisites of Article 3(3) third subparagraph point (a) of Regulation (EU) 2015/2120 are met, that is whether the DNS block is necessary to implement national or European legislation and is therefore justified under Article 3(3) third subparagraph point (a) of Regulation (EU) 2015/2120. The examination and statement made by the Bundesnetzagentur before a block is set up are both informal since the TSM Regulation neither provides for an ex ante examination by the Bundesnetzagentur nor requires approval by or notification to the Bundesnetzagentur of DNS blocks implemented by internet access providers. The Bundesnetzagentur assesses the legal and statistical statements before sending its informal opinion to the CUII. The internet access providers can only set up a DNS block if there are no net neutrality concerns.
27. Seven DNS blocks were set up in the reporting period under this procedure.<sup>10</sup> The websites concerned offer content that infringes copyright.

### Consumer queries

28. A few consumer queries about site blocks were received in the reporting period. The consumers wanted to know, for example, how and whether the Bundesnetzagentur would remove or block fake shops or forums sharing illegal content. The Bundesnetzagentur responded by saying that it was not responsible for ordering DNS blocks or any other types of blocks. It explained the possibilities open to the consumers to pursue their issues, which varied in each individual case. General information (in German) is available on the Bundesnetzagentur's website<sup>11</sup>.

### 3.1.3 Data protection and obligations for the protection of privacy – Article 3(4)

#### Article 3(4) TSM Regulation

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<sup>10</sup> A list of CUII recommendations to which the Bundesnetzagentur responded with an opinion is available here (in German):

<https://cuii.info/empfehlungen/>

<sup>11</sup> <https://www.bundesnetzagentur.de/654104>

Any traffic management measure may entail processing of personal data only if such processing is necessary and proportionate to achieve the objectives set out in paragraph 3. Such processing shall be carried out in accordance with Regulation (EU) 2016/679 (General Data Protection Regulation (GDPR)). Traffic management measures shall also comply with Directive 2002/58/EC of the European Parliament and of the Council.

29. Regulation (EU) 2016/679 replaced the repealed Directive 95/46/EC (see Article 94 GDPR). As the GDPR is directly applicable, the BfDI is solely responsible for monitoring data protection in telecommunications services. Different rules apply to supervision with regard to the obligations laid down in Directive 2002/58/EC (see Article 95 GDPR). The obligations laid down there concern in particular the traffic data of interest within the framework of Article 3(4) of Regulation (EU) 2015/2120, so data that is collected, processed or used in the provision of a telecommunications service, section 3 para 70 TKG. To this extent the joint responsibility of the BfDI and the Bundesnetzagentur continues in principle unchanged.
30. Rules on data protection in the telecommunications sector are based on European law as set out in the E-Privacy Directive (2002/58/EC). Plans were made to replace this directive with an EU regulation. However, these plans are no longer being actively pursued.
31. With the entry into force of the revised TKG in 2021, the sector-specific data protection rules set out in Part 7 of the old TKG are now part of a separate piece of legislation, the Telecommunications Digital Services Data Protection Act (TDDDG). Sector-specific rules for telecommunications, including telecommunications secrecy, are now set out in Part 2 (sections 3 to 18) of the TDDDG. Some of the Bundesnetzagentur's previous tasks are now the sole responsibility of the BfDI. The provisions assigning the responsibilities are set out in sections 28 to 30 TDDDG. The new TKG retains the requirement for telecommunications service providers to inform the Bundesnetzagentur, the BfDI and, under certain circumstances, those affected if a personal data breach occurs (section 169 new TKG; section 109a old TKG). However, a distinction must be made between this requirement and the requirement to report to the BfDI under Article 33 GDPR. Further information is available on the websites of both the Bundesnetzagentur and the BfDI.

### 3.1.4 Services other than internet access services (specialised services) – Article 3(5)

#### Article 3(5) TSM Regulation

Providers of electronic communications to the public, including providers of internet access services, and providers of content, applications and services shall be free to offer services other than internet access services which are optimised for specific content, applications or services, or a combination thereof, where the optimisation is necessary in order to meet requirements of the content, applications or services for a specific level of quality.

Providers of electronic communications to the public, including providers of internet access services, may offer or facilitate such services only if the network capacity is sufficient to provide them in

addition to any internet access services provided. Such services shall not be usable or offered as a replacement for internet access services, and shall not be to the detriment of the availability or general quality of internet access services for end-users.

32. No complaints about specialised services were addressed to the Bundesnetzagentur in the reporting period.
33. A mobile network operator is planning to offer a product designed to facilitate communication by the police or fire brigade, for example, which is to be made available as a specialised service. The Bundesnetzagentur consulted with the mobile network operator on this product during the reporting period. However, whether or not the requirements in Article 3(5) of the TSM Regulation are met depends on the specific technical arrangements for the individual services. The Bundesnetzagentur is therefore in constant dialogue both with the companies concerned and at international level within BEREC as regards these services.

## 3.2 Transparency measures – Article 4

### 3.2.1 Contractual arrangements – Article 4(1)

#### Article 4(1) TSM Regulation

Providers of internet access services shall ensure that any contract which includes internet access services specifies at least the following:

- (a) information on how traffic management measures applied by that provider could impact on the quality of the internet access services, on the privacy of end-users and on the protection of their personal data;
- (b) a clear and comprehensible explanation as to how any volume limitation, speed and other quality of service parameters may in practice have an impact on internet access services, and in particular on the use of content, applications and services;
- (c) a clear and comprehensible explanation of how any services referred to in Article 3(5) to which the end-user subscribes might in practice have an impact on the internet access services provided to that end-user;
- (d) a clear and comprehensible explanation of the minimum, normally available, maximum and advertised download and upload speed of the internet access services in the case of fixed networks, or of the estimated maximum and advertised download and upload speed of the internet access services in the case of mobile networks, and how significant deviations from the respective advertised download and upload speeds could impact the exercise of the end-users' rights laid down in Article 3(1);

(e) a clear and comprehensible explanation of the remedies available to the consumer in accordance with national law in the event of any continuous or regularly recurring discrepancy between the actual performance of the internet access service regarding speed or other quality of service parameters and the performance indicated in accordance with points (a) to (d).

Providers of internet access services shall publish the information referred to in the first subparagraph.

34. The vast majority of the complaints the Bundesnetzagentur receives from end-users are not about the transparency of contractual agreements but are about non-fulfilment of the contractually agreed performance (discrepancies between the contractually agreed internet speeds and the speeds actually measured). This now applies to a greater extent because the rules in the new TKG in force since the end of 2021 give end-users special termination and reduction rights as long as the end-users use the measuring tool provided by the Bundesnetzagentur to prove discrepancies in performance. The tool can currently only be used to prove discrepancies in fixed-network performance.
35. The Bundesnetzagentur deals with these complaints on broadband speed discrepancies following the complaints procedure (see paragraph 40), also taking into account since December 2021 the general administrative order on the new reduction rules for fixed-network internet access (see paragraphs 46-49).
36. Where providers applied admissible traffic management measures, the Bundesnetzagentur endeavoured to ensure appropriate transparency in the contractual information. An example of this is the lower priority given when assigning resources to mobile-based fixed-line substitute products. If congestion occurs, users of this tariff are assigned fewer resources than other mobile users in the same cell. Traffic within each tariff is treated equally (and so there is no breach of the equal treatment obligation under Article 3(3) of Regulation (EU) 2015/2120).
37. No complaints were received by the Bundesnetzagentur during the reporting period regarding the transparency requirements under Article 4(1) first sentence points (b), (c) and (e) of Regulation (EU) 2015/2120 specifically relating to the requirement of “a clear and comprehensible explanation”.

#### **Report in accordance with section 55(4) sentence 3 para 1 TKG**

38. In accordance with section 55(4) sentence 3 para 1 TKG, the Bundesnetzagentur publishes an annual report on its surveys and findings that presents, in particular, the extent to which providers of publicly accessible telecommunications services provide the information required under section 55(2) TKG and Article 4(1) of Regulation (EU) 2015/2120.
39. The following picture has emerged for the Bundesnetzagentur: fixed network providers provide information on the speeds as referred to in Article 4(1) point (d) of Regulation (EU) 2015/2120 in their general terms and conditions or service specifications and in their product information sheets and contract summaries. The providers typically refer to specific figures for the respective speeds or express them as a percentage of the maximum speed. Advertised speeds typically correspond to maximum speeds. Mobile providers also provide information on the corresponding speeds in their general terms and conditions or service specifications and in their product information sheets and contract summaries. The providers also increasingly describe the impact of traffic management measures (where they are applied and have been deemed admissible by the Bundesnetzagentur) on the internet access service.

### 3.2.2 Complaints procedure – Article 4(2)

#### Article 4(2) TSM Regulation

Providers of internet access services shall put in place transparent, simple and efficient procedures to address complaints of end-users relating to the rights and obligations laid down in Article 3 and paragraph 1 of this Article.

40. The Bundesnetzagentur, in coordination with industry representatives, has designed standard procedures for handling the complaints it receives from end-users. One of the aims of the procedure is to ensure that providers deal with complaints swiftly and properly as far as possible, and especially in cases where the contractually agreed speeds are not delivered. All internet access providers were asked to set up special contact points to be able to deal with end-users' complaints about internet speeds as well as questions and complaints about the transparency of contracts as swiftly and properly as possible. The procedure means that, as a rule, the provider's response to a complaint is sent to both the Bundesnetzagentur and the end-user.

#### Number of complaints

41. The Bundesnetzagentur forwards legitimate complaints from end-users, for which no solution has yet been reached between the end-user and the internet access provider, to the provider. The Bundesnetzagentur asks the end-users to measure their internet speeds using the desktop app version of the Bundesnetzagentur's broadband speed checker (see paragraph 61). In the relevant reporting period, around 2,000 substantiated complaints under the terms of Article 4(4) of Regulation (EU) 2015/2120 were submitted. In the previous reporting period, there had been about 2,750.
42. Moreover, it is possible to submit a request for a dispute settlement procedure to the Bundesnetzagentur.
43. The Bundesnetzagentur does not generally enforce individual end-users' special termination or compensation rights vis-à-vis providers, as it is primarily up to the civil courts to do that.
44. Legal remedies for consumer rights are governed by civil law. No specific, additional remedies for consumer redress have been introduced for net neutrality.

### 3.2.3 Monitoring mechanism – Article 4(4)

#### Article 4(4) TSM Regulation

Any significant discrepancy, continuous or regularly recurring, between the actual performance of the internet access service regarding speed or other quality of service parameters and the performance indicated by the provider of internet access services in accordance with points (a) to (d) of paragraph 1 shall, where the relevant facts are established by a monitoring mechanism certified by the national regulatory authority, be deemed to constitute non-conformity of performance for the purposes of triggering the remedies available to the consumer in accordance with national law.

This paragraph applies only to contracts concluded or renewed from 29 November 2015.

45. In its guidelines BEREC clearly set out that a monitoring mechanism provided by an NRA and implemented for the purpose of Article 4(4) of Regulation (EU) 2015/2120 should be considered a certified monitoring mechanism (see BEREC guidelines, paragraph 161). The Bundesnetzagentur thus considers its desktop broadband speed checker app to be such a certified monitoring mechanism.

**Clarification of the undefined legal terms "significant discrepancy, continuous or regularly recurring [...] regarding speed"**

46. The German legislators considerably strengthened consumer rights with the revised version of the TKG, which came into force at the end of 2021. Section 57(4) sentence 1 para 1 TKG gives consumers the right to reduce their contractually agreed fee or terminate their contract extraordinarily, without compliance with a period of notice, in the case of non-conformity of performance. The condition is that there is a significant discrepancy, continuous or regularly recurring, between the actual performance of the internet access service regarding speed or other quality of service parameters and the performance indicated by the provider of internet access services in accordance with Article 4(1) points (a) to (d) of Regulation (EU) 2015/2120.
47. The Bundesnetzagentur published an administrative order setting out the reduction rules for fixed-network internet access in December 2021 and produced a guide with specific requirements for the proof of performance procedure. Further information is available at [www.bundesnetzagentur.de/internetgeschwindigkeit](http://www.bundesnetzagentur.de/internetgeschwindigkeit) and at [www.breitbandmessung.de](http://www.breitbandmessung.de) (in German).
48. The Bundesnetzagentur is planning to use the powers assigned to it to issue determinations under section 57(5) TKG to specify in an administrative order the undefined terms of the “significant discrepancy, continuous or regularly recurring, regarding speed” under section 57(4) sentence 1 para 1 TKG also for mobile-network internet access. The Bundesnetzagentur published drafts of the administrative order specifying the undefined terms in the mobile sector and of the guide on its website ([www.bundesnetzagentur.de/breitbandgeschwindigkeiten](http://www.bundesnetzagentur.de/breitbandgeschwindigkeiten) (in German)) on 12 June 2024 and invited all stakeholders to submit written comments until 31 July 2024.
49. A number of comments were received on both consultation documents, which can also be found on the Bundesnetzagentur website under the same link. Participants included consumer advice centres, two ministries and one consumer, in addition to telecommunications companies and industry associations.

**Report in accordance with section 55(4) sentence 3 para 2 TKG**

50. In the third twelve-month reporting period following the entry into force of the new reduction rules (January to December 2024), 43,514 users (2023: 56,441) began one or more sets of measurements using the desktop app to prove reduced performance in their fixed network. One set comprises 30 individual measurements. A total of 10,115 users (2023: 13,571) completed at least one set of measurements. The number of users went down again compared to the previous reporting period.
51. As in the last reporting period, the great majority of users did not complete their measurements. Many consumers stopped taking measurements part-way through a set if the results were good. About 47% of all sets of measurements that were not completed were discontinued after the first measurement.
52. As in the previous year, a comparison between complete and incomplete sets of measurements shows that more users who completed their measurements had lower download speeds in percentage terms (see

Figure 1). Overall, the download speeds measured by users not completing their measurements were considerably higher than those measured by users completing their measurements. The median speed measured in the incomplete sets of measurements is 79.5% of the contractually agreed maximum speed (2023: 76.9%), while the median in the complete sets is only 57.8% (2023: 58.1%). A comparison of the upload speed measurements also shows better results in the incomplete sets of measurements. The median speed measured in the incomplete sets is 94.9% of the contractually agreed maximum speed (2023: 94.4%), while the median in the complete sets is 85.4% (2023: 86.6%).

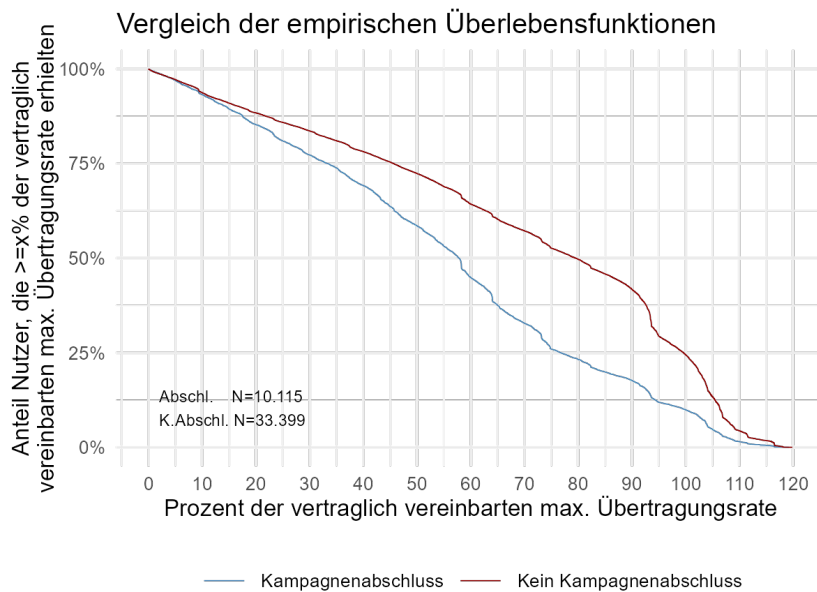


Figure 1: Comparison of the empirical survival functions for download speeds in complete and incomplete sets of measurements

53. The fact that the majority of the users obtaining considerably better results did not complete their measurements again indicates that users will tend to discontinue their measurements when they obtain positive results. This may reflect lower expectations about a successful proof of performance procedure or basic satisfaction with the service provided.
54. Again, the results show that certain bandwidth categories have an unusually high proportion of users completing their measurements (see Figure 2). In bandwidth category 2 (8 Mbps to less than 18 Mbps), for example, the proportion of complete sets of measurements is more than three times larger than the proportion of incomplete sets. The technical limitations of ADSL technology in this bandwidth category typically result in large differences between the maximum speeds advertised and those actually available. At the same time, the proportions are smaller in bandwidth category 4 (25 Mbps to less than 50 Mbps) and above.

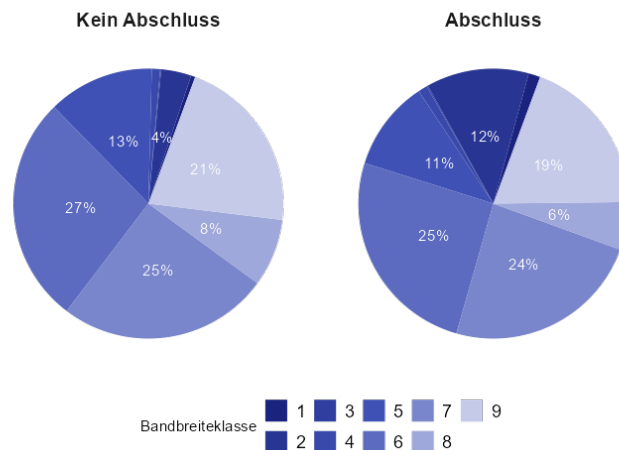


Figure 2: Proportions of users completing and not completing their measurements by bandwidth category<sup>12</sup>

55. Nearly all the sets of measurements that were completed demonstrated the end-users' entitlement to a reduction of their fee, with download speeds affected considerably more than upload speeds (see Table 1). This is due to a high proportion of asymmetric broadband connections for which it is comparatively easier to meet the upload criteria because the contractually agreed absolute speeds are lower. The pattern is the same for both download and upload speeds, with minimum speeds accounting for the lowest proportion of reduced performance and standard speeds accounting for the highest proportion in each case. Two or more criteria were not met in more than 90% of the complete sets of measurements.

<sup>12</sup> The bandwidth categories (BC) are defined as follows: BC 1: 2 Mbps to less than 8 Mbps; BC 2: 8 Mbps to less than 18 Mbps, BC 3: 18 Mbps to less than 25 Mbps; BC 4: 25 Mbps to less than 50 Mbps; BC 5: 50 Mbps to less than 100 Mbps; BC 6: 100 Mbps to less than 200 Mbps; BC 7: 200 Mbps to less than 500 Mbps; BC 8: 500 Mbps to less than 1,000 Mbps; BC 9: 1,000 Mbps to less than 2,500 Mbps.

**Percentage of measurements in which criteria were not met**

Criterion	Percentage of sets of measurements
Minimum download	53.4%
Standard download	85.5%
Maximum download	74.8%
Minimum upload	28.8%
Standard upload	55.5%
Maximum upload	55.3%

Source: Bundesnetzagentur

**3.2.4 Additional legislative measures – Article 4(3)****Article 4(3) TSM Regulation**

The requirements laid down in paragraphs 1 and 2 are in addition to those provided for in Directive 2002/22/EC and shall not prevent Member States from maintaining or introducing additional monitoring, information and transparency requirements, including those concerning the content, form and manner of the information to be published. Those requirements shall comply with this Regulation and the relevant provisions of Directives 2002/21/EC and 2002/22/EC.

56. At the national level, additional transparency requirements were adopted during a previous reporting period by way of the Ordinance concerning the promotion of transparency in the telecommunications market ("Transparency Ordinance"). This Ordinance regulates the publication of information and additional measures for cost control on the telecommunications market.
57. The Transparency Ordinance entered into force on 1 June 2017. It was amended by the Telecommunications Legislation Modernisation Act (TKModG) of 23 June 2021. As before, it requires fixed network and mobile providers to provide more transparency when offering internet access services.
58. Providers of internet access services must provide product information sheets where the consumer can quickly see the essential contractual provisions in a simple way before concluding the contract. The product information sheet contains details of the available data transmission rates, the term of the contract and the monthly costs. Consumers are also informed of the contractually agreed data allowance (if relevant).
59. Moreover, consumers have the right to inform themselves of the quality of their internet access service using reliable measurement results, in particular regarding the available data transmission rates and how the rates achieved compare to the contractually agreed maximum speed. The annex to the Ordinance sets out the format for this information. The provider of the internet access service must therefore inform the consumer of possible means of measuring the speed, for example by referring to the Bundesnetzagentur's broadband speed checker (see <https://breitbandmessung.de> – German website).

### 3.3 Supervision and enforcement – Article 5

#### Article 5(1) first subparagraph TSM Regulation

National regulatory authorities shall closely monitor and ensure compliance with Articles 3 and 4, and shall promote the continued availability of non-discriminatory internet access services at levels of quality that reflect advances in technology. For those purposes, national regulatory authorities may impose requirements concerning technical characteristics, minimum quality of service requirements and other appropriate and necessary measures on one or more providers of electronic communications to the public, including providers of internet access services.

#### Enforcement measures

60. The Bundesnetzagentur takes action in the event of non-compliance with the net neutrality provisions. In the reporting period, in some cases providers of internet access services voluntarily ceased infringements of the provisions, whereas in others no infringement was detected. One case from the reporting period is still pending.

#### Broadband speed checker

61. The Bundesnetzagentur provides a monitoring mechanism, the "Breitbandmessung" broadband speed checker, which allows consumers to monitor the quality and performance of their broadband internet access. An installable version (desktop app) can be used for fixed-line broadband and an app-based one (Android and iOS) for mobile connections. A browser-based test is also available to test performance when surfing the internet.
62. The measurement process used in the actual testing is technically identical for both fixed and mobile connections. The test measures the data transmission rate in both the download and upload directions. The measurement result is presented as an absolute value and as a relative value for the contractually agreed speed. Thus, the broadband speed checker allows the data transmission rate actually measured of a broadband connection to be compared with the data transmission rate contractually agreed. In addition, the delay and packet loss parameters are measured. However, only the time delay is presented to the end-user.
63. As well as being used as a monitoring mechanism to prove reduced performance (see paragraph 50 et seq), the broadband speed checker is used to collect test samples via crowdsourcing. The results are presented in an annual broadband speed test report. The ninth annual report will be published in June 2025.
64. Furthermore, the end-user can see in a map view the data transmission rates measured in specific regions; these are displayed as NUTS-3 clusters and in a table. Whereas the annual report on the broadband speed tests is for a fixed time period, the maps are updated daily and show the results of the previous 6, 12, 24 and 36 months.

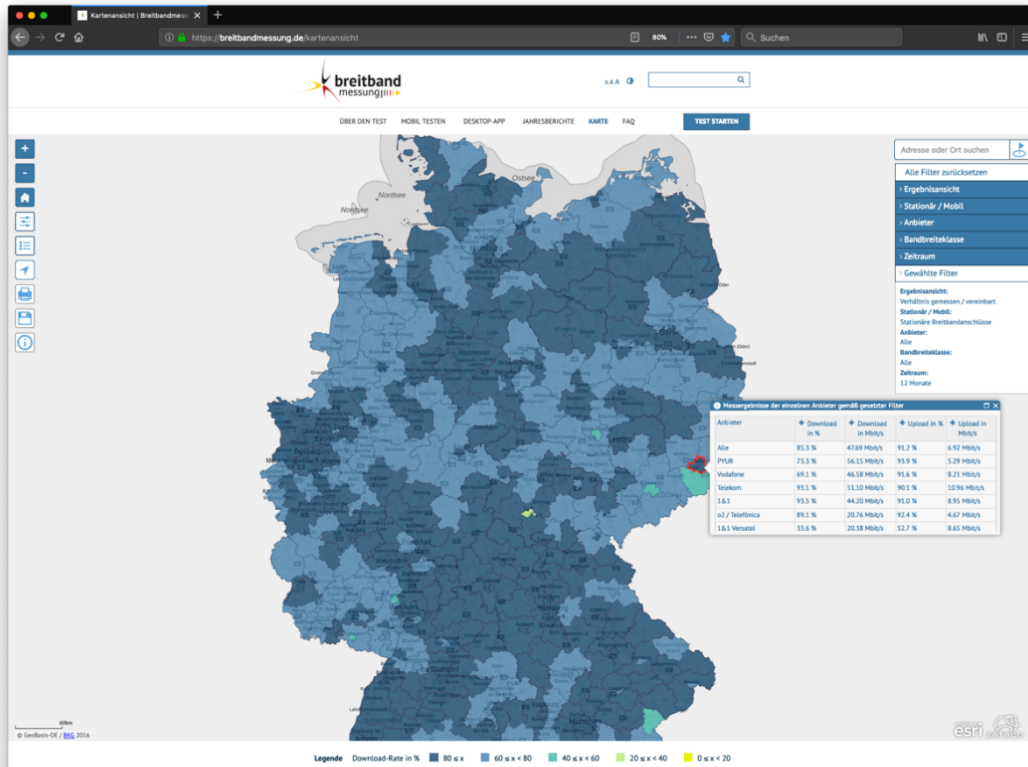


Figure 3: Example of map for fixed networks displaying aggregate results for the NUTS-3 level

65. It is important to note that the results obtained using the broadband speed checker depend on the end-user that is performing the test and the tariff that they have agreed with their provider. It is therefore not possible to draw conclusions from the results about broadband coverage or the availability of broadband internet access.
66. For the purposes of the speed tests, a drop-down list of providers' tariffs is drawn up using the tariff data reported by the telecommunications companies. The users then select their individual tariff from the drop-down list before carrying out their tests.
67. The test sample is validated in an extensive process. In particular, any possible cause of measurement errors due to the end-user's environment is excluded as far as possible using both technical information and information provided by the end-user.
68. Furthermore, multiple tests carried out on any fixed broadband connection are excluded for statistical reasons. Only one test per line and quarter is used for the report. Multiple tests on mobile broadband connections are kept in the sample due to the fact that even a minimal change in location may produce a completely different result.

### Main findings of the ninth annual report

69. The tests covered in the ninth annual report were carried out in the period from 1 October 2023 to 30 September 2024. The report covers a total of 276,081 valid tests on fixed broadband connections (2022/23: 305,035) and 562,305 valid tests on mobile broadband connections (2022/2023: 563,363).
70. Fixed broadband connections: in the year under review the proportion of all desktop app users across all bandwidth categories and providers whose connection had a download speed at least half their

contractually agreed maximum speed was 86.5% (2022/2023: 85.5%); the proportion of users whose connection had a speed equivalent to or higher than their contractually agreed maximum speed was 45.2% (2022/2023: 43.5%).

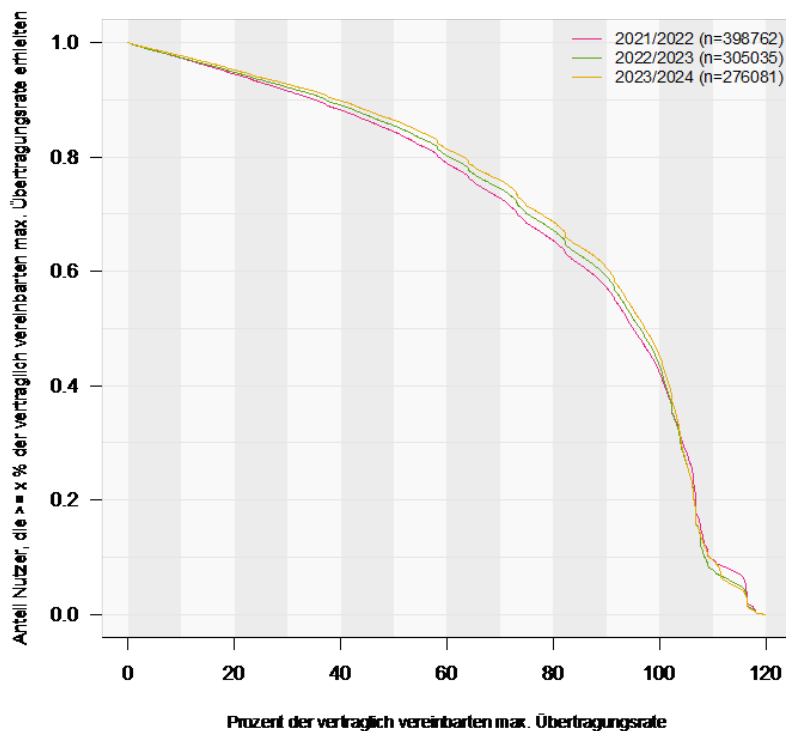


Figure 4: Percentage of the contractually agreed maximum speed

71. The results were again mixed as regards bandwidth categories, providers and the time of day. Based on the speeds measured as a percentage of the contractually agreed maximum speeds, upload performance was again generally similar to download performance. End-users in the upper bandwidth categories, in particular, tended to obtain the best results for latency times.
72. Most end-users (79.6%; 2022/2023: 79.1%) were satisfied with the performance of their broadband connection (rating of 1 to 3 on a scale of 1 to 6, with 1 being the highest). In this reporting period again, only 10% of end-users gave their connection a rating of 5 or 6. Users were asked to rate their satisfaction before carrying out the speed tests. The actual speeds measured by satisfied end-users were closer to the contractually agreed maximum speeds.
73. Mobile broadband connections: There was again progress in 5G network rollout during the latest reporting period. In the year under review, approximately 44% of all the valid tests on mobile connections covered in the annual report were with 5G (2022/2023: 28.5%).
74. It is possible to achieve very high speeds with 5G, which are sometimes well over the contractually agreed estimated maximum of the relevant tariff. Providers usually do not put a limit on the data transmission rates that can be achieved with very high bit-rate tariffs. This means that it is not possible to make an overall assessment of the different tests. Instead, a distinction has to be made between the different technologies (4G and 5G) and, in the case of 5G, also between the different bandwidth categories (1 to 6, and 7 and 8).

75. In bandwidth categories 1 to 6 the results from tests with 5G are generally better than with 4G. The results from tests with 5G in the two highest bandwidth categories are considerably better than with 4G because, as described above, the speeds are “upwardly open”. Some of the speeds measured with 5G are much higher than the contractually agreed estimated maximum.
76. A similar percentage was recorded for upload as for download speeds. However, the differences between 4G and 5G with upload speeds are not as large as with download speeds, in particular in the two highest bandwidth categories. The results for latency times from tests with 5G are considerably better than with 4G. More users with 5G benefit from lower latency. Better latency times were generally measured with both 4G and 5G in the higher bandwidth categories. The latency times measured for mobile connections were generally higher than for fixed connections.
77. A large majority of users again gave their providers a rating of 1 to 3. However, there are large differences depending on the technology used for the tests. The proportion of users with 4G who gave their providers a rating of 1 to 3 was approximately 66.1% across all bandwidth categories, while the proportion of users with 5G who gave their providers this rating was approximately 75.5% (bandwidth categories 1 to 6) and approximately 73.1% (bandwidth categories 7 and 8). As users were asked to rate their providers before they carried out the tests, the ratings are not influenced by the test results. However, the fact that considerably fewer providers offer 5G tariffs than 4G tariffs and that 5G tariffs are mostly for the two highest bandwidth categories suggests that users who have chosen these 5G tariffs are more satisfied with their providers overall.

## 4 Penalties – Article 6

### Article 6 TSM Regulation

Member States shall lay down the rules on penalties applicable to infringements of Articles 3, 4 and 5 and shall take all measures necessary to ensure that they are implemented. The penalties provided for must be effective, proportionate and dissuasive. Member States shall notify the Commission of those rules and measures by 30 April 2016 and shall notify the Commission without delay of any subsequent amendment affecting them.

78. Various infringements of Article 3 and Article 4 of Regulation (EU) 2015/2120 can be penalised by a fine (see section 228 subsection (4) paras 1-5 in conjunction with subsection (7) TKG). The maximum fine that can be imposed differs in each case.
- The maximum fine for serious breaches of the net neutrality provisions – for example for 1) agreements and commercial practices infringing Article 3(2) of Regulation (EU) 2015/2120, 2) traffic management measures that are not permitted under Article 3(3) third subparagraph first sentence of Regulation (EU) 2015/2120, and 3) failure to comply with an order of the Bundesnetzagentur – is €1mn (see section 228(7) para 1 c) TKG) or, in the case of legal persons or associations of persons with an average turnover of more than €100mn, up to 1% of the average annual turnover achieved worldwide in the previous three years (see section 228(8) para 2 TKG).
  - The maximum fine for infringements of the transparency measures in accordance with Article 4(1) first sentence of Regulation (EU) 2015/2120 is €100,000 (see section 228(7) para 4 TKG).
  - The maximum fine for failure to comply with information requests under Article 5(2) of Regulation (EU) 2015/2120 is €10,000 (see section 228(7) para 6 TKG).
79. Moreover, a fine between €1,000 and €10mn can be imposed if a provider of internet access services does not comply with an official order (see section 202(5) TKG).
80. A fine imposed in regulatory offence proceedings serves as a penalty, whereas a fine imposed in administrative proceedings serves to encourage the addressee to comply with an official order.

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## List of abbreviations

ADSL	asymmetric digital subscriber line
BEREC	Body of European Regulators for Electronic Communications
BfDI	Federal Commissioner for Data Protection and Freedom of Information
CUII	Online Copyright Clearance System
DNS	domain name system
GDPR	General Data Protection Regulation
ECJ	European Court of Justice
EU	European Union
IP	internet protocol
IPTV	internet protocol television
IPv4	internet protocol version 4
IPv6	internet protocol version 6
Mbps	megabits per second
NRA	national regulatory authority
NUTS	Nomenclature of Territorial Units for Statistics
SIM	subscriber identity module
TDDDG	Telecommunications Digital Services Data Protection Act
TKG	Telecommunications Act
TKModG	Telecommunications Legislation Modernisation Act
TMG	Telemedia Act
TSM Regulation	Telecommunications Single Market Regulation; Regulation (EU) 2015/2120 of the European Parliament and of the Council of 25 November 2015 laying down measures concerning open internet access and retail charges for regulated intra-EU communications and amending Directive 2002/22/EC and Regulation (EU) No 531/2012



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